

# **Results from the 2007 National Survey on Drug Use and Health: National Findings**

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# Highlights

This report presents the first information from the 2007 National Survey on Drug Use and Health (NSDUH), an annual survey sponsored by the Substance Abuse and Mental Health Services Administration (SAMHSA). The survey is the primary source of information on the use of illicit drugs, alcohol, and tobacco in the civilian, noninstitutionalized population of the United States aged 12 years old or older. The survey interviews approximately 67,500 persons each year. Unless otherwise noted, all comparisons in this report described using terms such as "increased," "decreased," or "more than" are statistically significant at the .05 level.

## Illicit Drug Use

- In 2007, an estimated 19.9 million Americans aged 12 or older were current (past month) illicit drug users, meaning they had used an illicit drug during the month prior to the survey interview. This estimate represents 8.0 percent of the population aged 12 years old or older. Illicit drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically.
- The rate of current illicit drug use among persons aged 12 or older in 2007 (8.0 percent) was similar to the rate in 2006 (8.3 percent).
- Marijuana was the most commonly used illicit drug (14.4 million past month users). Among persons aged 12 or older, the rate of past month marijuana use in 2007 (5.8 percent) was similar to the rate in 2006 (6.0 percent).
- In 2007, there were 2.1 million current cocaine users aged 12 or older, comprising 0.8 percent of the population. These estimates were similar to the number and rate in 2006 (2.4 million or 1.0 percent).
- Hallucinogens were used in the past month by 1.0 million persons (0.4 percent) aged 12 or older in 2007, including 503,000 (0.2 percent) who had used Ecstasy. These estimates were similar to the corresponding estimates for 2006.
- There were 6.9 million (2.8 percent) persons aged 12 or older who used prescription-type psychotherapeutic drugs nonmedically in the past month. Of these, 5.2 million used pain relievers, the same as the number in 2006.
- In 2007, there were an estimated 529,000 current users of methamphetamine aged 12 or older (0.2 percent of the population). These estimates were not significantly different from the estimates for 2006 (731,000 or 0.3 percent).
- Among youths aged 12 to 17, the current illicit drug use rate remained stable from 2006 (9.8 percent) to 2007 (9.5 percent). Between 2002 and 2007, youth rates declined significantly for illicit drugs in general (from 11.6 to 9.5 percent) and for marijuana, cocaine, hallucinogens, LSD, Ecstasy, prescription-type drugs used nonmedically, pain relievers, stimulants, methamphetamine, and the use of illicit drugs other than marijuana.

- The rate of current marijuana use among youths aged 12 to 17 declined from 8.2 percent in 2002 to 6.7 percent in 2007. The rate decreased for both males (from 9.1 to 7.5 percent) and females (from 7.2 to 5.8 percent).
- Among young adults aged 18 to 25, there were decreases from 2006 to 2007 in the rate of current use of several drugs, including cocaine (from 2.2 to 1.7 percent), Ecstasy (from 1.0 to 0.7 percent), stimulants (from 1.4 to 1.1 percent), methamphetamine (from 0.6 to 0.4 percent), and illicit drugs other than marijuana (from 8.9 to 8.1 percent).
- From 2002 to 2007, there was an increase among young adults aged 18 to 25 in the rate of current use of prescription pain relievers, from 4.1 to 4.6 percent. There were decreases in the use of hallucinogens (from 1.9 to 1.5 percent), Ecstasy (from 1.1 to 0.7 percent), and methamphetamine (from 0.6 to 0.4 percent).
- Among those aged 50 to 54, the rate of past month illicit drug use increased from 3.4 percent in 2002 to 5.7 percent in 2007. Among those aged 55 to 59, current illicit drug use showed an increase from 1.9 percent in 2002 to 4.1 percent in 2007. These trends may partially reflect the aging into these age groups of the baby boom cohort, whose lifetime rates of illicit drug use are higher than those of older cohorts.
- Among persons aged 12 or older who used pain relievers nonmedically in the past 12 months, 56.5 percent reported that the source of the drug the most recent time they used was from a friend or relative for free. Another 18.1 percent reported they got the drug from just one doctor. Only 4.1 percent got the pain relievers from a drug dealer or other stranger, and 0.5 percent reported buying the drug on the Internet. Among those who reported getting the pain reliever from a friend or relative for free, 81.0 percent reported in a follow-up question that the friend or relative had obtained the drugs from just one doctor.
- Among unemployed adults aged 18 or older in 2007, 18.3 percent were current illicit drug users, which was higher than the 8.4 percent of those employed full time and 10.1 percent of those employed part time. However, most illicit drug users were employed. Of the 17.4 million current illicit drug users aged 18 or older in 2007, 13.1 million (75.3 percent) were employed either full or part time.
- In 2007, there were 9.9 million persons aged 12 or older who reported driving under the influence of illicit drugs during the past year. This corresponds to 4.0 percent of the population aged 12 or older, similar to the rate in 2006 (4.2 percent), but lower than the rate in 2002 (4.7 percent). In 2007, the rate was highest among young adults aged 18 to 25 (12.5 percent).

## Alcohol Use

- Slightly more than half of Americans aged 12 or older reported being current drinkers of alcohol in the 2007 survey (51.1 percent). This translates to an estimated 126.8 million people, which was similar to the 2006 estimate of 125.3 million people (50.9 percent).
- More than one fifth (23.3 percent) of persons aged 12 or older participated in binge drinking (having five or more drinks on the same occasion on at least 1 day in the 30 days prior to the survey) in 2007. This translates to about 57.8 million people, similar to the estimate in 2006.
- In 2007, heavy drinking was reported by 6.9 percent of the population aged 12 or older, or 17.0 million people. This rate was the same as the rate of heavy drinking in 2006. Heavy drinking is defined as binge drinking on at least 5 days in the past 30 days.
- In 2007, among young adults aged 18 to 25, the rate of binge drinking was 41.8 percent, and the rate of heavy drinking was 14.7 percent. These rates were similar to the rates in 2006.
- The rate of current alcohol use among youths aged 12 to 17 was 15.9 percent in 2007. Youth binge and heavy drinking rates were 9.7 and 2.3 percent, respectively. These rates were essentially the same as the 2006 rates.
- Past month and binge drinking rates among underage persons (aged 12 to 20) have remained essentially unchanged since 2002. In 2007, about 10.7 million persons aged 12 to 20 (27.9 percent of this age group) reported drinking alcohol in the past month. Approximately 7.2 million (18.6 percent) were binge drinkers, and 2.3 million (6.0 percent) were heavy drinkers.
- Among persons aged 12 to 20, past month alcohol use rates in 2007 were 16.8 percent among Asians, 18.3 percent among blacks, 24.7 percent among Hispanics, 26.2 percent among those reporting two or more races, 28.3 percent among American Indians or Alaska Natives, and 32.0 percent among whites.
- In 2007, 56.3 percent of current drinkers aged 12 to 20 reported that their last use of alcohol in the past month occurred in someone else's home, and 29.4 percent reported that it had occurred in their own home. About one third (30.2 percent) paid for the alcohol the last time they drank, including 8.2 percent who purchased the alcohol themselves and 21.8 percent who gave money to someone else to purchase it. Among those who did not pay for the alcohol they last drank, 37.2 percent got it from an unrelated person aged 21 or older, 20.7 percent from another person under 21 years of age, and 19.5 percent got it from a parent, guardian, or other adult family member.
- In 2007, an estimated 12.7 percent of persons aged 12 or older drove under the influence of alcohol at least once in the past year. This percentage has decreased since 2002, when it was 14.2 percent. From 2006 to 2007, the rate of driving under the influence of alcohol among persons aged 18 to 25 decreased from 24.4 to 22.8 percent.

## **Tobacco Use**

- In 2007, an estimated 70.9 million Americans aged 12 or older were current (past month) users of a tobacco product. This represents 28.6 percent of the population in that age range. In addition, 60.1 million persons (24.2 percent of the population) were current cigarette smokers; 13.3 million (5.4 percent) smoked cigars; 8.1 million (3.2 percent) used smokeless tobacco; and 2.0 million (0.8 percent) smoked tobacco in pipes.
- The rate of current use of any tobacco product among persons aged 12 or older decreased from 29.6 percent in 2006 to 28.6 percent in 2007, but the rates of current use of cigarettes, smokeless tobacco, cigars, and pipe tobacco did not change significantly over that period. Between 2002 and 2007, past month use of any tobacco product decreased from 30.4 to 28.6 percent, and past month cigarette use declined from 26.0 to 24.2 percent. Rates of past month use of cigars, smokeless tobacco, and pipe tobacco were similar in 2002 and 2007.
- The rate of past month cigarette use among 12 to 17 year olds declined from 13.0 percent in 2002 to 9.8 percent in 2007. However, past month smokeless tobacco use was higher in 2007 (2.4 percent) than in 2002 (2.0 percent).
- Among pregnant women aged 15 to 44, combined data for 2006 and 2007 indicated that the rate of past month cigarette use was 16.4 percent. The rate was higher among women in that age group who were not pregnant (28.4 percent).

## **Initiation of Substance Use (Incidence, or First-Time Use) within the Past 12 Months**

- In 2007, an estimated 2.7 million persons aged 12 or older used an illicit drug for the first time within the past 12 months. A majority of these past year illicit drug initiates reported that their first drug was marijuana (56.2 percent). Nearly one third initiated with psychotherapeutics (30.6 percent, including 19.0 percent with pain relievers, 6.5 percent with tranquilizers, 4.1 percent with stimulants, and 1.1 percent with sedatives). A sizable proportion reported inhalants (10.7 percent) as their first illicit drug, and a small proportion used hallucinogens as their first drug (2.0 percent).
- The illicit drug categories with the largest number of past year initiates among persons aged 12 or older were nonmedical use of pain relievers (2.1 million) and marijuana use (2.1 million). These estimates were not significantly different from the numbers in 2006.
- In 2007, there were 775,000 persons aged 12 or older who had used inhalants for the first time within the past 12 months; 66.3 percent were under age 18 when they first used. There was no significant change in the number of inhalant initiates from 2006 to 2007.
- The number of past year initiates of methamphetamine among persons aged 12 or older was 157,000 in 2007. This estimate was significantly lower than the estimate in 2002 (299,000), 2003 (260,000), 2004 (318,000), and 2006 (259,000).
- Ecstasy initiation remained essentially unchanged from 2006 (860,000) to 2007 (781,000), but was lower in 2007 than in 2002 (1.2 million).

- Most (85.9 percent) of the 4.6 million past year alcohol initiates were younger than age 21 at the time of initiation.
- The number of persons aged 12 or older who smoked cigarettes for the first time within the past 12 months was 2.2 million in 2007, which was significantly lower than the estimate in 2006 (2.4 million) but significantly higher than the estimate for 2002 (1.9 million). Most new smokers in 2007 were under age 18 when they first smoked cigarettes (59.7 percent).

### **Youth Prevention-Related Measures**

- Perceived risk is measured by NSDUH as the percentage reporting that there is great risk in the substance use behavior. Among youths aged 12 to 17, there were no changes in the perceived risk of marijuana, cocaine, or heroin use between 2006 and 2007. However, between 2002 and 2007, there were increases in the perceived risk of smoking marijuana once a month (from 32.4 to 34.5 percent) and smoking marijuana once or twice a week (from 51.5 to 54.7 percent). On the other hand, the percentage of youths who perceived that trying heroin once or twice is a great risk declined from 58.5 percent in 2002 to 57.0 percent in 2007, and those who perceived that using LSD once or twice a week is a great risk declined from 76.2 to 74.2 percent.
- Almost half (49.1 percent) of youths aged 12 to 17 reported in 2007 that it would be "fairly easy" or "very easy" for them to obtain marijuana if they wanted some. Around one quarter reported it would be easy to get cocaine (24.5 percent). About one in seven (14.1 percent) indicated that heroin would be "fairly" or "very" easily available, and 14.4 percent reported easy availability for LSD.
- The percentage of youths aged 12 to 17 reporting that it would be easy to obtain cocaine declined from 25.9 percent in 2006 to 24.5 percent in 2007. In addition, the perceived availability decreased between 2002 and 2007 for marijuana (from 55.0 to 49.1 percent), heroin (from 15.8 to 14.1 percent), and LSD (from 19.4 to 14.4 percent).
- A majority of youths aged 12 to 17 (91.0 percent) in 2007 reported that their parents would strongly disapprove of their trying marijuana or hashish once or twice. Current marijuana use was much less prevalent among youths who perceived strong parental disapproval for trying marijuana or hashish once or twice than for those who did not (4.6 vs. 28.1 percent).
- In 2007, 11.3 percent of youths aged 12 to 17 reported that they had participated in substance use prevention programs outside of school within the past year. Almost four fifths (77.9 percent) reported having seen or heard drug or alcohol prevention messages from sources outside of school, lower than in 2002 when the percentage was 83.2 percent. Most (59.6 percent) youths reported in 2007 that they had talked with a parent in the past year about the dangers of drug, tobacco, or alcohol use.

## **Substance Dependence, Abuse, and Treatment**

- In 2007, an estimated 22.3 million persons (9.0 percent of the population aged 12 or older) were classified with substance dependence or abuse in the past year based on criteria specified in the *Diagnostic and Statistical Manual of Mental Disorders*, 4th edition (DSM-IV). Of these, 3.2 million were classified with dependence on or abuse of both alcohol and illicit drugs, 3.7 million were dependent on or abused illicit drugs but not alcohol, and 15.5 million were dependent on or abused alcohol but not illicit drugs.
- Between 2002 and 2007, there was no change in the number of persons with substance dependence or abuse (22.0 million in 2002, 22.3 million in 2007).
- The specific illicit drugs that had the highest levels of past year dependence or abuse in 2007 were marijuana (3.9 million), followed by pain relievers (1.7 million) and cocaine (1.6 million).
- Adults aged 21 or older who had first used alcohol before age 21 were more likely than adults who had their first drink at age 21 or older to be classified with alcohol dependence or abuse (9.6 vs. 2.2 percent).
- The rate of substance dependence or abuse for males aged 12 or older in 2007 was about twice as high as the rate for females (12.5 vs. 5.7 percent). Among youths aged 12 to 17, however, the rate of substance dependence or abuse among males was the same as the rate among females (7.7 percent for both).
- Treatment need is defined as having a substance use disorder or receiving treatment at a specialty facility (hospital inpatient, drug or alcohol rehabilitation, or mental health centers) within the past 12 months. In 2007, 23.2 million persons aged 12 or older needed treatment for an illicit drug or alcohol use problem (9.4 percent of persons aged 12 or older). Of these, 2.4 million (1.0 percent of persons aged 12 or older and 10.4 percent of those who needed treatment) received treatment at a specialty facility. Thus, 20.8 million persons (8.4 percent of the population aged 12 or older) needed treatment for an illicit drug or alcohol use problem but did not receive treatment at a specialty substance abuse facility in the past year.
- Of the 20.8 million people in 2007 who were classified as needing substance use treatment but did not receive treatment at a specialty facility in the past year, 1.3 million persons (6.4 percent) reported that they felt they needed treatment for their illicit drug or alcohol use problem. Of these 1.3 million persons who felt they needed treatment, 380,000 (28.5 percent) reported that they made an effort to get treatment, and 955,000 (71.5 percent) reported making no effort to get treatment.

## **Mental Health**

- Serious psychological distress (SPD) is an overall indicator of past year nonspecific psychological distress that is constructed from the K6 scale administered to adults aged 18 or older in NSDUH. In 2007, there were an estimated 24.3 million adults aged 18 or older in the United States with SPD in the past year. This represents 10.9 percent of all adults in this country, a rate similar to the SPD rate in 2006 (11.3 percent) but below the rate in 2004 (12.2 percent).
- Rates of SPD in 2007 were highest for adults aged 18 to 25 (17.9 percent) and lowest for adults aged 50 or older (7.0 percent).
- The prevalence of SPD among women aged 18 or older (13.4 percent) was higher than that among men in that age group (8.2 percent).
- SPD in the past year was associated with past year substance dependence or abuse in 2007. Among adults aged 18 or older with SPD in 2007, 22.1 percent (5.4 million) were dependent on or abused illicit drugs or alcohol. The rate among adults without SPD was 7.6 percent (15.0 million).
- Among the 24.3 million adults with SPD in 2007, 10.8 million (44.6 percent) used mental health services in the past year. Among all adults with SPD, 38.8 percent received a prescription medication, 27.3 percent received outpatient services, and 5.1 percent received inpatient services for a mental health problem in the past year.
- Among the 5.4 million adults with both SPD and substance dependence or abuse (i.e., a substance use disorder) in 2007, nearly half (46.5 percent) received mental health care or substance use treatment at a specialty facility; 10.4 percent received both mental health care and specialty substance use treatment, 33.3 percent received only mental health care, and 2.8 percent received only specialty substance use treatment.
- In 2007, 7.5 percent of persons aged 18 or older (16.5 million persons) had at least one major depressive episode (MDE) in the past year. Almost 1 in 20 adults (4.6 percent or 10.1 million persons) had a past year MDE with severe impairment.
- Having MDE in the past year was associated with past year substance dependence or abuse. In 2007, adults aged 18 or older with past year MDE had higher rates of past year illicit drug use than those without MDE (27.4 vs. 12.8 percent). Adults with past year MDE were more likely than those without MDE to be dependent on or abuse illicit drugs (8.8 vs. 2.1 percent) and alcohol (17.0 vs. 7.0 percent).
- Among adults aged 18 or older who had MDE in the past year, 64.5 percent received treatment (i.e., saw or talked to a medical doctor or other professional or used prescription medication) for depression in the same time period, which was lower than in 2006 (69.1 percent).

- Among adults aged 18 or older with MDE in the past year in 2007, women were more likely than men to receive treatment for depression in the past year (68.0 vs. 57.8 percent), though the treatment rate for women was significantly lower than in 2006 (73.7 percent).
- In 2007, there were 2.0 million youths (8.2 percent of the population aged 12 to 17) who had MDE during the past year. An estimated 1.4 million (5.5 percent) had MDE with severe impairment in one or more role domains (chores at home; school or work; close relationships with family; or social life).
- The rate of MDE in the past year was higher for adolescent females (11.9 percent) than for adolescent males (4.6 percent). The prevalence of MDE with severe impairment was 8.2 percent for females and 3.0 percent for males.
- Among 12 to 17 year olds who had past year MDE in 2007, 35.5 percent had used illicit drugs during the same period. This was higher than the rate of 17.2 percent among youths who did not have past year MDE. Similarly, the rates of past month daily cigarette use and heavy alcohol use were higher for youths with MDE (4.8 and 3.8 percent, respectively) than for youths who did not have MDE (2.3 and 2.2 percent, respectively).
- In 2007, 38.9 percent of youths aged 12 to 17 with past year MDE received treatment for depression (saw or talked to a medical doctor or other professional or used prescription medication). Among youths with past year MDE, 20.5 percent saw or talked to a medical doctor or other professional only, 2.5 percent used prescription medication only, and 15.6 percent received treatment from both sources for depression in the past year.
- In 2007, 3.1 million youths aged 12 to 17 (12.5 percent) received treatment or counseling for problems with behavior or emotions in the specialty mental health setting (inpatient or outpatient care). Additionally, 11.5 percent of youths received services in the education setting, and 2.8 percent received mental health services in the general medical setting in the past 12 months. Mental health services were received in both the specialty setting and either the education or general medical settings (i.e., care from multiple settings) by 5.1 percent of youths.



# 1. Introduction

This report presents the first information from the 2007 National Survey on Drug Use and Health (NSDUH), an annual survey of the civilian, noninstitutionalized population of the United States aged 12 years old or older. This initial report on the 2007 data presents national estimates of rates of use, numbers of users, and other measures related to illicit drugs, alcohol, and tobacco products. Measures related to mental health problems also are presented, including data on depression and on the co-occurrence of substance use and mental health problems. Estimates from NSDUH for States and areas within States will be presented in separate reports.

A major focus of this report is a comparison of substance use prevalence estimates between 2006 and 2007. Trends since 2002 also are discussed for some measures. Because of improvements to the survey in 2002, the 2002 data constitute a new baseline for tracking trends in substance use and other measures. Therefore, estimates from the 2002 through 2007 NSDUHs should not be compared with estimates from the 2001 and earlier surveys in the series to assess changes in substance use and mental health problems over time.

## 1.1. Summary of NSDUH

NSDUH is the primary source of statistical information on the use of illegal drugs by the U.S. population. 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 the respondent's place of residence. The survey is sponsored by the Substance Abuse and Mental Health Services Administration (SAMHSA), U.S. Department of Health and Human Services, and is planned and managed by SAMHSA's Office of Applied Studies (OAS). Data collection and analysis are conducted under contract with RTI International, Research Triangle Park, North Carolina.<sup>1</sup> This section briefly describes the survey methodology; a more complete description is provided in Appendix A.

NSDUH collects information from residents of households and noninstitutional group quarters (e.g., shelters, rooming houses, dormitories) and from civilians living on military bases. The survey excludes homeless persons who do not use shelters, military personnel on active duty, and residents of institutional group quarters, such as jails and hospitals. Appendix D describes surveys that cover populations outside the NSDUH target population.

Since 1999, the NSDUH interview has been carried out using computer-assisted interviewing (CAI). Most of the questions are administered with audio computer-assisted self-interviewing (ACASI). ACASI is designed to provide the respondent with a highly private and confidential means of responding to questions to increase the level of honest reporting of illicit drug use and other sensitive behaviors. Less sensitive items are administered by interviewers using computer-assisted personal interviewing (CAPI).

The 2007 NSDUH employed a State-based design with an independent, multistage area probability sample within each State and the District of Columbia. The eight States with the

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<sup>1</sup> RTI International is a trade name of Research Triangle Institute.

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

Nationally, 141,487 addresses were screened for the 2007 survey, and 67,870 completed interviews were obtained. The survey was conducted from January through December 2007. Weighted response rates for household screening and for interviewing were 89.5 and 73.9 percent, respectively. See Appendix B for more information on NSDUH response rates.

## **1.2. Trend Measurement**

Although the design of the 2002 through 2007 NSDUHs is similar to the design of the 1999 through 2001 surveys, there are important methodological differences that affect the comparability of the 2002-2007 estimates with estimates from prior surveys. The most important change was the incentive payment started in 2002 and continuing in subsequent surveys. Each NSDUH respondent completing the interview is given \$30. The name of the survey was also changed in 2002, from the National Household Survey on Drug Abuse (NHSDA) to the current name. In addition, improved data collection quality control procedures were introduced in the survey starting in 2001, and updated population data from the 2000 decennial census were incorporated into NSDUH sample weighting procedures starting with the 2002 estimates. Analyses of the effects of these factors on NSDUH estimates have shown that 2002 and later data should not be compared with 2001 and earlier data from the survey series to assess changes over time. Appendix C of the 2004 NSDUH report on national findings discusses this issue in more detail (see OAS, 2005b).

## **1.3. Change in Estimates for Psychotherapeutic Drugs and Stimulants**

This report includes revised estimates of nonmedical use of prescription psychotherapeutic drugs and prescription stimulants that take into account data on methamphetamine use based on information obtained from survey items added to NSDUH in 2005, 2006, and 2007. The 2006 NSDUH national findings report incorporated revised estimates for methamphetamine use based on these new items (OAS, 2007b), and this report extends the revisions to use of stimulants and any prescription psychotherapeutics. In a methodological study, these measures were found to be noticeably higher when the data from the new methamphetamine use items were taken into account. Estimates for use of illicit drugs overall and use of illicit drugs other than marijuana, however, were affected only minimally by these methamphetamine use items and were not revised. See Section B.4.6 in Appendix B for more information on the results of this study.

The 2006 estimates for nonmedical use of stimulants and prescription psychotherapeutics in this report have been revised based on the additional questions on methamphetamine use, and statistical adjustments have been applied to the estimates from 2002 to 2005. These modifications control for the potentially confounding effects of the questionnaire changes and

enable year-to-year comparisons to be made over the period from 2002 to 2007. Section B.4.6 in Appendix B provides a discussion of the revised measures and the procedures used to generate estimates based on them. Because of these changes, estimates for nonmedical use of stimulants and psychotherapeutic drugs in this report are not comparable to corresponding estimates in previous NSDUH reports. Methamphetamine use estimates in this report also are not comparable with those in NSDUH reports for survey years prior to 2006.

#### **1.4. Format of Report and Explanation of Tables**

This report has separate chapters that discuss the national findings on seven topics: use of illicit drugs; use of alcohol; use of tobacco products; initiation of substance use; prevention-related issues; substance dependence, abuse, and treatment; and mental health problems and treatment. A final chapter summarizes the results and discusses key findings in relation to other research and survey results. Technical appendices describe the survey (Appendix A), provide technical details on the statistical methods and measurement (Appendix B), offer key NSDUH definitions (Appendix C), discuss other sources of related data (Appendix D), list the references cited in the report (as well as other relevant references) (Appendix E), and present selected tabulations of estimates (Appendices F and G).

Tables, text, and figures present prevalence measures for the population in terms of both the number of persons and the percentage of the population. Substance use tables show prevalence estimates by lifetime (i.e., ever used), past year, and past month use. Analyses focus primarily on past month use, which also is referred to as "current use." Tables and figures in which estimates are presented by year have footnotes indicating whether the 2007 estimates are significantly different from 2006 or earlier estimates.

Statistical tests have been conducted for all statements appearing in the text of the report that compare estimates between years or subgroups of the population. Unless explicitly stated that a difference is not statistically significant, all statements that describe differences are significant at the .05 level. Statistically significant differences are described using terms such as "higher," "lower," "increased," and "decreased." Statements that use terms such as "similar," "no difference," "same," or "remained steady" to describe the relationship between estimates denote that a difference is not statistically significant. In addition, a set of estimates for survey years or population subgroups may be presented without a statement of comparison, in which case a statistically significant difference between these estimates is not implied and testing was not conducted.

All estimates presented in the report have met the criteria for statistical reliability (see Section B.2.2 of Appendix B). Estimates that do not meet these criteria are suppressed and do not appear in tables, figures, or text. Also, subgroups with suppressed estimates are not included in statistical tests of comparisons. For example, a statement that "whites had the highest prevalence" means that the rate among whites was higher than the rate among all nonsuppressed racial/ethnic subgroups, but not necessarily higher than the rate among a subgroup for which the estimate was suppressed.

Data are presented for racial/ethnic groups based on current guidelines for collecting and reporting race and ethnicity data (Office of Management and Budget [OMB], 1997). Because

respondents were allowed to choose more than one racial group, a "two or more races" category is presented that includes persons who reported more than one category among the basic groups listed in the survey question (white, black or African American, American Indian or Alaska Native, Native Hawaiian, Other Pacific Islander, Asian, Other). Respondents choosing both Native Hawaiian and Other Pacific Islander but no other categories mentioned above are classified in the combined "Native Hawaiian or Other Pacific Islander" category instead of the "two or more race" category. It should be noted that, except for the "Hispanic or Latino" group, the racial/ethnic groups discussed in this report include only non-Hispanics. The category "Hispanic or Latino" includes Hispanics of any race.

Data also are presented for four U.S. geographic regions and nine geographic divisions within these regions. These regions and divisions, defined by the U.S. Census Bureau, consist of the following groups of States:

***Northeast Region*** - *New England Division*: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont; *Middle Atlantic Division*: New Jersey, New York, Pennsylvania.

***Midwest Region*** - *East North Central Division*: Illinois, Indiana, Michigan, Ohio, Wisconsin; *West North Central Division*: Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota.

***South Region*** - *South Atlantic Division*: Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia; *East South Central Division*: Alabama, Kentucky, Mississippi, Tennessee; *West South Central Division*: Arkansas, Louisiana, Oklahoma, Texas.

***West Region*** - *Mountain Division*: Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming; *Pacific Division*: Alaska, California, Hawaii, Oregon, Washington.

Geographic comparisons also are made based on county type, a variable that reflects different levels of urbanicity and metropolitan area inclusion of counties, based on metropolitan area definitions issued by the OMB in June 2003 (OMB, 2003). For this purpose, counties are grouped based on the 2003 rural-urban continuum codes. These codes were originally developed by the U.S. Department of Agriculture (Butler & Beale, 1994). Each county is either inside or outside a metropolitan statistical area (MSA), as defined by the OMB.

Large metropolitan areas have a population of 1 million or more. Small metropolitan areas have a population of fewer than 1 million. Small metropolitan areas are further classified based on whether they have a population of 250,000 or more. Nonmetropolitan areas are areas outside MSAs. Counties in nonmetropolitan areas are further classified based on the number of people in the county who live in an urbanized area, as defined by the Census Bureau at the subcounty level. "Urbanized" counties have a population of 20,000 or more in urbanized areas, "less urbanized" counties have at least 2,500 but fewer than 20,000 population in urbanized areas, and "completely rural" counties have fewer than 2,500 population in urbanized areas.

## 1.5. Other NSDUH Reports and Data

Other reports focusing on specific topics of interest will be produced using the 2007 NSDUH data and made available on SAMHSA's website. A report on State-level estimates for 2006-2007 will be available in early 2009.

A comprehensive set of tables, referred to as "detailed tables," is available through the Internet at <http://oas.samhsa.gov>. The tables are organized into sections based primarily on the topic, and most tables are provided in several parts, showing population estimates (e.g., numbers of drug users), rates (e.g., percentages of population using drugs), and standard errors of all nonsuppressed estimates. A small subset of these detailed tables has been selected for inclusion in Appendices F and G of this report. The appendix tables can be mapped back to the detailed tables by using the table number in parentheses in the upper left corner of each table (e.g., Table G.1 in Appendix G is Table 8.1A in the detailed tables). Additional methodological information on NSDUH, including the questionnaire, is available electronically at the same web address.

Brief descriptive reports and in-depth analytic reports focusing on specific issues or population groups also are produced by OAS. A complete listing of previously published reports from NSDUH and other data sources is available from OAS. Most of these reports also 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, 2008) at <http://www.icpsr.umich.edu/SAMHDA/index.html>. Currently, files are available from the 1979 to 2006 surveys.<sup>2</sup> The 2007 NSDUH public use file will be available by the end of 2008.

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<sup>2</sup> See <http://webapp.icpsr.umich.edu/cocoon/SAMHDA/DAS3/00064.xml>.



## 2. Illicit Drug Use

The National Survey on Drug Use and Health (NSDUH) obtains information on nine different categories of illicit drug use: use of marijuana, cocaine, heroin, hallucinogens, and inhalants; and the nonmedical use of prescription-type pain relievers, tranquilizers, stimulants, and sedatives. In these categories, hashish is included with marijuana, and crack is considered a form of cocaine. Several drugs are grouped under the hallucinogens category, including LSD, PCP, peyote, mescaline, psilocybin mushrooms, and "Ecstasy" (MDMA). Inhalants include a variety of substances, such as nitrous oxide, amyl nitrite, cleaning fluids, gasoline, spray paint, other aerosol sprays, and glue. The four categories of prescription-type drugs (pain relievers, tranquilizers, stimulants, and sedatives) cover numerous medications available by prescription and drugs within these groupings that may be manufactured illegally, such as methamphetamine, which is included under stimulants. Respondents are asked to report only "nonmedical" use of these drugs, defined as use without a prescription of the individual's own or simply for the experience or feeling the drugs caused. Use of over-the-counter drugs and legitimate use of prescription drugs are not included. NSDUH reports combine the four prescription-type drug groups into a category referred to as "psychotherapeutics."

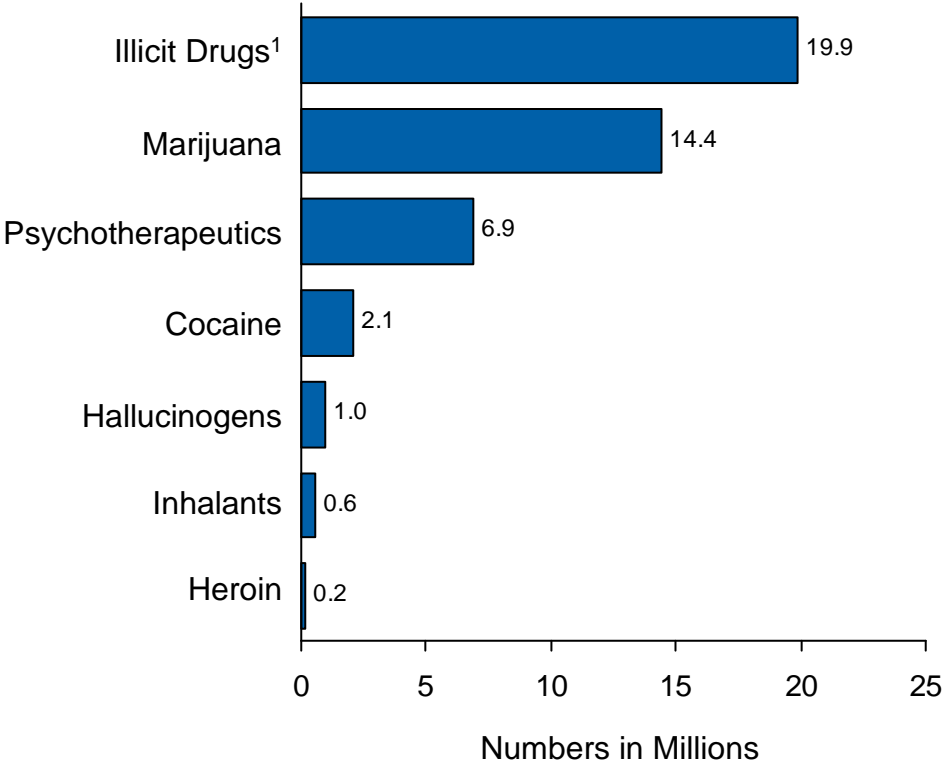
Estimates of "illicit drug use" reported from NSDUH reflect the use of any of the nine drug categories listed above. Use of alcohol and tobacco products, while illegal for youths, is not included in these estimates, but is discussed in Chapters 3 and 4.

This chapter includes revised estimates of the nonmedical use of prescription psychotherapeutic drugs and prescription stimulants that take into account data on methamphetamine use based on information obtained from survey items added to NSDUH in 2005, 2006, and 2007. The 2006 NSDUH national findings report incorporated revised estimates for methamphetamine use based on these additional items (Office of Applied Studies [OAS], 2007b), and this report extends the revisions to use of stimulants and any prescription psychotherapeutics. In a methodological study, these measures were found to be noticeably higher when the data from the additional methamphetamine use items were taken into account. Estimates for use of illicit drugs overall and use of illicit drugs other than marijuana, however, were affected only minimally by these methamphetamine use items and were not revised. See Section B.4.6 in Appendix B for more information on the results of this study.

The 2006 estimates for nonmedical use of stimulants and prescription psychotherapeutics in this report have been revised based on the additional questions on methamphetamine use, and statistical adjustments have been applied to the estimates from 2002 to 2005. These modifications control for the potentially confounding effects of the questionnaire changes and enable year-to-year comparisons to be made over the period from 2002 to 2007. Section B.4.6 in Appendix B provides a discussion of the revised measures and the procedures used to generate estimates based on them. Because of these changes, estimates for the nonmedical use of stimulants and psychotherapeutic drugs in this report are not comparable with corresponding estimates in previous NSDUH reports. Methamphetamine use estimates in this report also are not comparable with those in NSDUH reports for survey years prior to 2006.

- In 2007, an estimated 19.9 million Americans aged 12 or older were current (past month) illicit drug users, meaning they had used an illicit drug during the month prior to the survey interview (Figure 2.1). This estimate represents 8.0 percent of the population aged 12 years old or older.
- The overall rate of current illicit drug use among persons aged 12 or older in 2007 (8.0 percent) was similar to the rate in 2006 (8.3 percent) and has remained stable since 2002 (8.3 percent) (Figure 2.2).
- Marijuana was the most commonly used illicit drug (14.4 million past month users). In 2007, marijuana was used by 72.8 percent of current illicit drug users and was the only drug used by 53.3 percent of them. Illicit drugs other than marijuana were used by 9.3 million persons or 46.7 percent of illicit drug users aged 12 or older. Current use of other drugs but not marijuana was reported by 27.2 percent of illicit drug users, and 19.4 percent used both marijuana and other drugs.

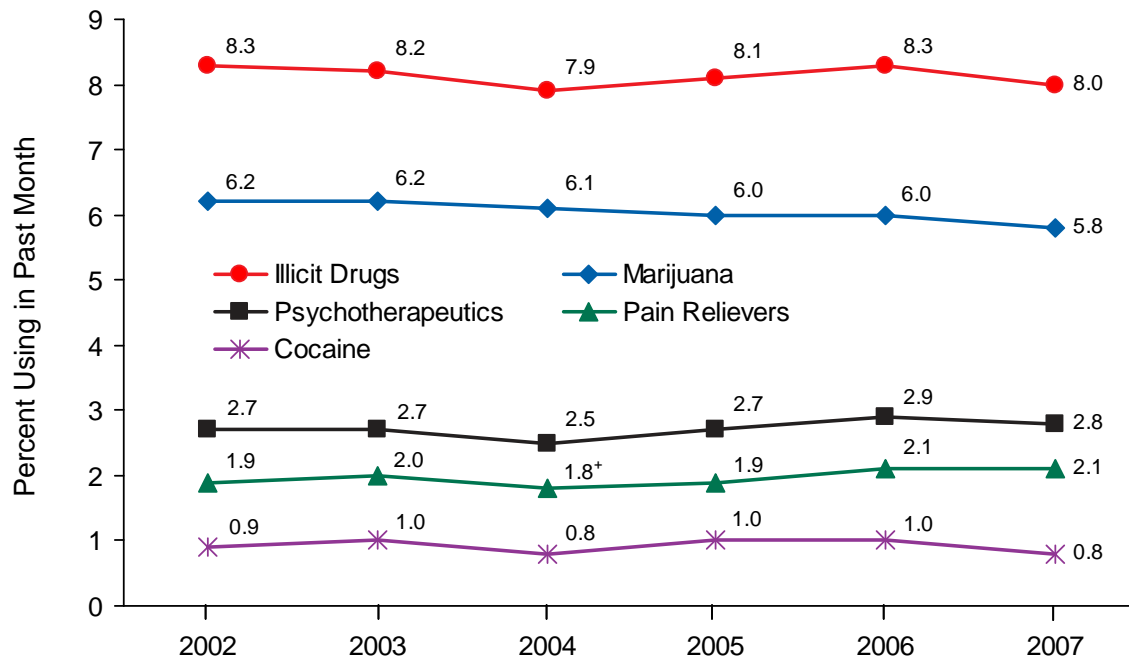
**Figure 2.1 Past Month Illicit Drug Use among Persons Aged 12 or Older: 2007**



<sup>1</sup> Illicit Drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically.



**Figure 2.2 Past Month Use of Selected Illicit Drugs among Persons Aged 12 or Older: 2002-2007**

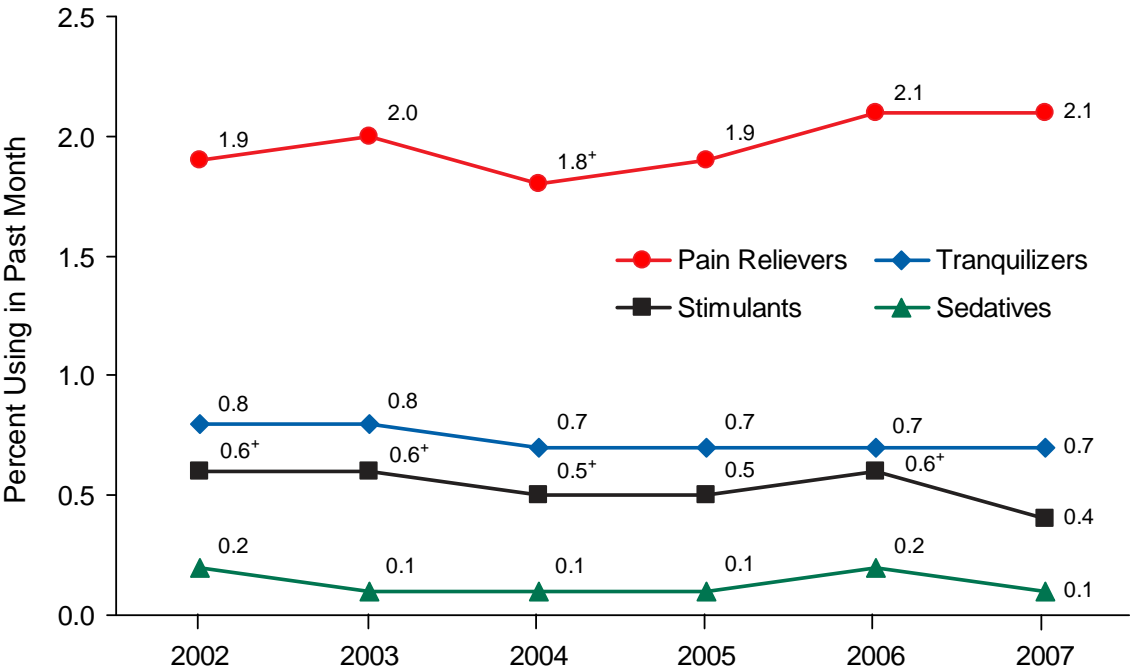


<sup>+</sup> Difference between this estimate and the 2007 estimate is statistically significant at the .05 level.

- Among persons aged 12 or older, the overall rate of past month marijuana use in 2007 (5.8 percent) was similar to the rate in 2006 and the rates in earlier years going back to 2002 (Figure 2.2).
- An estimated 9.3 million people aged 12 or older (3.7 percent) were current users of illicit drugs other than marijuana in 2007. Most (6.9 million persons, or 2.8 percent of the population) used psychotherapeutic drugs nonmedically. In addition to the estimated 5.2 million nonmedical users of pain relievers in 2007, 1.8 million used tranquilizers, 1.1 million used stimulants, and 346,000 used sedatives. The numbers of nonmedical users of pain relievers, tranquilizers, and sedatives in 2007 were similar to the corresponding numbers in 2006, and the percentage rates also remained stable (Figure 2.3). However, the number and percentage of nonmedical stimulant users decreased from 2006 to 2007.
- The estimated number and percentage of persons aged 12 or older who used cocaine in the past month in 2007 (2.1 million users or 0.8 percent of the population) were similar to those in 2006 (2.4 million or 1.0 percent) and 2002 (2.0 million or 0.9 percent). The number of past month crack users was also similar over this period (610,000 in 2007 vs. 702,000 in 2006 and 567,000 in 2002).

- Hallucinogens were used in the past month by 1.0 million persons aged 12 or older (0.4 percent) in 2007, including 503,000 (0.2 percent) who had used Ecstasy. These estimates are similar to the corresponding estimates for 2006. However, lifetime use of Ecstasy increased from 10.2 million persons (4.3 percent) in 2002 to 12.4 million (5.0 percent) in 2007, while past year use of Ecstasy decreased from 3.2 million (1.3 percent) to 2.1 million (0.9 percent) over the same period.
- The number of current heroin users decreased from 338,000 in 2006 to 153,000 in 2007, and the corresponding prevalence rate decreased from 0.14 to 0.06 percent.
- In both 2006 and 2007, an estimated 5.2 million persons aged 12 or older (2.1 percent in each year) were current nonmedical users of prescription pain relievers (Figure 2.3). This number was higher than the estimated 4.4 million in 2002, but the difference between the rates in 2002 and 2007 (1.9 and 2.1 percent, respectively) was not statistically significant. However, the rate was higher in 2007 (2.1 percent) than in 2004 (1.8 percent).

**Figure 2.3 Past Month Nonmedical Use of Types of Psychotherapeutic Drugs among Persons Aged 12 or Older: 2002-2007**



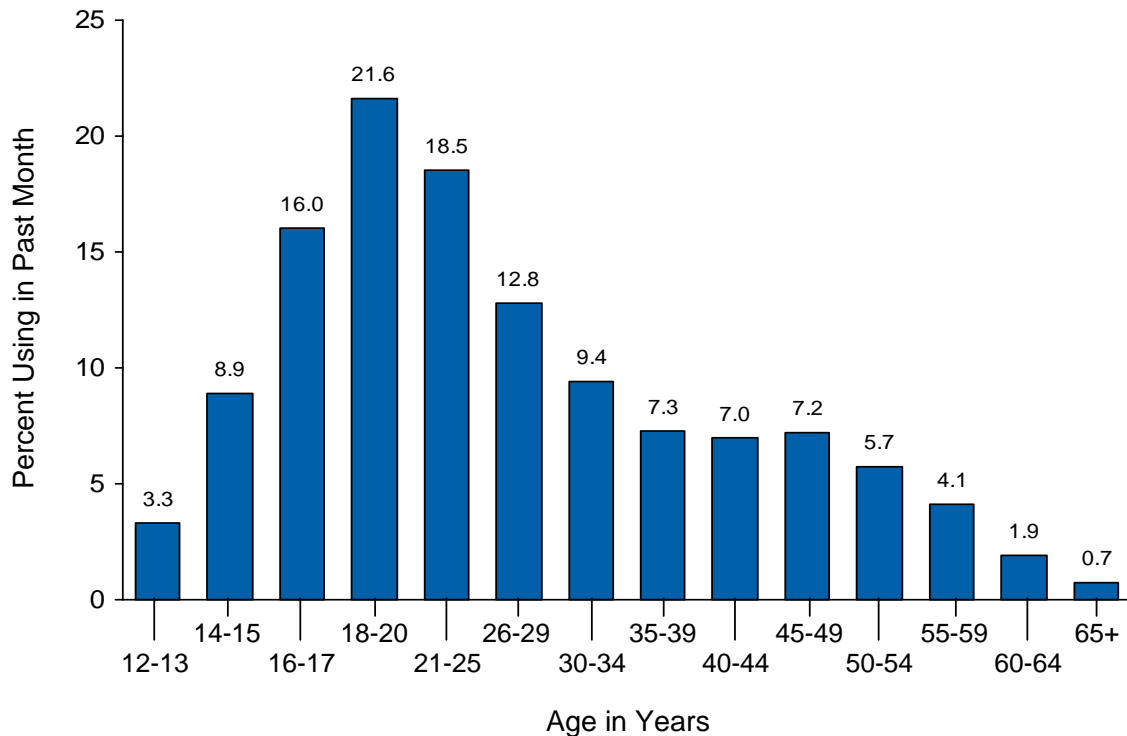
<sup>+</sup> Difference between this estimate and the 2007 estimate is statistically significant at the .05 level.

- In 2007, the estimated number of past month nonmedical users of stimulants aged 12 or older, 1.1 million, was lower than it had been in 2006 (1.4 million); the corresponding rates also showed a decline (from 0.6 percent in 2006 to 0.4 percent in 2007). These numbers for stimulants included 529,000 persons (0.2 percent) who were current users of methamphetamine in 2007, similar to the number and rate in 2006 (731,000 persons or 0.3 percent of the population). However, the estimated number of past year methamphetamine users declined from 1.9 million in 2006 to 1.3 million in 2007, and the corresponding rate declined from 0.8 to 0.5 percent.

### Age

- In 2007, rates of past month illicit drug use varied with age. Through the adolescent years from 12 to 17, the rates of current illicit drug use increased from 3.3 percent at ages 12 or 13 to 8.9 percent at ages 14 or 15 to 16.0 percent at ages 16 or 17 (Figure 2.4). The highest rate was among persons aged 18 to 20 (21.6 percent). The rate was 18.5 percent among those aged 21 to 25, 12.8 percent among those aged 26 to 29, and 0.7 percent among those aged 65 or older.

**Figure 2.4 Past Month Illicit Drug Use among Persons Aged 12 or Older, by Age: 2007**



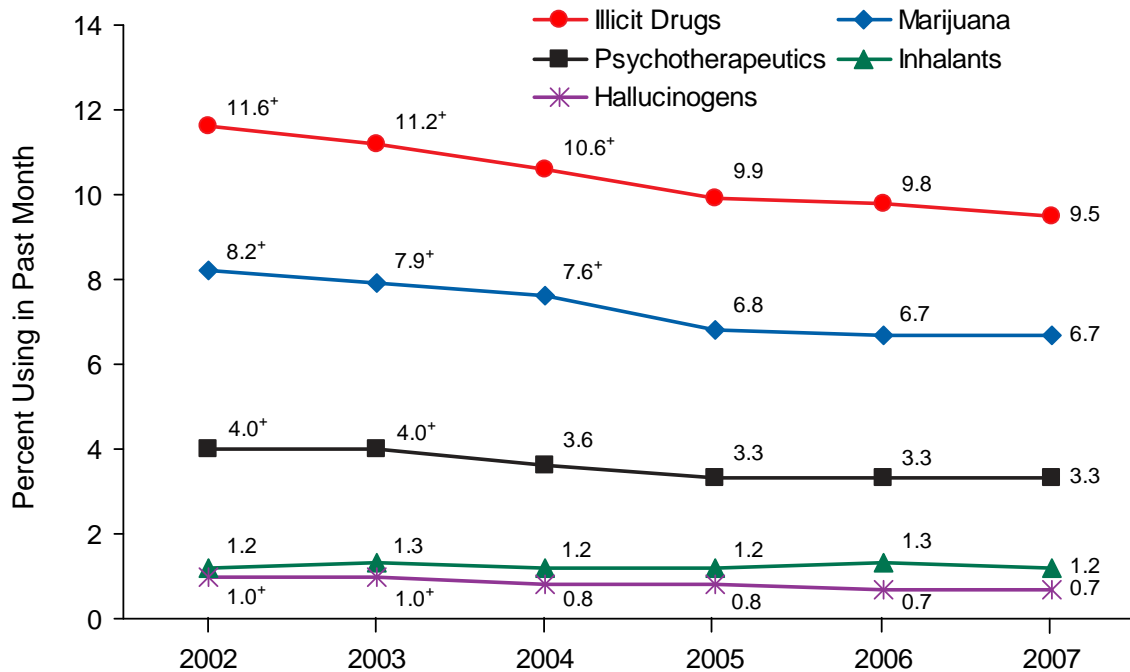
- Although adults aged 26 or older were less likely to be current drug users in 2007 than youths aged 12 to 17 or young adults aged 18 to 25 (5.8 vs. 9.5 and 19.7 percent, respectively), there were more drug users aged 26 or older (11.0 million) than in the 12-to-17-year age group (2.4 million) and 18-to-25-year age group (6.5 million) combined.

- Current illicit drug use remained stable from 2006 to 2007 among youths aged 12 to 17, young adults aged 18 to 25, and adults aged 26 or older. From 2002 to 2007, however, the rate of current illicit drug use among 12 to 17 year olds decreased from 11.6 to 9.5 percent (Figure 2.5).

### Youths Aged 12 to 17

- In 2007, 9.5 percent of youths aged 12 to 17 were current illicit drug users: 6.7 percent used marijuana, 3.3 percent engaged in nonmedical use of prescription-type psychotherapeutics, 1.2 percent used inhalants, 0.7 percent used hallucinogens, and 0.4 percent used cocaine.
- Among youths aged 12 to 17, the types of drugs used in the past month varied by age group. Among 12 or 13 year olds, 1.4 percent used prescription-type drugs nonmedically, 1.1 percent used inhalants, and 0.9 percent used marijuana. Among 14 or 15 year olds, marijuana was the most commonly used drug (5.7 percent), followed by prescription-type drugs used nonmedically (3.4 percent), and then inhalants (1.4 percent). Marijuana was also the most commonly used drug among 16 or 17 year olds (13.1 percent), followed by prescription-type drugs used nonmedically (4.9 percent), and then hallucinogens (1.2 percent), inhalants (1.0 percent), and cocaine (0.9 percent).

**Figure 2.5 Past Month Use of Selected Illicit Drugs among Youths Aged 12 to 17: 2002-2007**



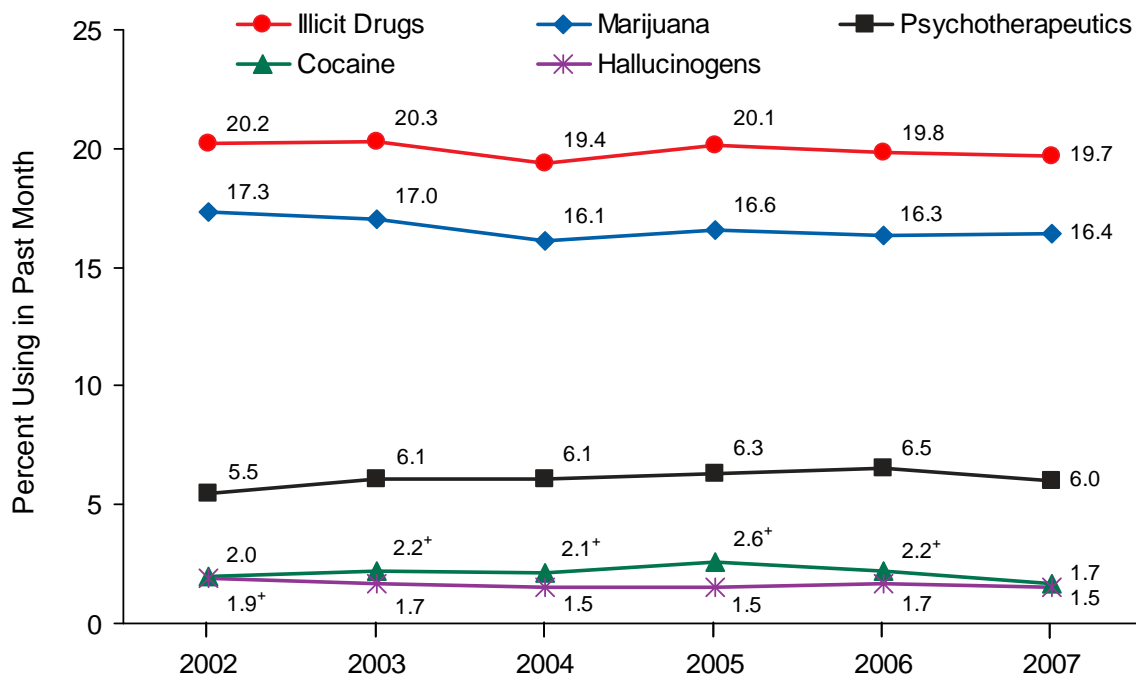
<sup>+</sup> Difference between this estimate and the 2007 estimate is statistically significant at the .05 level.

- Rates of current use remained stable from 2006 to 2007 among youths aged 12 to 17 for all drugs except use of heroin, which decreased from 0.06 to 0.01 percent, and nonmedical use of tranquilizers, which increased from 0.5 to 0.7 percent.
- From 2002 to 2007, rates of current use among youths aged 12 to 17 declined significantly for illicit drugs overall and for several specific drugs, including marijuana, cocaine, hallucinogens, LSD, Ecstasy, prescription-type drugs used nonmedically, pain relievers, stimulants, methamphetamine, and the use of illicit drugs other than marijuana (Figure 2.5). For illicit drug use overall, the rates were 11.6 percent in 2002, 11.2 percent in 2003, 10.6 percent in 2004, 9.9 percent in 2005, 9.8 percent in 2006, and 9.5 percent in 2007.
- The rate of current marijuana use among youths aged 12 to 17 decreased from 8.2 percent in 2002 to 6.7 percent in 2007. Significant declines were also evident between 2002 and 2007 for past year marijuana use (from 15.8 to 12.5 percent) and lifetime marijuana use (from 20.6 to 16.2 percent).
- Current use of illicit drugs other than marijuana among 12 to 17 year olds declined from 5.7 percent in 2002 to 4.7 percent in 2007. Over the same period, past month nonmedical use of psychotherapeutic drugs decreased from 4.0 to 3.3 percent, nonmedical use of pain relievers declined from 3.2 to 2.7 percent, nonmedical use of stimulants decreased from 0.8 to 0.5 percent, and methamphetamine use declined from 0.3 to 0.1 percent. Youths' current use of hallucinogens declined from 1.0 percent in 2002 to 0.7 percent in 2007, reflecting decreases in current use of Ecstasy (from 0.5 to 0.3 percent) and LSD (from 0.2 to 0.1 percent).

### **Young Adults Aged 18 to 25**

- Rates of current use of illicit drugs in 2007 were higher for young adults aged 18 to 25 (19.7 percent) than for youths aged 12 to 17 (9.5 percent) and adults aged 26 or older (5.8 percent). Among young adults, 16.4 percent used marijuana, 6.0 percent used prescription-type drugs nonmedically, 1.7 percent used cocaine, and 1.5 percent used hallucinogens (Figure 2.6).
- From 2006 to 2007, current use of several illicit drugs declined among young adults aged 18 to 25. Use of cocaine decreased from 2.2 to 1.7 percent, Ecstasy use declined from 1.0 to 0.7 percent, stimulant use went from 1.4 to 1.1 percent, methamphetamine use declined from 0.6 to 0.4 percent, and use of illicit drugs other than marijuana decreased from 8.9 to 8.1 percent.
- From 2002 to 2007, the rate of current use of prescription pain relievers among young adults aged 18 to 25 increased from 4.1 to 4.6 percent. Past month use of hallucinogens overall decreased from 1.9 to 1.5 percent, and use of Ecstasy decreased from 1.1 to 0.7 percent; however, use of LSD increased from 0.1 to 0.2 percent. A decline also was seen in current use of methamphetamine (0.6 percent in 2002 vs. 0.4 percent in 2007).

**Figure 2.6 Past Month Use of Selected Illicit Drugs among Young Adults Aged 18 to 25: 2002-2007**



<sup>+</sup> Difference between this estimate and the 2007 estimate is statistically significant at the .05 level.

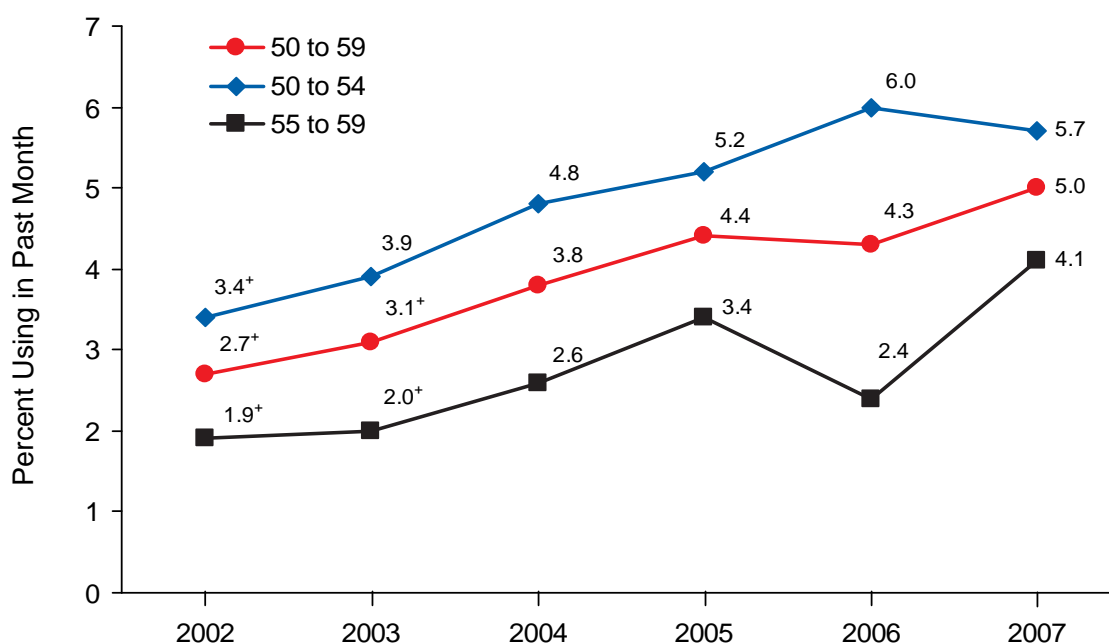
### Adults Aged 26 or Older

- Among adults aged 26 or older, 5.8 percent reported current illicit drug use in 2007. In this age group, 3.9 percent used marijuana and 2.2 percent used prescription-type drugs nonmedically. Less than 1 percent used cocaine (0.7 percent), hallucinogens (0.2 percent), heroin (0.1 percent), and inhalants (0.1 percent). The only significant change between 2006 and 2007 in the rates of past month use among adults in this age group involved heroin, which decreased from 0.14 to 0.05 percent. Lifetime use of marijuana among adults aged 26 or older increased from 40.6 percent in 2006 to 42.0 percent in 2007, while past year nonmedical use of stimulants declined from 1.0 to 0.8 percent and past year use of methamphetamine decreased from 0.6 to 0.4 percent.
- Among adults aged 50 to 59, the rate of current illicit drug use showed an irregular increasing trend between 2002 and 2007 (Figure 2.7). For those aged 50 to 54, the rate increased from 3.4 in 2002 to 6.0 percent in 2006, then ended at 5.7 percent in 2007, not significantly different from the rate in 2006. Among those aged 55 to 59, current illicit drug use also showed an irregular trend with an overall increase from 1.9 percent in 2002 to 4.1 percent in 2007. These patterns and trends may partially reflect the aging into these age groups of the baby boom cohort, whose lifetime rates of illicit drug use are higher than those of older cohorts.

## Gender

- In 2007, as in prior years, the rate of current illicit drug use among persons aged 12 or older was higher for males than for females (10.4 vs. 5.8 percent, respectively). Males were about twice as likely as females to be past month marijuana users (8.0 vs. 3.8 percent). However, males and females had similar rates of past month use of tranquilizers (0.8 and 0.7 percent for males and females, respectively), stimulants (0.4 percent for males and 0.5 percent for females), methamphetamine (0.2 percent for both males and females), sedatives (0.2 percent for males and 0.1 percent for females), and OxyContin<sup>®</sup> (0.2 percent for males and 0.1 percent for females).
- From 2006 to 2007, the rate of current heroin use decreased from 0.06 to 0.02 percent among females aged 12 or older, and the rate of current nonmedical use of stimulants declined from 0.6 to 0.4 percent among males in that age group.

**Figure 2.7 Past Month Illicit Drug Use among Adults Aged 50 to 59: 2002-2007**



<sup>+</sup> Difference between this estimate and the 2007 estimate is statistically significant at the .05 level.

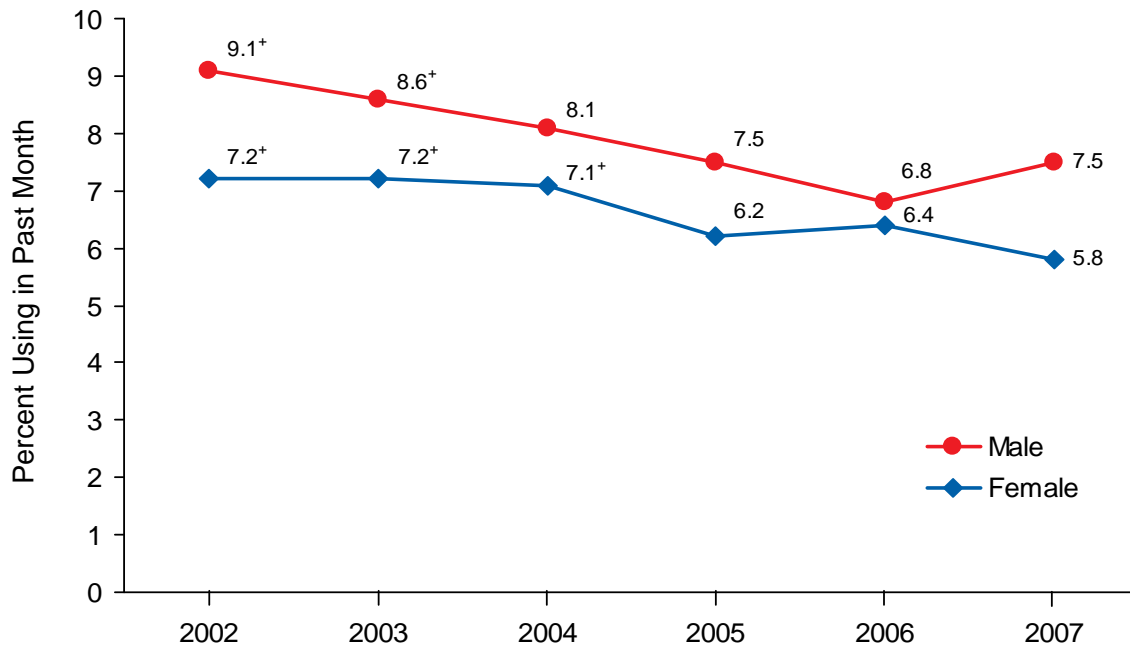
- Among youths aged 12 to 17 in 2007, males and females had similar rates of current use of illicit drugs (10.0 percent for males and 9.1 percent for females), cocaine (0.4 and 0.5 percent, respectively), crack (0.03 and 0.09 percent), hallucinogens (0.8 and 0.6 percent), and inhalants (1.2 and 1.1 percent). Rates also were similar for nonmedical use of prescription psychotherapeutic drugs (3.0 and 3.5 percent for males and females, respectively) and prescription pain relievers (2.5 and 2.8 percent). Current marijuana use, however, was more common among male youths (7.5 percent) than female youths (5.8 percent).

- Past month marijuana use among male youths aged 12 to 17 declined from 9.1 percent in 2002 to 6.8 percent in 2006. In 2007, the rate was 7.5 percent, which was not significantly different from the rate in 2006, but was lower than the rate in 2002 (Figure 2.8). Among female youths, little change occurred from 2002 to 2004, but the rate in 2007 (5.8 percent) was lower than the rate in 2002 (7.2 percent).

### Pregnant Women

- Among pregnant women aged 15 to 44 years, an average of 5.2 percent used illicit drugs in the past month based on combined 2006 and 2007 NSDUH data. This rate was significantly lower than the rate among women in that age group who were not pregnant (9.7 percent). Among pregnant women, the average rate of current illicit drug use did not change significantly between 2004-2005 (3.9 percent) and 2006-2007 (5.2 percent).

**Figure 2.8 Past Month Marijuana Use among Youths Aged 12 to 17, by Gender: 2002-2007**



\* Difference between this estimate and the 2007 estimate is statistically significant at the .05 level.

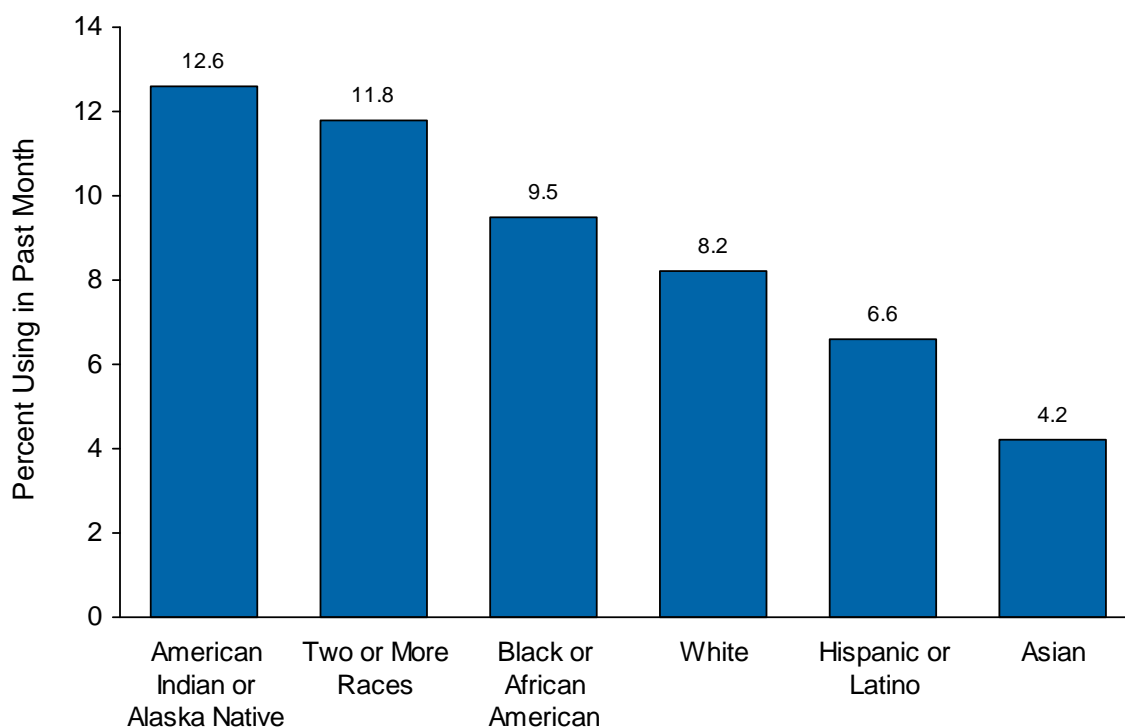
- The rate of current illicit drug use in the combined 2006-2007 data was lower for pregnant women than for nonpregnant women among those aged 18 to 25 (7.2 vs. 16.0 percent, respectively) and among those aged 26 to 44 (3.0 vs. 6.5 percent). Among women aged 15 to 17, however, those who were pregnant had a higher rate of use (22.6 percent) than those who were not pregnant (13.3 percent). For nonpregnant women aged 15 to 17, current illicit drug use decreased from 14.7 to 13.3 percent between 2004-2005 and 2006-2007.



## Race/Ethnicity

- Current illicit drug use varied by race/ethnicity in 2007 among persons aged 12 or older, with the lowest rate among Asians (4.2 percent) (Figure 2.9). Rates were 12.6 percent for American Indians or Alaska Natives, 11.8 percent for persons reporting two or more races, 9.5 percent for blacks, 8.2 percent for whites, and 6.6 percent for Hispanics.
- There were no statistically significant changes between 2006 and 2007 in the rate of current illicit drug use for any racial/ethnic group among persons aged 12 or older.

**Figure 2.9 Past Month Illicit Drug Use among Persons Aged 12 or Older, by Race/Ethnicity: 2007**



Note: Due to low precision, the estimate for Native Hawaiians or Other Pacific Islanders is not shown.

## Education

- Illicit drug use in 2007 varied by educational status. Among adults aged 18 or older, the rate of current illicit drug use was lower for college graduates (5.1 percent) than for those who did not graduate from high school (9.3 percent), high school graduates (8.6 percent), and those with some college (8.9 percent). However, adults who had graduated from college were more likely to have tried illicit drugs in their lifetime when compared with adults who had not completed high school (51.8 vs. 36.0 percent). Rates of current illicit drug use remained stable from 2006 to 2007 for each category of education among adults.

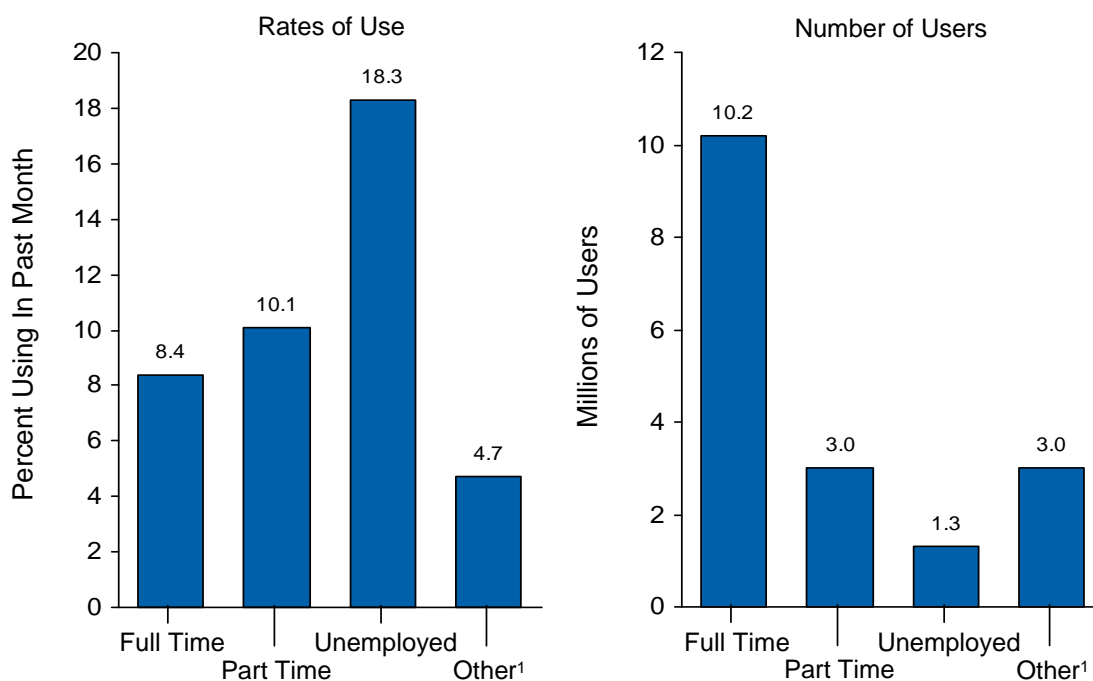
## College Students

- Among persons aged 18 to 22 years old, the rate of current use of illicit drugs in 2007 was lower among full-time college students (19.8 percent) than among other persons in that age group (22.8 percent), which includes part-time college students, students in other grades, and nonstudents. Current illicit drug use among college students and other 18 to 22 year olds did not change between 2006 and 2007.
- Among full-time college students aged 18 to 22, there were declines from 2006 to 2007 in the current rate of use of hallucinogens (from 1.9 to 1.0 percent), Ecstasy (1.2 to 0.5 percent), and methamphetamine (0.3 to 0.1 percent). Among persons aged 18 to 22 who were not full-time college students, there were decreases in the rate of cocaine use (from 2.7 to 2.1 percent) and nonmedical use of stimulants (from 1.5 to 0.9 percent).

## Employment

- Current illicit drug use differed by employment status in 2007. Among adults aged 18 or older, the rate of drug use was higher for unemployed persons (18.3 percent) than for those who were employed full time (8.4 percent) or part time (10.1 percent) (Figure 2.10). These rates were all similar to the corresponding rates in 2006.

**Figure 2.10 Past Month Illicit Drug Use among Persons Aged 18 or Older, by Employment Status: 2007**



<sup>1</sup>The Other Employment category includes retired persons, disabled persons, homemakers, students, or other persons not in the labor force.

- Although the rate of past month illicit drug use was higher among unemployed persons compared with those from other employment groups, most drug users were employed. Of the estimated 17.4 million current illicit drug users aged 18 or older in 2007, 13.1 million (75.3 percent) were employed either full or part time.

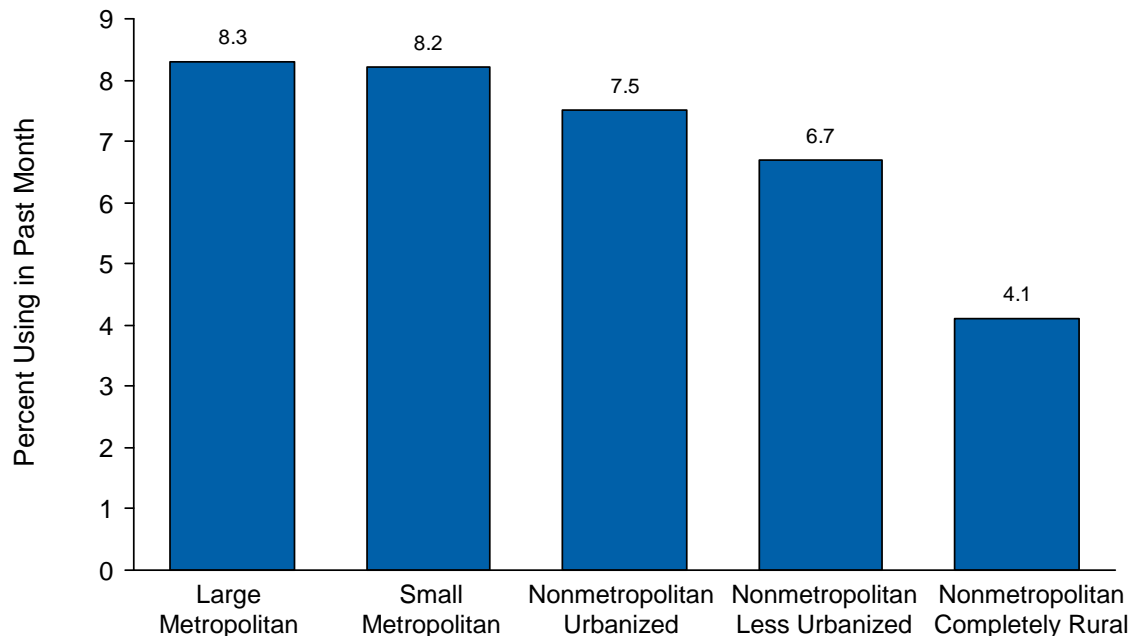
### **Geographic Area**

- Among persons aged 12 or older, the rate of current illicit drug use in 2007 was 9.3 percent in the West, 7.9 percent in the Midwest, 7.8 percent in the Northeast, and 7.4 percent in the South.
- Among youths aged 12 to 17, current marijuana use declined from 2002 to 2007 in each region, although the difference was not significant in the West. In the Northeast, marijuana use rates declined from 9.5 percent in 2002 to 7.2 percent in 2007. In the Midwest, the rate declined from 8.1 percent in 2002 to 6.9 percent in 2005 and remained stable through 2007. In the South, the rate decreased from 2002 to 2004 and then remained reasonably stable through 2007. In the West, the rate did not change significantly from 2002 through 2004 (8.0 percent in 2002, 8.7 percent in 2003, and 9.3 percent in 2004), but then declined to 6.8 percent in 2005 and remained around that level through 2007.
- In 2007, the rate of current illicit drug use among persons aged 12 or older was higher in metropolitan areas than in nonmetropolitan areas. The rates were 8.3 percent in large metropolitan counties, 8.2 percent in small metropolitan counties, and 6.7 percent in nonmetropolitan counties as a group (Figure 2.11). Within nonmetropolitan areas, the rate was 7.5 percent in urbanized counties, 6.7 percent in less urbanized counties, and 4.1 percent in completely rural counties.
- The rate of current illicit drug use among the population aged 12 or older in completely rural counties in 2007 (4.1 percent) was lower than that observed in 2006 (7.8 percent).

### **Criminal Justice Populations**

- In 2007, there were an estimated 1.6 million adults aged 18 or older on parole or other supervised release from prison during the past year. Almost one fourth of these (24.1 percent) were current illicit drug users, higher than the 7.7 percent among adults not on parole or supervised release.
- Among the 5.1 million adults on probation at some time in the past year, 28.4 percent reported current illicit drug use in 2007. This was higher than the rate of 7.4 percent among adults not on probation in 2007.

**Figure 2.11 Past Month Illicit Drug Use among Persons Aged 12 or Older, by County Type: 2007**



### Frequency of Use

- In 2007, an estimated 14.2 percent of past year marijuana users aged 12 or older used marijuana on 300 or more days within the past 12 months. This translates into 3.6 million using marijuana on a daily or almost daily basis over a 12-month period, higher than the estimate of 3.1 million (12.3 percent of past year users) in 2006. Among past month marijuana users aged 12 or older, 35.3 percent (5.1 million) used the drug on 20 or more days in the past month.

### Association with Cigarette and Alcohol Use

- In 2007, the rate of current illicit drug use was almost 9 times higher among youths aged 12 to 17 who smoked cigarettes in the past month (47.3 percent) than it was among youths who did not smoke cigarettes in the past month (5.4 percent).
- Past month illicit drug use also was associated with the level of past month alcohol use. Among youths aged 12 to 17 in 2007 who were heavy drinkers (i.e., consumed five or more drinks on the same occasion on each of 5 or more days in the past 30 days), 60.1 percent also were current illicit drug users, which was higher than the rate among nondrinkers (5.0 percent).

## **Driving Under the Influence of Illicit Drugs**

- In 2007, 9.9 million persons aged 12 or older reported driving under the influence of illicit drugs during the past year. This corresponds to 4.0 percent of the population in that age group, similar to the rate in 2006 (4.2 percent), but lower than the rate in 2002 (4.7 percent). In 2007, the rate was highest among young adults aged 18 to 25 (12.5 percent).

## **Source of Prescription Drugs**

- Past year nonmedical users of prescription-type psychotherapeutic drugs are asked how they obtained the drugs they recently used nonmedically. In both 2006 and 2007, over half of the nonmedical users of prescription-type pain relievers, tranquilizers, stimulants, and sedatives aged 12 or older said they got the drugs they used most recently "from a friend or relative for free." In a follow-up question, the majority of these respondents indicated that their friend or relative had obtained the drugs from one doctor.
- Among persons aged 12 or older in 2007 who used pain relievers nonmedically in the past 12 months, 56.5 percent said they got the pain relievers they most recently used from a friend or relative for free. Another 8.9 percent bought them from a friend or relative, and 5.2 percent reported stealing them from a friend or relative. Nearly one fifth (18.1 percent) indicated that they got the drugs from one doctor. Around 1 in 20 users (4.1 percent) got pain relievers from a drug dealer or other stranger, and 0.5 percent said they bought them on the Internet.
- In 81.0 percent of the cases in 2007 where nonmedical users of prescription pain relievers aged 12 or older obtained the drugs from a friend or relative for free, the individuals indicated that their friend or relative had obtained them from just one doctor. Only 1.8 percent reported that the friend or relative had bought the drugs from a drug dealer or other stranger.
- In 2007, 44.3 percent of past year methamphetamine users aged 12 or older reported that they obtained the methamphetamine they used most recently from a friend or relative for free. Another 30.4 percent bought it from a friend or relative. Around one in five users (19.8 percent) bought it from a drug dealer or other stranger.



## 3. Alcohol Use

The National Survey on Drug Use and Health (NSDUH) includes questions about the recency and frequency of consumption of alcoholic beverages, such as beer, wine, whiskey, brandy, and mixed drinks. An extensive list of examples of the kinds of beverages covered is given to respondents prior to the question administration. 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. Times when the respondent only had a sip or two from a drink are not considered to be consumption. For this report, estimates for the prevalence of alcohol use are reported primarily at three levels defined for both males and females and for all ages as follows:

Current (past month) use - At least one drink in the past 30 days.

Binge use - 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 past 30 days.

Heavy use - Five or more drinks on the same occasion on each of 5 or more days in the past 30 days.

These levels are not mutually exclusive categories of use; heavy use is included in estimates of binge and current use, and binge use is included in estimates of current use.

This chapter is divided into two main sections. Section 3.1 describes trends and patterns of alcohol use among the population aged 12 or older. Section 3.2 is particularly concerned with the use of alcohol by persons aged 12 to 20. These persons are under the legal drinking age in all 50 States and the District of Columbia.

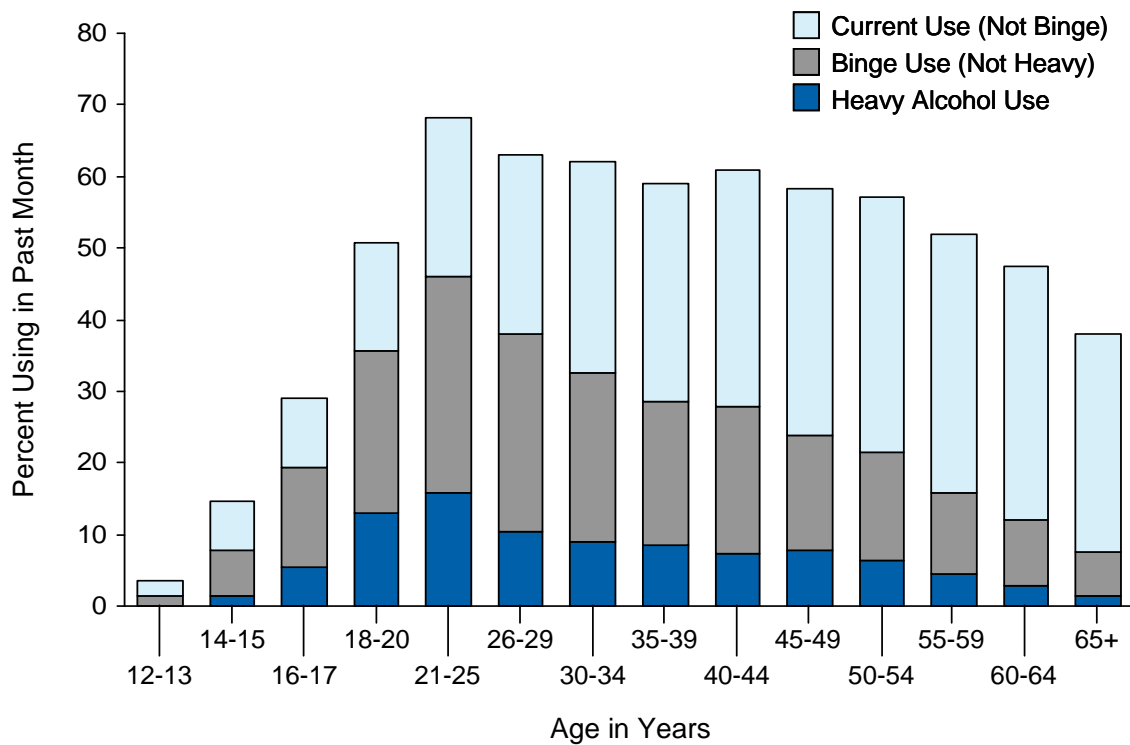
### 3.1. Alcohol Use among Persons Aged 12 or Older

- Slightly more than half of Americans aged 12 or older reported being current drinkers of alcohol in the 2007 survey (51.1 percent). This translates to an estimated 126.8 million people, which is similar to the 2006 estimate of 125.3 million people (50.9 percent).
- More than one fifth (23.3 percent) of persons aged 12 or older participated in binge drinking at least once in the 30 days prior to the survey in 2007. This translates to about 57.8 million people. The rate in 2007 is similar to the rate in 2006 (23.0 percent).
- In 2007, heavy drinking was reported by 6.9 percent of the population aged 12 or older, or 17.0 million people. This percentage is the same as the rate of heavy drinking in 2006 (6.9 percent).

