

The NHSDA Report

May 9, 2003

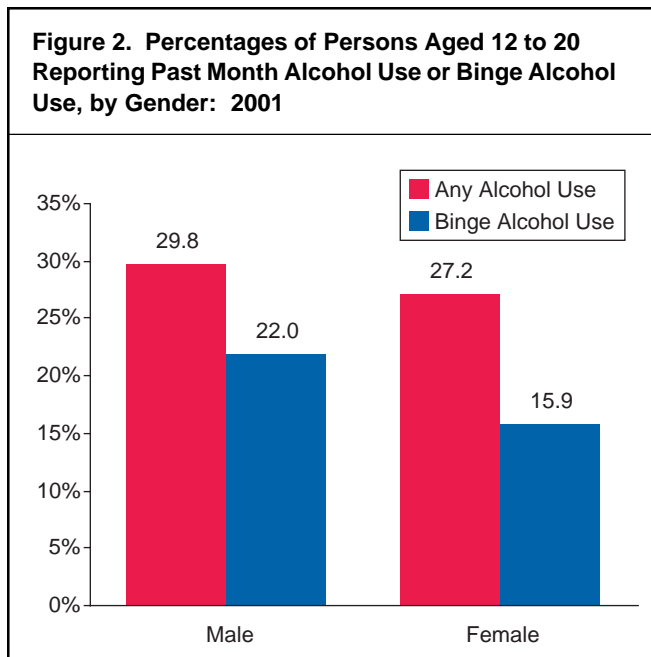
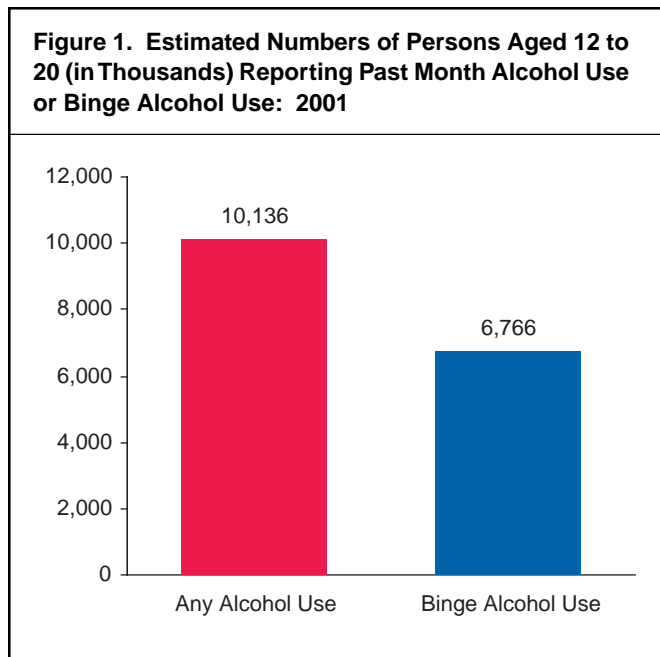
Alcohol Use by Persons Under the Legal Drinking Age of 21

In Brief

- In 2001, nearly one in five persons aged 12 to 20 engaged in binge alcohol use
- Underage alcohol use tended to be more prevalent in States in New England, the upper Midwest, and the northern Mountain States
- Nearly 3 million persons aged 12 to 20 were dependent on or abused alcohol in the past year

Adolescence and young adulthood are times of transition both physically and socially, and many youthful behaviors can have far-reaching consequences.¹ During this time of social and developmental change, many young people also experiment with alcohol, although all States have had a legal drinking age of 21 since 1988. Regular, excessive alcohol use in adolescence can result in changes in brain functioning² and cognitive impairment.³ Underage drinkers who drive after drinking are at greater risk of fatal crashes than older drinkers because of their lack of driving experience and over-confidence.⁴ Among college students, about one fourth reported academic problems related to their alcohol use,⁵ and excessive alcohol use can result in death or injury, sexual assault or engaging in unprotected sex, and vandalism or property damage.⁶ These problems affect more than just those who engage in underage alcohol use and include risks to other drivers and passengers caused by underage drinking drivers.

