

9. Discussion

This report presents initial findings from the third year of the redesigned National Household Survey on Drug Abuse (NHSDA). These analyses demonstrate that there is much to be learned about substance use, mental health, and related issues from this extraordinary database. During 1999, 2000, and 2001, a total of more than 200,000 Americans, including 75,000 youths aged 12 to 17, participated in the NHSDA. With this expanded sample, the NHSDA is now a much more powerful tool for studying these issues.

The new information on mental health will provide important information on the relationship between substance abuse and mental health problems. Confirming previous studies based on smaller and more restricted samples, the 2001 NHSDA found a strong relationship between substance abuse and mental health problems among both youths and adults.

9.1 Recent Trends in Substance Use

The NHSDA showed increases among Americans aged 12 or older between 2000 and 2001 in rates of use of several substances, including marijuana and cocaine and the nonmedical use of pain relievers and tranquilizers. Alcohol use also increased, although binge and heavy use remained unchanged between 2000 and 2001. There were also increases in rates of dependence on or abuse of alcohol or illicit drugs. Overall tobacco use and cigarette use remained unchanged, although there was an increase in cigar use. Among youths aged 12 to 17, there were increases in the use of marijuana and alcohol between 2000 and 2001, but no change in the use of other substances, no change in binge and heavy alcohol use, and no change in dependence on or abuse of alcohol or illicit drugs.

The higher levels of use of many substances, particularly marijuana and alcohol among youths and adults, in 2001 compared with 2000 was a somewhat surprising finding. Other surveys of youths generally have shown a leveling off or in some instances a decrease in the use of marijuana and alcohol since 1997. The 2000 NHSDA indicated very little change from 1999 in rates of substance use among youths or adults, and decreasing rates of incidence or new use. There was reason to believe that subsequent surveys would show decreases in prevalence rates. In 2001, there were unusually large increases in lifetime prevalence of use of marijuana and other substances, a finding that is somewhat inconsistent with other NHSDA data on substance use initiation. This finding raised the possibility that some of the increases might be artifacts of methodological changes in the survey in 2001. This issue is discussed below.

Comparisons with Other Data Sources

Appendix E in Volume II describes other surveys that produce estimates of substance use prevalence and compares their results to NHSDA results. National data on trends in substance use among adults are available from three other data sources—the National Health Interview Survey (NHIS), the National Survey of Parents and Youth (NSPY), and the Monitoring the Future (MTF) study. The NHIS trends in adult cigarette and alcohol use between 2000 and 2001 are consistent with the NHSDA trend, showing no significant change in current cigarette use

(23.4 percent in 2000 and 22.9 percent in 2001) and a small (61.5 to 62.7 percent, not statistically significant) increase in past year alcohol use from 2000 to 2001 (National Center for Health Statistics [NCHS], 2002). The NHIS does not collect data on illicit drug use. Data on illicit drug use are available from the sample of parents in the National Survey of Parents and Youth (NSPY). Among parents, the rates of lifetime and past month marijuana use were higher in 2001 (53.7 and 3.4 percent, respectively) than in 2000 (52.8 and 2.7 percent, respectively), but these differences are not statistically significant (Office of National Drug Control Policy [ONDCP], 2002). Another source of data on adults is the follow-up samples from the MTF. Estimates from 1998 through 2001 from the MTF suggest increases (not statistically significant) in past month marijuana use among young adults aged 19 to 28 (14.9 percent in 1998, 15.6 percent in 1999, 16.1 percent in 2000, and 16.7 percent in 2001) (Johnston, O'Malley, & Bachman, 2002a, 2002b).

Several nationally representative surveys of youths provide trends in substance use prevalence. These include school surveys, such as the MTF and the Youth Risk Behavior Survey (YRBS), and the NSPY, which is conducted in households. Trends in cigarette use are generally consistent between the NHSDA and each of these surveys, indicating a continuing gradual decline in youth smoking through 2001 (although the decline between 2000 and 2001 in the NHSDA is not statistically significant). In contrast with the increase in youth alcohol use found in the NHSDA, all three of these surveys show small decreases in alcohol use among youths, with no changes reaching statistical significance. The NHSDA increase in youth marijuana use is not consistent with the MTF and YRBS data. The YRBS shows a decrease for past month use among 9th to 12th graders, from 26.7 percent in 1999 to 23.9 percent in 2001 (Centers for Disease Control and Prevention [CDC], 2002b). The MTF shows no statistically significant changes from 2000 to 2001, although the 2001 estimates for each grade were slightly above the 2000 estimates. The NSPY estimates are consistent with the NHSDA trend, although the reported increase in past month marijuana use from 7.2 percent in 2000 to 8.0 percent in 2001 among youths aged 12 to 18 based on the NSPY is not statistically significant. NHSDA estimates for youths aged 12 to 17 are 7.2 percent in 2000 and 8.0 percent in 2001.