## Age

- In 2007, rates of current alcohol use were 3.5 percent among persons aged 12 or 13, 14.7 percent of persons aged 14 or 15, 29.0 percent of 16 or 17 year olds, 50.7 percent of those aged 18 to 20, and 68.3 percent of 21 to 25 year olds (Figure 3.1). Among older age groups, the prevalence of current alcohol use decreased with increasing age, from 63.2 percent among 26 to 29 year olds to 47.6 percent among 60 to 64 year olds and 38.1 percent among people aged 65 or older.

**Figure 3.1 Current, Binge, and Heavy Alcohol Use among Persons Aged 12 or Older, by Age: 2007**



- Rates of binge alcohol use in 2007 were 1.5 percent among 12 or 13 year olds, 7.8 percent among 14 or 15 year olds, 19.4 percent among 16 or 17 year olds, 35.7 percent among persons aged 18 to 20, and peaked among those aged 21 to 25 at 45.9 percent. The rate decreased beyond young adulthood from 35.1 percent of 26 to 34 year olds to 18.9 percent of persons aged 35 or older.
- The rate of binge drinking was 41.8 percent for young adults aged 18 to 25. Heavy alcohol use was reported by 14.7 percent of persons aged 18 to 25. These rates are similar to the rates in 2006 (42.2 and 15.6 percent, respectively).



- Persons aged 65 or older had lower rates of binge drinking (7.6 percent) than adults in other age groups. The rate of heavy drinking among persons aged 65 or older was 1.4 percent.
- The rate of current alcohol use among youths aged 12 to 17 was 15.9 percent in 2007. Youth binge and heavy drinking rates were 9.7 and 2.3 percent, respectively. These rates are essentially the same as the 2006 rates (16.6, 10.3, and 2.4 percent, respectively).

### **Gender**

- In 2007, 56.6 percent of males aged 12 or older were current drinkers, higher than the rate for females (46.0 percent). However, among youths aged 12 to 17, the percentage of males who were current drinkers (15.9 percent) was similar to the rate for females (16.0 percent).
- Among adults aged 18 to 25, an estimated 57.1 percent of females and 65.3 percent of males reported current drinking in 2007. These rates are similar to those reported in 2006 (57.9 and 65.9 percent, respectively).

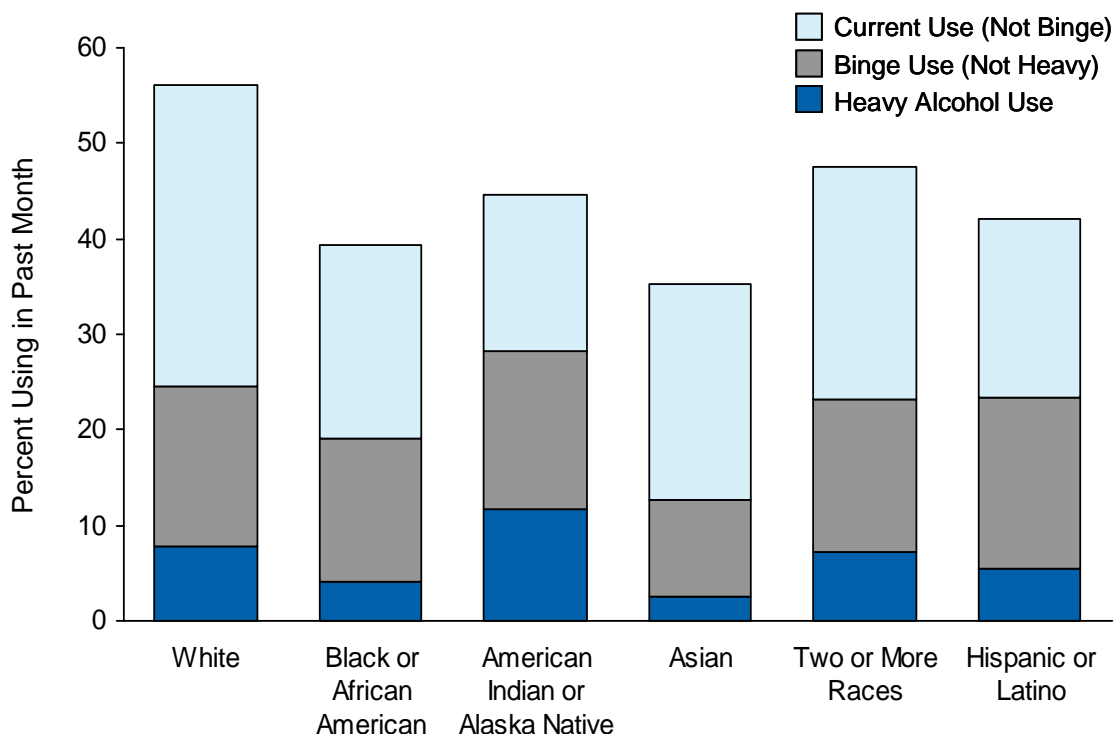
### **Pregnant Women**

- Among pregnant women aged 15 to 44, an estimated 11.6 percent reported current alcohol use, 3.7 percent reported binge drinking, and 0.7 percent reported heavy drinking. These rates were significantly lower than the rates for nonpregnant women in the same age group (53.2, 24.1, and 5.5 percent, respectively). Binge drinking during the first trimester of pregnancy was reported by 6.6 percent of pregnant women aged 15 to 44. All of these estimates by pregnancy status are based on data averaged over 2006 and 2007.

### **Race/Ethnicity**

- Among persons aged 12 or older, whites in 2007 were more likely than other racial/ethnic groups to report current use of alcohol (56.1 percent) (Figure 3.2). The rates were 47.5 percent for persons reporting two or more races, 44.7 percent for American Indians or Alaska Natives, 42.1 percent for Hispanics, 39.3 percent for blacks, and 35.2 percent for Asians.
- The rate of binge alcohol use was lowest among Asians (12.6 percent). Rates for other racial/ethnic groups were 19.1 percent for blacks, 23.2 percent for persons reporting two or more races, 23.4 percent for Hispanics, 24.6 percent for whites, and 28.2 percent for American Indians or Alaska Natives.
- Among youths aged 12 to 17 in 2007, whites had higher rates of current alcohol use than any other racial/ethnic group. In 2007, 18.2 percent of white youths were current drinkers, while 8.1 percent of Asian youths, 10.1 percent of black youths, 12.5 percent of those reporting two or more races, and 15.2 percent of Hispanic youths used alcohol in the past month.

**Figure 3.2 Current, Binge, and Heavy Alcohol Use among Persons Aged 12 or Older, by Race/Ethnicity: 2007**



Note: Due to low precision, estimates for Native Hawaiians or Other Pacific Islanders are not shown.

### Education

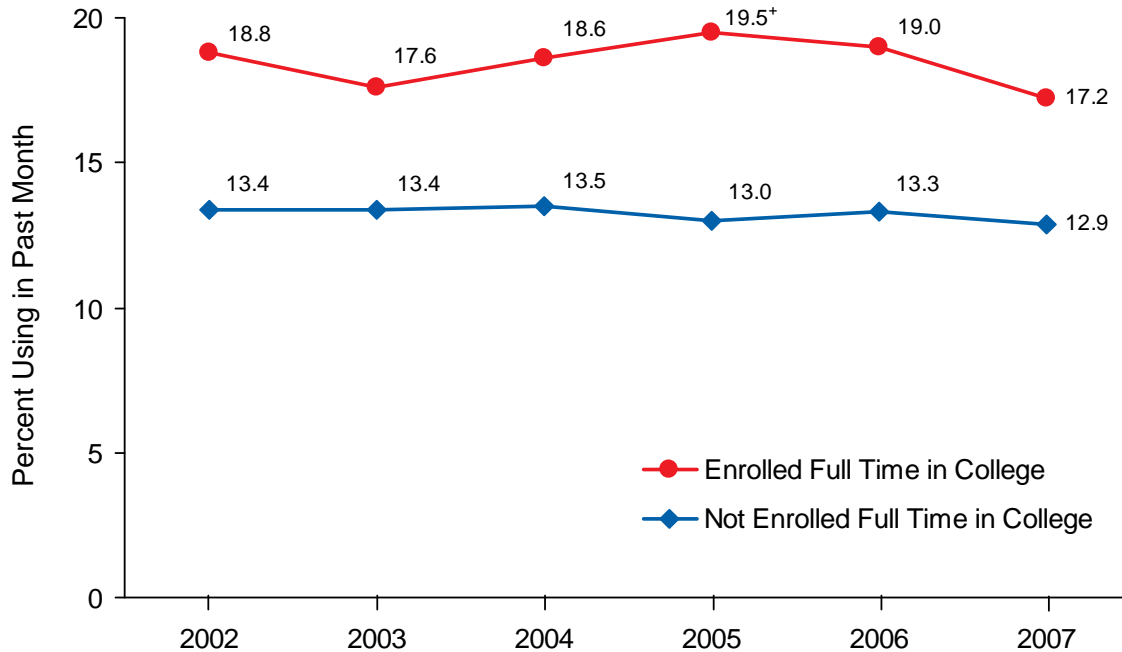
- Among adults aged 18 or older, the rate of past month alcohol use increased with increasing levels of education. Among adults with less than a high school education, 36.5 percent were current drinkers in 2007, significantly lower than the 68.5 percent of college graduates who were current drinkers. However, among adults aged 26 or older, binge and heavy alcohol use rates were lower among college graduates (20.1 and 4.8 percent, respectively) than among those who had not completed college (22.7 vs. 6.7 percent, respectively).

### College Students

- Young adults aged 18 to 22 enrolled full time in college were more likely than their peers not enrolled full time (i.e., part-time college students and persons not currently enrolled in college) to use alcohol in the past month, binge drink, and drink heavily. Past month alcohol use was reported by 63.7 percent of full-time college students compared with 53.5 percent of persons aged 18 to 22 who were not enrolled full time. Binge and heavy use rates for college students were 43.6 and 17.2 percent, respectively, compared with 38.4 and 12.9 percent, respectively, for 18 to 22 year olds not enrolled full time in college.

- The pattern of higher rates of current alcohol use, binge alcohol use, and heavy alcohol use among full-time college students compared with rates for others aged 18 to 22 has remained consistent since 2002 (Figure 3.3).

**Figure 3.3 Heavy Alcohol Use among Adults Aged 18 to 22, by College Enrollment: 2002-2007**



<sup>+</sup> Difference between this estimate and the 2007 estimate is statistically significant at the .05 level.

### Employment

- Rates of current alcohol use were 62.8 percent for full-time employed adults aged 18 or older in 2007, higher than the rate for unemployed adults (56.9 percent). However, the rate of heavy use for unemployed persons was 12.0 percent, which was higher than the rate of 8.8 percent for full-time employed persons. There was no significant difference in binge alcohol use rates between full-time employed adults (30.2 percent) and unemployed adults (32.2 percent).
- Most binge and heavy alcohol users were employed in 2007. Among 55.3 million adult binge drinkers, 44.0 million (79.4 percent) were employed either full or part time. Among 16.4 million heavy drinkers, 13.1 million (79.6 percent) were employed.

### Geographic Area

- The rate of past month alcohol use for people aged 12 or older in 2007 was lower in the South (46.8 percent) than in the Northeast (56.0 percent), Midwest (54.6 percent), or West (50.8 percent).

- Among people aged 12 or older, the rate of past month alcohol use in large metropolitan areas (53.5 percent) was higher than the 50.9 percent in small metropolitan areas and 44.0 percent in nonmetropolitan areas. Binge drinking was equally prevalent in small metropolitan areas (23.4 percent), large metropolitan areas (23.3 percent), and nonmetropolitan areas (23.0 percent). The rate of binge alcohol use in nonmetropolitan urbanized areas increased from 21.9 percent in 2006 to 25.7 percent in 2007.
- The rates of binge alcohol use among youths aged 12 to 17 were 11.6 percent in nonmetropolitan areas, 9.4 percent in small metropolitan areas, and 9.3 percent in large metropolitan areas.

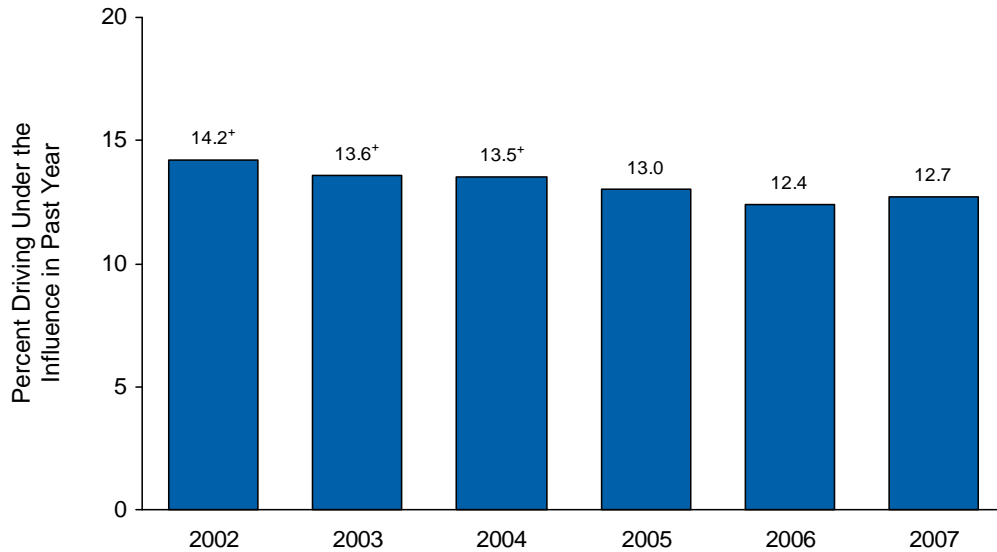
### **Association with Illicit Drug and Tobacco Use**

- The level of alcohol use was associated with illicit drug use in 2007. Among the 17.0 million heavy drinkers aged 12 or older, 31.3 percent were current illicit drug users. Persons who were not current alcohol users were less likely to have used illicit drugs in the past month (3.4 percent) than those who reported (a) current use of alcohol but did not meet the criteria for binge or heavy use (5.5 percent), (b) binge use but did not meet the criteria for heavy use (16.1 percent), or (c) heavy use of alcohol (31.3 percent).
- Alcohol consumption levels also were associated with tobacco use. Among heavy alcohol users aged 12 or older, 58.1 percent smoked cigarettes in the past month, while only 19.0 percent of non-binge current drinkers and 16.4 percent of persons who did not drink alcohol in the past month were current smokers. Smokeless tobacco use and cigar use also were more prevalent among heavy drinkers (12.3 and 17.5 percent, respectively) than among non-binge drinkers (2.0 and 4.3 percent) and nondrinkers (1.9 and 2.2 percent).

### **Driving Under the Influence of Alcohol**

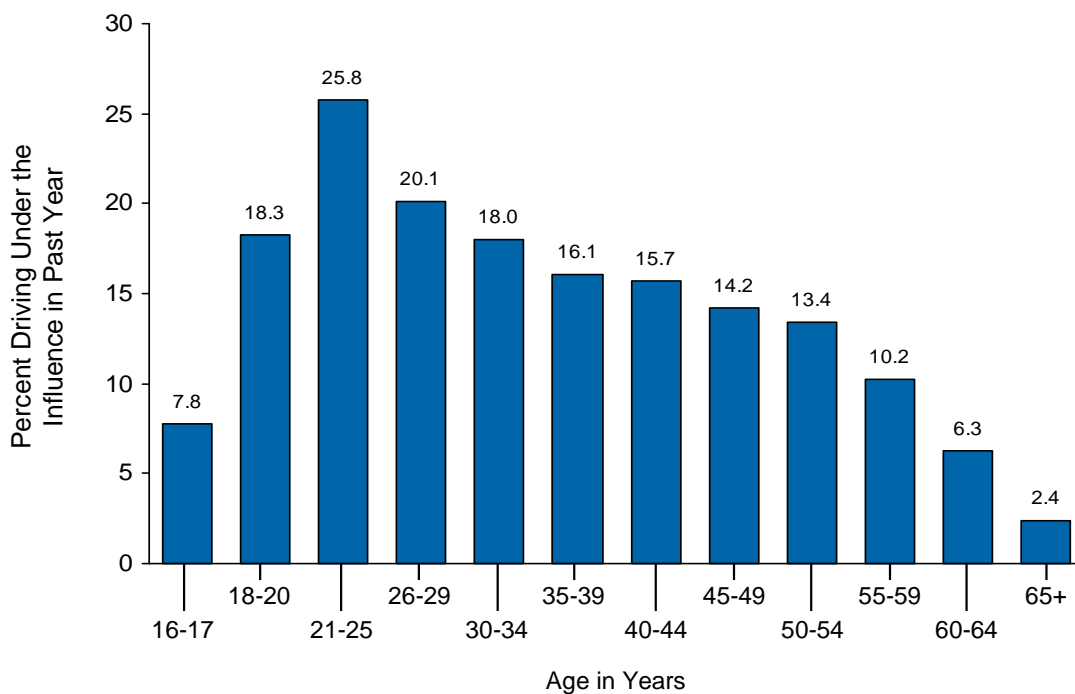
- In 2007, an estimated 12.7 percent of persons aged 12 or older drove under the influence of alcohol at least once in the past year (Figure 3.4). This percentage has dropped slightly since 2002, when it was 14.2 percent. The 2007 estimate corresponds to 31.4 million persons. From 2006 to 2007, the rate of driving under the influence of alcohol among young adults aged 18 to 25 decreased from 24.4 to 22.8 percent.
- Driving under the influence of alcohol was associated with age in 2007. An estimated 7.8 percent of 16 or 17 year olds, 18.3 percent of 18 to 20 year olds, and 25.8 percent of 21 to 25 year olds reported driving under the influence of alcohol in the past year (Figure 3.5). Beyond age 25, these rates showed a general decline with increasing age.
- Among persons aged 12 or older, males were nearly twice as likely as females (16.6 vs. 9.0 percent) to drive under the influence of alcohol in the past year.

**Figure 3.4 Driving Under the Influence of Alcohol in the Past Year among Persons Aged 12 or Older: 2002-2007**



\* Difference between this estimate and the 2007 estimate is statistically significant at the .05 level.

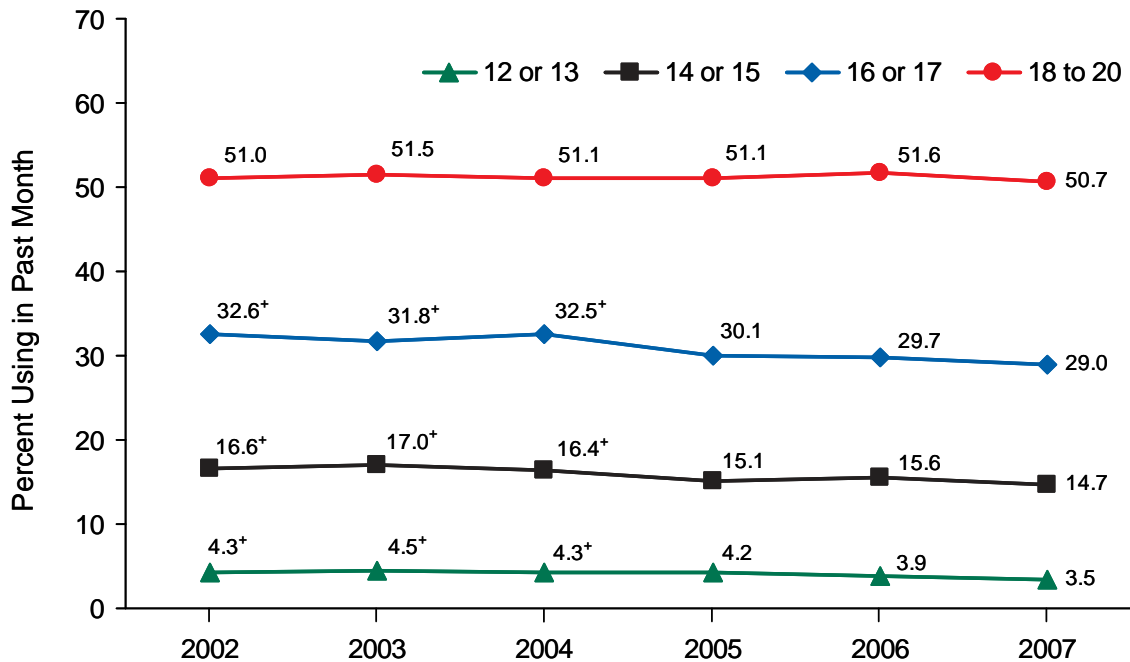
**Figure 3.5 Driving Under the Influence of Alcohol in the Past Year among Persons Aged 16 or Older, by Age: 2007**



### 3.2. Underage Alcohol Use

- In 2007, about 10.7 million persons aged 12 to 20 (27.9 percent of this age group) reported drinking alcohol in the past month. Approximately 7.2 million (18.6 percent) were binge drinkers, and 2.3 million (6.0 percent) were heavy drinkers. These figures have remained essentially the same since the 2002 survey.
- Rates of current alcohol use increased with increasing age among underage persons. In 2007, 3.5 percent of persons aged 12 or 13, 14.7 percent of persons aged 14 or 15, 29.0 percent of 16 or 17 year olds, and 50.7 percent of 18 to 20 year olds drank alcohol during the 30 days before they were surveyed. This pattern has remained stable since 2002 (Figure 3.6).

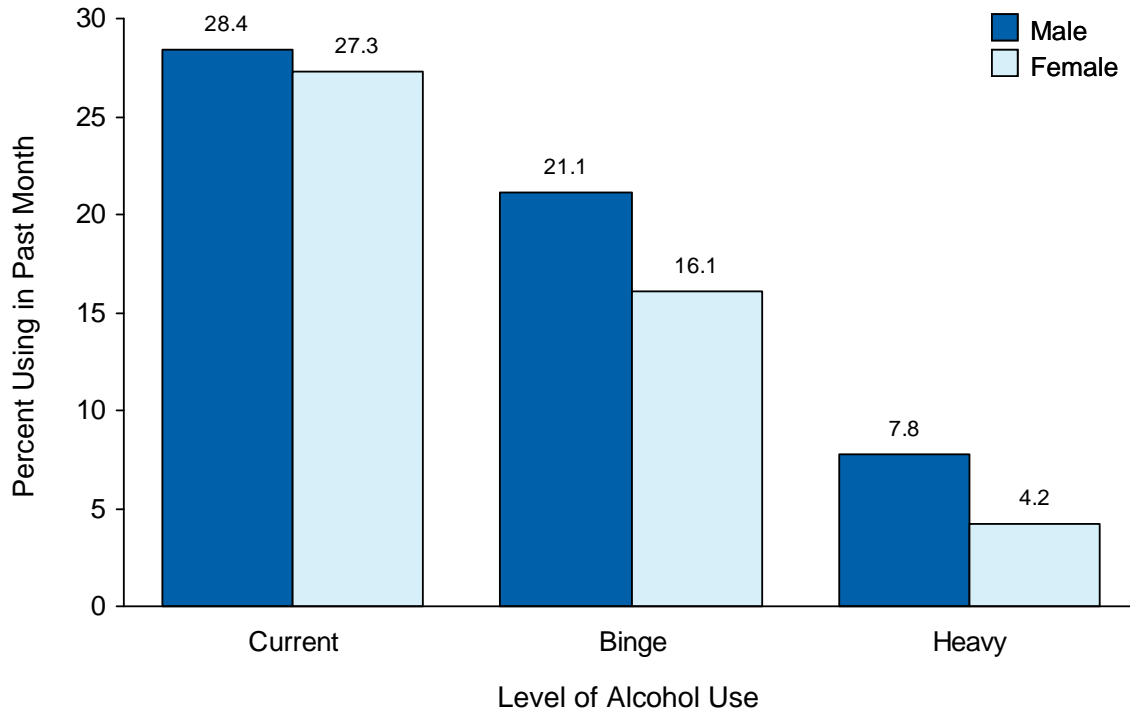
**Figure 3.6 Current Alcohol Use among Persons Aged 12 to 20, by Age: 2002-2007**



<sup>+</sup> Difference between this estimate and the 2007 estimate is statistically significant at the .05 level.

- More males than females aged 12 to 20 reported binge drinking (21.1 vs. 16.1 percent) and heavy drinking (7.8 vs. 4.2 percent) in 2007 (Figure 3.7). However, rates of current alcohol use were similar by gender (28.4 percent for males and 27.3 percent for females).

**Figure 3.7 Current, Binge, and Heavy Alcohol Use among Persons Aged 12 to 20, by Gender: 2007**



- Among persons aged 12 to 20, past month alcohol use rates in 2007 were 16.8 percent among Asians, 18.3 percent among blacks, 24.7 percent among Hispanics, 26.2 percent among those reporting two or more races, 28.3 percent among American Indians or Alaska Natives, and 32.0 percent among whites.
- In 2007, among persons aged 12 to 20, binge drinking was reported by 22.4 percent of whites, 16.7 percent of Hispanics, and 16.4 percent of persons reporting two or more races, but only by 9.6 percent of Asians and 8.4 percent of blacks.
- Across geographic regions in 2007, underage current alcohol use rates were higher in the Northeast (31.4 percent) and Midwest (29.1 percent) than in the South (25.7 percent). The rate in the West (27.3 percent) was similar to rates in the South and Midwest regions, but was significantly lower than the rate in the Northeast.
- In 2007, underage current alcohol use rates were higher in small metropolitan areas (29.2 percent) compared with large metropolitan areas (26.9 percent) and similar in small metropolitan areas and nonmetropolitan areas (28.8 percent). The rate in completely rural nonmetropolitan areas was 24.6 percent.

- In 2007, 80.9 percent of current drinkers aged 12 to 20 were with two or more other people the last time they drank alcohol, 14.1 percent were with one other person the last time they drank, and 4.9 percent were alone.
- A majority of underage current drinkers in 2007 reported that their last use of alcohol in the past month occurred either in someone else's home (56.3 percent) or their own home (29.4 percent). Underage males were more likely than females to have been in their own home on their last drinking occasion (31.3 vs. 27.3 percent), whereas females were more likely than males to have been in a restaurant, bar, or club on their last drinking occasion (12.8 vs. 6.1 percent).
- Among underage current drinkers in 2007, 30.2 percent paid for the alcohol the last time they drank, including 8.2 percent who purchased the alcohol themselves and 21.8 percent who gave money to someone else to purchase it.
- Among underage drinkers who did not pay for the alcohol the last time they drank, the most common source was an unrelated person aged 21 or older (37.2 percent). Other underage persons provided the alcohol on the last occasion 20.7 percent of the time. Parents, guardians, or other adult family members provided the alcohol 19.5 percent of the time. Other sources of alcohol for underage drinkers included (a) took the alcohol from home (5.5 percent), (b) took it from someone else's home (3.4 percent), and (c) got it some other way (8.5 percent).
- Underage drinkers were more likely than persons aged 21 or older to use illicit drugs within 2 hours of alcohol use on their last reported drinking occasion (16.3 vs. 4.5 percent, respectively). The most commonly reported illicit drug used by underage drinkers in combination with alcohol was marijuana, which was used within 2 hours of alcohol use by 15.3 percent of current underage drinkers (1.6 million persons) on their last drinking occasion.

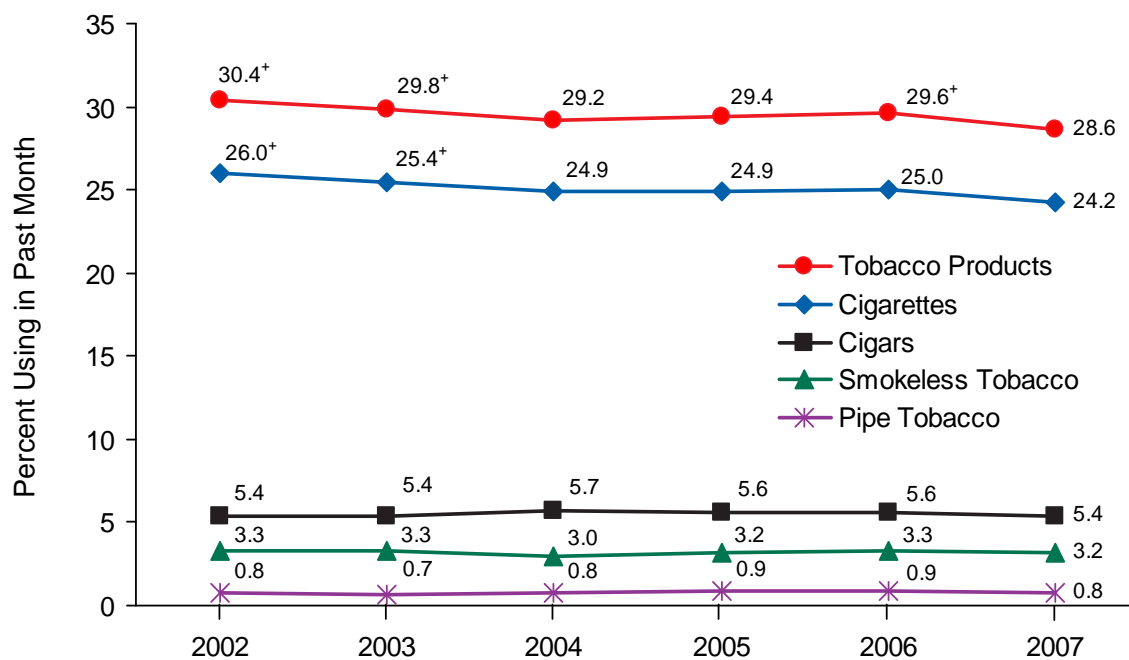


## 4. Tobacco Use

The National Survey on Drug Use and Health (NSDUH) includes a series of questions about the use of tobacco products, including cigarettes, chewing tobacco, snuff, cigars, and pipe tobacco. Cigarette use is defined as smoking "part or all of a cigarette." For analytic purposes, data for chewing tobacco and snuff are combined as "smokeless tobacco."

- In 2007, an estimated 70.9 million Americans aged 12 or older were current (past month) users of a tobacco product. This represents 28.6 percent of the population in that age range. In addition, 60.1 million persons (24.2 percent of the population) were current cigarette smokers; 13.3 million (5.4 percent) smoked cigars; 8.1 million (3.2 percent) used smokeless tobacco; and 2.0 million (0.8 percent) smoked tobacco in pipes (Figure 4.1).
- The rate of current use of any tobacco product among persons aged 12 or older decreased from 29.6 percent in 2006 to 28.6 percent in 2007, but the rates of current use of cigarettes, smokeless tobacco, cigars, and pipe tobacco did not change significantly over that period. Between 2002 and 2007, past month use of any tobacco product decreased from 30.4 to 28.6 percent, and past month cigarette use declined from 26.0 to 24.2 percent. Rates of past month use of cigars, smokeless tobacco, and pipe tobacco were similar in 2002 and 2007.

**Figure 4.1 Past Month Tobacco Use among Persons Aged 12 or Older: 2002-2007**

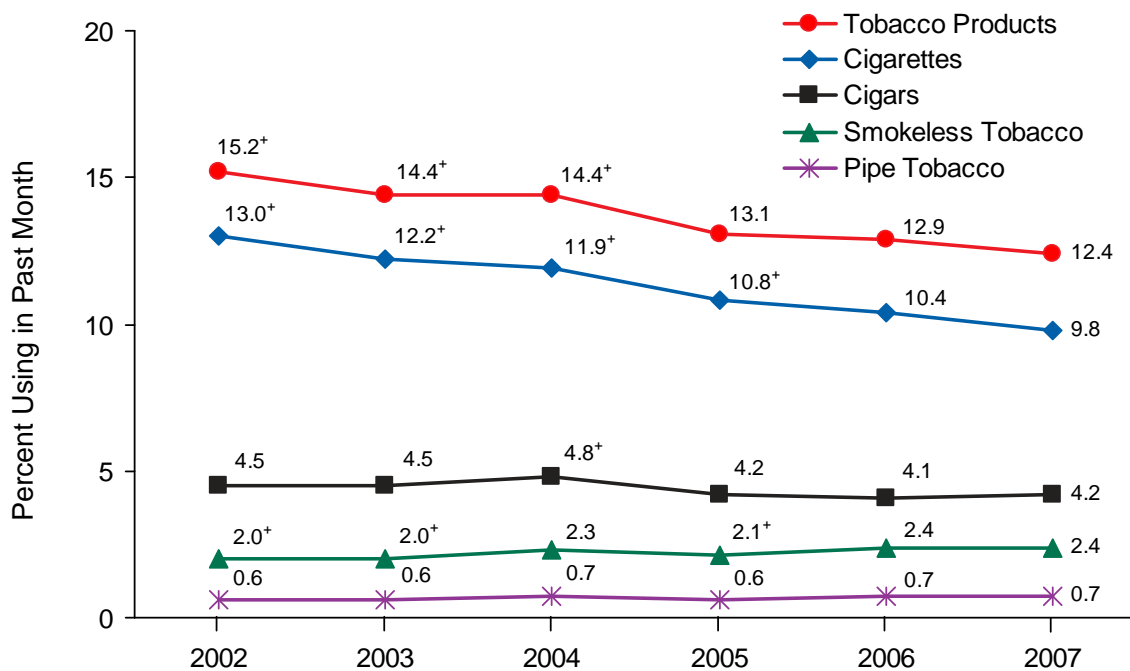


<sup>+</sup> Difference between this estimate and the 2007 estimate is statistically significant at the .05 level.

## Age

- Young adults aged 18 to 25 had the highest rate of current use of a tobacco product (41.8 percent) and of each specific product compared with youths aged 12 to 17 and adults aged 26 or older. In 2007, the rates of past month use among young adults were 36.2 percent for cigarettes, 11.8 percent for cigars, 5.3 percent for smokeless tobacco, and 1.2 percent for pipe tobacco. The rate of current use of a tobacco product by young adults decreased from 2006 to 2007 (43.9 vs. 41.8 percent), as did the rate of cigarette use (38.4 vs. 36.2 percent). These decreases from 2006 to 2007 in current use of any tobacco product and cigarettes continue declines seen from 2002 to 2006 among young adults; in 2002, the rates were 45.3 and 40.8 percent, respectively. However, the rate of current use of cigars by young adults was higher in 2007 than in 2002 (11.8 vs. 11.0 percent).
- Among youths aged 12 to 17 in 2007, 3.1 million (12.4 percent) used a tobacco product in the past month, 2.5 million (9.8 percent) used cigarettes, and 1.1 million (4.2 percent) used cigars (Figure 4.2). The rate of past month cigarette use among 12 to 17 year olds declined from 13.0 percent in 2002 to 9.8 percent in 2007. Past month use of smokeless tobacco, however, was higher in 2007 (2.4 percent) than in 2002 (2.0 percent).

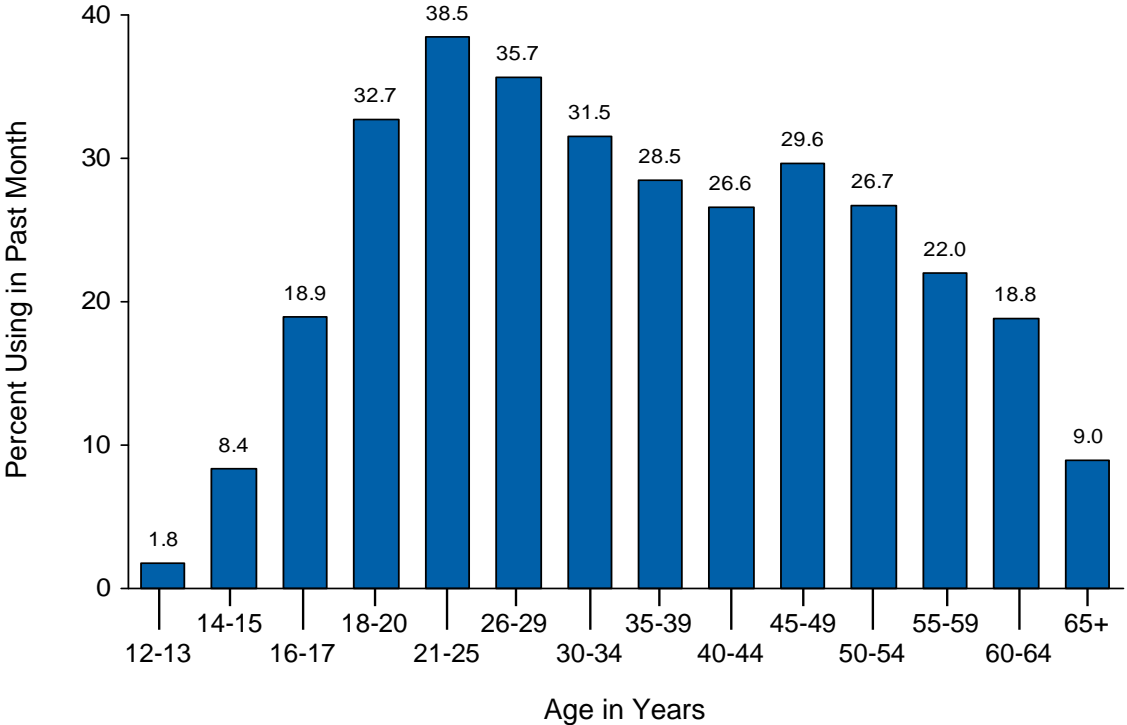
**Figure 4.2 Past Month Tobacco Use among Youths Aged 12 to 17: 2002-2007**



<sup>+</sup> Difference between this estimate and the 2007 estimate is statistically significant at the .05 level.

- In 2007, 1.8 percent of 12 or 13 year olds, 8.4 percent of 14 or 15 year olds, and 18.9 percent of 16 or 17 year olds were current cigarette smokers (Figure 4.3). Across age groups, current cigarette use peaked at 38.5 percent among persons aged 21 to 25. Less than a quarter (22.0 percent) of persons aged 35 or older in 2007 smoked cigarettes in the past month. From 2006 to 2007, the rate of current cigarette use decreased among persons aged 18 to 20 (from 35.6 to 32.7 percent) and among persons aged 21 to 25 (from 40.2 to 38.5 percent).

**Figure 4.3 Past Month Cigarette Use among Persons Aged 12 or Older, by Age: 2007**

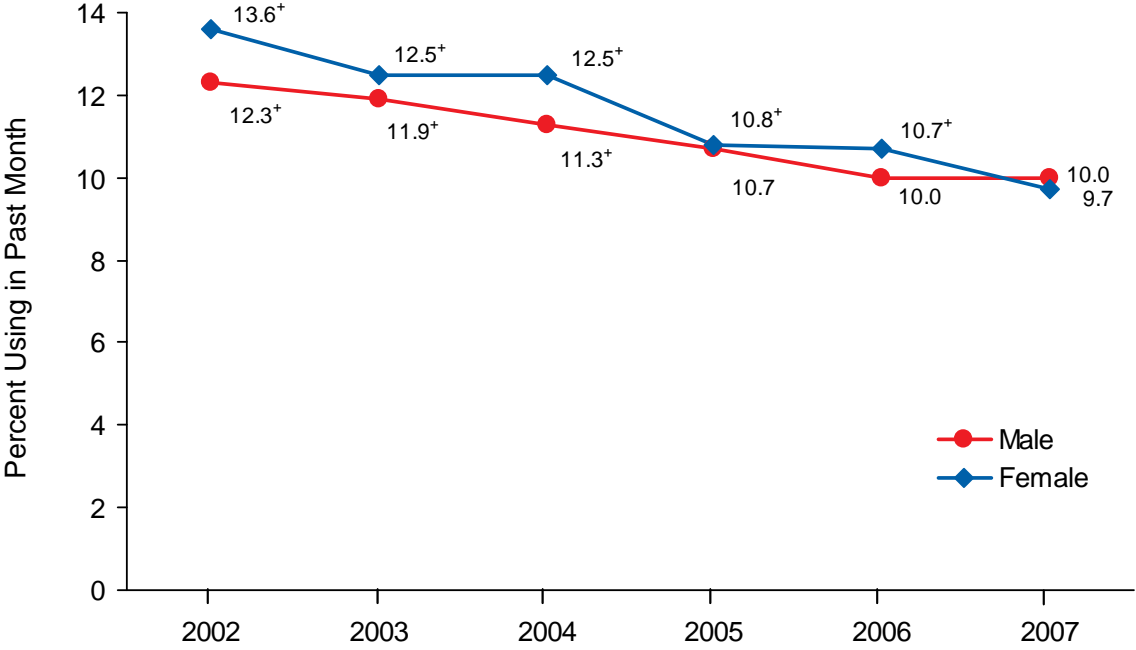


**Gender**

- In 2007, current use of a tobacco product among persons aged 12 or older was reported by a higher percentage of males (35.2 percent) than females (22.4 percent). Males also had higher rates of past month use than females of each specific tobacco product: cigarette smoking (27.1 percent of males vs. 21.5 percent of females), cigar smoking (9.1 vs. 1.8 percent), use of smokeless tobacco (6.3 vs. 0.4 percent), and use of pipe tobacco (1.5 vs. 0.2 percent).

- Among youths aged 12 to 17, the rate of current cigarette smoking in 2007 did not differ significantly for males (10.0 percent) and females (9.7 percent). The rate declined for females between 2006 and 2007 (10.7 vs. 9.7 percent), but remained unchanged for males (10.0 percent in each year). From 2002 to 2007, the rate of current cigarette smoking among youths decreased for both males (from 12.3 to 10.0 percent) and females (from 13.6 to 9.7 percent) (Figure 4.4).

**Figure 4.4 Past Month Cigarette Use among Youths Aged 12 to 17, by Gender: 2002-2007**



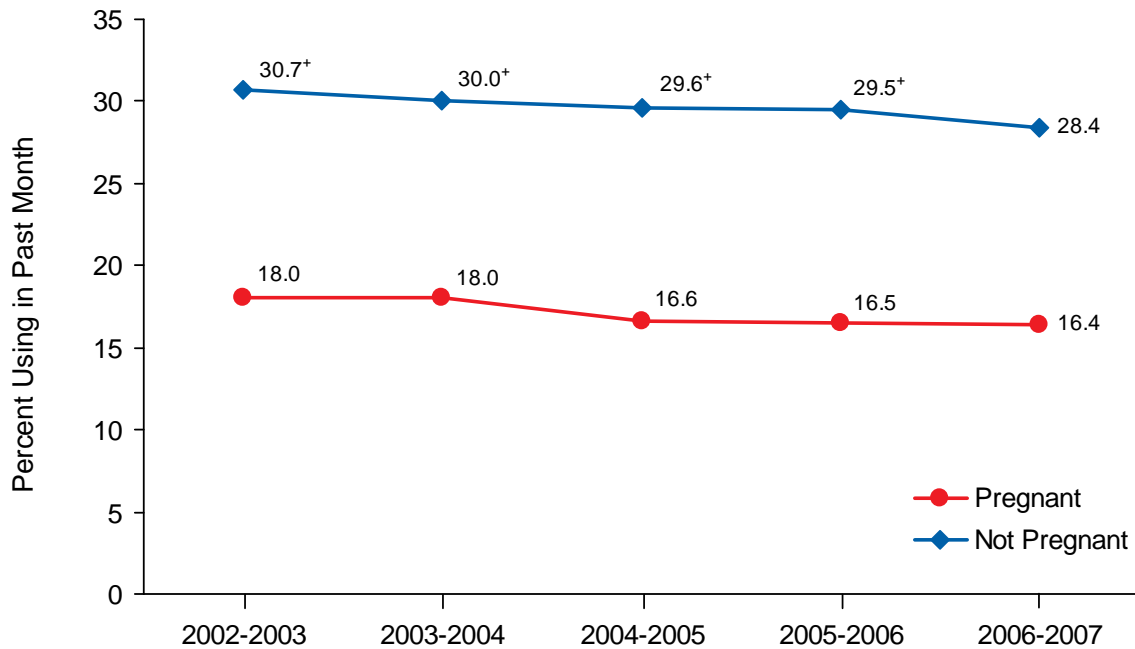
<sup>+</sup> Difference between this estimate and the 2007 estimate is statistically significant at the .05 level.

- Among female young adults aged 18 to 25, current cigarette smoking decreased from 34.9 percent in 2006 to 31.8 percent in 2007. Between 2002 and 2007, the rate of cigarette use among young adults declined for both males (from 44.4 to 40.5 percent) and females (from 37.1 to 31.8 percent). Among male young adults, however, there was an increase in the rate of current cigar smoking over that period (from 16.8 percent in 2002 to 18.4 percent in 2007).

## Pregnant Women

- Among women aged 15 to 44, combined data for 2006 and 2007 indicated that the rate of past month cigarette use was lower among those who were pregnant (16.4 percent) than it was among those who were not pregnant (28.4 percent). This pattern was evident among women aged 18 to 25 (23.3 vs. 33.9 percent for pregnant and nonpregnant women, respectively) and among women aged 26 to 44 (11.6 vs. 28.3 percent, respectively). However, among those aged 15 to 17, the rate of cigarette smoking for pregnant women was higher than for nonpregnant women (24.3 vs. 16.0 percent). A similar pattern in cigarette smoking was observed in the combined 2004-2005 data, although the difference among those aged 15 to 17 was not statistically significant in the data for those years.
- Two-year moving average rates from 2002-2003 to 2006-2007 indicate that current cigarette use among women aged 15 to 44 decreased from 30.7 to 28.4 percent for those who were not pregnant and from 18.0 to 16.4 percent for those who were pregnant, although the latter difference was not statistically significant (Figure 4.5).

**Figure 4.5 Past Month Cigarette Use among Women Aged 15 to 44, by Pregnancy Status: Combined Years 2002-2003 to 2006-2007**



<sup>+</sup> Difference between this estimate and the 2006-2007 estimate is statistically significant at the .05 level.

## **Race/Ethnicity**

- In 2007, the prevalence of current use of a tobacco product among persons aged 12 or older was 15.4 percent for Asians, 22.7 percent for Hispanics, 26.8 percent for blacks, 30.7 percent for whites, 35.2 percent for persons who reported two or more races, and 41.8 percent for American Indians or Alaska Natives. There were no statistically significant changes in past month use of a tobacco product between 2006 and 2007 for any of these racial/ethnic groups. Among the specific tobacco products, smokeless tobacco use in the past month among blacks decreased from 1.7 percent in 2006 to 0.7 percent in 2007.
- In 2007, current cigarette smoking among youths aged 12 to 17 and young adults aged 18 to 25 was more prevalent among whites than blacks (12.2 vs. 6.1 percent for youths and 40.8 vs. 26.2 percent for young adults). Among adults aged 26 or older, however, whites and blacks used cigarettes at about the same rate (24.8 and 25.7 percent, respectively). The rates for Hispanics were 6.7 percent among youths, 29.5 percent among young adults, and 21.0 percent among those aged 26 or older.
- From 2006 to 2007, current cigarette use among whites aged 18 to 25 decreased from 44.4 to 40.8 percent, and current use of smokeless tobacco among blacks aged 26 or older decreased from 2.2 to 0.8 percent.

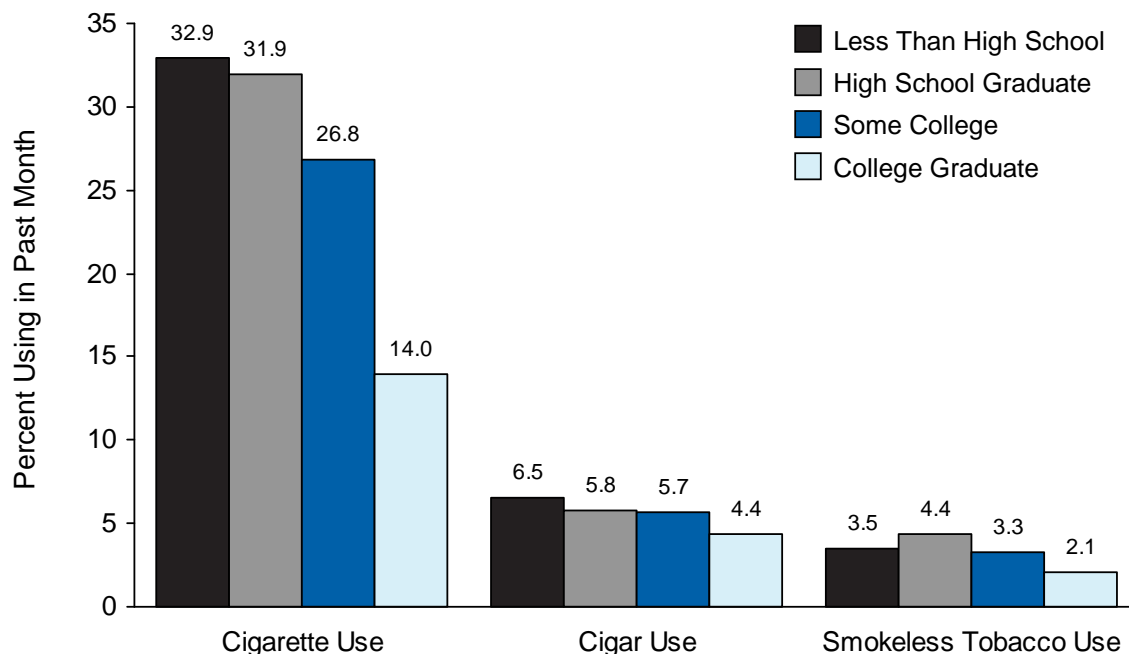
## **Education**

- Cigarette smoking in the past month was less prevalent among adults who were college graduates compared with those with less education. Among adults aged 18 or older, current cigarette use in 2007 was reported by 32.9 percent of those who had not completed high school, 31.9 percent of high school graduates who did not attend college, 26.8 percent of persons with some college, and 14.0 percent of college graduates (Figure 4.6). Past month cigarette smoking among adults who had not completed high school decreased from 35.6 percent in 2006 to 32.9 percent in 2007.
- In 2007, the use of smokeless tobacco in the past month was reported by 3.5 percent of persons aged 18 or older who had not completed high school, 4.4 percent of those who completed high school but did not attend college, and 3.3 percent of those who attended some college. The prevalence among college graduates, 2.1 percent, was lower than among the other groups.

## **College Students**

- Among young adults 18 to 22 years old, full-time college students were less likely to be current cigarette smokers than their peers who were not enrolled full time in college. Cigarette use in the past month in 2007 was reported by 25.6 percent of full-time college students, less than the rate of 41.2 percent for those not enrolled full time.
- Among males aged 18 to 22 in 2007, full-time college students and those not enrolled full time in college did not differ significantly in their rates of past month cigar smoking (19.1 and 21.7 percent, respectively) or past month smokeless tobacco use (9.8 and 10.7 percent). A similar pattern was seen among females aged 18 to 22.

**Figure 4.6 Past Month Tobacco Use among Adults Aged 18 or Older, by Education: 2007**



### Employment

- In 2007, current cigarette smoking was more common among unemployed adults aged 18 or older than among adults who were working full time or part time (44.6 vs. 27.6 and 24.5 percent, respectively). Cigar smoking followed a similar pattern, with 11.2 percent of unemployed adults reporting past month use compared with 6.4 percent of full-time workers and 5.3 percent of part-time workers.
- Current use of smokeless tobacco in 2007 was higher among adults aged 18 or older who were employed full time (4.4 percent) and those who were unemployed (4.9 percent) than among adults who were employed part time (2.0 percent) and those in the "other" employment category, which includes persons not in the labor force (1.9 percent).

### Geographic Area

- In 2007, current cigarette smoking among persons aged 12 or older was lowest in the West (21.1 percent) and Northeast (22.1 percent), higher in the South (25.5 percent), and highest in the Midwest (27.2 percent). Use of smokeless tobacco was higher in the Midwest and South (4.0 and 3.8 percent, respectively) than in the West (2.8 percent); the lowest rate was in the Northeast (1.8 percent).

- Among persons aged 12 or older, the rate of current cigarette use was associated with county type in 2007. The rates of cigarette smoking were 22.7 percent in large metropolitan areas, 24.8 percent in small metropolitan areas, 28.0 percent in urbanized nonmetropolitan areas, and 29.5 percent in less urbanized nonmetropolitan areas. In completely rural counties, 23.6 percent of persons aged 12 or older were current cigarette smokers in 2007, which is lower than the rate in 2006 (30.1 percent) and similar to the rate in 2005 (23.3 percent).
- Use of smokeless tobacco in the past month in 2007 among persons aged 12 or older was lowest in large metropolitan areas (2.0 percent). In small metropolitan areas, the rate was 3.5 percent; in nonmetropolitan areas, it was 6.7 percent; and in completely rural nonmetropolitan counties, the rate was 7.0 percent.

### **Association with Illicit Drug and Alcohol Use**

- Use of illicit drugs and alcohol was more common among current cigarette smokers than among nonsmokers in 2007, as in 2002 through 2006. Among persons aged 12 or older, 20.1 percent of past month cigarette smokers reported current use of an illicit drug compared with 4.1 percent of persons who were not current cigarette smokers. Past month alcohol use was reported by 66.9 percent of current cigarette smokers compared with 46.1 percent of those who did not use cigarettes in the past month. The association also was found with binge drinking (45.0 percent of current cigarette users vs. 16.4 percent of current nonusers) and heavy drinking (16.4 vs. 3.8 percent, respectively).

### **Frequency of Cigarette Use**

- Among the 60.1 million current cigarette smokers aged 12 or older in 2007, 36.8 million (61.3 percent) used cigarettes daily. The percentage of daily cigarette smokers increased with age, with 26.3 percent among past month cigarette users aged 12 to 17, 49.3 percent among those aged 18 to 25, and 66.3 percent among those aged 26 or older. In addition, over half (50.9 percent) of daily smokers aged 12 or older reported smoking 16 or more cigarettes per day; this is approximately one pack or more. The percentage of daily smokers who used a pack of cigarettes or more per day was steadily higher with age from 18.5 percent among those aged 12 to 17 to 33.1 percent among those aged 18 to 25 to 55.0 percent among those aged 26 or older.



## 5. Initiation of Substance Use

Information on substance use initiation, also known as incidence or first-time use, is important for policymakers and researchers. Measures of initiation are often leading indicators of emerging patterns of substance use. They provide valuable information that can be used in the assessment of the effectiveness of current prevention programs and in focusing prevention efforts.

With its large sample size and oversampling of youths aged 12 to 17 and young adults aged 18 to 25, the National Survey on Drug Use and Health (NSDUH) provides a variety of estimates related to substance use initiation based on questions on age, year, and month at first use. Using this information, along with the interview date and the respondent's date of birth, a date of first use is determined for each substance used by a respondent. Estimates of the number of initiates, rates of initiation, and average age at first use can be constructed for specific time periods.

Because of concerns about the validity of trend estimates of incidence based on long recall periods (Gfroerer, Hughes, Chromy, Heller, & Packer, 2004), this report only presents estimates of initiation occurring in the 12 months prior to the interview date. Individuals who initiated use within the past 12 months are defined as recent or past year initiates. Estimates for each year are produced independently based on the data from the survey conducted that year. One caveat of this approach is that because the survey interviews persons aged 12 or older and asks about the past 12 months, the initiation estimates will represent some, but not all of initiation at age 11, and no initiation occurring at age 10 or younger. This underestimation problem primarily affects estimates of initiation for cigarettes, alcohol, and inhalants because they tend to be initiated at a younger age than other substances. See Section B.4.1 in Appendix B for further discussion of the methods and bias in initiation estimates.

There are some important issues that readers need to be aware of when interpreting these NSDUH incidence estimates. First, note that some tables and analyses are based on the ages of initiates at the time of interview, while others focus on the age at the time of first substance use. This can have a large impact on estimates, so readers should pay close attention to the approach used in each situation. Titles and notes on tables document which method applies. Regarding the age at first use estimates, means, as measures of central tendency, are heavily influenced by the presence of extreme values in the data. Thus, for the purposes of this report and unless specified otherwise, the mean age at initiation pertains to persons aged 12 to 49. This constraint was implemented so that the mean age estimates reported would not be influenced by those few respondents who were past year initiates at age 50 or older. Note that this constraint only affects estimates of mean age at initiation; other estimates in this chapter, including the number and prevalence of past year initiates, are among all persons aged 12 or older.

An important consideration in looking at incidence estimates across different drug categories is that substance users typically initiate use of different substances at different times in their lives. Thus, the estimates for specific illicit drugs cannot be added to obtain the number of illicit drug initiates, because, for example, most of the cocaine initiates had previously used marijuana or other drugs and therefore would be represented in the illicit drug initiate estimates

for a prior year. Similarly, the estimates of crack initiation are not a subset of the estimates of cocaine initiation, as some persons would have used powder cocaine prior to using crack. To help clarify this aspect of the incidence data, additional tables have been generated to identify which specific illicit drug was used at the time of first use of any illicit drug. These new estimates are discussed below in the first section of this chapter.

The prevalence estimates for nonmedical use of psychotherapeutic drugs, stimulants, and methamphetamine discussed in Chapter 2 take account of data from new items on methamphetamine use that were added to the noncore section of the survey in 2005 and 2006 to capture information on methamphetamine users who failed to recognize the drug when it was presented in the context of prescription drugs in the core stimulants module. The drug use initiation estimates in this chapter, however, are based on data only from the core section of the questionnaire and do not take account of data from new items on the initiation of methamphetamine use that were added to the noncore section in 2007 following up on the additional methamphetamine users identified in the questions introduced in 2005 and 2006. See Section B.4.6 in Appendix B of this report for details.

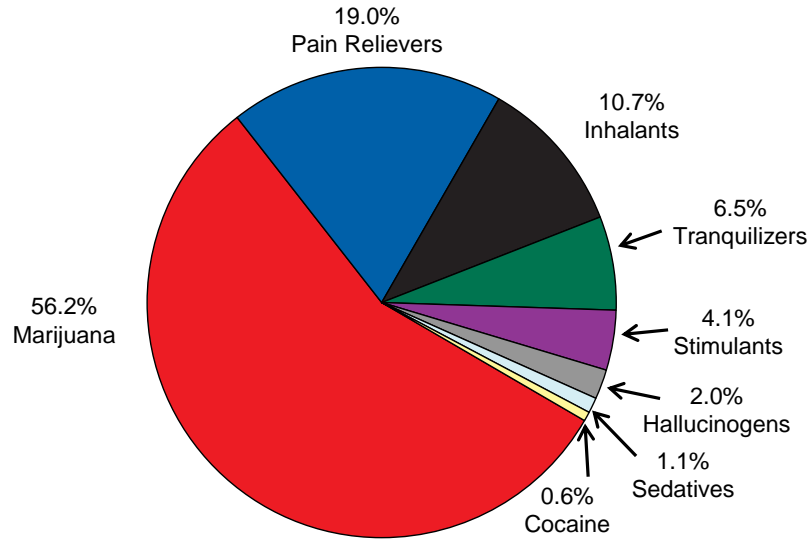
### **Initiation of Illicit Drug Use**

- In 2007, an estimated 2.7 million persons aged 12 or older used an illicit drug for the first time within the past 12 months; this averages to more than 7,000 initiates per day. This estimate was not significantly different from the number in 2006 (2.8 million). Three fifths of initiates (60.1 percent) were younger than age 18 when they first used, and 54.1 percent of new users were female. The average age at initiation among persons aged 12 to 49 was 18.0 years.
- In 2007, of the 2.7 million persons aged 12 or older who used illicit drugs for the first time within the past 12 months, a majority reported that their first drug was marijuana (56.2 percent) (Figure 5.1). Nearly one third initiated with psychotherapeutics (30.6 percent, including 19.0 percent with pain relievers, 6.5 percent with tranquilizers, 4.1 percent with stimulants, and 1.1 percent with sedatives). A sizable proportion reported inhalants (10.7 percent) as their first drug, and a small proportion used hallucinogens as their first illicit drug (2.0 percent). The percentage of past year illicit drug initiates whose first drug was tranquilizers increased from 2.4 percent in 2002 to 6.5 percent in 2007, while the percentage whose first drug was Ecstasy decreased from 1.9 percent in 2002 to 0.6 percent in 2007.

### **Comparison, by Drug**

- The specific drug categories with the largest number of recent initiates among persons aged 12 or older were nonmedical use of pain relievers (2.1 million) and marijuana use (2.1 million), followed by nonmedical use of tranquilizers (1.2 million), cocaine (0.9 million), Ecstasy (0.8 million), inhalants (0.8 million), and stimulants (0.6 million) (Figure 5.2).
- Among persons aged 12 to 49, the average age at first use of inhalants in 2007 was 17.1 years; it was 17.6 years for marijuana, 20.2 years for cocaine, 20.2 years for Ecstasy, 21.2 years for pain relievers, and 24.5 years for tranquilizers (Figure 5.3).

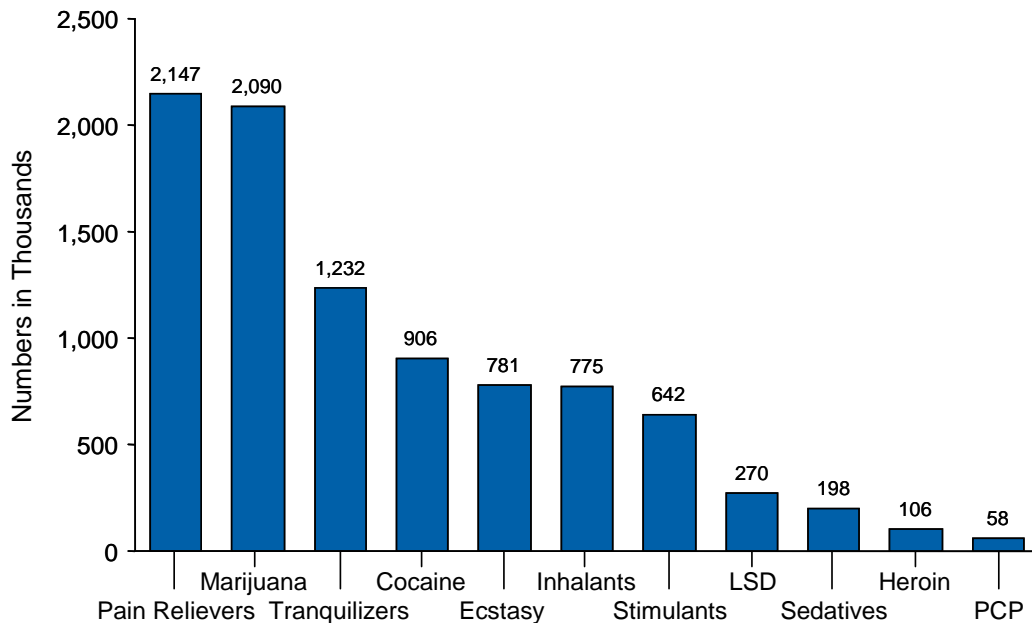
**Figure 5.1 Specific Drug Used When Initiating Illicit Drug Use among Past Year Initiates of Illicit Drugs Aged 12 or Older: 2007**



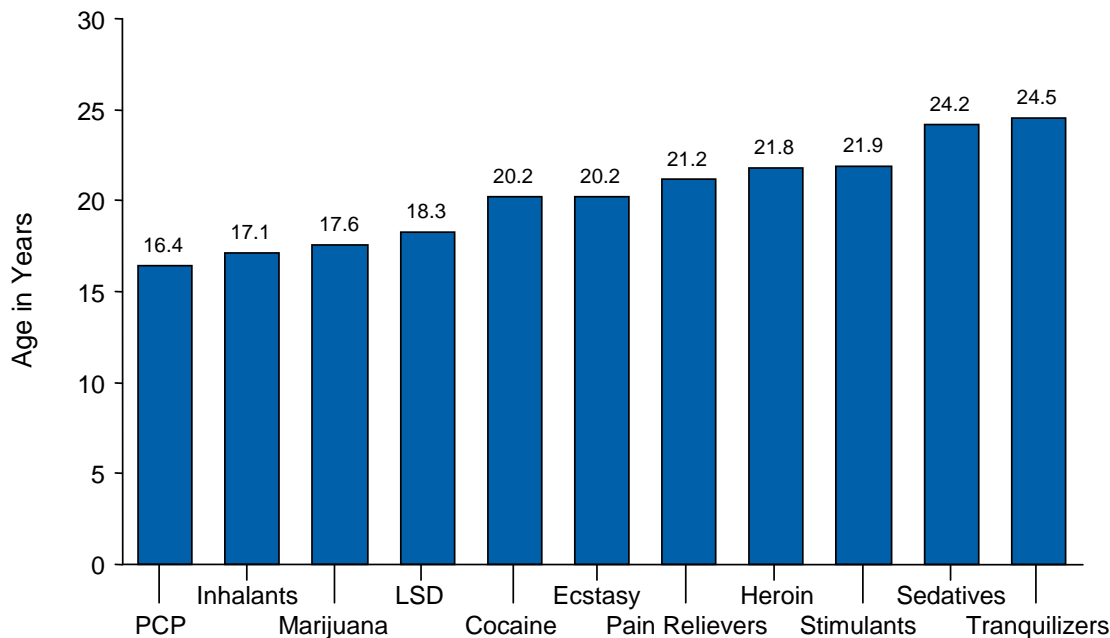
2.7 Million Initiates of Illicit Drugs

Note: The percentages add to greater than 100 percent because of a small number of respondents initiating multiple drugs on the same day.

**Figure 5.2 Past Year Initiates for Specific Illicit Drugs among Persons Aged 12 or Older: 2007**



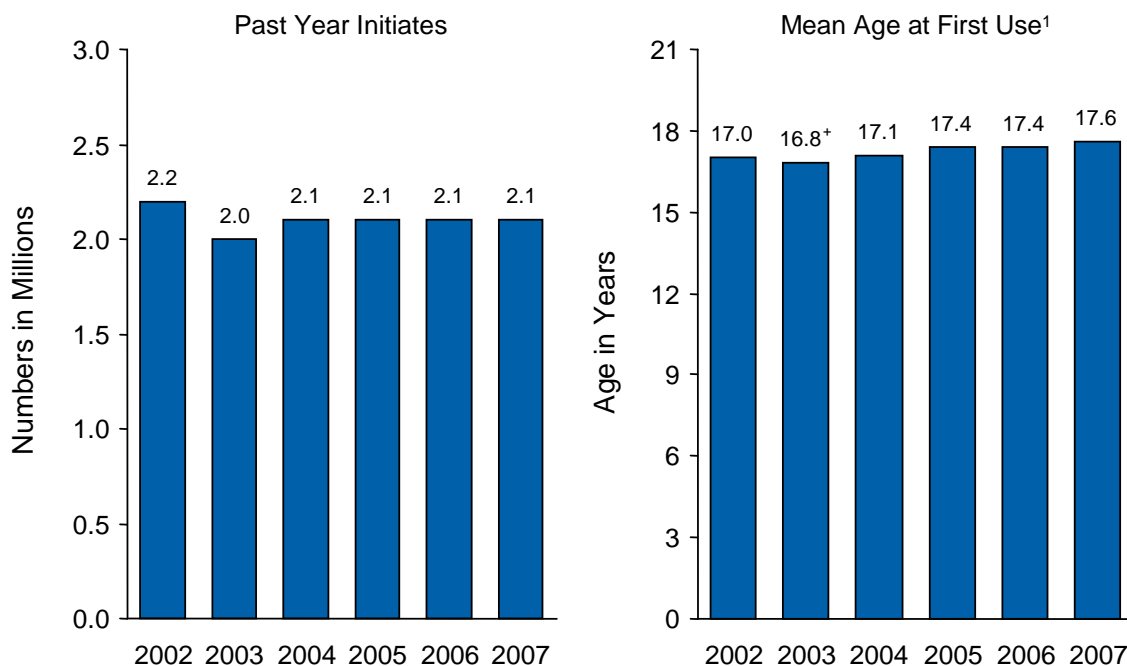
**Figure 5.3 Mean Age at First Use for Specific Illicit Drugs among Past Year Initiates Aged 12 to 49: 2007**



### **Marijuana**

- In 2007, there were 2.1 million persons who had used marijuana for the first time within the past 12 months; this averages to approximately 6,000 initiates per day. This estimate of past year initiates in 2007 was about the same as the number in 2006 (2.1 million), 2005 (2.1 million), 2004 (2.1 million), 2003 (2.0 million), and 2002 (2.2 million) (Figure 5.4).
- Most (62.2 percent) of the 2.1 million recent marijuana initiates were younger than age 18 when they first used. Among youths aged 12 to 17, an estimated 4.6 percent had used marijuana for the first time within the past year, similar to the rate in 2006 (4.7 percent).
- As a percentage of those aged 12 to 17 who had not used marijuana prior to the past year, the youth marijuana initiation rate in 2007 (5.2 percent) was similar to the rate in 2006 (5.4 percent).
- In 2007, the average age at first marijuana use among recent initiates aged 12 to 49 was 17.6 years, which was similar to the average in 2006 (17.4 years) (Figure 5.4). Among recent initiates aged 12 or older who initiated use prior to the age of 21, the mean age at first use was 16.2 years in 2007, which was not significantly different from the estimate (16.1 years) in 2006.

**Figure 5.4 Past Year Marijuana Initiates among Persons Aged 12 or Older and Mean Age at First Use of Marijuana among Past Year Marijuana Initiates Aged 12 to 49: 2002-2007**



<sup>+</sup> Difference between this estimate and the 2007 estimate is statistically significant at the .05 level.

<sup>1</sup> Mean-age-at-first-use estimates are for recent initiates aged 12 to 49.

### Cocaine

- In 2007, there were 906,000 persons aged 12 or older who had used cocaine for the first time within the past 12 months; this averages to approximately 2,500 initiates per day. This estimate was not significantly different from the number in 2006 (977,000).
- Most (66.5 percent) of the 0.9 million recent cocaine initiates were 18 or older when they first used. The average age at first use among recent initiates aged 12 to 49 was 20.2 years, which was similar to the average age in 2006 (20.3 years).

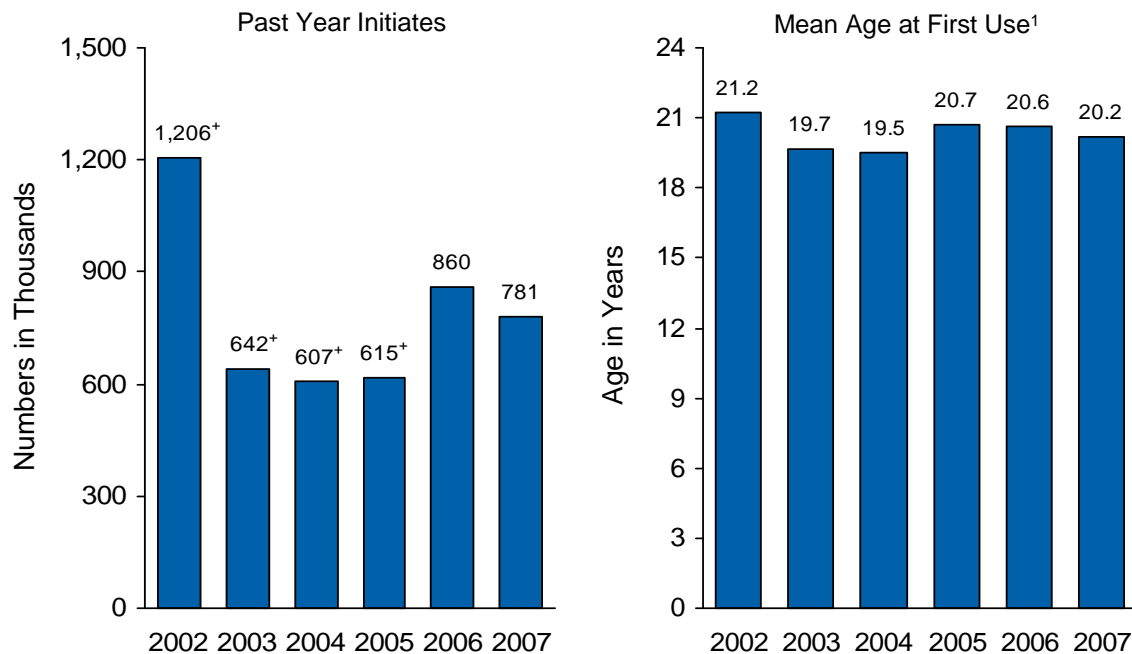
### Heroin

- In 2007, there were 106,000 persons aged 12 or older who had used heroin for the first time within the past 12 months. The average age at first use among recent initiates aged 12 to 49 was 21.8 years in 2007. There were no significant changes in the number of initiates or in the average age at first use from 2006 to 2007.

## Hallucinogens

- In 2007, there were 1.1 million persons aged 12 or older who had used hallucinogens for the first time within the past 12 months. This estimate was not significantly different from the estimate in 2002, 2004, 2005, and 2006. However, the estimate was significantly higher than the estimate in 2003 (886,000).
- There was no significant change between 2006 and 2007 in the number of past year initiates of LSD (264,000 and 270,000, respectively).
- There was no significant change in the past year initiates of Ecstasy between 2006 (860,000) and 2007 (781,000). The number of past year Ecstasy initiates in 2007, however, was significantly lower than the estimate in 2002 (1.2 million), but higher than the estimate in 2003 (642,000), 2004 (607,000), and 2005 (615,000) (Figure 5.5). Most (61.2 percent) of the recent Ecstasy initiates in 2007 were aged 18 or older at the time they first used Ecstasy. The corresponding figure was 70.1 percent in 2006. Among past year initiates aged 12 to 49, the average age at initiation of Ecstasy in 2007 was 20.2 years, similar to the average age in 2006 (20.6 years).

**Figure 5.5 Past Year Ecstasy Initiates among Persons Aged 12 or Older and Mean Age at First Use of Ecstasy among Past Year Ecstasy Initiates Aged 12 to 49: 2002-2007**



\* Difference between this estimate and the 2007 estimate is statistically significant at the .05 level.

<sup>1</sup> Mean-age-at-first-use estimates are for recent initiates aged 12 to 49.

## **Inhalants**

- In 2007, there were 775,000 persons aged 12 or older who had used inhalants for the first time within the past 12 months; 66.3 percent were under age 18 when they first used. There was no significant difference in the number of inhalant initiates between 2006 and 2007. However, there was a significant increase in the average age at first use among recent initiates aged 12 to 49 from 2006 (15.7 years) to 2007 (17.1 years).

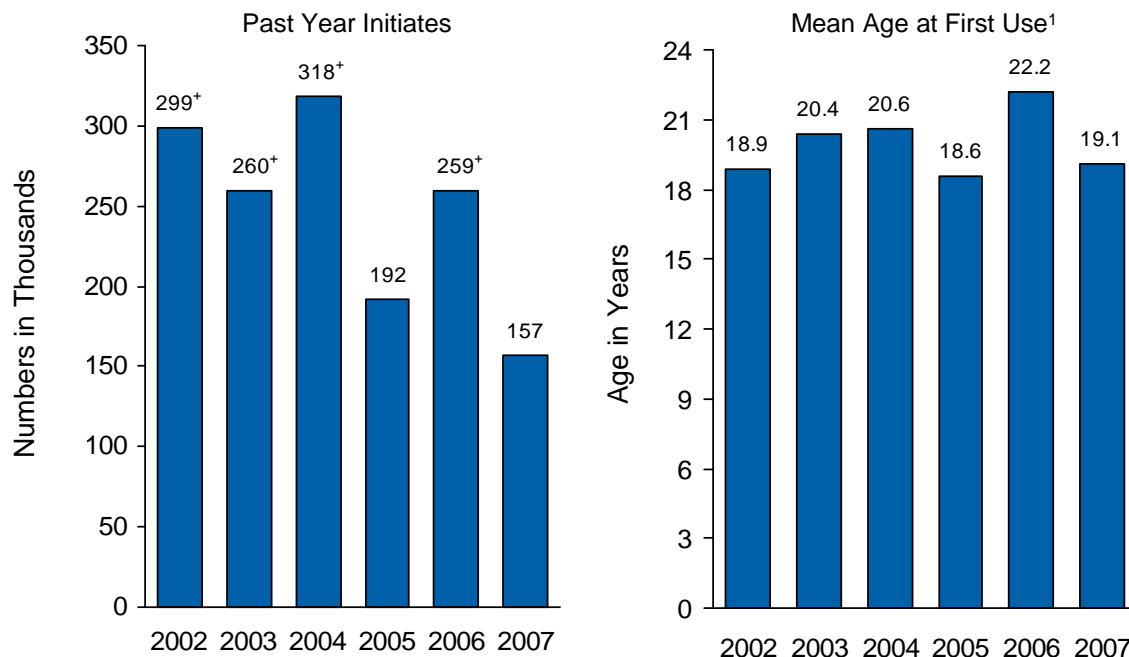
## **Psychotherapeutics**

- Psychotherapeutics include the nonmedical use of any prescription-type pain relievers, tranquilizers, stimulants, or sedatives. Over-the-counter substances are not included. In 2007, there were 2.5 million persons aged 12 or older who used psychotherapeutics nonmedically for the first time within the past year, which averages out to around 7,000 initiates per day. The numbers of new users of specific classes of psychotherapeutics in 2007 were 2.1 million for pain relievers, 1.2 million for tranquilizers, 642,000 for stimulants, and 198,000 for sedatives. There was a significant decrease in the number of past year initiates of stimulants from 2006 (845,000) to 2007 (642,000), but there were no significant changes in the estimates for the remaining psychotherapeutics between these years. The estimated number of past year initiates of nonmedical pain reliever use declined from 2.5 million in 2003 to 2.1 million in 2007.
- The average age at first nonmedical use of any psychotherapeutics among recent initiates aged 12 to 49 was 21.8 years. More specifically, it was 21.2 years for pain relievers, 21.9 years for stimulants, 24.5 years for tranquilizers, and 24.2 years for sedatives.
- In 2007, the number of new nonmedical users of OxyContin<sup>®</sup> aged 12 or older was 554,000, with an average age at first use of 24.0 years among those aged 12 to 49. These estimates are similar to those for 2006 (533,000 and 22.6 years, respectively).
- The number of recent new users of methamphetamine among persons aged 12 or older was 157,000 in 2007 (Figure 5.6). This estimate was significantly lower than the estimate in 2002 (299,000), 2003 (260,000), 2004 (318,000), and 2006 (259,000). The average age of new methamphetamine users aged 12 to 49 in 2007 was 19.1 years, not significantly different from the average ages in 2002 through 2006.

## **Alcohol**

- In 2007, there were 4.6 million persons aged 12 or older who had used alcohol for the first time within the past 12 months; this averages to approximately 12,500 initiates per day. The number of past year alcohol initiates in 2007 was significantly greater than the estimate in 2002 (3.9 million) and 2003 (4.1 million), but similar to the numbers in 2004 (4.4 million), 2005 (4.3 million), and 2006 (4.4 million).
- Most (85.9 percent) of the 4.6 million recent alcohol initiates were younger than age 21 at the time of initiation.

**Figure 5.6 Past Year Methamphetamine Initiates among Persons Aged 12 or Older and Mean Age at First Use of Methamphetamine among Past Year Methamphetamine Initiates Aged 12 to 49: 2002-2007**



<sup>+</sup> Difference between this estimate and the 2007 estimate is statistically significant at the .05 level.

<sup>1</sup> Mean-age-at-first-use estimates are for recent initiates aged 12 to 49.

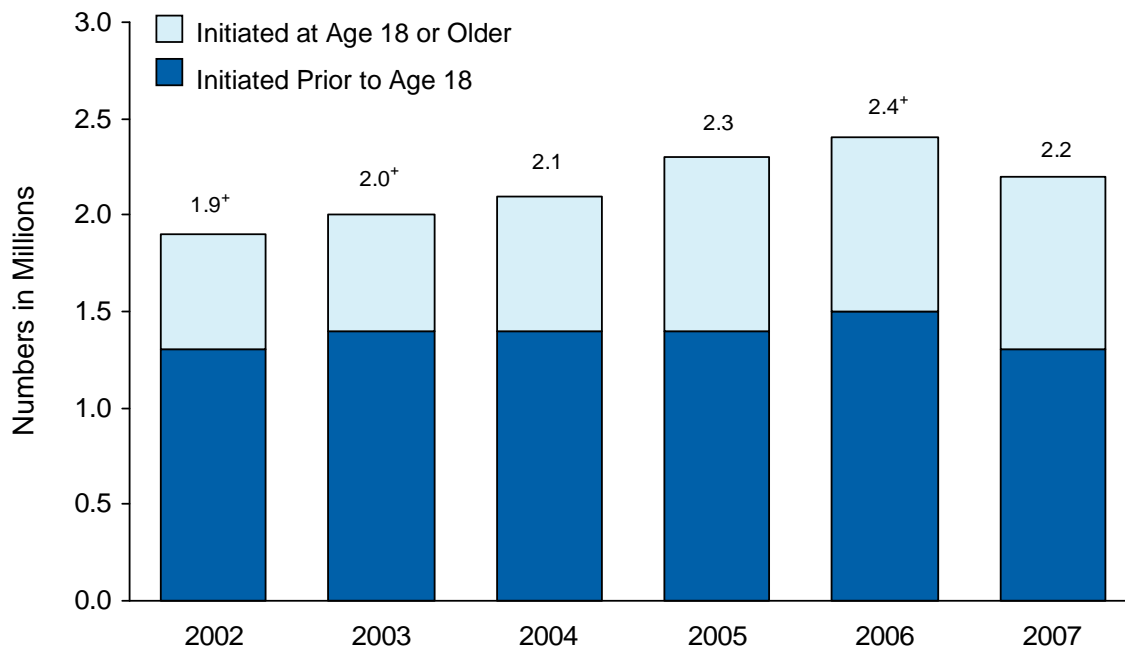
- In 2007, the average age at first alcohol use among recent initiates aged 12 to 49 was 16.8 years, similar to the corresponding 2006 estimate (16.6 years). The mean age at first use among recent initiates aged 12 or older who initiated use prior to the age of 21 was 15.8 years, which was the same as the 2006 estimate.

### Tobacco

- The number of persons aged 12 or older who smoked cigarettes for the first time within the past 12 months was 2.2 million in 2007, which was significantly lower than the estimate in 2006 (2.4 million) but significantly higher than the estimate for 2002 (1.9 million) and 2003 (2.0 million) (Figure 5.7). The 2007 estimate averages out to approximately 6,100 new cigarette smokers every day. Most new smokers in 2007 were under age 18 when they first smoked cigarettes (59.7 percent).
- In 2007, among recent initiates aged 12 to 49, the average age of first cigarette use was 16.9 years, similar to the average in 2006 (17.1 years).



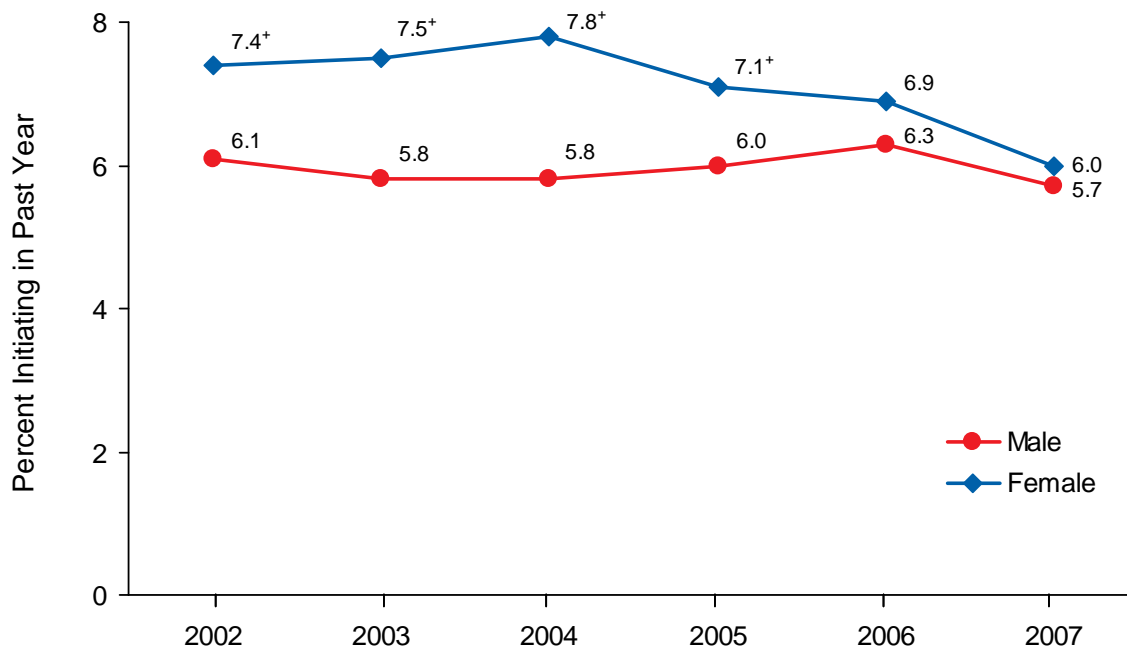
**Figure 5.7 Past Year Cigarette Initiates among Persons Aged 12 or Older, by Age at First Use: 2002-2007**



<sup>+</sup> Difference between this estimate and the 2007 estimate is statistically significant at the .05 level.