This report presents findings on underage alcohol use (i.e., alcohol use among persons

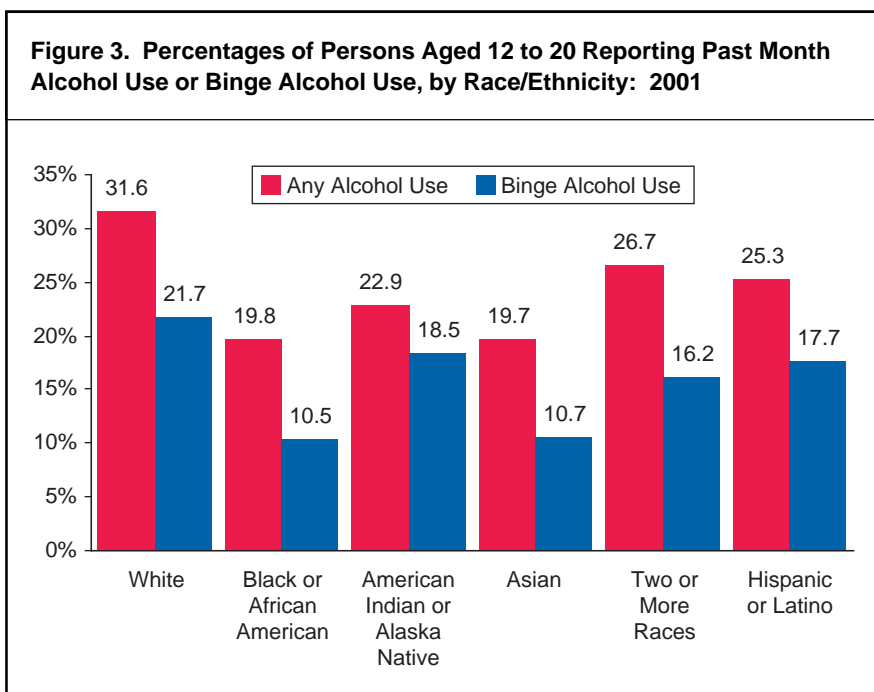


under the age of 21) from the National Household Survey on Drug Abuse (NHSDA). The NHSDA asks respondents about the quantity and frequency of their alcohol use in the past month. The NHSDA also asks about problems or behaviors associated with their alcohol use in the past 12 months, including driving under the influence of alcohol, symptoms of alcohol dependence or abuse,⁷ and receipt of treatment for alcohol problems. Data also were analyzed by the type of county in which respondents lived at the time of the interview⁸ and by college enrollment status.

Moreover, because the NHSDA since 1999 has included people in all 50 States and the District of Columbia, it is possible to produce estimates at the State level. Therefore, this report also includes estimates of underage alcohol use at the State level based on combined data from 3 survey years: 1999 through 2001.

National Estimates and Patterns of Underage Alcohol Use

In 2001, 10.1 million people, or 28.5 percent, of persons aged 12 to 20



reported using alcohol in the past month. Nearly one in five persons aged 12 to 20 (19.0 percent, or 6.8 million people) engaged in binge alcohol use in the past month in 2001. Binge alcohol use is defined as having five or more drinks on the same occasion (i.e., at the same time or within a couple of hours) at least once in the past month. Thus,

nearly 70 percent of underage persons who drank any alcohol in the past month had at least one occasion in that period when they consumed five or more drinks (Figure 1).

Underage alcohol use is more prevalent among males than among females. An estimated 29.8 percent of males and 27.2 percent of females aged 12 to 20 in 2001 used alcohol

Figure 4. Percentages of Persons Aged 12 to 20 Reporting Past Month Alcohol Use or Binge Alcohol Use, by County Type: 2001