It is also worth noting that trends among youths in perceived risk of harm in using marijuana recently have shown decreases. The 2001 MTF reported a statistically significant decrease in the percentage of 8th graders reporting "great risk" in smoking marijuana regularly, from 74.8 percent in 2000 to 72.2 percent in 2001. Similar decreases in measures of perceived risk were also evident for 10th graders between 1999 and 2001. Perceived risk measures have often been cited as leading indicators of future trends in use, with decreases in perceived risk historically preceding increases in use and vice versa. Consistent with the MTF trend, the NHSDA also found significant decreases in the perceived risk of using marijuana among youths. Between 2000 and 2001, the percentage of youths reporting great risk in smoking marijuana once a month decreased from 37.7 to 35.7 percent; the percentage reporting great risk in smoking marijuana once or twice a week decreased from 56.0 to 53.5 percent.

In summary, there is some agreement between other datasets and the NHSDA results with respect to trends in substance use prevalence from 2000 to 2001, but not in every case.

Changes in the 2001 NHSDA

Initial analyses of the 2001 NHSDA data raised questions about some methodological changes between 2000 and 2001 that might have affected the estimates. The significantly higher rates of use of a variety of substances, particularly marijuana among adults and youths, in 2001 compared with 2000 was not anticipated. Of particular interest was the substantial increase in the number of lifetime users of marijuana and other substances, which seemed inconsistent with the usual patterns of new use. The survey has shown that 2 million to 2½ million Americans have initiated marijuana use each year since 1994, but the estimate of the number of persons who ever used marijuana was more than 7 million higher in 2001 than in 2000.

A major effort was undertaken by the Office of Applied Studies (OAS) and its contractor on the project, RTI, to explain these findings. There were two changes in data collection procedures during 2001 that might have affected reporting. During the first half of 2001, a small portion of the NHSDA sample participated in an experiment to test the impact of incentive payments on respondent participation and on the quality of data. The experiment involved approximately 9,600 respondents, about half of whom received a payment of \$20 or \$40. The other protocol change was subtle, but more widespread. It involved an increased emphasis by survey managers on following specific data collection protocols during initial contacts with households and during screening and interviewing. The increased emphasis on adherence to procedures was conveyed by communications with all field interviewers and directives based on observations of a sample of interviews.

NHSDA data were analyzed in a number of different ways in an attempt to understand the effects of the changes in survey protocol. This analysis suggested that these changes may have influenced reporting. However, the effects are relatively small and do not fully account for the observed increases in substance use between 2000 and 2001. There appears to have been a general increase in reporting of lifetime use beyond the impact of any changes in the survey and beyond levels that could reasonably have occurred within a single year. One other possibility is that the increases in some prevalence estimates between 2000 and 2001 appear larger because the 2000 estimates were biased downward. This seems plausible for the marijuana estimates because the lifetime prevalence estimate for marijuana decreased (not significantly) between 1999 and 2000, resulting in an estimated number of lifetime marijuana users in 2001 that is approximately 6.4 million more than the estimated number for 1999. This translates to just over 3 million new marijuana users per year, a number that is reasonably consistent with incidence estimates.

It is not clear that the anomaly in the lifetime use measures necessarily indicates a problem with past year and past month use measures. As discussed in Section 9.1 above, the NHSDA trend results for past month and past year substance use were compared with results from other data sources. Some confirmation of the increasing trends for youths and adults was evident in these comparisons, but the results were not consistent across all of the sources (see Appendix E in Volume II for further discussion).

More detailed information on the survey process and changes in 2001 is provided in Appendix C in Volume II.

New Questions on Ecstasy in 2001

For the basic measures of substance use prevalence, the NHSDA employs a core set of questions that remain unchanged from year to year. This promotes comparability over time in key measures. However, due to the critical need for information on the emerging use of Ecstasy (MDMA), new questions were inserted into the core section covering the use of hallucinogens. This had a small but measurable impact on estimates of overall current hallucinogen use. As discussed in Appendix C in Volume II, the questionnaire change accounts for a 19 percent increase in the estimate of past month hallucinogen use among persons aged 12 or older (from 0.5 to 0.6 percent). The effect on the composite estimate of any illicit drug use is small (less than a 0.3 percent relative increase).