- Of those aged 12 or older who had not smoked cigarettes prior to the past year, the past year initiation rate for cigarettes was 2.5 percent in 2007, significantly lower than the rate in 2006 (2.9 percent). Among youths aged 12 to 17 years who had not smoked cigarettes prior to the past year, incidence showed a significant decrease between 2006 (6.6 percent) and 2007 (5.9 percent). Among males aged 12 to 17, the decrease in the past year initiation rate from 6.1 percent in 2002 to 5.7 percent in 2007 was not statistically significant, but among females, the decrease from 7.4 percent in 2002 to 6.0 percent in 2007 was statistically significant (Figure 5.8).
- In 2007, the number of persons who had started smoking cigarettes daily within the past 12 months was 1.0 million. This estimate is similar to the estimates for 2002 (1.0 million), 2003 (1.1 million), 2004 (1.1 million), 2005 (1.0 million), and 2006 (1.1 million). Of these new daily smokers in 2007, 40.7 percent, or 400,000, were younger than age 18 when they started smoking daily. This figure averages to approximately 1,100 initiates of daily smoking under age 18 every day.
- The average age of first daily smoking among new daily smokers aged 12 to 49 in 2007 was 19.2 years. This was not significantly different from the average in 2006 (18.9 years).

**Figure 5.8 Past Year Cigarette Initiation among Youths Aged 12 to 17 Who Had Never Smoked, by Gender: 2002-2007**



<sup>+</sup> Difference between this estimate and the 2007 estimate is statistically significant at the .05 level.

- In 2007, there were 3.1 million persons aged 12 or older who had used cigars for the first time in the past 12 months, the same as the number in 2006. However, this estimate reflects a significant increase in the number of initiates from 2003 (2.7 million). Among past year cigar initiates aged 12 to 49, the average age at first use was 20.5 years in 2007, which was not significantly different from the estimate in 2006 (19.9 years).
- The number of persons aged 12 or older initiating use of smokeless tobacco in the past year was 1.3 million in 2007, which was the same as the estimate in 2006 and not significantly different from the estimate in 2005 (1.1 million). However, the estimated number of past year initiates of smokeless tobacco use in 2007 was at least 30 percent higher than the estimate in 2002 (951,000), 2003 (928,000), and 2004 (999,000). About three quarters (74.2 percent) of new initiates in 2007 were male, and a little more than half (52.5 percent) were under age 18 when they first used.
- The average age at first smokeless tobacco use among recent initiates aged 12 to 49 in 2007 was 18.0 years. Averages were 17.4 years for males and 19.7 years for females.

## 6. Youth Prevention-Related Measures

The National Survey on Drug Use and Health (NSDUH) includes questions for youths aged 12 to 17 about a number of risk and protective factors that may affect the likelihood that they will engage in substance use. Risk factors are individual characteristics and environmental influences associated with an increased vulnerability to the initiation, continuation, or escalation of substance use. Protective factors include individual resilience and other circumstances that appear to reduce the likelihood of substance use. Risk and protective factors include variables that operate at different stages of development and reflect different domains of influence, including the individual, family, peer, school, community, and societal levels (Hawkins, Catalano, & Miller, 1992). Interventions to prevent substance use generally are designed to ameliorate the influence of risk factors and enhance the effectiveness of protective factors.

This chapter presents findings for youth prevention-related measures collected in the 2007 NSDUH and compares these with findings from previous years. Included are measures of perceived risk from substance use (cigarettes, alcohol, and illicit drugs), perceived availability of substances, perceived parental disapproval of substance use, feelings about peer substance use, involvement in fighting and delinquent behavior, participation in religious and other activities, exposure to substance use prevention messages and programs, and parental involvement.

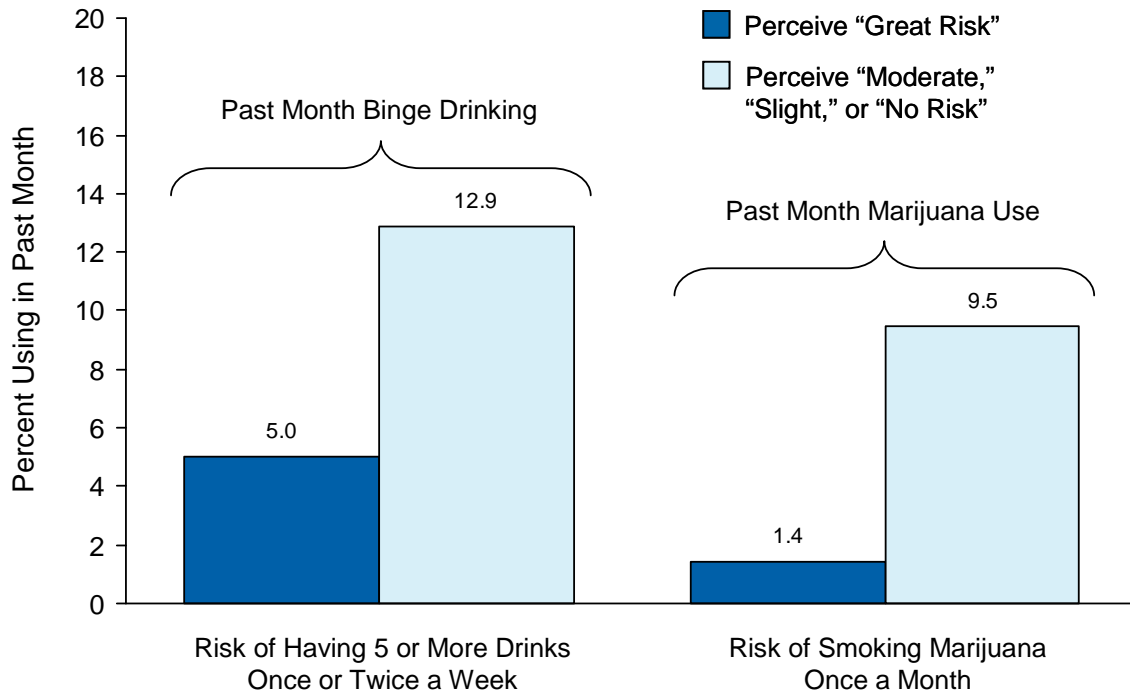
In this chapter, rates of substance use are compared for persons responding differently to questions reflecting risk or protective factors, such as the perceived risk of harm from using a substance. Because the NSDUH data for an individual are collected at only one point in time, it is not possible to determine causal connections from these data. However, a number of research studies of youths have shown that reducing risk factors and increasing protective factors can reduce rates of substance use (Botvin, Botvin, & Ruchlin, 1998). This report shows that marijuana use, cigarette use, and alcohol use among youths aged 12 to 17 decreased between 2002 and 2007, yet corresponding changes in individual risk and protective factors for the same period may or may not have occurred. There can be many reasons for this, such as the lack of or a weak causal connection, a lagged relationship between the occurrence of a risk factor and the change in drug use behavior, or that individual use is typically the result of multiple simultaneous risk factors rather than a single factor (Newcomb, Maddahian, & Bentler, 1986).

### Perceptions of Risk

One factor that can influence whether youths will use tobacco, alcohol, or illicit drugs is the extent to which youths believe these substances might cause them harm. NSDUH respondents were asked how much they thought people risk harming themselves physically and in other ways when they use various substances in certain amounts or frequencies. Response choices for these items were "great risk," "moderate risk," "slight risk," or "no risk."

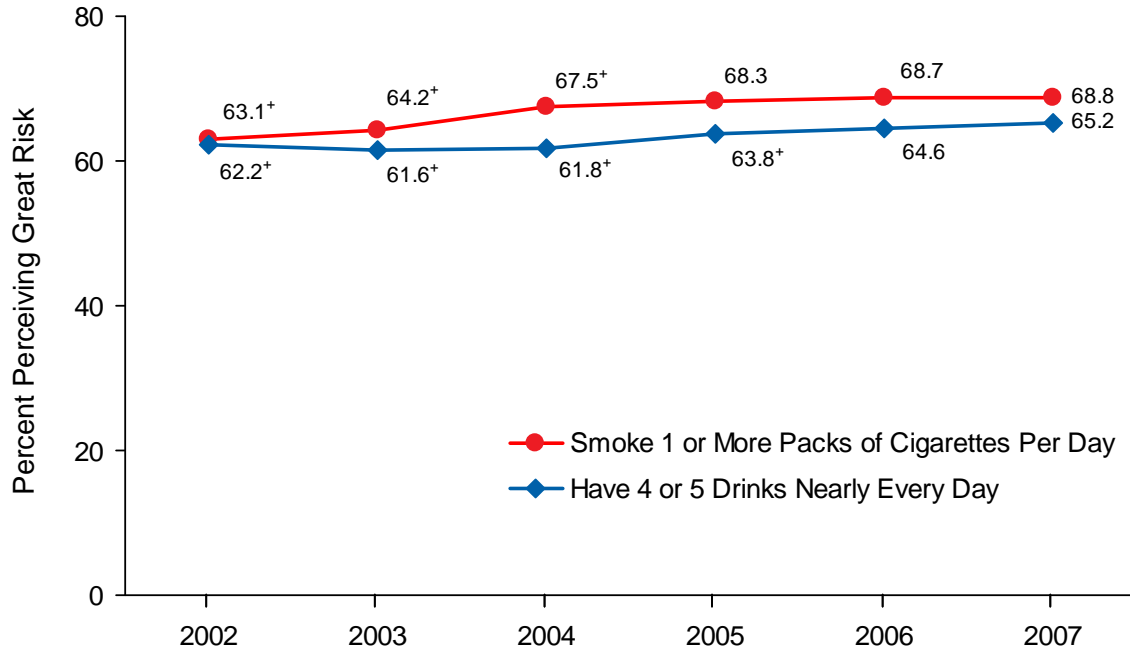
- The percentages of youths reporting binge alcohol use and use of cigarettes and marijuana in the past month were lower among those who perceived great risk in using these substances than among those who did not perceive great risk. For example, in 2007, 5.0 percent of youths aged 12 to 17 who perceived great risk from "having 5 or more drinks of an alcoholic beverage once or twice a week" reported binge drinking in the past month (consumption of five or more drinks of an alcoholic beverage on a single occasion on at least 1 day in the past 30 days); by contrast, past month binge drinking was reported by 12.9 percent of youths who saw moderate, slight, or no risk from having five or more drinks of an alcoholic beverage once or twice a week (Figure 6.1). Past month marijuana use was reported by 1.4 percent of youths who saw great risk in smoking marijuana once a month compared with 9.5 percent of youths who saw moderate, slight, or no risk.

**Figure 6.1 Past Month Binge Drinking and Marijuana Use among Youths Aged 12 to 17, by Perceptions of Risk: 2007**



- Increases in the perceived risk of using a substance often are associated with decreases in the rate of current use of that substance. Looking over the 6-year period, the proportion of youths aged 12 to 17 who reported perceiving great risk from smoking one or more packs of cigarettes per day increased from 63.1 percent in 2002 to 68.8 percent in 2007 (Figure 6.2). The rate of past month cigarette smoking among youths aged 12 to 17 dropped from 13.0 to 9.8 percent during the same period. Percentages for both perceived risk of smoking one or more packs of cigarettes per day and smoking in the past month were similar in 2006 and 2007.

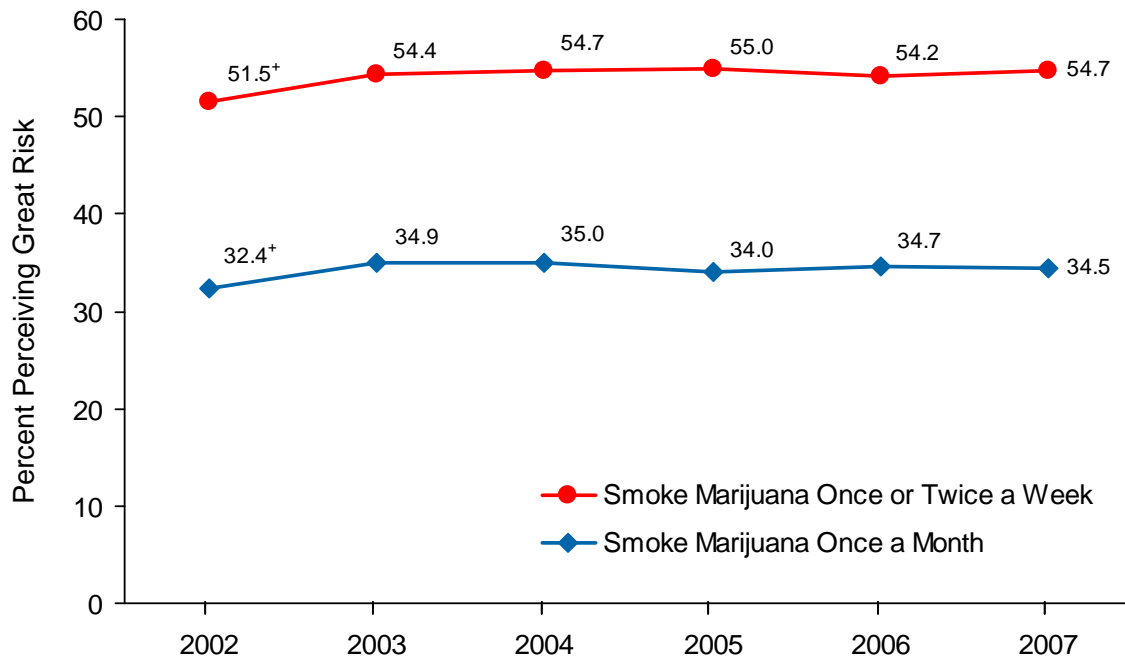
**Figure 6.2 Perceived Great Risk of Cigarette and Alcohol Use among Youths Aged 12 to 17: 2002-2007**



<sup>+</sup> Difference between this estimate and the 2007 estimate is statistically significant at the .05 level.

- The percentage of youths aged 12 to 17 indicating great risk in having four or five drinks nearly every day increased from 62.2 percent in 2002 to 65.2 percent in 2007, but the percentage remained unchanged between 2006 (64.6 percent) and 2007 (Figure 6.2). The rates of past month heavy alcohol use among youths aged 12 to 17 were about the same throughout the period from 2002 to 2007 (e.g., 2.5 percent in 2002, 2.4 percent in 2006, and 2.3 percent in 2007).
- The percentage of youths aged 12 to 17 perceiving great risk in having five or more drinks of an alcoholic beverage once or twice a week increased from 38.2 percent in 2002 to 39.4 percent in 2007, but remained stable between 2006 (39.4 percent) and 2007. Accordingly, the rate of past month binge alcohol use among youths decreased from 10.7 percent in 2002 to 9.7 percent in 2007, but the rate remained stable between 2006 (10.3 percent) and 2007.
- The percentage of youths aged 12 to 17 indicating great risk in smoking marijuana once a month increased from 32.4 percent in 2002 to 34.5 percent in 2007 (Figure 6.3). The percentage of youths aged 12 to 17 perceiving great risk in smoking marijuana once or twice a week also increased from 51.5 percent in 2002 to 54.7 percent in 2007. Both of these percentages of perceived great risk of use were similar between 2006 and 2007.

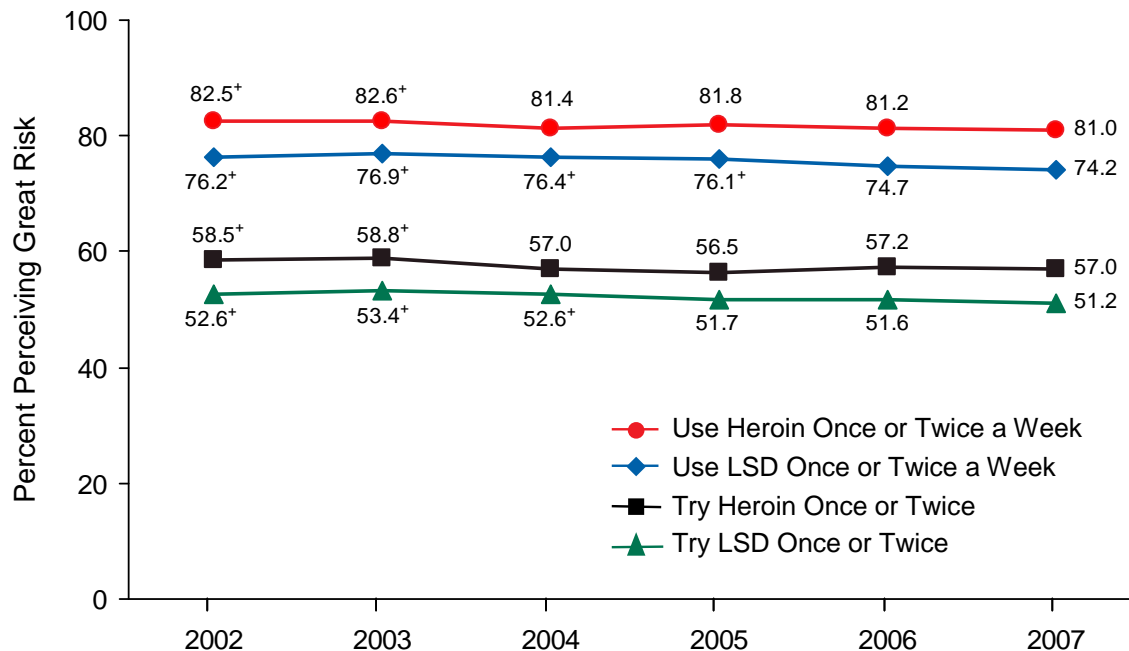
**Figure 6.3 Perceived Great Risk of Marijuana Use among Youths Aged 12 to 17: 2002-2007**



<sup>+</sup> Difference between this estimate and the 2007 estimate is statistically significant at the .05 level.

- Coincident with the increase in the percentage of youths who perceived great risk of marijuana use, the prevalence of lifetime, past year, and past month marijuana use among youths aged 12 to 17 decreased between 2002 and 2007. During the 6-year period, lifetime use of marijuana dropped from 20.6 to 16.2 percent, past year use declined from 15.8 to 12.5 percent, and past month use fell from 8.2 to 6.7 percent. Although lifetime use of marijuana decreased from 17.3 percent in 2006 to 16.2 percent in 2007, past year and past month marijuana use rates remained stable during the 2-year period.
- Between 2002 and 2007, the percentage of youths aged 12 to 17 perceiving great risk declined for the following substance use patterns: trying heroin once or twice (from 58.5 to 57.0 percent), using heroin once or twice a week (from 82.5 to 81.0 percent), trying LSD once or twice (from 52.6 to 51.2 percent), and using LSD once or twice a week (from 76.2 to 74.2 percent) (Figure 6.4). Over the same period, however, the percentage of youths aged 12 to 17 indicating great risk for using cocaine once a month (50.5 percent in 2002 and 49.6 percent in 2007) and using cocaine once or twice a week (79.8 percent in 2002 and 78.9 percent in 2007) remained statistically unchanged. Moreover, percentages for all of these perception of risk measures remained stable between 2006 and 2007.

**Figure 6.4 Perceived Great Risk of Use of Selected Illicit Drugs among Youths Aged 12 to 17: 2002-2007**

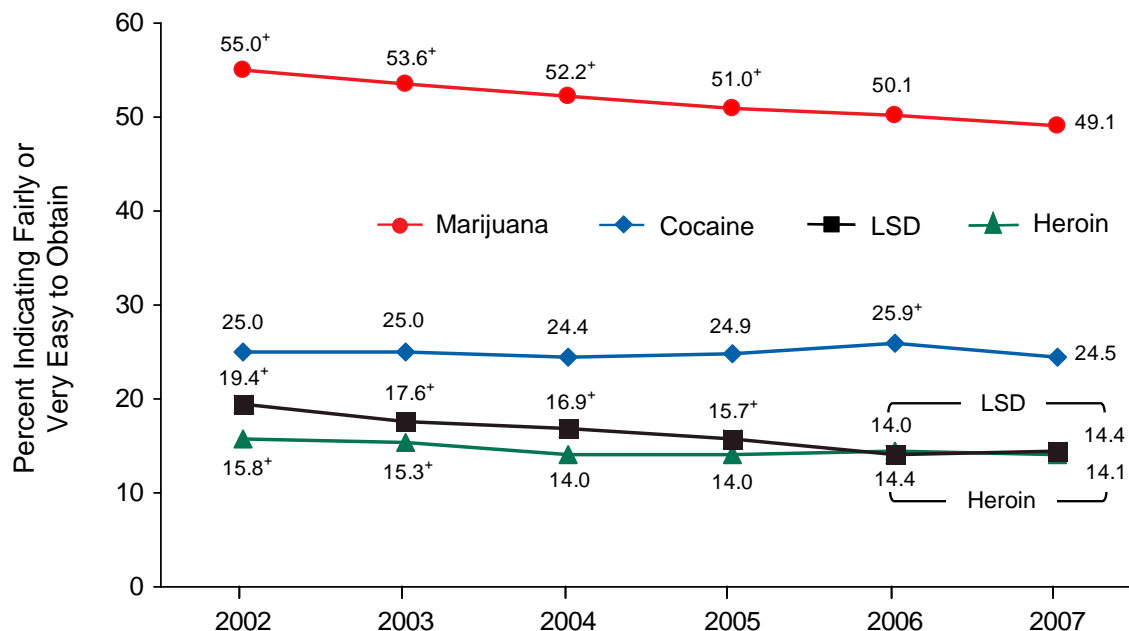


<sup>+</sup> Difference between this estimate and the 2007 estimate is statistically significant at the .05 level.

### Perceived Availability

- In 2007, about half (49.1 percent) of the youths aged 12 to 17 reported that it would be "fairly easy" or "very easy" for them to obtain marijuana if they wanted some (Figure 6.5). One in seven (14.1 percent) indicated that heroin would be "fairly" or "very" easily available, and 14.4 percent reported so for LSD. Between 2002 and 2007, there were decreases in the perceived availability of marijuana (from 55.0 to 49.1 percent), crack (from 26.5 to 25.3 percent), LSD (from 19.4 to 14.4 percent), and heroin (from 15.8 to 14.1 percent). The perceived availability of cocaine declined from 25.9 percent in 2006 to 24.5 percent in 2007, but the perceived availability of marijuana, crack, LSD, and heroin did not change significantly during the 2-year period.
- The percentage of youths who reported that illicit drugs would be easy to obtain increased with age in 2007. For example, 20.6 percent of those aged 12 or 13 said it would be fairly or very easy to obtain marijuana compared with 50.9 percent of those aged 14 or 15 and 73.4 percent of those aged 16 or 17.

**Figure 6.5 Perceived Availability of Selected Illicit Drugs among Youths Aged 12 to 17: 2002-2007**



<sup>+</sup> Difference between this estimate and the 2007 estimate is statistically significant at the .05 level.

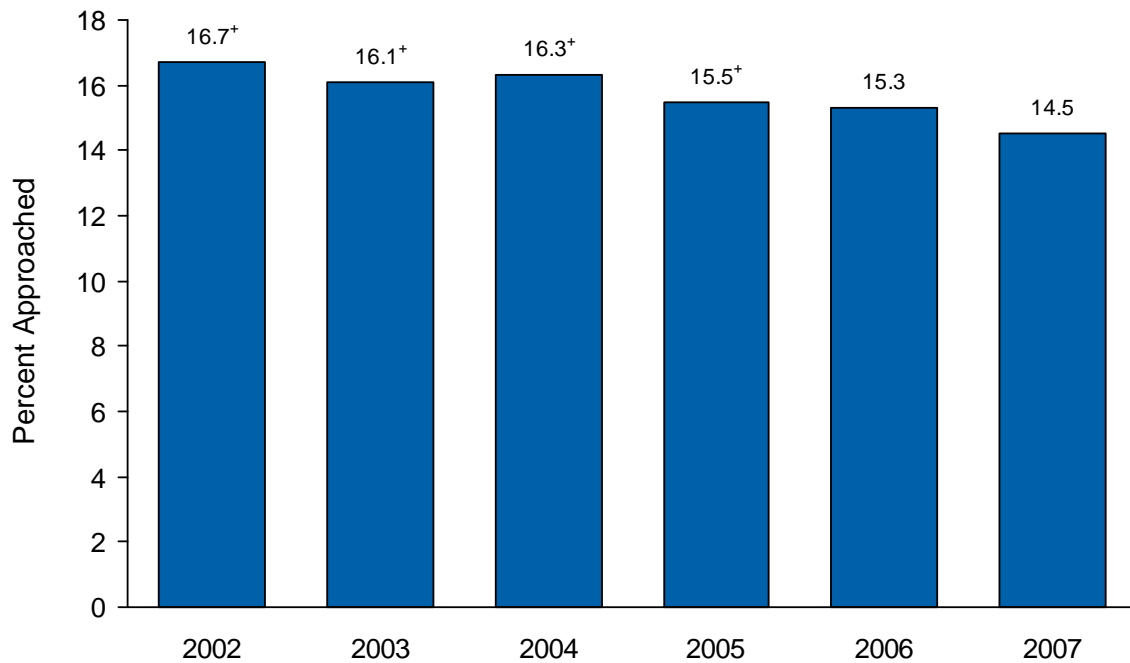
- In 2007, 14.5 percent of youths aged 12 to 17 indicated that they had been approached by someone selling drugs in the past month, which was down from the 16.7 percent reported in 2002 (Figure 6.6). The rate remained stable between 2006 (15.3 percent) and 2007.

### Perceived Parental Disapproval of Substance Use

- Most youths aged 12 to 17 believed their parents would "strongly disapprove" of their using substances. In 2007, 91.0 percent of youths reported that their parents would strongly disapprove of their trying marijuana or hashish once or twice; this was similar to the rate in 2006 (90.4 percent), but was higher than the rate in 2002 (89.1 percent). Most (89.6 percent) reported that their parents would strongly disapprove of their having one or two drinks of an alcoholic beverage nearly every day, which was the same as the rate in 2006 and similar to the 89.0 percent reported in 2002. In 2007, however, 92.1 percent of youths reported that their parents would strongly disapprove of their smoking one or more packs of cigarettes per day, which was higher than the 91.4 percent reported in 2006 and the 89.5 percent reported in 2002.



**Figure 6.6** Approached in the Past Month by Someone Selling Drugs among Youths Aged 12 to 17: 2002-2007



<sup>+</sup> Difference between this estimate and the 2007 estimate is statistically significant at the .05 level.

- Youths aged 12 to 17 who believed their parents would strongly disapprove of their using substances in certain amounts or frequencies were less likely to use that substance than were youths who believed their parents would somewhat disapprove or neither approve nor disapprove. For example, in 2007, past month cigarette use was reported by 7.2 percent of youths who perceived strong parental disapproval of their smoking one or more packs of cigarettes per day compared with 41.5 percent of youths who believed their parents would not strongly disapprove. Current marijuana use also was much less prevalent among youths who perceived strong parental disapproval for trying marijuana or hashish once or twice than among those who did not (4.6 vs. 28.1 percent, respectively).

## **Feelings about Peer Substance Use**

- A majority of youths aged 12 to 17 reported that they disapprove of their peers using substances. In 2007, 89.7 percent of youths "strongly" or "somewhat" disapproved of their peers smoking one or more packs of cigarettes per day, which was similar to the rate of 89.1 percent in 2006, but higher than the 87.1 percent in 2002. In addition, 82.9 percent strongly or somewhat disapproved of peers using marijuana or hashish once a month or more, which was similar to the 82.8 percent reported in 2006, but was an increase from the 80.4 percent in 2002. Also, 86.6 percent of youths strongly or somewhat disapproved of peers having one or two drinks of an alcoholic beverage nearly every day, which was similar to the rate of 86.4 percent in 2006, but was higher than the 84.7 percent reported in 2002.
- In 2007, past month marijuana use was reported by 2.3 percent of youths aged 12 to 17 who strongly or somewhat disapproved of their peers using marijuana once a month or more compared with 27.7 percent of youths who reported that they neither approve nor disapprove of such behavior from their peers.

## **Fighting and Delinquent Behavior**

- In 2007, 22.3 percent of youths aged 12 to 17 reported that, in the past year, they had gotten into a serious fight at school or at work; this was similar to the rate in 2006 (22.6 percent), but was higher than that in 2002 (20.6 percent). Almost one in six (15.4 percent) had taken part in a group-against-group fight, which was lower than the rate in 2006 (17.0 percent), but was similar to the rate in 2002 (15.9 percent). One in thirty (3.3 percent) had carried a handgun at least once, which was similar to the rates in 2006 (3.2 percent) and 2002 (3.3 percent). An estimated 2.9 percent had sold illegal drugs, which was similar to the rate of 3.3 percent in 2006, but was lower than the 4.4 percent rate in 2002. In 2007, 4.3 percent had, at least once, stolen or tried to steal something worth more than \$50; this was similar to the rate in 2006 (4.8 percent), but lower than the rate in 2002 (4.9 percent). An estimated 7.3 percent had, in at least one instance, attacked others with the intent to harm or seriously hurt them, which was similar to the rates of 7.9 percent in 2006 and 7.8 percent in 2002.
- Youths aged 12 to 17 who had engaged in fighting or other delinquent behaviors were more likely than other youths to have used illicit drugs in the past month. For example, in 2007, past month illicit drug use was reported by 16.5 percent of youths who had gotten into a serious fight at school or work in the past year compared with 7.5 percent of those who had not engaged in fighting, and by 36.6 percent of those who had stolen or tried to steal something worth over \$50 in the past year compared with 8.2 percent of those who had not engaged in such theft.

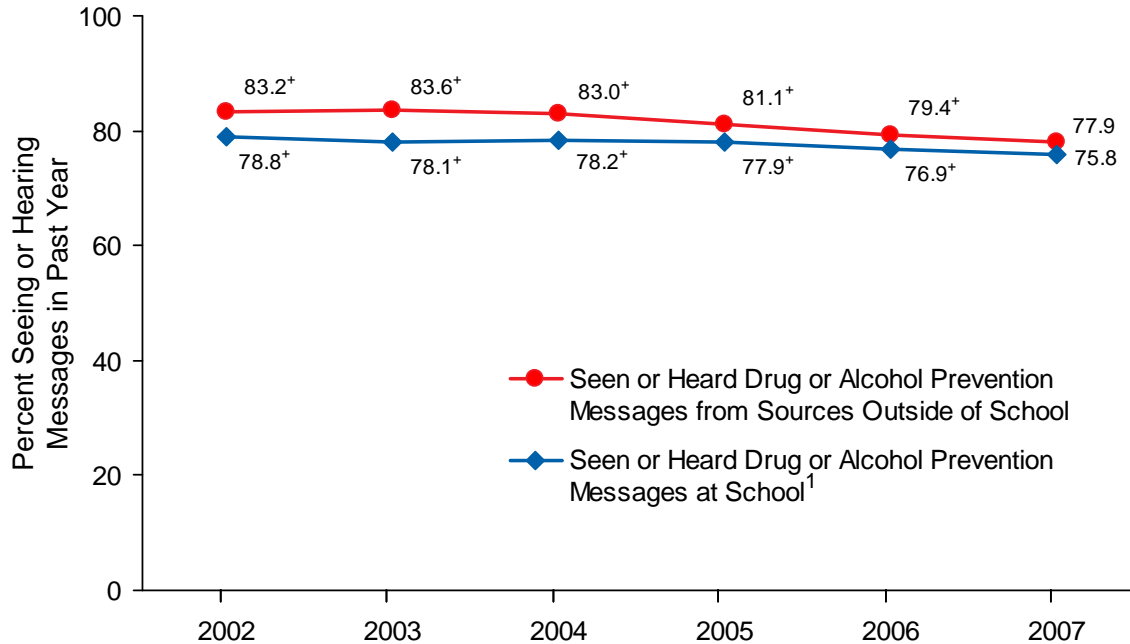
## **Religious Beliefs and Participation in Activities**

- In 2007, 31.4 percent of youths aged 12 to 17 reported that they had attended religious services 25 or more times in the past year, which was similar to the rate in 2006 (31.7 percent) and the rate in 2002 (33.0 percent). In addition, 76.1 percent agreed or strongly agreed with the statement that religious beliefs are a very important part of their lives, which was similar to the 77.0 percent reported in 2006, but was lower than the 78.2 percent reported in 2002. Also, 35.1 percent agreed with the statement that it is important for their friends to share their religious beliefs, which was the same as the rate in 2006 and similar to the rate in 2002 (35.8 percent).
- Rates of past month use of illicit drugs, cigarettes, and alcohol (including binge alcohol) were lower among youths aged 12 to 17 who agreed with these statements than among those who disagreed. For example, in 2007, past month illicit drug use was reported by 7.4 percent of those who agreed that religious beliefs are a very important part of life compared with 16.3 percent of those who disagreed with that statement.

## **Exposure to Substance Use Prevention Messages and Programs**

- In 2007, approximately one in eight youths aged 12 to 17 (11.3 percent) reported that they had participated in drug, tobacco, or alcohol prevention programs outside of school in the past year. This rate was similar to the 11.4 percent reported in 2006, but was lower than the rates reported in 2002 (12.7 percent) and 2003 (13.9 percent). The prevalence of past month binge alcohol use was lower among those who participated in these prevention programs outside of school (7.9 percent) than among those who did not (9.9 percent). However, the prevalence of past month use of illicit drugs, marijuana, or cigarettes was not significantly lower among those who participated in these prevention programs outside of school (9.4 percent, 6.2 percent, and 9.0 percent, respectively) than among those who did not (9.5 percent, 6.7 percent, and 9.9 percent, respectively).
- In 2007, 77.9 percent of youths aged 12 to 17 reported having seen or heard drug or alcohol prevention messages in the past year from sources outside of school, which was lower than the 79.4 percent reported in 2006 and the 83.2 percent reported in 2002 (Figure 6.7). The prevalence of past month use of illicit drugs was lower among those who reported having such exposure (9.2 percent) than among those who reported having no such exposure (10.6 percent).
- In 2007, 75.8 percent of youths aged 12 to 17 enrolled in school in the past year reported having seen or heard drug or alcohol prevention messages at school, which was lower than the 76.9 percent reported in 2006 and the 78.8 percent reported in 2002 (Figure 6.7). The prevalence of past month use of illicit drugs or marijuana was lower among those who reported having such exposure (8.7 percent and 6.0 percent for illicit drugs and marijuana, respectively) than among those who reported having no such exposure (12.0 percent and 9.1 percent, respectively).

**Figure 6.7 Exposure to Substance Use Prevention Messages and Programs among Youths Aged 12 to 17: 2002-2007**



<sup>+</sup> Difference between this estimate and the 2007 estimate is statistically significant at the .05 level.

<sup>1</sup> Estimates are from youths aged 12 to 17 who were enrolled in school in the past year.

- In 2007, 59.6 percent of youths aged 12 to 17 reported that they had talked at least once in the past year with at least one of their parents about the dangers of drug, tobacco, or alcohol use. This was similar to the 59.8 percent reported in 2006, but was higher than the 58.1 percent reported in 2002. The prevalence of past month use of illicit drugs, marijuana, cigarettes, or binge alcohol among those who reported having had such conversations with their parents (8.6 percent, 6.2 percent, 9.0 percent, and 9.3 percent, respectively) was lower than that among those who reported having no such conversations (10.9 percent, 7.3 percent, 11.0 percent, and 10.4 percent, respectively).

## Parental Involvement

- Youths aged 12 to 17 were asked a number of questions related to the extent of support, oversight, and control that they perceived their parents exercised over them in the year prior to the survey. In 2007, among youths aged 12 to 17 enrolled in school in the past year, 79.5 percent reported that in the past year their parents always or sometimes checked on whether or not they had completed their homework, which was the same as the rate in 2006 and similar to the 78.4 percent reported in 2002. In addition, 80.9 percent reported that their parents always or sometimes provided help with their homework, which was similar to the rates of 79.8 percent in 2006 and 81.4 percent in 2002. Also, 70.4 percent reported that their parents limited the amount of time that they spent out with friends on school nights, which was higher than the 69.1 percent reported in 2006, but was similar to the 70.7 percent reported in 2002.
- In 2007, 87.8 percent of youths aged 12 to 17 reported that in the past year their parents made them always or sometimes do chores around the house, 86.2 percent reported that their parents always or sometimes let them know that they had done a good job, and 85.7 percent reported that their parents let them know they were proud of something they had done. All of these percentages in 2007 were similar to those reported in 2006 and remained statistically unchanged from the rates reported in 2002. In 2007, however, 39.7 percent of youths reported that their parents limited the amount of time that they watched television, which was similar to the rate in 2006 (39.4 percent), but was higher than the 36.9 percent reported in 2002.
- In 2007, past month use of illicit drugs, cigarettes, and alcohol (including binge alcohol) was lower among youths aged 12 to 17 who reported that their parents always or sometimes engaged in monitoring behaviors than among youths whose parents "seldom" or "never" engaged in such behaviors. For example, the rate of past month use of any illicit drug was 8.1 percent for youths whose parents always or sometimes helped with homework compared with 16.0 percent among youths who indicated that their parents seldom or never helped. Rates for current cigarette smoking were 8.5 and 16.3 percent for the two groups of youths, respectively, and rates of past month binge alcohol use were 7.9 versus 18.3 percent correspondingly.



# 7. Substance Dependence, Abuse, and Treatment

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 psychotherapeutic drugs. These questions are used to classify persons as 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).

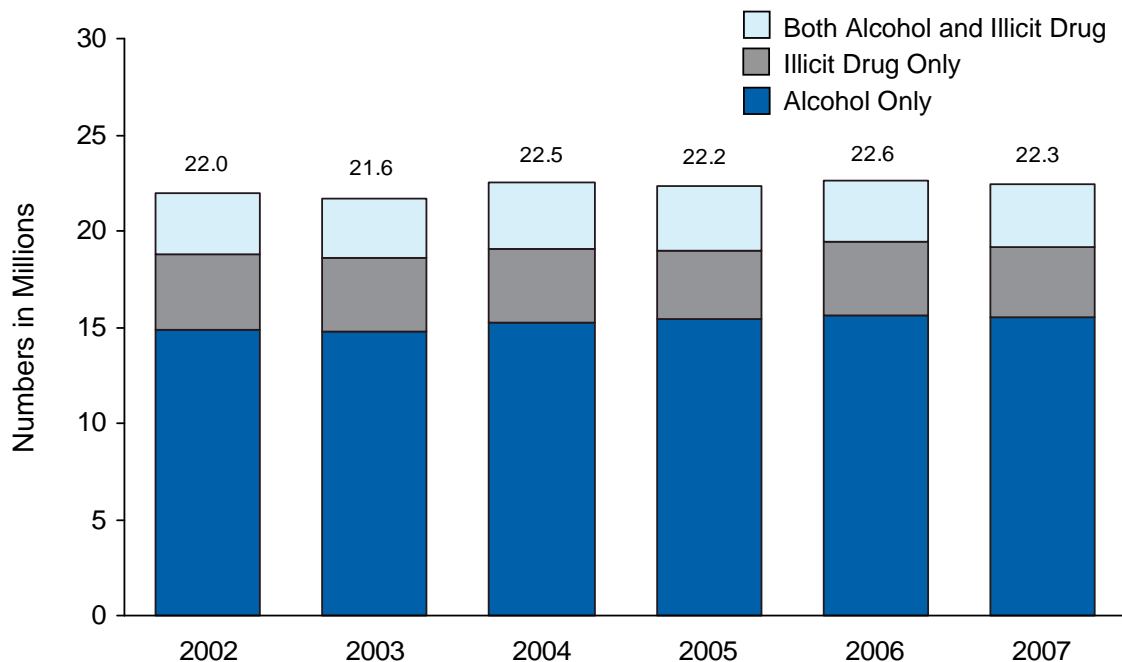
The questions related to dependence ask about health and emotional problems associated with substance use, unsuccessful attempts to cut down on use, tolerance, withdrawal, reducing other activities to use substances, spending a lot of time engaging in activities related to substance use, or using the substance in greater quantities or for a longer time than intended. 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 is considered to be a more severe substance use problem than abuse because it involves the psychological and physiological effects of tolerance and withdrawal. Although individuals may meet the criteria specified here for both dependence and abuse, persons meeting the criteria for both are classified as having dependence, but not abuse. Persons defined with abuse in this report do not meet the criteria for dependence.

This chapter provides estimates of the prevalence and patterns of substance use disorders occurring in the past year from the 2007 NSDUH and compares these estimates against the results from the 2002, 2003, 2004, 2005, and 2006 surveys. It also provides estimates of the prevalence and patterns of the receipt of treatment in the past year for problems related to substance use. This chapter concludes with a discussion of the need for and the receipt of treatment at specialty facilities for problems associated with substance use.

## 7.1. Substance Dependence or Abuse

- In 2007, an estimated 22.3 million persons aged 12 or older were classified with substance dependence or abuse in the past year (9.0 percent of the population aged 12 or older) (Figure 7.1). Of these, 3.2 million were classified with dependence on or abuse of both alcohol and illicit drugs, 3.7 million were dependent on or abused illicit drugs but not alcohol, and 15.5 million were dependent on or abused alcohol but not illicit drugs.
- The number of persons with substance dependence or abuse was stable between 2002 and 2007 (22.0 million in 2002, 21.6 million in 2003, 22.5 million in 2004, 22.2 million in 2005, 22.6 million in 2006, and 22.3 million in 2007).
- In 2007, 18.6 million persons aged 12 or older were classified with dependence on or abuse of alcohol. This represents 7.5 percent of the population. The number and the percentage have remained similar since 2002.

**Figure 7.1 Substance Dependence or Abuse in the Past Year among Persons Aged 12 or Older: 2002-2007**

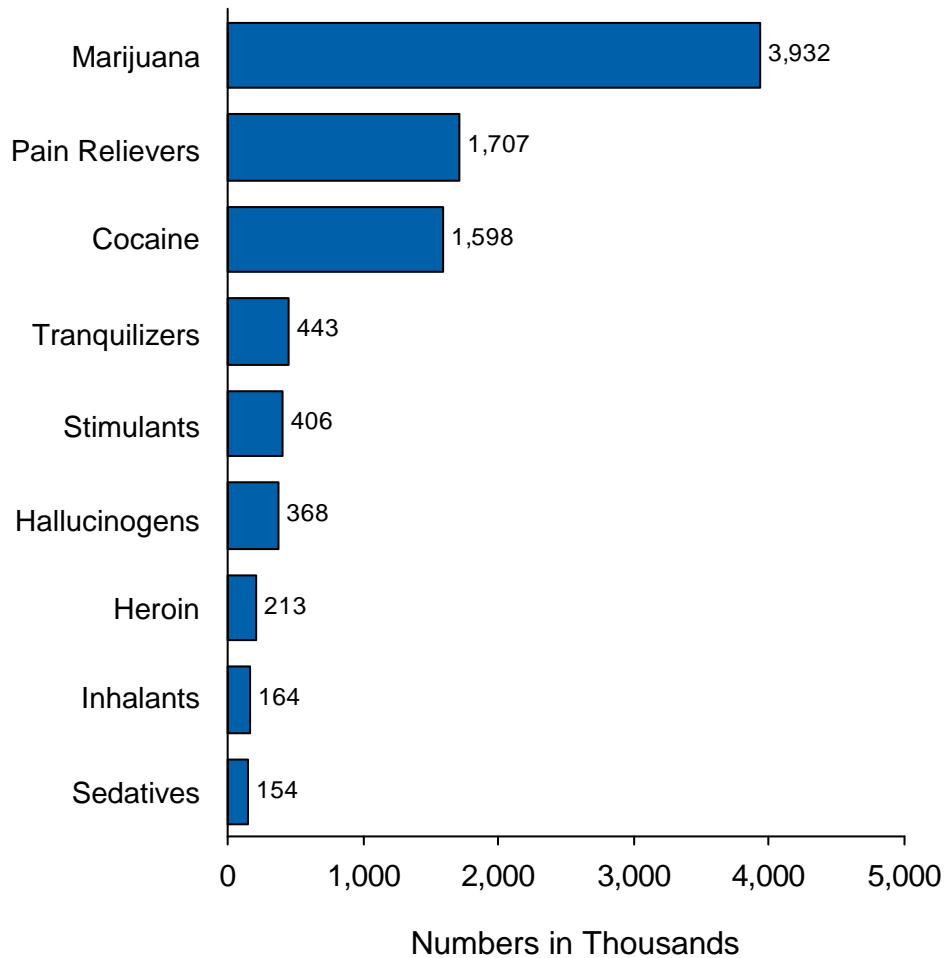


<sup>+</sup> Difference between this estimate and the 2007 estimate is statistically significant at the .05 level.

- Marijuana was the illicit drug that had the highest rate of past year dependence or abuse in 2007, followed by pain relievers and cocaine. Of the 6.9 million persons aged 12 or older classified with dependence on or abuse of illicit drugs in 2007, 3.9 million were dependent on or abused marijuana or hashish (representing 1.6 percent of the total population aged 12 or older, and 57.4 percent of all those classified with illicit drug dependence or abuse), 1.7 million persons were classified with dependence on or abuse of pain relievers, and 1.6 million persons were classified with dependence on or abuse of cocaine (Figure 7.2). These estimates for pain relievers and cocaine did not change significantly between 2006 and 2007 and between 2002 and 2007. The rate for marijuana decreased from 2002 to 2007 but was stable from 2006 to 2007, while the number of people dependent on or abusing marijuana did not change significantly between 2006 and 2007 and between 2002 and 2007.
- The percentages of persons with dependence on or abuse of illicit drugs remained stable between 2006 (2.9 percent) and 2007 (2.8 percent). Between 2002 and 2007, the rate declined from 3.0 to 2.8 percent. During the 6-year period, the percentages of persons with dependence on or abuse of alcohol remained stable (7.7 percent in 2002, 7.6 percent in 2006, and 7.5 percent in 2007).



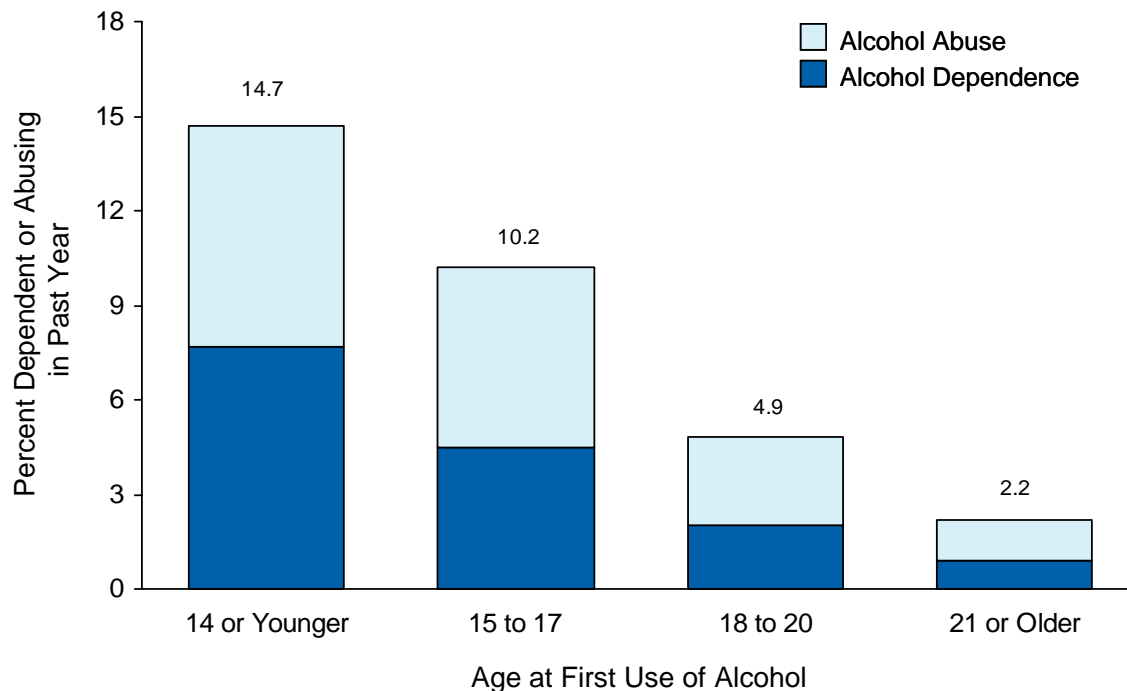
**Figure 7.2 Dependence on or Abuse of Specific Illicit Drugs in the Past Year among Persons Aged 12 or Older: 2007**



**Age at First Use**

- In 2007, among adults aged 18 or older who first tried marijuana at age 14 or younger, 12.9 percent were classified with illicit drug dependence or abuse, higher than the 2.7 percent of adults who had first used marijuana at age 18 or older.
- Among adults, age at first use of alcohol was associated with dependence on or abuse of alcohol. In 2007, among adults aged 18 or older who first tried alcohol at age 14 or younger, 15.9 percent were classified with alcohol dependence or abuse compared with only 3.9 percent of adults who had first used alcohol at age 18 or older. Adults aged 21 or older who had first used alcohol before age 21 were more likely than adults who had their first drink at age 21 or older to be classified with alcohol dependence or abuse (9.6 vs. 2.2 percent) (Figure 7.3).

**Figure 7.3 Alcohol Dependence or Abuse in the Past Year among Adults Aged 21 or Older, by Age at First Use of Alcohol: 2007**



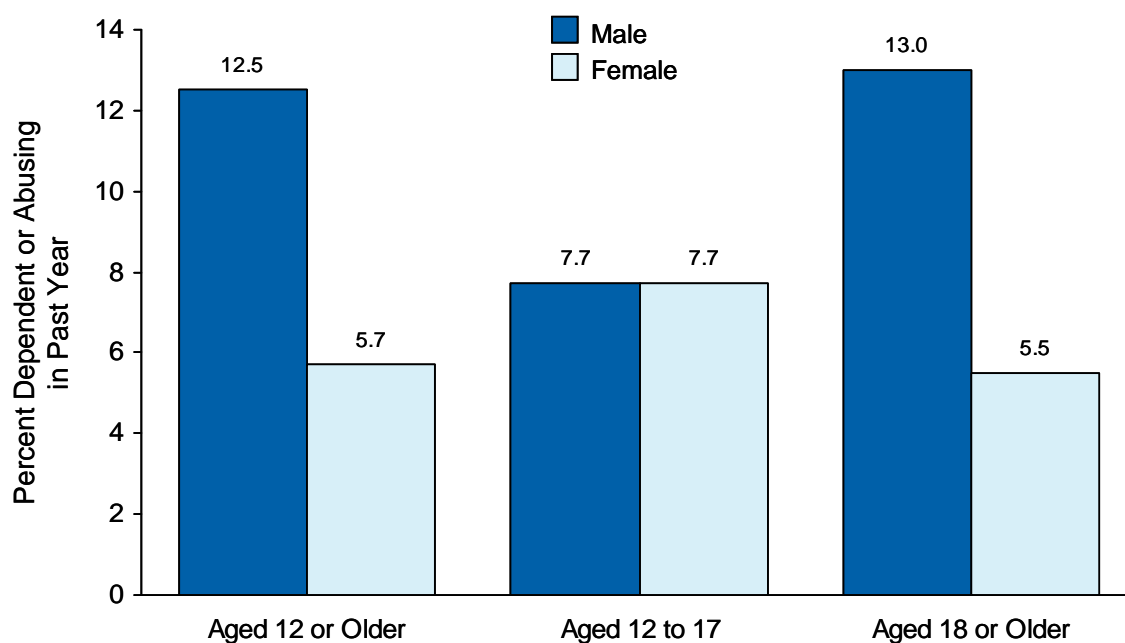
### Age

- Rates of substance dependence or abuse were associated with age. In 2007, the rate of substance dependence or abuse among adults aged 18 to 25 (20.7 percent) was higher than that among youths aged 12 to 17 (7.7 percent) and among adults aged 26 or older (7.2 percent). None of these estimates changed significantly between 2006 and 2007. For youths aged 12 to 17, the rate decreased from 8.9 percent in 2002 to 7.7 percent in 2007. There were no changes from 2002 to 2007 for adults aged 18 to 25 and those 26 or older.
- In 2007, among persons with substance dependence or abuse, the proportion with dependence on or abuse of illicit drugs also was associated with age: 56.3 percent of youths aged 12 to 17, 38.3 percent of young adults aged 18 to 25, and 23.3 percent of adults aged 26 or older. For young adults aged 18 to 25 and adults aged 26 or older, these estimates did not change significantly between 2006 and 2007 and between 2002 and 2007. For youths aged 12 to 17, the rate decreased between 2002 and 2007, but did not change significantly between 2006 and 2007.
- The rate of substance dependence or abuse among youths aged 12 to 17 remained stable between 2006 and 2007 (7.7 percent in 2007 and 8.0 percent in 2006), but the rate in 2007 was lower than the rate in 2002 (8.9 percent). The rate of alcohol dependence or abuse among youths aged 12 to 17 remained stable between 2006 and 2007 and between 2002 and 2007 (5.4 percent in 2007, 5.4 percent in 2006, and 5.9 percent in 2002).

## Gender

- As was the case from 2002 through 2006, the rate of substance dependence or abuse for males aged 12 or older in 2007 was about twice as high as the rate for females. For males in 2007, the rate was 12.5 percent, which was similar to the 12.3 percent in 2006, while for females, it was 5.7 percent, which was lower than the 6.3 percent in 2006 (Figure 7.4). Among youths aged 12 to 17, however, the rate of substance dependence or abuse among males was similar to the rate among females during the 6-year period (7.7 vs. 7.7 percent in 2007; 8.0 vs. 8.1 percent in 2006; and 9.3 vs. 8.6 percent in 2002).

**Figure 7.4 Substance Dependence or Abuse in the Past Year, by Age and Gender: 2007**



- The rate of illicit drug dependence or abuse among males aged 12 or older was similar between 2006 and 2007 and between 2002 and 2007 (3.8 percent in 2007, 3.7 percent in 2006, and 4.0 percent in 2002). The rate for females remained stable between 2006 and 2007, but decreased between 2002 and 2007 (1.8 percent in 2007, 2.0 percent in 2006, and 2.1 percent in 2002).

## Race/Ethnicity

- In 2007, among persons aged 12 or older, the rate of substance dependence or abuse was the lowest among Asians (4.7 percent). Racial/ethnic groups with similar rates included American Indians or Alaska Natives (13.4 percent), persons reporting two or more races (10.8 percent), Native Hawaiians or Other Pacific Islanders (9.9 percent), whites (9.4 percent), blacks (8.5 percent), and Hispanics (8.3 percent). These rates in 2007 were similar to the rates in 2002 and 2006, except that the rate of substance dependence or abuse among Hispanics in 2007 was lower than the rate in 2002 (10.4 percent) and 2006 (10.0 percent).

## **Education/Employment**

- Rates of substance dependence or abuse were associated with level of education in 2007. Among adults aged 18 or older, those who graduated from a college or university had a lower rate of dependence or abuse (7.5 percent) than those who graduated from high school (9.3 percent), those who did not graduate from high school (9.8 percent), and those with some college (10.3 percent).
- Rates of substance dependence or abuse were associated with current employment status in 2007. A higher percentage of unemployed adults aged 18 or older were classified with dependence or abuse (20.0 percent) than were full-time employed adults (10.1 percent) or part-time employed adults (10.6 percent).
- Most adults aged 18 or older with substance dependence or abuse were employed full time in 2007. Of the 20.4 million adults classified with dependence or abuse, 12.3 million (60.4 percent) were employed full time.

## **Criminal Justice Populations**

- In 2007, adults aged 18 or older who were on parole or a supervised release from jail during the past year had higher rates of dependence on or abuse of a substance (37.2 percent) than their counterparts who were not on parole or supervised release during the past year (8.9 percent).
- In 2007, probation status was associated with substance dependence or abuse. The rate of substance dependence or abuse was 37.4 percent among adults who were on probation during the past year, which was significantly higher than the rate among adults who were not on probation during the past year (8.5 percent).

## **Geographic Area**

- In 2007, rates of substance dependence or abuse for persons aged 12 or older showed evidence of differences by region, with the Midwest (10.0 percent) having a higher rate than the South (8.7 percent) and the Northeast (8.1 percent), but a similar rate to the West (9.2 percent). Rates for substance dependence or abuse among persons aged 12 or older in 2007 also varied by county type, with small metropolitan counties (9.4 percent) having a significantly higher rate than nonmetropolitan counties (8.3 percent), but a similar rate when compared with large metropolitan counties (9.0 percent).

## **7.2. Past Year Treatment for a Substance Use Problem**

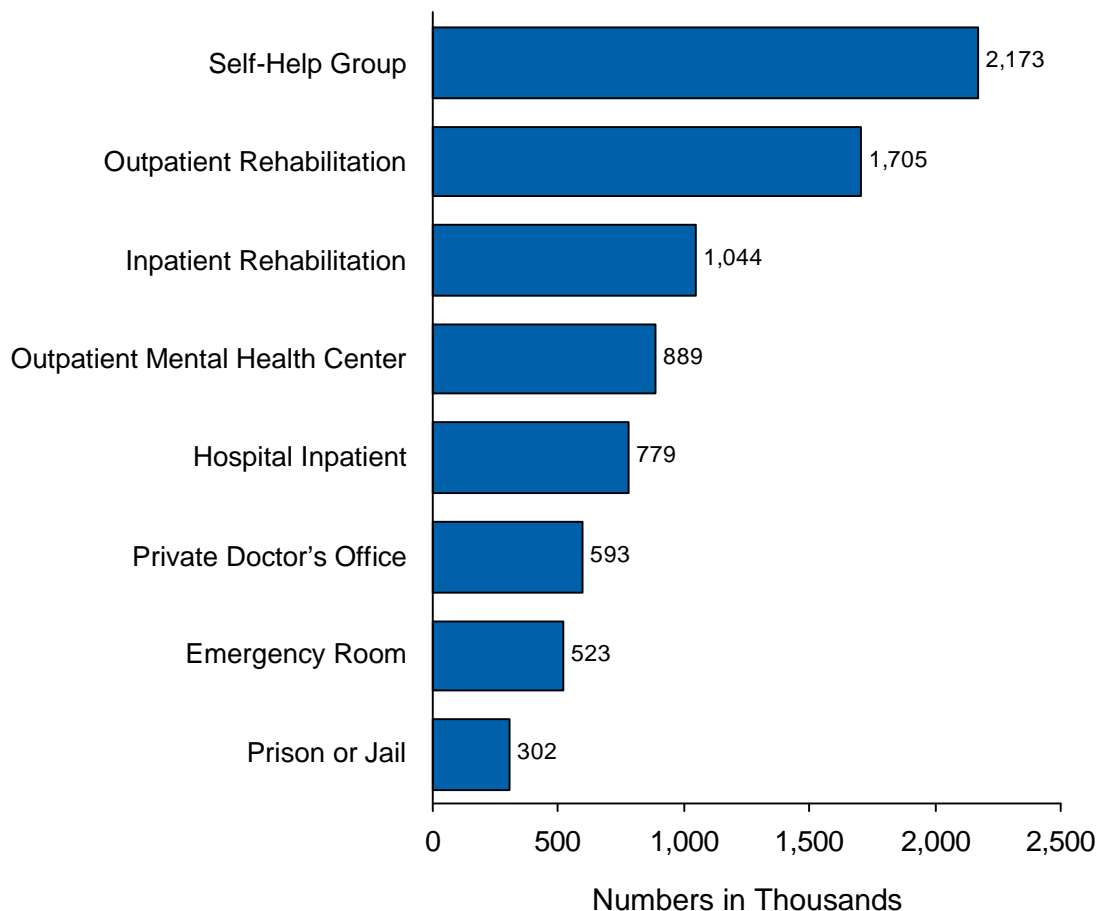
Estimates described in this section refer to treatment received for illicit drug or alcohol use, or for medical problems associated with the use of illicit drugs or alcohol. This includes treatment received in the past year at any location, such as a hospital (inpatient), rehabilitation facility (outpatient or inpatient), mental health center, emergency room, private doctor's office, prison or jail, or a self-help group, such as Alcoholics Anonymous or Narcotics Anonymous. Persons could report receiving treatment at more than one location. Note that the definition of treatment in this section is different from the definition of specialty treatment described in

Section 7.3. Specialty treatment only includes treatment at a hospital (inpatient), a rehabilitation facility (inpatient or outpatient), or a mental health center.

Individuals who reported receiving substance use treatment but were missing information on whether the treatment was specifically for alcohol use or illicit drug use were not counted in estimates of illicit drug use treatment or in estimates of alcohol use treatment; however, they were counted in estimates for "drug or alcohol use" treatment.

- In 2007, 3.9 million persons aged 12 or older (1.6 percent of the population) received some kind of treatment for a problem related to the use of alcohol or illicit drugs. Of these, 1.4 million received treatment for the use of both alcohol and illicit drugs, 0.8 million received treatment for the use of illicit drugs but not alcohol, and 1.3 million received treatment for the use of alcohol but not illicit drugs. (Note that estimates by substance do not sum to the total number of persons receiving treatment because the total includes persons who reported receiving treatment but did not report for which substance the treatment was received.)
- The number and the percentage of the population aged 12 or older receiving substance use treatment within the past year remained stable between 2006 and 2007 and between 2002 and 2007 (3.9 million, 1.6 percent in 2007; 4.0 million, 1.6 percent in 2006; and 3.5 million, 1.5 percent in 2002).
- In 2007, among the 3.9 million persons aged 12 or older who received treatment for alcohol or illicit drug use in the past year, 2.2 million persons received treatment at a self-help group, and 1.7 million received treatment at a rehabilitation facility as an outpatient (Figure 7.5). There were 1.0 million persons who received treatment at a rehabilitation facility as an inpatient, 889,000 persons who received treatment at a mental health center as an outpatient, 779,000 at a hospital as an inpatient, 593,000 at a private doctor's office, 523,000 at an emergency room, and 302,000 at a prison or jail. None of these estimates changed significantly between 2006 and 2007 or between 2002 and 2007.
- In 2007, during their most recent treatment in the past year, 2.5 million persons aged 12 or older reported receiving treatment for alcohol use, and 936,000 persons reported receiving treatment for marijuana use (Figure 7.6). Accordingly, estimates on receiving treatment for the use of other drugs were 809,000 persons for cocaine, 558,000 for pain relievers, 335,000 for heroin, 311,000 for stimulants, and 303,000 for hallucinogens. None of these estimates changed significantly between 2006 and 2007, except that the numbers who received treatment for marijuana use and for nonmedical use of stimulants in 2007 were lower than the numbers in 2006 (1.2 million and 535,000 persons, respectively). None of these estimates changed significantly between 2002 and 2007, except that the number who received treatment for the use of pain relievers in 2007 was higher than the number in 2002 (360,000 persons). (Note that respondents could indicate that they received treatment for more than one substance during their most recent treatment.)

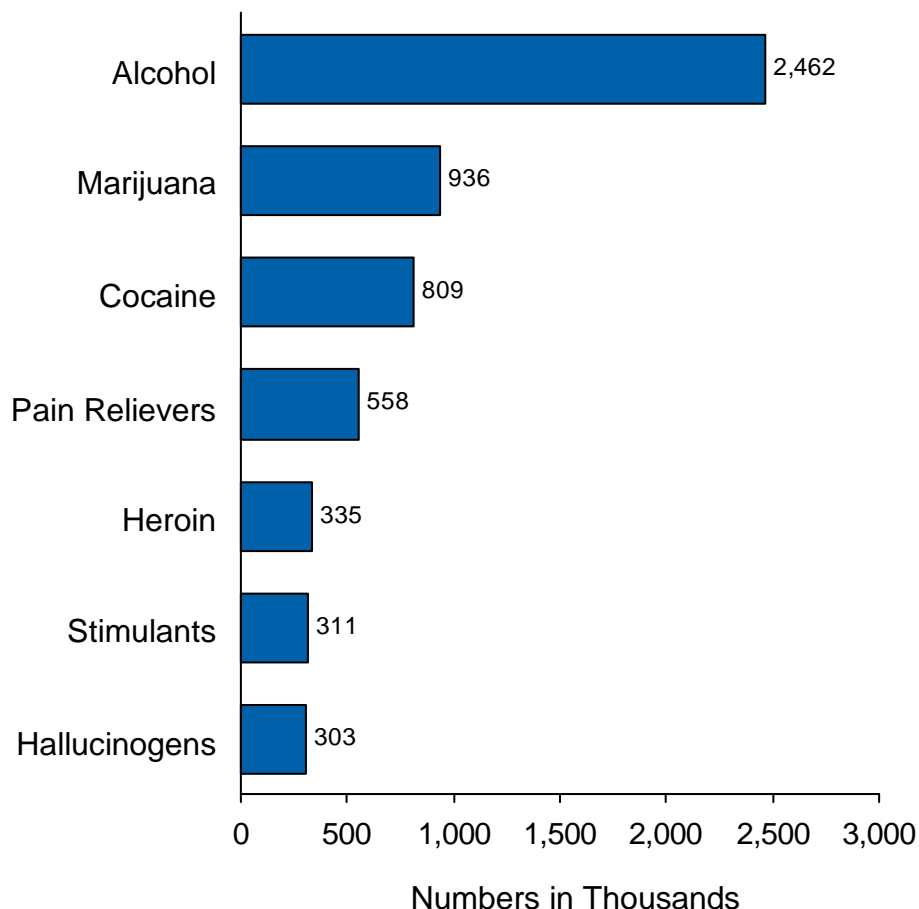
**Figure 7.5 Locations Where Past Year Substance Use Treatment Was Received among Persons Aged 12 or Older: 2007**



### 7.3. Need for and Receipt of Specialty Treatment

This section discusses the need for and receipt of treatment for a substance use problem at a "specialty" treatment facility. Specialty treatment is defined as treatment received at any of the following types of facilities: hospitals (inpatient only), drug or alcohol rehabilitation facilities (inpatient or outpatient), or mental health centers. It does not include treatment at an emergency room, private doctor's office, self-help group, prison or jail, or hospital as an outpatient. An individual is defined as needing treatment for an alcohol or drug use problem if he or she met the DSM-IV (APA, 1994) diagnostic criteria for dependence on or abuse of alcohol or illicit drugs in the past 12 months or if he or she received specialty treatment for alcohol use or illicit drug use in the past 12 months.

**Figure 7.6 Substances for Which Most Recent Treatment Was Received in the Past Year among Persons Aged 12 or Older: 2007**



In this section, an individual needing treatment for an illicit drug use problem is defined as receiving treatment for his or her drug use problem only if he or she reported receiving specialty treatment for drug use in the past year. Thus, an individual who needed treatment for illicit drug use but only received specialty treatment for alcohol use in the past year or who received treatment for illicit drug use only at a facility not classified as a specialty facility was not counted as receiving treatment for drug use. Similarly, an individual who needed treatment for an alcohol use problem was only counted as receiving alcohol use treatment if the treatment was received for alcohol use at a specialty treatment facility. Individuals who reported receiving specialty substance use treatment but were missing information on whether the treatment was specifically for alcohol use or drug use were not counted in estimates of specialty drug use treatment or in estimates of specialty alcohol use treatment; however, they were counted in estimates for "drug or alcohol use" treatment.

In addition to questions about symptoms of substance use problems that are used to classify respondents' need for treatment based on DSM-IV criteria, NSDUH includes questions

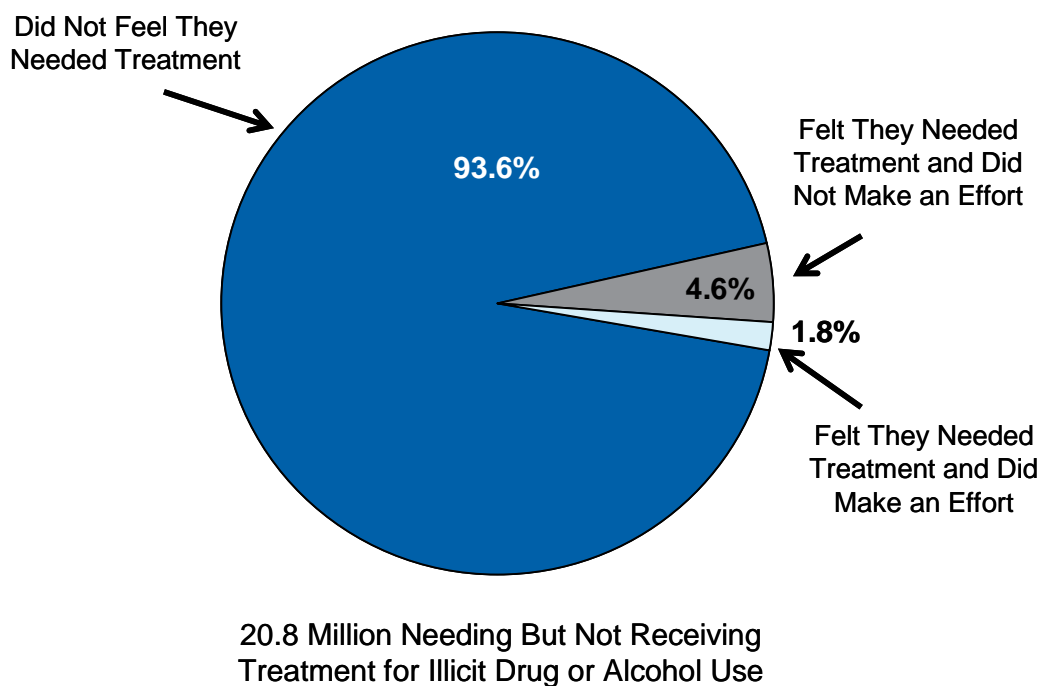
asking respondents about their perceived need for treatment (i.e., whether they felt they needed treatment or counseling for illicit drug use or alcohol use). In this report, estimates for perceived need for treatment are only discussed for persons who were classified as needing treatment (based on DSM-IV criteria) but did not receive treatment at a specialty facility. Similarly, estimates for whether a person made an effort to get treatment are only discussed for persons who felt the need for treatment.

### **Illicit Drug or Alcohol Use Treatment and Treatment Need**

- In 2007, 23.2 million persons aged 12 or older needed treatment for an illicit drug or alcohol use problem (9.4 percent of the persons aged 12 or older). Of these, 2.4 million (1.0 percent of persons aged 12 or older and 10.4 percent of those who needed treatment) received treatment at a specialty facility. Thus, 20.8 million persons (8.4 percent of the population aged 12 or older) needed treatment for an illicit drug or alcohol use problem but did not receive treatment at a specialty substance abuse facility in the past year. These estimates are similar to the estimates for 2006 and for 2002.
- Of the 2.4 million people aged 12 or older who received specialty substance use treatment in 2007, 952,000 received treatment for alcohol use only, 728,000 received treatment for illicit drug use only, and 615,000 persons received treatment for both alcohol and illicit drug use. These estimates are similar to the estimates for 2006 and for 2002.
- In 2007, among persons who received their last or current substance use treatment at a specialty facility in the past year, 53.3 percent reported using their "own savings or earnings" as a source of payment for their most recent specialty treatment, 34.9 percent reported using private health insurance, 26.3 percent reported using public assistance other than Medicaid, 19.7 percent reported using Medicare, 19.6 percent reported using funds from family members, and 18.2 percent reported using Medicaid. None of these estimates changed significantly between 2006 and 2007 and between 2002 and 2007, except that the 53.3 percent reported using their "own savings or earnings" as a source of payment in 2007 was higher than the 42.1 percent reported in 2006. (Note that persons could report more than one source of payment.)
- Of the 20.8 million persons in 2007 who were classified as needing substance use treatment but not receiving treatment at a specialty facility in the past year, 1.3 million persons (6.4 percent) reported that they perceived a need for treatment for their illicit drug or alcohol use problem (Figure 7.7). Of these 1.3 million persons who felt they needed treatment but did not receive treatment in 2007, 380,000 (28.5 percent) reported that they made an effort to get treatment, and 955,000 (71.5 percent) reported making no effort to get treatment.



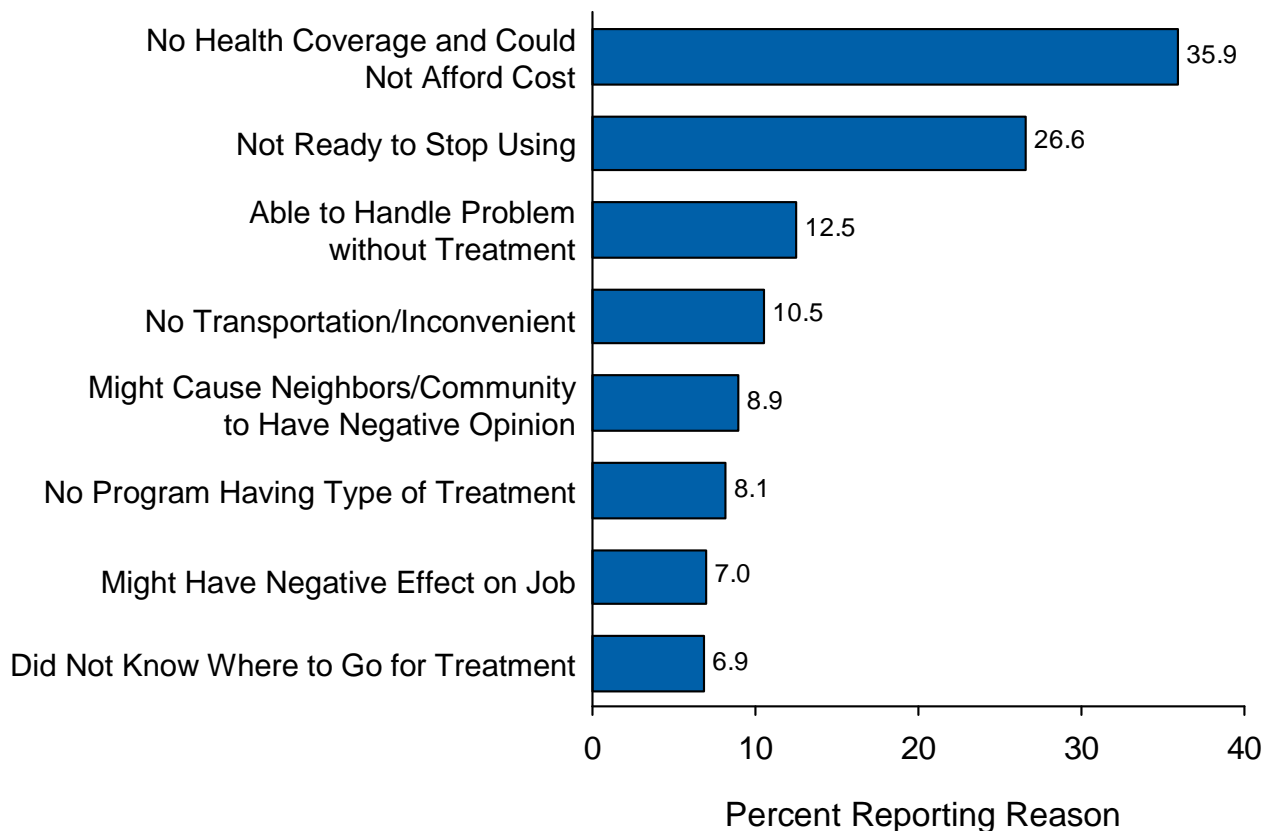
**Figure 7.7 Past Year Perceived Need for and Effort Made to Receive Specialty Treatment among Persons Aged 12 or Older Needing But Not Receiving Treatment for Illicit Drug or Alcohol Use: 2007**



- The number and the percentage of youths aged 12 to 17 who needed treatment for an illicit drug or alcohol use problem remained unchanged between 2006 and 2007; however, there was a significant decrease between 2002 and 2007 (2.0 million youths and 7.9 percent of the population in 2007; 2.1 million and 8.2 percent in 2006; and 2.3 million and 9.1 percent in 2002). Of the 2.0 million youths who needed treatment in 2007, 150,000 received treatment at a specialty facility (about 7.6 percent of the youths who needed treatment), leaving 1.8 million who needed treatment for a substance use problem but did not receive it at a specialty facility.
- Based on 2004-2007 combined data, five of the most often reported reasons for not receiving illicit drug or alcohol use treatment among persons who needed but did not receive treatment at a specialty facility and perceived a need for treatment included (a) not ready to stop using (38.7 percent), (b) no health coverage and could not afford cost (31.1 percent), (c) possible negative effect on job (11.6 percent), (d) not knowing where to go for treatment (11.6 percent), and (e) concern that receiving treatment might cause neighbors/community to have negative opinion (11.1 percent).

- Based on 2004-2007 combined data, among persons who needed but did not receive illicit drug or alcohol use treatment, made an effort to receive treatment, and felt a need for treatment, some of the most often reported reasons for not receiving treatment were (a) no health coverage and could not afford cost (35.9 percent), (b) not ready to stop using (26.6 percent), (c) able to handle the problem without treatment (12.5 percent), (d) no transportation/inconvenient (10.5 percent), (e) might cause neighbors/community to have negative opinion (8.9 percent), (f) no program having type of treatment (8.1 percent), (g) might have negative effect on job (7.0 percent), and (h) did not know where to go for treatment (6.9 percent) (Figure 7.8).

**Figure 7.8 Reasons for Not Receiving Substance Use Treatment among Persons Aged 12 or Older Who Needed and Made an Effort to Get Treatment But Did Not Receive Treatment and Felt They Needed Treatment: 2004-2007 Combined**



## **Illicit Drug Use Treatment and Treatment Need**

- In 2007, the number of persons aged 12 or older needing treatment for an illicit drug use problem was 7.5 million (3.0 percent of the total population). Of these, 1.3 million (0.5 percent of the total population and 17.8 percent of the persons who needed treatment) received treatment at a specialty facility for an illicit drug use problem in the past year. Thus, there were 6.2 million persons (2.5 percent of the total population) who needed treatment but did not receive treatment at a specialty facility for an illicit drug use problem in 2007. None of these estimates changed significantly between 2006 and 2007 and between 2002 and 2007.
- The number of persons needing treatment for illicit drug use in 2007 (7.5 million) was similar to the number needing treatment in 2002 (7.7 million), 2003 (7.3 million), 2004 (8.1 million), 2005 (7.6 million), and 2006 (7.8 million). Also, the number of persons needing but not receiving specialty treatment in the past year for an illicit drug use problem in 2007 (6.2 million) was similar to the estimates in 2002 (6.3 million), 2003 (6.2 million), 2004 (6.6 million), 2005 (6.3 million), and 2006 (6.2 million).
- Of the 6.2 million people aged 12 or older who needed but did not receive specialty treatment for illicit drug use in 2007, 548,000 (8.9 percent) reported that they perceived a need for treatment for their illicit drug use problem. Of the 548,000 persons who felt a need for treatment in 2007, 205,000 (37.5 percent) reported that they made an effort and 343,000 (62.5 percent) reported making no effort to get treatment.
- Among youths aged 12 to 17, there were 1.1 million (4.5 percent) who needed treatment for an illicit drug use problem in 2007. Of this group, only 111,000 received treatment at a specialty facility (9.9 percent of youths aged 12 to 17 who needed treatment), leaving 1.0 million youths who needed treatment but did not receive it at a specialty facility.
- Among people aged 12 or older who needed but did not receive illicit drug use treatment and felt they needed treatment (based on 2004-2007 combined data), six of the most often reported reasons for not receiving treatment were (a) no health coverage and could not afford cost (34.3 percent), (b) not ready to stop using (31.8 percent), (c) concern that getting treatment might cause neighbors/community to have negative opinion (14.4 percent), (d) not knowing where to go for treatment (13.5 percent), (e) being able to handle the problem without treatment (12.7 percent), and (f) possible negative effect on job (11.7 percent).

## **Alcohol Use Treatment and Treatment Need**

- In 2007, the number of persons aged 12 or older needing treatment for an alcohol use problem was 19.3 million (7.8 percent of the population aged 12 or older). Of these, 1.6 million (0.6 percent of the total population and 8.1 percent of the people who needed treatment for an alcohol use problem) received alcohol use treatment at a specialty facility. Thus, there were 17.7 million people who needed treatment but did not receive treatment at a specialty facility for an alcohol use problem. None of these estimates changed significantly between 2006 and 2007 and between 2002 and 2007.

- Among the 17.7 million people aged 12 or older who needed but did not receive treatment for an alcohol use problem in 2007, there were 859,000 (4.8 percent) who felt they needed treatment for their alcohol use problem. The number and the percentage were higher than those reported in 2006 (541,000 persons and 3.0 percent, respectively), but were similar to those reported in 2002 (761,000 persons and 4.5 percent, respectively). Of these, 619,000 (72.1 percent) did not make an effort to get treatment, and 240,000 (27.9 percent) made an effort but were unable to get treatment in 2007.
- In 2007, there were 1.4 million youths (5.5 percent) aged 12 to 17 who needed treatment for an alcohol use problem. Of this group, only 82,000 received treatment at a specialty facility (0.3 percent of all youths and 5.9 percent of youths who needed treatment), leaving 1.3 million youths who needed but did not receive treatment.

## 8. Mental Health

This chapter presents findings on mental health problems in the United States, including the prevalence of serious psychological distress (SPD) and major depressive episode (MDE) and the association of these problems with substance use and substance dependence or abuse (substance use disorder). Also reported here are the rates of treatment for depression (among those with MDE) in the past year, the percentages of adults aged 18 or older and youths aged 12 to 17 who received mental health care in the past year, and the percentage of adults who had an unmet need for mental health care in the past year.

SPD is an overall indicator of past year psychological distress that is derived from the K6 scale administered to adults aged 18 or older in the National Survey on Drug Use and Health (NSDUH). Numerical scores derived from responses to these six questions range from 0 to 24. For this report, a score of 13 or higher is considered SPD. It is notable that the data related to SPD assessed from 2004 to 2007 are not directly comparable with data from earlier years because of study design changes. Further information on the measurement of SPD, the scoring algorithm, and the study design changes is provided in Section B.4.4 of Appendix B.

A module of questions designed to obtain measures of lifetime and past year prevalence of MDE, the level of functional impairment caused by MDE in the past year, and treatment for depression has been administered to adults aged 18 or older and youths aged 12 to 17 since 2004. Some questions in the adolescent depression module were modified slightly from the adult depression module to make them more appropriate for youths. Given these differences, adult and youth depression estimates are presented separately in this chapter.

MDE is defined as a period of at least 2 weeks when a person experienced a depressed mood or loss of interest or pleasure in daily activities and had at least four of the seven additional symptoms reflecting the criteria for major depressive disorder as described in the 4th edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)* (American Psychiatric Association [APA], 1994). It should be noted that no exclusions were made for MDE caused by medical illness, bereavement, or substance use disorders. Impairment is defined by the level of role interference reported to be caused by MDE in the past 12 months. For adults, the Sheehan Disability Scale (SDS) role domains are (1) home management, (2) work/school, (3) close relationships with others, and (4) social life. The role domains are assessed on a 0 to 10 scale with impairment categories of none (0), mild (1-3), moderate (4-6), severe (7-9), and very severe (10). The role domains for youths are slightly modified to be made age appropriate, but are assessed on the same 0 to 10 scale described for adults. The specific questions used to measure MDE and role impairment and the scoring algorithm for these responses are included in Section B.4.5 of Appendix B.

Although there is substantial overlap in the populations classified with SPD and MDE, there are important distinctions between the definitions of the two. Meeting the criteria for SPD indicates that the respondent endorsed having symptoms at a level known to be indicative of having a mental disorder (i.e., any disorder such as an anxiety or mood disorder). Meeting the criteria for past year MDE indicates that the respondent had the specific physical and emotional

symptom profile indicative of MDE in the past 12 months. MDE is known to be a fairly common disorder that often has a significant impact on a person's work, home, and social life.

This chapter also presents data on mental health care among adults aged 18 or older and youths aged 12 to 17 for any type of mental health problem. Initiated in 2000, the mental health service utilization modules are asked of respondents regardless of MDE or SPD status. In the adult module, respondents are asked whether they received treatment or counseling for any problem with emotions, "nerves," or mental health in the past year in any inpatient or outpatient setting or used prescription medication for a mental or emotional condition. The treatment questions in this module are generic in that they do not ask specifically about treatment for a particular disorder, as do the questions in the MDE module. As such, subsequent references to treatment or counseling for any problem with emotions, nerves, or mental health are described broadly as "mental health service use" or receiving/needing "mental health care." It is possible for a respondent to have indicated receipt of treatment for depression without having indicated that he or she received services for any problems with emotions, nerves, or mental health.

In NSDUH, questions in the youth mental health service utilization module differ from those asked of adults. Youths aged 12 to 17 are asked whether they received any treatment or counseling within the 12 months prior to the interview for problems with behavior or emotions in the specialty mental health setting (outpatient or inpatient care), the general medical setting (pediatrician or family physician care for emotional or behavior problems), or the education setting (talked with a counselor, psychologist, or teacher, or received special education services while in a regular classroom or placed in a special classroom, special program, or special school). They also are asked for the number of nights spent in overnight facilities, the number of visits they had to outpatient mental health providers, and the reason(s) for the most recent stay or visit. Both the youth and the adult mental health questions specifically exclude treatment for problems with substance use, a topic asked about in other interview modules.

Estimates of unmet need for mental health care are reported for adults. Unmet need is established using a question that asks whether the respondent perceived a need for, but did not receive mental health treatment or counseling at any time in the 12 months prior to the NSDUH interview. This measure also includes persons who received some type of mental health service in the past 12 months, but reported a perceived need for additional services they did not receive.