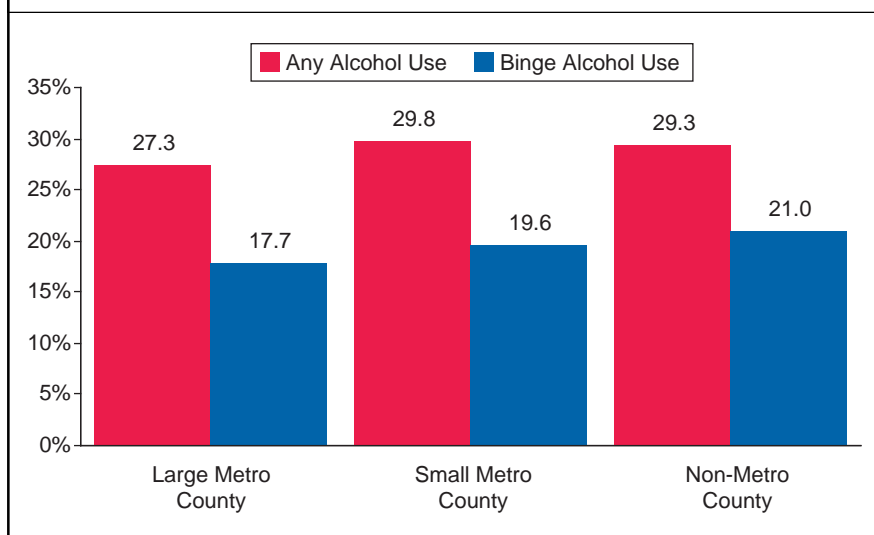
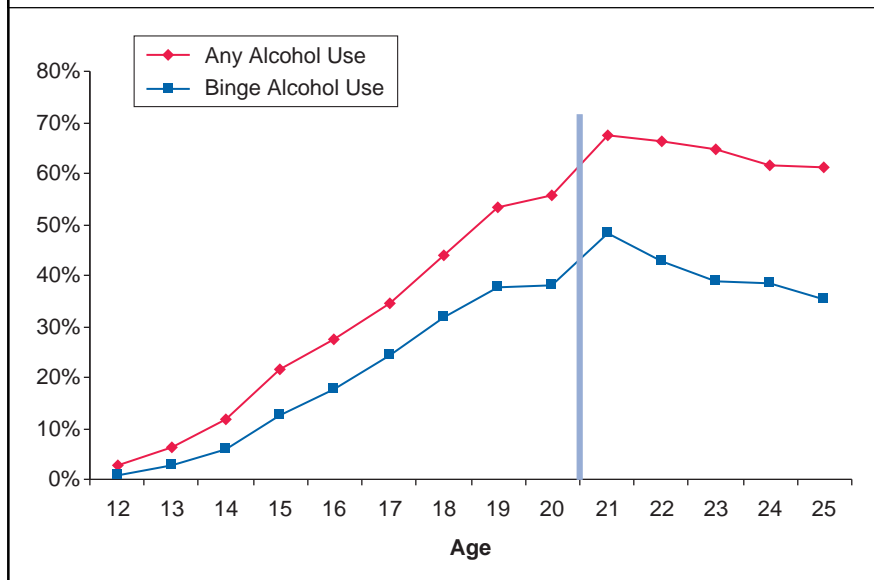


Figure 5. Percentages of Persons Aged 12 to 25 Reporting Past Month Alcohol Use or Binge Alcohol Use, by Single Years of Age: 2001



metropolitan areas, and 29.3 percent for those in nonmetro-politan areas. For binge alcohol use in the past month by county type, rates ranged from 17.7 percent in large metropolitan areas to 21.0 percent in nonmetropolitan areas.

Figure 5 shows rates of alcohol use by single years of age from age 12 to age 25. Rates are shown to age 25 to provide a further context for understanding underage alcohol use. Rates of any alcohol use in the past month for specific ages increased up to age 21 (67.5 percent), the legal drinking age, and remained above 60 percent through age 25. Rates roughly doubled from age 12 (2.6 percent) to age 13 (6.1 percent), from age 13 to age 14 (11.7 percent), and from age 14 to age 15 (21.5 percent). In addition, more than half of young adults aged 19 or 20 and nearly 45 percent of 18 year olds had used alcohol in the past month.

Rates of binge alcohol use in the past month for specific ages showed a pattern of steady increases similar to that for any alcohol use, peaking at age 21. Nearly half of 21 year olds (48.2 percent) engaged in binge alcohol use at some point in the past month. In addition, nearly 40 percent of young adults aged 19 or 20 were binge alcohol users in 2001. Approximately one in eight 15 year olds, 18 percent of 16 year olds, and nearly one fourth of 17 year olds were binge alcohol users in the past month.