9.2 Long-Term Trends in Illicit Drug Use

The NHSDA estimates presented in this report are not strictly comparable with estimates from NHSDAs prior to 1999 because of the shift from paper-and-pencil interviewing (PAPI) to computer-assisted interviewing (CAI) in 1999 and the effect that this methodological change has on the estimates. However, it is important to discuss the 1999, 2000, and 2001 data in the context of the results from the earlier surveys.

The estimated number of past month illicit drug users in the United States in 2001 (15.9 million) is somewhat higher than the estimate based on the 1992 NHSDA (12.0 million), which reflects a low point in levels of illicit drug use in the United States. The higher number in 2001 is due to several factors, including a much higher rate of use among youths (10.8 percent in 2001 vs. 5.3 percent in 1992), a slight increase in the rate of use among adults that is partly due to the aging of younger drug-using cohorts (6.6 percent in 2001 vs. 5.9 percent in 1992), and a 10 percent increase in the size of the U.S. population. The rate of use among youths doubled between 1992 and 1995, from 5.3 to 10.9 percent. After 1995, the youth rate varied from year to year and declined significantly from 1997 to 1998. Estimates from the supplemental PAPI sample employed with the 1999 NHSDA indicated a continuing decline among youths in 1999, to 9.0 percent. This estimate is still higher than the 1992 rate. Although not strictly comparable with the 1995 to 1999 PAPI estimates, the 2001 estimate of youth past month illicit drug use from the NHSDA (10.8 percent) is similar to the 1995 rate and well above the 1992 rate.

Prior to the increase in youth illicit drug use in the early to mid-1990s, there had been a period of significant decline in drug use among both youths and adults. This occurred from 1979, the peak year for illicit drug use prevalence among adults and youths, until 1992. During that period, the number of past month illicit drug users dropped from 25 million to 12 million. The rate of use dropped from 14.1 to 5.8 percent of the population aged 12 or older. Among youths aged 12 to 17, the rate fell from 16.3 to 5.3 percent. Thus, although the rate of illicit drug use among youths in 2001 is approximately twice the rate in 1992, it is still significantly below the peak rate that occurred in 1979. Similarly, the overall number and rate of use in the population are roughly half of what they were in 1979.

Prior to 1979, the peak year for illicit drug use, there had been a steady increase in use occurring throughout the 1970s (National Institute on Drug Abuse [NIDA], 1983). Although the

first national survey to estimate the prevalence of illicit drug use was conducted in 1971, estimates of illicit drug initiation, based on retrospective reports of first-time use, suggest that the increase had begun in the early or mid-1960s (Gfroerer & Brodsky, 1992). These incidence estimates suggest that illicit drug use prevalence had been very low during the early 1960s, but began to increase during the mid-1960s as substantial numbers of young people initiated the use of marijuana. As discussed in Chapter 5 of this report, annual marijuana incidence increased from about 0.6 million new users in 1965 until it reached a peak of 3.2 million initiates per year in 1976 and 1977, 2 to 3 years before the prevalence rates peaked. Interestingly, the annual number of marijuana initiates reached a low point in 1990 (1.4 million), then increased, 2 years before the increase in youth prevalence occurred. This finding demonstrates the value of analyzing the incidence data in forecasting future trends in prevalence. Assuming this relationship between incidence and prevalence continues to hold, the continuing high levels (2.4 million to 2.5 million initiates per year) of marijuana incidence between 1995 and 2000 indicate that a decline in youth prevalence may not occur in the near future. The cohort identified as the "baby boomers," who had high marijuana initiation rates during the 1970s, has resulted in an increase in the numbers needing treatment for substance abuse problems. The increase in marijuana initiation rates during the 1990s may have the same result.

9.3 Changes in the Survey in 2002

At the time of this initial release of the 2001 NHSDA data, the 2002 survey is more than 50 percent completed. For the 2002 survey, which began in January, two changes have been implemented. First, the name of the survey has been changed. The survey is now called the National Survey on Drug Use and Health (NSDUH). This new name more correctly describes the purpose of the survey and the topics covered by the questionnaire than the old name did. The other change in the survey is the introduction of respondent incentives. Beginning in January 2002, each NSDUH participant is given \$30 for completing the interview. Testing of the use of incentives indicated that response rates would be increased significantly with such a payment and that survey costs are likely to drop because of a decline in the number of return visits to sample addresses that had been required to gain respondent participation. OAS has initiated a series of analyses to assess the impact of the incentives on the estimates produced from the survey.