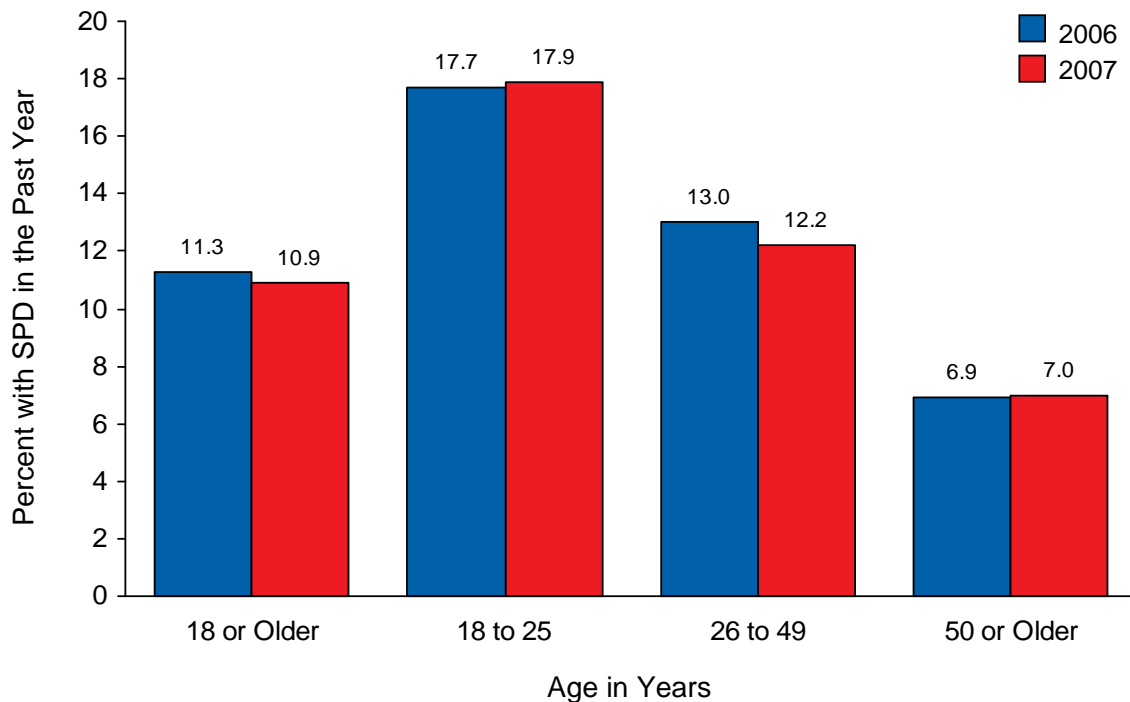
It is important to note that because the survey covers the U.S. civilian, noninstitutionalized population, persons residing in long-term psychiatric or other institutions continuously throughout the year were not included in the NSDUH sampling frame. Persons who were hospitalized or institutionalized for a period of time during 2007, but who resided in households during the rest of the year, were included in the sample.

## 8.1. Adults Aged 18 or Older

### Prevalence of Serious Psychological Distress among Adults

- In 2007, there were an estimated 24.3 million adults aged 18 or older in the United States with SPD in the past year. This represents 10.9 percent of all adults in this country, a rate similar to the SPD rate in 2006 (11.3 percent) (Figure 8.1), but below the rate in 2004 (12.2 percent).
- Rates of SPD in 2007 were highest for adults aged 18 to 25 (17.9 percent) and lowest for adults aged 50 or older (7.0 percent).
- The prevalence of SPD in 2007 among women aged 18 or older (13.4 percent) was significantly higher than among men in that age group (8.2 percent).
- In 2007, rates of past year SPD were lowest among Asians at 6.4 percent. Rates for other racial/ethnic groups were 10.2 percent among Hispanics, 10.5 percent among blacks, 11.3 percent among whites, 11.9 percent among Native Hawaiians or Other Pacific Islanders, 13.7 percent among American Indians or Alaska Natives, and 14.0 percent among persons reporting two or more races.

**Figure 8.1 Serious Psychological Distress in the Past Year among Adults Aged 18 or Older, by Age: 2006-2007**

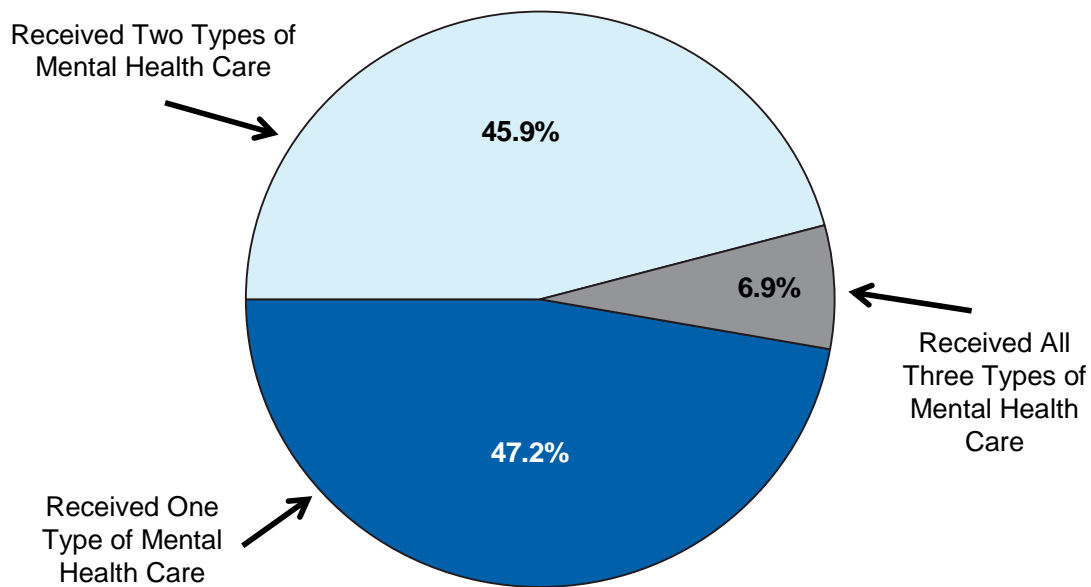


+ Difference between this estimate and the 2007 estimate is statistically significant at the .05 level.

### Mental Health Service Use among Adults with Serious Psychological Distress

- Among the 24.3 million adults aged 18 or older with SPD in 2007, 10.8 million (44.6 percent) used mental health services in the past year. Among all adults with SPD, 38.8 percent received prescription medication, 27.3 percent received outpatient services, and 5.1 percent received inpatient services for a mental health problem in the past year. Respondents could report more than one type of service used.
- Among those with SPD who reported receiving mental health services in the past year, 47.2 percent received one type of care (inpatient, outpatient, or prescription medication), 45.9 percent received two types of care, and 6.9 percent received all three types of care (Figure 8.2).

**Figure 8.2 Number of Types of Mental Health Services Received in the Past Year among Persons Aged 18 or Older with Past Year Serious Psychological Distress Who Received Mental Health Services in the Past Year: 2007**



10.8 Million Adults with SPD Who Received Mental Health Services

Note: The three types of mental health care are receiving inpatient care, outpatient care, or prescription medication.



## **Serious Psychological Distress and Substance Use and Dependence or Abuse among Adults**

- Past year illicit drug use in 2007 was higher among adults aged 18 or older with SPD (28.0 percent) than among adults without SPD (12.2 percent). Similarly, the rate of past month cigarette use was higher among adults with SPD (42.1 percent) than among adults without SPD (23.9 percent).
- Among adults aged 18 or older with past year SPD in 2007, the rate of binge alcohol use (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 past 30 days) was 32.2 percent, which was higher than the 24.0 percent among adults who did not meet the criteria for SPD. Similarly, the rate of heavy alcohol use (drinking five or more drinks on the same occasion on each of 5 or more days in the past 30 days) among adults with SPD in the past year was higher (10.9 percent) than the rate reported among adults without SPD in the past year (6.9 percent).
- SPD in the past year was associated with past year substance dependence or abuse in 2007. Among adults aged 18 or older with SPD, 22.1 percent were dependent on or abused illicit drugs or alcohol. The rate among adults without SPD was 7.6 percent.

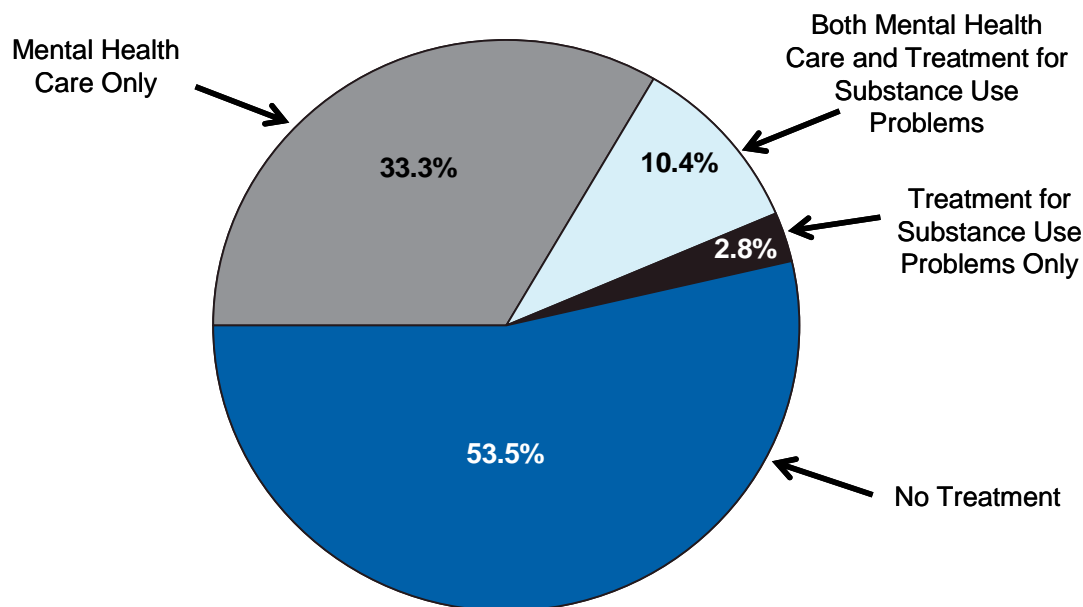
## **Mental Health Care among Adults with Co-Occurring Serious Psychological Distress and Substance Use Disorders**

- Among the 5.4 million adults aged 18 or older with both SPD and substance dependence or abuse (i.e., a substance use disorder) in 2007, 46.5 percent received mental health care or substance use treatment at a specialty facility; 10.4 percent received both mental health care and specialty substance use treatment, 33.3 percent received only mental health care, and 2.8 percent received only specialty substance use treatment (Figure 8.3).

## **Prevalence of Major Depressive Episode among Adults**

- In 2007, 7.5 percent of adults aged 18 or older (16.5 million people) had at least one MDE in the past year (Figure 8.4). Almost 1 in 20 adults (4.6 percent or 10.1 million people) had a past year MDE with severe impairment. The rates of past year MDE and MDE with severe impairment were stable between 2006 and 2007.
- The past year prevalence of MDE in 2007 was lowest for those aged 50 or older (5.8 percent). The rates were similar among persons aged 18 to 25 (8.9 percent) and those aged 26 to 49 (8.5 percent).
- The past year prevalence of MDE was higher among adult females than among adult males (9.5 vs. 5.3 percent). Among women, past year MDE rates were higher in the younger age groups (11.9 percent for 18 to 25 year olds, 11.0 percent for 26 to 49 year olds) compared with those 50 or older (7.2 percent).

**Figure 8.3 Past Year Mental Health Care among Adults Aged 18 or Older with Both Serious Psychological Distress and a Substance Use Disorder: 2007**



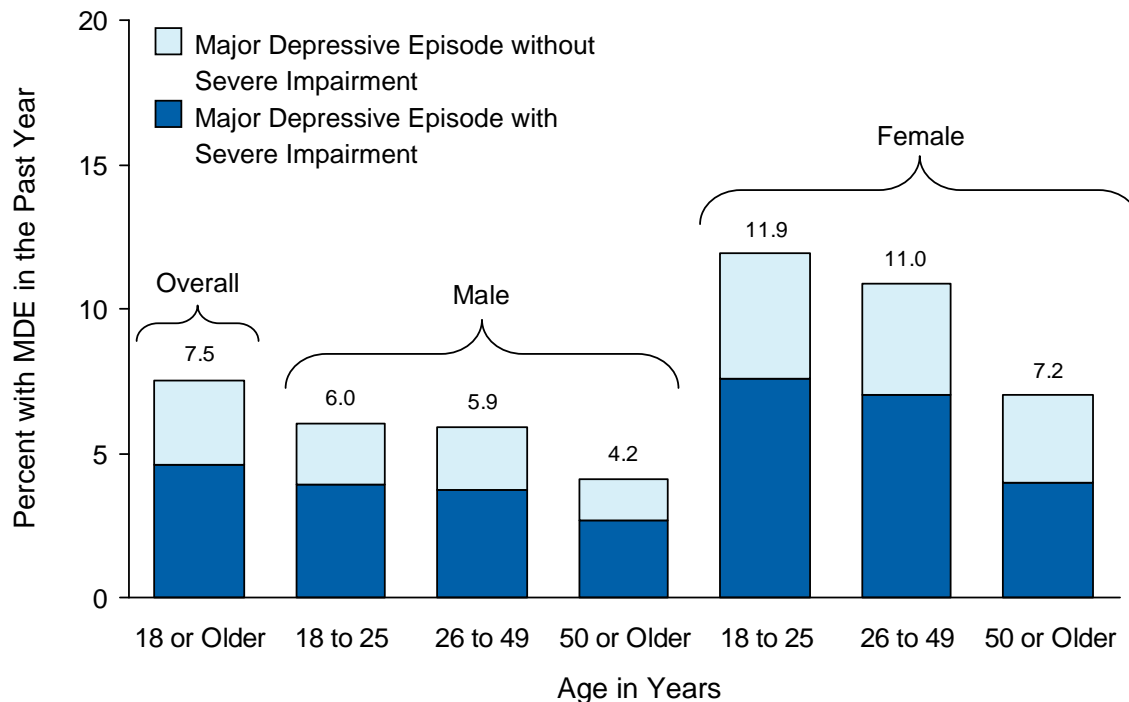
5.4 Million Adults with Co-Occurring SPD and Substance Use Disorder

- Among adults aged 18 or older, past year prevalence of MDE varied by race/ethnicity in 2007. The rate of MDE was lowest among Asians (2.9 percent), while rates for other groups were 12.1 percent among persons reporting two or more races, 9.2 percent among American Indians or Alaska Natives, 8.1 percent among whites, 6.3 percent among Hispanics, and 6.1 percent among blacks.
- Among adults aged 18 or older in 2007, past year prevalence of MDE with severe impairment was higher among unemployed persons (10.2 percent) than among persons employed full time (3.6 percent), persons employed part time (5.2 percent), and persons not in the labor force (5.7 percent).

**Major Depressive Episode and Substance Use and Dependence or Abuse among Adults**

- In 2007, adults aged 18 or older with past year MDE had higher rates of past year illicit drug use than those without MDE (27.4 vs. 12.8 percent). A similar pattern was observed for specific types of past year illicit drug use, such as marijuana, cocaine, heroin, hallucinogens, inhalants, and the nonmedical use of prescription-type psychotherapeutics.

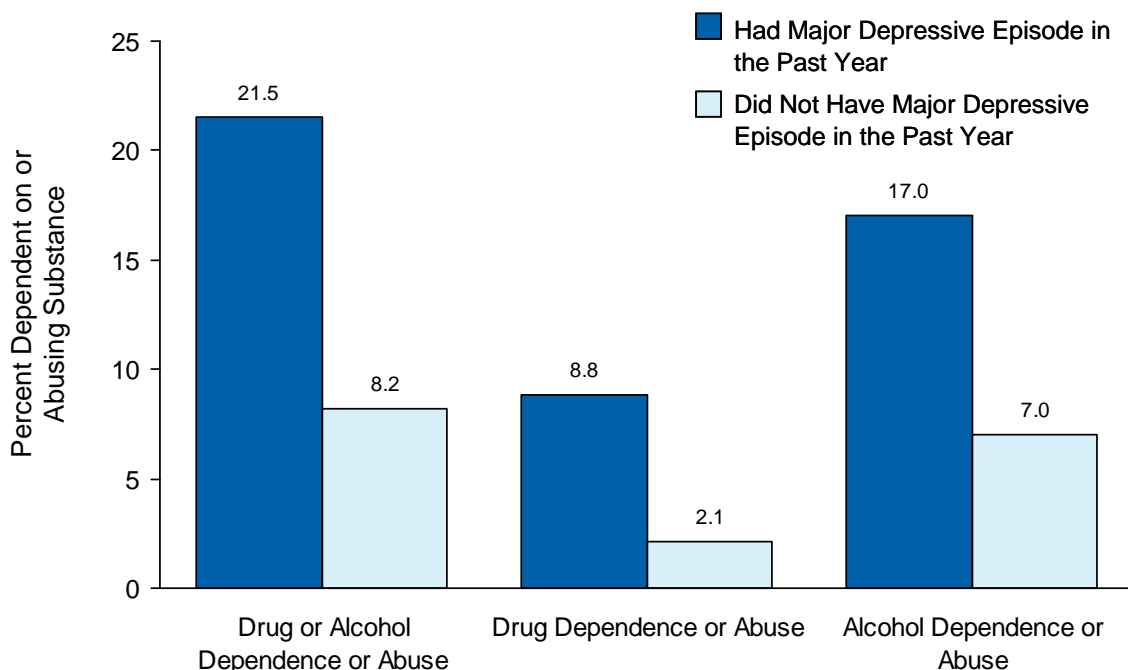
**Figure 8.4 Major Depressive Episode in the Past Year among Adults Aged 18 or Older, by Severe Impairment, Age, and Gender: 2007**



Note: Respondents with an unknown level of impairment were included in the estimates for Major Depressive Episode without Severe Impairment.

- Among adults aged 18 or older with MDE in the past year, 10.4 percent were heavy alcohol users in the past month, higher than the 7.1 percent of heavy alcohol users without MDE in the past year. Similarly, among adults with past year MDE, the rate of daily cigarette use in the past month was 28.7 percent, while the rate was 15.2 percent among adults without past year MDE.
- Having MDE in the past year was associated with past year substance dependence or abuse. Among adults aged 18 or older who had MDE in 2007, 21.5 percent were dependent on or abused alcohol or illicit drugs, while among adults without MDE 8.2 percent were dependent on or abused alcohol or illicit drugs (Figure 8.5). Adults with past year MDE were more likely than those without MDE to be dependent on or abuse illicit drugs (8.8 vs. 2.1 percent) and alcohol (17.0 vs. 7.0 percent).

**Figure 8.5 Substance Dependence or Abuse among Adults Aged 18 or Older, by Major Depressive Episode in the Past Year: 2007**



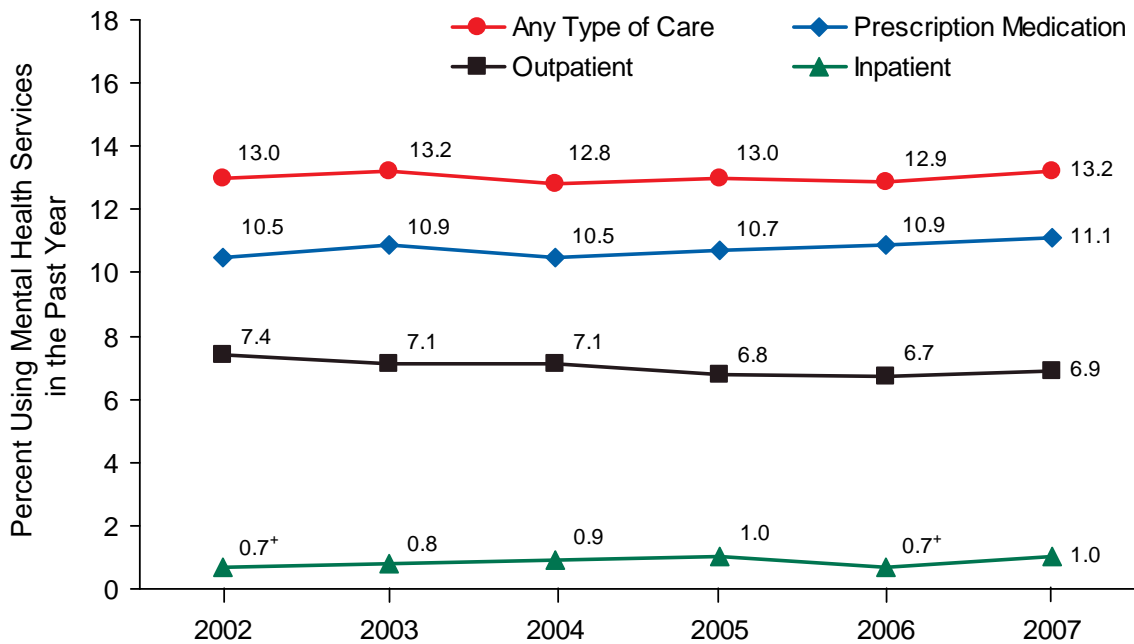
#### Treatment for Major Depressive Episode among Adults

- Among adults aged 18 or older who had past year MDE in 2007, 64.5 percent received treatment (i.e., saw or talked to a medical doctor or other professional or used prescription medication) for depression in the same time period, which was lower than in 2006 (69.1 percent). Among persons aged 50 or older who had MDE in the past year, the treatment rate decreased from 85.4 percent in 2006 to 74.2 percent in 2007. Of adults aged 18 or older who had past year MDE with severe impairment in 2007, 72.2 percent received treatment, similar to the rate in 2006 (74.1 percent).
- In 2007, women aged 18 or older who had MDE in the past year were more likely than men to receive treatment for depression in the past year (68.0 vs. 57.8 percent), though the treatment rate for women was significantly lower than in 2006 (73.7 percent).
- Among adults aged 18 or older with past year MDE in 2007, approximately half of those with no insurance (49.3 percent) received treatment for depression in the past year compared with higher rates for those with insurance: 64.4 percent of adults with private insurance, 76.7 percent of adults covered by Medicaid or CHIP, and 77.6 percent of adults with other health insurance (including Medicare, CHAMPUS, TRICARE, CHAMPVA, VA, and other sources of health care or insurance). The rates of treatment for adults with private health insurance and other health insurance decreased from 2006 (71.1 and 86.8 percent, respectively).

## Mental Health Service Use and Unmet Need for Mental Health Care among Adults

- In 2007, 29.4 million adults (13.2 percent of the population 18 years or older) received mental health services during the past 12 months (Figure 8.6). This was similar to the rate in 2006 (12.9 percent).
- In 2007, the type of mental health services most often received by adults aged 18 or older was prescription medication (11.1 percent), followed by outpatient services (6.9 percent). Rates of prescription medication and outpatient service use in 2007 were similar to the rates in 2006 (10.9 and 6.7 percent, respectively). Respondents could report receiving more than one type of mental health care.
- About 2.1 million adults (1.0 percent of the population aged 18 years or older) received inpatient care for mental health problems during the past year. This estimate was the same as the rate reported in 2005 after a significant decline in inpatient care noted in 2006 (0.7 percent or 1.6 million adults).
- Rates of mental health service use varied by age for adults aged 18 or older: 10.3 percent for adults aged 18 to 25, 14.3 percent for adults aged 26 to 49, and 13.2 percent for adults aged 50 or older.

**Figure 8.6 Past Year Mental Health Service Use among Adults Aged 18 or Older, by Type of Care: 2002-2007**



<sup>+</sup> Difference between this estimate and the 2007 estimate is statistically significant at the .05 level.

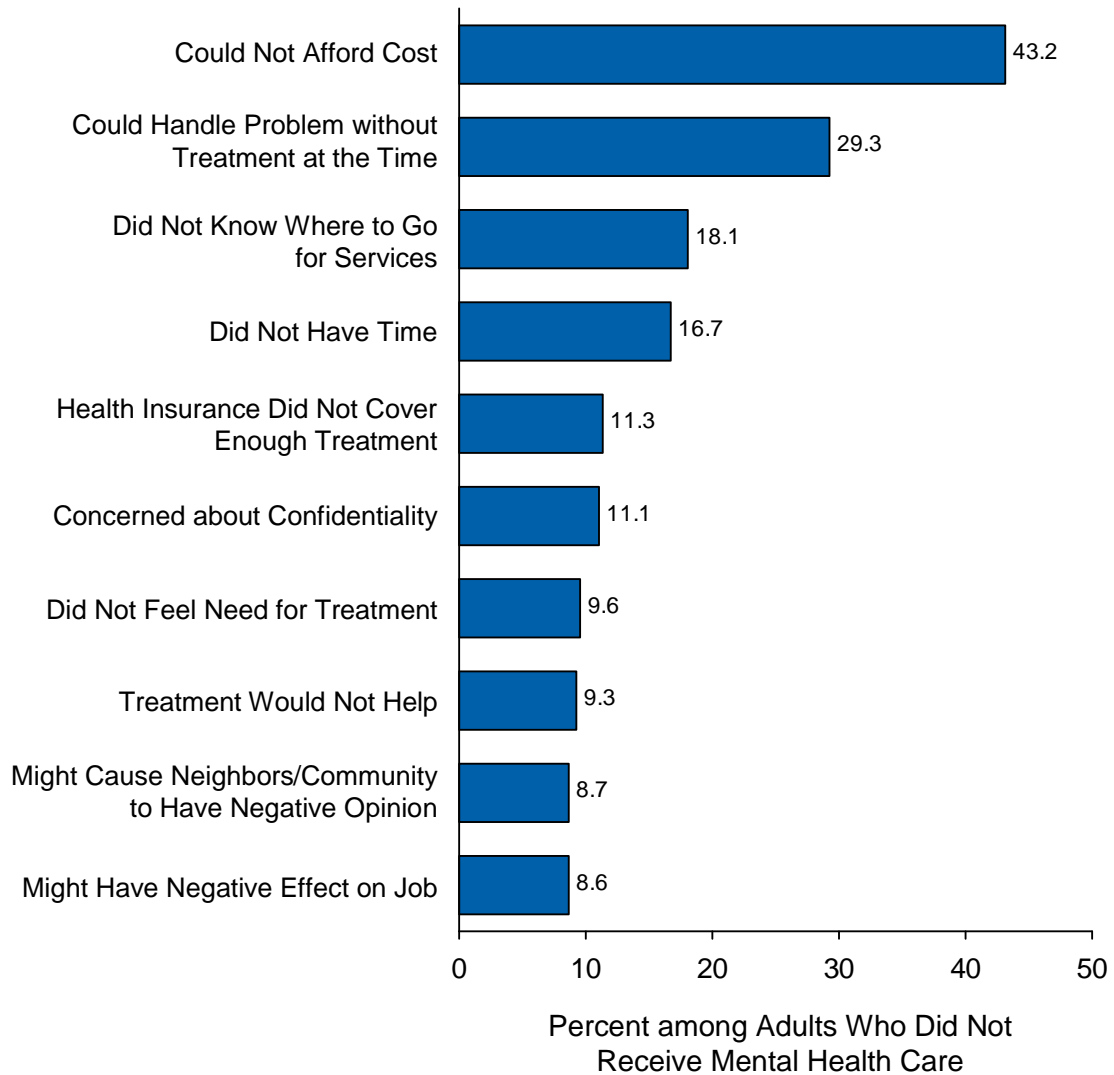
- Men were less likely than women to receive outpatient mental health services (4.7 vs. 9.0 percent) and prescription medication (7.5 vs. 14.5 percent) for mental health problems in the past year. There was no significant gender difference in inpatient care (1.0 vs. 0.9 percent).
- Among racial/ethnic groups, the rates of mental health service use for adults aged 18 or older in 2007 were 16.0 percent for whites, 15.6 percent for persons reporting two or more races, 11.6 percent for American Indians or Alaska Natives, 7.3 percent for Hispanics, 6.8 percent for blacks, and 3.9 percent for Asians.
- In 2007, there were 10.9 million adults aged 18 or older (4.9 percent) who reported an unmet need for mental health care in the past year. This included 5.4 million adults who did not receive any mental health services in the past year. Among the 5.5 million adults with an unmet need who did receive some type of mental health service in the past year, 18.7 percent reported an unmet need for mental health care. (Unmet need among adults who received mental health services may reflect a delay in care or a perception of insufficient care.)
- Among the 5.4 million adults who reported an unmet need for mental health care and did not receive mental health services in the past year, several barriers to care were reported. These included an inability to afford care (43.2 percent), believing at the time that the problem could be handled without care (29.3 percent), not knowing where to go for care (18.1 percent), and not having the time to go for care (16.7 percent) (Figure 8.7).

## **8.2. Youths Aged 12 to 17**

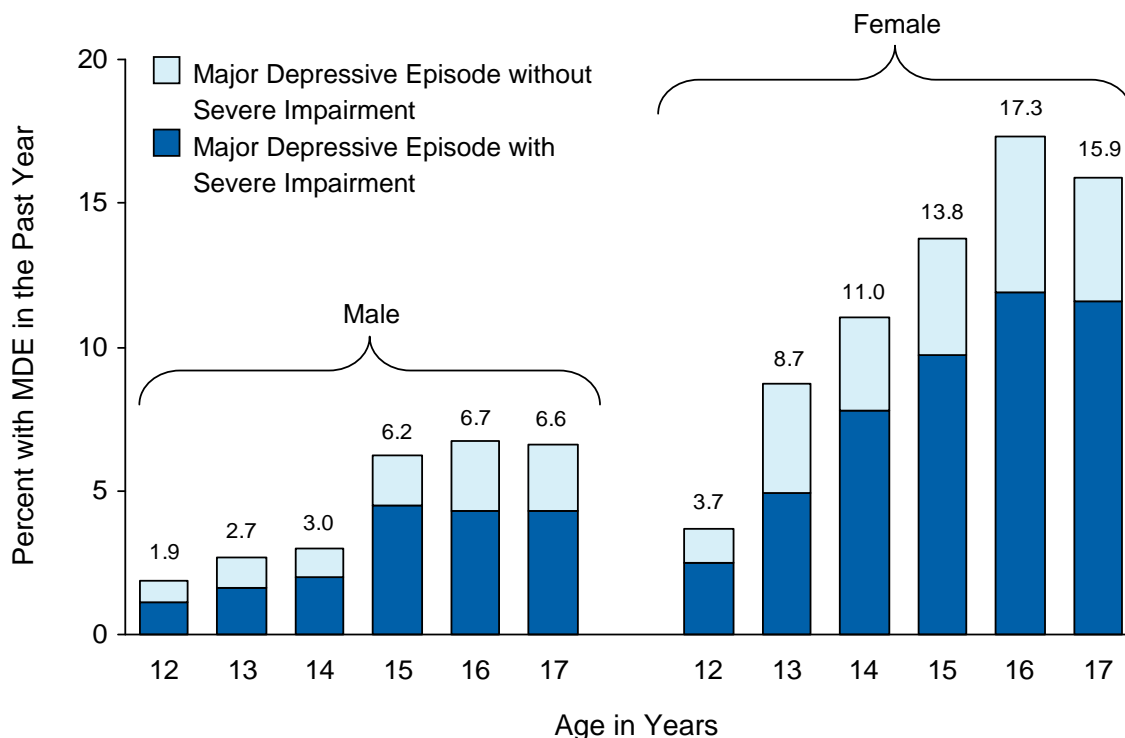
### **Prevalence of Major Depressive Episode among Youths**

- In 2007, there were 2.0 million youths (8.2 percent of the population aged 12 to 17) who had major depressive episode (MDE) during the past year. An estimated 1.4 million (5.5 percent) had MDE with severe impairment in one or more role domains (chores at home; school or work; close relationships with family; or social life).
- Among youths aged 12 to 17 in 2007, the past year prevalence of MDE ranged from 2.8 percent among 12 year olds to 11.8 percent among those aged 16 and 11.1 percent among those aged 17. Similarly, rates of past year MDE with severe impairment ranged from 1.8 percent among 12 years olds to 7.9 percent among 16 and 17 year olds.
- Among youths aged 12 to 17 in 2007, the prevalence rates of MDE and MDE with severe impairment among females were more than twice those among males. Female youths had an MDE prevalence rate of 11.9 percent in 2007, while the rate for males in the same age range was 4.6 percent. The prevalence of MDE with severe impairment was 8.2 percent for females and 3.0 percent for males (Figure 8.8).

**Figure 8.7 Reasons for Not Receiving Mental Health Services in the Past Year among Adults Aged 18 or Older with an Unmet Need for Mental Health Care Who Did Not Receive Mental Health Services: 2007**



**Figure 8.8 Major Depressive Episode in the Past Year among Youths Aged 12 to 17, by Severe Impairment, Age, and Gender: 2007**



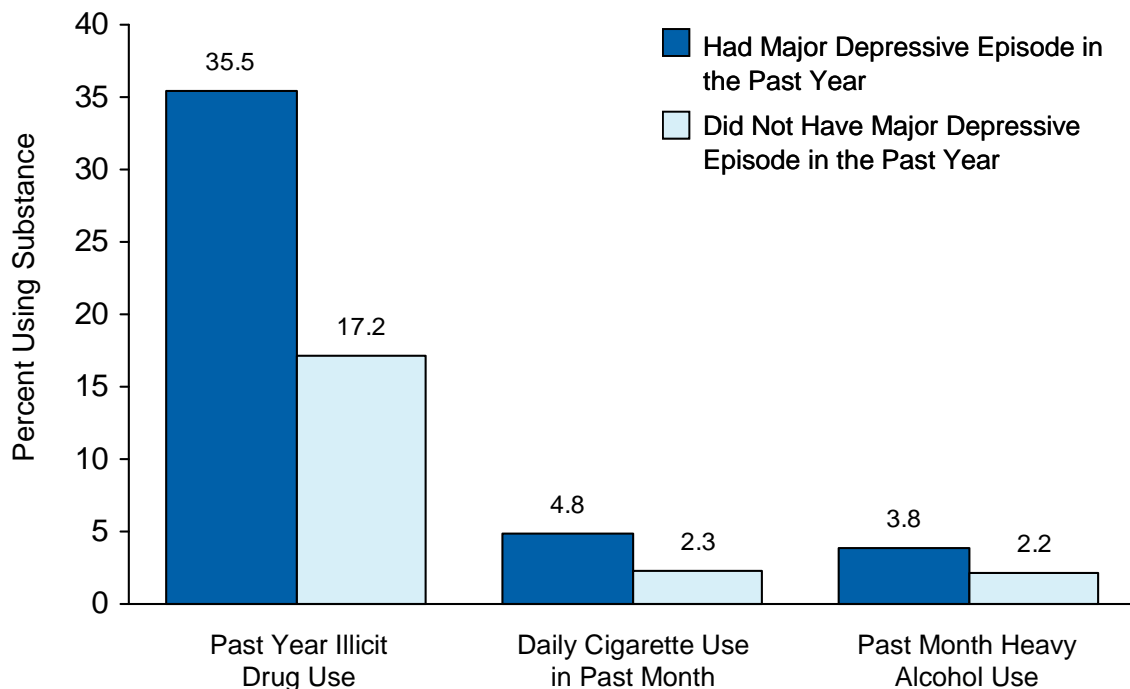
Note: Respondents with an unknown level of impairment were included in the estimates for Major Depressive Episode without Severe Impairment.

### Major Depressive Episode and Substance Use among Youths

- Among 12 to 17 year olds who had past year MDE in 2007, 35.5 percent had used illicit drugs during the same period (Figure 8.9). This was higher than the rate of 17.2 percent among youths who did not have past year MDE. This pattern was similar for most specific types of illicit drug use, including marijuana, cocaine, hallucinogens, inhalants, and the nonmedical use of prescription-type psychotherapeutics.
- In 2007, youths aged 12 to 17 who had MDE during the past year were more likely to report daily cigarette use in comparison with those who did not have MDE during the past year (4.8 vs. 2.3 percent). Similarly, youths who had past year MDE were more likely to report heavy use of alcohol than those who did not have MDE (3.8 vs. 2.2 percent).
- The occurrence of MDE in the past year among youths aged 12 to 17 was associated with a higher prevalence of illicit drug or alcohol dependence or abuse (18.9 percent). Among youths who did not report past year MDE, 6.7 percent had illicit drug or alcohol dependence or abuse during the same period.



**Figure 8.9 Substance Use among Youths Aged 12 to 17, by Major Depressive Episode in the Past Year: 2007**



**Treatment for Major Depressive Episode among Youths**

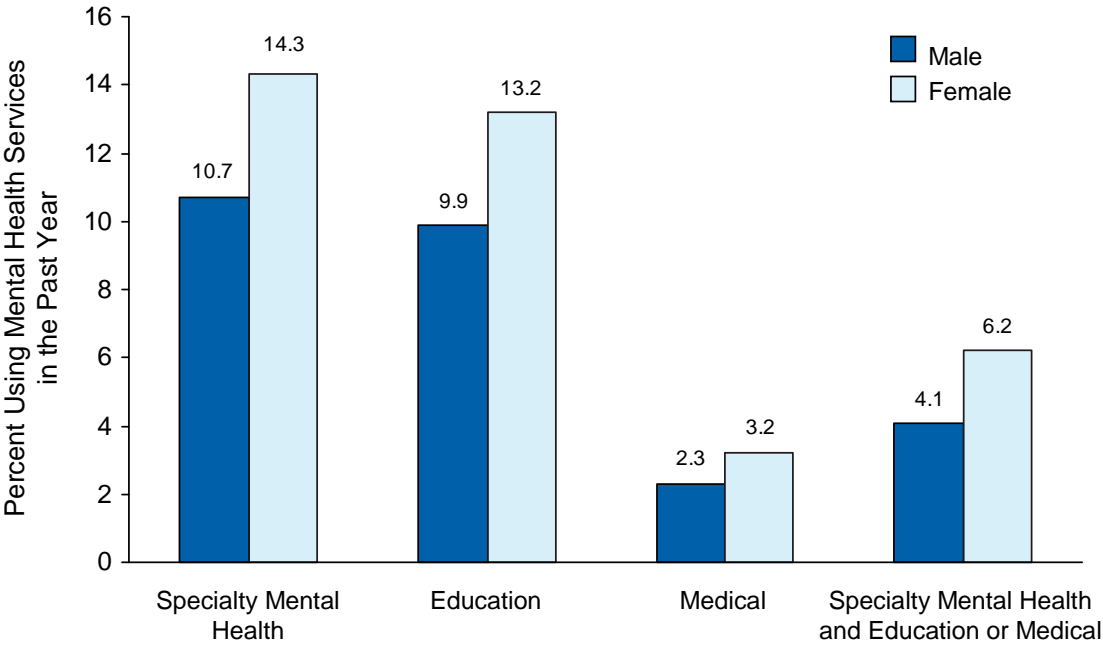
- In 2007, 38.9 percent of youths aged 12 to 17 with past year MDE received treatment for depression (i.e., saw or talked to a medical doctor or other professional or used prescription medication), which was unchanged from the 2006 rate. Among youths with past year MDE in 2007, 20.5 percent saw or talked to a medical doctor or other professional only, 2.5 percent used prescription medication only, and 15.6 percent received treatment from both sources for depression in the past year.

**Mental Health Service Use among Youths**

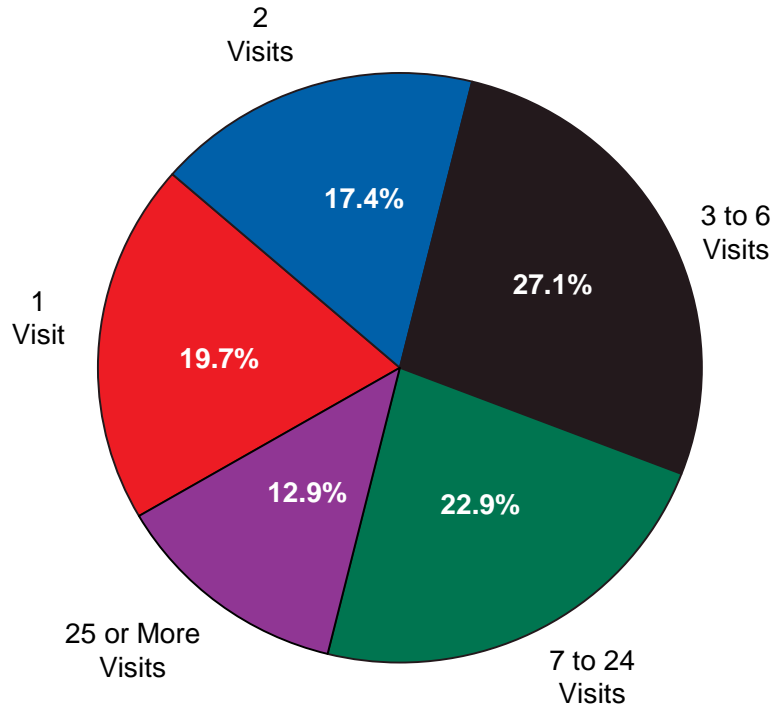
- In 2007, 3.1 million youths aged 12 to 17 (12.5 percent) received treatment or counseling for problems with behavior or emotions in the specialty mental health setting (inpatient or outpatient care). Additionally, 11.5 percent of youths received services in the education setting, and 2.8 percent received mental health services from the general medical setting in the past 12 months. Mental health services were received from both the specialty setting and either the education or general medical settings (i.e., care from multiple settings) by 5.1 percent of youths.

- Female youths were more likely than male youths to report using outpatient specialty mental health services (13.3 vs. 9.1 percent), education services (13.2 vs. 9.9 percent), or general medical-based services (3.2 vs. 2.3 percent), but there was no significant gender difference in the use of inpatient specialty mental health services (Figure 8.10).
- Of the 2.8 million youths who received outpatient specialty mental health services in the past 12 months, 19.7 percent reported having 1 visit, 17.4 percent reported having 2 visits, 27.1 percent reported having 3 to 6 visits, 22.9 percent reported having 7 to 24 visits, and 12.9 percent reported having 25 or more visits (Figure 8.11).
- Of the 628,000 youths who received inpatient or residential specialty mental health services in the past 12 months, over half (52.4 percent) reported staying overnight 1 to 2 nights, 18.4 percent reported staying 3 to 6 nights, 14.4 percent reported staying 7 to 24 nights, and 14.8 reported staying 25 or more nights (Figure 8.12).

**Figure 8.10 Past Year Mental Health Service Use among Youths Aged 12 to 17, by Gender: 2007**

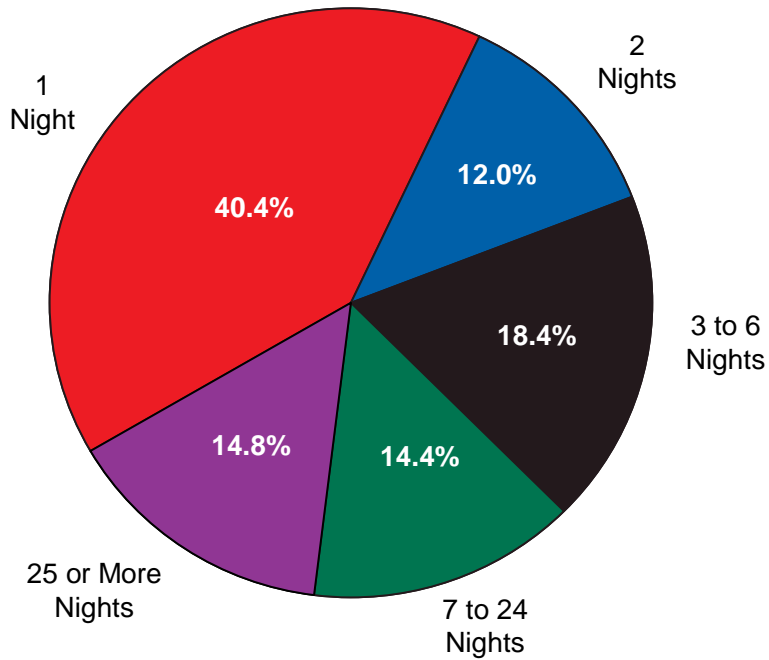


**Figure 8.11 Number of Outpatient Visits in the Past Year among Youths Aged 12 to 17 Who Received Outpatient Specialty Mental Health Services: 2007**



2.8 Million Youths Who Received Outpatient Specialty Mental Health Services

**Figure 8.12 Number of Nights Stayed in an Inpatient Specialty Mental Health Facility in the Past Year among Youths Aged 12 to 17 Who Received Inpatient Specialty Mental Health Services: 2007**



628,000 Youths Who Received Inpatient Specialty Mental Health Services

## 9. Discussion of Trends in Substance Use among Youths and Young Adults

This report presents findings from the 2007 National Survey on Drug Use and Health (NSDUH). Conducted since 1971 and previously named the National Household Survey on Drug Abuse (NHSDA), the survey underwent several methodological improvements in 2002 that have affected prevalence estimates. As a result, the 2002 through 2007 estimates are not comparable with estimates from 2001 and earlier surveys. Therefore, the primary focus of the report is on comparisons of measures of substance use and mental health problems across subgroups of the U.S. population in 2007 and changes between 2006 and 2007, as well as between 2002 and 2007. This chapter provides an additional discussion of the findings concerning a topic of great interest—trends in substance use among youths and young adults.

An important step in the analysis and interpretation of NSDUH or any other survey data is to compare the results with those from other data sources. This can be difficult sometimes because the other surveys typically have different purposes, definitions, and designs. Research has established that surveys of substance use and other sensitive topics often produce inconsistent results because of different methods used. Thus, it is important to understand that conflicting results often reflect differing methodologies, not incorrect results. Despite this limitation, comparisons can be very useful. Consistency across surveys can confirm or support conclusions about trends and patterns of use, and inconsistent results can point to areas for further study. Further discussion of this issue is included in Appendix D, along with descriptions of methods and results from other sources of substance use and mental health data.

Unfortunately, few additional data sources are available at this time to compare with NSDUH results. One established source is Monitoring the Future (MTF), a study sponsored by the National Institute on Drug Abuse (NIDA). MTF surveys students in the 8th, 10th, and 12th grades in classrooms during the spring of each year, and it also collects data by mail from a subsample of adults who had participated earlier in the study as 12th graders (Johnston, O'Malley, Bachman, & Schulenberg, 2007c, 2008a, 2008b). Historically, NSDUH rates of substance use among youths have been lower than those of MTF, and occasionally the two surveys have shown different trends over a short time period. Nevertheless, the two sources have shown very similar long-term trends in prevalence. NSDUH and MTF rates of substance use generally have been similar among young adults, and the two sources also have shown similar trends.

A comparison of NSDUH and MTF estimates for 2002 to 2007 is shown in Tables 9.1 and 9.2 at the end of this chapter for several substances that are defined similarly in the two surveys. MTF data on 8th and 10th graders combined give the closest match on age to estimates for NSDUH youths aged 12 to 17, while MTF follow-up data on persons aged 19 to 24 provide the closest match on age to estimates for NSDUH young adults aged 18 to 25. The NSDUH results are remarkably consistent with MTF trends for both youths and young adults, as discussed below.

Both surveys generally show decreases between 2002 and 2007 in the percentages of youths who used marijuana, Ecstasy, LSD, alcohol, and cigarettes in the lifetime, past year, and past month (Table 9.1). One exception was for LSD in the past month for MTF, and information on cigarettes in the past year was not available for MTF. Estimates from both surveys indicate a decline in cocaine use between 2002 and 2007, although the trend was statistically significant in NSDUH data but not in MTF data. Both surveys show no decrease in the rates of past year and past month inhalant use among youths between 2002 and 2007, although only NSDUH shows a significant decrease in lifetime use. The consistency between NSDUH and MTF trend data is found not only in terms of the specific drugs showing decreases, but also in terms of the magnitude of the decreases. Despite the higher levels of prevalence estimated from MTF, the two surveys show very similar rates of change in past month prevalence, especially for the three substances used most commonly by youths: alcohol, cigarettes, and marijuana. Between 2002 and 2007, the rate of current alcohol use among youths declined 10 percent according to both NSDUH and MTF. Current cigarette use prevalence rates in 2007 were 25 percent lower in both NSDUH and MTF compared with 2002 rates. For past month marijuana use, the NSDUH decline from 2002 to 2007 was 18 percent, and the MTF decline was 24 percent.

Data on young adults also show similar trends in the two surveys, although not as consistent as for the youth data (Table 9.2). Potential reasons for differences are the relatively smaller MTF sample size for young adults and possible bias in the MTF sample due to noncoverage of school dropouts and a low overall response rate, considering nonresponse by schools, by students in the 12th grade survey, and in the follow-up mail survey. Both surveys show declines from 2002 to 2007 in past year and past month cigarette and marijuana use among young adults, although the decline in past month marijuana use in NSDUH was not statistically significant. However, the NSDUH rates of decline in current cigarette and marijuana use for young adults were less than the declines in NSDUH for youths and for young adults in MTF. Past month marijuana prevalence among young adults declined 5 percent according to NSDUH and 12 percent according to MTF. For past month cigarette use, declines were 11 percent in NSDUH and 18 percent in MTF. Both surveys show no significant change from 2002 and 2007 in the rate of current alcohol use among young adults. A significant decline between 2006 and 2007 in past month cocaine use is seen in the NSDUH data, and the MTF data show a similar drop in use (although not statistically significant).

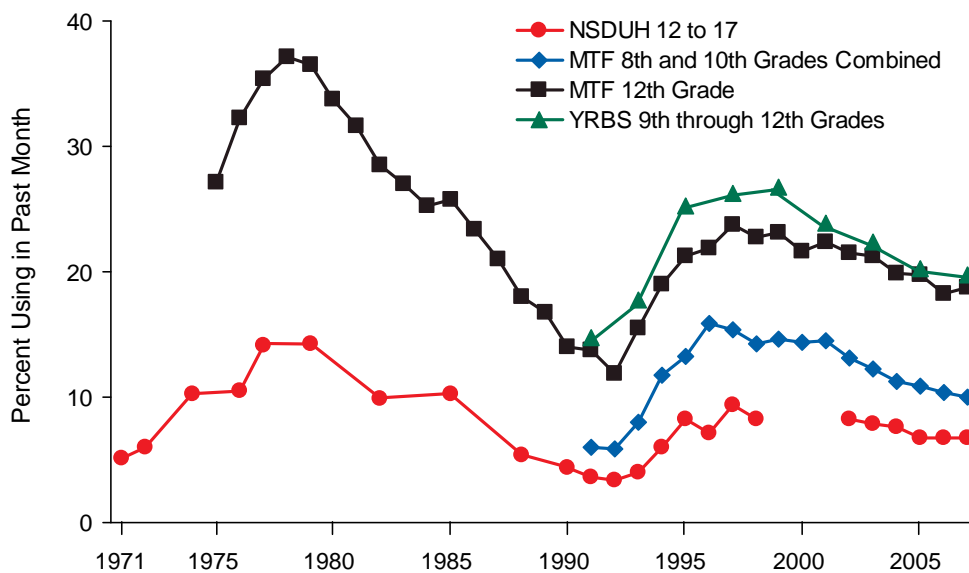
Both NSDUH and MTF generally show substantial decreases for both youths and young adults in the past year use of Ecstasy and LSD between 2002 and 2004, then a leveling in 2005. The 2006 data from both surveys had suggested the start of a possible resurgence in the past year use of Ecstasy among youths and young adults, but the 2007 data do not indicate any major increase or decrease since 2005, in general. The only statistically significant change in past year Ecstasy use between 2005 and 2007 was for use among youths in NSDUH (from 1.0 to 1.3 percent). NSDUH also showed a statistically significant increase between 2005 and 2006 in past year initiation of Ecstasy use for young adults (from 322,000 initiates in 2005 to 494,000 initiates in 2006), but the increase did not continue in 2007 (414,000 initiates).

Another source of data on trends in the use of drugs among youths is the Youth Risk Behavior Survey (YRBS), sponsored by the Centers for Disease Control and Prevention. YRBS surveys students in 9th through 12th grades in classrooms every other year during the spring (Eaton et al., 2008). The most recent survey was completed in 2007. YRBS has generally shown

higher prevalence rates but similar long-term trends when compared with NSDUH and MTF. However, comparisons between YRBS and NSDUH or MTF are less straightforward because of the different periodicity (i.e., biennially instead of annually) and ages covered, the limited number of drug use questions, and smaller sample size in the YRBS. For the substances for which information on current use is collected in the YRBS, including alcohol, cigarettes, marijuana, and cocaine, the YRBS trend results between 2001 and 2007 are consistent with NSDUH and MTF (Eaton et al., 2008; Grunbaum et al., 2002). YRBS data for the combined grades 9 through 12 showed no significant change in alcohol use (47.1 percent in 2001 and 44.7 percent in 2007), a decrease in cigarette use (28.5 percent in 2001, 20.0 percent in 2007), a decrease in marijuana use (23.9 percent in 2001, 19.7 percent in 2007), and a decline in cocaine use (4.2 percent in 2001, 3.3 percent in 2007).

Although changes in NSDUH preclude direct comparisons of recent estimates with estimates from before 2002, it is important to put the recent trends in context by reviewing longer term trends in use. NSDUH data (prior to the design changes in 1999 and 2002) on youths aged 12 to 17 and MTF data on high school seniors have shown substantial increases in youth illicit drug use during the 1970s, reaching a peak in the late 1970s. Both surveys then showed significant declines throughout the 1980s until about 1992, when rates reached a low point. These trends were driven by the trend in marijuana use. With the start of annual data collection in NSDUH in 1991, along with the biennial YRBS and the annual 8th and 10th grade samples in MTF, trends among youths are well documented since the low point that occurred in the early 1990s. Although they employ different survey designs and cover different age groups, the three surveys are consistent in showing increasing rates of marijuana use during the early to mid-1990s, reaching a peak in the late 1990s, followed by consistent declines in use since the turn of the 21st century (Figure 9.1).

**Figure 9.1 Past Month Marijuana Use among Youths in NSDUH, MTF, and YRBS: 1971-2007**



MTF = Monitoring the Future; NSDUH = National Survey on Drug Use and Health; YRBS = Youth Risk Behavior Survey.

**Table 9.1 Comparison of NSDUH and MTF Prevalence Estimates among Youths: 2002-2007**

Substance/ Time Period	NSDUH						MTF					
	Ages 12-17						8th and 10th Grades					
	2002	2003	2004	2005	2006	2007	2002	2003	2004	2005	2006	2007
<b>Marijuana</b>												
Lifetime	20.6 <sup>a</sup>	19.6 <sup>a</sup>	19.0 <sup>a</sup>	17.4 <sup>a</sup>	17.3 <sup>a</sup>	16.2	29.0 <sup>a</sup>	27.0 <sup>a</sup>	25.7 <sup>a</sup>	25.3 <sup>a</sup>	23.8	22.6
Past Year	15.8 <sup>a</sup>	15.0 <sup>a</sup>	14.5 <sup>a</sup>	13.3 <sup>a</sup>	13.2	12.5	22.5 <sup>a</sup>	20.5 <sup>a</sup>	19.7 <sup>a</sup>	19.4 <sup>a</sup>	18.5	17.5
Past Month	8.2 <sup>a</sup>	7.9 <sup>a</sup>	7.6 <sup>a</sup>	6.8	6.7	6.7	13.1 <sup>a</sup>	12.3 <sup>a</sup>	11.2 <sup>a</sup>	10.9	10.4	10.0
<b>Cocaine</b>												
Lifetime	2.7 <sup>a</sup>	2.6 <sup>a</sup>	2.4	2.3	2.2	2.1	4.9	4.4	4.4	4.5	4.1	4.2
Past Year	2.1 <sup>a</sup>	1.8	1.6	1.7	1.6	1.5	3.2	2.8	2.9	2.9	2.6	2.7
Past Month	0.6 <sup>a</sup>	0.6 <sup>a</sup>	0.5	0.6	0.4	0.4	1.4	1.1	1.3	1.3	1.3	1.1
<b>Ecstasy</b>												
Lifetime	3.3 <sup>a</sup>	2.4 <sup>a</sup>	2.1	1.6	1.9	1.8	5.5 <sup>a</sup>	4.3	3.6	3.4	3.5	3.8
Past Year	2.2 <sup>a</sup>	1.3	1.2	1.0 <sup>a</sup>	1.2	1.3	3.9 <sup>a</sup>	2.6	2.1	2.2	2.1	2.5
Past Month	0.5 <sup>a</sup>	0.4	0.3	0.3	0.3	0.3	1.6 <sup>a</sup>	0.9	0.8	0.8	1.0	0.9
<b>LSD</b>												
Lifetime	2.7 <sup>a</sup>	1.6 <sup>a</sup>	1.2 <sup>a</sup>	1.1 <sup>a</sup>	0.9	0.8	3.8 <sup>a</sup>	2.8	2.3	2.2	2.2	2.3
Past Year	1.3 <sup>a</sup>	0.6	0.6	0.6	0.4	0.5	2.1 <sup>a</sup>	1.5	1.4	1.4	1.3	1.5
Past Month	0.2 <sup>a</sup>	0.2	0.2	0.1	0.1	0.1	0.7	0.6	0.6	0.6	0.6	0.6
<b>Inhalants</b>												
Lifetime	10.5 <sup>a</sup>	10.7 <sup>a</sup>	11.0 <sup>a</sup>	10.5 <sup>a</sup>	10.1	9.6	14.4	14.3	14.9	15.1	14.7	14.6
Past Year	4.4	4.5 <sup>a</sup>	4.6 <sup>a</sup>	4.5 <sup>a</sup>	4.4	3.9	6.8	7.1	7.8	7.8	7.8	7.5
Past Month	1.2	1.3	1.2	1.2	1.3	1.2	3.1	3.2	3.5	3.2	3.2	3.2
<b>Alcohol</b>												
Lifetime	43.4 <sup>a</sup>	42.9 <sup>a</sup>	42.0 <sup>a</sup>	40.6 <sup>a</sup>	40.4	39.4	57.0 <sup>a</sup>	55.8 <sup>a</sup>	54.1 <sup>a</sup>	52.1 <sup>a</sup>	51.0	50.3
Past Year	34.6 <sup>a</sup>	34.3 <sup>a</sup>	33.9 <sup>a</sup>	33.3 <sup>a</sup>	32.9 <sup>a</sup>	31.8	49.4 <sup>a</sup>	48.3 <sup>a</sup>	47.5 <sup>a</sup>	45.3	44.7	44.1
Past Month	17.6 <sup>a</sup>	17.7 <sup>a</sup>	17.6 <sup>a</sup>	16.5	16.6	15.9	27.5 <sup>a</sup>	27.6 <sup>a</sup>	26.9 <sup>a</sup>	25.2	25.5	24.7
<b>Cigarettes</b>												
Lifetime	33.3 <sup>a</sup>	31.0 <sup>a</sup>	29.2 <sup>a</sup>	26.7 <sup>a</sup>	25.8 <sup>a</sup>	23.7	39.4 <sup>a</sup>	35.7 <sup>a</sup>	34.3 <sup>a</sup>	32.4 <sup>a</sup>	30.4 <sup>a</sup>	28.4
Past Year	20.3 <sup>a</sup>	19.0 <sup>a</sup>	18.4 <sup>a</sup>	17.3 <sup>a</sup>	17.0 <sup>a</sup>	15.7	--	--	--	--	--	--
Past Month	13.0 <sup>a</sup>	12.2 <sup>a</sup>	11.9 <sup>a</sup>	10.8 <sup>a</sup>	10.4	9.8	14.2 <sup>a</sup>	13.5 <sup>a</sup>	12.6 <sup>a</sup>	12.1 <sup>a</sup>	11.6 <sup>a</sup>	10.6

-- Not available.

NOTE: MTF data for 8th and 10th graders are simple averages of estimates for those two grades. Data for 8th and 10th graders are reported in Johnston, O'Malley, Bachman, and Schulenberg (2008a). Design effects used for variance estimation are reported in Johnston, O'Malley, Bachman, and Schulenberg (2007c).

<sup>a</sup> Difference between this estimate and 2007 estimate is statistically significant at the .05 level.

Sources: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2002, 2003, 2004, 2005, 2006, and 2007. University of Michigan, The Monitoring the Future Study, 2002, 2003, 2004, 2005, 2006, and 2007.



**Table 9.2 Comparison of NSDUH and MTF Prevalence Estimates among Young Adults: 2002-2007**

Substance/ Time Period	NSDUH						MTF					
	Ages 18-25						Ages 19-24					
	2002	2003	2004	2005	2006	2007	2002	2003	2004	2005	2006	2007
<b>Marijuana</b>												
Lifetime	53.8 <sup>a</sup>	53.9 <sup>a</sup>	52.8 <sup>a</sup>	52.4 <sup>a</sup>	52.4 <sup>a</sup>	50.8	56.1	56.4 <sup>a</sup>	55.6	54.4	53.8	53.9
Past Year	29.8 <sup>a</sup>	28.5	27.8	28.0	28.0	27.5	34.2 <sup>a</sup>	33.0	31.6	31.4	30.9	31.0
Past Month	17.3	17.0	16.1	16.6	16.3	16.4	19.8 <sup>a</sup>	19.9 <sup>a</sup>	18.2	17.0	17.0	17.5
<b>Cocaine</b>												
Lifetime	15.4	15.0	15.2	15.1	15.7	15.0	12.9	14.5 <sup>a</sup>	14.3 <sup>a</sup>	12.6	13.6	12.4
Past Year	6.7	6.6	6.6	6.9	6.9	6.4	6.5	7.3	7.8 <sup>a</sup>	6.9	7.0	6.3
Past Month	2.0	2.2 <sup>a</sup>	2.1 <sup>a</sup>	2.6 <sup>a</sup>	2.2 <sup>a</sup>	1.7	2.5	2.6	2.4	2.1	2.4	1.9
<b>Ecstasy</b>												
Lifetime	15.1 <sup>a</sup>	14.8 <sup>a</sup>	13.8 <sup>a</sup>	13.7	13.4	12.8	16.0 <sup>a</sup>	16.6 <sup>a</sup>	14.9 <sup>a</sup>	12.4 <sup>a</sup>	11.5	9.5
Past Year	5.8 <sup>a</sup>	3.7	3.1	3.1	3.8	3.5	8.0 <sup>a</sup>	5.3 <sup>a</sup>	3.3	3.4	3.6	2.8
Past Month	1.1 <sup>a</sup>	0.7	0.7	0.8	1.0 <sup>a</sup>	0.7	1.6 <sup>a</sup>	1.0 <sup>a</sup>	0.8	0.6	0.9	0.3
<b>LSD</b>												
Lifetime	15.9 <sup>a</sup>	14.0 <sup>a</sup>	12.1 <sup>a</sup>	10.5 <sup>a</sup>	8.9 <sup>a</sup>	7.3	13.9 <sup>a</sup>	13.8 <sup>a</sup>	10.4 <sup>a</sup>	7.9 <sup>a</sup>	6.7	5.9
Past Year	1.8 <sup>a</sup>	1.1	1.0	1.0	1.2	1.1	2.4 <sup>a</sup>	1.5	1.2	1.1	1.5	1.4
Past Month	0.1 <sup>a</sup>	0.2	0.3	0.2	0.2	0.2	0.4	0.2	0.2	0.2	0.3	0.3
<b>Inhalants</b>												
Lifetime	15.7 <sup>a</sup>	14.9 <sup>a</sup>	14.0 <sup>a</sup>	13.3 <sup>a</sup>	12.5 <sup>a</sup>	11.3	11.7 <sup>a</sup>	11.4 <sup>a</sup>	10.6 <sup>a</sup>	9.3	9.7	7.5
Past Year	2.2 <sup>a</sup>	2.1 <sup>a</sup>	2.1	2.1 <sup>a</sup>	1.8	1.6	2.2 <sup>a</sup>	1.5	2.3 <sup>a</sup>	1.6	1.8	1.1
Past Month	0.5	0.4	0.4	0.5	0.4	0.4	0.8	0.3	0.4	0.3	0.4	0.3
<b>Alcohol</b>												
Lifetime	86.7 <sup>a</sup>	87.1 <sup>a</sup>	86.2	85.7	86.5 <sup>a</sup>	85.2	88.4 <sup>a</sup>	87.6	87.2	87.1	87.0	86.0
Past Year	77.9	78.1	78.0	77.9	78.8	77.9	83.9	82.3	83.1	82.8	83.2	82.8
Past Month	60.5	61.4	60.5	60.9	61.9	61.2	67.7	66.3	67.3	66.8	67.0	67.4
<b>Cigarettes</b>												
Lifetime	71.2 <sup>a</sup>	70.2 <sup>a</sup>	68.7 <sup>a</sup>	67.3 <sup>a</sup>	66.6 <sup>a</sup>	64.7	--	--	--	--	--	--
Past Year	49.0 <sup>a</sup>	47.6 <sup>a</sup>	47.5 <sup>a</sup>	47.2 <sup>a</sup>	47.0 <sup>a</sup>	45.1	41.8 <sup>a</sup>	40.8 <sup>a</sup>	41.4 <sup>a</sup>	40.2 <sup>a</sup>	37.1	36.2
Past Month	40.8 <sup>a</sup>	40.2 <sup>a</sup>	39.5 <sup>a</sup>	39.0 <sup>a</sup>	38.4 <sup>a</sup>	36.2	31.4 <sup>a</sup>	29.5 <sup>a</sup>	30.2 <sup>a</sup>	28.7 <sup>a</sup>	26.7	25.7

-- Not available.

NOTE: MTF data for persons aged 19 to 24 are simple averages of modal age groups 19-20, 21-22, and 23-24 as reported in Johnston, O'Malley, and Bachman (2003b) and in Johnston, O'Malley, Bachman, and Schulenberg (2004b, 2005b, 2006b, 2007b, 2008b).

NOTE: For the 19 to 24 age group in the MTF data, significance tests were performed assuming independent samples between years an odd number of years apart because two distinct cohorts a year apart were monitored longitudinally at 2-year intervals. Although appropriate for comparisons of 2002, 2004, and 2006 estimates with 2007 estimates, this assumption results in conservative tests for comparisons of 2003 and 2005 estimates with 2007 estimates because it does not take into account covariances that are associated with repeated observations from the longitudinal samples. Estimates of covariances were not available.

<sup>a</sup> Difference between this estimate and 2007 estimate is statistically significant at the .05 level.

Sources: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2002, 2003, 2004, 2005, 2006, and 2007. University of Michigan, The Monitoring the Future Study, 2002, 2003, 2004, 2005, 2006, and 2007.



# Appendix A: Description of the Survey

## A.1 Sample Design

The 2007 National Survey on Drug Use and Health (NSDUH)<sup>3</sup> is part of a coordinated 5-year sample design providing estimates for all 50 States plus the District of Columbia for the years 2005 through 2009. The respondent universe is the civilian, noninstitutionalized population aged 12 years old or older residing within the United States. The survey includes persons living in noninstitutionalized group quarters (e.g., shelters, rooming/boarded houses, college dormitories, migratory workers' camps, halfway houses), and civilians living on military bases. Persons excluded from the survey include persons with no fixed household address (e.g., homeless and/or transient persons not in shelters), active-duty military personnel, and residents of institutional group quarters, such as correctional facilities, nursing homes, mental institutions, and long-term hospitals.

Although there is no planned overlap with the 1999 through 2004 samples, a coordinated design for 2005 through 2009 facilitates 50 percent overlap in second-stage units (area segments) within each successive 2-year period from 2005 through 2009. Because the 2005 design enables estimates to be developed by State in all 50 States plus the District of Columbia, States may be viewed as the first level of stratification and as a reporting variable.

For the 50-State design, 8 States were designated as large sample States (California, Florida, Illinois, Michigan, New York, Ohio, Pennsylvania, and Texas) with target sample sizes of 3,600. In 2007, sample sizes in these States ranged from 3,557 to 3,699. For the remaining 42 States and the District of Columbia, the target sample size was 900. Sample sizes in these States ranged from 824 to 974 in 2007. This approach ensures there is sufficient sample in every State to support small area estimation (SAE)<sup>4</sup> while at the same time maintaining efficiency for national estimates.

States were first stratified into a total of 900 State sampling (SS) regions (48 regions in each large sample State and 12 regions in each small sample State). These regions were contiguous geographic areas designed to yield the same number of interviews on average.<sup>5</sup> Unlike the 1999 through 2001 NHSDAs and the 2002 through 2004 NSDUHs in which the first-stage sampling units were clusters of census blocks called area segments, the first stage of

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<sup>3</sup> Prior to 2002, the survey was known as the National Household Survey on Drug Abuse (NHSDA).

<sup>4</sup> SAE is a hierarchical Bayes modeling technique used to make State-level estimates for approximately 20 measures related to substance use. For more details, see the *State Estimates of Substance Use from the 2005-2006 National Surveys on Drug Use and Health* (Hughes, Sathe, & Spagnola, 2008).

<sup>5</sup> Areas were defined using 2000 census geography. Dwelling units (DUs) and population counts were obtained from the 2000 census data supplemented with revised population counts from Claritas (<http://www.claritas.com/Default.jsp>).

selection for the 2005 through 2009 NSDUHs was census tracts.<sup>6</sup> This stage was included to contain sample segments within a single census tract to the extent possible.<sup>7</sup>

For each SS region, 48 census tracts were selected with probability proportional to size. Within sampled census tracts, adjacent census blocks were combined to form the second-stage sampling units or area segments. One area segment was selected within each sampled census tract with probability proportional to population size to support the 5-year sample and any supplemental studies that the Substance Abuse and Mental Health Services Administration (SAMHSA) may choose to field.<sup>8</sup> Of these segments, 24 were designated for the coordinated 5-year sample and 24 were designated as "reserve" segments. Eight sample segments per SS region were fielded during the 2007 survey year.

These sampled segments were allocated equally into four separate samples, one for each 3-month period (calendar quarter) during the year. That is, a sample was selected from two segments in each calendar quarter so that the survey was essentially continuous in the field. In each of the area segments, a listing of all addresses was made from which a national sample of 192,092 addresses was selected. Of the selected addresses, 158,411 were determined to be eligible sample units. In these sample units (which can be either households or units within group quarters), sample persons were randomly selected using an automated screening procedure programmed in a handheld computer carried by the interviewers. The number of sample units completing the screening was 141,487. Youths aged 12 to 17 years and young adults aged 18 to 25 years were oversampled at this stage, with 12 to 17 year olds sampled at a rate of 85.2 percent and 18 to 25 year olds at a rate of 75.5 percent on average, when they were present in the sampled households or group quarters. Persons in age groups 26 or older were sampled at rates of 22.1 percent or less, with persons in the eldest age group (50 years or older) sampled at a rate of 8.2 percent on average. The overall population sampling rates were 0.09 percent for 12 to 17 year olds, 0.07 percent for 18 to 25 year olds, 0.02 percent for 26 to 34 year olds, 0.02 percent for 35 to 49 year olds, and 0.01 percent for those 50 or older. Because of the large sample size, there was no need to oversample racial/ethnic groups, as was done on surveys prior to 1999. Nationwide, 85,774 persons were selected. Consistent with previous surveys in this series, the final respondent sample of 67,870 persons was representative of the U.S. general population (since 1991, the civilian, noninstitutionalized population) aged 12 or older. In addition, State samples were representative of their respective State populations. More detailed information on the disposition of the national screening and interview sample can be found in Appendix B.

The survey covers residents of households (living in houses/townhouses, apartments, condominiums, etc.), persons in noninstitutional group quarters (e.g., shelters, rooming/boarding houses, college dormitories, migratory workers' camps, halfway houses), and civilians living on military bases. Although the survey covers residents of these types of units (they are given a nonzero probability of selection), the sample sizes of most specific groups are too small to provide separate estimates.

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<sup>6</sup> Census tracts are relatively permanent statistical subdivisions of counties and provide a stable set of geographic units across decennial census periods.

<sup>7</sup> Some census tracts had to be aggregated in order to meet the minimum DU requirement of 150 DUs in urban areas and 100 DUs in rural areas.

<sup>8</sup> For more details on the 5-year sample, see the 2007 sample design report in the *2007 NSDUH Methodological Resource Book* (Morton, Martin, Hirsch, & Chromy, 2008).

More information on the sample design can be found in the 2007 NSDUH sample design report by Morton et al. (2008) on the Office of Applied Studies (OAS) website (available as a PDF at <http://oas.samhsa.gov/nsduh/methods.cfm>).

## **A.2 Data Collection Methodology**

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

Introductory letters are sent to sampled addresses, followed by an interviewer visit. A 5-minute screening procedure using a handheld computer involves listing all household members along with their basic demographic data. The computer uses the demographic data in a preprogrammed selection algorithm to select zero to two sample persons, depending on the composition of the household. This selection process is designed to provide the necessary sample sizes for the specified population age groupings. In areas where a third or more of the households contain Spanish-speaking residents, the initial introductory letters written in English are mailed with a Spanish version on the back. All interviewers carry copies of this letter in Spanish. If the interviewer is not certified bilingual, he or she will use preprinted Spanish cards to attempt to find someone in the household who speaks English and who can serve as the screening respondent or who can translate for the screening respondent. If no one is available, the interviewer will schedule a time when a Spanish-speaking interviewer can come to the address. In households where a language other than Spanish is encountered, another language card is used to attempt to find someone who speaks English to complete the screening.

The NSDUH interview is available in English and Spanish, and both versions have the same content. If the sample person prefers to complete the interview in Spanish, a certified bilingual interviewer is sent to the address to conduct the interview. Because the interview is not translated into any other language, if a sample person does not speak English or Spanish, the interview is not conducted.

Interviewers attempt to conduct the NSDUH interview immediately with each sample person in the household. The interviewer requests the selected respondent to identify a private area in the home to conduct the interview away from other household members. The interview averages about an hour and includes a combination of CAPI (computer-assisted personal interviewing, in which the interviewer reads the questions) and ACASI (audio computer-assisted self-interviewing).

The NSDUH interview consists of core and noncore (i.e., supplemental) sections. A core set of questions critical for basic trend measurement of prevalence estimates remains in the survey every year and comprises the first part of the interview. Noncore questions, or modules, that can be revised, dropped, or added from year to year make up the remainder of the interview. The core consists of initial demographic items (which are interviewer-administered) and self-administered questions pertaining to the use of tobacco, alcohol, marijuana, cocaine, crack

cocaine, heroin, hallucinogens, inhalants, pain relievers, tranquilizers, stimulants, and sedatives. Topics in the remaining noncore self-administered sections include (but are not limited to) injection drug use, perceived risks of substance use, substance dependence or abuse, arrests, treatment for substance use problems, pregnancy and health care issues, and mental health issues. Noncore demographic questions (which are interviewer-administered and follow the ACASI questions) address such topics as immigration, current school enrollment, employment and workplace issues, health insurance coverage, and income. It should be noted that some of the noncore portions of the interview have remained in the survey, relatively unchanged, from year to year (e.g., current health insurance coverage, employment).

Thus, the interview begins in CAPI mode with the field interviewer (FI) reading the questions from the computer screen and entering the respondent's replies into the computer. The interview then transitions to the ACASI mode for the sensitive questions. In this mode, the respondent can read the questions silently on the computer screen and/or listen to the questions read through headphones and enter his or her responses directly into the computer. At the conclusion of the ACASI section, the interview returns to the CAPI mode with the interviewer completing the questionnaire. Each respondent who completes a full interview is given a \$30.00 cash payment as a token of appreciation for his or her time.

No personal identifying information is captured in the CAI record for the respondent. Interviewers transmit the completed interview data to RTI in Research Triangle Park, North Carolina, via home telephone lines.

### **A.3 Data Processing**

Computers at RTI direct the information to a raw data file (i.e., in which no logical editing of the data had been done) that consists of one record for each completed interview. Cases are retained only if respondents provided data on lifetime use of cigarettes and at least nine other substances in the core section of the questionnaire. Written responses to questions (e.g., names of other drugs that were used) are assigned numeric codes as part of the data processing procedures. Even though editing and consistency checks are done by the CAI program during the interview, additional, more complex edits and consistency checks are completed at RTI. Additionally, statistical imputation is used to replace missing or ambiguous values after editing for some key variables. Analysis weights are created so that estimates will be representative of the target population.

#### **A.3.1 Data Coding and Logical Editing**

With the exception of industry and occupation data, coding of written answers that respondents or interviewers typed was performed at RTI for the 2007 NSDUH. These written answers include mentions of drugs that respondents had used or other responses that did not fit a previous response option (subsequently referred to as "OTHER, Specify" data). Coding of the "OTHER, Specify" variables was accomplished through computer-assisted survey procedures and the use of a secure website that allowed for coding and review of the data. The computer-assisted procedures entailed a database check for a given "OTHER, Specify" variable that contained typed entries and the associated numeric codes. If an exact match was found between the typed response and an entry in the system, the computer-assisted procedures assigned the

appropriate numeric code. Typed responses that did not match an existing entry were coded through the web-based coding system. Data on the industries in which respondents worked and respondents' occupations were assigned numeric industry and occupation codes by staff at the U.S. Census Bureau.

As noted above, the CAI program included checks that alerted respondents or interviewers when an entered answer was inconsistent with a previous answer in a given module. In this way, the inconsistency could be resolved while the interview was in progress. However, not every inconsistency was resolved during the interview, and the CAI program did not include checks for every possible inconsistency that might have occurred in the data.

Therefore, the first important step in processing the raw NSDUH data was logical editing of the data. Logical editing involved using data from within a respondent's record to (a) reduce the amount of item nonresponse (i.e., missing data) in interview records, including identification of items that were legitimately skipped; (b) make related data elements consistent with each other; and (c) identify ambiguities or inconsistencies to be resolved through statistical imputation procedures (see Section A.3.2).

For example, if respondents reported that they never used a given drug, the CAI logic skipped them out of all remaining questions about use of that drug. In the editing procedures, the skipped variables were assigned codes to indicate that the respondents were lifetime nonusers. Similarly, respondents were instructed in the prescription psychotherapeutics modules (i.e., pain relievers, tranquilizers, stimulants, and sedatives) not to report the use of over-the-counter (OTC) drugs. Therefore, if a respondent's only report of lifetime use of a particular type of "prescription" psychotherapeutic drug was for an OTC drug, the respondent was logically inferred never to have been a nonmedical user of the prescription drugs in that psychotherapeutic category.

In addition, respondents could report that they were lifetime users of a drug but not provide specific information on when they last used it. In this situation, a temporary "indefinite" value for the most recent period of use was assigned to the edited recency-of-use variable (e.g., Used at some point in the lifetime LOGICALLY ASSIGNED), and a final, specific value was statistically imputed. The editing procedures for key drug use variables also involved identifying inconsistencies between related variables so that these inconsistencies could be resolved through statistical imputation. For example, if a respondent reported last using a drug more than 12 months ago and also reported first using it at his or her current age, both of those responses could not be true. In this example, the inconsistent period of most recent use was replaced with an "indefinite" value, and the inconsistent age at first use was replaced with a missing data code. These indefinite or missing values were subsequently imputed through statistical procedures to yield consistent data for the related measures, as discussed in the next section.

### **A.3.2 Statistical Imputation**

For some key variables that still had missing or ambiguous values after editing, statistical imputation was used to replace these values with appropriate response codes. For example, a response is ambiguous if the editing procedures assigned a respondent's most recent use of a drug to "use at some point in the lifetime," with no definite period within the lifetime. In this case, the

imputation procedures assign a definite value for when the respondent last used the drug (e.g., in the past 30 days, more than 30 days ago but within the past 12 months, more than 12 months ago). Similarly, if a response is completely missing, the imputation procedures replace missing values with nonmissing ones.

In most cases, missing or ambiguous values are imputed in NSDUH using a methodology called predictive mean neighborhoods (PMN), which was developed specifically for the 1999 survey and used in all subsequent survey years. The PMN method offers a rigorous and flexible method that was implemented to improve the quality of estimates and allow more variables to be imputed. Some of the key reasons for implementing this method include the following: (1) the ability to use covariates to determine donors is far greater than that offered in the hot deck, (2) the relative importance of covariates can be determined by standard estimating equation techniques, (3) the correlations across response variables can be accounted for by making the imputation multivariate, and (4) sampling weights can be easily incorporated in the models. The PMN method has some similarity with the predictive mean matching method of Rubin (1986) except that, for the donor records, Rubin used the observed variable value (not the predictive mean) to compute the distance function. Also, the well-known method of nearest neighbor imputation is similar to PMN, except that the distance function is in terms of the original predictor variables and often requires somewhat arbitrary scaling of discrete variables. PMN is a combination of a model-assisted imputation methodology and a random nearest neighbor hot-deck procedure. The hot-deck procedure is set up in such a way that imputed values are made consistent with preexisting nonmissing values for other variables. Whenever feasible, the imputation of variables using PMN is multivariate, in which imputation is accomplished on several response variables at once. Variables requiring imputation using PMN are the core demographic variables, core drug use variables (recency of use, frequency of use, and age at first use), income, health insurance, and noncore demographic variables for work status, immigrant status, and the household roster. A weighted regression imputation is used to impute some of the missing values in the nicotine dependence variables.

In the modeling stage of PMN, the model chosen depends on the nature of the response variable  $Y$ . In the 2007 NSDUH, the models included binomial logistic regression, multinomial logistic regression, Poisson regression, and ordinary linear regression, where the models incorporated the sampling design weights.

In general, hot-deck imputation replaces an item nonresponse (missing or ambiguous value) with a recorded response that is donated from a "similar" respondent who has nonmissing data. For random nearest neighbor hot-deck imputation, the missing or ambiguous value is replaced by a responding value from a donor randomly selected from a set of potential donors. Potential donors are those defined to be "close" to the unit with the missing or ambiguous value according to a predefined function called a distance metric. In the hot-deck stage of PMN, the set of candidate donors (the "neighborhood") consists of respondents with complete data who have a predicted mean close to that of the item nonrespondent. The predicted means are computed both for respondents with and without missing data, which differs from Rubin's method where predicted means are not computed for the donor respondent (Rubin, 1986). In particular, the neighborhood consists of either the set of the closest 30 respondents or the set of respondents with a predicted mean (or means) within 5 percent of the predicted mean(s) of the item nonrespondent, whichever set is smaller. If no respondents are available who have a predicted



mean (or means) within 5 percent of the item nonrespondent, the respondent with the predicted mean(s) closest to that of the item nonrespondent is selected as the donor.

In the univariate case (where only one variable is imputed using PMN), the neighborhood of potential donors is determined by calculating the relative distance between the predicted mean for an item nonrespondent and the predicted mean for each potential donor, then choosing those means defined by the distance metric. The pool of donors is restricted further to satisfy logical constraints whenever necessary (e.g., age at first crack use must not be less than age at first cocaine use).

Whenever possible, missing or ambiguous values for more than one response variable are considered at a time. In this (multivariate) case, the distance metric is a Mahalanobis distance (Manly, 1986) rather than a relative Euclidean distance. Whether the imputation is univariate or multivariate, only missing or ambiguous values are replaced, and donors are restricted to be logically consistent with the response variables that are not missing. Furthermore, donors are restricted to satisfy "likeness constraints" whenever possible. That is, donors are required to have the same values for variables highly correlated with the response. If no donors are available who meet these conditions, these likeness constraints can be loosened. For example, donors for the age at first use variable are required to be of the same age as recipients, if at all possible. Further details on the PMN methodology are provided in RTI International (2008) and by Singh, Grau, and Folsom (2001, 2002).

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

### **A.3.3 Development of Analysis Weights**

The general approach to developing and calibrating analysis weights involved developing design-based weights,  $d_k$ , as the product of the inverse of the selection probabilities at each selection stage. Similar to the 2005 and 2006 NSDUHs, the 2007 NSDUH used a four-stage sample selection scheme in which an extra selection stage of census tracts was added before the selection of a segment. Thus, the design-based weights,  $d_k$ , for the 2007 NSDUH incorporated an extra layer of sampling selection to reflect the sample design change. Adjustment factors,  $a_k(\lambda)$ , then were applied to the design-based weights to adjust for nonresponse, to poststratify to known population control totals, and to control for extreme weights when necessary. In view of the importance of State-level estimates with the 50-State design, it was necessary to control for a much larger number of known population totals. Several other modifications to the general weight adjustment strategy that had been used in past surveys also were implemented for the first time beginning with the 1999 CAI sample.

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

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

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

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

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

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

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

This general approach was used at several stages of the weight adjustment process, including (1) adjustment of household weights for nonresponse at the screener level, (2) poststratification of household weights to meet population controls for various demographic groups by State, (3) adjustment of household weights for extremes, (4) poststratification of selected person weights, (5) adjustment of responding person weights for nonresponse at the questionnaire level, (6) poststratification of responding person weights, and (7) adjustment of responding person weights for extremes.

Every effort was made to include as many relevant State-specific covariates (typically defined by demographic domains within States) as possible in the multivariate models used to calibrate the weights (nonresponse adjustment and poststratification steps). Because further subdivision of State samples by demographic covariates often produced small cell sample sizes, it was not possible to retain all State-specific covariates (even after meaningful collapsing of covariate categories) and still estimate the necessary model parameters with reasonable precision. Therefore, a hierarchical structure was used in grouping States with covariates defined at the national level, at the census division level within the Nation, at the State group within the census division, and, whenever possible, at the State level. In every case, the controls for the total population within a State and the five age groups (12 to 17, 18 to 25, 26 to 34, 35 to 49, 50 or older) within a State were maintained except that, in the last step of poststratification of person weights, six age groups (12 to 17, 18 to 25, 26 to 34, 35 to 49, 50 to 64, 65 or older) were used. Census control totals by age, race, gender, and Hispanicity were required for the civilian, noninstitutionalized population of each State. Beginning with the 2002 NSDUH, the Population Estimates Branch of the U.S. Census Bureau has produced the necessary population estimates in response to a special request based on the 2000 census.