Figure 6 shows rates of alcohol use for young adults aged 18 to 20 who were full-time college undergraduate students and those who were not. Full-time undergraduates aged 18 to 20 were significantly more likely to have used alcohol in the past month or to have engaged in binge alcohol use in the past month compared with their counterparts who were not in college full time.

in the past month. Rates of binge alcohol use in the past month were 22.0 percent for males aged 12 to 20 and 15.9 percent for females in this age group (Figure 2).

Among racial/ethnic groups, Non-Hispanic whites in the 12 to 20 age group had the highest rate of past month alcohol use (31.6 percent). Non-Hispanic blacks and

Asians in this age group had the lowest rates (19.8 and 19.7 percent, respectively). Similar patterns were observed for binge alcohol use by Hispanic origin and race (Figure 3).

Rates of past month alcohol use by county type for persons aged 12 to 20 (Figure 4) were 27.3 percent for persons living in large metro-politan areas, 29.8 percent for those in small

State Estimates of Underage Alcohol Use

Figure 7 presents State estimates of alcohol use among persons aged 12 to 20 based on combined NHSDA data from 1999 through 2001. Prevalence estimates were ranked and categorized into quintiles, or fifths, in order to simplify the discussion.

Underage alcohol use in the past month at the State level ranged from a low of 16.1 percent of persons aged 12 to 20 in Utah to 39.6 percent of this age group in North Dakota. Underage alcohol use tended to be more prevalent in States in New England, the upper Midwest, and the northern Mountain States of Montana and Wyoming. Six of the ten States with the lowest rates of underage alcohol use were located in the Southeast. In addition to Utah in the West, Idaho had one of the lowest rates of underage alcohol use (22.8 percent). Although Southeastern States tended to have lower rates of underage alcohol use, Louisiana was an exception, with an estimated 32.5 percent of persons aged 12 to 20 having used alcohol in the past month.

Problems Associated with Underage Alcohol Use

Two important issues of concern related to underage alcohol use are motor vehicle accidents resulting from driving under the influence of alcohol and the need for treatment for alcohol use disorders among youth. Unlike the estimates discussed previously, which pertained to past month use, estimates in this section pertain to alcohol use in the past 12 months. Estimates in this section are based on the 2001 NHSDA.

In 2001, nearly 3 million persons aged 16 to 20 were estimated to have driven under the influence of alcohol at least once in the past year, including more than 600,000 persons aged 16 or 17. The rate of driving under

Figure 6. Persons Aged 18 to 20 who Reported Past Month and Binge Alcohol Use, by College Enrollment Status and Age: 2001

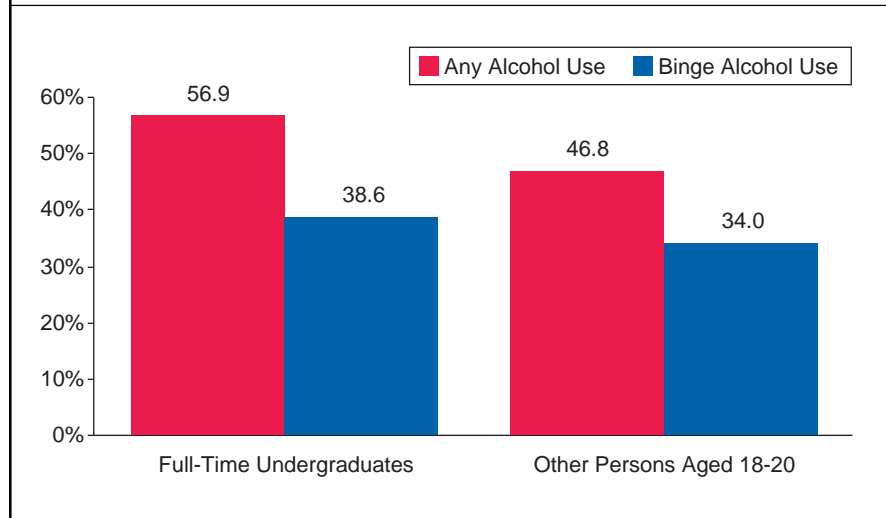
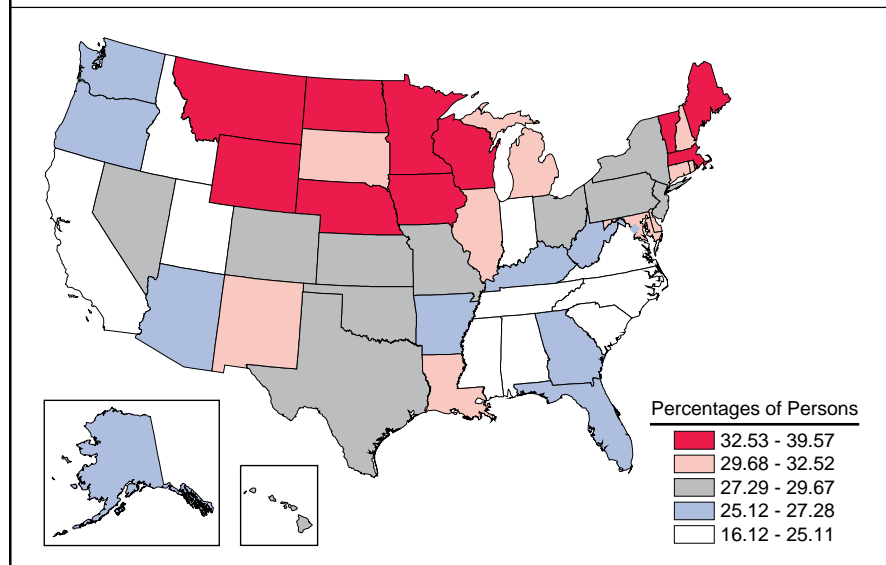


Figure 7. Percentages of Persons Aged 12 to 20 Reporting Past Month Alcohol Use, by State: 1999–2001



the influence of alcohol in the past year for 16 to 25 year olds peaked at age 21 (28.3 percent) and then declined for ages 22 to 25 (Figure 8).

Nearly 3 million persons aged 12 to 20 were classified as meeting criteria for alcohol dependence or abuse in the past 12 months, based on the numbers of alcohol-related problems they experienced in that

period (Figure 9). In comparison, however, only about 400,000 persons in this age group were estimated to have received any type of alcohol treatment in the past year. This latter finding suggests considerable unmet need for alcohol treatment among underage drinkers experiencing problems related to their alcohol use.

Figure 8. Percentages of Persons Aged 16 to 25 Who Drove Under the Influence of Alcohol in the Past 12 Months: 2001

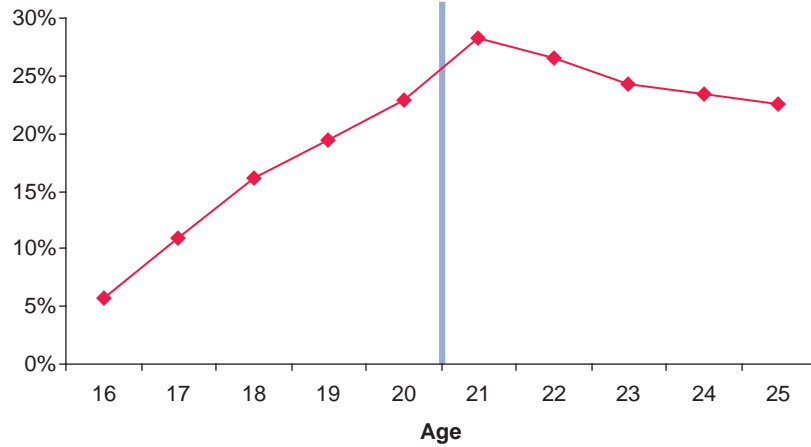
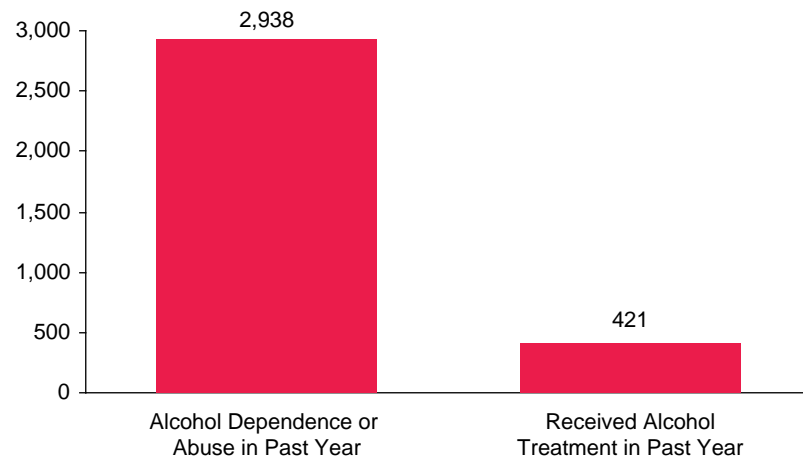