Consistent with the surveys from 1999 onward, control of extreme weights through separate bounds for adjustment factors was incorporated into the GEM calibration processes for both nonresponse and poststratification. This is unlike the traditional method of winsorization in which extreme weights are truncated at prespecified levels and the trimmed portions of weights are distributed to the nontruncated cases. In GEM, it is possible to set bounds around the prespecified levels for extreme weights, and then the calibration process provides an objective way of deciding the extent of adjustment (or truncation) within the specified bounds. A step was added to poststratify the household-level weights to obtain census-consistent estimates based on the household rosters from all screened households; these household roster-based estimates then provided the control totals needed to calibrate the respondent pair weights for subsequent planned analyses. An additional step poststratified the selected person sample to conform to the adjusted roster estimates. This additional step takes advantage of the inherent two-phase nature of the NSDUH design. The final step poststratified the respondent person sample to external census data (defined within the State whenever possible, as discussed above). For more detailed information, see the *2006 NSDUH Methodological Resource Book* (RTI International, 2008).

For certain populations of interest, 2 years of NSDUH data were combined to obtain annual averages. The person-level weights for estimates based on the annual averages were obtained by dividing the analysis weights for the 2 specific years by a factor of 2.



# Appendix B: Statistical Methods and Measurement

## B.1 Target Population

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

## B.2 Sampling Error and Statistical Significance

This report includes tables for national estimates (see Appendices F and G) that were drawn from a more comprehensive set of tables referred to as "detailed tables."<sup>9</sup> The national estimates, along with the associated standard errors (SEs), were computed for all detailed tables, including those in this report, using a multiprocedure package, SUDAAN<sup>®</sup> Software for Statistical Analysis of Correlated Data. SUDAAN was designed for the statistical analysis of data collected using stratified, multistage cluster sampling designs, as well as other observational and experimental studies involving repeated measures or studies subject to cluster correlation effects (RTI International, 2004). The final, nonresponse-adjusted, and poststratified analysis weights were used in SUDAAN to compute unbiased design-based drug use estimates.

The sampling error (i.e., the standard error or SE) of an estimate is the error caused by the selection of a sample instead of conducting a census of the population. The sampling error may be reduced by selecting a large sample and/or by using efficient sample design and estimation strategies, such as stratification, optimal allocation, and ratio estimation.

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

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<sup>9</sup> This comprehensive set of tables is available at <http://oas.samhsa.gov/WebOnly.htm#NSDUHtabs>.

### B.2.1 Variance Estimation for Totals

Although the SEs of estimates of means and proportions can be calculated appropriately in SUDAAN using a Taylor series linearization approach, SEs of estimates of totals may be underestimated in situations where the domain size is poststratified to data from the U.S. Census Bureau. Because of this underestimation, alternatives for estimating SEs of totals were implemented.

Estimates of means or proportions,  $\hat{p}_d$ , such as drug use prevalence estimates for a domain  $d$ , can be expressed as a ratio estimate:

$$\hat{p}_d = \frac{\hat{Y}_d}{\hat{N}_d},$$

where  $\hat{Y}_d$  is a linear statistic estimating the number of substance users in the domain  $d$  and  $\hat{N}_d$  is a linear statistic estimating the total number of persons in domain  $d$  (both users and nonusers). The SUDAAN software package is used to calculate direct estimates of  $\hat{Y}_d$  and  $\hat{N}_d$  and also can be used to estimate their respective SEs. A Taylor series approximation method implemented in SUDAAN provides estimates for  $\hat{p}_d$  and its SE.

When the domain size,  $\hat{N}_d$ , is free of sampling error, an appropriate estimate of the SE for the total number of substance users is

$$SE(\hat{Y}_d) = \hat{N}_d SE(\hat{p}_d).$$

This approach is theoretically correct when the domain size estimates,  $\hat{N}_d$ , are among those forced to match their respective U.S. Census Bureau population estimates through the weight calibration process (Chen et al., 2008) described in the *2006 NSDUH Methodological Resource Book* (RTI International, 2008). In these cases,  $\hat{N}_d$  is not subject to a sampling error induced by the NSDUH design. For a more detailed explanation of the weight calibration process, see Section A.3.3 in Appendix A.

For estimated domain totals,  $\hat{Y}_d$ , where  $\hat{N}_d$  is not fixed (i.e., where domain size estimates are not forced to match the U.S. Census Bureau population estimates), this formulation still may provide a good approximation if it can be assumed that the sampling variation in  $\hat{N}_d$  is negligible relative to the sampling variation in  $\hat{p}_d$ . This is a reasonable assumption for most cases in this study.

For various subsets of estimates, the above approach yielded an underestimate of the variance of a total because  $\hat{N}_d$  was subject to considerable variation. Starting with the 2005 NSDUH report and continuing in the 2007 NSDUH report, a "mixed" method approach was implemented for all detailed tables to improve the accuracy of SEs and to better reflect the effects of weighting on the variance of total estimates. This approach assigns the method of SE

calculation to domains (subgroups for which the estimates were calculated) within tables so that all estimates among a select set of domains with fixed  $\hat{N}_d$  were calculated using the formula above, and all other estimates were calculated directly in SUDAAN, regardless of other estimates within the same table. The set of domains considered controlled (i.e., those with a fixed  $\hat{N}_d$ ) was restricted to main effects and two-way interactions in order to maintain continuity between years. Domains consisting of three-way interactions may be controlled in 1 year but not necessarily in preceding or subsequent years. The use of such SEs did not affect the SE estimates for the corresponding proportions presented in the same sets of tables because all SEs for means and proportions are calculated directly in SUDAAN. As a result of the use of this mixed-method approach, the SEs for the total estimates within many detailed tables were calculated differently from those in NSDUH reports prior to the 2005 report.

Table B.1 at the end of this appendix contains a list of domains with a fixed  $\hat{N}_d$ . This table includes both the main effects and two-way interactions and may be used to identify the method of SE calculation employed for estimates of totals in the various tables of this report. For example, Table G.13 in Appendix G of this report presents estimates of illicit drug use among persons aged 18 or older within the domains of gender, Hispanic origin and race, education, and current employment. Estimates among the total population (age main effect), males and females (age by gender interaction), and Hispanics and non-Hispanics (age by Hispanic origin interaction) were treated as controlled in this table, and the formula above was used to calculate the SEs. The SEs for all other estimates, including white and black or African American (age by Hispanic origin by race interaction) were calculated directly from SUDAAN. It is important to note that estimates presented in this report for racial groups are among non-Hispanics. For instance, the domain for whites is actually non-Hispanic whites and is therefore a two-way interaction.

### **B.2.2 Suppression Criteria for Unreliable Estimates**

As has been done in past NSDUH reports, direct survey estimates produced for this study that are considered to be unreliable due to unacceptably large sampling errors are not shown in this report and are noted by asterisks (\*) in the tables containing such estimates. The criteria used for suppressing all direct survey estimates were based on the relative standard error (RSE) (defined as the ratio of the SE over the estimate), nominal (actual) sample size, and effective sample size for each estimate.

Proportion estimates ( $\hat{p}$ ) within the range  $[0 < \hat{p} < 1]$ , rates, and the corresponding estimated number of users were suppressed if

$$\text{RSE}[-\ln(\hat{p})] > .175 \text{ when } \hat{p} \leq .5$$

or

$$\text{RSE}[-\ln(1 - \hat{p})] > .175 \text{ when } \hat{p} > .5.$$

Using a first-order Taylor series approximation to estimate  $\text{RSE}[-\ln(\hat{p})]$  and  $\text{RSE}[-\ln(1 - \hat{p})]$ , the following equation was derived and used for computational purposes:

$$\frac{SE(\hat{p})/\hat{p}}{-\ln(\hat{p})} > .175 \text{ when } \hat{p} \leq .5$$

or

$$\frac{SE(\hat{p})/(1-\hat{p})}{-\ln(1-\hat{p})} > .175 \text{ when } \hat{p} > .5.$$

The separate formulas for  $\hat{p} \leq .5$  and  $\hat{p} > .5$  produce a symmetric suppression rule; that is, if  $\hat{p}$  is suppressed,  $1-\hat{p}$  will be suppressed as well. See Figure B.1 for a graphical representation of the required minimum effective sample sizes as a function of the proportion estimated. When  $.05 < \hat{p} < .95$ , the symmetric properties of the rule produce local minimum effective sample sizes at  $\hat{p} = .2$  and again at  $\hat{p} = .8$ , such that an effective sample size of greater than 50 is required; this means that estimates would be suppressed for these values of  $\hat{p}$  unless the effective sample sizes were greater than 50. Within this same interval of  $.05 < \hat{p} < .95$ , a local maximum effective sample size of 68 is required at  $\hat{p} = .5$ . So, to simplify requirements and maintain a conservative suppression rule, estimates of  $\hat{p}$  between .05 and .95, which had effective sample sizes below 68, were suppressed.

In addition, a minimum nominal sample size suppression criterion ( $n = 100$ ) that protects against unreliable estimates caused by small design effects and small nominal sample sizes was employed. Prevalence estimates also were suppressed if they were close to 0 or 100 percent (i.e., if  $\hat{p} < .00005$  or if  $\hat{p} \geq .99995$ ).

Estimates of other totals (e.g., number of initiates) along with means and rates that are not bounded between 0 and 1 (e.g., mean age at first use and incidence rates) were suppressed if the RSEs of the estimates were larger than .5. Additionally, estimates of the mean age at first use were suppressed if the sample size was smaller than 10 respondents. Also, the estimated incidence rate and number of initiates were suppressed if they rounded to 0.

The suppression criteria for various NSDUH estimates are summarized in Table B.2 at the end of this appendix.

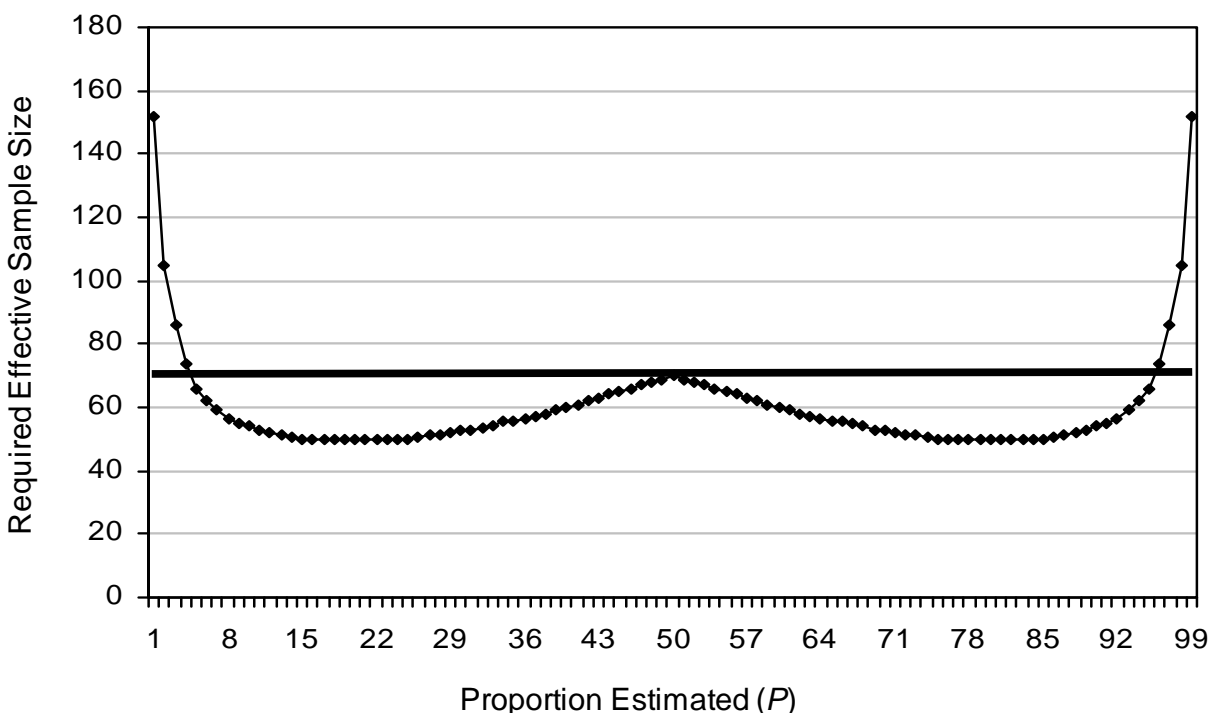
### **B.2.3 Statistical Significance of Differences**

This section describes the methods used to compare prevalence estimates in this report. Customarily, the observed difference between estimates is evaluated in terms of its statistical significance. Statistical significance is based on the  $p$  value of the test statistic and refers to the probability that a difference as large as that observed would occur due to random variability in the estimates if there were no difference in the prevalence estimates for the population groups being compared. The significance of observed differences in this report is reported at the .05 level. When comparing prevalence estimates, the null hypothesis (no difference between



**Figure B.1 Required Effective Sample as a Function of the Proportion Estimated**

Current Rule: NSDUH 2007



prevalence estimates) was tested against the alternative hypothesis (there is a difference in prevalence estimates) using the standard difference in proportions test expressed as

$$Z = \frac{\hat{p}_1 - \hat{p}_2}{\sqrt{\text{var}(\hat{p}_1) + \text{var}(\hat{p}_2) - 2\text{cov}(\hat{p}_1, \hat{p}_2)}},$$

where  $\hat{p}_1$  = first prevalence estimate,  $\hat{p}_2$  = second prevalence estimate,  $\text{var}(\hat{p}_1)$  = variance of first prevalence estimate,  $\text{var}(\hat{p}_2)$  = variance of second prevalence estimate, and  $\text{cov}(\hat{p}_1, \hat{p}_2)$  = covariance between  $\hat{p}_1$  and  $\hat{p}_2$ . In cases where significance tests between years were performed, the prevalence estimate from the earlier year (e.g., 2002, 2003, 2004, 2005, or 2006) becomes the first prevalence estimate, and the prevalence estimate from the later year (e.g., 2003, 2004, 2005, 2006, or 2007) becomes the second prevalence estimate.

Under the null hypothesis,  $Z$  is asymptotically distributed as a normal random variable. Therefore, calculated values of  $Z$  can be referred to the unit normal distribution to determine the corresponding probability level (i.e.,  $p$  value). Because the covariance term between the two estimates is not necessarily zero, SUDAAN was used to compute estimates of  $Z$  along with the associated  $p$  values using the analysis weights and accounting for the sample design as described in Appendix A. A similar procedure and formula for  $Z$  were used for estimated totals; however, it

should be noted that because it was necessary to calculate the SE outside of SUDAAN for domains forced by the weighting process to match their respective U.S. Census Bureau population estimates, the corresponding test statistics also were computed outside of SUDAAN.

When comparing population subgroups across three or more levels of a categorical variable, log-linear chi-square tests of independence of the subgroups and the prevalence variables were conducted using SUDAAN in order to first control the error level for multiple comparisons. If Shah's Wald  $F$  test (transformed from the standard Wald chi-square) indicated overall significant differences, the significance of each particular pairwise comparison of interest was tested using SUDAAN analytic procedures to properly account for the sample design (RTI International, 2007b). Using the published estimates and SEs to perform independent  $t$  tests for the difference of proportions usually will provide the same results as tests performed in SUDAAN. However, where the significance level is borderline, results may differ for two reasons: (1) the covariance term is included in SUDAAN tests, whereas it is not included in independent  $t$  tests; and (2) the reduced number of significant digits shown in the published estimates may cause rounding errors in the independent  $t$  tests.

As part of a comparative analysis discussed in Chapter 9, prevalence estimates from the Monitoring the Future (MTF) study, sponsored by the National Institute on Drug Abuse (NIDA), were presented for recency measures of selected substances (see Tables 9.1 and 9.2). The analyses focused on prevalence estimates for 8th and 10th graders and prevalence estimates for young adults aged 19 to 24 for 2002 through 2007. Estimates for the 8th and 10th grade students were calculated using MTF data as the simple average of the 8th and 10th grade estimates. Estimates for young adults aged 19 to 24 were calculated using MTF data as the simple average of three modal age groups: 19 and 20 years, 21 and 22 years, and 23 and 24 years. Published results were not available from NIDA for significant differences in prevalence estimates between years for these subgroups, so testing was performed using information that was available.

For the 8th and 10th grade average estimates, tests of differences were performed between 2007 and the 5 prior years. Estimates for persons in grade 8 and grade 10 were considered independent, simplifying the calculation of variances for the combined grades. Across years, the estimates for 2007 involved samples independent of those in 2002, 2003, 2004, and 2005, but from 2006 to 2007 the sample of schools overlapped 50 percent, creating a covariance in the estimates. Design effects published in Johnston et al. (2007c) for adjacent and nonadjacent year testing were used. For the 19- to 24-year-old age group, tests of differences were done assuming independent samples between years an odd number of years apart because two distinct cohorts a year apart were monitored longitudinally at 2-year intervals. This is appropriate for comparisons of 2002, 2004, and 2006 with 2007. However, this results in conservative tests for comparisons of 2003 and 2005 data with 2007 data because it does not take into account covariances associated with repeated observations from the longitudinal samples. Estimates of covariances were not available.

As an example, the difference between the 2006 and 2007 averages of prevalence estimates for persons in grades 8 and 10 can be expressed as

$$\bar{p}_2 - \bar{p}_1,$$

where  $\bar{p}_1 = (\hat{p}_{11} + \hat{p}_{12})/2$ ,  $\hat{p}_{11}$  and  $\hat{p}_{12}$  are the prevalence estimates for the 8th and 10th grades, respectively, for 2006; and  $\bar{p}_2$  is defined similarly for 2007. The variance of a prevalence estimate  $\hat{p}$  can be written as

$$\text{var}(\hat{p}) = \frac{1}{n} D \hat{p}(1 - \hat{p}),$$

where  $n$  is the sample size and  $D$  is the appropriate design effect obtained from the sampling design. In the MTF study, design effects were available for comparisons between adjacent-year (i.e., 2006 vs. 2007) estimates and nonadjacent-year (i.e., 2002 vs. 2007, 2003 vs. 2007, 2004 vs. 2007, and 2005 vs. 2007) estimates; therefore, the variance of the difference between 2 years of estimates for a particular grade can be expressed as

$$\text{var}(\hat{p}_{2i} - \hat{p}_{1i}) = D_i \left( \frac{1}{n_{1i}} \hat{p}_{1i}(1 - \hat{p}_{1i}) + \frac{1}{n_{2i}} \hat{p}_{2i}(1 - \hat{p}_{2i}) \right); i = 1, 2,$$

where  $i = 1$  indexes the 8th grade,  $i = 2$  indexes the 10th grade,  $D_i$  is the design effect appropriate for comparisons between estimates of the 2 years (with separate design effect parameters for adjacent and nonadjacent years), and the  $n_{ji}$  are the sample sizes corresponding to the indexed year and grade prevalence estimates,  $i, j = 1, 2$ . Because the 8th and 10th grade samples were independently drawn, the variance of the difference between the 8th and 10th grade averages can be expressed as

$$\text{var}(\bar{p}_2 - \bar{p}_1) = \frac{1}{4} \{ \text{var}(\hat{p}_{21} - \hat{p}_{11}) + \text{var}(\hat{p}_{22} - \hat{p}_{12}) \}.$$

The test statistic can therefore be written as

$$Z = \frac{\bar{p}_2 - \bar{p}_1}{\sqrt{\text{var}(\bar{p}_2 - \bar{p}_1)}},$$

where  $Z$  is asymptotically distributed as a standard normal random variable.

### B.3 Other Information on Data Accuracy

The accuracy of survey estimates can be affected by nonresponse, coding errors, computer processing errors, errors in the sampling frame, reporting errors, and other errors not due to sampling. They are sometimes referred to as "nonsampling errors." These types of errors and their impact are reduced through data editing, statistical adjustments for nonresponse, close monitoring and periodic retraining of interviewers, and improvement in various quality control procedures.

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

### **B.3.1 Screening and Interview Response Rate Patterns**

In 2007, respondents continued to receive a \$30 incentive in an effort to maximize response rates. Of the 158,411 eligible households sampled for the 2007 NSDUH, 141,487 were screened successfully, for a weighted screening response rate of 89.5 percent (Table B.3). In these screened households, a total of 85,774 sample persons were selected, and completed interviews were obtained from 67,870 of these sample persons, for a weighted interview response rate of 73.9 percent (Table B.4). A total of 11,881 (17.6 percent) sample persons were classified as refusals or parental refusals, 3,676 (4.1 percent) were not available or never at home, and 2,347 (4.3 percent) did not participate for various other reasons, such as physical or mental incompetence or language barrier (see Table B.4, which also shows the distribution of the selected sample by interview code and age group). Among demographic subgroups, the weighted interview response rate was highest among 12 to 17 year olds (85.4 percent), females (75.7 percent), blacks (80.0 percent), among persons in the South (75.8 percent), and among residents of nonmetropolitan areas (77.4 percent) (Table B.5).

The overall weighted response rate, defined as the product of the weighted screening response rate and weighted interview response rate, was 66.1 percent in 2007. Nonresponse bias can be expressed as the product of the nonresponse rate ( $1 - R$ ) and the difference between the characteristic of interest between respondents and nonrespondents in the population ( $P_r - P_{nr}$ ). By maximizing NSDUH response rates, it is hoped that the bias due to the difference between the estimates from respondents and nonrespondents is minimized. Drug use surveys are particularly vulnerable to nonresponse due to the difficult nature of accessing heavy drug users. In a study that matched 1990 census data to 1990 NHSDA nonrespondents,<sup>10</sup> it was found that populations with low response rates did not always have high drug use rates. For example, although some populations were found to have low response rates and high drug use rates (e.g., residents of large metropolitan areas and males), other populations had low response rates and low drug use rates (e.g., older adults and high-income populations). Therefore, many of the potential sources of bias tend to cancel each other in estimates of overall prevalence (Gfroerer, Lessler, & Parsley, 1997a).

### **B.3.2 Inconsistent Responses and Item Nonresponse**

Among survey participants, item response rates were above 99 percent for most drug use items. However, respondents could give inconclusive or inconsistent information about whether they ever used a given drug (i.e., "yes" or "no") and, if they had used a drug, when they last used it; the latter information is needed to identify those lifetime users of a drug who used it in the past year or past month. In addition, respondents could give inconsistent responses to items such as when they first used a drug compared with their most recent use of a drug. These missing or inconsistent responses first are resolved where possible through a logical editing process. Additionally, missing or inconsistent responses are imputed using statistical methodology (Ault et al., 2008). These imputation procedures in NSDUH are based on responses to multiple questions, so that the maximum amount of information is used in determining whether a respondent is classified as a user or nonuser, and if the respondent is classified as a user, whether the respondent is classified as having used in the past year or the past month. For example,

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<sup>10</sup> Prior to 2002, NSDUH was known as the National Household Survey on Drug Abuse (NHSDA).

ambiguous data on the most recent use of cocaine are statistically imputed based on a respondent's data for use (or most recent use) of tobacco products, alcohol, inhalants, marijuana, hallucinogens, and nonmedical use of prescription psychotherapeutic drugs. Nevertheless, editing and imputation of missing responses are potential sources of measurement error. For more information on editing and statistical imputation, see Sections A.3.1 and A.3.2 of Appendix A. Additional information on editing and statistical imputation procedures can be found online at <http://drugabusestatistics.samhsa.gov/nsduh/methods.cfm#top>.

### **B.3.3 Data Reliability**

NSDUH research staff are conducting a study to assess the reliability of respondents' responses to the survey. An interview/reinterview method was employed in which 3,136 individuals were interviewed on two occasions during 2006 generally 5 to 15 days apart. The reliability of the responses will be assessed by comparing the responses of the first interview to the responses from the reinterview. Preliminary analyses indicate good levels of response consistency on measures of substance use and mental health. Results of the study will be published later.

### **B.3.4 Validity of Self-Reported Substance Use**

Most substance use prevalence estimates, including those produced for NSDUH, are based on self-reports of use. Although studies have generally supported the validity of self-report data, it is well documented that these data often are biased (underreported or overreported). The bias varies by several factors, including the mode of administration, the setting, the population under investigation, and the type of drug (Aquilino, 1994; Brener et al., 2006; Harrison & Hughes, 1997; Tourangeau & Smith, 1996; Turner, Lessler, & Gfroerer, 1992). NSDUH utilizes widely accepted methodological practices for increasing the accuracy of self-reports, such as encouraging privacy through audio computer-assisted self-interviewing (ACASI) and providing assurances that individual responses will remain confidential. Comparisons using these methods within NSDUH have shown that they reduce reporting bias (Gfroerer, Eyerman, & Chromy, 2002). Various procedures, such as biological specimens (e.g., urine, hair, saliva), proxy reports (e.g., family member, peer), and repeated measures (e.g., recanting), have been used to validate self-report data (Fendrich, Johnson, Sudman, Wislar, & Spiehler, 1999). However, these procedures often are impractical or too costly for general population epidemiological studies (SRNT Subcommittee on Biochemical Verification, 2002).

A recent study cosponsored by the Substance Abuse and Mental Health Services Administration (SAMHSA) and the National Institute on Drug Abuse (NIDA) examined the validity of NSDUH self-report data on drug use among persons aged 12 to 25. The study found that it is possible to collect urine and hair specimens with a relatively high response rate in a general population survey, and that most youths and young adults reported their recent drug use accurately in self-reports (Harrison, Martin, Enev, & Harrington, 2007). However, there were some reporting differences in either direction, with some respondents not reporting use but testing positive, and some reporting use but testing negative. Technical and statistical problems related to the hair tests precluded presenting comparisons of self-reports and hair test results, while small sample sizes for self-reports and positive urine test results for opiates and stimulants precluded drawing conclusions about the validity of self-reports of these drugs. Further,

inexactness in the window of detection for drugs in biological specimens and biological factors affecting the window of detection could account for some inconsistency between self-reports and urine test results.

## B.4 Measurement Issues

Several measurement issues associated with the 2007 NSDUH may be of interest and are discussed in this section. Specifically, these issues include the methods for measuring incidence; nicotine (cigarette) dependence; substance dependence and abuse; serious psychological distress (SPD); depression; methamphetamine use; use of hallucinogens, stimulants, and sedatives; and income.

### B.4.1 Incidence

In epidemiological studies, incidence is defined as the number of new cases of a disease occurring within a specific period of time. Similarly, in substance use studies, incidence refers to the first use of a particular substance.

In the 2004 NSDUH national results report (Office of Applied Studies [OAS], 2005b), a new measure related to incidence was introduced, and since then it has become the primary focus of Chapter 5 in this national results report series. The incidence measure is termed "past year initiation" and refers to respondents whose date of first use of a substance was within the 12 months prior to their interview date. This measure is determined by self-reported past year use, age at first use, year and month of recent new use, and the interview date.

Since 1999, the survey questionnaire has allowed for collection of year and month of first use for recent initiates (i.e., persons who used a particular substance for the first time in a given survey year). Month, day, and year of birth also are obtained directly or are imputed for item nonrespondents as part of the data postprocessing. Additionally, the computer-assisted interviewing (CAI) instrument records and provides the date of the interview. By imputing a day of first use within the year and month of first use, a specific date of first use,  $t_{fu,d,i}$ , can be used for estimation purposes.

Past year initiation among persons using a substance in the past year can be viewed as an indicator variable defined as follows:

$$I_{(Past\ Year\ Initiate)}(i) = \begin{cases} 1 & \text{if } (DOI_i MOI_i YOI_i - t_{fu,d,i}) \leq 365 \\ 0 & \text{otherwise} \end{cases},$$

where  $DOI_i$ ,  $MOI_i$ , and  $YOI_i$  denote the day, month, and year of the interview, respectively, and  $t_{fu,d,i}$  denotes the date of first use.

The calculation of this estimate does not take into account whether a respondent initiated substance use while a resident of the United States. This method of calculation has little effect on past year estimates and allows for direct comparability with other standard measures of substance use because the populations of interest for the measures will be the same (i.e., both

measures examine all possible respondents and are not restricted to those initiating substance use only in the United States).

One important note for incidence estimates is the relationship between main categories and subcategories of substances (e.g., illicit drugs would be a main category, and inhalants and marijuana would be subcategories in relation to illicit drugs). For most measures of substance use, any member of a subcategory is by necessity a member of the main category (e.g., if a respondent is a past month user of a particular drug, then he or she is also a past month user of illicit drugs in general). However, this is not the case with regard to incidence statistics. Because an individual can only be an initiate of a particular substance category (main or sub) a single time, a respondent with lifetime use of multiple substances may not, by necessity, be included as a past year initiate of a main category, even if he or she were a past year initiate for a particular subcategory because his or her first initiation of other substances within the main category could have occurred earlier.

In addition to estimates of the number of persons initiating use of a substance in the past year, estimates of the mean age of past year first-time users of these substances are computed. Unless specified otherwise, estimates of the mean age at initiation in the past 12 months have been restricted to persons aged 12 to 49 so that the mean age estimates reported are not influenced by those few respondents who were past year initiates at age 50 or older. As a measure of central tendency, means are influenced heavily by the presence of extreme values in the data, and this constraint should increase the utility of these results to health researchers and analysts by providing a better picture of the substance use initiation behaviors among the civilian, noninstitutionalized population in the United States. This constraint was applied only to estimates of mean age at first use and does not affect estimates of incidence.

Because NSDUH is a survey of persons aged 12 years old or older at the time of the interview, younger individuals in the sample dwelling units are not eligible for selection into the NSDUH sample. Some of these younger persons may have initiated substance use during the past year. As a result, past year initiate estimates suffer from undercoverage if a user assumes that these estimates reflect all initial users instead of only for those above the age of 11. For earlier years, data can be obtained retrospectively based on the age at and date of first use. As an example, persons who were 12 years old on the date of their interview in the 2007 survey may report having initiated use of cigarettes between 1 and 2 years ago; these persons would have been past year initiates reported in the 2006 survey had persons who were 11 years old on the date of the 2006 interview been allowed to participate in the survey. Similarly, estimates of past year use by younger persons (age 10 or younger) can be derived from the current survey, but they apply to initiation in prior years and not the survey year.

To get an impression of the potential undercoverage in the current year, reports of substance use initiation reported in 2007 by persons aged 12 or older were estimated for the years in which these persons would have been 1 to 11 years younger. These estimates do not necessarily reflect behavior by persons 1 to 11 years younger in 2007. Instead, the data for the 11 year olds reflect initiation in the year prior to the 2007 survey, the data for the 10 year olds reflect behavior between the 12th and 23rd months prior to the 2007 survey, and so on. A very rough way to adjust for the difference in the years that the estimate pertains to without considering changes in the population is to apply an adjustment factor to each age-based estimate

of past year initiates. This adjustment factor can be based on a ratio of lifetime users aged 12 to 17 in 2007 to the same estimate for the prior applicable survey year. To illustrate the calculation, consider past year use of alcohol. In the 2007 survey, 116,102 persons 12 years old in 2007 were estimated to have initiated use of alcohol between 1 and 2 years earlier. These persons would have been past year initiates in the 2006 survey conducted on the same dates had the 2006 survey covered younger persons. The estimated number of lifetime users currently aged 12 to 17 was 9,949,469 for 2007 and 10,255,011 for 2006, indicating fewer overall initiates of alcohol use among persons aged 17 or younger in 2007. Thus, an adjusted estimate of initiation of alcohol use by persons who were 11 years old in 2007 is given by

$$(\textit{Estimated Past Year Initiates Aged 11})_{2006} \times \frac{(\textit{Estimated Lifetime Users Aged 12 to 17})_{2007}}{(\textit{Estimated Lifetime Users Aged 12 to 17})_{2006}}.$$

This yielded an adjusted estimate of 112,643 persons 11 years old on a 2007 survey date and initiating use of alcohol in the past year:

$$116,102 * \frac{9,949,469}{10,255,011} = 112,643.$$

A similar procedure was used to adjust the estimated number of past year initiates among persons who would have been 10 years old on the date of the interview in 2005 and for younger persons in earlier years. The overall adjusted estimate for past year initiates of alcohol use by persons 11 years of age or younger on the date of the interview was 279,949, or about 6.1 percent of the estimate based on past year initiation by persons 12 or older only ( $279,949 \div 4,558,760 = 0.0614$ ).

Based on similar analyses, the estimated undercoverage of past year initiates was 5.6 percent for cigarettes, 1.1 percent for marijuana, and 22.7 percent for inhalants.

The undercoverage of past year initiates aged 11 or younger also affects the mean age at first use estimate. An adjusted estimate of the mean age at first use was calculated using a weighted estimate of the mean age at first use based on the current survey and the numbers of persons aged 11 or younger in the past year obtained in the aforementioned analysis for estimating undercoverage of past year initiates. Analysis results showed that the mean age at first use was changed from 16.8 to 16.3 (or a decrease of 2.8 percent) for alcohol, from 16.9 to 16.4 (or a decrease of 3.1 percent) for cigarettes, from 17.6 to 17.5 (or a decrease of 0.6 percent) for marijuana, and from 17.1 to 15.6 (or a decrease of 8.9 percent) for inhalants.

#### **B.4.2 Nicotine (Cigarette) Dependence**

The 2007 NSDUH's CAI instrumentation included questions designed to measure nicotine dependence among current cigarette smokers. Nicotine dependence is based on criteria derived from the Nicotine Dependence Syndrome Scale (NDSS) (Shiffman, Hickcox, Gnys, Paty, & Kassel, 1995; Shiffman, Waters, & Hickcox, 2004) and the Fagerstrom Test of Nicotine Dependence (FTND) (Fagerstrom, 1978; Heatherton, Kozlowski, Frecker, & Fagerstrom, 1991). The above-mentioned criteria were first used to measure nicotine dependence in NSDUH in 2003.



The conceptual roots of the NDSS (Edwards & Gross, 1976) are similar to those behind the American Psychiatric Association (APA) *Diagnostic and Statistical Manual of Mental Disorders*, 4th edition (DSM-IV), concept of dependence (APA, 1994). The 2007 NSDUH contained 19 NDSS questions that addressed five aspects of dependence:

1. Smoking drive (compulsion to smoke driven by nicotine craving and withdrawal)
  - a. After not smoking for a while, you need to smoke in order to feel less restless and irritable.
  - b. When you don't smoke for a few hours, you start to crave cigarettes.
  - c. You sometimes have strong cravings for a cigarette where it feels like you're in the grip of a force you can't control.
  - d. You feel a sense of control over your smoking - that is, you can "take it or leave it" at any time.
  - e. You sometimes worry that you will run out of cigarettes.
2. Nicotine tolerance
  - a. Since you started smoking, the amount you smoke has increased.
  - b. Compared to when you first started smoking, you need to smoke a lot more now in order to be satisfied.
  - c. Compared to when you first started smoking, you can smoke much, much more now before you start to feel anything.
3. Continuous smoking
  - a. You smoke cigarettes fairly regularly throughout the day.
  - b. You smoke about the same amount on weekends as on weekdays.
  - c. You smoke just about the same number of cigarettes from day to day.
  - d. It's hard to say how many cigarettes you smoke per day because the number often changes.
  - e. It's normal for you to smoke several cigarettes in an hour, then not have another one until hours later.
4. Behavioral priority (preferring smoking over other reinforcing activities)
  - a. You tend to avoid places that don't allow smoking, even if you would otherwise enjoy them.
  - b. There are times when you choose not to be around your friends who don't smoke because they won't like it if you smoke.
  - c. Even if you're traveling a long distance, you'd rather not travel by airplane because you wouldn't be allowed to smoke.
5. Stereotypy (fixed patterns of smoking)
  - a. Do you have any friends who do not smoke cigarettes?

- b. The number of cigarettes you smoke per day is often influenced by other things - how you're feeling, or what you're doing, for example.
- c. Your smoking is not affected much by other things. For example, you smoke about the same amount whether you're relaxing or working, happy or sad, alone or with others.

Each of the five domains listed above can be assessed by a separate measure, but an average score across all domains also can be obtained for overall nicotine dependence (Shiffman et al., 2004). The NDSS algorithm for calculating this average score was based on the respondent's answers to 17 of the 19 questions listed above. The two items regarding nonsmoking friends (4b and 5a) were excluded due to higher item nonresponse rates.

To optimize the number of respondents who could be classified for nicotine dependence, imputation was utilized for all respondents who answered all but 1 of the 17 nicotine dependence questions that were used in the NDSS algorithm. The imputation was based on weighted least square regressions using the other 16 NDSS items as covariates in the model (Ault et al., 2008).

Responses to items 1a-c, 1e, 2a-c, 3a-c, 4a, 4c, and 5c were coded from 1 to 5 where

- 1 = Not at all true of me
- 2 = Somewhat true of me
- 3 = Moderately true of me
- 4 = Very true of me
- 5 = Extremely true of me

Responses to items 1d, 3d, 3e, and 5b were reverse coded from 5 to 1 where

- 5 = Not at all true of me
- 4 = Somewhat true of me
- 3 = Moderately true of me
- 2 = Very true of me
- 1 = Extremely true of me

The NDSS score was calculated as the sum of the responses to the previous questions divided by 17. The NDSS score was only calculated for current cigarette smokers who had complete data (based on actual reporting and imputation) for all 17 questions.

A current cigarette smoker was defined as nicotine dependent if his or her NDSS score was greater than or equal to 2.75. If the NDSS score for a current cigarette smoker was less than 2.75 or the NDSS score was not defined, then the respondent was determined to be nondependent based on the NDSS. The threshold of 2.75 was derived by examining the distribution of scores in other samples of smokers administered the NDSS, including a contrast of scores obtained for nondependent smokers (chippers) versus heavy smokers (Shiffman, Paty, Kassel, Gnys, & Zettler-Segal, 1994).

The FTND is a multi-item measure of dependence, but much of its ability to discriminate dependent smokers derives from a single item that assesses how soon after waking that smokers

have their first cigarette (Heatherton, Kozlowski, Frecker, Rickert, & Robinson, 1989). Because most nicotine is cleared from the bloodstream overnight, smokers typically wake in nicotine deprivation, and rapid movement to smoke is considered a sign of dependence. A current cigarette smoker was defined as nicotine dependent based on the FTND if the first cigarette smoked was within 30 minutes of waking up on the days that he or she smoked.

Using both the NDSS and the FTND measures described above, a current cigarette smoker was defined as having nicotine dependence in the past month if he or she met either the NDSS or FTND criteria for dependence.

### **B.4.3 Illicit Drug and Alcohol Dependence and Abuse**

The 2007 NSDUH CAI instrumentation included questions that were designed to measure dependence on and abuse of illicit drugs and alcohol. For these substances,<sup>11</sup> dependence and abuse questions were based on the criteria in the DSM-IV (APA, 1994).

Specifically, for marijuana, hallucinogens, inhalants, and tranquilizers, a respondent was defined as having dependence if he or she met three or more of the following six dependence criteria:

1. Spent a great deal of time over a period of a month getting, using, or getting over the effects of the substance.
2. Used the substance more often than intended or was unable to keep set limits on the substance use.
3. Needed to use the substance more than before to get desired effects or noticed that the same amount of substance use had less effect than before.
4. Inability to cut down or stop using the substance every time tried or wanted to.
5. Continued to use the substance even though it was causing problems with emotions, nerves, mental health, or physical problems.
6. The substance use reduced or eliminated involvement or participation in important activities.

For alcohol, cocaine, heroin, pain relievers, sedatives, and stimulants, a seventh withdrawal criterion was added. A respondent was defined as having dependence if he or she met three or more of seven dependence criteria. The seventh withdrawal criterion is defined by a respondent reporting having experienced a certain number of withdrawal symptoms that vary by substance (e.g., having trouble sleeping, cramps, hands tremble).

For each illicit drug and alcohol, a respondent was defined as having abused that substance if he or she met one or more of the following four abuse criteria and was determined not to be dependent on the respective substance in the past year:

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<sup>11</sup> Substances include alcohol, marijuana, cocaine, heroin, hallucinogens, inhalants, pain relievers, tranquilizers, stimulants, and sedatives.

1. Serious problems at home, work, or school caused by the substance, such as neglecting your children, missing work or school, doing a poor job at work or school, or losing a job or dropping out of school.
2. Used the substance regularly and then did something that might have put you in physical danger.
3. Use of the substance caused you to do things that repeatedly got you in trouble with the law.
4. Had problems with family or friends that were probably caused by using the substance and continued to use the substance even though you thought the substance use caused these problems.

Criteria used to determine whether a respondent was asked the dependence and abuse questions during the interview included responses from the core substance use questions and the frequency of substance use questions, as well as the noncore substance use questions. Missing or incomplete responses in the core substance use and frequency of substance use questions were imputed. However, the imputation process did not take into account reported data in the noncore (i.e., substance dependence and abuse) CAI modules. This may have resulted in responses to the dependence and abuse questions that were inconsistent with the imputed substance use or frequency of substance use.

For alcohol and marijuana, respondents were asked the dependence and abuse questions if they reported substance use on more than 5 days in the past year, or if they reported any substance use in the past year but did not report their frequency of past year use. Therefore, inconsistencies could have occurred where the imputed frequency of use response indicated less frequent use than required for respondents to be asked the dependence and abuse questions originally.

For cocaine, heroin, and stimulants, respondents were asked the dependence and abuse questions if they reported past year use in a core drug module or past year use in the noncore special drugs module. Thus, inconsistencies could have occurred when the response to a core substance use question indicated no use in the past year, but responses to dependence and abuse questions indicated substance dependence or abuse for the respective substance.

In 2005, two new questions were added to the noncore special drugs module about past year methamphetamine use: "Have you ever, even once, used methamphetamine?" and "Have you ever, even once, used a needle to inject methamphetamine?" In 2006, an additional follow-up question was added to the noncore special drugs module confirming prior responses about methamphetamine use: "Earlier, the computer recorded that you have never used methamphetamine. Which answer is correct?" The responses to these new questions were used in the skip logic for the stimulant dependence and abuse questions. Based on the decisions made during the methamphetamine analysis (see Section B.4.6), respondents who indicated past year methamphetamine use solely from these new special drug use questions (i.e., did not indicate methamphetamine use from the core drug module or other questions in the special drugs module) were categorized as NOT having past year stimulant dependence or abuse regardless of how they answered the dependence and abuse questions. Furthermore, if these same respondents were categorized as not having past year dependence on or abuse of any other substance (e.g., pain

relievers, tranquilizers, or sedatives for the psychotherapeutic drug grouping), then they were categorized as NOT having past year dependence on or abuse of psychotherapeutics, illicit drugs, illicit drugs or alcohol, and illicit drugs and alcohol.

Respondents might have provided ambiguous information about past year use of any individual substance, in which case these respondents were not asked the dependence and abuse questions for that substance. Subsequently, these respondents could have been imputed to be past year users of the respective substance. In this situation, the dependence and abuse data were unknown; thus, these respondents were classified as not dependent on or abusing the respective substance. However, such a respondent never actually was asked the dependence and abuse questions.

#### **B.4.4 Serious Psychological Distress**

For this 2007 NSDUH report, serious psychological distress (SPD) was measured using the K6 screening instrument for nonspecific psychological distress (Kessler et al., 2003a). In NSDUH reports prior to 2004, the K6 scale was used to measure serious mental illness (SMI). For a discussion of the reasons that the K6 was used to measure SPD instead of SMI for the 2004 and later NSDUH reports, as well as details on a methodological study of the measurement of SMI, see Section B.4.4 of Appendix B in the 2004 NSDUH national results report (OAS, 2005b).

The K6 consists of six questions that ask respondents how frequently they experienced symptoms of psychological distress during the 1 month in the past year when they were at their worst emotionally. The use of this scale for SPD (or SMI prior to 2004) was based on a methodological study designed to evaluate several screening scales for measuring SMI in NSDUH. These scales evaluated in this methodological study consisted of a truncated version of the World Health Organization (WHO) Composite International Diagnostic Interview Short Form (CIDI-SF) scale (Kessler, Andrews, Mroczek, Üstün, & Wittchen, 1998), the K10/K6 scale of nonspecific psychological distress (Kessler et al., 2003a), and a truncated version of the WHO Disability Assessment Schedule (WHO-DAS) (Rehm et al., 1999). Overall, the K6 scale exhibited sound psychometric properties.

The six questions comprising the K6 scale are given as follows:

**DSNERV1** Most people have periods when they are not at their best emotionally. Think of 1 month in the past 12 months when you were the most depressed, anxious, or emotionally stressed. If there was no month like this, think of a typical month.

During that month, how often did you feel nervous?

- 1 All of the time
- 2 Most of the time
- 3 Some of the time
- 4 A little of the time
- 5 None of the time

DK/REF

Response categories are the same for the following questions:

- DSHOPE** During that same month when you were at your worst emotionally . . . how often did you feel hopeless?
- DSFIDG** During that same month when you were at your worst emotionally . . . how often did you feel restless or fidgety?
- DSNOCHR** During that same month when you were at your worst emotionally . . . how often did you feel so sad or depressed that nothing could cheer you up?
- DSEFFORT** During that same month when you were at your worst emotionally . . . how often did you feel that everything was an effort?
- DSDOWN** During that same month when you were at your worst emotionally . . . how often did you feel down on yourself, no good, or worthless?

To create a score, the six items (DSNERV1, DSHOPE, DSFIDG, DSNOCHR, DSEFFORT, and DSDOWN) on the K6 scale were coded from 0 to 4 so that "all of the time" was coded 4, "most of the time" 3, "some of the time" 2, "a little of the time" 1, and "none of the time" 0, with "don't know" and "refuse" also coded 0. Summing across the transformed responses resulted in a score with a range from 0 to 24. Respondents with a total score of 13 or greater were classified as having past year SPD (or SMI prior to 2004). This cut point was chosen to equalize false positives and false negatives.

In the 2003 NSDUH, the mental health module (i.e., the serious mental illness module) contained a truncated version of the CIDI-SF scale, the K10/K6 scale, and a truncated version of the WHO-DAS scale (in this order) to mirror the questions used by Kessler et al. (2003a). Thus, the module contained a broad array of questions from the CIDI-SF about mental health (i.e., panic attacks, depression, mania, phobias, generalized anxiety, posttraumatic stress disorder, and use of mental health services) that preceded the K6 items, and the four extra questions in the K10 scale were interspersed among the items in the K6 scale. In the 2004 NSDUH, the sample of respondents 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). The "short form" version was introduced to reduce interview time, removing questions that were not needed for estimation of SPD, and to provide space for a new module on depression. Inclusion of the "long form" version in half of the sample was to measure the impact on the K6 responses of changing the context of the K6.

Results from the 2004 NSDUH showed large differences between the two samples in both the K6 total score and the proportion of respondents with a K6 total score of 13 or greater. These differences were most pronounced in the 18 to 25 age group. These contextual differences suggest that the K6 scale is sensitive to item ordering in relation to other questions in the module; that is, respondents appear to respond to the K6 items differently depending on whether the scale is preceded by a broad array of other mental health questions.

Given the difference in K6 reporting between the A (long form) and B (short form) samples, the 2004 SPD estimates presented in the 2004 detailed tables and 2004 NSDUH national results report are based only on the A sample, which used a mental health module identical to that used in 2002 and 2003. In the 2005 to 2007 NSDUHs, only the "short form"

SPD module was used; therefore, the 2004 SPD estimates presented in the 2005 to 2007 detailed tables and in the corresponding NSDUH national results reports are based on the B sample, so that the estimates are comparable. Note that the 2004 SPD estimates reported in the 2004 detailed tables (OAS, 2005a) are different from the 2004 SPD estimates reported in the 2005 to 2007 detailed tables (OAS, 2006a, 2007a, 2008b), and SPD estimates reported in the 2005-2007 detailed tables are not comparable with estimates reported in previous years.

#### **B.4.5 Major Depressive Episode (Depression)**

Beginning in 2004, modules related to major depressive episode (MDE) derived from DSM-IV (APA, 1994) criteria for major depression were included in the questionnaire. These questions permit estimates to be calculated for prevalence of MDE and treatment for MDE. Separate modules were administered to adults aged 18 or older and youths aged 12 to 17. The adult questions were adapted from the depression section of the National Comorbidity Survey–Replication (NCS-R; Harvard School of Medicine, 2005), and the questions for youths were adapted from the depression section of the National Comorbidity Survey–Adolescent (NCS-A; Harvard School of Medicine, 2005). To make the modules developmentally appropriate for youths, there are minor wording differences in a few questions between the adult and youth modules. Revisions to the questions in both modules were made primarily to reduce its length and to modify the NCS questions, which are interviewer-administered, to the ACASI format used in NSDUH. In addition, some revisions, based on cognitive testing, were made to improve comprehension. Furthermore, even though titles similar to those used in the NCS were used for the NSDUH modules, the results of these items may not be directly comparable. This is mainly due to differing modes of administration in each survey (ACASI in NSDUH vs. computer-assisted personal interviewing [CAPI] in NCS), revisions to wording necessary to maintain the logical processes of the ACASI environment, and possible context effects resulting from deleting questions not explicitly pertinent to severe depression.

In 2004, a split-sample design was implemented where adults in sample B received the depression module while adult respondents in sample A did not. All youths were administered the youth depression module. Starting in 2005, all adult and youth respondents were administered their respective depression modules.

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. Respondents who have had MDE in their lifetime are asked if, during the past 12 months, they had a period of depression lasting 2 weeks or longer while also having some of the other symptoms mentioned. Those reporting that they have are defined as having had MDE in the past year and then are asked questions from the Sheehan Disability Scale (SDS) to measure the level

of functional impairment in major life activities reported to be caused by the MDE in the past 12 months (Leon, Olfson, Portera, Farber, & Sheehan, 1997).

NSDUH measures the nine attributes associated with MDE as defined in DSM-IV with the following questions. Note that the questions shown are taken from the adult depression module. A few of the questions in the youth module were modified slightly to use wording more appropriate for youths aged 12 to 17. It should be noted that no exclusions were made for MDE caused by medical illness, bereavement, or substance use disorders.

### 1. Depressed mood most of the day

The following questions refer to the worst or most recent period of time when the respondent experienced any or all of the following: sadness, discouragement, or lack of interest in most things.

During that [worst/most recent] period of time...

- a. ... did you feel sad, empty, or depressed **most of the day nearly every day**?
- b. ... did you feel discouraged about how things were going in your life **most of the day nearly every day**?

### 2. Markedly diminished interest or pleasure in all or almost all activities most of the day

- a. ... did you lose interest in almost all things like work and hobbies and things you like to do for fun?
- b. ... did you lose the ability to take pleasure in having good things happen to you, like winning something or being praised or complimented?

### 3. Weight

In answering the next questions, think about the [worse/most recent] period of time.

- a. Did you have a much smaller appetite than usual nearly every day during that time?
- b. Did you have a much **larger** appetite than usual nearly every day?
- c. Did you gain weight without trying to during that [worst/most recent] period of time?
  - a. ... because you were growing?
  - b. ... because you were pregnant?
  - c. How many pounds did you gain?
- d. Did you lose weight without trying to?
  - a. ... because you were sick or on a diet?
  - b. How many pounds did you lose?

### 4. Insomnia or hypersomnia

- a. Did you have a lot more trouble than usual falling asleep, staying asleep, or waking too early nearly every night during that [worst/most recent] period of time?
- b. During that [worst/most recent] period of time, did you sleep a lot more than usual nearly every night?



## 5. Psychomotor agitation or retardation

- a. Did you talk or move more slowly than is normal for you nearly every day?
- b. Were you so restless or jittery nearly every day that you paced up and down or couldn't sit still?

## 6. Fatigue or loss of energy

- a. During that [worst/most recent] period of time, did you feel tired or low in energy nearly every day even when you had not been working very hard?

## 7. Feelings of worthlessness

- a. Did you feel that you were not as good as other people nearly every day?
- b. Did you feel totally worthless nearly every day?

## 8. Diminished ability to think or concentrate or indecisiveness

- a. During that [worst/most recent] time period, did your thoughts come much more slowly than usual or seem confused nearly every day?
- b. Did you have a lot more trouble concentrating than usual nearly every day?
- c. Were you unable to make decisions about things you ordinarily have no trouble deciding about?

## 9. Recurrent thoughts of death or recurrent suicidal ideation

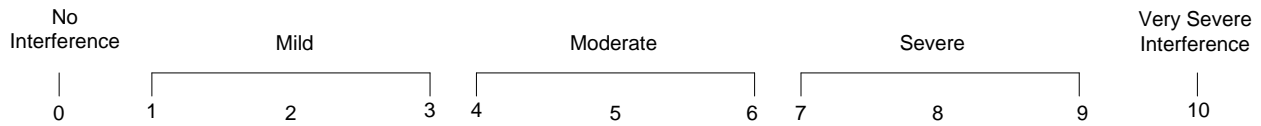
- a. Did you often think about death, either your own, someone else's, or death in general?
- b. During that period, did you ever think it would be better if you were dead?
- c. Did you think about committing suicide?

NSDUH also collects data on impairment using the Sheehan Disability Scale (SDS), which is a measure of mental health–related impairment in four major life activities or role domains. These four domains are defined separately for adults aged 18 or older and youths aged 12 to 17 to reflect the different roles associated with the two age groups. Each module consists of four questions, and each item uses an 11-point scale line, where 0 corresponds to no interference, 1 to 3 correspond to mild interference, 4 and 5 correspond to moderate interference, 7 to 9 correspond to severe interference, and 10 corresponds to very severe interference. Impairment score is defined as the single highest severity level of role impairment across the four SDS role domains. Ratings greater than or equal to 7 on the scale were considered severe impairment. In addition to past year MDE, NSDUH shows estimates for past year MDE with severe impairment. Estimates for severe impairment are calculated separately for youths and adults because the four domains are slightly different for the two groups. The questions pertaining to the four domains are listed below for both groups.

### *Adult Depression Module: Functional Impairment*

**ASDSHOME** Think about the time in the past 12 months when these problems with your mood were **most severe**.

Using the 0 to 10 scale shown below, where 0 means **no** interference and 10 means very **severe** interference, select the number that describes how much these problems interfered with each of the following activities during that period. You can use any number between 0 and 10 to answer. If this activity doesn't apply to you, type 95.



How much did your [depression symptoms] interfere with your home management, like cleaning, shopping, and working around the house, apartment, or yard?

**ASDSWORK** During the time in the past 12 months when your [depression symptoms] were most severe, how much did this interfere with your ability to work?

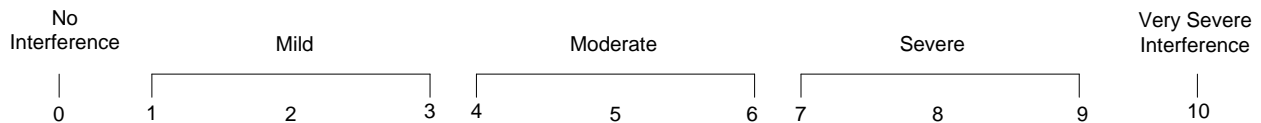
**ASDSREL** How much did your [depression symptoms] interfere with your ability to form and maintain **close** relationships with other people during that period of time?

**ASDSSOC** How much did [depression symptoms] interfere with your social life during that period of time?

**Youth Depression Module: Functional Impairment**

**YSDSHOME** Think about the time in the past 12 months when these problems with your mood were the **worst**.

Using the 0 to 10 scale shown below, where 0 means **no** problems and 10 means very **severe** problems, select the number that describes how much your [depression symptoms] caused problems with each of the following activities during that time. You can use any number between 0 and 10 to answer. If this activity doesn't apply to you, type 95.



How much did your [depression symptoms] cause problems with your chores at home?

**YSDSWORK** During the time in the past 12 months when your [depression symptoms] were worst, how much did this cause problems with your ability to do well at school or work?

**YSDSREL** How much did your [depression symptoms] cause problems with your ability to get along with your family during that time?

**YSDSSOC** How much did your [depression symptoms] cause problems with your social life during that time?

#### **B.4.6 Revised Estimates of Methamphetamine Use**

A challenge in measuring nonmedical use of prescription drugs comes when those drugs are produced illegally. Drugs that have been manufactured by legitimate pharmaceutical companies under government regulation may become popular drugs of abuse, stimulating illegal production. In particular, most methamphetamine that currently is used nonmedically in the United States is produced by clandestine laboratories within the United States or abroad rather than by the legitimate pharmaceutical industry. Questions on methamphetamine use in NSDUH are first asked in the stimulants module in the core section of the questionnaire in the context of questions about nonmedical use of prescription stimulants. Therefore, one concern in measuring methamphetamine use in NSDUH is that some methamphetamine users may fail to report use if they do not recognize the drug when it is presented in the prescription drug context.

To address this concern, questions were added to the special drugs module in the noncore section of the NSDUH questionnaire beginning in 2005 to capture information from respondents who may have used methamphetamine but did not recognize it as a prescription drug and therefore did not report use in the core stimulants module. These noncore questions differed from the methamphetamine use questions asked in the core stimulants module. They asked about methamphetamine use outside of the context of prescription drug use. These questions also included more descriptive information relevant to this drug. Respondents who did not indicate in the core stimulants module that they had used methamphetamine were asked to respond to the following item:

Methamphetamine, also known as crank, ice, crystal meth, speed, glass, and many other names, is a stimulant that usually comes in crystal or powder forms. It can be smoked, "snorted," swallowed or injected. Have you ever, even once, used Methamphetamine?

Respondents who answered "Yes" to this question then were asked questions about the last time they used methamphetamine. They also were asked whether they ever injected methamphetamine with a needle, and (if applicable) the last time they used a needle to inject methamphetamine. Answers to these questions were used to classify respondents as lifetime (i.e., ever used), past year, or past month users.

Findings from the methamphetamine analysis section (Ruppenkamp, Davis, Kroutil, & Aldworth, 2006) of the *2005 NSDUH Methodological Resource Book* (RTI International, 2007a) suggested that estimates of methamphetamine use based only on core data could be lower than the true population prevalence. However, larger estimates of methamphetamine use based on both core and noncore answers could be a partial artifact of asking a second set of questions *only* from persons who did not report use the first time. Repeating questions for any drug only to those who did not report use the first time could artificially increase the positive responses. Doing so only for methamphetamine could result in a disproportionate reporting of that drug relative to the others in the survey. In addition, because the respondents reporting

methamphetamine use in the noncore questions essentially had contradicted their prior responses, some may have made mistakes in answering the noncore questions.

For these reasons, additional follow-up items were included, beginning with the 2006 NSDUH. In particular, these items sought to identify respondents who had failed to report methamphetamine use in response to the earlier question in the core stimulants module because they may not have considered methamphetamine to be a prescription drug. The items added in 2006 are as follows:

Earlier, the computer recorded that you have never used Methamphetamine, Desoxyn or Methedrine. Which answer is correct?

- 1 I have never, even once, used Methamphetamine, Desoxyn or Methedrine
- 2 I last used Methamphetamine [time period]

[IF ABOVE ITEM ANSWERED AS 2] Why did you report earlier that you had never used Methamphetamine?

- 1 The earlier question asked about prescription drugs, and I didn't think of Methamphetamine as a prescription drug
- 2 I made a mistake when I answered the earlier question about ever using Methamphetamine
- 3 Some other reason

Respondents who reported "some other reason" for not having reported methamphetamine use in the core stimulants module but indicated use in the noncore questions were asked to specify this other reason.

Findings showed that it would be important to use data from these consistency check questions in further investigating how best to estimate the prevalence of methamphetamine use in NSDUH (Ruppenkamp et al., 2006). In particular, respondents who confirmed in the first follow-up question that they never used methamphetamine should not be counted as "additional" methamphetamine users based on their report of methamphetamine use in the noncore special drugs module. In addition, respondents who reported that they "made a mistake" in answering the earlier question about methamphetamine use in the core stimulants module would not be counted in prevalence estimates. As noted above, allowing respondents a second chance to report methamphetamine use could inflate the estimates for this drug relative to estimates for other drugs for which respondents were not asked a second set of questions.

The majority of respondents who should be included in estimates of the prevalence of methamphetamine based on the noncore special drugs questions consisted of those who both (a) confirmed in the first question that they used methamphetamine and (b) indicated in the second follow-up question that they had not reported methamphetamine use in the core stimulants module because they did not think of methamphetamine as a prescription drug. A smaller group of respondents who confirmed methamphetamine use in the noncore special drugs module also should be retained as methamphetamine users for prevalence estimation because they specified other similar reasons why they may not have recognized methamphetamine in the context of the earlier questions in the core stimulants module. More detailed documentation of how these

methamphetamine data were edited are provided in the *2006 NSDUH Methodological Resource Book* (RTI International, 2008).

To assess the impact of the noncore methamphetamine use questions, weighted estimates from 2006 were generated and compared for two different scenarios: (1) only methamphetamine data from the core stimulants module from 2006, and (2) core methamphetamine data and noncore methamphetamine use variables that were added to the special drugs module in 2005 and 2006 (taking into account the additional follow-up questions in 2006). Comparisons were made for the lifetime, past year, and past month measures of methamphetamine use. Prevalence estimates for scenario 2 were greater than those using only the core methamphetamine data. For example, the lifetime prevalence estimates of methamphetamine use among persons aged 12 or older increased from 4.62 percent based only on core data to 5.77 percent for core plus noncore (CPN) data. See the columns labeled "2006" and "2007" in Table B.6 for a comparison of the core-only and CPN-based estimates for those years.

The methamphetamine use estimates that are presented in this report and in the detailed tables are based both on the original methamphetamine items in the core stimulants module and the methamphetamine items in the noncore special drugs module. For the purpose of examining trends in nonmedical methamphetamine use, a Bernoulli stochastic imputation (BSI) procedure was used in conjunction with the predictive mean neighborhoods (PMN) method (described in Section A.3.2 of Appendix A in this report) to generate comparable estimates for 2002 through 2005.<sup>12</sup> An explanation of this imputation procedure is presented later in this section. See Table B.6 for the resulting "adjusted" estimates of lifetime, past year, and past month methamphetamine use for 2002 through 2005.

Beginning with the 2005 survey, NSDUH also contained questions on how past year methamphetamine users obtained the methamphetamine that they last used. Respondents who reported past year methamphetamine use in the core stimulants or the noncore special drugs modules were asked these questions about obtaining the methamphetamine they last used. To assess the impact of respondents being routed to these source questions from both locations, weighted estimates for 2006 were generated and compared for the following two scenarios: (1) respondents routed to the source of methamphetamine questions from the core stimulants module only, and (2) respondents routed to the source of methamphetamine questions from either the core stimulants module or the noncore special drugs module (principally because they did not consider methamphetamine to be a prescription drug). This assessment revealed that an adjustment would be needed in order to compare 2006 estimates with 2005 estimates. To generate comparable estimates for 2005, the past year source of methamphetamine estimates were adjusted by using the Bernoulli stochastic-adjusted past year methamphetamine variable. Past year source of methamphetamine estimates for 2005 and 2006 based on the different estimation methods are presented in Appendix B of the 2006 national results report (OAS, 2007b).

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<sup>12</sup> Although additional methamphetamine use items were included in the special drugs module in 2005, the 2005 survey did not include the follow-up questions that were added in 2006. Hence, data from 2005 needed to be included in the BSI procedures.

Due to the use of similar items, however, no adjustment procedures were necessary for the 2006 and 2007 estimates of the past year source of methamphetamine. Thus, the 2006 and 2007 estimates presented in this report and in the detailed tables for how past year methamphetamine users obtained the methamphetamine they used the last time were based on answers from respondents who reported methamphetamine use in the original core stimulants items and those who reported use in the special drugs module (principally because they did not consider methamphetamine to be a prescription drug).

In this report, estimates of the prevalence of methamphetamine use are based on data from the core and noncore methamphetamine items in 2006 and 2007 and on the adjusted estimates for 2002 through 2005 using the methods outlined below. These estimates for 2002 through 2005 are not comparable with those presented in previous NSDUH reports.

In addition, new questions on the age at first use of methamphetamine were added to the noncore special drugs module in 2007 that could be used to identify methamphetamine users who initiated use of the drug in the past 12 months and had not previously reported methamphetamine use in the core stimulants module. Respondents who first used methamphetamine within 1 year of their current age were asked to report the year and month when they first used the drug. Comparison of estimates based on core-only and CPN data indicated that the large majority of past year methamphetamine initiates estimated by the CPN data were captured in the core-only data. For example, 157,000 persons aged 12 or older were estimated to be past year methamphetamine initiates based on the core-only data for 2007 compared with 195,000 based on the CPN data. Thus, the core data captured more than 80 percent of the past year initiates aged 12 or older who were estimated by the CPN data. Further, the estimated numbers of youths aged 12 to 17 who were past year methamphetamine initiates were the same for the core-only and CPN data when rounded to the nearest thousand. For these reasons, the estimates of the numbers of past year initiates of methamphetamine use shown in this report continue to be based only on responses to the age and date at first use questions from respondents who reported methamphetamine use in the original core stimulants items and are comparable with those in prior NSDUH reports.

Changes in estimates of methamphetamine use have the potential to affect estimates of nonmedical use of stimulants, nonmedical use of psychotherapeutic drugs, use of illicit drugs, and use of illicit drugs other than marijuana. The 2006 methamphetamine analysis section (Ruppenkamp et al., 2007) in the *2006 NSDUH Methodological Resource Book* (RTI International, 2008) revealed only negligible differences between core-only and CPN estimates of the use of illicit drugs or illicit drugs other than marijuana. Therefore, no adjustment was made to these indicators in the present report or in the detailed tables.

However, the methamphetamine analysis found somewhat larger effects on estimates of nonmedical use of stimulants and psychotherapeutic drugs. In 2006, for example, the estimates of lifetime nonmedical use of stimulants among persons aged 12 or older increased from 8.18 percent based only on core data to 9.13 percent based on CPN data (Table B.7). Similarly, core data yielded a lifetime estimate of nonmedical use of psychotherapeutic drugs of 20.26 percent among persons aged 12 or older compared with an estimate of 20.72 percent based on CPN data (Table B.8). Therefore, the prevalence estimates for nonmedical use of stimulants and psychotherapeutic drugs in this report and the corresponding 2007 detailed tables are based on

the combined core and noncore data. The 2006 and 2007 estimates for these measures were derived directly by combining data from items in the core modules and the noncore methamphetamine questions. Estimates for nonmedical use of stimulants and psychotherapeutic drugs for 2002 through 2005 are based on original core data for those years adjusted using the methods outlined below. Tables B.7 and B.8 present comparisons of the core-only and CPN estimates of nonmedical use of stimulants and psychotherapeutic drugs for 2002 through 2007. The adjusted CPN estimates in these tables for 2002 through 2005 and the direct CPN estimates for 2006 are not comparable with estimates in previously published NSDUH reports.

For 2002 through 2005, the imputation-revised versions of the CPN methamphetamine and stimulant recency variables were created by a complex combination of two previously mentioned imputation methods: predictive mean neighborhoods (PMN) and Bernoulli stochastic imputation (BSI). For a particular survey year, if the questionnaire covered the variable in question, then PMN was used to provide an imputation-revised version of that variable; otherwise, BSI was used. Core recency and lifetime variables were already imputed by methodologies discussed in Section A.3.2 of Appendix A in this report. Exhibit B.1 serves as a road map to the imputation methods used for the different variables in different survey years. Following standard NSDUH imputation procedures, lifetime use was imputed first, followed by recency.

The PMN and BSI methods are described briefly here. For step-by-step details on how the methods were applied, see the 2006 methamphetamine analysis section (Ruppenkamp et al., 2007) in the *2006 NSDUH Methodological Resource Book* (RTI International, 2008).

**Exhibit B.1 Imputation Methodology Applied to Methamphetamine and Stimulant Variables in Survey Years 2002-2007**

Variable	Survey Year(s)			
	2002-2004	2005	2006	2007
Core Lifetime Use, Core Past Year Use, Core Past Month Use	PMN	PMN	PMN	PMN
Noncore Lifetime Use	BSI	PMN/BSI <sup>1</sup>	PMN	PMN
Noncore Past Year Use	BSI	PMN/BSI <sup>1</sup>	PMN	PMN
Noncore Past Month Use	BSI	PMN/BSI <sup>1</sup>	PMN	PMN

BSI = Bernoulli stochastic imputation; PMN = predictive mean neighborhoods.

<sup>1</sup> PMN was used for imputation of noncore lifetime and recency (ignoring the consistency check), but BSI was used for the consistency check. For those respondents who were determined to have failed the consistency check, the indicators for lifetime, past year, and past month were all set to nonuse.

The PMN method is used for most variables in NSDUH that undergo imputation and consists of a modeling step and a hot-deck step. During modeling, a neighborhood of potential donors is chosen for each item nonrespondent, and a final donor is randomly selected from that neighborhood. The neighborhood is formed by applying constraints to the set of item respondents; some of the constraints are based on predicted means from regression models. In the hot-deck step, the final donor is chosen so that its predicted mean(s) is (are) close to the predicted mean(s) of the item nonrespondent. For more information, see Section A.3.2 of Appendix A in this report.

BSI is a simpler version of PMN and can be used when the variable of interest is (1) dichotomous and (2) imputed on its own, not as part of a multivariate framework in which multiple variables need to be imputed simultaneously for consistency. As in PMN, logistic regression models are fit and predicted means are calculated. However, no neighborhoods are formed with BSI, and there is no hot-deck step. Once the predicted mean  $\hat{p}$  for the item nonrespondent is calculated, the imputation-revised value for the item nonrespondent is stochastically computed as follows: It is given the value of 1 with probability  $\hat{p}$ , and the value of 0 with probability  $1-\hat{p}$ .

As applied to these measures of methamphetamine and stimulant prevalence, the data used to build the BSI regression models for the years when the relevant noncore variables were not collected came from the survey years when these items were collected. The PMN imputation was done for the survey years when the relevant variables were available. For example, 2007 data were used to build the model estimating the probability of noncore past year use given noncore lifetime use. Then, the parameter estimates from this model were used to calculate predicted means for each noncore lifetime user in the 2002-2005 survey years. Finally, these predicted means were used in the stochastic imputation of the noncore past year use variable for each noncore lifetime user in the 2002-2005 survey years.

Note that the BSI method is identical to the mean-centered univariate PMN imputation method for dichotomous variables.

The CPN estimates for nonmedical use of psychotherapeutics were created by using the core information for pain relievers, tranquilizers, and sedatives in conjunction with the CPN information for stimulants in 2006 and 2007. A similar procedure was applied for 2002 through 2005, except that the adjusted stimulant estimates were used for those years.

#### **B.4.7 Investigations of Additional Noncore Questions on Hallucinogens, Stimulants, and Sedatives**

Substance use is not a static phenomenon, and that is particularly true for prescription drugs with abuse potential. Shifts in abuse of legal drugs (or previously legal drugs) are affected by factors such as changes in legal status, changes in drug scheduling, introduction of new products, changes in prescribing practices, or discontinuation of products. Further, drugs that have been manufactured by legitimate pharmaceutical companies under government regulation may become popular drugs of abuse and may shift mainly to being produced illegally, as in the case of methamphetamine. Additional illegal or nonprescription drugs also can emerge as popular drugs of abuse.

Changes in the drugs that are being used or misused in the population present challenges for the measurement of the prevalence of substance use (or misuse) and related trends. Assessing trends requires the survey to maintain consistent measures and methods across years to ensure comparable measurement of substance use from year to year. In seeking to maintain consistency of survey items, however, consideration also must be given to changes in the substance use behaviors being measured. With frequent changes in the prescription drugs that are available on the market, for example, long-term tracking of the same set of specific medications in a given psychotherapeutic category would not ensure accurate monitoring of trends in misuse for that



category of drugs. Similarly, maintaining questions about the same specific nonprescription drugs (e.g., drugs that are considered hallucinogens) over several years would fail to take into account the emergence of newly popular drugs of abuse. Failure to adapt the questions to include use of specific emerging drugs could result in gradual erosion of the accuracy of the trend data, as respondents (and particularly younger ones or new users) would be presented with a list of increasingly obsolete drugs and would not be asked about drugs that are increasingly being used. Even if a survey focused on measurement of trends in use (or misuse) of only a defined set of drugs (as opposed to attempting to measure drug use as comprehensively as possible), the resulting trend data would become irrelevant over time if many of these drugs are no longer being used and have been replaced by newly emerging drugs.

Thus, it is essential that NSDUH and other epidemiological surveys periodically evaluate the relevant drugs to be included in survey questions to ensure continuous and accurate tracking of the general phenomenon of drug use. However, any introduction of new drug questions needs to be done in a manner that allows actual changes in population prevalence to be distinguished from measurement effects (e.g., artifactual increments or decrements in estimated prevalence resulting from the introduction of items about new drugs or the removal of items about obsolete ones). Findings in Section B.4.6 from analyses of the methamphetamine items that were added to the noncore special drugs module (i.e., after respondents had completed the core section of the survey) offer an example of this kind of measured introduction and assessment.

In response to the issue of potential changes in drugs of abuse, SAMHSA made the decision to include questions about additional drugs in the noncore special drugs module beginning with the 2006 survey. Questions about the following drugs or types of drugs were added in 2006:

- GHB (gamma hydroxybutyrate),
- Adderall<sup>®</sup> (a prescription stimulant),
- Ambien<sup>®</sup> (a prescription sedative),
- over-the-counter (OTC) cough and cold medicines (which fall into different drug categories, depending on the active ingredients), and
- the hallucinogens ketamine, dimethyltryptamine (DMT), alpha-methyltryptamine (AMT), and 5-methoxy-diisopropyltryptamine (5-MeO-DIPT, or "Foxy"),<sup>13</sup> and *Salvia divinorum*.

Except for GHB, specific questions about these drugs were added to the 2006 survey because data going back to the 1999 survey showed increasing numbers of mentions of these drugs in response to questions that asked respondents to specify the names of other drugs that they had used. Questions about GHB were added because GHB has been included as part of a group of drugs referred to as "club drugs" (NIDA, 2006; OAS, 2004a).

Respondents were asked whether they had ever used each of these drugs (or used them nonmedically in the case of Adderall<sup>®</sup> and Ambien<sup>®</sup>). Lifetime users of each of these drugs were

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<sup>13</sup> For the sake of brevity, these drugs are subsequently referred to as the "tryptamine drugs" or the "tryptamines."

asked to report the most recent time that they used them. Thus, data were available in the 2006 survey to identify lifetime, past year, and past month users of these drugs.

Because respondents were asked questions about the lifetime and most recent use of these drugs after they had answered all of the questions in the core drug modules (i.e., tobacco through sedatives), data from these new questions would not affect how respondents would have answered the core questions. Consequently, the measures and data from the core drug sections in 2006 were comparable with data from these sections in 2005 and prior years, for the purpose of measuring trends.

Although the drug use estimates that were presented in the 2006 national results report (OAS, 2007b) and in the detailed tables for 2006 (OAS, 2007a) did not include data from these additional items, a separate study examined the effects on prevalence estimates if data from these noncore items had been taken into account (Kroutil, Vorburger, & Aldworth, 2007).<sup>14</sup> This study found that inclusion of noncore data for Adderall<sup>®</sup> and Ambien<sup>®</sup> had notable effects on past year prevalence estimates of nonmedical use of stimulants and sedatives, respectively, compared with the corresponding estimates based on core data alone. Inclusion of data for ketamine, the tryptamines, and *Salvia divinorum* had a relatively small effect on hallucinogen prevalence estimates relative to those based on core data alone. Inclusion of noncore Adderall<sup>®</sup> and Ambien<sup>®</sup> data slightly increased the estimates of nonmedical use of any prescription psychotherapeutic drug relative to estimates based on core prescription psychotherapeutic data alone. Inclusion of noncore data for these drugs and for GHB had relatively little effect on estimates of illicit drug use and use of illicit drugs excluding marijuana compared with estimates based only on core data.

Items for these additional drugs continued to be included in the 2007 NSDUH. Therefore, SAMHSA requested a follow-up study to evaluate the overall effects on prevalence and trends that would result from the inclusion of noncore questions on use of methamphetamine, misuse of the prescription drugs Adderall<sup>®</sup> and Ambien<sup>®</sup>, use of the hallucinogens ketamine, the tryptamine drugs, and *Salvia divinorum*, and use of GHB.

So that data on trends are not disrupted, the drug use measures for the estimates that are presented in the main body of the report continued to be created in a manner consistent with how these measures were created for the 2006 survey. With the exception of the additional noncore data for methamphetamine, therefore, the estimates discussed elsewhere in this report do not take into account the noncore data for these additional drugs. In light of the issues discussed above, however, it also is important to present information on the prevalence and incidence of drug use that is as accurate and complete as possible. Therefore, estimates from this latest investigation are presented in this section of Appendix B.

For this investigation, recoded core-plus-noncore (CPN) variables were created for 2006 and 2007 that took into account noncore data from the special module on nonmedical use of Adderall<sup>®</sup> and Ambien<sup>®</sup> and use of ketamine, tryptamines, *Salvia divinorum*, and GHB.

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<sup>14</sup> Because misuse of OTC cough and cold medications falls outside of the measurement of nonmedical use of *prescription* drugs in NSDUH, this methods study did not investigate the data for the cough and cold medicines. However, a separate NSDUH report is available on the misuse of OTC cough and cold medicines (OAS, 2008a).

Exhibit B.2 shows the CPN drug use measures for which data from specific noncore drugs were taken into account. GHB was included only in CPN measures of illicit drug use and illicit drug use other than marijuana because GHB does not fit into any of the drug categories in NSDUH.

**Exhibit B.2 Noncore Drugs Used in the Creation of Additional CPN Recodes in the 2006 and 2007 NSDUHs**

Drug	CPN Drug Use Measure					
	Stimulants	Sedatives	Psychotherapeutic Drugs	Hallucinogens	Illicit Drugs	Illicit Drugs Other Than Marijuana
Adderall®	X		X		X	X
Ambien®		X	X		X	X
Ketamine				X	X	X
Tryptamines				X	X	X
<i>Salvia divinorum</i>				X	X	X
GHB					X	X

CPN = core plus noncore; GHB = gamma hydroxybutyrate.

For measures except stimulants and psychotherapeutic drugs, the imputed core variables (i.e., core variables with imputations for missing data or for situations in which respondents were lifetime users but the period of most recent use was undefined) were the starting point for creating the respective CPN recodes. For example, the imputed core sedative variables were the starting point for creating the CPN sedative recodes that took into account the core sedative data and the noncore data for Ambien®. The imputed variables that took into account noncore methamphetamine and relevant core data were the starting points for creating the CPN recodes for stimulants and psychotherapeutic drugs (see Section B.4.6). If respondents indicated use in the relevant period (i.e., lifetime, past year, past month) in the noncore data but the corresponding core-only or CPN variable with methamphetamine (for stimulants and psychotherapeutics) did not indicate use in that period, then the recoded CPN variables for this analysis indicated that respondents were users. Missing or ambiguous data in the noncore variables were treated as being equivalent to reports of nonuse in the period of interest. For example, if the respondent was a nonuser of sedatives based on the core data (i.e., SEDFLAG = 0) and also was a lifetime nonmedical user of Ambien®, but the exact period of most recent nonmedical use of Ambien® was not defined, then the corresponding recoded CPN data for sedatives indicated that the respondent was a nonmedical user of any sedatives in the lifetime period but not in the past 12 months or past 30 days.

Weighted prevalence estimates were generated for 2006 and 2007 for the core-only data (or CPN data for stimulants and psychotherapeutics due to the additional noncore methamphetamine items) and for the CPN measures that took into account Adderall®, Ambien®, ketamine, tryptamines, *Salvia divinorum*, and GHB, where relevant. Procedures for estimating variances, suppressing unreliable estimates, and testing for statistically significant differences in estimates between 2006 and 2007 were the same as those described in Section B.2. For each of these years, estimates were compared with and without the new noncore drugs. However, no

statistical tests of differences were conducted between the core-only<sup>15</sup> and CPN estimates within a single survey year. The large sample sizes and the high within-subject correlations (because the core-only and CPN estimates came from the same set of respondents) could result in even small differences between estimates being statistically significant. This was not an issue for comparisons between 2006 and 2007, which were based on different samples. Therefore, statistical tests of differences from 2006 to 2007 were conducted separately for the core-only and CPN estimates.

Tables B.9 through B.11 present trends in drug use prevalence between 2006 and 2007 for stimulants, sedatives, any psychotherapeutic drug, hallucinogens, illicit drugs, and illicit drugs other than marijuana based on different estimation procedures. With few exceptions, the trends between 2006 and 2007 were the same regardless of whether additional noncore drug measures were included in the estimates. In each year, the CPN estimates that included additional drug measures each year were shifted upward relative to the core-only or CPN estimates that included noncore methamphetamine data (but not other noncore data). Nevertheless, the overall conclusions about changes in prevalence from 2006 to 2007 would be the same for the CPN and core-only estimates for most measures.

For example, the prevalence of past year hallucinogen use among females declined significantly from 1.26 percent in 2006 to 1.00 percent in 2007 based only on core hallucinogen data (Table B.10). The CPN estimates of past year hallucinogen use among females that took into account data on past year use of ketamine, tryptamines, and *Salvia divinorum*, though higher than the core-only estimates in each year, also showed a significant decline, from 1.34 percent in 2006 to 1.15 percent in 2007. Similarly, estimates of lifetime, past year, and past month nonmedical use of sedatives did not change significantly between 2006 and 2007 for persons aged 12 or older, by age group, or by gender, regardless of whether estimates were based only on core data or based on CPN data that included Ambien<sup>®</sup> (Table B.9).

However, inclusion of data on nonmedical use of Adderall<sup>®</sup> affected the trends in estimated nonmedical use of stimulants compared with the trends that were based on CPN data including methamphetamine but not including Adderall<sup>®</sup>. As shown in Table B.9, the prevalence of nonmedical stimulant use among young adults aged 18 to 25 declined significantly between 2006 and 2007 for all three time periods based on the CPN estimates that included methamphetamine but not Adderall<sup>®</sup>. For this age group, however, none of the CPN estimates that included Adderall<sup>®</sup> was significantly different between 2006 and 2007. In addition, the past year and past month prevalences of nonmedical stimulant use for males declined significantly between 2006 and 2007 for the CPN measures that included only the noncore methamphetamine data in addition to the core data. The corresponding CPN measures that included both methamphetamine and Adderall<sup>®</sup> in addition to core data did not show these same statistically significant declines for males. Additional analysis indicated that the prevalence of nonmedical Adderall<sup>®</sup> use in the lifetime, past year, and past month did not change significantly between 2006 and 2007 for persons aged 12 or older or by age group and gender (data not shown). The

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<sup>15</sup> In the case of stimulants, no tests were conducted between the CPN estimates that included noncore methamphetamine but not Adderall<sup>®</sup> data and the CPN estimates that included noncore data for both methamphetamine and Adderall<sup>®</sup>. For psychotherapeutics, no tests were conducted between the CPN estimates that included noncore methamphetamine data but data for Adderall<sup>®</sup> and Ambien<sup>®</sup> versus the CPN estimates that included noncore data for methamphetamine, Adderall<sup>®</sup>, and Ambien<sup>®</sup>.

stability of the prevalences for Adderall<sup>®</sup> appears to have driven the trends for young adults and males to show no significant changes between 2006 and 2007 when Adderall<sup>®</sup>, methamphetamine, and nonmedical use of prescription stimulants all were taken into account.

In addition, the prevalence of use of illicit drugs other than marijuana declined significantly between 2006 and 2007 for the lifetime and past year periods among youths aged 12 to 17 based on only core drug data (Table B.11). However, the changes among youths were not significant between 2006 and 2007 for corresponding estimates that included data from all of the noncore drugs.

#### **B.4.8 Revised Income Questions**

In the 2006 NSDUH, 3,847 (5.7 percent) of the sample of 67,802 respondents and in 2007, 3,262 (4.8 percent) of the 67,870 respondents received a new reduced set of income questions designed to decrease the burden on respondents. Analyses were conducted to assess if the new questions had an effect on response variables representing personal income, family<sup>16</sup> income, and government assistance, relative to the old questions.

In the original income module, 10 source-of-income variables were included: Social Security, Supplemental Security Income, welfare cash assistance, welfare noncash assistance, wages, food stamps, child support, interest/investment income, other income, and the number of months receiving welfare. If a household contained other family members, then separate questions were asked to ascertain personal-level responses and other-family-level responses. These responses then were combined to create family-level responses.

The new set of income questions included only 6 of the 10 source-of-income variables; questions covering Social Security, child support, interest/investment income, and other income were omitted. In addition, separate questions to ascertain personal-level and other-family-level responses were no longer asked; all questions were asked at the family level only.

In both sets of income questions, personal and family-level questions were asked about actual annual income received at two levels of refinement.<sup>17</sup>

The respondents receiving the new income questions in 2006 consisted of two groups: (1) 2,050 were drawn from the 16,602 respondents in the first quarter, and (2) 1,797 were drawn from the 3,634 respondents who were assigned to a reliability study conducted within the main survey in the second, third, and fourth quarters. One difference between these two groups was the within-household sampling algorithm used to select respondents. In the main survey, respondents were selected according to an algorithm that allowed selection of 0, 1, or 2 persons in all households, but in the reliability study, respondents were restricted to those households in which only 1 person was selected.

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<sup>16</sup> Family is defined as any related member in the household, including unmarried and same-sex partners. It excludes roommates, boarders, and other nonrelatives.

<sup>17</sup> At the coarser level, the question was designed to ascertain whether annual income was less than \$20,000. At the finer level, the question was designed to ascertain annual income in increments of \$1,000 up to \$20,000; increments of \$5,000 up to \$100,000; and \$100,000 or more.

An initial analysis was done to see whether the two groups needed to be analyzed in combination or separately. Using data from the 2004 NSDUH, it was shown that the two groups differed not only in the number of persons selected, but also in the number of persons eligible within a household. In the 2004 NSDUH, households with only one person eligible made up 8.7 percent of all households, but that percentage increased to 23.5 percent among households in which only one person was selected. Analyses of the 2004 survey on income and poverty variables, government assistance variables, and health insurance variables suggested that with some exceptions, the number selected within a household did not have much impact on the variables in question. However, these variables were greatly affected by whether one or more than one person in the household was eligible. Because the selection algorithm in the 2004 and 2006 NSDUHs is identical, these general conclusions are unlikely to differ in the 2006 NSDUH. Therefore, subsequent analyses dealing with the new income questions in the 2006 NSDUH needed to take into account that (1) household composition (in terms of number eligible) was likely to differ between the two groups of respondents, and (2) household composition was likely to have an effect on the income and related response variables of interest.

Analyses were conducted on the 2006 data to measure whether the new questions, relative to the old questions, had an effect on response variables representing personal income, family income, and government assistance. Results of the analyses suggested that the new income questions did not affect the reporting of personal income, family income, or government assistance response variables (except Supplemental Security Income). Based on a more specific follow-up analysis of the Supplemental Security Income variable, it was determined that the omission of the Supplemental Security Income items in one of the 2006 samples may have caused some respondents to confuse Supplemental Security Income with Social Security. Therefore, a decision was made to use another split sample in 2007 to compare the traditional 10 source-of-income set of questions with a subset of 7 source-of-income items that included the Social Security item and the 2006 subset of 6 source-of-income variables. This revised module with seven source-of-income variables was fully implemented in the 2008 survey.

Simulation analyses were conducted on the 2005 data to measure the potential impact on imputation modeling procedures and imputation-revised estimates due to the new income questions. The simulation analyses indicated that the impact on imputation modeling procedures would be small and the impact on imputation-revised estimates would be negligible.

Finally, an analysis of the audit trail timing data from 2006 indicated that the mean time for all respondents to complete the income questions was reduced from 4.7 minutes for the old module to 3.7 minutes for the new module, and the median time was reduced from 4.2 to 3.2 minutes. Thus, the new income questions save about 1 minute of interview time in the 2006 and future NSDUHs. For further details, refer to the 2006 NSDUH's new income questions analysis section (Aldworth, Copello, Heller, Liu, & Robbins, 2007b) included in the *2006 NSDUH Methodological Resource Book* (RTI International, 2008).

**Table B.1 Demographic and Geographic Domains Forced to Match Their Respective U.S. Census Bureau Population Estimates through the Weight Calibration Process, 2007**

MAIN EFFECTS	TWO-WAY INTERACTIONS
<p><b>Age Group</b>            12-17            18-25            26-34            35-49            50-64            65 or Older            All Combinations of Groups Listed Above<sup>1</sup></p> <p><b>Gender</b>            Male            Female</p> <p><b>Hispanic Origin</b>            Hispanic or Latino            Not Hispanic or Latino</p> <p><b>Race</b>            White            Black or African American</p> <p><b>Geographic Region</b>            Northeast            Midwest            South            West</p> <p><b>Geographic Division</b>            New England            Middle Atlantic            East North Central            West North Central            South Atlantic            East South Central            West South Central            Mountain            Pacific</p>	<p><b>Age Group x Gender</b>            (e.g., Males Aged 12 to 17)</p> <p><b>Age Group x Hispanic Origin</b>            (e.g., Hispanics or Latinos Aged 18 to 25)</p> <p><b>Age Group x Race</b>            (e.g., Whites Aged 26 or Older)</p> <p><b>Age Group x Geographic Region</b>            (e.g., Persons Aged 12 to 25 in the Northeast)</p> <p><b>Age Group x Geographic Division</b>            (e.g., Persons Aged 65 or Older in New England)</p> <p><b>Gender x Hispanic Origin</b>            (e.g., Not Hispanic or Latino Males)</p> <p><b>Hispanic Origin x Race</b>            (e.g., Not Hispanic or Latino Whites)</p>

<sup>1</sup> Combinations of the age groups (including but not limited to 12 or older, 18 or older, 26 or older, 35 or older, and 50 or older) also were forced to match their respective U.S. Census Bureau population estimates through the weight calibration process.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2007.

**Table B.2 Summary of 2007 NSDUH Suppression Rules**

Estimate	Suppress if:
Prevalence Rate, $\hat{p}$ , with Nominal Sample Size, $n$ , and Design Effect, $deff$	<p>(1) The estimated prevalence rate, <math>\hat{p}</math>, is <math>&lt; .00005</math> or <math>\geq .99995</math>, or</p> <p>(2) <math>\frac{SE(\hat{p}) / \hat{p}}{-\ln(\hat{p})} &gt; .175</math> when <math>\hat{p} \leq .5</math>, or</p> <p><math>\frac{SE(\hat{p}) / (1 - \hat{p})}{-\ln(1 - \hat{p})} &gt; .175</math> when <math>\hat{p} &gt; .5</math>, or</p> <p>(3) Effective <math>n &lt; 68</math>, where Effective <math>n = \frac{n}{deff}</math> or</p> <p>(4) <math>n &lt; 100</math>.</p> <p>Note: The rounding portion of this suppression rule for prevalence rates will produce some estimates that round at one decimal place to 0.0 or 100.0 percent but are not suppressed from the tables.</p>
Estimated Number (Numerator of $\hat{p}$ )	<p>The estimated prevalence rate, <math>\hat{p}</math>, is suppressed.</p> <p>Note: In some instances when <math>\hat{p}</math> is not suppressed, the estimated number may appear as a 0 in the tables. This means that the estimate is greater than 0 but less than 500 (estimated numbers are shown in thousands).</p>
Mean Age at First Use, $\bar{x}$ , with Nominal Sample Size, $n$	<p>(1) <math>RSE(\bar{x}) &gt; .5</math>, or</p> <p>(2) <math>n &lt; 10</math>.</p>

deff = design effect; RSE = relative standard error; SE = standard error.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2007.



**Table B.3 Weighted Percentages and Sample Sizes for 2006 and 2007 NSDUHs, by Screening Result Code**

SCREENING RESULT CODE	SAMPLE SIZE		WEIGHTED PERCENTAGE	
	2006	2007	2006	2007
<b>TOTAL SAMPLE</b>	182,459	192,092	100.00	100.00
Ineligible Cases	31,171	33,681	16.87	17.00
Eligible Cases	151,288	158,411	83.13	83.00
<b>INELIGIBLES</b>	31,171	33,681	16.87	17.00
Vacant	17,135	18,585	55.24	55.98
Not a Primary Residence	5,733	6,280	18.50	18.28
Not a Dwelling Unit	2,655	2,595	8.17	7.55
All Military Personnel	314	291	1.06	0.81
Other, Ineligible	5,334	5,930	17.03	17.38
<b>ELIGIBLE CASES</b>	151,288	158,411	83.13	83.00
<b>Screening Complete</b>	137,057	141,487	90.55	89.45
No One Selected	78,641	82,420	51.23	51.33
One Selected	31,398	31,949	20.99	20.46
Two Selected	27,018	27,118	18.33	17.66
<b>Screening Not Complete</b>	14,231	16,924	9.45	10.55
No One Home	2,456	3,213	1.55	1.88
Respondent Unavailable	396	434	0.25	0.25
Physically or Mentally Incompetent	301	319	0.19	0.19
Language Barrier—Hispanic	53	84	0.03	0.05
Language Barrier—Other	360	439	0.25	0.28
Refusal	10,037	11,164	6.76	7.00
Other, Access Denied	543	1,235	0.37	0.87
Other, Eligible	8	9	0.00	0.00
Segment Not Accessible	0	0	0.00	0.00
Screener Not Returned	51	16	0.03	0.01
Fraudulent Case	23	11	0.01	0.01
Electronic Screening Problem	3	0	0.00	0.00

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006 and 2007.

**Table B.4 Weighted Percentages and Sample Sizes for 2006 and 2007 NSDUHs, by Final Interview Code**

FINAL INTERVIEW CODE	PERSONS AGED 12 OR OLDER				PERSONS AGED 12 TO 17				PERSONS AGED 18 OR OLDER			
	Sample Size		Weighted Percentage		Sample Size		Weighted Percentage		Sample Size		Weighted Percentage	
	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007
<b>TOTAL</b>	85,034	85,774	100.00	100.00	26,702	26,191	100.00	100.00	58,332	59,583	100.00	100.00
Interview Complete	67,802	67,870	74.24	73.94	22,912	22,475	85.46	85.35	44,890	45,395	72.95	72.65
No One at Dwelling Unit	1,222	1,565	1.51	1.79	212	242	0.78	0.93	1,010	1,323	1.60	1.89
Respondent Unavailable	1,922	2,111	2.23	2.35	410	403	1.50	1.50	1,512	1,708	2.31	2.45
Break-Off	61	103	0.11	0.16	10	14	0.03	0.05	51	89	0.12	0.17
Physically/Mentally Incompetent	856	839	1.90	1.93	187	178	0.72	0.66	669	661	2.03	2.08
Language Barrier - Hispanic	211	185	0.22	0.21	12	9	0.02	0.07	199	176	0.24	0.22
Language Barrier - Other	437	437	1.21	1.16	35	27	0.15	0.14	402	410	1.33	1.27
Refusal	9,709	9,896	16.84	16.76	755	739	2.72	2.73	8,954	9,157	18.47	18.35
Parental Refusal	2,041	1,985	0.84	0.82	2,041	1,985	8.10	8.06	0	0	0.00	0.00
Other	773	783	0.90	0.88	128	119	0.51	0.52	645	664	0.94	0.92

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006 and 2007.

**Table B.5 Response Rates and Sample Sizes for 2006 and 2007 NSDUHs, by Demographic Characteristics**

Demographic Characteristic	SELECTED PERSONS		COMPLETED INTERVIEWS		WEIGHTED RESPONSE RATE	
	2006	2007	2006	2007	2006	2007
<b>TOTAL</b>	85,034	85,774	67,802	67,870	74.24%	73.94%
<b>AGE IN YEARS</b>						
12-17	26,702	26,191	22,912	22,475	85.46%	85.35%
18-25	27,303	28,085	22,152	22,409	80.96%	79.76%
26 or Older	31,029	31,498	22,738	22,986	71.54%	71.42%
<b>GENDER</b>						
Male	41,833	42,280	32,696	32,802	72.44%	72.06%
Female	43,201	43,494	35,106	35,068	75.92%	75.69%
<b>RACE/ETHNICITY</b>						
Hispanic	11,948	12,501	9,675	10,011	77.37%	76.11%
White	57,292	57,200	45,345	44,870	73.99%	73.29%
Black	9,740	9,660	8,150	8,087	77.94%	79.97%
All Other Races	6,054	6,413	4,632	4,902	63.46%	65.50%
<b>REGION</b>						
Northeast	17,201	17,486	13,499	13,642	71.96%	71.65%
Midwest	23,766	24,150	18,988	19,110	75.39%	74.34%
South	25,848	25,737	20,841	20,683	75.13%	75.75%
West	18,219	18,401	14,474	14,435	73.60%	72.52%
<b>COUNTY TYPE</b>						
Large Metropolitan	38,443	38,758	29,970	29,837	72.35%	72.04%
Small Metropolitan	28,328	28,633	22,917	23,074	76.39%	75.42%
Nonmetropolitan	18,263	18,383	14,915	14,959	76.77%	77.41%

Note: Estimates are based on demographic information obtained from screener data and are not consistent with estimates on demographic characteristics presented in the 2006 and 2007 sets of detailed tables.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006 and 2007.

**Table B.6 Nonmedical Use of Methamphetamine in Lifetime, Past Year, and Past Month, by Demographic Characteristics: Percentages Based on Different Estimation Methods, 2002-2007**

Time Period/ Demographic Characteristic	2002		2003		2004		2005		2006		2007	
	Core <sup>1</sup>	Adjusted Core <sup>2</sup>	Core <sup>1</sup>	Adjusted Core <sup>2</sup>	Core <sup>1</sup>	Adjusted Core <sup>2</sup>	Core <sup>1</sup>	Adjusted Core and Noncore <sup>3</sup>	Core <sup>1</sup>	Core and Noncore <sup>4</sup>	Core <sup>1</sup>	Core and Noncore <sup>4</sup>
<b>LIFETIME</b>	5.27	6.53	5.18	6.37	4.88	6.03	4.26	5.21	4.62	5.77	4.27	5.27
<b>Age</b>												
12-17	1.48	1.68	1.31	1.53	1.19	1.37	1.17	1.26	1.13	1.34	0.72	0.88
18-25	5.66	7.42	5.20	6.91	5.24	6.98	5.18	6.74	4.87	6.42	4.30	5.63
26 or Older	5.72	7.05	5.71	6.94	5.32	6.51	4.52	5.48	5.05	6.26	4.74	5.79
<b>Gender</b>												
Male	6.52	8.05	6.40	7.76	6.00	7.32	5.30	6.36	5.82	7.16	5.19	6.28
Female	4.10	5.12	4.03	5.06	3.82	4.82	3.28	4.12	3.49	4.46	3.41	4.33
<b>PAST YEAR</b>	0.66	0.75	0.55	0.67	0.60	0.75	0.53	0.66	0.60	0.77	0.43	0.54
<b>Age</b>												
12-17	0.91	0.99	0.69	0.74	0.65	0.70	0.67	0.70	0.63	0.73	0.40	0.47
18-25	1.69	1.99	1.59	1.87	1.60	1.92	1.48	1.77	1.29	1.69	0.97	1.23
26 or Older	0.44	0.50	0.35	0.45	0.42	0.55	0.35	0.46	0.48	0.61	0.34	0.43
<b>Gender</b>												
Male	0.76	0.88	0.68	0.83	0.76	0.98	0.63	0.79	0.67	0.87	0.47	0.60
Female	0.56	0.63	0.44	0.53	0.44	0.54	0.44	0.54	0.53	0.67	0.39	0.49
<b>PAST MONTH</b>	0.25	0.29	0.26	0.31	0.24	0.29	0.21	0.26	0.23	0.30	0.18	0.21
<b>Age</b>												
12-17	0.25	0.29	0.28	0.28	0.22	0.23	0.26	0.28	0.18	0.21	0.11	0.13
18-25	0.52	0.59	0.58	0.62	0.58	0.68	0.60	0.69	0.42	0.56	0.32	0.35
26 or Older	0.21	0.24	0.20	0.25	0.19	0.23	0.14	0.18	0.20	0.26	0.17	0.20
<b>Gender</b>												
Male	0.30	0.36	0.35	0.41	0.26	0.34	0.23	0.29	0.28	0.36	0.19	0.23
Female	0.21	0.23	0.17	0.21	0.23	0.25	0.19	0.23	0.18	0.24	0.17	0.20

\*Low precision; no estimate reported.

<sup>1</sup> "Core" estimates are based on responses to questions in the core stimulants module only. The 2007 estimates are directly comparable with the 2002, 2003, 2004, 2005, and 2006 estimates presented here and in prior NSDUH reports.

<sup>2</sup> "Adjusted Core" estimates were generated using available data from the core stimulants module and a Bernoulli stochastic imputation procedure to be comparable with the 2006 and 2007 "Core and Noncore" estimates. See Section B.4.6 in Appendix B of this report for more information on the adjustment procedure.

<sup>3</sup> "Adjusted Core and Noncore" estimates were generated using available data from both the core stimulants module and the noncore special drugs module, and a Bernoulli stochastic imputation procedure to be comparable with the 2006 and 2007 "Core and Noncore" estimates. See Section B.4.6 in Appendix B of this report for more information on the adjustment procedure.

<sup>4</sup> "Core and Noncore" estimates are based on responses to questions in the core stimulants module, as well as responses to additional questions in the noncore special drugs module for respondents who initially did not report methamphetamine use in the core module because they did not consider it to be a prescription drug.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2002, 2003, 2004, 2005, 2006, and 2007.

**Table B.7 Nonmedical Use of Stimulants in Lifetime, Past Year, and Past Month, by Demographic Characteristics: Percentages Based on Different Estimation Methods, 2002-2007**

Time Period/ Demographic Characteristic	2002		2003		2004		2005		2006		2007	
	Core <sup>1</sup>	Adjusted Core <sup>2</sup>	Core <sup>1</sup>	Adjusted Core <sup>2</sup>	Core <sup>1</sup>	Adjusted Core <sup>2</sup>	Core <sup>1</sup>	Adjusted Core and Noncore <sup>3</sup>	Core <sup>1</sup>	Core and Noncore <sup>4</sup>	Core <sup>1</sup>	Core and Noncore <sup>4</sup>
<b>LIFETIME</b>	8.96	9.99	8.75	9.68	8.31	9.27	7.84	8.63	8.18	9.13	7.93	8.74
<b>Age</b>												
12-17	4.34	4.49	4.03	4.19	3.44	3.59	3.37	3.43	3.46	3.66	2.76	2.90
18-25	10.76	12.24	10.78	12.21	10.64	12.09	11.07	12.34	10.71	11.98	9.89	10.92
26 or Older	9.29	10.36	9.05	9.99	8.57	9.56	7.89	8.69	8.37	9.38	8.27	9.14
<b>Gender</b>												
Male	10.30	11.53	9.80	10.88	9.62	10.75	8.89	9.75	9.50	10.61	9.05	9.95
Female	7.71	8.55	7.76	8.56	7.07	7.88	6.86	7.57	6.93	7.74	6.86	7.59
<b>PAST YEAR</b>	1.35	1.44	1.16	1.28	1.21	1.35	1.14	1.27	1.38	1.54	1.11	1.21
<b>Age</b>												
12-17	2.62	2.69	2.27	2.31	1.97	2.01	1.98	2.00	2.01	2.16	1.61	1.65
18-25	3.69	3.98	3.51	3.77	3.67	3.98	3.56	3.82	3.85	4.20	3.22	3.47
26 or Older	0.77	0.83	0.59	0.69	0.68	0.80	0.60	0.72	0.86	0.99	0.67	0.76
<b>Gender</b>												
Male	1.46	1.57	1.22	1.37	1.34	1.55	1.17	1.35	1.44	1.63	1.12	1.24
Female	1.25	1.31	1.10	1.19	1.09	1.17	1.11	1.19	1.32	1.45	1.10	1.18
<b>PAST MONTH</b>	0.52	0.55	0.50	0.55	0.49	0.55	0.44	0.49	0.48	0.56	0.39	0.42
<b>Age</b>												
12-17	0.81	0.84	0.88	0.89	0.71	0.71	0.67	0.68	0.63	0.67	0.48	0.50
18-25	1.24	1.32	1.26	1.30	1.39	1.49	1.34	1.44	1.27	1.39	1.02	1.08
26 or Older	0.35	0.38	0.32	0.37	0.31	0.36	0.25	0.30	0.33	0.40	0.27	0.30
<b>Gender</b>												
Male	0.57	0.63	0.55	0.61	0.52	0.60	0.44	0.50	0.50	0.60	0.35	0.39
Female	0.47	0.48	0.45	0.49	0.47	0.49	0.44	0.47	0.47	0.53	0.42	0.45

\*Low precision; no estimate reported.

<sup>1</sup> "Core" estimates are based on responses to questions in the core stimulants module only. The 2007 estimates are directly comparable with the 2002, 2003, 2004, 2005, and 2006 estimates presented here and in prior NSDUH reports.

<sup>2</sup> "Adjusted Core" estimates were generated using available data from the core stimulants module and a Bernoulli stochastic imputation procedure to be comparable with the 2006 and 2007 "Core and Noncore" estimates. See Section B.4.6 in Appendix B of this report for more information on the adjustment procedure.

<sup>3</sup> "Adjusted Core and Noncore" estimates were generated using available data from both the core stimulants module and the noncore special drugs module, and a Bernoulli stochastic imputation procedure to be comparable with the 2006 and 2007 "Core and Noncore" estimates. See Section B.4.6 in Appendix B of this report for more information on the adjustment procedure.

<sup>4</sup> "Core and Noncore" estimates are based on responses to questions in the core stimulants module, as well as responses to additional questions in the noncore special drugs module for respondents who initially did not report methamphetamine use in the core module because they did not consider it to be a prescription drug.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2002, 2003, 2004, 2005, 2006, and 2007.

**Table B.8 Nonmedical Use of Psychotherapeutics in Lifetime, Past Year, and Past Month, by Demographic Characteristics: Percentages Based on Different Estimation Methods, 2002-2007**

Time Period/ Demographic Characteristic	2002		2003		2004		2005		2006		2007	
	Core <sup>1</sup>	Adjusted Core <sup>2</sup>	Core <sup>1</sup>	Adjusted Core <sup>2</sup>	Core <sup>1</sup>	Adjusted Core <sup>2</sup>	Core <sup>1</sup>	Adjusted Core and Noncore <sup>3</sup>	Core <sup>1</sup>	Core and Noncore <sup>4</sup>	Core <sup>1</sup>	Core and Noncore <sup>4</sup>
<b>LIFETIME</b>	19.80	20.40	20.15	20.62	19.96	20.44	20.03	20.38	20.26	20.72	19.99	20.34
<b>Age</b>												
12-17	13.69	13.74	13.41	13.49	13.46	13.50	11.89	11.91	12.44	12.49	11.63	11.68
18-25	27.68	28.29	29.03	29.50	29.17	29.71	30.35	30.75	30.30	30.70	29.58	29.91
26 or Older	19.28	19.95	19.52	20.04	19.24	19.76	19.33	19.72	19.57	20.09	19.45	19.84
<b>Gender</b>												
Male	21.45	22.06	21.61	22.08	21.89	22.40	21.87	22.29	22.72	23.22	21.64	21.99
Female	18.25	18.84	18.78	19.24	18.15	18.60	18.29	18.59	17.94	18.36	18.45	18.79
<b>PAST YEAR</b>	6.24	6.29	6.30	6.38	6.09	6.17	6.24	6.31	6.62	6.70	6.51	6.57
<b>Age</b>												
12-17	9.22	9.23	9.16	9.18	8.82	8.83	8.30	8.29	8.53	8.59	8.04	8.06
18-25	14.22	14.35	14.49	14.61	14.76	14.93	15.04	15.13	15.47	15.64	14.90	15.01
26 or Older	4.45	4.49	4.48	4.55	4.19	4.27	4.41	4.49	4.82	4.89	4.86	4.92
<b>Gender</b>												
Male	6.58	6.64	6.57	6.67	6.40	6.52	6.57	6.67	7.35	7.46	7.16	7.21
Female	5.93	5.97	6.05	6.11	5.79	5.85	5.93	5.97	5.93	5.98	5.89	5.96
<b>PAST MONTH</b>	2.64	2.67	2.67	2.71	2.50	2.54	2.63	2.67	2.84	2.88	2.75	2.78
<b>Age</b>												
12-17	3.96	3.98	3.99	3.99	3.62	3.62	3.31	3.31	3.29	3.32	3.26	3.28
18-25	5.42	5.47	6.03	6.06	6.09	6.14	6.26	6.30	6.38	6.46	5.94	5.96
26 or Older	1.98	2.01	1.89	1.95	1.71	1.76	1.91	1.95	2.16	2.20	2.14	2.17
<b>Gender</b>												
Male	2.72	2.77	2.72	2.78	2.59	2.66	2.77	2.82	3.23	3.29	3.21	3.25
Female	2.57	2.58	2.62	2.65	2.41	2.42	2.51	2.53	2.48	2.51	2.32	2.34

\*Low precision; no estimate reported.

NOTE: Nonmedical use of prescription-type psychotherapeutics includes the nonmedical use of pain relievers, tranquilizers, stimulants, or sedatives and does not include over-the-counter drugs.

<sup>1</sup> "Core" estimates are based on responses to questions in the core prescription-type psychotherapeutic modules only. The 2007 estimates are directly comparable with the 2002, 2003, 2004, 2005, and 2006 estimates presented here and in prior NSDUH reports.

<sup>2</sup> "Adjusted Core" estimates were generated using available data from the core prescription-type psychotherapeutic modules and a Bernoulli stochastic imputation procedure to be comparable with the 2006 and 2007 "Core and Noncore" estimates. See Section B.4.6 in Appendix B of this report for more information on the adjustment procedure.

<sup>3</sup> "Adjusted Core and Noncore" estimates were generated using available data from both the core prescription-type psychotherapeutic modules and the noncore special drugs module, and a Bernoulli stochastic imputation procedure to be comparable with the 2006 and 2007 "Core and Noncore" estimates. See Section B.4.6 in Appendix B of this report for more information on the adjustment procedure.

<sup>4</sup> "Core and Noncore" estimates are based on responses to questions in the core prescription-type psychotherapeutic modules and responses to additional questions in the noncore special drugs module for respondents who initially did not report methamphetamine use in the core stimulants module because they did not consider it to be a prescription drug.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2002, 2003, 2004, 2005, 2006, and 2007.

**Table B.9 Nonmedical Use of Sedatives and Stimulants in the Lifetime, Past Year, and Past Month among Persons Aged 12 or Older Based on Different Estimation Methods, by Demographic Characteristics: Percentages, 2006 and 2007**

Time Period/ Demographic Characteristic	NONMEDICAL USE OF SEDATIVES				NONMEDICAL USE OF STIMULANTS			
	Core Data Plus Noncore Data <sup>1</sup>		Core Data Only		Core Data Plus Noncore Methamphetamine and Adderall <sup>®</sup> Data <sup>2</sup>		Core Data Plus Noncore Methamphetamine Data <sup>3</sup>	
	2006	2007	2006	2007	2006	2007	2006	2007
<b>LIFETIME</b>	4.86	4.99	3.59	3.39	9.81	9.50	9.13	8.74
<b>Age</b>								
12-17	1.85	1.77	0.88	0.85	5.04 <sup>b</sup>	4.30	3.66 <sup>b</sup>	2.90
18-25	4.54	4.40	1.86	1.78	15.12	14.46	11.98 <sup>a</sup>	10.92
26 or Older	5.33	5.52	4.25	4.00	9.53	9.33	9.38	9.14
<b>Gender</b>								
Male	5.69	5.49	4.42	3.95	11.42	10.89	10.61	9.95
Female	4.08	4.53	2.80	2.86	8.29	8.19	7.74	7.59
<b>PAST YEAR</b>	1.07	1.08	0.38	0.35	1.95 <sup>b</sup>	1.64	1.54 <sup>b</sup>	1.21
<b>Age</b>								
12-17	1.01	0.94	0.43	0.44	3.09 <sup>a</sup>	2.59	2.16 <sup>b</sup>	1.65
18-25	1.93	1.79	0.57	0.53	5.98	5.44	4.20 <sup>b</sup>	3.47
26 or Older	0.93	0.98	0.34	0.31	1.09 <sup>a</sup>	0.86	0.99 <sup>a</sup>	0.76
<b>Gender</b>								
Male	1.07	1.14	0.34	0.40	2.08	1.80	1.63 <sup>b</sup>	1.24
Female	1.07	1.02	0.41	0.30	1.82 <sup>a</sup>	1.49	1.45 <sup>a</sup>	1.18
<b>PAST MONTH</b>	0.32	0.27	0.16	0.14	0.68 <sup>a</sup>	0.56	0.56 <sup>a</sup>	0.42
<b>Age</b>								
12-17	0.34	0.25	0.18	0.14	0.94	0.87	0.67	0.50
18-25	0.40	0.52	0.17	0.22	1.90	1.69	1.39 <sup>a</sup>	1.08
26 or Older	0.31	0.23	0.15	0.13	0.43	0.32	0.40	0.30
<b>Gender</b>								
Male	0.34	0.26	0.11	0.16	0.73	0.56	0.60 <sup>a</sup>	0.39
Female	0.31	0.28	0.20	0.12	0.63	0.55	0.53	0.45

\*Low precision; no estimate reported.

<sup>a</sup> Difference between this estimate and the corresponding 2007 estimate is statistically significant at the .05 level.

<sup>b</sup> Difference between this estimate and the corresponding 2007 estimate is statistically significant at the .01 level.

<sup>1</sup> Data include persons who reported nonmedical use of Ambien<sup>®</sup> in the noncore special drugs module and those who reported nonmedical sedative use in the core drug module.

<sup>2</sup> Data include persons who reported either of the following in the noncore special drugs module: the use of methamphetamine (and who did not think of methamphetamine as a prescription drug) or nonmedical use of Adderall<sup>®</sup>. Data also include persons who reported nonmedical stimulant use in the core drug module.

<sup>3</sup> Data include persons who reported the use of methamphetamine (and who did not think of methamphetamine as a prescription drug) in the noncore special drugs module. Data also include persons who reported nonmedical stimulant use in the core drug module.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006 and 2007.

**Table B.10 Nonmedical Use of Prescription-Type Psychotherapeutics and Use of Hallucinogens in the Lifetime, Past Year, and Past Month among Persons Aged 12 or Older Based on Different Estimation Methods, by Demographic Characteristics: Percentages, 2006 and 2007**

Time Period/ Demographic Characteristic	NONMEDICAL USE OF PSYCHOTHERAPEUTICS <sup>1</sup>				HALLUCINOGENS			
	Core Data Plus Noncore Methamphetamine, Adderall <sup>®</sup> , and Ambien <sup>®</sup> Data <sup>2</sup>		Core Data Plus Noncore Methamphetamine Data <sup>3</sup>		Core Data Plus Noncore Data <sup>4</sup>		Core Data Only	
	2006	2007	2006	2007	2006	2007	2006	2007
<b>LIFETIME</b>	21.33	21.11	20.72	20.34	14.58	14.12	14.34	13.80
<b>Age</b>								
12-17	13.29	12.56	12.49	11.68	4.31	4.17	3.88	3.55
18-25	32.22	31.40	30.70	29.91	20.97	20.47	20.20	19.21
26 or Older	20.52	20.48	20.09	19.84	14.85	14.35	14.73	14.24
<b>Gender</b>								
Male	23.83	22.71	23.22 <sup>a</sup>	21.99	17.90	17.63	17.54	17.15
Female	18.97	19.61	18.36	18.79	11.44	10.82	11.33	10.65
<b>PAST YEAR</b>	7.27	7.18	6.70	6.57	1.78	1.78	1.61	1.52
<b>Age</b>								
12-17	9.22	8.68	8.59	8.06	2.84	2.90	2.56	2.48
18-25	16.89	16.40	15.64	15.01	7.37	7.36	6.56	6.26
26 or Older	5.33	5.39	4.89	4.92	0.67	0.67	0.62	0.57
<b>Gender</b>								
Male	8.05	7.90	7.46	7.21	2.25	2.45	1.98	2.06
Female	6.54	6.49	5.98	5.96	1.34 <sup>a</sup>	1.15	1.26 <sup>b</sup>	1.00
<b>PAST MONTH</b>	3.08	2.96	2.88	2.78	0.47	0.47	0.41	0.40
<b>Age</b>								
12-17	3.56	3.59	3.32	3.28	0.82	0.83	0.71	0.69
18-25	6.95	6.47	6.46	5.96	1.98	1.77	1.72	1.45
26 or Older	2.34	2.27	2.20	2.17	0.16	0.19	0.14	0.18
<b>Gender</b>								
Male	3.53	3.41	3.29	3.25	0.58	0.66	0.48	0.57
Female	2.66	2.53	2.51	2.34	0.37	0.28	0.34	0.24

\*Low precision; no estimate reported.

<sup>a</sup> Difference between this estimate and the corresponding 2007 estimate is statistically significant at the .05 level.

<sup>b</sup> Difference between this estimate and the corresponding 2007 estimate is statistically significant at the .01 level.

<sup>1</sup> Nonmedical use of prescription-type psychotherapeutics includes the nonmedical use of pain relievers, tranquilizers, stimulants (including methamphetamine), or sedatives and does not include over-the-counter drugs.

<sup>2</sup> Data include persons who reported any of the following in the noncore special drugs module: the use of methamphetamine (and who did not think of methamphetamine as a prescription drug) or nonmedical use of Adderall<sup>®</sup> or Ambien<sup>®</sup>. Data also include persons who reported nonmedical use of prescription-type psychotherapeutic drugs in the core drug module.

<sup>3</sup> Data include persons who reported the use of methamphetamine (and who did not think of methamphetamine as a prescription drug) in the noncore special drugs module. Data also include persons who reported nonmedical use of prescription-type psychotherapeutic drugs in the core drug module.

<sup>4</sup> Data include persons who reported the use of any of the following in the noncore special drugs module: ketamine; any of the three tryptamine hallucinogens alpha-methyltryptamine (AMT), dimethyltryptamine (DMT), or 5-methoxy-diisopropyltryptamine (5-MeO-DIPT, "Foxy"); or *Salvia divinorum*. Data also include persons who reported hallucinogen use in the core drug module.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006 and 2007.



**Table B.11 Illicit Drug Use and Illicit Drug Use Other Than Marijuana in the Lifetime, Past Year, and Past Month among Persons Aged 12 or Older Based on Different Estimation Methods, by Demographic Characteristics: Percentages, 2006 and 2007**

Time Period/ Demographic Characteristic	ILLCIT DRUGS				ILLCIT DRUGS OTHER THAN MARIJUANA			
	Core Data Plus Noncore Data <sup>1</sup>		Core Data Only		Core Data Plus Noncore Data <sup>1</sup>		Core Data Only	
	2006	2007	2006	2007	2006	2007	2006	2007
<b>LIFETIME</b>	45.75	46.44	45.43	46.11	30.25	30.33	29.63	29.65
<b>Age</b>								
12-17	28.00 <sup>a</sup>	26.67	27.60 <sup>a</sup>	26.23	20.18	19.25	19.49 <sup>a</sup>	18.37
18-25	59.48 <sup>a</sup>	57.89	58.98 <sup>a</sup>	57.42	40.85	39.75	39.52	38.36
26 or Older	45.76 <sup>a</sup>	47.09	45.48	46.80	29.76	30.18	29.28	29.65
<b>Gender</b>								
Male	50.59	50.92	50.29	50.65	34.07	34.07	33.47	33.46
Female	41.19	42.21	40.86	41.83	26.65	26.81	26.02	26.07
<b>PAST YEAR</b>	14.99	14.87	14.54	14.40	9.27	9.22	8.64	8.53
<b>Age</b>								
12-17	19.95	19.16	19.58	18.72	13.01	12.27	12.39 <sup>a</sup>	11.55
18-25	35.14	33.92	34.37	33.19	21.69	21.00	20.24	19.46
26 or Older	10.81	11.02	10.41	10.59	6.60	6.78	6.11	6.25
<b>Gender</b>								
Male	17.84	17.89	17.40	17.38	10.67	10.68	10.01	9.87
Female	12.32	12.02	11.85	11.59	7.94	7.84	7.35	7.27
<b>PAST MONTH</b>	8.44	8.16	8.27	8.01	4.13	3.95	3.91	3.74
<b>Age</b>								
12-17	9.96	9.81	9.77	9.54	5.23	5.05	4.93	4.68
18-25	20.16	20.11	19.80	19.75	9.46 <sup>a</sup>	8.72	8.87 <sup>a</sup>	8.07
26 or Older	6.19	5.88	6.06	5.78	3.06	2.98	2.91	2.87
<b>Gender</b>								
Male	10.69	10.53	10.51	10.40	4.96	4.81	4.69	4.60
Female	6.31	5.92	6.17	5.76	3.35	3.14	3.17	2.93

\*Low precision; no estimate reported.

NOTE: Illicit Drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically. Illicit Drugs Other Than Marijuana include cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically.

<sup>a</sup> Difference between this estimate and the corresponding 2007 estimate is statistically significant at the .05 level.

<sup>b</sup> Difference between this estimate and the corresponding 2007 estimate is statistically significant at the .01 level.

<sup>1</sup> Data include persons who reported any of the following in the noncore special drugs module: the use of methamphetamine (and who did not think of methamphetamine as a prescription drug); gamma hydroxybutyrate (GHB); ketamine; any of the three tryptamine hallucinogens alpha-methyltryptamine (AMT), dimethyltryptamine (DMT), or 5-methoxy-diisopropyltryptamine (5-MeO-DIPT, "Foxy"); *Salvia divinorum*; or the nonmedical use of Adderall<sup>®</sup> or Ambien<sup>®</sup>. Data also include persons who reported use of illicit drugs or illicit drugs other than marijuana in the core drug module.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006 and 2007.



# Appendix C: Key Definitions, 2007

This appendix provides definitions for many of the measures and terms used in this report on the 2007 National Survey on Drug Use and Health (NSDUH). Where relevant, cross-references also are provided. For some key terms, specific question wording, including "feeder questions" that precede the question(s), is provided for clarity.

## **Abuse**

Abuse of a substance was defined as meeting one or more of the four criteria for abuse included in the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV) (American Psychiatric Association [APA], 1994) and if the definition for dependence was not met for that substance. Additional criteria for alcohol and marijuana abuse include the use of these drugs on 6 or more days in the past 12 months. These questions have been included in the survey since 2000. See Section B.4.3 of Appendix B for additional details.

SEE: "Dependence," "Need for Illicit Drug or Alcohol Use Treatment," and "Prevalence."

## **Adult Education**

SEE: "Education."

## **Age**

Age of the respondent was defined as "age at time of interview." The interview program calculated the respondent's age from the date of birth and interview date. The interview program prompts the interviewer to confirm the respondent's age after it has been calculated.

## **Alcohol Use**

Measures of use of alcohol in the respondent's lifetime, the past year, and the past month were developed from responses to the question about recency of use: "How long has it been since you last drank an alcoholic beverage?"

Feeder question: "The next questions are about alcoholic beverages, such as, beer, wine, brandy, and mixed drinks. Listed on the next screen are examples of the types of beverages we are interested in. Please review this list carefully before you answer these questions. These questions are about drinks of alcoholic beverages. Throughout these questions, by a 'drink,' we mean 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. We are not asking about times when you only had a sip or two from a drink. Have you ever, even once, had a drink of any type of alcoholic beverage? Please do not include times when you only had a sip or two from a drink."

SEE: "Binge Use of Alcohol," "Current Use," "Heavy Use of Alcohol," "Lifetime Use," "Past Month Use," "Past Year Use," "Prevalence," and "Recency of Use."

**Alcohol Use in  
Combination with  
Illicit Drug Use**

Respondents aged 12 to 20 who reported drinking at least one alcoholic beverage within the past 30 days were asked what other drugs were used while they were drinking or were used within a couple of hours of drinking. Respondents were presented a list of 10 possible drugs, depending on which drugs they previously reported using in the past month. The 10 possible drugs were marijuana or hashish, cocaine or crack, heroin, hallucinogens, inhalants, prescription pain relievers, prescription tranquilizers, prescription stimulants, methamphetamine, and prescription sedatives. A respondent was defined as having Alcohol Use in Combination with Illicit Drug Use if he or she reported using any 1 of the 10 drugs above with his or her last alcohol use or within a couple of hours of drinking.

NOTE: Respondents were defined as having used methamphetamine with their most recent use of alcohol in the past month if they reported use in the core stimulants module or if they reported use in the noncore special drugs module and said they had not reported methamphetamine use in the core module because they did not think of it as a prescription drug.

SEE: "Alcohol Use," "Core," "Illicit Drugs," and "Noncore."

**American Indian or  
Alaska Native**

American Indian or Alaska Native only, not of Hispanic, Latino, or Spanish origin (including North American, Central American, or South American Indian); does not include respondents reporting two or more races. (Respondents reporting that they were American Indians or Alaska Natives and of Hispanic, Latino, or Spanish origin were classified as Hispanic.)

SEE: "Hispanic" and "Race/Ethnicity."

**Asian**

Asian only, not of Hispanic, Latino, or Spanish origin; does not include respondents reporting two or more races. (Respondents reporting that they were Asian and of Hispanic, Latino, or Spanish origin were classified as Hispanic.) Specific Asian groups that were asked about were Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese, and "Other Asian."

SEE: "Hispanic" and "Race/Ethnicity."

**Baby Boom Cohort**

The baby boom cohort refers to persons born in the United States after World War II between 1946 and 1964 (Light, 1988).

SEE: "Age."

**Binge Use of Alcohol**

Binge use of alcohol was 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 past 30 days.

Feeder question: "How long has it been since you last drank an alcoholic beverage?"

SEE: "Alcohol Use" and "Heavy Use of Alcohol."

**Black**

Black/African American only, not of Hispanic, Latino, or Spanish origin; does not include respondents reporting two or more races. (Respondents reporting that they were black or African American and of Hispanic, Latino, or Spanish origin were classified as Hispanic.)

SEE: "Hispanic" and "Race/Ethnicity."

**Blunts**

Blunts were defined as cigars with marijuana in them. Measures of use of blunts in the respondent's lifetime, the past year, and the past month were developed from responses to the question about recency of use: "How long has it been since you last smoked part or all of a cigar with marijuana in it?"

Feeder question: "Sometimes people take tobacco out of a cigar and replace it with marijuana. This is sometimes called a 'blunt.' Have you ever smoked part or all of a cigar with marijuana in it?"

SEE: "Cigar Use," "Current Use," "Lifetime Use," "Marijuana Use," "Past Month Use," "Past Year Use," "Prevalence," "Recency of Use," and "Tobacco Product Use."

**Cash Assistance**

Cash assistance was defined as receipt of direct monetary payments due to low income, such as Temporary Assistance for Needy Families (TANF), welfare, or other public assistance. In 2006 and 2007, a majority of respondents received two questions regarding cash assistance: (a) their personal receipt of cash assistance, and (b) whether another family member living in the household received cash assistance. The remaining respondents

received a reduced set of income questions, including a single question about whether the respondent or another family member in the household received cash assistance. See Section B.4.8 of Appendix B for additional details.

NOTE: For youths and those respondents who were unable to respond to the insurance or income questions, proxy responses were accepted from a household member identified as being better able to give the correct information about insurance and income.

SEE: "Welfare Assistance."

### **Cigar Use**

Measures of use of cigars (including cigarillos and little cigars) in the respondent's lifetime, the past year, and the past month were developed from responses to the questions about cigar use in the past 30 days and the recency of use (if not in the past 30 days): "Now think about the past 30 days—that is, from [DATEFILL] up to and including today. During the past 30 days, have you smoked part or all of any type of cigar?" and "How long has it been since you last smoked part or all of any type of cigar?" Responses to questions about use of cigars with marijuana in them (blunts) were not included in these measures.

Feeder question: "The next questions are about smoking cigars. By cigars we mean any kind, including big cigars, cigarillos, and even little cigars that look like cigarettes. Have you ever smoked part or all of any type of cigar?"

SEE: "Blunts," "Cigarette Use," "Current Use," "Lifetime Use," "Past Month Use," "Past Year Use," "Prevalence," "Recency of Use," "Smokeless Tobacco Use," and "Tobacco Product Use."

### **Cigarette Use**

Measures of use of cigarettes in the respondent's lifetime, the past year, and the past month were developed from responses to the questions about cigarette use in the past 30 days and the recency of use (if not in the past 30 days): "Now think about the past 30 days—that is, from [DATEFILL] up to and including today. During the past 30 days, have you smoked part or all of a cigarette?" and "How long has it been since you last smoked part or all of a cigarette?"

Feeder question: "These questions are about your use of tobacco products. This includes cigarettes, chewing tobacco, snuff, cigars,

and pipe tobacco. The first questions are about cigarettes only. Have you ever smoked part or all of a cigarette?"

SEE: "Cigar Use," "Current Use," "Lifetime Daily Cigarette Use," "Lifetime Use," "Nicotine (Cigarette) Dependence," "Past Month Daily Cigarette Use," "Past Month Use," "Past Year Use," "Prevalence," "Recency of Use," "Smokeless Tobacco Use," and "Tobacco Product Use."

### **Cocaine Use**

Measures of use of cocaine in the respondent's lifetime, the past year, and the past month were developed from responses to the question about recency of use: "How long has it been since you last used any form of cocaine?"

Feeder question: "These questions are about cocaine, including all the different forms of cocaine such as powder, crack, free base, and coca paste. Have you ever, even once, used any form of cocaine?"

SEE: "Crack Use," "Current Use," "Lifetime Use," "Past Month Use," "Past Year Use," "Prevalence," and "Recency of Use."

### **College Enrollment Status**

This variable was computed only for college-aged respondents (i.e., respondents aged 18 to 22). Respondents in this age group were classified as full-time college students or as some other status (including part-time students, students in other grades, or nonstudents). Respondents were classified as full-time college students if they reported that they were attending (or will be attending) their first through fifth or higher year of college or university and that they were (or will be) a full-time student. Respondents whose current enrollment status was unknown were excluded from this variable.

### **Core**

A core set of questions critical for basic trend measurement of prevalence estimates remains in the survey every year and comprises the first part of the interview. Supplemental or "noncore" questions, or modules, that can be revised, dropped, or added from year to year make up the remainder of the interview. The core consists of initial demographic items (which are interviewer-administered) and self-administered questions pertaining to the use of tobacco, alcohol, marijuana, cocaine, crack cocaine, heroin, hallucinogens, inhalants, pain relievers, tranquilizers, stimulants, and sedatives.

SEE: "Noncore."

**County Type**

Counties were grouped based on the "Rural/Urban Continuum Codes" developed by the U.S. Department of Agriculture (2003). Each county is in either a metropolitan statistical area (MSA) or outside of an MSA (also see Butler & Beale, 1994). Large metropolitan (large metro) areas have a population of 1 million or more. Small metropolitan (small metro) areas have a population of fewer than 1 million. Nonmetropolitan (nonmetro) areas are outside of MSAs and include urbanized counties with a population of 20,000 or more in urbanized areas, less urbanized counties with a population of at least 2,500 but fewer than 20,000 in urbanized areas, and completely rural counties with a population of fewer than 2,500 in urbanized areas. Estimates based on county-type information presented in this report use the 2003 revised definition of an MSA; estimates for 2002 in this report therefore are not directly comparable with those presented in the 2002 NSDUH report (Office of Applied Studies [OAS], 2003).

**Crack Use**

Measures of use of crack cocaine in the respondent's lifetime, the past year, and the past month were developed from responses to the question about recency of use: "How long has it been since you last used *crack*?"

Feeder questions: "These questions are about cocaine, including all the different forms of cocaine such as powder, *crack*, free base, and coca paste. Have you ever, even once, used any form of cocaine?"

"The next questions are about *crack*, that is cocaine in rock or chunk form, and not the other forms of cocaine. Have you ever, even once, used *crack*?"

SEE: "Cocaine Use," "Current Use," "Lifetime Use," "Past Month Use," "Past Year Use," "Prevalence," and "Recency of Use."

**Current Use**

Any reported use of a specific drug in the past 30 days.

SEE: "Lifetime Use," "Past Month Use," "Past Year Use," "Prevalence," and "Recency of Use."

**Delinquent Behavior**

Youths aged 12 to 17 were asked a series of six questions: "During the past 12 months, how many times have you . . . stolen or tried to steal anything worth more than \$50?" "sold illegal drugs?" "attacked someone with the intent to seriously hurt them?" "gotten into a serious fight at school or work?" "taken part in a fight where



a group of your friends fought against another group?" and "carried a handgun?"

SEE: "Gang Fighting," "Prevalence," and "Stealing."

## **Dependence**

Dependence on illicit drugs or alcohol was defined as meeting three out of seven dependence criteria (for substances that included questions to measure a withdrawal criterion) or three out of six dependence criteria (for substances that did not include withdrawal questions) for that substance, based on criteria included in the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)* (APA, 1994). Additional criteria for alcohol and marijuana dependence since 2000 included the use of these drugs on 6 or more days in the past 12 months. These criteria were not used to define Nicotine (Cigarette) Dependence, which used a different series of items. See Section B.4.3 of Appendix B for additional details.

SEE: "Abuse," "Need for Alcohol Use Treatment," "Need for Illicit Drug or Alcohol Use Treatment," "Need for Illicit Drug Use Treatment," "Nicotine (Cigarette) Dependence," and "Prevalence."

## **Depression**

SEE: "Major Depressive Episode."

## **Driving Under the Influence**

Respondents were asked whether in the past 12 months they had driven a vehicle while under the influence of alcohol and illegal drugs used together, alcohol only, or illegal drugs only.

SEE: "Prevalence."

## **Ecstasy Use**

Measures of use of Ecstasy or MDMA (methylenedioxy-methamphetamine) in the respondent's lifetime, the past year, and the past month were developed from responses to the question about recency of use: "How long has it been since you last used *Ecstasy*, also known as MDMA?"

SEE: "Current Use," "Hallucinogen Use," "Lifetime Use," "LSD Use," "Past Month Use," "Past Year Use," "PCP Use," "Prevalence," and "Recency of Use."

## **Education**

This is the measure of educational attainment among respondents who are aged 18 or older. It is based on respondents' reports of their highest grade or year of school that they completed. Response alternatives were presented in terms of single years of education,

ranging from 0 if respondents never attended school to 17 if respondents completed 5 or more years at the college or university level. Respondents were classified into four categories based on their answers: less than high school, high school graduate, some college, and college graduate. Persons indicating having completed the 12th grade were classified as high school graduates, and persons who indicated completing 4 or more years at the college or university level were defined as being college graduates.

## **Employment**

Respondents were asked to report whether they worked in the week prior to the interview, and if not, whether they had a job despite not working in the past week. Respondents who worked in the past week or who reported having a job despite not working were asked whether they usually work 35 or more hours per week. Respondents who did not work in the past week but had a job were asked to look at a card that described why they did not work in the past week despite having a job. Respondents who did not have a job in the past week were asked to look at a different card that described why they did not have a job in the past week.

**Full-time** "Full-time" in the tables includes respondents who usually work 35 or more hours per week and who worked in the past week or had a job despite not working in the past week.

**Part-time** "Part-time" in the tables includes respondents who usually work fewer than 35 hours per week and who worked in the past week or had a job despite not working in the past week.

**Unemployed** "Unemployed" in the tables refers to respondents who did not have a job, were on layoff, and were looking for work. For consistency with the Current Population Survey definition of unemployment, respondents who reported that they did not have a job but were looking for work needed to report making specific efforts to find work in the past 30 days, such as sending out resumes or applications, placing ads, or answering ads.

**Other** "Other" includes all other responses, including being a student, keeping house or caring for children full time, retired, disabled, or other miscellaneous work statuses that were defined as not being in the labor force. Respondents who reported that they did not have a job or were on

layoff, but were not looking for work, were classified as not being in the labor force. Similarly, respondents who reported not having a job and looking for work also were classified as not being in the labor force if they did not report making specific efforts to find work in the past 30 days.

**Ethnicity** SEE: "Race/Ethnicity."

**Ever Use** SEE: "Lifetime Use."

**Exposure to Drug**

**Education and Prevention**

Youths aged 12 to 17 who reported they attended any type of school at any time in the past 12 months were asked: "During the past 12 months . . . Have you had a special class about drugs or alcohol in school? Have you had films, lectures, discussions, or printed information about drugs or alcohol in one of your regular classes, such as health or physical education? Have you had films, lectures, discussions, or printed information about drugs or alcohol outside of one of your regular classes, such as in a special assembly?"

(Youths who reported that they were home schooled in the past 12 months also were asked these questions. Youths who reported that they were home schooled were instructed to think about their home schooling as "school.")

Youths also were asked: "During the past 12 months, have you seen or heard any alcohol or drug prevention messages from sources outside school, such as in posters, pamphlets, and radio or TV ads?"

**Family Income**

Family income was ascertained by asking respondents about their total personal income and total family income, based on the following questions: "Of these income groups, which category best represents (your/SAMPLE MEMBER's) total personal income during [the previous calendar year]?" and "Of these income groups, which category best represents (your/SAMPLE MEMBER's) total combined family income during [the previous calendar year]?" (Income data are important in analyzing the health information we collect. For example, the information helps us to learn whether persons in one income group use certain types of medical care services or have conditions more or less often than those in another group.)" Family is defined as any related member in the household, including all foster relationships and unmarried

partners (including same-sex partners.) It excludes roommates, boarders, and other nonrelatives.

NOTE: If no other family members were living with the respondent, total family income was based on information about the respondent's total personal income. For youths aged 12 to 17 and those respondents who were unable to respond to the insurance or income questions, proxy responses were accepted from a household member identified as being better able to give the correct information about insurance and income. In 2006 and 2007, respondents were subdivided into two groups. One group received the same version of the income questions as in 2005 (long version), and the second received a reduced set of questions (short version). Respondents in both groups were asked about total personal income and total combined family income, but the respondents who received the short version were asked fewer questions about specific sources of income. In addition, the introductions to these total income questions differed between the two versions. See Section B.4.8 of Appendix B for additional details.

SEE: "Poverty Level (% of U.S. Census Bureau Poverty Threshold)."

## **Food Stamps**

Food stamps are government-issued coupons that can be used to purchase food. Instead of coupons, some States issue a special card that can be used like a credit card to purchase food in grocery stores. In 2006 and 2007, a majority of respondents received two questions regarding food stamps: (a) their personal receipt of food stamps, and (b) whether another family member living in the household received food stamps. The remaining respondents received a reduced set of income questions, including a single question about whether the respondent or another family member in the household received food stamps. See Section B.4.8 of Appendix B for additional details.

NOTE: For youths aged 12 to 17 and those respondents who were unable to respond to the insurance or income questions, proxy responses were accepted from a household member identified as being better able to give the correct information about insurance and income.

SEE: "Welfare Assistance."

## **Gang Fighting**

Youths aged 12 to 17 were asked how many times during the past 12 months they had taken part in a fight where a group of their friends fought against another group. Response alternatives were (1) 0 times, (2) 1 or 2 times, (3) 3 to 5 times, (4) 6 to 9 times, or (5) 10 or more times.

SEE: "Delinquent Behavior" and "Stealing."

## **Geographic Division**

Data are presented for nine geographic divisions within the four geographic regions. Within the **Northeast Region** are the *New England Division* (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont) and the *Middle Atlantic Division* (New Jersey, New York, Pennsylvania). Within the **Midwest Region** are the *East North Central Division* (Illinois, Indiana, Michigan, Ohio, Wisconsin) and the *West North Central Division* (Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota). Within the **South Region** are the *South Atlantic Division* (Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia), the *East South Central Division* (Alabama, Kentucky, Mississippi, Tennessee), and the *West South Central Division* (Arkansas, Louisiana, Oklahoma, Texas). Within the **West Region** are the *Mountain Division* (Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming) and the *Pacific Division* (Alaska, California, Hawaii, Oregon, Washington).

SEE: "Region."

## **Hallucinogen Use**

Measures of use of hallucinogens in the respondent's lifetime, the past year, and the past month were developed from responses to the core question about recency of use: "How long has it been since you last used any hallucinogen?" Responses to noncore questions about the use of the following drugs, which were added to the survey in 2006, were not included in these measures: ketamine, DMT (dimethyltryptamine), AMT (alpha-methyltryptamine), 5-MeO-DIPT (5-methoxy-diisopropyltryptamine, also known as "Foxy"), and *Salvia divinorum*. See Section B.4.7 of Appendix B for additional details.

Feeder questions: "The next questions are about substances called hallucinogens. These drugs often cause people to see or experience things that are not real... Have you ever, even once, used LSD, also called *acid*? Have you ever, even once, used PCP, also called *angel dust* or phencyclidine? Have you ever, even once, used peyote? Have you ever, even once, used mescaline? Have you ever, even once, used psilocybin, found in mushrooms? Have you ever, even

once, used *Ecstasy*, also known as MDMA? Have you ever, even once used any other hallucinogen besides the ones that have been listed?"

SEE: "Core," "Current Use," "Ecstasy Use," "Lifetime Use," "LSD Use," "Noncore," "Past Month Use," "Past Year Use," "PCP Use," "Prevalence," and "Recency of Use."

### **Health Insurance Status**

A series of questions was asked to identify whether respondents currently were covered by Medicare, Medicaid, the State Children's Health Insurance Program (SCHIP), military health care (such as TRICARE or CHAMPUS), private health insurance, or any kind of health insurance (if respondents reported not being covered by any of the above). If respondents did not currently have health insurance coverage, questions were asked to determine the length of time they were without coverage and the reasons for not being covered.

NOTE: For youths aged 12 to 17 and those respondents who were unable to respond to the insurance or income questions, proxy responses were accepted from a household member identified as being better able to give the correct information about insurance and income.

SEE: "Medicaid" and "Medicare."

### **Heavy Use of Alcohol**

Heavy use of alcohol was 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 each of 5 or more days in the past 30 days. Heavy alcohol users also were defined as binge users of alcohol.

Feeder question: "How long has it been since you last drank an alcoholic beverage?"

SEE: "Alcohol Use" and "Binge Use of Alcohol."

### **Heroin Use**

Measures of use of heroin in the respondent's lifetime, the past year, and the past month were developed from responses to the question about recency of use: "How long has it been since you last used heroin?"

Feeder question: "These next questions are about heroin. Have you ever, even once, used heroin?"

SEE: "Current Use," "Lifetime Use," "Past Month Use," "Past Year Use," "Prevalence," and "Recency of Use."

## **Hispanic**

Hispanic was defined as anyone of Hispanic, Latino, or Spanish origin. Respondents were classified as Hispanic in the race/ethnicity measure regardless of race.

SEE: "American Indian or Alaska Native," "Asian," "Black," "Race/Ethnicity," "Two or More Races," and "White."

## **Illicit Drugs**

Illicit drugs include marijuana or hashish, cocaine (including crack), inhalants, hallucinogens (including phencyclidine [PCP], lysergic acid diethylamide [LSD], and Ecstasy [MDMA]), heroin, or prescription-type psychotherapeutics used nonmedically, which include stimulants, sedatives, tranquilizers, and pain relievers. Illicit drug use refers to use of any of these drugs based on responses to questions only in the core sections and does not include data from the noncore methamphetamine items that were added in 2005 and 2006. Responses to questions about the use of the following drugs, which were added to the survey beginning in 2006, were not included in these measures: GHB (gamma hydroxybutyrate), Adderall<sup>®</sup>, Ambien<sup>®</sup>, nonprescription cough or cold medicines, ketamine, DMT (dimethyltryptamine), AMT (alpha-methyltryptamine), 5-MeO-DIPT (5-methoxy-diisopropyltryptamine, also known as "Foxy"), and *Salvia divinorum*.

SEE: "Core," "Current Use," "Lifetime Use," "Noncore," "Past Month Use," "Past Year Use," "Prevalence," "Psychotherapeutic Drugs," and "Recency of Use."

## **Illicit Drugs Other Than Marijuana**

These drugs include cocaine (including crack), inhalants, hallucinogens (including phencyclidine [PCP], lysergic acid diethylamide [LSD], and Ecstasy [MDMA]), heroin, or prescription-type psychotherapeutics used nonmedically, which include stimulants, sedatives, tranquilizers, and pain relievers. This measure includes marijuana users who used any of the above drugs in addition to using marijuana, as well as users of those drugs who have not used marijuana. Illicit drugs other than marijuana is defined based on responses to questions only in the core sections and does not include responses based on the noncore methamphetamine items that were added in 2005 and 2006. Responses to questions about the use of the following drugs, which were added to the survey beginning in 2006, were not included in these measures: GHB (gamma hydroxybutyrate), Adderall<sup>®</sup>, Ambien<sup>®</sup>, nonprescription cough or cold medicines, ketamine, DMT (dimethyltryptamine), AMT (alpha-methyltryptamine), and

5-MeO-DIPT (5-methoxy-diisopropyltryptamine, also known as "Foxy"), and *Salvia divinorum*.

SEE: "Core," "Current Use," "Lifetime Use," "Noncore," "Past Month Use," "Past Year Use," "Prevalence," "Psychotherapeutic Drugs," and "Recency of Use."

## **Incidence**

Substance use incidence refers to the use of a substance for the first time (new use). Incidence estimates are based on questions about age at first use of substances, year and month of first use for recent initiates, the respondent's date of birth, and the interview date.

Incidence statistics in this report reflect first use occurring within the 12 months prior to the interview. This is referred to as past year incidence. For these statistics, respondents who are immigrants are included regardless of whether their first use occurred inside or outside the United States. See Section B.4.1 in Appendix B for additional details.

## **Income**

SEE: "Family Income."

## **Inhalant Use**

Measures of use of inhalants in the respondent's lifetime, the past year, and the past month were developed from responses to the question about recency of use: "How long has it been since you last used any inhalant for kicks or to get high?"

Feeder questions: "These next questions are about liquids, sprays, and gases that people sniff or inhale to get high or to make them feel good... Have you ever, even once, inhaled [INHALANT NAME] for kicks or to get high?" Respondents were asked about the following inhalants: (a) amyl nitrite, "poppers," locker room odorizers, or "rush"; (b) correction fluid, degreaser, or cleaning fluid; (c) gasoline or lighter fluid; (d) glue, shoe polish, or toluene; (e) halothane, ether, or other anesthetics; (f) lacquer thinner or other paint solvents; (g) lighter gases, such as butane or propane; (h) nitrous oxide or whippets; (i) spray paints; (j) some other aerosol spray; and (k) any other inhalants besides the ones that have been listed.

SEE: "Current Use," "Lifetime Use," "Past Month Use," "Past Year Use," "Prevalence," and "Recency of Use."

## **Large Metro**

SEE: "County Type."



**Lifetime Daily Cigarette Use**

A respondent was defined as being a lifetime daily cigarette user if he or she ever had a period in his or her life of smoking part or all of a cigarette every day for at least 30 days.

SEE: "Cigarette Use" and "Past Month Daily Cigarette Use."

**Lifetime Use**

Lifetime use indicates use of a specific drug at least once in the respondent's lifetime. This measure includes respondents who also reported last using the drug in the past 30 days or past 12 months.

SEE: "Current Use," "Past Month Use," "Past Year Use," "Prevalence," and "Recency of Use."

**Location of Most Recent Underage Alcohol Use**

Respondents aged 12 to 20 who reported drinking at least one alcoholic beverage within the past 30 days were asked to indicate where they drank alcoholic beverages the last time they drank. The possible locations were (1) in a car; (2) at the respondent's home; (3) at someone else's home; (4) at a park, on a beach, or in a parking lot; (5) in a restaurant, bar, or club; (6) at a concert or sports game; (7) at school; or (8) some other place. Those who reported "some other place" were asked to write in a response indicating the specific location.

SEE: "Alcohol Use."

**Low Precision**

Prevalence estimates based on only a few respondents or with relatively large standard errors were not shown in the tables, but have been replaced with an asterisk (\*) and noted as "low precision." These estimates have been omitted because one cannot place a high degree of confidence in their accuracy. See Table B.2 in Appendix B for a complete list of the rules used to determine low precision.

**LSD Use**

Measures of use of lysergic acid diethylamide (LSD) in the respondent's lifetime, the past year, and the past month were developed from responses to the question about recency of use: "How long has it been since you last used LSD?"

SEE: "Current Use," "Ecstasy Use," "Hallucinogen Use," "Lifetime Use," "Past Month Use," "Past Year Use," "PCP Use," "Prevalence," and "Recency of Use."

**Major Depressive Episode**

A person was defined as having had a lifetime major depressive episode (MDE) if he or she had at least five or more of the

following nine symptoms in the same 2-week period in his or her lifetime, in which at least one of the symptoms was a depressed mood or loss of interest or pleasure in daily activities: (1) depressed mood most of the day, nearly every day; (2) markedly diminished interest or pleasure in all or almost all activities most of the day, nearly every day; (3) significant weight loss when not dieting or weight gain or decrease or increase in appetite nearly every day; (4) insomnia or hypersomnia nearly every day; (5) psychomotor agitation or retardation nearly every day; (6) fatigue or loss of energy nearly every day; (7) feelings of worthlessness nearly every day; (8) diminished ability to think or concentrate or indecisiveness nearly every day; and (9) recurrent thoughts of death or recurrent suicide ideation. This definition is based on the definition found in the 4th edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV) (APA, 1994). A person was defined as having an MDE in the past year if he or she had a lifetime MDE and a period of time in the past 12 months when he or she felt depressed or lost interest or pleasure in daily activities for 2 weeks or longer, while also having at least four of the other symptoms defined above for a lifetime MDE. See Section B.4.5 of Appendix B for additional details.

### **Major Depressive Episode with Severe Impairment**

Measures of major depressive episode (MDE) with severe impairment are based on the Sheehan Disability Scale (SDS) role domains, which measure the impact of a disorder on a person's life. Severe impairment is defined as the highest severity level of role impairment across four domains that differ for youths aged 12 to 17 and adults aged 18 or older. For youths, the domains are (1) chores at home, (2) school or work, (3) close relationships with family, and (4) social life. For adults, the domains are (1) home management, (2) work, (3) close relationships with others, and (4) social life. Ratings equal to or greater than 7 on a 0 to 10 scale were considered to indicate severe impairment. See Section B.4.5 of Appendix B for additional details.

SEE: "Major Depressive Episode" and "Severe Impairment."

### **Marijuana Use**

Measures of use of marijuana in the respondent's lifetime, the past year, and the past month were developed from responses to the question about recency of use: "How long has it been since you last used marijuana or hashish?" Responses to questions about use of cigars with marijuana in them (blunts) were not included in these measures.

Feeder question: "The next questions are about marijuana and hashish. Marijuana is also called pot or grass. Marijuana is usually smoked, either in cigarettes called joints, or in a pipe. It is sometimes cooked in food. Hashish is a form of marijuana that is also called *hash*. It is usually smoked in a pipe. Another form of hashish is hash oil. Have you ever, even once, used marijuana or hashish?"

SEE: "Blunts," "Current Use," "Illicit Drugs," "Lifetime Use," "Past Month Use," "Past Year Use," "Prevalence," "Prior Year Marijuana Use," and "Recency of Use."

## **Medicaid**

Medicaid is a public assistance program that pays for medical care for low-income and disabled persons. Respondents were asked specifically about the Medicaid program in the State where they lived. Respondents aged 12 to 19 were asked specifically about the State Children's Health Insurance Program (SCHIP) in their State. Respondents aged 12 to 19 who reported that they were covered by the SCHIP in their State also were classified as being covered by Medicaid. Respondents aged 65 or older who reported that they were covered by Medicaid were asked to verify that their answer was correct.

NOTE: For youths aged 12 to 17 and those respondents who were unable to respond to the insurance or income questions, proxy responses were accepted from a household member identified as being better able to give the correct information about insurance and income.

SEE: "Health Insurance Status" and "Medicare."

## **Medicare**

Medicare is a health insurance program for persons aged 65 or older and for certain disabled persons. Respondents under the age of 65 who reported that they were covered by Medicare were asked to verify that their answer was correct.

NOTE: For youths aged 12 to 17 and those respondents who were unable to respond to the insurance or income questions, proxy responses were accepted from a household member identified as being better able to give the correct information about insurance and income.

SEE: "Health Insurance Status" and "Medicaid."

**Mental Health Service Utilization**

For adults aged 18 or older, mental health service utilization is defined as receiving treatment or counseling for any problem with emotions, nerves, or mental health in the 12 months prior to the interview in any inpatient or outpatient setting, or the use of prescription medication for treatment of any mental or emotional condition. Estimates for adults are based only on responses to items in the module on adult mental health service utilization.

For youths aged 12 to 17, mental health service utilization is defined as receiving within the 12 months prior to the interview treatment or counseling for any emotional or behavioral problem in the specialty mental health setting (inpatient or outpatient services); the education setting (school-based services); or the general medical setting (pediatrician or family physician services).

Treatment for only a substance use problem is not included for adults or youths.

SEE: "Prevalence" and "Unmet Need for Mental Health Services."

**Mental Health Treatment**

SEE: "Mental Health Service Utilization" and "Treatment for Major Depressive Episode."

**Methamphetamine Use**

Measures of use of methamphetamine (also known as crank, crystal, ice, or speed), Desoxyn<sup>®</sup>, or Methedrine<sup>®</sup> in the respondent's lifetime, the past year, and the past month were developed from responses to the core question about recency of use: "How long has it been since you last used methamphetamine, Desoxyn, or Methedrine?" In this report, estimates for the 2006 and 2007 methamphetamine use measures also include responses based on the noncore methamphetamine use items that were added in 2005 and 2006; estimates for 2002 through 2005 have been adjusted to make them comparable with estimates for 2006 and 2007 that include responses to the noncore methamphetamine items. See Section B.4.6 of Appendix B for additional details.

SEE: "Core," "Current Use," "Lifetime Use," "Noncore," "Past Month Use," "Past Year Use," "Prevalence," "Recency of Use," "Source of Psychotherapeutic Drugs," and "Stimulant Use."

**Midwest Region**

The States included are those in the East North Central Division— Illinois, Indiana, Michigan, Ohio, and Wisconsin—and the West

North Central Division—Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota.

SEE: "Geographic Division" and "Region."

**Native Hawaiian or  
Other Pacific Islander**

Native Hawaiian or Other Pacific Islander, not of Hispanic, Latino, or Spanish origin; does not include respondents reporting two or more races. (Respondents reporting that they were Native Hawaiian or Other Pacific Islander and of Hispanic, Latino, or Spanish origin were classified as Hispanic.)

SEE: "Hispanic" and "Race/Ethnicity."

**Need for Alcohol Use  
Treatment**

Respondents were classified as needing treatment for an alcohol use problem if they met at least one of three criteria during the past year: (1) dependence on alcohol; (2) abuse of alcohol; or (3) received treatment for an alcohol use problem at a specialty facility (i.e., drug and alcohol rehabilitation facilities [inpatient or outpatient], hospitals [inpatient only], and mental health centers).

SEE: "Abuse," "Dependence," "Prevalence," "Specialty Substance Use Treatment Facility," and "Treatment for a Substance Use Problem."

**Need for Illicit Drug  
or Alcohol Use Treatment**

Respondents were classified as needing treatment for an illicit drug or alcohol use problem if they met at least one of three criteria during the past year: (1) dependence on illicit drugs or alcohol; (2) abuse of illicit drugs or alcohol; or (3) received treatment for an illicit drug or alcohol use problem at a specialty facility (i.e., drug and alcohol rehabilitation facilities [inpatient or outpatient], hospitals [inpatient only], and mental health centers).

SEE: "Abuse," "Dependence," "Prevalence," "Specialty Substance Use Treatment Facility," and "Treatment for a Substance Use Problem."

**Need for Illicit Drug Use  
Treatment**

Respondents were classified as needing treatment for an illicit drug use problem if they met at least one of three criteria during the past year: (1) dependence on illicit drugs; (2) abuse of illicit drugs; or (3) received treatment for an illicit drug use problem at a specialty facility (i.e., drug and alcohol rehabilitation facilities [inpatient or outpatient], hospitals [inpatient only], and mental health centers).

SEE: "Abuse," "Dependence," "Prevalence," "Specialty Substance Use Treatment Facility," and "Treatment for a Substance Use Problem."

**Nicotine (Cigarette) Dependence**

A respondent was defined with nicotine (cigarette) dependence if he or she met either the dependence criteria derived from the Nicotine Dependence Syndrome Scale (NDSS) or the Fagerstrom Test of Nicotine Dependence (FTND). See Section B.4.2 of Appendix B for additional details.

SEE: "Cigarette Use," "Dependence," and "Prevalence."

**Noncash Assistance**

Noncash assistance refers to assistance that is not in the form of direct monetary payments due to low income, such as help getting a job, placement in an education or job training program, or help with transportation, child care, or housing. In 2006 and 2007, a majority of respondents received two questions regarding noncash assistance: (a) their personal receipt of noncash assistance, and (b) whether another family member living in the household received noncash assistance. The remaining respondents received a reduced set of income questions where the latter question was excluded. See Section B.4.8 of Appendix B for additional details.

NOTE: For youths aged 12 to 17 and those respondents who were unable to respond to the insurance or income questions, proxy responses were accepted from a household member identified as being better able to give the correct information about insurance and income.

SEE: "Cash Assistance" and "Welfare Assistance."

**Noncore**

A core set of unaltered questions (consisting of demographic items and modules on the use of tobacco, alcohol, marijuana, cocaine, crack cocaine, heroin, hallucinogens, inhalants, pain relievers, tranquilizers, stimulants, and sedatives) is critical for basic trend measurement of prevalence estimates. This core set remains in the survey every year and comprises the first part of the interview. Supplemental or "noncore" questions, or modules, that can be revised, dropped, or added from year to year make up the remainder of the interview. Supplemental topics in the remaining self-administered sections include (but are not limited to) injection drug use, perceived risks of substance use, substance dependence or abuse, arrests, treatment for substance use problems, pregnancy and health care issues, and mental health issues. Supplemental

demographic questions (which are interviewer-administered and follow the audio computer-assisted self-interviewing [ACASI] questions) address such topics as immigration, current school enrollment, employment and workplace issues, health insurance coverage, and income. It should be noted that some of the supplemental portions of the interview have remained in the survey, relatively unchanged, from year to year (e.g., current health insurance coverage, employment).

SEE: "Core."

### **Nonmedical Use of Psychotherapeutics**

A core section of the interview instrument deals with nonmedical use of four classes of prescription-type psychotherapeutics: pain relievers, sedatives, stimulants, and tranquilizers. Nonmedical use is defined as use of at least one of these medications without a prescription belonging to the respondent or use that occurred simply for the experience or feeling the drug caused. In this report, estimates for the 2006 and 2007 measures of nonmedical use of psychotherapeutics also include responses based on the noncore methamphetamine use items that were added in 2005 and 2006; estimates for 2002 through 2005 have been adjusted to make them comparable with estimates for 2006 and 2007 that include responses to the noncore methamphetamine items. Responses to questions about the nonmedical use of Adderall<sup>®</sup> (a stimulant) and Ambien<sup>®</sup> (a sedative), which were added to the survey in 2006, were not included in these measures.

Measures of use of nonmedical psychotherapeutic agents in the respondent's lifetime, the past year, and the past month were developed from responses to the question about recency of use: "How long has it been since you last used any prescription [pain reliever, sedative, stimulant, or tranquilizer] that was not prescribed for you or that you took only for the experience or feeling it caused?"

Feeder question: "Now we have some questions about drugs that people are supposed to take only if they have a prescription from a doctor. We are only interested in your use of a drug if the drug was not prescribed for you, or if you took the drug only for the experience or feeling it caused."

NOTE: The pill card contains pictures and names of specific drugs within each psychotherapeutic category. For example, pictures and the names of Valium<sup>®</sup>, Librium<sup>®</sup>,

and other tranquilizers are shown when the section on tranquilizers is introduced.

SEE: "Core," "Current Use," "Lifetime Use," "Methamphetamine Use," "Noncore," "Pain Reliever Use," "Past Month Use," "Past Year Use," "Pill Cards," "Prevalence," "Psychotherapeutic Drugs," "Recency of Use," "Sedative Use," "Source of Psychotherapeutic Drugs," "Stimulant Use," and "Tranquilizer Use."

**Nonmetro**

SEE: "County Type."

**Northeast Region**

The States included are those in the New England Division—Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont—and the Middle Atlantic Division—New Jersey, New York, and Pennsylvania.

SEE: "Geographic Division" and "Region."

**OxyContin<sup>®</sup> Use**

Measures of use of the prescription pain reliever OxyContin<sup>®</sup> in the respondent's lifetime, the past year, and the past month were developed from responses to the question about recency of use: "How long has it been since you last used OxyContin that was not prescribed for you or that you took only for the experience or feeling it caused?" For additional details, see Section B.5.1 of Appendix B of the 2004 NSDUH's national results report (OAS, 2005b).

SEE: "Current Use," "Lifetime Use," "Pain Reliever Use," "Past Month Use," "Past Year Use," "Prevalence," and "Recency of Use."

**Pain Reliever Use**

Measures of the nonmedical use of prescription-type pain relievers in the respondent's lifetime, the past year, and the past month were developed from responses to the question about recency of use: "How long has it been since you last used any prescription pain reliever that was not prescribed for you, or that you took only for the experience or feeling it caused?"

Feeder question: "These questions are about the use of pain relievers. We are not interested in your use of *over-the-counter* pain relievers such as aspirin, Tylenol, or Advil that can be bought in drug stores or grocery stores without a doctor's prescription. Card A shows pictures of some different types of prescription pain relievers and lists the names of some others. These pictures show only pills, but we are interested in your use of any form of



prescription pain relievers that were not prescribed for you or that you took only for the experience or feeling they caused."

The following prescription pain relievers were listed on Pill Card A (Pain Relievers): (1) Darvocet<sup>®</sup>, Darvon<sup>®</sup>, or Tylenol<sup>®</sup> with Codeine; (2) Percocet<sup>®</sup>, Percodan<sup>®</sup>, or Tylox<sup>®</sup>; (3) Vicodin<sup>®</sup>, Lortab<sup>®</sup>, or Lorcet<sup>®</sup>/Lorcet Plus<sup>®</sup>; (4) Codeine; (5) Demerol<sup>®</sup>; (6) Dilaudid<sup>®</sup>; (7) Fioricet<sup>®</sup>; (8) Fiorinal<sup>®</sup>; (9) Hydrocodone; (10) Methadone; (11) Morphine; (12) OxyContin<sup>®</sup>; (13) Phenaphen<sup>®</sup> with Codeine; (14) Propoxyphene; (15) SK-65<sup>®</sup>; (16) Stadol<sup>®</sup> (no picture); (17) Talacen<sup>®</sup>; (18) Talwin<sup>®</sup>; (19) Talwin NX<sup>®</sup>; (20) Tramadol (no picture); and (21) Ultram<sup>®</sup>.

SEE: "Current Use," "Lifetime Use," "Nonmedical Use of Psychotherapeutics," "OxyContin<sup>®</sup> Use," "Past Month Use," "Past Year Use," "Pill Cards," "Prevalence," "Psychotherapeutic Drugs," "Recency of Use," "Sedative Use," "Source of Psychotherapeutic Drugs," "Stimulant Use," and "Tranquilizer Use."

**Past Month Daily Cigarette Use**

A respondent was defined as being a past month daily cigarette user if he or she smoked part or all of a cigarette on each of the past 30 days.

Feeder question: "Now think about the past 30 days – that is, from [DATEFILL] up to and including today. During the past 30 days, have you smoked part or all of a cigarette?"

SEE: "Cigarette Use" and "Lifetime Daily Cigarette Use."

**Past Month Use**

This measure indicates use of a specific drug in the 30 days prior to the interview. Respondents who indicated past month use of a specific drug also were classified as lifetime and past year users.

SEE: "Current Use," "Lifetime Use," "Past Year Use," "Prevalence," and "Recency of Use."

**Past Year Incidence**

SEE: "Incidence."

**Past Year Use**

This measure indicates use of a specific drug in the 12 months prior to the interview. This definition includes those respondents who last used the drug in the 30 days prior to the interview. Respondents who indicated past year use of a specific drug also were classified as lifetime users.

SEE: "Current Use," "Lifetime Use," "Past Month Use," "Prevalence," and "Recency of Use."

### **PCP Use**

Measures of use of phencyclidine (PCP) in the respondent's lifetime, the past year, and the past month were developed from responses to the question about recency of use: "How long has it been since you last used PCP?"

SEE: "Current Use," "Ecstasy Use," "Hallucinogen Use," "Lifetime Use," "LSD Use," "Past Month Use," "Past Year Use," "Prevalence," and "Recency of Use."

### **Perceived Availability**

Respondents were asked to assess how difficult or easy it would be for them to get various illicit drugs if they wanted these drugs. Response alternatives were (1) probably impossible, (2) very difficult, (3) fairly difficult, (4) fairly easy, and (5) very easy.

### **Perceived Need for Alcohol Use Treatment**

Respondents were classified as perceiving a need for alcohol use treatment if they reported feeling a need for alcohol use treatment when asked, "During the past 12 months, did you need treatment or counseling for your alcohol use?" or if they indicated feeling a need for additional treatment specifically for alcohol use when asked, "During the past 12 months, for which of the following drugs did you need additional treatment or counseling?"

SEE: "Prevalence" and "Treatment for a Substance Use Problem."

### **Perceived Need for Illicit Drug or Alcohol Use Treatment**

Respondents were classified as perceiving a need for illicit drug or alcohol use treatment if they were classified as either perceiving a need for illicit drug use treatment or perceiving a need for alcohol use treatment.

SEE: "Perceived Need for Alcohol Use Treatment" and "Perceived Need for Illicit Drug Use Treatment."

### **Perceived Need for Illicit Drug Use Treatment**

Respondents were classified as perceiving a need for illicit drug use treatment if they reported feeling a need for treatment for the use of one or more drugs when asked specifically about each of the individual drugs they had indicated using, "During the past 12 months, did you need treatment or counseling for your use of (drug)?" They also were classified as perceiving a need for illicit

drug use treatment if they indicated feeling a need for additional treatment specifically for the use of one or more drugs when asked, "During the past 12 months, for which of the following drugs did you need additional treatment or counseling?" The response list of drugs included marijuana/hashish, cocaine or crack, heroin, hallucinogens, inhalants, pain relievers, tranquilizers, stimulants, sedatives, or some other drug.

SEE: "Prevalence" and "Treatment for a Substance Use Problem."

**Perceived Risk/  
Harmfulness**

Respondents were asked to assess the extent to which people risk harming themselves physically and in other ways when they use various illicit drugs, alcohol, and cigarettes, with various levels of frequency. Response alternatives were (1) no risk, (2) slight risk, (3) moderate risk, and (4) great risk.

**Percentages**

In this report, all of the tables contain percentages based on weighted data.

SEE: "Rounding."

**Pill Cards**

The pill cards contain pictures and names of specific drugs within each psychotherapeutic category. For example, pictures and the names of Valium<sup>®</sup>, Librium<sup>®</sup>, and other tranquilizers are shown when the questionnaire section on tranquilizers is introduced.

SEE: "Current Use," "Lifetime Use," "Nonmedical Use of Psychotherapeutics," "Pain Reliever Use," "Past Month Use," "Past Year Use," "Prevalence," "Psychotherapeutic Drugs," "Recency of Use," "Sedative Use," "Stimulant Use," and "Tranquilizer Use."

**Poverty Level (% of  
U.S. Census Bureau  
Poverty Threshold)**

This measure is a comparison of a respondent's total family income with the U.S. Census Bureau's poverty thresholds (both measured in dollar amounts) in order to determine the poverty status of the respondent and his or her family. Information on family income, size, and composition (i.e., number of children) and the respondent's age is used to determine the respondent's poverty level. The poverty level is calculated as a percentage of the poverty threshold by dividing the respondent's reported total family income by the appropriate poverty threshold amount. Thus, if a family's total income is less than the family's poverty threshold, then that

family and every individual in it is considered to be in poverty (i.e., less than 100 percent of the U.S. census poverty threshold). Accordingly, if a family's total income is greater than the poverty threshold but less than twice the poverty threshold, then that family and every individual in it is classified as being 100 to 199 percent of the U.S. census poverty threshold. Because of changes in the creation of the poverty-level measure in 2006, estimates are not comparable with similar estimates published in NSDUH reports prior to 2006.

SEE: "Family Income."

### **Prevalence**

Prevalence is a general term used to describe the estimates for lifetime, past year, and past month substance use, dependence or abuse, or other behaviors of interest within a given period (e.g., the past 12 months). Other behaviors of interest include delinquent behavior, driving under the influence of alcohol or drugs, mental health service utilization, perceived need for alcohol or illicit drug use treatment, serious psychological distress, treatment for a substance use problem, and unmet need for mental health services.

SEE: "Abuse," "Current Use," "Delinquent Behavior," "Dependence," "Driving Under the Influence," "Mental Health Service Utilization," "Need for Illicit Drug or Alcohol Use Treatment," "Nicotine (Cigarette) Dependence," "Perceived Need for Alcohol Use Treatment," "Perceived Need for Illicit Drug or Alcohol Use Treatment," "Perceived Need for Illicit Drug Use Treatment," "Recency of Use," "Serious Psychological Distress," "Treatment for a Substance Use Problem," and "Unmet Need for Mental Health Services."

**Prior Year Marijuana Use** A respondent was defined as engaging in prior year marijuana use if he or she used marijuana or hashish 12 to 23 months prior to the interview date. Prior Year Marijuana Use is different from Past Year Marijuana Use because Past Year Marijuana Use indicates use in the past 12 calendar months prior to the interview date, whereas Prior Year Marijuana Use is defined as using marijuana in the year prior to the past year (12 calendar months prior to the interview date) or within 12 to 23 months prior to the interview date.

SEE: "Marijuana Use."

**Psychotherapeutic Drugs** Psychotherapeutic drugs are prescription-type medications with legitimate medical uses as pain relievers, tranquilizers, stimulants,

and sedatives. The interview instrument covers nonmedical use of these drugs, which involves use without a prescription belonging to the respondent or use that occurred simply for the experience or feeling the drug caused. In this report, estimates for the 2006 and 2007 psychotherapeutic drug measures include responses based on the core questions about nonmedical use of psychotherapeutics and the noncore methamphetamine use items that were added in 2005 and 2006; estimates for 2002 through 2005 have been adjusted to make them comparable with estimates for 2006 and 2007 that include responses to the noncore methamphetamine items.