Figure 9. Estimated Numbers of Persons Aged 12 to 20 (in Thousands) Who Met Criteria for Alcohol Dependence or Abuse or Who Received Treatment in the Past 12 Months: 2001



The National Household Survey on Drug Abuse (NHSDA) is an annual survey sponsored by the Substance Abuse and Mental Health Services Administration (SAMHSA). The 1999, 2000, and 2001 data are based on information obtained from approximately 70,000 persons aged 12 or older per year, including approximately 32,000 persons aged 12 to 20 each year. The survey collects data by administering questionnaires to a representative sample of the population through face-to-face interviews at their place of residence.

The NHSDA Report is prepared by the Office of Applied Studies (OAS), SAMHSA, and by RTI in Research Triangle Park, North Carolina.

Information and data for this issue are based on the following publications and statistics:

Office of Applied Studies. (2001). *Summary of findings from the 2000 National Household Survey on Drug Abuse* (DHHS Publication No. SMA 01-3549, NHSDA Series H-13). Rockville, MD: Author.

Also available on-line:

<http://www.DrugAbuseStatistics.samhsa.gov>.

Additional tables available upon request.

U.S. DEPARTMENT OF HEALTH & HUMAN SERVICES
Substance Abuse & Mental Health Services Administration
Office of Applied Studies
www.samhsa.gov

- Hingson, R. W., Heeren, T., Zakocs, R. C., Kopstein, A., & Wechsler, H. (2002). Magnitude of alcohol-related mortality and morbidity among U.S. college students ages 18-24. *Journal of Studies on Alcohol*, 63, 136-144.
- Wechsler, H., Lee, J. E., Kuo, M., Seibring, M., Nelson, T. F., & Lee, H. P. (2002). Trends in college binge drinking during a period of increased prevention efforts: Findings from 4 Harvard School of Public Health College Alcohol Study surveys: 1993-2001. *Journal of American College Health*, 50, 203-217.
- Abuse or dependence is based on the definition found in the 4th edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV): American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders (4th ed.)*. Washington, DC: Author.
- County types were defined according to whether counties were inside or outside metropolitan statistical areas (MSAs), as defined by the Office of Management and Budget. Counties in large metropolitan areas are located in MSAs with a population of 1 million or more. Counties in small metropolitan areas are located in MSAs with a population of fewer than 1 million. Counties in nonmetropolitan areas are outside MSAs.

End Notes

- Task Force of the National Advisory Council on Alcohol Abuse and Alcoholism. (2002, April). *A call to action: Changing the culture of drinking at U.S. colleges* (NIH Publication No. 02-5010); available at <http://www.collegedrinkingprevention.gov/Reports/>.) Bethesda, MD: National Institute on Alcohol Abuse and Alcoholism.
- De Bellis, M. D., Clark, D. B., Beers, S. R., Soloff, P. H., Boring, A. M., Hall, J., Kersh, A., & Keshavan, M. S. (2000). Hippocampal volume in adolescent-onset alcohol use

disorders. *American Journal of Psychiatry*, 157, 737-744.

- Brown, S. A., Tapert, S. F., Granholm, E., & Delis, D. C. (2000). Neurocognitive functioning of adolescents: Effects of protracted alcohol use. *Alcoholism: Clinical and Experimental Research*, 24, 164-171.
- National Institute on Alcohol Abuse and Alcoholism. (2001, April). *Alcohol Alert No. 52: Alcohol and transportation safety*. Retrieved April 15, 2003 from <http://www.niaaa.nih.gov/publications/alalerts.htm>

Figure Notes

Source: (Figures 1-6, 8 and 9) SAMHSA 2001 NHSDA

Source: (Figure 7) SAMHSA 1999-2001 NHSDA