SEE: "Core," "Current Use," "Lifetime Use," "Methamphetamine Use," "Noncore," "Nonmedical Use of Psychotherapeutics," "Pain Reliever Use," "Past Month Use," "Past Year Use," "Pill Cards," "Prevalence," "Recency of Use," "Sedative Use," "Source of Psychotherapeutic Drugs," "Stimulant Use," and "Tranquilizer Use."

### **Race/Ethnicity**

Race/ethnicity is used to refer to the respondent's self-classification of racial and ethnic origin and identification. For Hispanic origin, respondents were asked, "Are you of Hispanic, Latino, or Spanish origin or descent?" For race, respondents were asked, "Which of these groups best describes you?" Response alternatives were (1) white, (2) black/African American, (3) American Indian or Alaska Native, (4) Native Hawaiian, (5) Other Pacific Islander, (6) Asian, and (7) Other. Categories for a combined race/ethnicity variable included Hispanic; non-Hispanic groups where respondents indicated only one race (white, black, American Indian or Alaska Native, Native Hawaiian or Other Pacific Islander, Asian); and non-Hispanic groups where respondents reported two or more races. These categories are based on classifications developed by the U.S. Census Bureau.

SEE: "American Indian or Alaska Native," "Asian," "Black," "Hispanic," "Native Hawaiian or Other Pacific Islander," "Two or More Races," and "White."

### **Recency of Use**

The recency question for each drug was the source for the lifetime, past year, and past month prevalence estimates.

The question was essentially the same for all classes of drugs. The question was: "How long has it been since you last used [drug name]?" For the four classes of psychotherapeutics, the phrase "that was not prescribed for you or only for the experience or feeling it caused" was added after the name of the drug.

For tobacco products (cigarettes, snuff, chewing tobacco, or cigars), a question first was asked about use in the past 30 days. If the respondent did not use the product in the past 30 days, the recency question was asked as above, with the response alternatives (1) more than 30 days ago but within the past 12 months; (2) more than 12 months ago but within the past 3 years; and (3) more than 3 years ago. For the remaining drugs, the response alternatives were (1) within the past 30 days; (2) more than 30 days ago but within the past 12 months; and (3) more than 12 months ago.

SEE: "Current Use," "Lifetime Use," "Past Month Use," "Past Year Use," and "Prevalence."

**Region**

Four regions, Northeast, Midwest, South, and West, are based on classifications developed by the U.S. Census Bureau.

SEE: "Geographic Division," "Midwest Region," "Northeast Region," "South Region," and "West Region."

**Rounding**

The decision rules for the rounding of percentages were as follows. If the second number to the right of the decimal point was greater than or equal to 5, the first number to the right of the decimal point was rounded up to the next higher number. If the second number to the right of the decimal point was less than 5, the first number to the right of the decimal point remained the same. Thus, a prevalence estimate of 16.55 percent would be rounded to 16.6 percent, while an estimate of 16.44 percent would be rounded to 16.4 percent. Although the percentages in the tables generally total 100 percent, the use of rounding sometimes produces a total of slightly less than or more than 100 percent.

SEE: "Percentages."

**Sedative Use**

Measures of the nonmedical use of prescription-type sedatives in the respondent's lifetime, the past year, and the past month were developed from responses to the core question about recency of use: "How long has it been since you last used any prescription sedative that was not prescribed for you, or that you took only for the experience or feeling it caused?" Responses to noncore questions about use of the prescription sedative Ambien<sup>®</sup>, which were added to the survey in 2006, were not included in these measures. See Section B.4.7 of Appendix B for additional details.

Feeder question: "These next questions ask about the use of sedatives or barbiturates. These drugs are also called *downers* or *sleeping pills*. People take these drugs to help them relax or to help them sleep. We are not interested in the use of *over-the-counter* sedatives such as Sominex, Unisom, Nytol, or Benadryl that can be bought in drug stores or grocery stores without a doctor's prescription. Card D shows pictures of different kinds of prescription sedatives and lists the names of some others. These pictures show only pills, but we are interested in your use of any form of prescription sedatives that were not prescribed for you or that you took only for the experience or feeling they caused."

The following prescription sedatives were listed on Pill Card D (Sedatives): (1) Methaqualone (includes Sopor<sup>®</sup>, Quaalude<sup>®</sup>) (no picture); (2) Nembutal<sup>®</sup>, Pentobarbital (no picture), Seconal<sup>®</sup>, Secobarbital (no picture), or Butalbital (no picture); (3) Restoril<sup>®</sup> or Temazepam; (4) Amytal<sup>®</sup>; (5) Butisol<sup>®</sup>; (6) Chloral Hydrate (no picture); (7) Dalmane<sup>®</sup>; (8) Halcion<sup>®</sup>; (9) Phenobarbital; (10) Placidyl<sup>®</sup>; and (11) Tuinal<sup>®</sup>.

SEE: "Core," "Current Use," "Lifetime Use," "Noncore," "Nonmedical Use of Psychotherapeutics," "Pain Reliever Use," "Past Month Use," "Past Year Use," "Pill Cards," "Prevalence," "Psychotherapeutic Drugs," "Recency of Use," "Source of Psychotherapeutic Drugs," "Stimulant Use," and "Tranquilizer Use."

### **Self-Help Group**

NSDUH has collected data on self-help groups because they may be potential locations of treatment for a substance use problem. Respondents who reported that they received treatment for their use of alcohol or drugs in the past 12 months were asked whether they received treatment in a self-help group, such as Alcoholics Anonymous or Narcotics Anonymous; these groups were not considered specialty substance use treatment facilities. Beginning with the 2006 survey, respondents also were asked whether they attended self-help groups in the past 12 months to receive help for their alcohol or drug use, regardless of whether they previously reported receiving any treatment in the past 12 months.

SEE: "Specialty Substance Use Treatment Facility" and "Treatment for a Substance Use Problem."

### **Serious Psychological Distress**

Serious psychological distress (SPD) is defined as having a score of 13 or higher on the K6 scale, which measures symptoms of psychological distress during the 1 month in the past 12 months

when respondents were at their worst emotionally. Beginning with the 2005 survey, all respondents aged 18 or older were administered a short-form version of the SPD module featuring only the six questions pertaining to the K6 scale. In 2004, half of the respondents aged 18 or older were administered a short-form version of the SPD module, while the remaining adults were administered a long-form version of the SPD module. Due to differences in the 2004 SPD prevalence estimates based on the two versions of the module, estimates from the short-form module are presented in this report for 2004. Because of these changes, 2004 through 2007 estimates presented in this report are not comparable with estimates published in the 2004 and earlier reports. See Section B.4.4 of Appendix B for additional details.

SEE: "Prevalence."

### **Severe Impairment Due to MDE**

Severe impairment in adults is defined by the level of role interference reported to be caused by MDE in the past 12 months. The Sheehan Disability Scale (SDS) role domains of (1) home management, (2) work, (3) close relationships with others, and (4) social life are assessed on a 0 to 10 visual analog scale with impairment categories of none (0), mild (1-3), moderate (4-6), severe (7-9), and very severe (10). Ratings of 7 or greater in one or more role domains are classified as severe impairment. See Section B.4.5 of Appendix B for additional details.

SEE: "Major Depressive Episode with Severe Impairment."

### **Significance**

For tables in which trends over time were shown, statistically significant differences between estimates from two different time points (e.g., 2006 and 2007) were identified at two levels: 0.05 and 0.01. Thus, estimates with different values that did not meet the criteria for statistical significance were not considered to be different from one another. In the text of this report, a significance level of 0.05 was used to determine whether estimates from different demographic subgroups were statistically different.

### **Small Metro**

SEE: "County Type."

### **Smokeless Tobacco Use**

Measures of use of smokeless tobacco in the respondent's lifetime, the past year, and the past month were developed from responses to the questions about snuff and chewing tobacco use in the past 30 days and the recency of use (if not in the past 30 days): "Now think about the past 30 days—that is, from [DATEFILL] up to and including today. During the past 30 days, have you used snuff,



even once?" "How long has it been since you last used snuff?" "Now think about the past 30 days—that is, from [DATEFILL] up to and including today. During the past 30 days, have you used chewing tobacco, even once?" and "How long has it been since you last used chewing tobacco?"

Feeder questions: "These next questions are about your use of snuff, sometimes called dip... Have you ever used snuff, even once?" and "These next questions are only about chewing tobacco... Have you ever used chewing tobacco, even once?"

SEE: "Cigar Use," "Cigarette Use," "Current Use," "Lifetime Use," "Past Month Use," "Past Year Use," "Prevalence," "Recency of Use," and "Tobacco Product Use."

### **Social Context of Most Recent Alcohol Use**

Respondents aged 12 to 20 who reported drinking at least one alcoholic beverage within the past 30 days were asked if they were alone, with one other person, or with more than one person the last time they drank.

SEE: "Alcohol Use."

### **Source of Alcohol for Most Recent Underage Alcohol Use**

Respondents aged 12 to 20 who reported drinking at least one alcoholic beverage within the past 30 days were asked questions pertaining to the source of the alcohol for their most recent alcohol use. The sources were (1) purchased it himself or herself; (2) it was purchased by someone else; (3) received it from a parent or guardian; (4) received it from another family member aged 21 or older; (5) received it from an unrelated person aged 21 or older; (6) received it from someone under age 21; (7) took it from own home; (8) took it from someone else's home; or (9) got it some other way.

The questions on the source of last alcohol use are presented in two categories: (a) respondent paid (he or she purchased the alcohol or gave someone else money to purchase the alcohol), and (b) respondent did not pay (he or she received the alcohol for free from someone or took the alcohol from his or her own or someone else's home).

SEE: "Alcohol Use."

## **Source of Psychotherapeutic Drugs**

There are two measures of the source of psychotherapeutic drugs (prescription pain relievers, prescription tranquilizers, prescription stimulants, methamphetamine, and prescription sedatives) used nonmedically: how respondents obtained these drugs the last time they used them nonmedically and how respondents obtained these drugs for any nonmedical use in the past month. Beginning in 2006, respondents who reported that they obtained these drugs from a friend or relative for free were asked how the friend or relative obtained them. For all of these drugs except methamphetamine, response options for the source of the medications were as follows: (a) got a prescription from just one doctor; (b) got prescriptions from more than one doctor; (c) wrote a fake prescription; (d) stole from a doctor's office, clinic, hospital, or pharmacy; (e) got from a friend or relative for free; (f) bought from a friend or relative; (g) took from a friend or relative without asking; (h) bought from a drug dealer or other stranger; (i) bought on the Internet; and (j) got in some other way (includes other sources specified by respondents). Methamphetamine users were presented with options (e) through (j) only.

If respondents last used a psychotherapeutic drug nonmedically in the past 30 days and reported getting that drug from only one source, the source of the psychotherapeutic drug for the most recent use measure was based on that answer. For respondents who reported getting a psychotherapeutic drug from multiple sources in the past 30 days or who last misused that drug more than 30 days ago but in the past 12 months, the source of the psychotherapeutic drug for the most recent use measure was based on their answer to a question about how they got that drug the last time they used it nonmedically. The source of the psychotherapeutic drug for any use in the past month was based only on the answer to the question about sources in the past 30 days.

Measures of the source of methamphetamine differ from all other measures regarding the source of psychotherapeutic drugs in that they include respondents who reported methamphetamine use in the stimulants module and respondents who reported methamphetamine use in the special drugs module who did not initially report methamphetamine use in the stimulants module because they did not consider it to be a prescription drug. All other measures of the source of psychotherapeutic drugs only include respondents who reported psychotherapeutic drug use in their respective core drug modules.

Feeder questions from the drug modules: "Earlier, the computer recorded that, during the past 30 days, you used [prescription pain relievers, prescription tranquilizers, prescription stimulants, methamphetamine, prescription sedatives] that were not prescribed for you or that you took only for the experience or feeling it caused. How did you get these [fill in relevant drug name from above]? Please enter all the ways that you got the [fill in relevant drug name from above] you used in the past 30 days."

"Now think about the last time you used [a prescription pain reliever, a prescription tranquilizer, a prescription stimulant, methamphetamine, a prescription sedative] that was not prescribed for you or that you took only for the experience or feeling it caused. How did you get this [fill in relevant drug name from above]?"

Feeder questions from the special drugs module: "Earlier, the computer recorded that you have never used Methamphetamine, Desoxyn, or Methedrine."

"Why did you report earlier that you had never used Methamphetamine?"

SEE: "Core," "Methamphetamine Use," "Noncore," "Nonmedical Use of Psychotherapeutics," "Pain Reliever Use," "Psychotherapeutic Drugs," "Sedative Use," "Stimulant Use," and "Tranquilizer Use."

### **South Region**

The States included are those in the South Atlantic Division—Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, and West Virginia; the East South Central Division—Alabama, Kentucky, Mississippi, and Tennessee; and the West South Central Division—Arkansas, Louisiana, Oklahoma, and Texas.

SEE: "Geographic Division" and "Region."

### **Specialty Substance Use Treatment Facility**

Defined as drug or alcohol rehabilitation facilities (inpatient or outpatient), hospitals (inpatient services only), and mental health centers.

SEE: "Need for Illicit Drug or Alcohol Use Treatment," "Self-Help Group," and "Treatment for a Substance Use Problem."

## Stealing

Respondents were asked how many times during the past 12 months they had stolen or tried to steal anything worth more than \$50. Response alternatives were (1) 0 times, (2) 1 or 2 times, (3) 3 to 5 times, (4) 6 to 9 times, or (5) 10 or more times.

This item was asked of the 12 to 17 age group and of those aged 18 or older.

SEE: "Delinquent Behavior" and "Gang Fighting."

## Stimulant Use

Measures of nonmedical use of prescription-type stimulants in the respondent's lifetime, the past year, and the past month were developed from responses to the core questions about recency of use: "How long has it been since you last used any prescription stimulant that was not prescribed for you or that you took only for the experience or feeling it caused?" and "How long has it been since you last used Methamphetamine, Desoxyn, or Methedrine?" In this report, estimates for the 2006 and 2007 stimulant use measures included responses based on the noncore methamphetamine use items that were added in 2005 and 2006; estimates for 2002 through 2005 have been adjusted to make them comparable with estimates for 2006 and 2007 that include responses to the noncore methamphetamine items. However, measures of stimulant use do not include data from new noncore questions that were added to the survey in 2006 about the use of the prescription stimulant Adderall<sup>®</sup>. See Section B.4.7 of Appendix B for additional details.

Feeder question: "These next questions are about the use of drugs such as amphetamines that are known as stimulants, *uppers*, or *speed*. People sometimes take these drugs to lose weight, to stay awake, or for attention deficit disorders. We are not interested in the use of *over-the-counter* stimulants such as Dexatrim or No-Doz that can be bought in drug stores or grocery stores without a doctor's prescription. Card C shows pictures of some different kinds of prescription stimulants and lists the names of some others. These pictures show only pills, but we are interested in your use of any form of prescription stimulants that were not prescribed for you or that you took only for the experience or feeling it caused."

The following prescription stimulants were listed on Pill Card C (Stimulants): (1) Methamphetamine (crank, crystal, ice, or speed) (no picture), Desoxyn<sup>®</sup>, or Methedrine<sup>®</sup> (no picture); (2) Amphetamines (no picture), Bensedrine<sup>®</sup>, Biphetamine<sup>®</sup>, Fastin<sup>®</sup>, or Phentermine; (3) Ritalin<sup>®</sup> or Methylphenidate; (4) Cylert<sup>®</sup>; (5) Dexedrine<sup>®</sup>; (6) Dextroamphetamine (no picture); (7) Didrex<sup>®</sup>; (8)

Eskatrol<sup>®</sup>; (9) Ionamin<sup>®</sup>; (10); Mazanor<sup>®</sup>; (11) Obedrin-LA<sup>®</sup> (no picture); (12) Plegine<sup>®</sup>; (13) Preludin<sup>®</sup>; (14) Sanorex<sup>®</sup>; and (15) Tenuate<sup>®</sup>.

SEE: "Core," "Current Use," "Lifetime Use," "Methamphetamine Use," "Noncore," "Nonmedical Use of Psychotherapeutics," "Pain Reliever Use," "Past Month Use," "Past Year Use," "Pill Cards," "Prevalence," "Psychotherapeutic Drugs," "Recency of Use," "Sedative Use," "Source of Psychotherapeutic Drugs," and "Tranquilizer Use."

**Substance Use Treatment** SEE: "Treatment for a Substance Use Problem."

**Supplemental Security Income (SSI)**

Supplemental Security Income (SSI) is a governmental program that makes assistance payments to low-income, aged, blind, and disabled persons. In 2006 and 2007, a majority of respondents received two questions regarding SSI: (a) their personal receipt of SSI, and (b) whether another family member living in the household received cash assistance. The remaining respondents received a reduced set of income questions, including a single question about whether the respondent or another family member in the household received SSI. See Section B.4.8 of Appendix B for additional details.

NOTE: For youths aged 12 to 17 and those respondents who were unable to respond to the insurance or income questions, proxy responses were accepted from a household member identified as being better able to give the correct information about insurance and income.

SEE: "Welfare Assistance."

**Tobacco Product Use**

This measure indicates use of any tobacco product: cigarettes, chewing tobacco, snuff, cigars, and pipe tobacco. Tobacco product use in the past year includes past month pipe tobacco use. Tobacco product use in the past year does not include use of pipe tobacco more than 30 days ago but within 12 months of the interview because the survey did not capture this information. Measures of tobacco product use in the respondent's lifetime, the past year, or the past month also do not include use of cigars with marijuana in them (blunts).

SEE: "Blunts," "Cigar Use," "Cigarette Use," and "Smokeless Tobacco Use."

**Total Family Income**

SEE: "Family Income."

**Tranquilizer Use**

Measures of the nonmedical use of prescription-type tranquilizers in the respondent's lifetime, the past year, and the past month were developed from responses to the question about recency of use: "How long has it been since you last used any prescription tranquilizer that was not prescribed for you, or that you took only for the experience or feeling it caused?"

Feeder question: "These next questions ask about the use of tranquilizers. Tranquilizers are usually prescribed to relax people, to calm people down, to relieve anxiety, or to relax muscle spasms. Some people call tranquilizers *nerve pills*. Card B shows pictures of some different kinds of prescription tranquilizers. These pictures show only pills, but we are interested in your use of any form of prescription tranquilizers that were not prescribed for you, or that you took only for the experience or feeling it caused."

The following prescription tranquilizers were listed on Pill Card B (Tranquilizers): (1) Klonopin<sup>®</sup> or Clonazepam; (2) Xanax<sup>®</sup>, Alprazolam, Ativan<sup>®</sup>, or Lorazepam; (3) Valium<sup>®</sup> or Diazepam; (4) Atarax<sup>®</sup>; (5) BuSpar<sup>®</sup>; (6) Equanil<sup>®</sup>; (7) Flexeril<sup>®</sup>; (8) Librium<sup>®</sup>; (9) Limbitrol<sup>®</sup>; (10) Meproamate; (11) Miltown<sup>®</sup>; (12) Rohypnol<sup>®</sup>; (13) Serax<sup>®</sup>; (14) Soma<sup>®</sup>; (15) Tranxene<sup>®</sup>; and (16) Vistaril<sup>®</sup>.

SEE: "Current Use," "Lifetime Use," "Nonmedical Use of Psychotherapeutics," "Pain Reliever Use," "Past Month Use," "Past Year Use," "Pill Cards," "Prevalence," "Psychotherapeutic Drugs," "Recency of Use," "Sedative Use," "Source of Psychotherapeutic Drugs," and "Stimulant Use."

**Treatment for Depression**

Treatment for depression is defined as seeing or talking to a medical doctor or other professional or using prescription medication in the past year for depression.

SEE: "Major Depressive Episode."

**Treatment for Major Depressive Episode**

Treatment for major depressive episode (MDE) is defined as seeing or talking to a medical doctor or other professional or using prescription medication in the past year for depression.

SEE: "Major Depressive Episode."

**Treatment for a Substance Use Problem**

Respondents were asked if they had received treatment for illicit drug use, alcohol use, or both illicit drug and alcohol use in the past 12 months in any of the following locations: a hospital overnight as an inpatient, a residential drug or alcohol rehabilitation facility where they stayed overnight, a drug or alcohol rehabilitation facility as an outpatient, a mental health facility as an outpatient, an emergency room, a private doctor's office, prison or jail, a self-help group, or some other place.

SEE: "Alcohol Use," "Illicit Drugs," "Need for Illicit Drug or Alcohol Use Treatment," "Prevalence," "Self-Help Group," and "Specialty Substance Use Treatment Facility."

**Two or More Races**

Respondents were asked to report which racial group describes them. Response alternatives were (1) white, (2) black or African American, (3) American Indian or Alaska Native, (4) Native Hawaiian, (5) Other Pacific Islander, (6) Asian, and (7) Other. Respondents were allowed to choose more than one of these groups. Persons who chose both the "Native Hawaiian" and "Other Pacific Islander" categories (and no additional categories) were classified in a single category: Native Hawaiian or Other Pacific Islander. Otherwise, persons reporting two or more of the above groups and that they were not of Hispanic, Latino, or Spanish origin were included in a "Two or More Races" category. This category does not include respondents who reported more than one Asian subgroup but who reported "Asian" as their only race. Respondents reporting two or more races and reporting that they were of Hispanic, Latino, or Spanish origin were classified as Hispanic.

SEE: "Hispanic" and "Race/Ethnicity."

**Unmet Need for Mental Health Service**

Unmet need for mental health services is defined as a perceived need for mental health treatment in the past 12 months that was not received. This measure also includes persons who received some type of mental health service in the past 12 months, but reported a perceived need for additional services they did not receive.

Feeder question: "During the past 12 months, was there any time when you needed mental health treatment or counseling for yourself but didn't get it?"

SEE: "Mental Health Service Utilization" and "Prevalence."

**Welfare Assistance**

Household participation in one or more government (welfare) assistance programs during the prior calendar year was defined as one or more family members receiving Supplemental Security Income (SSI), food stamps, cash, or noncash assistance. SSI provides payments to low-income, aged, blind, and disabled persons. Food stamps are government-issued coupons used to purchase food. Cash assistance refers to cash payments through Temporary Assistance for Needy Families (TANF), welfare, or other public assistance. Noncash assistance refers to services, such as help getting a job, placement in an education or job-training program, or help with transportation, child care, or housing. In 2006 and 2007, a majority of respondents received multiple questions for each of these forms of government assistance: (a) their personal receipt of these forms of assistance, and (b) whether another family member living in the household received these forms of assistance. The remaining respondents received a reduced set of income questions, including single questions for each of these forms of assistance that applied to the respondent or any other family members in the household. See Section B.4.8 of Appendix B for additional details.

NOTE: For youths aged 12 to 17 and those respondents who were unable to respond to the insurance or income questions, proxy responses were accepted from a household member identified as being better able to give the correct information about insurance and income.

SEE: "Cash Assistance," "Food Stamps," "Noncash Assistance," and "Supplemental Security Income (SSI)."

**West Region**

The States included are those in the Mountain Division—Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming; and the Pacific Division—Alaska, California, Hawaii, Oregon, and Washington.

SEE: "Geographic Division" and "Region."

**White**

White, not of Hispanic, Spanish, or Latino origin; does not include respondents reporting two or more races. (Respondents reporting that they were white and of Hispanic, Latino, or Spanish origin were classified as Hispanic.)

SEE: "Hispanic" and "Race/Ethnicity."



# Appendix D: Other Sources of Data

A variety of surveys and data systems other than the National Survey on Drug Use and Health (NSDUH) collect data on substance use and mental health problems. It is useful to consider the results of these other studies when discussing NSDUH data. This appendix briefly describes several of these other data systems and presents selected comparisons with NSDUH results. In addition, this appendix describes surveys of populations not covered by NSDUH. Survey descriptions are presented in alphabetical order.

When considering the information presented here, it is important to understand the methodological differences between the different surveys and the impact that these differences could have on estimates of the presence of substance use and mental health problems. Several studies have compared NSDUH estimates with estimates from other studies and have evaluated how differences may have been affected by differences in survey methodology (Gfroerer, Wright, & Kopstein, 1997b; Grucza, Abbacchi, Przybeck, & Gfroerer, 2007; Hennessy & Ginsberg, 2001; Miller et al., 2004). These comparisons suggest that the goals and approaches of surveys are often different, making comparisons between them difficult. Some methodological differences that have been identified as affecting comparisons include populations covered, sampling methods, modes of data collection, questionnaires, and estimation methods.

## D.1 Other National Surveys of Substance Use and Mental Health

### Behavioral Risk Factor Surveillance System (BRFSS)

The Behavioral Risk Factor Surveillance System (BRFSS) is an annual, State-based telephone survey of the civilian, noninstitutionalized adult population aged 18 or older and is sponsored by the Centers for Disease Control and Prevention (CDC). Since 2002, BRFSS has collected data from all 50 States, the District of Columbia, Puerto Rico, the U.S. Virgin Islands, and Guam using a computer-assisted telephone interviewing (CATI) design. BRFSS collects information on access to health care, health status indicators, health risk behaviors (including cigarette and alcohol use), and the use of clinical preventive services. More than 350,000 adults are interviewed each year. National data are calculated using a median score across States.

NSDUH has shown consistently higher rates of binge drinking than BRFSS. The use of audio computer-assisted self-interviewing (ACASI) in NSDUH, which is considered to be more anonymous and yields higher reporting of sensitive behaviors, was offered as an explanation for the lower rates in BRFSS (Miller et al., 2004). For further details about BRFSS, see the CDC website at <http://www.cdc.gov/brfss/> (CDC, 2008a).

### Epidemiologic Catchment Area Survey (ECA)

The Epidemiologic Catchment Area (ECA) Study (1981-83) was the first survey to administer a structured psychiatric interview and provide population-based estimates of psychiatric disorders. Prevalences were estimated by collecting data from households and group quarters (e.g., prisons, nursing homes, mental hospitals) in five local catchment areas (Baltimore, Los Angeles, New Haven, North Carolina, and St. Louis) that had been previously designated as

Community Mental Health Center catchment areas. There were three waves of data collection with 20,861 respondents; the first and third waves were interviewer-assisted personal interviews, and the second wave was a telephone interview conducted with household participants only (Eaton et al., 1984). The ECA utilized the Diagnostic Interview Schedule (DIS), a structured clinical instrument that can be used by nonclinically trained interviewers to generate diagnoses of psychiatric and substance use disorders using the *Diagnostic and Statistical Manual of Mental Disorders*, third edition (DSM-III) (American Psychiatric Association [APA], 1980). A supplemental sample of institutional settings, such as nursing homes, psychiatric hospitals, and prisons, also was included to capture those respondents with a high probability of having a mental disorder. For further details about the ECA, see <http://webapp.icpsr.umich.edu/cocoon/ICPSR-STUDY/06153.xml> (National Institute of Mental Health [NIMH], 1992-1994).

### **Harvard School of Public Health's College Alcohol Study (CAS)**

The Harvard School of Public Health's College Alcohol Study (CAS) is an ongoing survey of students at 4-year colleges and universities in 40 States. The study surveyed a random sample of students at the same colleges in 1993, 1997, 1999, and 2001. The schools and students were selected to provide nationally representative samples of schools and students. In 1993, a national sample of 195 colleges was selected from the American Council on Education's list of accredited 4-year colleges by using probability proportionate to size of enrollment; of the 195 colleges, 140 agreed to participate, for a school-level response rate of 72 percent (Wechsler, Dowdall, Davenport, & Castillo, 1995). Of these 140 colleges, 130 participated in 1997, 128 in 1999, and 120 in 2001. Student-level response rates to the two-stage mail survey were 70 percent in 1993, 59 percent in 1997 and 1999, and 52 percent in 2001. The researchers provided a short survey to nonrespondents in order to better weight the data (Wechsler et al., 2002). For further details, see the CAS website at <http://www.hsph.harvard.edu/cas/About/index.html> (Harvard School of Public Health, 2005).

### **Monitoring the Future (MTF)**

The Monitoring the Future (MTF) study is a national survey that tracks substance use trends and related attitudes among America's adolescents. This survey is conducted annually by the Institute for Social Research at the University of Michigan through a grant awarded by the National Institute on Drug Abuse (NIDA). The MTF and NSDUH are the Federal Government's largest and primary tools for tracking youth substance use. The MTF is composed of three substudies: (a) an annual survey of high school seniors initiated in 1975; (b) ongoing panel studies of representative samples from each graduating class that have been conducted by mail since 1976; and (c) annual surveys of 8th and 10th graders initiated in 1991. In the spring, students complete a self-administered, machine-readable questionnaire during a regular class period. An average of about 400 public and private schools and about 50,000 students are sampled annually. The latest MTF was conducted in 2007 (Johnston, O'Malley, Bachman, & Schulenberg, 2008a).

Comparisons between the MTF estimates and estimates based on students sampled in NSDUH generally have shown NSDUH substance use prevalence levels to be lower than MTF

estimates (Table D.1).<sup>18</sup> The lower prevalences in NSDUH may be due to more underreporting in the household setting as compared with the MTF school setting. However, MTF does not survey dropouts, a group that NSDUH has shown to have higher rates of illicit drug use (Gfroerer et al., 1997b). Both surveys showed that rates of substance use were generally stable between 2006 and 2007. For further details, see the MTF website at <http://www.monitoringthefuture.org/> (University of Michigan, 2008).

### **National Comorbidity Survey (NCS)**

The National Comorbidity Survey (NCS) was sponsored by NIMH, NIDA, and the W.T. Grant Foundation. It was designed to measure the prevalence of the illnesses in DSM-III-R (APA, 1987) in the general population. The first wave of the NCS was a household survey collecting data from 8,098 respondents aged 15 to 54. These responses were weighted to produce nationally representative estimates. A random sample of 4,414 respondents also were administered an additional module that captured information on nicotine dependence. The interviews took place between 1990 and 1992. The NCS used a modified version of the Composite International Diagnostic Interview (the UM-CIDI) to generate DSM-III-R diagnoses.

There have been several recent extensions to the original NCS, including a 10-year follow-up of the baseline sample (NCS-II), a replication study conducted in 2001 and 2002 with a newly recruited nationally representative sample of 9,282 respondents aged 18 or older (NCS-R), and an adolescent sample with a targeted recruitment of more than 10,000 adolescents (NCS-A) along with their parents and teachers.

The NCS-R used an updated version of the CIDI that was designed to capture diagnoses of substance abuse or dependence using current DSM-IV criteria (APA, 1994). It should be noted that in several recent NCS-R studies (Kessler et al., 2005a; Kessler, Chiu, Demler, Merikangas, & Walters, 2005b), the diagnosis for abuse also includes those who meet the diagnosis for dependence. In contrast, NSDUH follows DSM-IV guidelines and measures abuse and dependence separately. To make the NCS definition of abuse comparable with that of NSDUH, the rate for dependence must be subtracted from the rate for abuse. Rates of alcohol dependence or abuse and rates of illicit drug dependence or abuse were generally lower in NCS-R than NSDUH. The NCS also produces nationally representative data on psychiatric conditions (Kessler et al., 2003a, 2003b). For further details, see the NCS website at <http://www.hcp.med.harvard.edu/ncs/> (Harvard School of Medicine, 2005).

### **National Health Interview Survey (NHIS)**

The National Health Interview Survey (NHIS) is a continuing nationwide sample survey that collects data using personal household interviews through an interviewer-administered computer-assisted personal interviewing (CAPI) system. The survey is sponsored by the National Center for Health Statistics (NCHS) and provides national estimates of selected health measures, including cigarette smoking and alcohol use among persons aged 18 or older. NHIS data have been collected since 1957. In 2006, data were derived from three core components of the survey: the Family Core, which collects information from all family members in each household; the

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<sup>18</sup> To examine estimates that are comparable with MTF data, NSDUH estimates presented in Table D.1 are based on data collected in the first 6 months of the survey year and are subset to ages 12 to 20.

Sample Adult Core, which collects information from one adult aged 18 or older in each family; and the Sample Child Core, which collects information from one child in each family with a child. In 2006, NHIS data were based on 53,043 persons in the Family Core, 17,040 adults in the Sample Adult Core, and 6,920 children in the Sample Child Core (CDC, 2008b). For further details about the NHIS, see the CDC website at <http://www.cdc.gov/nchs/nhis.htm> (CDC, 2008b).

### **National Longitudinal Alcohol Epidemiologic Survey (NLAES) and National Epidemiologic Survey on Alcohol and Related Conditions (NESARC)**

The National Longitudinal Alcohol Epidemiologic Survey (NLAES) was conducted in 1991 and 1992 by the U.S. Bureau of the Census for the National Institute on Alcohol Abuse and Alcoholism (NIAAA). Face-to-face, interviewer-administered interviews were conducted with 42,862 respondents aged 18 or older in the contiguous United States. Despite the survey name, the design was cross-sectional.

The National Epidemiologic Survey on Alcohol and Related Conditions (NESARC) was conducted in 2001 and 2002, also by the U.S. Bureau of the Census for NIAAA, using a computerized interviewer-administered interview. The NESARC sample was designed to make inferences for persons aged 18 or older in the civilian, noninstitutionalized population of the United States, including Alaska, Hawaii, and the District of Columbia, and including persons living in noninstitutional group quarters. NESARC was designed to be a longitudinal survey. The first wave was conducted in 2001 and 2002, with a final sample size of 43,093 respondents aged 18 or older. The second wave was conducted from 2004 to 2005 (Grant & Dawson, 2006).

The study contains comprehensive assessments of drug use, dependence, and abuse and associated mental disorders. NESARC included an extensive set of questions, based on DSM-IV criteria (APA, 1994), designed to assess the presence of symptoms of alcohol and drug dependence and abuse in persons' lifetimes and during the prior 12 months. In addition, DSM-IV diagnoses of major mental disorders were generated using the Alcohol Use Disorder and Associated Disabilities Interview Schedule-version 4 (AUDADIS-IV), which is a structured diagnostic interview that captures major DSM-IV axis I and axis II disorders.

Recent research indicates that (a) prevalence estimates for substance use were generally higher in NSDUH than in NESARC; (b) rates of past year substance use disorder (SUD) for cocaine and heroin use were higher in NSDUH than in NESARC; (c) rates of past year SUD for use of alcohol, marijuana, and hallucinogens were similar between NSDUH and NESARC; and (d) prevalence estimates for past year SUD conditional on past year use were substantially lower in NSDUH for the use of marijuana, hallucinogens, and cocaine (Gruca et al., 2007). A number of methodological variables might have contributed to such discrepancies, including factors related to privacy and anonymity (NSDUH is self-administered, while NESARC is interviewer administered, which may have resulted in higher use estimates in NSDUH) and differences in SUD diagnostic instrumentation (which may have resulted in higher SUD prevalence among past year substance users in NESARC). For further details about NLAES or NESARC, see the NIAAA website at <http://www.nesarc.niaaa.nih.gov/> (NIAAA, 2008).

## **National Longitudinal Study of Adolescent Health (Add Health)**

The National Longitudinal Study of Adolescent Health (Add Health) was conducted to measure the effects of family, peer group, school, neighborhood, religious institution, and community influences on health risks, such as tobacco, drug, and alcohol use. Initiated in 1994 under a grant from the National Institute of Child Health and Human Development (NICHD) with cofunding from 17 other Federal agencies, Add Health is the largest, most comprehensive survey of adolescents ever undertaken. Data at the individual, family, school, and community levels were collected in two waves between 1994 and 1996. In Wave 1 (conducted in 1994-95), roughly 90,000 students from grades 7 through 12 at 144 schools around the United States answered brief, machine-readable questionnaires during a regular class period. Interviews also were conducted with about 20,000 students and their parents in the students' homes using a combined CAPI and ACASI design. In Wave 2, students were interviewed a second time in their homes. In 2001 and 2002, 4,882 of the original Add Health respondents, now aged 18 to 26, were re-interviewed in a third wave to investigate the influence that adolescence has on young adulthood. Identifying information was obtained from participants in order to track them over time. For further details, see the Add Health website at <http://www.cpc.unc.edu/addhealth> (University of North Carolina, Carolina Population Center, 2008).

## **National Survey of Parents and Youth (NSPY)**

The National Survey of Parents and Youth (NSPY) was sponsored by NIDA to evaluate the Office of National Drug Control Policy's (ONDCP's) National Youth Anti-Drug Media Campaign. NSPY was a national, household-based survey of youths aged 9 to 18 years old and their parents. Data were collected using a combination of computer-assisted interviewing technologies, including CAPI for nonsensitive portions of the survey and ACASI for the sensitive portions.

NSPY employed a panel survey design with nine waves of data collection for youths between November 1999 and June 2004. Wave 1 included 3,298 youths and 2,284 of their parents, who were interviewed between November 1999 and May 2000. Wave 9 was conducted between January and June 2004 with 3,142 youths and 2,381 parents.

Data from NSPY and NSDUH produced similar estimates of marijuana use for youths. For example, Wave 9 of NSPY data indicated that 16.7 percent of youths aged 12 to 18 had used marijuana in the past year, and the 2004 NSDUH yielded an estimate of 17.1 percent among this age group for this time period (Orwin et al., 2006). One explanation for the similarity in estimates is that both surveys used ACASI. For further details, see the NSPY Center website at <https://www.nspycenter.com/default.asp> (AMSAQ, Inc., & Westat, 2008).

## **Partnership Attitude Tracking Study (PATS)**

The Partnership Attitude Tracking Study (PATS), an annual national research study that tracks attitudes about illegal drugs, is sponsored by the Partnership for a Drug-Free America (PDFA). PATS consists of two nationally projectable samples—a teenage sample for students in grades 7 through 12 and a parent sample. Adolescents complete self-administered, machine-readable questionnaires during a regular class period with their teacher remaining in the room. In



2002, PATS included questions on prescription drug abuse, and in 2005, it included questions on use of over-the-counter cough medicine to get high. The teenage sample is administered to approximately 7,000 youths annually. The latest PATS teenage survey was conducted in 2005 and a parent survey in 2006 (PDFA, 2008).

In general, NSDUH estimates of prevalence for youths aged 12 to 17 are lower than PATS estimates for youths in grades 7 through 12. The differences in prevalence estimates are likely to be due to the different study designs. The youth portion of PATS is a school-based survey, which may elicit more reporting of sensitive behaviors than the home-based NSDUH. In addition, the PATS survey is conducted with a sample of students in the 7th through 12th grades, which is a slightly older sample than that of the NSDUH 12- to 17-year-old sample (PDFA, 2006). For further details about PATS, see the PDFA website at <http://www.drugfree.org/> (PDFA, 2008).

### **Youth Risk Behavior Survey (YRBS)**

The Youth Risk Behavior Survey (YRBS) is a component of the CDC's Youth Risk Behavior Surveillance System (YRBSS), which measures the prevalence of six priority health risk behavior categories: (a) behaviors that contribute to unintentional injuries and violence; (b) tobacco use; (c) alcohol and other drug use; (d) sexual behaviors that contribute to unintended pregnancy and sexually transmitted diseases (STDs), including human immunodeficiency virus (HIV) infections; (e) unhealthy dietary behaviors; and (f) physical inactivity. The YRBSS includes national, State, territorial, and local school-based surveys of high school students conducted every 2 years. The national school-based survey uses a three-stage cluster sample design to produce a nationally representative sample of students in grades 9 through 12 who attend public and private schools. The State and local surveys use a two-stage cluster sample design to produce representative samples of students in grades 9 through 12 in their jurisdictions. The YRBS is conducted during the spring, with students completing a self-administered, machine-readable questionnaire during a regular class period. The latest YRBS was conducted in 2007 (Eaton et al., 2008).

In general, the YRBS school-based survey has found higher rates of substance use for youths than those found in NSDUH (Table D.2). The lower prevalence rates in NSDUH are likely due to the differences in study design; specifically, the YRBS is school-based, which likely has resulted in higher rates of reported use as compared with the home-based NSDUH. For further details about the YRBS, see the CDC website at <http://www.cdc.gov/HealthyYouth/yrbs/index.htm> (CDC, 2008c).

## **D.2 Surveys of Populations Not Covered by NSDUH**

### **Department of Defense (DoD) Survey of Health Related Behaviors Among Active Duty Military Personnel**

The 2005 Department of Defense (DoD) Survey of Health Related Behaviors Among Active Duty Military Personnel was the 9th in a series of studies conducted since 1980. The sample consisted of 16,146 active-duty Armed Forces personnel worldwide who anonymously completed self-administered questionnaires that assessed substance use and other health

behaviors (Bray et al., 2006). In recent administrations of this survey, comparisons with NSDUH data have consistently shown that, even after accounting for demographic differences between the military and civilian populations, the military personnel had higher rates of heavy alcohol use than their civilian counterparts, similar rates of cigarette use, and lower rates of illicit drug use. For further details, see the DoD Lifestyle Assessment Program (DLAP) website at <http://dodwws.rti.org/index.cfm> (DoD & RTI International, 2008).

### **Survey of Inmates in State and Federal Correctional Facilities (SISCF)**

The Survey of Inmates in State and Federal Correctional Facilities (SISCF) is conducted by the Bureau of Justice Statistics (BJS) every 5 years, providing information on individual characteristics of prison inmates, current offenses and sentences, family background, prior drug and alcohol use and treatment, as well as other characteristics. The SISCF is the only national source of detailed information on criminal offenders, particularly special populations such as drug and alcohol users and offenders who have mental health problems. The latest administration of this survey was conducted in 2004. Inmates were from a universe of 1,585 facilities. Systematic random sampling was used to select the inmates for computer-assisted personal interviewing. The final numbers interviewed were 14,999 State prisoners and 3,686 Federal prisoners.

Prior drug use among State prisoners remained stable on all measures between 1997 and 2004, while the percentage of Federal inmates who reported prior drug use rose on most measures (Mumola & Karberg, 2006). For the first time, half of Federal inmates reported drug use in the month before their offense. In 2004, measures of drug dependence and abuse based on criteria in DSM-IV (APA, 1994) were introduced. Fifty-three percent of the State and 45 percent of Federal prisoners met the DSM-IV criteria for drug abuse or dependence. The survey results indicate substantially higher rates of drug use among State and Federal prisoners as compared with NSDUH's rates for the general household population. For further details about the SISCF, see <http://www.icpsr.umich.edu/NACJD/sisfcf/> (BJS, 2008).

**Table D.1 Use of Specific Substances in Lifetime, Past Year, and Past Month among 8th, 10th, and 12th Graders in NSDUH and MTF: Percentages, 2006 and 2007**

Drug/Current Grade Level	SURVEY/TIME PERIOD											
	MTF						NSDUH (January – June)					
	Lifetime		Past Year		Past Month		Lifetime		Past Year		Past Month	
	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007
<b>Marijuana</b>												
8th grade	15.7	14.2	11.7 <sup>a</sup>	10.3	6.5	5.7	8.7	8.9	6.9	6.9	3.3	3.6
10th grade	31.8	31.0	25.2	24.6	14.2	14.2	25.8	22.5	20.3	18.3	10.1	10.5
12th grade	42.3	41.8	31.5	31.7	18.3	18.8	39.7	36.3	27.2	25.3	14.4	14.5
<b>Cocaine</b>												
8th grade	3.4	3.1	2.0	2.0	1.0	0.9	0.6	0.8	0.3	0.7	0.1	0.2
10th grade	4.8	5.3	3.2	3.4	1.5	1.3	2.8	2.6	2.1	2.1	0.7	0.5
12th grade	8.5	7.8	5.7	5.2	2.5 <sup>a</sup>	2.0	7.5	5.7	5.2	3.9	1.9	0.9
<b>Inhalants</b>												
8th grade	16.1	15.6	9.1	8.3	4.1	3.9	11.7	12.0	4.9	6.0	2.0	2.1
10th grade	13.3	13.6	6.5	6.6	2.3	2.5	11.5	10.7	4.5	4.3	1.5	1.4
12th grade	11.1	10.5	4.5	3.7	1.5	1.2	10.3	8.2	3.3	2.3	0.6	0.3
<b>Cigarettes</b>												
8th grade	24.6 <sup>b</sup>	22.1	--	--	8.7 <sup>b</sup>	7.1	18.2	17.1	10.6	10.0	4.9	5.4
10th grade	36.1	34.6	--	--	14.5	14.0	35.5	33.9	23.6	22.1	15.6	13.5
12th grade	47.1	46.2	--	--	21.6	21.6	49.4 <sup>a</sup>	43.3	36.7 <sup>a</sup>	30.8	25.8 <sup>a</sup>	21.0
<b>Alcohol</b>												
8th grade	40.5	38.9	33.6	31.8	17.2	15.9	29.9	28.2	22.6	20.9	9.1	8.7
10th grade	61.5	61.7	55.8	56.3	33.8	33.4	55.5	54.4	46.7	45.4	23.6	21.9
12th grade	72.7	72.2	66.5	66.4	45.3	44.4	72.1	70.0	64.0	61.2	38.7	38.1

-- Not available.

NOTE: NSDUH data have been subset to persons aged 12 to 20 to be more comparable with MTF data.

<sup>a</sup> Difference between estimate and 2007 estimate is statistically significant at the .05 level.

<sup>b</sup> Difference between estimate and 2007 estimate is statistically significant at the .01 level.

MTF = Monitoring the Future.

Sources: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006 and 2007 (January-June).  
The Monitoring the Future Study, University of Michigan, 2006 and 2007.



**Table D.2 Lifetime and Past Month Substance Use among Students in Grades 9 to 12 in YRBS and NSDUH: 2005 and 2007**

Substance/ Period of Use	YRBS		NSDUH (January – June)	
	2005	2007	2005	2007
<b>Marijuana</b>				
Lifetime Use	38.4	38.1	28.2	26.6
Past Month Use	20.2	19.7	11.2	10.9
<b>Cocaine</b>				
Lifetime Use	7.6	7.2	3.9	4.1
Past Month Use	3.4	3.3	0.8	0.6
<b>Inhalants</b>				
Lifetime Use	12.4	13.3	12.2	10.8
Past Month Use	--	--	1.0	1.1
<b>Cigarettes</b>				
Lifetime Use	54.3	50.3	39.3	35.9
Past Month Use	23.0	20.0	17.4	16.0
<b>Alcohol</b>				
Lifetime Use	74.3	75.0	58.0	57.9
Past Month Use	43.3	44.7	26.2	26.6

YRBS = Youth Risk Behavior Survey.

-- Not available.

Sources: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, January-June for 2005 and 2007.  
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# **Appendix F: Sample Size and Population Tables**

**Table F.1 Survey Sample Size for Respondents Aged 12 or Older, by Gender and Detailed Age Category: 2006 and 2007**

Age Category	Total		GENDER			
			Male		Female	
	2006	2007	2006	2007	2006	2007
<b>TOTAL</b>	67,802	67,870	32,713	32,796	35,089	35,074
12	3,570	3,540	1,777	1,785	1,793	1,755
13	3,838	3,766	2,002	1,933	1,836	1,833
14	3,905	3,716	2,062	1,950	1,843	1,766
15	3,984	3,829	2,024	1,958	1,960	1,871
16	3,892	3,868	1,982	2,001	1,910	1,867
17	3,682	3,714	1,871	1,897	1,811	1,817
18	3,055	3,178	1,573	1,632	1,482	1,546
19	2,754	2,850	1,366	1,399	1,388	1,451
20	2,640	2,714	1,230	1,296	1,410	1,418
21	2,830	2,711	1,329	1,291	1,501	1,420
22	2,653	2,642	1,236	1,273	1,417	1,369
23	2,717	2,721	1,267	1,243	1,450	1,478
24	2,684	2,719	1,237	1,279	1,447	1,440
25	2,615	2,652	1,184	1,232	1,431	1,420
26-29	3,188	3,308	1,533	1,581	1,655	1,727
30-34	3,452	3,600	1,621	1,697	1,831	1,903
35-39	3,022	3,192	1,396	1,448	1,626	1,744
40-44	3,164	3,252	1,436	1,479	1,728	1,773
45-49	3,211	3,532	1,445	1,565	1,766	1,967
50-54	1,698	1,575	787	737	911	838
55-59	1,476	1,337	696	602	780	735
60-64	1,107	1,028	495	434	612	594
65 or Older	2,665	2,426	1,164	1,084	1,501	1,342

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006 and 2007.

**Table F.2 Numbers (in Thousands) of Persons Aged 12 or Older, by Gender and Detailed Age Category: 2006 and 2007**

Age Category	Total		GENDER			
			Male		Female	
	2006	2007	2006	2007	2006	2007
<b>TOTAL</b>	246,022	247,845	119,362	120,265	126,659	127,581
12	3,908	4,017	1,901	2,019	2,007	1,999
13	4,144	4,117	2,194	2,081	1,951	2,036
14	4,279	4,133	2,280	2,164	1,999	1,969
15	4,541	4,387	2,289	2,202	2,252	2,185
16	4,331	4,451	2,159	2,305	2,172	2,147
17	4,189	4,135	2,147	2,120	2,042	2,015
18	4,589	4,767	2,493	2,558	2,095	2,208
19	4,176	4,383	2,235	2,207	1,941	2,175
20	4,028	4,085	2,002	2,071	2,027	2,014
21	4,293	4,088	2,155	2,053	2,138	2,035
22	3,950	3,791	1,970	1,922	1,981	1,868
23	3,947	3,956	1,928	1,911	2,019	2,045
24	3,921	3,939	1,895	1,943	2,026	1,996
25	3,836	3,723	1,818	1,816	2,019	1,908
26-29	16,495	16,402	8,110	8,206	8,385	8,196
30-34	18,615	18,898	9,375	9,376	9,240	9,522
35-39	20,901	21,062	10,258	10,428	10,643	10,634
40-44	22,381	21,211	10,949	10,574	11,432	10,637
45-49	22,030	22,571	10,920	10,901	11,111	11,669
50-54	20,879	21,724	9,996	10,921	10,883	10,803
55-59	17,504	18,408	8,732	8,546	8,772	9,862
60-64	13,432	13,295	6,331	6,381	7,101	6,915
65 or Older	35,653	36,301	15,229	15,559	20,424	20,742

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006 and 2007.

**Table F.3 Survey Sample Size for Respondents Aged 12 or Older, by Age Group and Demographic Characteristics: 2006 and 2007**

Demographic Characteristic	Total		AGE GROUP					
			12-17		18-25		26 or Older	
	2006	2007	2006	2007	2006	2007	2006	2007
<b>TOTAL</b>	67,802	67,870	22,871	22,433	21,948	22,187	22,983	23,250
<b>GENDER</b>								
Male	32,713	32,796	11,718	11,524	10,422	10,645	10,573	10,627
Female	35,089	35,074	11,153	10,909	11,526	11,542	12,410	12,623
<b>HISPANIC ORIGIN AND RACE</b>								
Not Hispanic or Latino	57,844	57,571	19,150	18,636	18,487	18,532	20,207	20,403
White	44,759	44,230	14,251	13,710	14,009	14,077	16,499	16,443
Black or African American	8,207	8,071	3,123	3,015	2,810	2,670	2,274	2,386
American Indian or Alaska Native	874	909	291	335	313	291	270	283
Native Hawaiian or Other Pacific Islander	305	269	96	84	123	103	86	82
Asian	1,956	2,217	586	645	693	787	677	785
Two or More Races	1,743	1,875	803	847	539	604	401	424
Hispanic or Latino	9,958	10,299	3,721	3,797	3,461	3,655	2,776	2,847
<b>GENDER/RACE/HISPANIC ORIGIN</b>								
Male, White, Not Hispanic	21,646	21,396	7,310	7,059	6,733	6,797	7,603	7,540
Female, White, Not Hispanic	23,113	22,834	6,941	6,651	7,276	7,280	8,896	8,903
Male, Black, Not Hispanic	3,780	3,642	1,581	1,505	1,227	1,164	972	973
Female, Black, Not Hispanic	4,427	4,429	1,542	1,510	1,583	1,506	1,302	1,413
Male, Hispanic	4,894	5,146	1,908	1,971	1,662	1,801	1,324	1,374
Female, Hispanic	5,064	5,153	1,813	1,826	1,799	1,854	1,452	1,473
<b>EDUCATION<sup>1</sup></b>								
< High School	7,741	7,710	N/A	N/A	4,291	4,326	3,450	3,384
High School Graduate	14,833	14,767	N/A	N/A	7,738	7,755	7,095	7,012
Some College	12,885	13,134	N/A	N/A	7,103	7,177	5,782	5,957
College Graduate	9,472	9,826	N/A	N/A	2,816	2,929	6,656	6,897
<b>CURRENT EMPLOYMENT<sup>1</sup></b>								
Full-Time	24,780	25,044	N/A	N/A	10,633	10,526	14,147	14,518
Part-Time	8,162	8,287	N/A	N/A	5,494	5,619	2,668	2,668
Unemployed	2,290	2,385	N/A	N/A	1,643	1,738	647	647
Other <sup>2</sup>	9,699	9,721	N/A	N/A	4,178	4,304	5,521	5,417

N/A: Not applicable.

<sup>1</sup> Estimates for education and current employment are shown only for persons aged 18 or older.<sup>2</sup> The Other Employment category includes retired persons, disabled persons, homemakers, students, or other persons not in the labor force.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006 and 2007.

**Table F.4 Numbers (in Thousands) of Persons Aged 12 or Older, by Age Group and Demographic Characteristics: 2006 and 2007**

Demographic Characteristic	Total		AGE GROUP					
			12-17		18-25		26 or Older	
	2006	2007	2006	2007	2006	2007	2006	2007
<b>TOTAL</b>	246,022	247,845	25,392	25,241	32,740	32,731	187,890	189,873
<b>GENDER</b>								
Male	119,362	120,265	12,969	12,891	16,494	16,481	89,899	90,893
Female	126,659	127,581	12,423	12,351	16,246	16,249	97,991	98,981
<b>HISPANIC ORIGIN AND RACE</b>								
Not Hispanic or Latino	212,600	213,595	20,836	20,574	26,912	26,942	164,851	166,079
White	168,390	169,048	15,245	15,053	20,186	20,231	132,959	133,765
Black or African American	29,112	29,235	3,895	3,848	4,486	4,519	20,731	20,868
American Indian or Alaska Native	1,232	1,267	136	166	181	168	915	933
Native Hawaiian or Other Pacific Islander	939	708	115	70	181	136	643	502
Asian	10,291	10,600	1,031	1,018	1,531	1,446	7,730	8,136
Two or More Races	2,635	2,736	413	419	347	442	1,874	1,876
Hispanic or Latino	33,422	34,250	4,556	4,667	5,827	5,789	23,038	23,794
<b>GENDER/RACE/HISPANIC ORIGIN</b>								
Male, White, Not Hispanic	81,759	82,096	7,787	7,710	10,138	10,206	63,833	64,180
Female, White, Not Hispanic	86,631	86,952	7,458	7,343	10,048	10,025	69,126	69,585
Male, Black, Not Hispanic	13,200	13,260	2,004	1,944	2,178	2,152	9,018	9,164
Female, Black, Not Hispanic	15,912	15,975	1,891	1,904	2,309	2,367	11,712	11,704
Male, Hispanic	17,175	17,585	2,327	2,384	3,089	3,039	11,759	12,163
Female, Hispanic	16,247	16,665	2,229	2,284	2,739	2,750	11,280	11,631
<b>EDUCATION<sup>1</sup></b>								
< High School	36,651	36,336	N/A	N/A	6,521	6,217	30,130	30,119
High School Graduate	69,100	68,151	N/A	N/A	11,269	11,136	57,830	57,014
Some College	55,259	57,465	N/A	N/A	10,619	10,960	44,640	46,505
College Graduate	59,620	60,653	N/A	N/A	4,331	4,418	55,289	56,235
<b>CURRENT EMPLOYMENT<sup>1</sup></b>								
Full-Time	121,576	121,464	N/A	N/A	15,778	15,330	105,798	106,134
Part-Time	28,890	29,509	N/A	N/A	8,277	8,423	20,612	21,086
Unemployed	7,055	7,102	N/A	N/A	2,494	2,613	4,560	4,490
Other <sup>2</sup>	63,109	64,529	N/A	N/A	6,190	6,365	56,919	58,164

N/A: Not applicable.

<sup>1</sup> Estimates for education and current employment are shown only for persons aged 18 or older.

<sup>2</sup> The Other Employment category includes retired persons, disabled persons, homemakers, students, or other persons not in the labor force.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006 and 2007.

**Table F.5 Survey Sample Size for Respondents Aged 12 or Older, by Age Group and Geographic Characteristics: 2006 and 2007**

Geographic Characteristic	Total		AGE GROUP					
			12-17		18-25		26 or Older	
	2006	2007	2006	2007	2006	2007	2006	2007
<b>TOTAL</b>	67,802	67,870	22,871	22,433	21,948	22,187	22,983	23,250
<b>GEOGRAPHIC DIVISION</b>								
Northeast	13,499	13,642	4,612	4,488	4,324	4,486	4,563	4,668
New England	5,442	5,396	1,844	1,755	1,798	1,789	1,800	1,852
Middle Atlantic	8,057	8,246	2,768	2,733	2,526	2,697	2,763	2,816
Midwest	18,988	19,110	6,374	6,352	6,046	6,281	6,568	6,477
East North Central	12,649	12,715	4,303	4,131	3,960	4,308	4,386	4,276
West North Central	6,339	6,395	2,071	2,221	2,086	1,973	2,182	2,201
South	20,841	20,683	7,142	6,787	6,777	6,701	6,922	7,195
South Atlantic	11,032	10,779	3,770	3,431	3,615	3,541	3,647	3,807
East South Central	3,616	3,582	1,254	1,158	1,182	1,186	1,180	1,238
West South Central	6,193	6,322	2,118	2,198	1,980	1,974	2,095	2,150
West	14,474	14,435	4,743	4,806	4,801	4,719	4,930	4,910
Mountain	7,207	7,257	2,318	2,427	2,418	2,372	2,471	2,458
Pacific	7,267	7,178	2,425	2,379	2,383	2,347	2,459	2,452
<b>COUNTY TYPE</b>								
Large Metro	29,970	29,837	10,166	9,922	9,420	9,558	10,384	10,357
Small Metro	22,917	23,074	7,629	7,405	7,864	7,918	7,424	7,751
250K – 1 Mil. Pop.	14,501	14,927	4,901	4,850	4,933	5,068	4,667	5,009
< 250K Pop.	8,416	8,147	2,728	2,555	2,931	2,850	2,757	2,742
Nonmetro	14,915	14,959	5,076	5,106	4,664	4,711	5,175	5,142
Urbanized	5,965	6,248	1,980	2,052	1,981	2,159	2,004	2,037
Less Urbanized	7,080	7,057	2,418	2,435	2,160	2,176	2,502	2,446
Completely Rural	1,870	1,654	678	619	523	376	669	659

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006 and 2007.

**Table F.6 Numbers (in Thousands) of Persons Aged 12 or Older, by Age Group and Geographic Characteristics: 2006 and 2007**

Geographic Characteristic	Total		AGE GROUP					
			12-17		18-25		26 or Older	
	2006	2007	2006	2007	2006	2007	2006	2007
<b>TOTAL</b>	246,022	247,845	25,392	25,241	32,740	32,731	187,890	189,873
<b>GEOGRAPHIC DIVISION</b>								
Northeast	45,851	45,878	4,513	4,458	5,863	5,903	35,475	35,516
New England	12,023	12,025	1,165	1,157	1,526	1,528	9,332	9,341
Middle Atlantic	33,829	33,853	3,349	3,302	4,337	4,375	26,143	26,176
Midwest	54,700	54,799	5,671	5,615	7,384	7,288	41,645	41,896
East North Central	38,267	38,300	3,980	3,942	5,103	5,026	29,184	29,332
West North Central	16,433	16,499	1,690	1,673	2,281	2,262	12,461	12,564
South	88,991	89,940	9,152	9,129	11,682	11,687	68,157	69,123
South Atlantic	47,049	47,572	4,649	4,639	5,872	5,906	36,528	37,028
East South Central	14,614	14,734	1,486	1,483	1,894	1,869	11,234	11,382
West South Central	27,327	27,633	3,017	3,007	3,915	3,912	20,395	20,714
West	56,480	57,229	6,056	6,038	7,811	7,853	42,612	43,337
Mountain	16,878	17,275	1,793	1,807	2,356	2,356	12,729	13,111
Pacific	39,602	39,954	4,263	4,231	5,456	5,497	29,883	30,226
<b>COUNTY TYPE</b>								
Large Metro	132,920	132,423	13,676	13,669	17,489	17,280	101,755	101,474
Small Metro	71,040	74,375	7,606	7,400	10,183	10,368	53,250	56,607
250K – 1 Mil. Pop.	46,794	49,747	5,122	4,997	6,710	6,806	34,962	37,943
< 250K Pop.	24,246	24,628	2,484	2,402	3,473	3,561	18,288	18,664
Nonmetro	42,062	41,047	4,110	4,172	5,068	5,083	32,885	31,792
Urbanized	16,369	16,748	1,655	1,712	2,159	2,267	12,555	12,768
Less Urbanized	21,111	19,705	1,988	2,033	2,402	2,444	16,721	15,228
Completely Rural	4,583	4,594	467	427	507	371	3,609	3,796

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006 and 2007.





## **Appendix G: Selected Prevalence Tables**

**Table G.1 Types of Illicit Drug Use in Lifetime among Persons Aged 12 or Older: Numbers in Thousands, 2002-2007**

<b>Drug</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
<b>ILLCIT DRUGS<sup>1</sup></b>	108,255 <sup>b</sup>	110,205 <sup>b</sup>	110,057 <sup>b</sup>	112,085	111,774	114,275
Marijuana and Hashish	94,946 <sup>b</sup>	96,611 <sup>b</sup>	96,772 <sup>b</sup>	97,545 <sup>a</sup>	97,825 <sup>a</sup>	100,518
Cocaine	33,910 <sup>a</sup>	34,891	34,153	33,673 <sup>a</sup>	35,298	35,882
Crack	8,402	7,949	7,840	7,928	8,554	8,581
Heroin	3,668	3,744	3,145 <sup>a</sup>	3,534	3,785	3,780
Hallucinogens	34,314	34,363	34,333	33,728	35,281	34,215
LSD	24,516 <sup>a</sup>	24,424 <sup>a</sup>	23,398	22,433	23,346	22,656
PCP	7,418 <sup>b</sup>	7,107 <sup>a</sup>	6,762	6,603	6,618	6,140
Ecstasy	10,150 <sup>b</sup>	10,904 <sup>b</sup>	11,130 <sup>b</sup>	11,495	12,262	12,426
Inhalants	22,870	22,995	22,798	22,745	22,879	22,477
Nonmedical Use of Psychotherapeutics <sup>2,3</sup>	47,958 <sup>a</sup>	49,001	49,157	49,571	50,965	50,415
Pain Relievers	29,611 <sup>b</sup>	31,207 <sup>a</sup>	31,768	32,692	33,472	33,060
OxyContin <sup>®</sup>	1,924 <sup>b</sup>	2,832 <sup>b</sup>	3,072 <sup>b</sup>	3,481 <sup>b</sup>	4,098	4,354
Tranquilizers	19,267	20,220	19,852	21,041	21,303	20,208
Stimulants <sup>3</sup>	23,496 <sup>b</sup>	23,004 <sup>a</sup>	22,297	20,983	22,468	21,654
Methamphetamine <sup>3</sup>	15,365 <sup>b</sup>	15,139 <sup>b</sup>	14,512 <sup>b</sup>	12,663	14,206 <sup>a</sup>	13,065
Sedatives	9,960 <sup>b</sup>	9,510 <sup>a</sup>	9,891 <sup>b</sup>	8,982	8,822	8,396
<b>ILLCIT DRUGS OTHER THAN MARIJUANA<sup>1</sup></b>	70,300 <sup>b</sup>	71,128 <sup>a</sup>	70,657 <sup>a</sup>	71,822	72,906	73,494

\*Low precision; no estimate reported.

<sup>a</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.05 level.

<sup>b</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.01 level.

<sup>1</sup> Illicit Drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically. Illicit Drugs Other Than Marijuana include cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically. The estimates for Nonmedical Use of Psychotherapeutics, Stimulants, and Methamphetamine incorporated in these summary estimates do not include data from the methamphetamine items added in 2005 and 2006. See Section B.4.6 in Appendix B of the *Results from the 2007 National Survey on Drug Use and Health: National Findings*.

<sup>2</sup> Nonmedical use of prescription-type psychotherapeutics includes the nonmedical use of pain relievers, tranquilizers, stimulants, or sedatives and does not include over-the-counter drugs.

<sup>3</sup> Estimates of Nonmedical Use of Psychotherapeutics, Stimulants, and Methamphetamine in the designated rows include data from methamphetamine items added in 2005 and 2006 and are not comparable with estimates presented in prior NSDUH reports. For the 2002 through 2005 survey years, a Bernoulli stochastic imputation procedure was used to generate adjusted estimates comparable with the 2006 and 2007 estimates. See Section B.4.6 in Appendix B of the *Results from the 2007 National Survey on Drug Use and Health: National Findings*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2002, 2003, 2004, 2005, 2006, and 2007.

**Table G.2 Types of Illicit Drug Use in Lifetime among Persons Aged 12 or Older: Percentages, 2002-2007**

<b>Drug</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
<b>ILLICIT DRUGS<sup>1</sup></b>	46.0	46.4	45.8	46.1	45.4	46.1
Marijuana and Hashish	40.4	40.6	40.2	40.1	39.8	40.6
Cocaine	14.4	14.7	14.2	13.8	14.3	14.5
Crack	3.6	3.3	3.3	3.3	3.5	3.5
Heroin	1.6	1.6	1.3	1.5	1.5	1.5
Hallucinogens	14.6 <sup>a</sup>	14.5	14.3	13.9	14.3	13.8
LSD	10.4 <sup>b</sup>	10.3 <sup>b</sup>	9.7	9.2	9.5	9.1
PCP	3.2 <sup>b</sup>	3.0 <sup>b</sup>	2.8	2.7	2.7	2.5
Ecstasy	4.3 <sup>b</sup>	4.6 <sup>a</sup>	4.6 <sup>a</sup>	4.7	5.0	5.0
Inhalants	9.7 <sup>a</sup>	9.7 <sup>a</sup>	9.5	9.4	9.3	9.1
Nonmedical Use of Psychotherapeutics <sup>2,3</sup>	20.4	20.6	20.4	20.4	20.7	20.3
Pain Relievers	12.6 <sup>a</sup>	13.1	13.2	13.4	13.6	13.3
OxyContin <sup>®</sup>	0.8 <sup>b</sup>	1.2 <sup>b</sup>	1.3 <sup>b</sup>	1.4 <sup>b</sup>	1.7	1.8
Tranquilizers	8.2	8.5	8.3	8.7	8.7	8.2
Stimulants <sup>3</sup>	10.0 <sup>b</sup>	9.7 <sup>b</sup>	9.3	8.6	9.1	8.7
Methamphetamine <sup>3</sup>	6.5 <sup>b</sup>	6.4 <sup>b</sup>	6.0 <sup>b</sup>	5.2	5.8 <sup>a</sup>	5.3
Sedatives	4.2 <sup>b</sup>	4.0 <sup>b</sup>	4.1 <sup>b</sup>	3.7	3.6	3.4
<b>ILLICIT DRUGS OTHER THAN MARIJUANA<sup>1</sup></b>	29.9	29.9	29.4	29.5	29.6	29.7

\*Low precision; no estimate reported.

<sup>a</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.05 level.

<sup>b</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.01 level.

<sup>1</sup> Illicit Drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically. Illicit Drugs Other Than Marijuana include cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically. The estimates for Nonmedical Use of Psychotherapeutics, Stimulants, and Methamphetamine incorporated in these summary estimates do not include data from the methamphetamine items added in 2005 and 2006. See Section B.4.6 in Appendix B of the *Results from the 2007 National Survey on Drug Use and Health: National Findings*.

<sup>2</sup> Nonmedical use of prescription-type psychotherapeutics includes the nonmedical use of pain relievers, tranquilizers, stimulants, or sedatives and does not include over-the-counter drugs.

<sup>3</sup> Estimates of Nonmedical Use of Psychotherapeutics, Stimulants, and Methamphetamine in the designated rows include data from methamphetamine items added in 2005 and 2006 and are not comparable with estimates presented in prior NSDUH reports. For the 2002 through 2005 survey years, a Bernoulli stochastic imputation procedure was used to generate adjusted estimates comparable with the 2006 and 2007 estimates. See Section B.4.6 in Appendix B of the *Results from the 2007 National Survey on Drug Use and Health: National Findings*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2002, 2003, 2004, 2005, 2006, and 2007.

**Table G.3 Types of Illicit Drug Use in the Past Year among Persons Aged 12 or Older: Numbers in Thousands, 2002-2007**

<b>Drug</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
<b>ILLICIT DRUGS<sup>1</sup></b>	35,132	34,993	34,807	35,041	35,775	35,692
Marijuana and Hashish	25,755	25,231	25,451	25,375	25,378	25,085
Cocaine	5,902	5,908	5,658	5,523	6,069	5,738
Crack	1,554	1,406	1,304	1,381	1,479	1,451
Heroin	404	314	398	379	560 <sup>a</sup>	366
Hallucinogens	4,749 <sup>b</sup>	3,936	3,878	3,809	3,956	3,762
LSD	999 <sup>b</sup>	558	592	563	666	620
PCP	235 <sup>b</sup>	219 <sup>b</sup>	210 <sup>a</sup>	164	187	137
Ecstasy	3,167 <sup>b</sup>	2,119	1,915	1,960	2,130	2,132
Inhalants	2,084	2,075	2,255	2,187	2,218	2,080
Nonmedical Use of Psychotherapeutics <sup>2,3</sup>	14,795 <sup>b</sup>	15,163 <sup>a</sup>	14,849 <sup>b</sup>	15,346	16,482	16,280
Pain Relievers	10,992 <sup>b</sup>	11,671	11,256 <sup>b</sup>	11,815	12,649	12,466
OxyContin <sup>®</sup>	--	--	1,213	1,226	1,323	1,422
Tranquilizers	4,849	5,051	5,068	5,249	5,058	5,282
Stimulants <sup>3</sup>	3,380	3,031	3,254	3,088	3,791 <sup>b</sup>	2,998
Methamphetamine <sup>3</sup>	1,755 <sup>a</sup>	1,602	1,808 <sup>b</sup>	1,603	1,889 <sup>b</sup>	1,343
Sedatives	981	831	737	750	926	864
<b>ILLICIT DRUGS OTHER THAN MARIJUANA<sup>1</sup></b>	20,423	20,305	19,658 <sup>a</sup>	20,109	21,254	21,144

\*Low precision; no estimate reported.

-- Not available.

<sup>a</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.05 level.<sup>b</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.01 level.

<sup>1</sup> Illicit Drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically. Illicit Drugs Other Than Marijuana include cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically. The estimates for Nonmedical Use of Psychotherapeutics, Stimulants, and Methamphetamine incorporated in these summary estimates do not include data from the methamphetamine items added in 2005 and 2006. See Section B.4.6 in Appendix B of the *Results from the 2007 National Survey on Drug Use and Health: National Findings*.

<sup>2</sup> Nonmedical use of prescription-type psychotherapeutics includes the nonmedical use of pain relievers, tranquilizers, stimulants, or sedatives and does not include over-the-counter drugs.

<sup>3</sup> Estimates of Nonmedical Use of Psychotherapeutics, Stimulants, and Methamphetamine in the designated rows include data from methamphetamine items added in 2005 and 2006 and are not comparable with estimates presented in prior NSDUH reports. For the 2002 through 2005 survey years, a Bernoulli stochastic imputation procedure was used to generate adjusted estimates comparable with the 2006 and 2007 estimates. See Section B.4.6 in Appendix B of the *Results from the 2007 National Survey on Drug Use and Health: National Findings*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2002, 2003, 2004, 2005, 2006, and 2007.

**Table G.4 Types of Illicit Drug Use in the Past Year among Persons Aged 12 or Older: Percentages, 2002-2007**

Drug	2002	2003	2004	2005	2006	2007
<b>ILLCIT DRUGS<sup>1</sup></b>	14.9	14.7	14.5	14.4	14.5	14.4
Marijuana and Hashish	11.0 <sup>b</sup>	10.6	10.6	10.4	10.3	10.1
Cocaine	2.5	2.5	2.4	2.3	2.5	2.3
Crack	0.7	0.6	0.5	0.6	0.6	0.6
Heroin	0.2	0.1	0.2	0.2	0.2 <sup>a</sup>	0.1
Hallucinogens	2.0 <sup>b</sup>	1.7	1.6	1.6	1.6	1.5
LSD	0.4 <sup>b</sup>	0.2	0.2	0.2	0.3	0.3
PCP	0.1 <sup>b</sup>	0.1 <sup>b</sup>	0.1 <sup>a</sup>	0.1	0.1	0.1
Ecstasy	1.3 <sup>b</sup>	0.9	0.8	0.8	0.9	0.9
Inhalants	0.9	0.9	0.9	0.9	0.9	0.8
Nonmedical Use of Psychotherapeutics <sup>2,3</sup>	6.3	6.4	6.2	6.3	6.7	6.6
Pain Relievers	4.7 <sup>a</sup>	4.9	4.7 <sup>a</sup>	4.9	5.1	5.0
OxyContin <sup>®</sup>	--	--	0.5	0.5	0.5	0.6
Tranquilizers	2.1	2.1	2.1	2.2	2.1	2.1
Stimulants <sup>3</sup>	1.4 <sup>a</sup>	1.3	1.4	1.3	1.5 <sup>b</sup>	1.2
Methamphetamine <sup>3</sup>	0.7 <sup>b</sup>	0.7 <sup>a</sup>	0.8 <sup>b</sup>	0.7	0.8 <sup>b</sup>	0.5
Sedatives	0.4	0.3	0.3	0.3	0.4	0.3
<b>ILLCIT DRUGS OTHER THAN MARIJUANA<sup>1</sup></b>	8.7	8.5	8.2	8.3	8.6	8.5

\*Low precision; no estimate reported.

-- Not available.

<sup>a</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.05 level.

<sup>b</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.01 level.

<sup>1</sup> Illicit Drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically. Illicit Drugs Other Than Marijuana include cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically. The estimates for Nonmedical Use of Psychotherapeutics, Stimulants, and Methamphetamine incorporated in these summary estimates do not include data from the methamphetamine items added in 2005 and 2006. See Section B.4.6 in Appendix B of the *Results from the 2007 National Survey on Drug Use and Health: National Findings*.

<sup>2</sup> Nonmedical use of prescription-type psychotherapeutics includes the nonmedical use of pain relievers, tranquilizers, stimulants, or sedatives and does not include over-the-counter drugs.

<sup>3</sup> Estimates of Nonmedical Use of Psychotherapeutics, Stimulants, and Methamphetamine in the designated rows include data from methamphetamine items added in 2005 and 2006 and are not comparable with estimates presented in prior NSDUH reports. For the 2002 through 2005 survey years, a Bernoulli stochastic imputation procedure was used to generate adjusted estimates comparable with the 2006 and 2007 estimates. See Section B.4.6 in Appendix B of the *Results from the 2007 National Survey on Drug Use and Health: National Findings*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2002, 2003, 2004, 2005, 2006, and 2007.

**Table G.5 Types of Illicit Drug Use in the Past Month among Persons Aged 12 or Older: Numbers in Thousands, 2002-2007**

<b>Drug</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
<b>ILLICIT DRUGS<sup>1</sup></b>	19,522	19,470	19,071	19,720	20,357	19,857
Marijuana and Hashish	14,584	14,638	14,576	14,626	14,813	14,448
Cocaine	2,020	2,281	2,021	2,397	2,421	2,075
Crack	567	604	467	682	702	610
Heroin	166	119	166	136	338 <sup>a</sup>	153
Hallucinogens	1,196	1,042	929	1,088	1,006	996
LSD	112	133	141	104	130	145
PCP	58	56	49	48	30	41
Ecstasy	676 <sup>a</sup>	470	450	502	528	503
Inhalants	635	570	638	611	761	616
Nonmedical Use of Psychotherapeutics <sup>2,3</sup>	6,287	6,451	6,110 <sup>a</sup>	6,491	7,095	6,895
Pain Relievers	4,377 <sup>b</sup>	4,693	4,404 <sup>b</sup>	4,658	5,220	5,174
OxyContin <sup>®</sup>	--	--	325	334	276	369
Tranquilizers	1,804	1,830	1,616	1,817	1,766	1,835
Stimulants <sup>3</sup>	1,303	1,310	1,312	1,188	1,385 <sup>a</sup>	1,053
Methamphetamine <sup>3</sup>	683	726	706	628	731	529
Sedatives	436	294	265	272	385	346
<b>ILLICIT DRUGS OTHER THAN MARIJUANA<sup>1</sup></b>	8,777	8,849	8,247 <sup>a</sup>	8,963	9,615	9,270

\*Low precision; no estimate reported.

-- Not available.

<sup>a</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.05 level.<sup>b</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.01 level.

<sup>1</sup> Illicit Drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically. Illicit Drugs Other Than Marijuana include cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically. The estimates for Nonmedical Use of Psychotherapeutics, Stimulants, and Methamphetamine incorporated in these summary estimates do not include data from the methamphetamine items added in 2005 and 2006. See Section B.4.6 in Appendix B of the *Results from the 2007 National Survey on Drug Use and Health: National Findings*.

<sup>2</sup> Nonmedical use of prescription-type psychotherapeutics includes the nonmedical use of pain relievers, tranquilizers, stimulants, or sedatives and does not include over-the-counter drugs.

<sup>3</sup> Estimates of Nonmedical Use of Psychotherapeutics, Stimulants, and Methamphetamine in the designated rows include data from methamphetamine items added in 2005 and 2006 and are not comparable with estimates presented in prior NSDUH reports. For the 2002 through 2005 survey years, a Bernoulli stochastic imputation procedure was used to generate adjusted estimates comparable with the 2006 and 2007 estimates. See Section B.4.6 in Appendix B of the *Results from the 2007 National Survey on Drug Use and Health: National Findings*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2002, 2003, 2004, 2005, 2006, and 2007.

**Table G.6 Types of Illicit Drug Use in the Past Month among Persons Aged 12 or Older: Percentages, 2002-2007**

<b>Drug</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
<b>ILLICIT DRUGS<sup>1</sup></b>	8.3	8.2	7.9	8.1	8.3	8.0
Marijuana and Hashish	6.2	6.2	6.1	6.0	6.0	5.8
Cocaine	0.9	1.0	0.8	1.0	1.0	0.8
Crack	0.2	0.3	0.2	0.3	0.3	0.2
Heroin	0.1	0.1	0.1	0.1	0.1 <sup>a</sup>	0.1
Hallucinogens	0.5 <sup>a</sup>	0.4	0.4	0.4	0.4	0.4
LSD	0.0	0.1	0.1	0.0	0.1	0.1
PCP	0.0	0.0	0.0	0.0	0.0	0.0
Ecstasy	0.3 <sup>a</sup>	0.2	0.2	0.2	0.2	0.2
Inhalants	0.3	0.2	0.3	0.3	0.3	0.2
Nonmedical Use of Psychotherapeutics <sup>2,3</sup>	2.7	2.7	2.5	2.7	2.9	2.8
Pain Relievers	1.9	2.0	1.8 <sup>a</sup>	1.9	2.1	2.1
OxyContin <sup>®</sup>	--	--	0.1	0.1	0.1	0.1
Tranquilizers	0.8	0.8	0.7	0.7	0.7	0.7
Stimulants <sup>3</sup>	0.6 <sup>a</sup>	0.6 <sup>a</sup>	0.5 <sup>a</sup>	0.5	0.6 <sup>a</sup>	0.4
Methamphetamine <sup>3</sup>	0.3	0.3	0.3	0.3	0.3	0.2
Sedatives	0.2	0.1	0.1	0.1	0.2	0.1
<b>ILLICIT DRUGS OTHER THAN MARIJUANA<sup>1</sup></b>	3.7	3.7	3.4	3.7	3.9	3.7

\*Low precision; no estimate reported.

-- Not available.

<sup>a</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.05 level.

<sup>b</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.01 level.

<sup>1</sup> Illicit Drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically. Illicit Drugs Other Than Marijuana include cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically. The estimates for Nonmedical Use of Psychotherapeutics, Stimulants, and Methamphetamine incorporated in these summary estimates do not include data from the methamphetamine items added in 2005 and 2006. See Section B.4.6 in Appendix B of the *Results from the 2007 National Survey on Drug Use and Health: National Findings*.

<sup>2</sup> Nonmedical use of prescription-type psychotherapeutics includes the nonmedical use of pain relievers, tranquilizers, stimulants, or sedatives and does not include over-the-counter drugs.

<sup>3</sup> Estimates of Nonmedical Use of Psychotherapeutics, Stimulants, and Methamphetamine in the designated rows include data from methamphetamine items added in 2005 and 2006 and are not comparable with estimates presented in prior NSDUH reports. For the 2002 through 2005 survey years, a Bernoulli stochastic imputation procedure was used to generate adjusted estimates comparable with the 2006 and 2007 estimates. See Section B.4.6 in Appendix B of the *Results from the 2007 National Survey on Drug Use and Health: National Findings*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2002, 2003, 2004, 2005, 2006, and 2007.

**Table G.7 Types of Illicit Drug Use in the Past Month among Persons Aged 12 to 17: Percentages, 2002-2007**

<b>Drug</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
<b>ILLCIT DRUGS<sup>1</sup></b>	11.6 <sup>b</sup>	11.2 <sup>b</sup>	10.6 <sup>b</sup>	9.9	9.8	9.5
Marijuana and Hashish	8.2 <sup>b</sup>	7.9 <sup>b</sup>	7.6 <sup>b</sup>	6.8	6.7	6.7
Cocaine	0.6 <sup>a</sup>	0.6 <sup>a</sup>	0.5	0.6	0.4	0.4
Crack	0.1	0.1	0.1	0.1	0.0	0.1
Heroin	0.0	0.1 <sup>a</sup>	0.1 <sup>a</sup>	0.1 <sup>a</sup>	0.1 <sup>a</sup>	0.0
Hallucinogens	1.0 <sup>b</sup>	1.0 <sup>b</sup>	0.8	0.8	0.7	0.7
LSD	0.2 <sup>a</sup>	0.2	0.2	0.1	0.1	0.1
PCP	0.1	0.1	0.0	0.1	0.0	0.0
Ecstasy	0.5 <sup>b</sup>	0.4	0.3	0.3	0.3	0.3
Inhalants	1.2	1.3	1.2	1.2	1.3	1.2
Nonmedical Use of Psychotherapeutics <sup>2,3</sup>	4.0 <sup>b</sup>	4.0 <sup>b</sup>	3.6	3.3	3.3	3.3
Pain Relievers	3.2 <sup>b</sup>	3.2 <sup>b</sup>	3.0	2.7	2.7	2.7
OxyContin <sup>®</sup>	--	--	0.3	0.1	0.1	0.2
Tranquilizers	0.8	0.9	0.6	0.6	0.5 <sup>a</sup>	0.7
Stimulants <sup>3</sup>	0.8 <sup>b</sup>	0.9 <sup>b</sup>	0.7 <sup>a</sup>	0.7	0.7	0.5
Methamphetamine <sup>3</sup>	0.3 <sup>a</sup>	0.3 <sup>b</sup>	0.2	0.3 <sup>a</sup>	0.2	0.1
Sedatives	0.2	0.2	0.1	0.1	0.2	0.1
<b>ILLCIT DRUGS OTHER THAN MARIJUANA<sup>1</sup></b>	5.7 <sup>b</sup>	5.7 <sup>b</sup>	5.3 <sup>a</sup>	4.9	4.9	4.7

\*Low precision; no estimate reported.

-- Not available.

<sup>a</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.05 level.<sup>b</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.01 level.

<sup>1</sup> Illicit Drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically. Illicit Drugs Other Than Marijuana include cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically. The estimates for Nonmedical Use of Psychotherapeutics, Stimulants, and Methamphetamine incorporated in these summary estimates do not include data from the methamphetamine items added in 2005 and 2006. See Section B.4.6 in Appendix B of the *Results from the 2007 National Survey on Drug Use and Health: National Findings*.

<sup>2</sup> Nonmedical use of prescription-type psychotherapeutics includes the nonmedical use of pain relievers, tranquilizers, stimulants, or sedatives and does not include over-the-counter drugs.

<sup>3</sup> Estimates of Nonmedical Use of Psychotherapeutics, Stimulants, and Methamphetamine in the designated rows include data from methamphetamine items added in 2005 and 2006 and are not comparable with estimates presented in prior NSDUH reports. For the 2002 through 2005 survey years, a Bernoulli stochastic imputation procedure was used to generate adjusted estimates comparable with the 2006 and 2007 estimates. See Section B.4.6 in Appendix B of the *Results from the 2007 National Survey on Drug Use and Health: National Findings*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2002, 2003, 2004, 2005, 2006, and 2007.



**Table G.8 Types of Illicit Drug Use in the Past Month among Persons Aged 18 to 25: Percentages, 2002-2007**

<b>Drug</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
<b>ILLCIT DRUGS<sup>1</sup></b>	20.2	20.3	19.4	20.1	19.8	19.7
Marijuana and Hashish	17.3	17.0	16.1	16.6	16.3	16.4
Cocaine	2.0	2.2 <sup>a</sup>	2.1 <sup>a</sup>	2.6 <sup>b</sup>	2.2 <sup>b</sup>	1.7
Crack	0.2	0.2	0.3	0.3 <sup>a</sup>	0.2	0.2
Heroin	0.1	0.1	0.1	0.2	0.2	0.1
Hallucinogens	1.9 <sup>b</sup>	1.7	1.5	1.5	1.7	1.5
LSD	0.1 <sup>a</sup>	0.2	0.3	0.2	0.2	0.2
PCP	0.0	0.1	0.1	0.0	0.0	0.0
Ecstasy	1.1 <sup>b</sup>	0.7	0.7	0.8	1.0 <sup>a</sup>	0.7
Inhalants	0.5	0.4	0.4	0.5	0.4	0.4
Nonmedical Use of Psychotherapeutics <sup>2,3</sup>	5.5	6.1	6.1	6.3	6.5	6.0
Pain Relievers	4.1 <sup>a</sup>	4.7	4.7	4.7	4.9	4.6
OxyContin <sup>®</sup>	--	--	0.4	0.4	0.4	0.5
Tranquilizers	1.6	1.7	1.8	1.9	2.0	1.7
Stimulants <sup>3</sup>	1.3	1.3	1.5 <sup>b</sup>	1.4 <sup>a</sup>	1.4 <sup>a</sup>	1.1
Methamphetamine <sup>3</sup>	0.6 <sup>b</sup>	0.6 <sup>b</sup>	0.7 <sup>b</sup>	0.7 <sup>b</sup>	0.6 <sup>a</sup>	0.4
Sedatives	0.2	0.2	0.2	0.2	0.2	0.2
<b>ILLCIT DRUGS OTHER THAN MARIJUANA<sup>1</sup></b>	7.9	8.4	8.1	8.8	8.9 <sup>a</sup>	8.1

\*Low precision; no estimate reported.

-- Not available.

<sup>a</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.05 level.<sup>b</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.01 level.

<sup>1</sup> Illicit Drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically. Illicit Drugs Other Than Marijuana include cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically. The estimates for Nonmedical Use of Psychotherapeutics, Stimulants, and Methamphetamine incorporated in these summary estimates do not include data from the methamphetamine items added in 2005 and 2006. See Section B.4.6 in Appendix B of the *Results from the 2007 National Survey on Drug Use and Health: National Findings*.

<sup>2</sup> Nonmedical use of prescription-type psychotherapeutics includes the nonmedical use of pain relievers, tranquilizers, stimulants, or sedatives and does not include over-the-counter drugs.

<sup>3</sup> Estimates of Nonmedical Use of Psychotherapeutics, Stimulants, and Methamphetamine in the designated rows include data from methamphetamine items added in 2005 and 2006 and are not comparable with estimates presented in prior NSDUH reports. For the 2002 through 2005 survey years, a Bernoulli stochastic imputation procedure was used to generate adjusted estimates comparable with the 2006 and 2007 estimates. See Section B.4.6 in Appendix B of the *Results from the 2007 National Survey on Drug Use and Health: National Findings*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2002, 2003, 2004, 2005, 2006, and 2007.

**Table G.9 Types of Illicit Drug Use in the Past Month among Persons Aged 26 or Older: Percentages, 2002-2007**

<b>Drug</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
<b>ILLICIT DRUGS<sup>1</sup></b>	5.8	5.6	5.5	5.8	6.1	5.8
Marijuana and Hashish	4.0	4.0	4.1	4.1	4.2	3.9
Cocaine	0.7	0.8	0.7	0.8	0.8	0.7
Crack	0.3	0.3	0.2	0.3	0.3	0.3
Heroin	0.1	0.0	0.1	0.0	0.1 <sup>a</sup>	0.1
Hallucinogens	0.2	0.1	0.1	0.2	0.1	0.2
LSD	0.0	0.0	0.0	0.0	0.0	0.0
PCP	0.0	*	0.0	0.0	*	0.0
Ecstasy	0.1	0.1	0.1	0.1	0.1	0.1
Inhalants	0.1	0.1	0.1	0.1	0.2	0.1
Nonmedical Use of Psychotherapeutics <sup>2,3</sup>	2.0	2.0	1.8 <sup>a</sup>	1.9	2.2	2.2
Pain Relievers	1.3 <sup>a</sup>	1.3	1.2 <sup>b</sup>	1.3	1.5	1.6
OxyContin <sup>®</sup>	--	--	0.1	0.1	0.1	0.1
Tranquilizers	0.6	0.6	0.5	0.6	0.5	0.6
Stimulants <sup>3</sup>	0.4	0.4	0.4	0.3	0.4	0.3
Methamphetamine <sup>3</sup>	0.2	0.3	0.2	0.2	0.3	0.2
Sedatives	0.2	0.1	0.1	0.1	0.2	0.1
<b>ILLICIT DRUGS OTHER THAN MARIJUANA<sup>1</sup></b>	2.7	2.6	2.3 <sup>b</sup>	2.6	2.9	2.9

\*Low precision; no estimate reported.

-- Not available.

<sup>a</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.05 level.<sup>b</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.01 level.

<sup>1</sup> Illicit Drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically. Illicit Drugs Other Than Marijuana include cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically. The estimates for Nonmedical Use of Psychotherapeutics, Stimulants, and Methamphetamine incorporated in these summary estimates do not include data from the methamphetamine items added in 2005 and 2006. See Section B.4.6 in Appendix B of the *Results from the 2007 National Survey on Drug Use and Health: National Findings*.

<sup>2</sup> Nonmedical use of prescription-type psychotherapeutics includes the nonmedical use of pain relievers, tranquilizers, stimulants, or sedatives and does not include over-the-counter drugs.

<sup>3</sup> Estimates of Nonmedical Use of Psychotherapeutics, Stimulants, and Methamphetamine in the designated rows include data from methamphetamine items added in 2005 and 2006 and are not comparable with estimates presented in prior NSDUH reports. For the 2002 through 2005 survey years, a Bernoulli stochastic imputation procedure was used to generate adjusted estimates comparable with the 2006 and 2007 estimates. See Section B.4.6 in Appendix B of the *Results from the 2007 National Survey on Drug Use and Health: National Findings*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2002, 2003, 2004, 2005, 2006, and 2007.

**Table G.10 Illicit Drug Use in Lifetime, Past Year, and Past Month, by Detailed Age Category: Percentages, 2006 and 2007**

Age Category	TIME PERIOD					
	Lifetime		Past Year		Past Month	
	2006	2007	2006	2007	2006	2007
<b>TOTAL</b>	45.4	46.1	14.5	14.4	8.3	8.0
12	12.1 <sup>a</sup>	9.9	6.9 <sup>a</sup>	5.4	3.1	2.7
13	16.3	16.4	9.9	10.2	4.6	4.0
14	23.2	21.4	15.8	14.7	7.0	6.7
15	31.9 <sup>a</sup>	29.0	22.8	21.4	11.1	11.0
16	37.3	37.6	28.3	28.6	14.9	14.8
17	43.1	41.5	32.2	30.8	17.1	17.4
18	50.1	46.9	37.6	34.8	20.7	20.7
19	54.9	53.3	37.2	36.6	22.4	22.3
20	59.7	57.1	38.2	36.6	23.6	22.0
21	61.7	60.3	36.0	37.6	20.1	23.1
22	62.3	59.6	34.3	32.8	19.5	20.0
23	61.9	62.7	30.9	31.6	18.1	17.5
24	62.4	62.1	31.4	28.7	17.9	16.1
25	60.5	60.1	28.3	25.4	15.5	15.4
26-29	60.4	57.8	24.7	23.0	14.1	12.8
30-34	55.3	55.5	17.5	16.9	10.0	9.4
35-39	56.2	56.1	14.2	13.9	8.0	7.3
40-44	60.9	58.6	13.6	13.1	8.3	7.0
45-49	61.6	61.0	11.9	11.9	6.7	7.2
50-54	54.6	58.9	9.1	10.6	6.0	5.7
55-59	43.4 <sup>b</sup>	51.6	4.9 <sup>b</sup>	8.0	2.4	4.1
60-64	28.2 <sup>b</sup>	35.0	3.4	4.4	2.1	1.9
65 or Older	9.8	10.7	1.1	1.0	0.7	0.7

\*Low precision; no estimate reported.

NOTE: Illicit Drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically, based on data from original questions not including methamphetamine items added in 2005 and 2006.

<sup>a</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.05 level.

<sup>b</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.01 level.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006 and 2007.

**Table G.11 Illicit Drug Use in Lifetime, Past Year, and Past Month among Persons Aged 12 or Older, by Demographic Characteristics: Percentages, 2006 and 2007**

Demographic Characteristic	TIME PERIOD					
	Lifetime		Past Year		Past Month	
	2006	2007	2006	2007	2006	2007
<b>TOTAL</b>	45.4	46.1	14.5	14.4	8.3	8.0
<b>AGE</b>						
12-17	27.6 <sup>a</sup>	26.2	19.6	18.7	9.8	9.5
18-25	59.0 <sup>a</sup>	57.4	34.4	33.2	19.8	19.7
26 or Older	45.5	46.8	10.4	10.6	6.1	5.8
<b>GENDER</b>						
Male	50.3	50.6	17.4	17.4	10.5	10.4
Female	40.9	41.8	11.8	11.6	6.2	5.8
<b>HISPANIC ORIGIN AND RACE</b>						
Not Hispanic or Latino	47.1	48.0	14.8	14.8	8.5	8.2
White	49.0 <sup>a</sup>	50.3	14.8	14.9	8.5	8.2
Black or African American	42.9	43.1	16.4	16.0	9.8	9.5
American Indian or Alaska Native	58.8	54.6	20.1	18.4	13.7	12.6
Native Hawaiian or Other Pacific Islander	40.9	*	13.4	13.3	7.5	*
Asian	23.7	22.8	8.9	7.2	3.6	4.2
Two or More Races	55.4	51.5	18.1	22.1	8.9	11.8
Hispanic or Latino	35.0	34.2	13.1	12.2	6.9	6.6

\*Low precision; no estimate reported.

NOTE: Illicit Drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically, based on data from original questions not including methamphetamine items added in 2005 and 2006.

<sup>a</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.05 level.

<sup>b</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.01 level.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006 and 2007.

**Table G.12 Illicit Drug Use in Lifetime, Past Year, and Past Month among Persons Aged 12 to 17, by Demographic Characteristics: Percentages, 2006 and 2007**

Demographic Characteristic	TIME PERIOD					
	Lifetime		Past Year		Past Month	
	2006	2007	2006	2007	2006	2007
<b>TOTAL</b>	27.6 <sup>a</sup>	26.2	19.6	18.7	9.8	9.5
<b>GENDER</b>						
Male	28.2	27.1	19.5	19.4	9.8	10.0
Female	27.0 <sup>a</sup>	25.4	19.7 <sup>a</sup>	18.0	9.7	9.1
<b>HISPANIC ORIGIN AND RACE</b>						
Not Hispanic or Latino	27.9 <sup>a</sup>	26.6	19.7	19.1	10.0	9.9
White	27.7	27.0	20.2	19.9	10.0	10.2
Black or African American	28.5	26.7	18.6	17.6	10.2	9.4
American Indian or Alaska Native	46.0	43.1	*	*	18.7	*
Native Hawaiian or Other Pacific Islander	*	*	*	*	*	*
Asian	24.2 <sup>a</sup>	16.3	13.7	10.9	6.7	6.0
Two or More Races	32.0	28.4	24.3	18.9	11.8	9.2
Hispanic or Latino	26.4	24.7	18.8	17.1	8.9	8.1
<b>GENDER/RACE/HISPANIC ORIGIN</b>						
Male, White, Not Hispanic	27.8	27.2	19.8	20.1	9.7	10.4
Female, White, Not Hispanic	27.5	26.7	20.7	19.8	10.3	9.9
Male, Black, Not Hispanic	30.0	27.7	19.7	18.0	10.8	10.1
Female, Black, Not Hispanic	26.9	25.8	17.3	17.1	9.5	8.8
Male, Hispanic	26.8	26.5	18.0	18.6	9.1	8.6
Female, Hispanic	26.0	22.9	19.6 <sup>a</sup>	15.5	8.6	7.6

\*Low precision; no estimate reported.

NOTE: Illicit Drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically, based on data from original questions not including methamphetamine items added in 2005 and 2006.

<sup>a</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.05 level.

<sup>b</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.01 level.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006 and 2007.

**Table G.13 Illicit Drug Use in Lifetime, Past Year, and Past Month among Persons Aged 18 or Older, by Demographic Characteristics: Percentages, 2006 and 2007**

Demographic Characteristic	TIME PERIOD					
	Lifetime		Past Year		Past Month	
	2006	2007	2006	2007	2006	2007
<b>TOTAL</b>	47.5	48.4	14.0	13.9	8.1	7.8
<b>GENDER</b>						
Male	53.0	53.5	17.1	17.1	10.6	10.4
Female	42.4	43.6	11.0	10.9	5.8	5.4
<b>HISPANIC ORIGIN AND RACE</b>						
Not Hispanic or Latino	49.2	50.3	14.2	14.3	8.3	8.1
White	51.2 <sup>a</sup>	52.6	14.2	14.4	8.4	8.0
Black or African American	45.1	45.5	16.1	15.8	9.7	9.5
American Indian or Alaska Native	60.4	56.3	18.3	16.7	13.1	12.0
Native Hawaiian or Other Pacific Islander	*	*	13.2	12.5	7.4	*
Asian	23.6	23.5	8.4	6.8	3.2	4.0
Two or More Races	59.8	55.6	16.9	22.7	8.4	12.3
Hispanic or Latino	36.4	35.7	12.2	11.5	6.6	6.4
<b>EDUCATION</b>						
< High School	37.2	36.0	15.0	15.0	9.2	9.3
High School Graduate	45.4	46.1	14.4	14.0	8.6	8.6
Some College	54.1	55.2	16.3	16.4	9.1	8.9
College Graduate	50.1	51.8	10.6	10.8	5.9	5.1
<b>CURRENT EMPLOYMENT</b>						
Full-Time	56.0	56.7	15.1	15.1	8.8	8.4
Part-Time	48.1	49.7	16.8	17.6	9.4	10.1
Unemployed	60.4	59.7	30.5	28.5	18.5	18.3
Other <sup>1</sup>	29.4	30.8	8.6	8.5	5.0	4.7

\*Low precision; no estimate reported.

NOTE: Illicit Drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically, based on data from original questions not including methamphetamine items added in 2005 and 2006.

<sup>a</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.05 level.

<sup>b</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.01 level.

<sup>1</sup> The Other Employment category includes retired persons, disabled persons, homemakers, students, or other persons not in the labor force.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006 and 2007.

**Table G.14 Tobacco Product and Alcohol Use in the Past Month among Persons Aged 12 or Older, by Gender: Numbers in Thousands, 2002-2007**

Gender/Substance	2002	2003	2004	2005	2006	2007
<b>TOTAL</b>						
<b>TOBACCO PRODUCTS<sup>1</sup></b>	71,499	70,757	70,257	71,519	72,873	70,939
Cigarettes	61,136	60,434	59,896	60,532	61,565	60,069
Smokeless Tobacco	7,787	7,725	7,154 <sup>a</sup>	7,682	8,231	8,051
Cigars	12,751	12,837	13,727	13,640	13,708	13,263
Pipe Tobacco	1,816	1,619 <sup>a</sup>	1,835	2,190	2,321	2,046
<b>ALCOHOL</b>	119,820 <sup>b</sup>	118,965 <sup>b</sup>	120,934 <sup>b</sup>	126,028	125,309	126,760
Binge Alcohol Use <sup>2</sup>	53,787 <sup>b</sup>	53,770 <sup>b</sup>	54,725 <sup>b</sup>	55,090 <sup>b</sup>	56,575	57,778
Heavy Alcohol Use <sup>2</sup>	15,860 <sup>a</sup>	16,144	16,689	16,035	16,946	17,010
<b>MALE</b>						
<b>TOBACCO PRODUCTS<sup>1</sup></b>	41,991	41,288	41,569	42,175	43,389	42,369
Cigarettes	32,636	32,263	32,278	32,312	33,220	32,607
Smokeless Tobacco	7,242	7,096	6,730 <sup>a</sup>	7,174	7,843	7,589
Cigars	10,669	10,372	11,375	11,355	11,092	10,940
Pipe Tobacco	1,487	1,400	1,579	1,877	2,023	1,797
<b>ALCOHOL</b>	65,210 <sup>b</sup>	65,927 <sup>a</sup>	66,317	68,497	68,025	68,088
Binge Alcohol Use <sup>2</sup>	35,456 <sup>b</sup>	35,565 <sup>b</sup>	36,195 <sup>a</sup>	36,025 <sup>b</sup>	37,298	38,128
Heavy Alcohol Use <sup>2</sup>	12,216	11,958	12,388	12,172	12,775	12,786
<b>FEMALE</b>						
<b>TOBACCO PRODUCTS<sup>1</sup></b>	29,509	29,469	28,688	29,344	29,484	28,570
Cigarettes	28,500	28,171	27,618	28,220	28,345	27,462
Smokeless Tobacco	545	628	424	508	388	461
Cigars	2,082	2,465	2,352	2,285	2,616	2,323
Pipe Tobacco	330	219	256	313	298	249
<b>ALCOHOL</b>	54,610 <sup>b</sup>	53,038 <sup>b</sup>	54,616 <sup>b</sup>	57,531	57,283	58,672
Binge Alcohol Use <sup>2</sup>	18,331 <sup>a</sup>	18,205 <sup>b</sup>	18,530 <sup>a</sup>	19,065	19,276	19,651
Heavy Alcohol Use <sup>2</sup>	3,645 <sup>a</sup>	4,186	4,301	3,863	4,172	4,225

\*Low precision; no estimate reported.

<sup>a</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.05 level.

<sup>b</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.01 level.

<sup>1</sup> Tobacco Products include cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

<sup>2</sup> 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 past 30 days. Heavy Alcohol Use is defined as drinking five or more drinks on the same occasion on each of 5 or more days in the past 30 days; all heavy alcohol users are also binge alcohol users.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2002, 2003, 2004, 2005, 2006, and 2007.

**Table G.15 Tobacco Product and Alcohol Use in the Past Month among Persons Aged 12 or Older, by Gender: Percentages, 2002-2007**

Gender/Substance	2002	2003	2004	2005	2006	2007
<b>TOTAL</b>						
<b>TOBACCO PRODUCTS<sup>1</sup></b>	30.4 <sup>b</sup>	29.8 <sup>a</sup>	29.2	29.4	29.6 <sup>a</sup>	28.6
Cigarettes	26.0 <sup>b</sup>	25.4 <sup>a</sup>	24.9	24.9	25.0	24.2
Smokeless Tobacco	3.3	3.3	3.0	3.2	3.3	3.2
Cigars	5.4	5.4	5.7	5.6	5.6	5.4
Pipe Tobacco	0.8	0.7	0.8	0.9	0.9	0.8
<b>ALCOHOL</b>	51.0	50.1	50.3	51.8	50.9	51.1
Binge Alcohol Use <sup>2</sup>	22.9	22.6	22.8	22.7	23.0	23.3
Heavy Alcohol Use <sup>2</sup>	6.7	6.8	6.9	6.6	6.9	6.9
<b>MALE</b>						
<b>TOBACCO PRODUCTS<sup>1</sup></b>	37.0 <sup>a</sup>	35.9	35.7	35.8	36.4	35.2
Cigarettes	28.7 <sup>a</sup>	28.1	27.7	27.4	27.8	27.1
Smokeless Tobacco	6.4	6.2	5.8	6.1	6.6	6.3
Cigars	9.4	9.0	9.8	9.6	9.3	9.1
Pipe Tobacco	1.3	1.2	1.4	1.6	1.7	1.5
<b>ALCOHOL</b>	57.4	57.3	56.9	58.1	57.0	56.6
Binge Alcohol Use <sup>2</sup>	31.2	30.9	31.1	30.5	31.2	31.7
Heavy Alcohol Use <sup>2</sup>	10.8	10.4	10.6	10.3	10.7	10.6
<b>FEMALE</b>						
<b>TOBACCO PRODUCTS<sup>1</sup></b>	24.3 <sup>b</sup>	24.0 <sup>b</sup>	23.1	23.4	23.3	22.4
Cigarettes	23.4 <sup>b</sup>	23.0 <sup>b</sup>	22.3	22.5	22.4	21.5
Smokeless Tobacco	0.4	0.5	0.3	0.4	0.3	0.4
Cigars	1.7	2.0	1.9	1.8	2.1	1.8
Pipe Tobacco	0.3	0.2	0.2	0.3	0.2	0.2
<b>ALCOHOL</b>	44.9	43.2 <sup>b</sup>	44.0 <sup>b</sup>	45.9	45.2	46.0
Binge Alcohol Use <sup>2</sup>	15.1	14.8	14.9	15.2	15.2	15.4
Heavy Alcohol Use <sup>2</sup>	3.0	3.4	3.5	3.1	3.3	3.3

\*Low precision; no estimate reported.

<sup>a</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.05 level.

<sup>b</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.01 level.

<sup>1</sup> Tobacco Products include cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

<sup>2</sup> 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 past 30 days. Heavy Alcohol Use is defined as drinking five or more drinks on the same occasion on each of 5 or more days in the past 30 days; all heavy alcohol users are also binge alcohol users.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2002, 2003, 2004, 2005, 2006, and 2007.



**Table G.16 Tobacco Product and Alcohol Use in the Past Month among Persons Aged 12 to 17, by Gender: Percentages, 2002-2007**

Gender/Substance	2002	2003	2004	2005	2006	2007
<b>TOTAL</b>						
<b>TOBACCO PRODUCTS<sup>1</sup></b>	15.2 <sup>b</sup>	14.4 <sup>b</sup>	14.4 <sup>b</sup>	13.1	12.9	12.4
Cigarettes	13.0 <sup>b</sup>	12.2 <sup>b</sup>	11.9 <sup>b</sup>	10.8 <sup>a</sup>	10.4	9.8
Smokeless Tobacco	2.0 <sup>b</sup>	2.0 <sup>a</sup>	2.3	2.1 <sup>a</sup>	2.4	2.4
Cigars	4.5	4.5	4.8 <sup>a</sup>	4.2	4.1	4.2
Pipe Tobacco	0.6	0.6	0.7	0.6	0.7	0.7
<b>ALCOHOL</b>	17.6 <sup>b</sup>	17.7 <sup>b</sup>	17.6 <sup>b</sup>	16.5	16.6	15.9
Binge Alcohol Use <sup>2</sup>	10.7 <sup>a</sup>	10.6 <sup>a</sup>	11.1 <sup>b</sup>	9.9	10.3	9.7
Heavy Alcohol Use <sup>2</sup>	2.5	2.6	2.7	2.4	2.4	2.3
<b>MALE</b>						
<b>TOBACCO PRODUCTS<sup>1</sup></b>	16.0 <sup>b</sup>	15.6 <sup>a</sup>	15.3 <sup>a</sup>	14.2	14.0	14.1
Cigarettes	12.3 <sup>b</sup>	11.9 <sup>b</sup>	11.3 <sup>a</sup>	10.7	10.0	10.0
Smokeless Tobacco	3.4 <sup>b</sup>	3.7	4.0	3.7 <sup>a</sup>	4.2	4.4
Cigars	6.2	6.2	6.6	5.8	5.5	6.0
Pipe Tobacco	0.7	0.9	0.9	0.8	0.9	0.9
<b>ALCOHOL</b>	17.4 <sup>a</sup>	17.1	17.2 <sup>a</sup>	15.9	16.3	15.9
Binge Alcohol Use <sup>2</sup>	11.4	11.1	11.6	10.4	10.7	10.6
Heavy Alcohol Use <sup>2</sup>	3.1	2.9	3.2	3.0	2.8	2.8
<b>FEMALE</b>						
<b>TOBACCO PRODUCTS<sup>1</sup></b>	14.4 <sup>b</sup>	13.3 <sup>b</sup>	13.5 <sup>b</sup>	11.9 <sup>a</sup>	11.8 <sup>a</sup>	10.6
Cigarettes	13.6 <sup>b</sup>	12.5 <sup>b</sup>	12.5 <sup>b</sup>	10.8 <sup>a</sup>	10.7 <sup>a</sup>	9.7
Smokeless Tobacco	0.4	0.3	0.4	0.4	0.4	0.4
Cigars	2.7	2.7	2.8	2.5	2.7	2.4
Pipe Tobacco	0.4	0.3	0.5	0.4	0.4	0.5
<b>ALCOHOL</b>	17.9 <sup>b</sup>	18.3 <sup>b</sup>	18.0 <sup>b</sup>	17.2	17.0	16.0
Binge Alcohol Use <sup>2</sup>	9.9 <sup>a</sup>	10.1 <sup>b</sup>	10.5 <sup>b</sup>	9.4	9.9 <sup>a</sup>	8.8
Heavy Alcohol Use <sup>2</sup>	1.9	2.3	2.1	1.8	1.9	1.8

\*Low precision; no estimate reported.

<sup>a</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.05 level.

<sup>b</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.01 level.

<sup>1</sup> Tobacco Products include cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

<sup>2</sup> 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 past 30 days. Heavy Alcohol Use is defined as drinking five or more drinks on the same occasion on each of 5 or more days in the past 30 days; all heavy alcohol users are also binge alcohol users.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2002, 2003, 2004, 2005, 2006, and 2007.

**Table G.17 Tobacco Product and Alcohol Use in the Past Month among Persons Aged 18 to 25, by Gender: Percentages, 2002-2007**

Gender/Substance	2002	2003	2004	2005	2006	2007
<b>TOTAL</b>						
<b>TOBACCO PRODUCTS<sup>1</sup></b>	45.3 <sup>b</sup>	44.8 <sup>b</sup>	44.6 <sup>b</sup>	44.3 <sup>b</sup>	43.9 <sup>b</sup>	41.8
Cigarettes	40.8 <sup>b</sup>	40.2 <sup>b</sup>	39.5 <sup>b</sup>	39.0 <sup>b</sup>	38.4 <sup>b</sup>	36.2
Smokeless Tobacco	4.8	4.7 <sup>a</sup>	4.9	5.1	5.2	5.3
Cigars	11.0 <sup>a</sup>	11.4	12.7 <sup>a</sup>	12.0	12.1	11.8
Pipe Tobacco	1.1	0.9 <sup>a</sup>	1.2	1.5	1.3	1.2
<b>ALCOHOL</b>	60.5	61.4	60.5	60.9	61.9	61.2
Binge Alcohol Use <sup>2</sup>	40.9	41.6	41.2	41.9	42.2	41.8
Heavy Alcohol Use <sup>2</sup>	14.9	15.1	15.1	15.3	15.6	14.7
<b>MALE</b>						
<b>TOBACCO PRODUCTS<sup>1</sup></b>	52.1 <sup>a</sup>	51.7	51.7	51.6	51.0	50.0
Cigarettes	44.4 <sup>b</sup>	44.2 <sup>b</sup>	43.5 <sup>b</sup>	42.9 <sup>a</sup>	41.9	40.5
Smokeless Tobacco	9.4	8.9 <sup>a</sup>	9.5	9.7	9.9	9.9
Cigars	16.8 <sup>a</sup>	17.3	19.7	18.3	18.7	18.4
Pipe Tobacco	1.7	1.4 <sup>a</sup>	2.1	2.3	2.2	1.9
<b>ALCOHOL</b>	65.2	66.9	64.9	66.3	65.9	65.3
Binge Alcohol Use <sup>2</sup>	50.2	51.3	50.1	51.7	50.2	49.8
Heavy Alcohol Use <sup>2</sup>	21.1	21.2	21.2	21.7 <sup>a</sup>	21.0	19.9
<b>FEMALE</b>						
<b>TOBACCO PRODUCTS<sup>1</sup></b>	38.4 <sup>b</sup>	37.8 <sup>b</sup>	37.4 <sup>b</sup>	36.9 <sup>b</sup>	36.8 <sup>b</sup>	33.6
Cigarettes	37.1 <sup>b</sup>	36.2 <sup>b</sup>	35.5 <sup>b</sup>	35.0 <sup>b</sup>	34.9 <sup>b</sup>	31.8
Smokeless Tobacco	0.3 <sup>a</sup>	0.4	0.4	0.5	0.4	0.5
Cigars	5.2	5.5	5.8	5.6	5.5	5.1
Pipe Tobacco	0.4	0.4	0.4	0.6	0.5	0.5
<b>ALCOHOL</b>	55.7	55.8	56.0	55.4	57.9	57.1
Binge Alcohol Use <sup>2</sup>	31.7 <sup>a</sup>	31.8 <sup>a</sup>	32.3	31.9	34.0	33.7
Heavy Alcohol Use <sup>2</sup>	8.7	9.0	8.8	8.8	10.0	9.5

\*Low precision; no estimate reported.

<sup>a</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.05 level.

<sup>b</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.01 level.

<sup>1</sup> Tobacco Products include cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

<sup>2</sup> 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 past 30 days. Heavy Alcohol Use is defined as drinking five or more drinks on the same occasion on each of 5 or more days in the past 30 days; all heavy alcohol users are also binge alcohol users.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2002, 2003, 2004, 2005, 2006, and 2007.

**Table G.18 Tobacco Product and Alcohol Use in the Past Month among Persons Aged 26 or Older, by Gender: Percentages, 2002-2007**

Gender/Substance	2002	2003	2004	2005	2006	2007
<b>TOTAL</b>						
<b>TOBACCO PRODUCTS<sup>1</sup></b>	29.9 <sup>a</sup>	29.3	28.5	29.0	29.4	28.5
Cigarettes	25.2 <sup>a</sup>	24.7	24.1	24.3	24.7	24.1
Smokeless Tobacco	3.2	3.2	2.7	3.0	3.2	3.0
Cigars	4.6	4.5	4.6	4.7	4.6	4.4
Pipe Tobacco	0.8	0.6	0.7	0.8	0.9	0.8
<b>ALCOHOL</b>	53.9	52.5 <sup>a</sup>	53.0	55.1	53.7	54.1
Binge Alcohol Use <sup>2</sup>	21.4	21.0	21.1	21.0	21.4	21.9
Heavy Alcohol Use <sup>2</sup>	5.9	5.9	6.1	5.6	6.0	6.1
<b>MALE</b>						
<b>TOBACCO PRODUCTS<sup>1</sup></b>	37.3	36.0	35.7	36.0	36.9	35.6
Cigarettes	28.3	27.5	27.2	27.0	27.8	27.1
Smokeless Tobacco	6.3	6.0	5.3	5.8	6.3	5.9
Cigars	8.5	7.9	8.4	8.6	8.1	7.8
Pipe Tobacco	1.3	1.2	1.3	1.6	1.7	1.5
<b>ALCOHOL</b>	61.9	61.5	61.3	62.7 <sup>a</sup>	61.2	60.8
Binge Alcohol Use <sup>2</sup>	30.7	30.1	30.4	29.6 <sup>a</sup>	30.7	31.4
Heavy Alcohol Use <sup>2</sup>	10.0	9.5	9.8	9.3	10.0	10.1
<b>FEMALE</b>						
<b>TOBACCO PRODUCTS<sup>1</sup></b>	23.2	23.1	22.0	22.6	22.5	22.0
Cigarettes	22.5	22.1	21.3	21.9	21.8	21.3
Smokeless Tobacco	0.5	0.6	0.3	0.4	0.3	0.3
Cigars	1.0	1.3	1.1	1.1	1.4	1.2
Pipe Tobacco	0.2	0.1	0.1	0.2	0.2	0.1
<b>ALCOHOL</b>	46.6	44.3 <sup>b</sup>	45.4 <sup>b</sup>	48.0	46.7	47.9
Binge Alcohol Use <sup>2</sup>	13.0	12.6	12.6	13.2	12.8	13.2
Heavy Alcohol Use <sup>2</sup>	2.2	2.6	2.7	2.3	2.4	2.5

\*Low precision; no estimate reported.

<sup>a</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.05 level.

<sup>b</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.01 level.

<sup>1</sup> Tobacco Products include cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.

<sup>2</sup> 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 past 30 days. Heavy Alcohol Use is defined as drinking five or more drinks on the same occasion on each of 5 or more days in the past 30 days; all heavy alcohol users are also binge alcohol users.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2002, 2003, 2004, 2005, 2006, and 2007.

**Table G.19 Alcohol Use in Lifetime, Past Year, and Past Month among Persons Aged 12 to 20, by Gender: Percentages, 2002-2007**

Gender/Alcohol Use	2002	2003	2004	2005	2006	2007
<b>TOTAL</b>						
Lifetime	56.2 <sup>b</sup>	55.8 <sup>b</sup>	54.9 <sup>b</sup>	53.9	53.9	52.9
Past Year	47.0 <sup>b</sup>	46.8 <sup>b</sup>	46.6 <sup>a</sup>	46.3	46.1	45.1
Past Month	28.8	29.0	28.7	28.2	28.3	27.9
Binge Alcohol Use <sup>1</sup>	19.3	19.2	19.6	18.8	19.0	18.6
Heavy Alcohol Use <sup>1</sup>	6.2	6.1	6.3	6.0	6.2	6.0
<b>MALE</b>						
Lifetime	56.5 <sup>b</sup>	55.0 <sup>a</sup>	54.9 <sup>a</sup>	53.7	54.0	53.0
Past Year	46.6	45.6	46.3	45.6	46.0	45.1
Past Month	29.6	29.9	29.6	28.9	29.2	28.4
Binge Alcohol Use <sup>1</sup>	21.8	21.7	22.1	21.3	21.3	21.1
Heavy Alcohol Use <sup>1</sup>	8.1	7.9	8.2	7.6	7.9	7.8
<b>FEMALE</b>						
Lifetime	56.0 <sup>b</sup>	56.6 <sup>b</sup>	54.8 <sup>a</sup>	54.2	53.7	52.8
Past Year	47.5 <sup>b</sup>	48.0 <sup>b</sup>	46.9 <sup>a</sup>	46.9 <sup>a</sup>	46.2	45.1
Past Month	28.0	28.1	27.8	27.5	27.4	27.3
Binge Alcohol Use <sup>1</sup>	16.7	16.5	17.0	16.1	16.5	16.1
Heavy Alcohol Use <sup>1</sup>	4.2	4.3	4.3	4.3	4.3	4.2

\*Low precision; no estimate reported.

<sup>a</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.05 level.

<sup>b</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.01 level.

<sup>1</sup> 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 past 30 days. Heavy Alcohol Use is defined as drinking five or more drinks on the same occasion on each of 5 or more days in the past 30 days; all heavy alcohol users are also binge alcohol users.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2002, 2003, 2004, 2005, 2006, and 2007.

**Table G.20 Alcohol Use, Binge Alcohol Use, and Heavy Alcohol Use in the Past Month, by Detailed Age Category: Percentages, 2006 and 2007**

Age Category	TYPE OF ALCOHOL USE					
	Alcohol Use		Binge Alcohol Use		Heavy Alcohol Use	
	2006	2007	2006	2007	2006	2007
<b>TOTAL</b>	50.9	51.1	23.0	23.3	6.9	6.9
12	1.9	2.2	0.6	0.9	*	0.1
13	5.7	4.7	2.3	2.0	0.5 <sup>a</sup>	0.1
14	11.8	10.0	6.2 <sup>a</sup>	4.5	0.7	0.4
15	19.2	19.0	11.5	10.9	1.7	2.4
16	27.3 <sup>b</sup>	23.8	18.2 <sup>b</sup>	15.1	4.5	3.8
17	32.3	34.6	22.0	23.9	6.7	7.1
18	46.2 <sup>a</sup>	41.8	32.7 <sup>a</sup>	28.9	12.8 <sup>b</sup>	9.6
19	52.4	53.7	37.2	38.8	14.4	14.1
20	56.9	57.8	39.0	40.3	14.0	15.8
21	70.2	71.8	49.3	50.1	19.5	17.9
22	70.8 <sup>a</sup>	66.5	48.9	46.9	17.3	16.9
23	69.7	68.4	47.2	45.3	17.2	16.2
24	66.5	67.4	43.3	44.3	16.1	15.6
25	65.5	67.3	41.2	42.7	13.2	12.6
26-29	63.5	63.2	38.3	37.9	11.9	10.5
30-34	60.3	62.1	30.5	32.6	8.4	9.0
35-39	59.1	59.1	27.6	28.4	7.3	8.5
40-44	56.7 <sup>a</sup>	60.9	25.4	27.9	6.7	7.3
45-49	58.9	58.3	23.8	23.9	7.0	7.8
50-54	55.9	57.0	22.0	21.5	6.7	6.3
55-59	53.0	52.0	13.8	15.9	4.6	4.5
60-64	48.0	47.6	12.8	12.1	2.7	2.9
65 or Older	38.4	38.1	7.6	7.6	1.6	1.4

\*Low precision; no estimate reported.

NOTE: 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 past 30 days. Heavy Alcohol Use is defined as drinking five or more drinks on the same occasion on each of 5 or more days in the past 30 days; all heavy alcohol users are also binge alcohol users.

<sup>a</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.05 level.

<sup>b</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.01 level.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006 and 2007.

**Table G.21 Alcohol Use, Binge Alcohol Use, and Heavy Alcohol Use in the Past Month among Persons Aged 12 to 20, by Demographic Characteristics: Percentages, 2006 and 2007**

Demographic Characteristic	TYPE OF ALCOHOL USE					
	Alcohol Use		Binge Alcohol Use		Heavy Alcohol Use	
	2006	2007	2006	2007	2006	2007
<b>TOTAL</b>	28.3	27.9	19.0	18.6	6.2	6.0
<b>GENDER</b>						
Male	29.2	28.4	21.3	21.1	7.9	7.8
Female	27.4	27.3	16.5	16.1	4.3	4.2
<b>HISPANIC ORIGIN AND RACE</b>						
Not Hispanic or Latino	29.0	28.6	19.5	19.1	6.5	6.4
White	32.3	32.0	22.7	22.4	8.2	8.0
Black or African American	18.6	18.3	8.6	8.4	1.3	1.5
American Indian or Alaska Native	31.3	28.3	23.6	*	4.7	*
Native Hawaiian or Other Pacific Islander	*	*	*	*	*	4.7
Asian	19.7	16.8	11.8	9.6	1.3	1.9
Two or More Races	27.5	26.2	20.7	16.4	6.3	5.0
Hispanic or Latino	25.3	24.7	16.5	16.7	4.8	4.1
<b>GENDER/RACE/HISPANIC ORIGIN</b>						
Male, White, Not Hispanic	33.2	32.7	25.2	25.1	10.3	10.2
Female, White, Not Hispanic	31.4	31.2	20.0	19.5	5.9	5.6
Male, Black, Not Hispanic	18.7	17.2	9.7	9.7	1.5	2.4
Female, Black, Not Hispanic	18.4	19.4	7.5	7.0	1.0	0.6
Male, Hispanic	26.7	25.8	19.4	19.2	6.6	5.6
Female, Hispanic	23.8	23.5	13.2	14.1	2.7	2.6

\*Low precision; no estimate reported.

NOTE: 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 past 30 days. Heavy Alcohol Use is defined as drinking five or more drinks on the same occasion on each of 5 or more days in the past 30 days; all heavy alcohol users are also binge alcohol users.

<sup>a</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.05 level.

<sup>b</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.01 level.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006 and 2007.

**Table G.22 Cigarette Use in Lifetime, Past Year, and Past Month, by Detailed Age Category: Percentages, 2006 and 2007**

Age Category	TIME PERIOD					
	Lifetime		Past Year		Past Month	
	2006	2007	2006	2007	2006	2007
<b>TOTAL</b>	66.3 <sup>a</sup>	65.3	29.1	28.5	25.0	24.2
12	5.6	5.1	3.1	2.6	0.7	0.9
13	12.1	10.7	6.9 <sup>a</sup>	5.5	2.6	2.7
14	20.0 <sup>a</sup>	17.5	12.8	11.2	6.7	6.0
15	30.1 <sup>a</sup>	26.8	18.6	17.6	11.3	10.7
16	38.1	37.2	26.4	24.7	17.0	15.5
17	46.9 <sup>b</sup>	42.9	32.8	31.4	22.9	22.5
18	55.4 <sup>a</sup>	51.5	42.1 <sup>a</sup>	38.7	32.4	29.7
19	62.1	60.5	46.9	45.5	36.9 <sup>a</sup>	33.2
20	65.3	64.0	47.3	44.9	37.9	35.7
21	68.5 <sup>a</sup>	64.6	49.2 <sup>a</sup>	45.1	39.9	37.1
22	70.3	67.7	49.4	49.4	41.3	40.3
23	70.9	71.0	49.3	48.4	41.6	39.8
24	70.8	71.0	46.0	47.4	38.5	39.5
25	71.3	71.4	46.5 <sup>a</sup>	42.8	39.9 <sup>a</sup>	35.7
26-29	71.8	70.1	43.2	41.4	36.4	35.7
30-34	70.4	68.3	36.3	36.0	32.0	31.5
35-39	69.3	70.0	31.5	32.9	28.0	28.5
40-44	72.5	70.5	31.9	30.3	29.4 <sup>a</sup>	26.6
45-49	75.7	74.9	32.6	32.3	29.6	29.6
50-54	72.5	75.2	29.3	29.7	26.7	26.7
55-59	74.2	73.6	25.3	24.6	22.7	22.0
60-64	75.3	76.3	20.1	20.5	18.6	18.8
65 or Older	67.5	65.1	11.1	10.8	9.5	9.0

\*Low precision; no estimate reported.

<sup>a</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.05 level.

<sup>b</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.01 level.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006 and 2007.

**Table G.23 Cigarette Use in Lifetime, Past Year, and Past Month among Persons Aged 12 to 17, by Demographic Characteristics: Percentages, 2006 and 2007**

Demographic Characteristic	TIME PERIOD					
	Lifetime		Past Year		Past Month	
	2006	2007	2006	2007	2006	2007
<b>TOTAL</b>	25.8 <sup>b</sup>	23.7	17.0 <sup>b</sup>	15.7	10.4	9.8
<b>GENDER</b>						
Male	25.8	24.5	16.7	16.0	10.0	10.0
Female	25.9 <sup>b</sup>	22.8	17.4 <sup>b</sup>	15.3	10.7 <sup>a</sup>	9.7
<b>HISPANIC ORIGIN AND RACE</b>						
Not Hispanic or Latino	26.2 <sup>b</sup>	24.3	17.4 <sup>a</sup>	16.2	10.9	10.5
White	28.5 <sup>a</sup>	26.7	19.5	18.7	12.4	12.2
Black or African American	20.0	17.8	10.8	9.6	6.0	6.1
American Indian or Alaska Native	40.2	29.7	*	19.3	21.2	13.4
Native Hawaiian or Other Pacific Islander	*	*	*	*	*	*
Asian	14.7	12.6	11.0 <sup>a</sup>	6.1	5.2	3.4
Two or More Races	27.2	24.2	19.2	14.5	12.7	8.9
Hispanic or Latino	24.3 <sup>b</sup>	20.8	15.1	13.1	8.2	6.7
<b>GENDER/RACE/HISPANIC ORIGIN</b>						
Male, White, Not Hispanic	28.1	27.1	18.9	18.5	11.8	11.7
Female, White, Not Hispanic	28.8 <sup>b</sup>	26.3	20.0	18.8	13.0	12.7
Male, Black, Not Hispanic	19.8	17.9	11.0	10.1	5.9	6.8
Female, Black, Not Hispanic	20.2	17.7	10.5	9.0	6.2	5.4
Male, Hispanic	25.4	22.7	15.2	14.3	8.6	7.8
Female, Hispanic	23.1 <sup>a</sup>	18.8	15.0 <sup>a</sup>	11.9	7.7	5.6

\*Low precision; no estimate reported.

<sup>a</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.05 level.

<sup>b</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.01 level.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006 and 2007.



**Table G.24 Cigarette Use in Lifetime, Past Year, and Past Month among Persons Aged 18 or Older, by Demographic Characteristics: Percentages, 2006 and 2007**

Demographic Characteristic	TIME PERIOD					
	Lifetime		Past Year		Past Month	
	2006	2007	2006	2007	2006	2007
<b>TOTAL</b>	70.9	70.0	30.5	29.9	26.7	25.9
<b>GENDER</b>						
Male	76.6	75.9	34.4	33.7	30.0	29.2
Female	65.6	64.5	26.9	26.4	23.6	22.8
<b>HISPANIC ORIGIN AND RACE</b>						
Not Hispanic or Latino	72.8	72.2	30.7	30.3	27.0	26.4
White	76.5	76.2	31.3	31.0	27.5	26.9
Black or African American	60.0	58.7	30.1	29.5	27.2	25.8
American Indian or Alaska Native	77.3	78.6	46.2	44.7	40.1	37.6
Native Hawaiian or Other Pacific Islander	*	*	*	*	*	*
Asian	45.8	41.4	18.8	18.7	15.6	15.3
Two or More Races	75.2	73.0	36.6	36.8	33.8	33.7
Hispanic or Latino	58.4	56.0	29.4	27.3	24.7	22.7
<b>EDUCATION</b>						
< High School	66.2	64.1	39.4	37.0	35.6 <sup>a</sup>	32.9
High School Graduate	71.5	71.2	35.2	35.7	31.9	31.9
Some College	74.0	73.1	32.3	31.3	27.7	26.8
College Graduate	70.2	69.2	18.0	17.9	14.3	14.0
<b>CURRENT EMPLOYMENT</b>						
Full-Time	73.1	72.4	33.0	31.9	28.8	27.6
Part-Time	69.7	68.1	29.9	29.7	25.4	24.5
Unemployed	72.5	70.9	51.9	49.5	47.8	44.6
Other <sup>1</sup>	67.0	66.2	23.6	24.2	20.9	21.1

\*Low precision; no estimate reported.

<sup>a</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.05 level.<sup>b</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.01 level.<sup>1</sup> The Other Employment category includes retired persons, disabled persons, homemakers, students, or other persons not in the labor force.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006 and 2007.

**Table G.25 Perceived Risk and Availability of Substances among Persons Aged 12 to 17: Percentages, 2002-2007**

<b>Risk/Availability</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
<b>PERCEPTIONS OF GREAT RISK<sup>1</sup></b>						
Cigarettes						
Smoke One or More Packs Per Day	63.1 <sup>b</sup>	64.2 <sup>b</sup>	67.5 <sup>a</sup>	68.3	68.7	68.8
Marijuana						
Smoke Once a Month	32.4 <sup>b</sup>	34.9	35.0	34.0	34.7	34.5
Smoke Once or Twice a Week	51.5 <sup>b</sup>	54.4	54.7	55.0	54.2	54.7
Cocaine						
Use Once a Month	50.5	51.4 <sup>b</sup>	49.6	48.8	49.0	49.6
Use Once or Twice a Week	79.8	80.7 <sup>b</sup>	79.8	79.9	79.2	78.9
Heroin						
Try Once or Twice	58.5 <sup>a</sup>	58.8 <sup>b</sup>	57.0	56.5	57.2	57.0
Use Once or Twice a Week	82.5 <sup>b</sup>	82.6 <sup>b</sup>	81.4	81.8	81.2	81.0
LSD						
Try Once or Twice	52.6 <sup>a</sup>	53.4 <sup>b</sup>	52.6 <sup>a</sup>	51.7	51.6	51.2
Use Once or Twice a Week	76.2 <sup>b</sup>	76.9 <sup>b</sup>	76.4 <sup>b</sup>	76.1 <sup>b</sup>	74.7	74.2
Alcohol						
Have Four or Five Drinks Nearly Every Day	62.2 <sup>b</sup>	61.6 <sup>b</sup>	61.8 <sup>b</sup>	63.8 <sup>a</sup>	64.6	65.2
Have Five or More Drinks Once or Twice a Week	38.2 <sup>a</sup>	38.5	38.1 <sup>a</sup>	38.4	39.4	39.4
<b>PERCEIVED AVAILABILITY<sup>2</sup></b>						
Fairly or Very Easy to Obtain <sup>3</sup>						
Marijuana	55.0 <sup>b</sup>	53.6 <sup>b</sup>	52.2 <sup>b</sup>	51.0 <sup>b</sup>	50.1	49.1
Cocaine	25.0	25.0	24.4	24.9	25.9 <sup>a</sup>	24.5
Crack	26.5 <sup>a</sup>	26.2	25.0	25.3	26.2	25.3
Heroin	15.8 <sup>b</sup>	15.3 <sup>a</sup>	14.0	14.0	14.4	14.1
LSD	19.4 <sup>b</sup>	17.6 <sup>b</sup>	16.9 <sup>b</sup>	15.7 <sup>b</sup>	14.0	14.4
Approached in the Past Month by Someone Selling Drugs	16.7 <sup>b</sup>	16.1 <sup>b</sup>	16.3 <sup>b</sup>	15.5 <sup>a</sup>	15.3	14.5

\*Low precision; no estimate reported.

<sup>a</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.05 level.

<sup>b</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.01 level.

<sup>1</sup> Response categories for the Perception of Risk questions include "No risk," "Slight risk," "Moderate risk," and "Great risk." The estimates in this table correspond to persons reporting "Great risk." Respondents with unknown Perception of Risk data were excluded.

<sup>2</sup> Respondents with unknown Perceived Availability data were excluded.

<sup>3</sup> Response categories for the Perceived Availability questions include "Probably impossible," "Very difficult," "Fairly difficult," "Fairly easy," and "Very easy." The estimates in this table correspond to persons reporting "Fairly easy" or "Very easy."

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2002, 2003, 2004, 2005, 2006, and 2007.

**Table G.26 Past Year Initiation of Substance Use among Persons Aged 12 or Older: Numbers in Thousands, 2002-2007**

Substance	2002	2003	2004	2005	2006	2007
<b>ILLICIT DRUGS<sup>1,2</sup></b>	2,656	2,627	2,784	2,908	2,789	2,670
Marijuana and Hashish	2,196	1,973	2,142	2,114	2,063	2,090
Cocaine	1,032	986	998	872	977	906
Crack	337	269	215	230	245	352
Heroin	117	92	118	108	91	106
Hallucinogens	1,152	886 <sup>a</sup>	934	953	1,116	1,064
LSD	338	200 <sup>a</sup>	235	243	264	270
PCP	123 <sup>b</sup>	105 <sup>b</sup>	106 <sup>a</sup>	77	69	58
Ecstasy	1,206 <sup>b</sup>	642 <sup>a</sup>	607 <sup>a</sup>	615 <sup>a</sup>	860	781
Inhalants	849	871	857	877	783	775
Nonmedical Use of Psychotherapeutics <sup>2,3</sup>	2,552	2,583	2,836	2,526	2,576	2,532
Pain Relievers	2,320	2,456 <sup>a</sup>	2,422	2,193	2,150	2,147
OxyContin <sup>®</sup>	--	--	615	526	533	554
Tranquilizers	1,184	1,071	1,180	1,286	1,112	1,232
Stimulants <sup>2</sup>	783 <sup>a</sup>	715	793	647	845 <sup>a</sup>	642
Sedatives	209	194	240	247	267	198
<b>ILLICIT DRUGS OTHER THAN MARIJUANA<sup>1,2</sup></b>	2,569	2,523	2,664	2,768	2,719	2,563
<b>CIGARETTES</b>	1,940 <sup>b</sup>	1,983 <sup>a</sup>	2,122	2,282	2,449 <sup>a</sup>	2,231
Daily Cigarette Use <sup>4</sup>	1,016	1,064	1,101	965	1,051	984
<b>SMOKELESS TOBACCO</b>	951 <sup>b</sup>	928 <sup>b</sup>	999 <sup>b</sup>	1,134	1,329	1,297
<b>CIGARS</b>	2,858	2,736 <sup>a</sup>	3,058	3,349	3,061	3,076
<b>ALCOHOL</b>	3,942 <sup>b</sup>	4,082 <sup>b</sup>	4,396	4,274	4,381	4,559

\*Low precision; no estimate reported.

-- Not available.

NOTE: Past Year Initiates are defined as persons who used the substance(s) for the first time in the 12 months prior to date of interview.

<sup>a</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.05 level.<sup>b</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.01 level.<sup>1</sup> Illicit Drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically. Illicit Drugs Other Than Marijuana include cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically.<sup>2</sup> Estimates in these designated rows do not include data from methamphetamine initiation items added in 2007 or methamphetamine use items added in 2005 and 2006.<sup>3</sup> Nonmedical use of prescription-type psychotherapeutics includes the nonmedical use of pain relievers, tranquilizers, stimulants, or sedatives and does not include over-the-counter drugs.<sup>4</sup> Daily Cigarette Use is defined as ever smoking every day for at least 30 days.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2002, 2003, 2004, 2005, 2006, and 2007.

**Table G.27 Substance Dependence or Abuse for Specific Substances in the Past Year among Persons Aged 12 or Older: Numbers in Thousands, 2002-2007**

Past Year Dependence or Abuse	2002	2003	2004	2005	2006	2007
<b>ILLICIT DRUGS<sup>1,2</sup></b>	7,116	6,835	7,298	6,833	7,020	6,851
Marijuana and Hashish	4,294	4,198	4,469 <sup>a</sup>	4,090	4,172	3,932
Cocaine	1,488	1,515	1,571	1,549	1,671	1,598
Heroin	214	189	270	227	323	213
Hallucinogens	426	321	449	371	380	368
Inhalants	180	169	233	221	176	164
Nonmedical Use of Psychotherapeutics <sup>2,3</sup>	2,018	1,923	2,048	1,959	2,035	2,160
Pain Relievers	1,509	1,424	1,388 <sup>a</sup>	1,546	1,635	1,707
Tranquilizers	509	435	573	419	402	443
Stimulants <sup>2</sup>	436	378	470	409	390	406
Sedatives	154	158	128	97	121	154
<b>ALCOHOL</b>	18,100	17,805	18,654	18,658	18,799	18,638
<b>BOTH ILLICIT DRUGS AND ALCOHOL<sup>1,2</sup></b>	3,210	3,054	3,445	3,273	3,205	3,175
<b>ILLICIT DRUGS OR ALCOHOL<sup>1,2</sup></b>	22,006	21,586	22,506	22,218	22,613	22,313

\*Low precision; no estimate reported.

NOTE: Dependence or abuse is based on definitions found in the 4<sup>th</sup> edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV).

<sup>a</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.05 level.

<sup>b</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.01 level.

<sup>1</sup> Illicit Drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically.

<sup>2</sup> Estimates in these designated rows do not include data from methamphetamine use items added in 2005 and 2006.

<sup>3</sup> Nonmedical use of prescription-type psychotherapeutics includes the nonmedical use of pain relievers, tranquilizers, stimulants, or sedatives and does not include over-the-counter drugs.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2002, 2003, 2004, 2005, 2006, and 2007.

**Table G.28 Substance Dependence or Abuse for Specific Substances in the Past Year among Persons Aged 12 or Older: Percentages, 2002-2007**

Past Year Dependence or Abuse	2002	2003	2004	2005	2006	2007
<b>ILLCIT DRUGS<sup>1,2</sup></b>	3.0 <sup>a</sup>	2.9	3.0 <sup>a</sup>	2.8	2.9	2.8
Marijuana and Hashish	1.8 <sup>b</sup>	1.8 <sup>a</sup>	1.9 <sup>b</sup>	1.7	1.7	1.6
Cocaine	0.6	0.6	0.7	0.6	0.7	0.6
Heroin	0.1	0.1	0.1	0.1	0.1	0.1
Hallucinogens	0.2	0.1	0.2	0.2	0.2	0.1
Inhalants	0.1	0.1	0.1 <sup>a</sup>	0.1	0.1	0.1
Nonmedical Use of Psychotherapeutics <sup>2,3</sup>	0.9	0.8	0.9	0.8	0.8	0.9
Pain Relievers	0.6	0.6	0.6	0.6	0.7	0.7
Tranquilizers	0.2	0.2	0.2	0.2	0.2	0.2
Stimulants <sup>2</sup>	0.2	0.2	0.2	0.2	0.2	0.2
Sedatives	0.1	0.1	0.1	0.0	0.0	0.1
<b>ALCOHOL</b>	7.7	7.5	7.8	7.7	7.6	7.5
<b>BOTH ILLICIT DRUGS AND ALCOHOL<sup>1,2</sup></b>	1.4	1.3	1.4	1.3	1.3	1.3
<b>ILLCIT DRUGS OR ALCOHOL<sup>1,2</sup></b>	9.4	9.1	9.4	9.1	9.2	9.0

\*Low precision; no estimate reported.

NOTE: Dependence or abuse is based on definitions found in the 4<sup>th</sup> edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV).

<sup>a</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.05 level.

<sup>b</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.01 level.

<sup>1</sup> Illicit Drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically.

<sup>2</sup> Estimates in these designated rows do not include data from methamphetamine use items added in 2005 and 2006.

<sup>3</sup> Nonmedical use of prescription-type psychotherapeutics includes the nonmedical use of pain relievers, tranquilizers, stimulants, or sedatives and does not include over-the-counter drugs.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2002, 2003, 2004, 2005, 2006, and 2007.

**Table G.29 Substance Dependence or Abuse in the Past Year among Persons Aged 12 or Older, by Demographic Characteristics: Percentages, 2006 and 2007**

Demographic Characteristic	TYPE OF PAST YEAR DEPENDENCE OR ABUSE					
	Illicit Drugs <sup>1</sup>		Alcohol		Illicit Drugs or Alcohol <sup>1</sup>	
	2006	2007	2006	2007	2006	2007
<b>TOTAL</b>	2.9	2.8	7.6	7.5	9.2	9.0
<b>AGE</b>						
12-17	4.6	4.3	5.4	5.4	8.0	7.7
18-25	7.9	7.9	17.6	16.8	21.3	20.7
26 or Older	1.7	1.7	6.2	6.2	7.2	7.2
<b>GENDER</b>						
Male	3.7	3.8	10.3	10.6	12.3	12.5
Female	2.0	1.8	5.1 <sup>a</sup>	4.6	6.3 <sup>a</sup>	5.7
<b>HISPANIC ORIGIN AND RACE</b>						
Not Hispanic or Latino	2.8	2.8	7.5	7.6	9.1	9.1
White	2.6	2.7	7.8	8.0	9.2	9.4
Black or African American	4.0	3.7	6.7	6.3	9.0	8.5
American Indian or Alaska Native	6.4	4.0	15.1	10.9	19.0	13.4
Native Hawaiian or Other Pacific Islander	2.1	3.6	10.8	7.3	12.0	9.9
Asian	1.4	1.1	3.2	4.3	4.3	4.7
Two or More Races	4.3	5.1	9.0	8.6	12.0	10.8
Hispanic or Latino	3.4 <sup>a</sup>	2.5	8.5 <sup>a</sup>	7.0	10.0 <sup>a</sup>	8.3

\*Low precision; no estimate reported.

NOTE: Dependence or abuse is based on definitions found in the 4<sup>th</sup> edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV).

<sup>a</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.05 level.

<sup>b</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.01 level.

<sup>1</sup> Illicit Drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically, based on data from original questions not including methamphetamine items added in 2005 and 2006.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006 and 2007.

**Table G.30 Received Substance Use Treatment at Any Treatment Location or at a Specialty Facility in the Past Year among Persons Aged 12 or Older: Numbers in Thousands, 2002-2007**

Location/Substance for Which Treatment Was Received in Past Year	2002	2003	2004	2005	2006	2007
<b>ANY TREATMENT LOCATION</b>						
Illicit Drugs <sup>1</sup>	2,013	1,802	2,192	2,172	2,457	2,163
Alcohol	2,405	2,359	2,658	2,843	2,764	2,733
Both Illicit Drugs and Alcohol <sup>1</sup>	1,319	1,255	1,467	1,522	1,566	1,406
Illicit Drugs or Alcohol <sup>1,2</sup>	3,483	3,327 <sup>a</sup>	3,791	3,930	4,031	3,913
<b>SPECIALTY FACILITY</b>						
Illicit Drugs <sup>1</sup>	1,412	1,103	1,427	1,280	1,576	1,343
Alcohol	1,549	1,298	1,535	1,626	1,557	1,567
Both Illicit Drugs and Alcohol <sup>1</sup>	709	595	718	748	731	615
Illicit Drugs or Alcohol <sup>1,2</sup>	2,346	1,874 <sup>b</sup>	2,327	2,308	2,537	2,412

\*Low precision; no estimate reported.

NOTE: Received Substance Use Treatment refers to treatment received in order to reduce or stop illicit drug or alcohol use, or for medical problems associated with illicit drug or alcohol use. Treatment at Any Treatment Location includes treatment received at any location, such as a hospital, rehabilitation facility (inpatient or outpatient), mental health center, emergency room, private doctor's office, self-help group, or prison/jail. Treatment at a Specialty Facility refers to treatment received at a hospital (inpatient), rehabilitation facility (inpatient or outpatient), or mental health center.

<sup>a</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.05 level.

<sup>b</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.01 level.

<sup>1</sup> Illicit Drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically, based on data from original questions not including methamphetamine items added in 2005 and 2006.

<sup>2</sup> Estimates include persons who received treatment specifically for illicit drugs or alcohol, as well as persons who received treatment but did not specify for what substance(s).

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2002, 2003, 2004, 2005, 2006, and 2007.

**Table G.31 Received Substance Use Treatment at Any Treatment Location or at a Specialty Facility in the Past Year among Persons Aged 12 or Older: Percentages, 2002-2007**

Location/Substance for Which Treatment Was Received in Past Year	2002	2003	2004	2005	2006	2007
<b>ANY TREATMENT LOCATION</b>						
Illicit Drugs <sup>1</sup>	0.9	0.8	0.9	0.9	1.0	0.9
Alcohol	1.0	1.0	1.1	1.2	1.1	1.1
Both Illicit Drugs and Alcohol <sup>1</sup>	0.6	0.5	0.6	0.6	0.6	0.6
Illicit Drugs or Alcohol <sup>1,2</sup>	1.5	1.4	1.6	1.6	1.6	1.6
<b>SPECIALTY FACILITY</b>						
Illicit Drugs <sup>1</sup>	0.6	0.5	0.6	0.5	0.6	0.5
Alcohol	0.7	0.5	0.6	0.7	0.6	0.6
Both Illicit Drugs and Alcohol <sup>1</sup>	0.3	0.3	0.3	0.3	0.3	0.2
Illicit Drugs or Alcohol <sup>1,2</sup>	1.0	0.8 <sup>a</sup>	1.0	0.9	1.0	1.0

\*Low precision; no estimate reported.

NOTE: Received Substance Use Treatment refers to treatment received in order to reduce or stop illicit drug or alcohol use, or for medical problems associated with illicit drug or alcohol use. Treatment at Any Treatment Location includes treatment received at any location, such as a hospital, rehabilitation facility (inpatient or outpatient), mental health center, emergency room, private doctor's office, self-help group, or prison/jail. Treatment at a Specialty Facility refers to treatment received at a hospital (inpatient), rehabilitation facility (inpatient or outpatient), or mental health center.

<sup>a</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.05 level.

<sup>b</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.01 level.

<sup>1</sup> Illicit Drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically, based on data from original questions not including methamphetamine items added in 2005 and 2006.

<sup>2</sup> Estimates include persons who received treatment specifically for illicit drugs or alcohol, as well as persons who received treatment but did not specify for what substance(s).

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2002, 2003, 2004, 2005, 2006, and 2007.



**Table G.32 Needed and Received Treatment for a Substance Use Problem in the Past Year among Persons Aged 12 or Older: Numbers in Thousands, 2002-2007**

Substance/Substance Treatment Status	2002	2003	2004	2005	2006	2007
<b>NEEDED TREATMENT FOR ILLICIT DRUGS<sup>1</sup></b>	7,748	7,333	8,053	7,550	7,756	7,528
Received Treatment at a Specialty Facility	1,412	1,103	1,427	1,280	1,576	1,343
Did Not Receive Treatment at a Specialty Facility	6,335	6,230	6,626	6,269	6,180	6,185
<b>NEEDED TREATMENT FOR ALCOHOL</b>	18,638	18,215	19,360	19,378	19,520	19,301
Received Treatment at a Specialty Facility	1,549	1,298	1,535	1,626	1,557	1,567
Did Not Receive Treatment at a Specialty Facility	17,089	16,917	17,824	17,752	17,963	17,734
<b>NEEDED TREATMENT FOR ILLICIT DRUGS OR ALCOHOL<sup>1</sup></b>	22,811	22,165	23,476	23,172	23,591	23,202
Received Treatment at a Specialty Facility	2,346	1,874 <sup>b</sup>	2,327	2,308	2,537	2,412
Did Not Receive Treatment at a Specialty Facility	20,465	20,290	21,149	20,864	21,054	20,790

\*Low precision; no estimate reported.

NOTE: Respondents were classified as needing treatment for a substance use problem if they met at least one of three criteria during the past year: (1) dependent on the substance; (2) abuse of the substance; or (3) received treatment for the substance use problem at a specialty facility (i.e., drug and alcohol rehabilitation facilities [inpatient or outpatient], hospitals [inpatient only], and mental health centers).

<sup>a</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.05 level.

<sup>b</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.01 level.

<sup>1</sup> Illicit Drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically, based on data from original questions not including methamphetamine items added in 2005 and 2006.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2002, 2003, 2004, 2005, 2006, and 2007.

**Table G.33 Needed and Received Treatment for a Substance Use Problem in the Past Year among Persons Aged 12 or Older: Percentages, 2002-2007**

Substance/Substance Treatment Status	2002	2003	2004	2005	2006	2007
<b>NEEDED TREATMENT FOR ILLICIT DRUGS<sup>1</sup></b>	3.3	3.1	3.3 <sup>a</sup>	3.1	3.2	3.0
Received Treatment at a Specialty Facility	0.6	0.5	0.6	0.5	0.6	0.5
Did Not Receive Treatment at a Specialty Facility	2.7	2.6	2.8 <sup>a</sup>	2.6	2.5	2.5
<b>NEEDED TREATMENT FOR ALCOHOL</b>	7.9	7.7	8.0	8.0	7.9	7.8
Received Treatment at a Specialty Facility	0.7	0.5	0.6	0.7	0.6	0.6
Did Not Receive Treatment at a Specialty Facility	7.3	7.1	7.4	7.3	7.3	7.2
<b>NEEDED TREATMENT FOR ILLICIT DRUGS OR ALCOHOL<sup>1</sup></b>	9.7	9.3	9.8	9.5	9.6	9.4
Received Treatment at a Specialty Facility	1.0	0.8 <sup>a</sup>	1.0	0.9	1.0	1.0
Did Not Receive Treatment at a Specialty Facility	8.7	8.5	8.8	8.6	8.6	8.4

\*Low precision; no estimate reported.

NOTE: Respondents were classified as needing treatment for a substance use problem if they met at least one of three criteria during the past year: (1) dependent on the substance; (2) abuse of the substance; or (3) received treatment for the substance use problem at a specialty facility (i.e., drug and alcohol rehabilitation facilities [inpatient or outpatient], hospitals [inpatient only], and mental health centers).

<sup>a</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.05 level.

<sup>b</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.01 level.

<sup>1</sup> Illicit Drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically, based on data from original questions not including methamphetamine items added in 2005 and 2006.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2002, 2003, 2004, 2005, 2006, and 2007.

**Table G.34 Needed and Received Treatment for an Illicit Drug or Alcohol Problem in the Past Year among Persons Aged 12 or Older, by Demographic Characteristics: Percentages, 2006 and 2007**

Demographic Characteristic	NEEDED TREATMENT FOR AN ILLICIT DRUG OR ALCOHOL PROBLEM IN THE PAST YEAR						Percentage Who Received Treatment at a Specialty Facility among Persons Who Needed Treatment	
	Total		Received Treatment at a Specialty Facility		Did Not Receive Treatment at a Specialty Facility		2006	2007
	2006	2007	2006	2007	2006	2007		
<b>TOTAL</b>	9.6	9.4	1.0	1.0	8.6	8.4	10.8	10.4
<b>AGE</b>								
12-17	8.2	7.9	0.7	0.6	7.5	7.3	8.7	7.6
18-25	21.8	21.1	1.5	1.5	20.3	19.7	7.0	7.0
26 or Older	7.6	7.5	1.0	0.9	6.7	6.6	12.9	12.4
<b>GENDER</b>								
Male	12.7	13.0	1.4	1.4	11.4	11.5	10.7	10.9
Female	6.6 <sup>a</sup>	6.0	0.7	0.6	5.9	5.4	10.9	9.3
<b>HISPANIC ORIGIN AND RACE</b>								
Not Hispanic or Latino	9.4	9.5	1.0	1.0	8.5	8.4	10.1	11.0
White	9.5	9.7	0.9	1.0	8.6	8.8	9.6	9.9
Black or African American	9.6	9.3	1.4	1.7	8.2	7.6	14.2	18.2
American Indian or Alaska Native	20.2	14.5	2.3	3.4	18.0	11.1	*	*
Native Hawaiian or Other Pacific Islander	12.3	9.9	0.8	0.1	11.5	9.9	*	*
Asian	4.4	4.9	0.3	0.2	4.2	4.7	6.2	*
Two or More Races	12.4	11.7	1.1	1.8	11.3	9.8	8.6	*
Hispanic or Latino	10.7 <sup>b</sup>	8.6	1.5 <sup>b</sup>	0.5	9.1	8.0	14.3 <sup>b</sup>	6.0

\*Low precision; no estimate reported.

NOTE: Respondents were classified as needing treatment for an illicit drug or alcohol problem if they met at least one of three criteria during the past year: (1) dependent on illicit drugs or alcohol; (2) abuse of illicit drugs or alcohol; or (3) received treatment for an illicit drug or alcohol problem at a specialty facility (i.e., drug and alcohol rehabilitation facilities [inpatient or outpatient], hospitals [inpatient only], and mental health centers). Illicit Drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically, based on data from original questions not including methamphetamine use items added in 2005 and 2006.

<sup>a</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.05 level.

<sup>b</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.01 level.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006 and 2007.

**Table G.35 Perceived Need for Illicit Drug or Alcohol Treatment and Whether Made an Effort to Get Treatment in the Past Year among Persons Aged 12 or Older Classified as Needing But Not Receiving Treatment for an Illicit Drug or Alcohol Problem, by Demographic Characteristics: Numbers in Thousands, 2006 and 2007**

Demographic Characteristic	Total Needing But Not Receiving Treatment <sup>1</sup>		FELT NEED FOR TREATMENT <sup>2</sup>						Did Not Feel Need for Treatment <sup>2</sup>	
			Total		Made Effort		Made No Effort			
	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007
<b>TOTAL</b>	21,054	20,790	940 <sup>a</sup>	1,335	314	380	625 <sup>a</sup>	955	20,114	19,455
<b>AGE</b>										
12-17	1,906	1,832	55	55	16	15	39	40	1,851	1,776
18-25	6,640	6,435	249	255	49	82	200	173	6,391	6,180
26 or Older	12,508	12,523	636 <sup>a</sup>	1,025	249	283	386 <sup>a</sup>	742	11,872	11,498
<b>GENDER</b>										
Male	13,584	13,871	633	898	216	262	418	636	12,950	12,973
Female	7,470	6,919	306	437	99	118	207	319	7,163 <sup>a</sup>	6,482

\*Low precision; no estimate reported.

<sup>a</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.05 level.

<sup>b</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.01 level.

<sup>1</sup> Needing But Not Receiving Treatment refers to respondents classified as needing treatment for illicit drugs or alcohol, but have not received treatment for an illicit drug or alcohol problem at a specialty facility (i.e., drug and alcohol rehabilitation facilities [inpatient or outpatient], hospitals [inpatient only], and mental health centers). Illicit Drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically, based on data from original questions not including methamphetamine use items added in 2005 and 2006.

<sup>2</sup> Felt Need for Treatment includes persons who did not receive but felt they needed treatment for an illicit drug or alcohol problem, as well as persons who received treatment at a location other than a specialty facility but felt they needed additional treatment.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006 and 2007.

**Table G.36 Perceived Need for Illicit Drug or Alcohol Treatment and Whether Made an Effort to Get Treatment in the Past Year among Persons Aged 12 or Older Classified as Needing But Not Receiving Treatment for an Illicit Drug or Alcohol Problem, by Demographic Characteristics: Percentages, 2006 and 2007**

Demographic Characteristic	Total Needing But Not Receiving Treatment <sup>1</sup>		FELT NEED FOR TREATMENT <sup>2</sup>						Did Not Feel Need for Treatment <sup>2</sup>	
			Total		Made Effort		Made No Effort			
	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007
<b>TOTAL</b>	100.0	100.0	4.5 <sup>a</sup>	6.4	1.5	1.8	3.0 <sup>a</sup>	4.6	95.5 <sup>a</sup>	93.6
<b>AGE</b>										
12-17	100.0	100.0	2.9	3.0	0.8	0.8	2.0	2.2	97.1	97.0
18-25	100.0	100.0	3.8	4.0	0.7	1.3	3.0	2.7	96.2	96.0
26 or Older	100.0	100.0	5.1 <sup>a</sup>	8.2	2.0	2.3	3.1 <sup>a</sup>	5.9	94.9 <sup>a</sup>	91.8
<b>GENDER</b>										
Male	100.0	100.0	4.7	6.5	1.6	1.9	3.1	4.6	95.3	93.5
Female	100.0	100.0	4.1 <sup>a</sup>	6.3	1.3	1.7	2.8 <sup>a</sup>	4.6	95.9 <sup>a</sup>	93.7

\*Low precision; no estimate reported.

<sup>a</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.05 level.

<sup>b</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.01 level.

<sup>1</sup> Needing But Not Receiving Treatment refers to respondents classified as needing treatment for illicit drugs or alcohol, but have not received treatment for an illicit drug or alcohol problem at a specialty facility (i.e., drug and alcohol rehabilitation facilities [inpatient or outpatient], hospitals [inpatient only], and mental health centers). Illicit Drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically, based on data from original questions not including methamphetamine use items added in 2005 and 2006.

<sup>2</sup> Felt Need for Treatment includes persons who did not receive but felt they needed treatment for an illicit drug or alcohol problem, as well as persons who received treatment at a location other than a specialty facility but felt they needed additional treatment.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2006 and 2007.

**Table G.37 Serious Psychological Distress in the Past Year among Persons Aged 18 or Older, by Demographic Characteristics: Percentages, 2004-2007**

<b>Demographic Characteristic</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
<b>TOTAL</b>	12.2 <sup>b</sup>	11.3	11.3	10.9
<b>AGE</b>				
18-25	20.2 <sup>b</sup>	18.6	17.7	17.9
26-49	14.0 <sup>b</sup>	12.5	13.0	12.2
50 or Older	6.9	7.1	6.9	7.0
<b>GENDER</b>				
Male	9.4 <sup>a</sup>	8.4	8.7	8.2
Female	14.8 <sup>a</sup>	14.0	13.7	13.4
<b>HISPANIC ORIGIN AND RACE</b>				
Not Hispanic or Latino	12.2 <sup>b</sup>	11.2	11.4	11.0
White	12.2	11.4	11.4	11.3
Black or African American	11.9	10.7	10.5	10.5
American Indian or Alaska Native	10.8	21.1	25.9 <sup>a</sup>	13.7
Native Hawaiian or Other Pacific Islander	*	*	10.8	11.9
Asian	9.2	7.2	7.8	6.4
Two or More Races	22.4	16.8	25.3 <sup>b</sup>	14.0
Hispanic or Latino	12.2	11.7	10.8	10.2

\*Low precision; no estimate reported.

NOTE: Estimates for 2004 in this table are based on a subsample of respondents aged 18 or older. Due to the use of alternative 2004 subsample data, these 2004 estimates may differ from 2004 estimates published in prior NSDUH reports. See Section B.4.4 in Appendix B of the *Results from the 2007 National Survey on Drug Use and Health: National Findings*.

NOTE: Serious Psychological Distress (SPD) is defined as having a score of 13 or higher on the K6 scale. Due to questionnaire changes, these estimates are not comparable with SPD estimates published in 2004 and prior years. See Section B.4.4 in Appendix B of the *Results from the 2007 National Survey on Drug Use and Health: National Findings*.

<sup>a</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.05 level.

<sup>b</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.01 level.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2004, 2005, 2006, and 2007.

**Table G.38 Received Mental Health Treatment/Counseling in the Past Year among Persons Aged 18 or Older, by Demographic Characteristics: Percentages, 2002-2007**

<b>Demographic Characteristic</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
<b>TOTAL</b>	13.0	13.2	12.8	13.0	12.9	13.2
<b>AGE</b>						
18-25	10.5	11.1 <sup>a</sup>	10.8	11.2 <sup>a</sup>	10.8	10.3
26-49	14.5	14.5	14.4	13.9	14.0	14.3
50 or Older	12.0	12.3	11.7 <sup>a</sup>	12.5	12.4	13.2
<b>GENDER</b>						
Male	8.7	8.5	8.8	8.9	8.9	9.2
Female	16.9	17.5	16.6	16.8	16.6	17.0
<b>HISPANIC ORIGIN AND RACE</b>						
Not Hispanic or Latino	13.6	13.9	13.6	13.7	13.8	14.2
White	14.7 <sup>b</sup>	15.2	14.9 <sup>a</sup>	15.1 <sup>a</sup>	15.2	16.0
Black or African American	8.5 <sup>a</sup>	8.5 <sup>a</sup>	8.5 <sup>a</sup>	8.9 <sup>a</sup>	7.4	6.8
American Indian or Alaska Native	17.7	12.6	12.6	15.4	11.9	11.6
Native Hawaiian or Other Pacific Islander	3.9	*	*	*	7.0	*
Asian	8.3 <sup>b</sup>	4.9	4.7	4.0	5.6	3.9
Two or More Races	16.6	17.5	15.8	14.4	21.6	15.6
Hispanic or Latino	8.2	7.8	7.4	7.8	7.0	7.3

\*Low precision; no estimate reported.

NOTE: Mental Health Treatment/Counseling is defined as having received inpatient care or outpatient care or having used prescription medication for problems with emotions, nerves, or mental health. Respondents were not to include treatment for drug or alcohol use. Respondents with unknown treatment/counseling information were excluded. Estimates were based only on responses to items in the Adult Mental Health Service Utilization module.

NOTE: Due to revised editing of 2002, 2003, and 2004 outpatient mental health treatment/counseling data, these 2002 and 2003 estimates may differ slightly from 2002 and 2003 estimates published in prior NSDUH reports. See Section B.5.2 in Appendix B of the *Results from the 2004 National Survey on Drug Use and Health: National Findings*.

<sup>a</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.05 level.

<sup>b</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.01 level.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2002, 2003, 2004, 2005, 2006, and 2007.

**Table G.39 Had at Least One Major Depressive Episode (MDE) in the Past Year among Persons Aged 18 or Older, by Demographic Characteristics: Percentages, 2004-2007**

<b>Demographic Characteristic</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
<b>TOTAL</b>	8.0	7.3	7.2	7.5
<b>AGE</b>				
18-25	10.1 <sup>b</sup>	9.7 <sup>a</sup>	9.0	8.9
26-49	9.8 <sup>b</sup>	8.4	8.5	8.5
50 or Older	5.0	5.1	5.1	5.8
<b>GENDER</b>				
Male	5.6	5.2	5.3	5.3
Female	10.3	9.3	9.0	9.5
<b>HISPANIC ORIGIN AND RACE</b>				
Not Hispanic or Latino	8.2	7.3	7.5	7.6
White	8.4	7.6	7.8	8.1
Black or African American	7.1	6.5	6.3	6.1
American Indian or Alaska Native	8.1	9.4	12.1	9.2
Native Hawaiian or Other Pacific Islander	*	*	5.8	*
Asian	5.0	3.6	3.0	2.9
Two or More Races	17.9	10.1	14.3	12.1
Hispanic or Latino	6.5	7.0	5.4	6.3

\*Low precision; no estimate reported.

NOTE: Major Depressive Episode (MDE) is defined as in the 4<sup>th</sup> edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)*, which specifies a period of at least 2 weeks when a person experienced a depressed mood or loss of interest or pleasure in daily activities and had a majority of specified depression symptoms. Respondents with unknown past year MDE data were excluded.

NOTE: Estimates for 2004 in this table are based on a subsample of respondents aged 18 or older, while 2005, 2006, and 2007 estimates are based on all respondents aged 18 or older. See Section B.4.5 in Appendix B of the *Results from the 2007 National Survey on Drug Use and Health: National Findings*.

<sup>a</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.05 level.

<sup>b</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.01 level.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2004, 2005, 2006, and 2007.



**Table G.40 Had at Least One Major Depressive Episode (MDE) in the Past Year among Persons Aged 12 to 17, by Demographic Characteristics: Percentages, 2004-2007**

<b>Demographic Characteristic</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
<b>TOTAL</b>	9.0 <sup>a</sup>	8.8	7.9	8.2
<b>AGE</b>				
12-13	5.4 <sup>a</sup>	5.2 <sup>a</sup>	4.9	4.3
14-15	9.2	9.5	7.9	8.4
16-17	12.3	11.5	10.7	11.5
<b>GENDER</b>				
Male	5.0	4.5	4.2	4.6
Female	13.1 <sup>a</sup>	13.3 <sup>a</sup>	11.8	11.9
<b>HISPANIC ORIGIN AND RACE</b>				
Not Hispanic or Latino	8.9	8.7	7.9	8.4
White	9.2	9.1	8.1	8.7
Black or African American	7.7	7.6	6.4	7.8
American Indian or Alaska Native	7.8	6.1	9.3	4.6
Native Hawaiian or Other Pacific Islander	*	*	*	*
Asian	8.3	6.0	7.6	6.8
Two or More Races	11.7	10.5	13.0	10.0
Hispanic or Latino	9.1 <sup>a</sup>	9.1 <sup>a</sup>	8.0	7.1

\*Low precision; no estimate reported.

NOTE: Major Depressive Episode (MDE) is defined as in the 4<sup>th</sup> edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV), which specifies a period of at least 2 weeks when a person experienced a depressed mood or loss of interest or pleasure in daily activities and had a majority of specified depression symptoms. Respondents with unknown past year MDE data were excluded.

<sup>a</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.05 level.

<sup>b</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.01 level.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2004, 2005, 2006, and 2007.

**Table G.41 Source of Mental Health Service in the Past Year among Persons Aged 12 to 17: Percentages, 2002-2007**

Source of Mental Health Service <sup>1</sup>	2002	2003	2004	2005	2006	2007
<b>SPECIALTY MENTAL HEALTH</b>	12.0	12.5	13.5 <sup>a</sup>	13.5 <sup>a</sup>	13.1	12.5
<b>Outpatient</b>	10.8	11.3	12.1 <sup>a</sup>	12.1 <sup>a</sup>	11.7	11.1
Private Therapist, Psychologist, Psychiatrist, Social Worker, or Counselor	9.2	9.5	10.1	10.2 <sup>a</sup>	9.6	9.4
Mental Health Clinic or Center	2.5	2.6	2.9 <sup>b</sup>	2.6	2.3	2.3
Partial Day Hospital or Day Treatment Program	1.8	1.7	1.8	1.8	1.9	1.7
In-Home Therapist, Counselor, or Family Preservation Worker	2.8	2.6	3.0	2.9	2.8	2.8
<b>Inpatient or Residential (Overnight or Longer   Stay)</b>	2.4	2.5	2.8	2.8	2.7	2.5
Hospital	1.7	1.9	2.1	2.1	2.0	2.0
Residential Treatment Center	0.9	0.9	1.2 <sup>b</sup>	0.9	0.9	0.8
Foster Care or Therapeutic Foster Care Home	0.6 <sup>a</sup>	0.7 <sup>b</sup>	0.6 <sup>a</sup>	0.6	0.5	0.4
<b>EDUCATION<sup>2</sup></b>	10.6 <sup>a</sup>	12.1	12.7 <sup>b</sup>	12.1	11.9	11.5
School Counselor, School Psychologist or Regular Meetings with a Teacher	8.6 <sup>b</sup>	9.9	10.5 <sup>a</sup>	10.0	9.8	9.7
Special Education Services While in a Regular Classroom or Placement in a Special Classroom, Special Program or Special School	3.4	3.9 <sup>b</sup>	4.1 <sup>b</sup>	3.9 <sup>b</sup>	3.9 <sup>b</sup>	3.3
<b>MEDICAL</b>						
Pediatrician or Other Family Doctor	2.7	2.9	3.4 <sup>b</sup>	3.2 <sup>a</sup>	2.8	2.8
<b>SPECIALTY MENTAL HEALTH AND EDUCATION OR MEDICAL<sup>3</sup></b>	4.8	5.7 <sup>a</sup>	5.7 <sup>a</sup>	5.8 <sup>a</sup>	5.3	5.1

\*Low precision; no estimate reported.

NOTE: Receipt of Mental Health Services for persons aged 12 to 17 is defined as having received treatment or counseling for emotional or behavioral problems not caused by drug or alcohol use.

NOTE: Respondents with unknown Mental Health Service Use in the Past Year were excluded.

<sup>a</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.05 level.

<sup>b</sup> Difference between estimate and 2007 estimate is statistically significant at the 0.01 level.

<sup>1</sup> Respondents could indicate multiple service sources; thus, these response categories are not mutually exclusive.

<sup>2</sup> Respondents who did not report their school enrollment status or who reported not being enrolled in school in the past 12 months were not asked about receipt of mental health treatment or counseling from this source.

<sup>3</sup> Specialty Mental Health and Education or Medical includes receipt of any specialty mental health services and receipt of services from either Education or Medical sources.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2002, 2003, 2004, 2005, 2006, and 2007.