

CONSUMPTION DATA

A small number of widely-used surveys collect national and state data on alcohol, tobacco, and other drug use. Some of these include questions which indicate alcohol or drug dependence, high-risk behaviors, and the need for treatment or intervention services. Surveys are used to estimate prevalence—the percentage and number of people using alcohol and other drugs within a population. However, most surveys rely on a subset to represent a population and therefore are subject to sampling error. The Missouri estimates, in particular, from the national surveys should be interpreted with caution due to relatively small sample sizes.

National Survey on Drug Use and Health

The National Survey on Drug Use and Health (NSDUH) is administered by the federal Substance Abuse and Mental Health Services Administration. The survey uses a sampling methodology that provides national, state, and sub-state (regional) estimates of alcohol, illicit drug, and tobacco use. The survey collects information on past month (current), past-year, and lifetime use of these substances. The perceived risks of smoking, using marijuana, and binge drinking are probed because many years of data from the NSDUH and the National Household Survey on Drug Abuse (its predecessor) have shown that attitudes and beliefs are good predictors of future use of these substances. Analysis of the NSDUH also yields estimated rates of initiation of use, alcohol and drug abuse, alcohol and drug dependence, and unmet treatment need. Single-year estimates are provided for the national data. Due to smaller sample sizes for the state data, state estimates and comparison national data are based on rolling two-year samples to improve the reliability of the estimates. Sub-state estimates use three-year samples. Data users are interested in the magnitude of the usage rates and in multi-year changes (trends) in these rates. Most apparent year-to-year changes in the Missouri rates are not large enough to rule-out sampling error and conclude that they reflect actual changes in usage. National and Missouri rate changes that meet the statistical tests for significance are noted in the discussions below. The table on page 36 provides national trends in current and lifetime drug use for adolescents and adults age 12 and older, and page 37 provides these rates for specific age groups for recent years. In the table on page 38, data from 2004 and 2005 includes comparisons of national and Missouri rates of current and past-year substance use, dependence, and unmet treatment need. Missouri population estimates based on these rates are provided in the table on page 39.

Alcohol Use: Among Missouri's population at least 12 years of age, the estimated percentage of current (past month) drinkers decreased from 53.21 percent in the combined 2002/2003 survey sample to 49.81 percent in 2003/2004—a statistically significant reduction—and then decreased again to 48.83 percent in the 2004/2005 sample. This latest Missouri rate is two percentage points lower than the U.S. rate of 51.05 percent. Past-month alcohol use rates for Missouri adolescents 12-17 years of age are higher than the U.S. rates and have changed little in recent surveys. The 2004/2005 Missouri rate was 19.96 percent, compared to 20.20 percent in 2003/2004 and 19.67 percent in 2002/2003. By contrast, the national rate in 2004/2005 was almost three percentage points lower at 17.06 percent. Missouri's past-month alcohol use rate is also higher than the national average for young adults 18-25 years of age. Based on the 2004/2005 sample, this age group had a rate of 65.63 percent, compared to only 60.69 percent for young adults nationwide. Missouri's 2003/2004 rate was 63.79 and the 2002/2003 rate was 64.52 percent. Although Missouri's past-month drinking rates are higher than the U.S. rates for the 12-17 and 18-25 age groups, they are lower for those older than age 25. Missouri's estimated drinking rate for these older adults was 49.71 percent in 2004/2005 and continued a downward trend after posting a rate of 51.36 percent in 2003/2004—statistically lower than the 2002/2003 rate of 55.85 percent. Nationwide, the older

adult age group had a rate of 54.03—a statistically significant increase from the 2003/2004 rate of 52.76 percent for past-month alcohol use.

Alcohol Use by ADA Planning Region: Based on the combined NSDUH samples for 2002-2004, the Eastern Region of the Division of Alcohol and Drug Abuse had Missouri's highest past-month drinking rate. The average annual rate for adolescents and adults 12 years of age and older was 57.41 percent. The St. Louis City and St. Louis County area had a slightly higher rate than the remainder of that region. The Northwest Region had the state's second highest rate at 52.36, but the rate for Jackson County (which includes most of Kansas City) was 53.47 percent compared to 51.36 for other parts of the region. The Central Region had a rate of 50.92 percent. The southern part of Missouri had lower rates of alcohol use. The Southwest Region had a rate of 45.04 percent and the Southeast Region had the lowest rate of past-month use of alcohol at 41.89 percent.

Binge Drinking: Binge alcohol use, defined as consuming at least five drinks on a single drinking occasion at least once in the preceding 30 days, has remained virtually unchanged in recent years. Missouri's estimated binge drinking rates for ages 12 and older were 24.56 percent in 2002/2003, 25.12 percent in 2003/2004, and 24.35 percent in 2004/2005. The latest rate is almost two percentage points higher than the national rate of 22.70 percent in 2004/2005 and 22.69 percent in 2003/2004. Among Missouri youth 12-17 years of age, the binge drinking rate was 12.84 percent in 2004/2005 compared to 13.67 percent in 2003/2004 and 12.61 percent in 2002/2003. None of these year-to-year changes are statistically significant. However, Missouri's latest adolescent binge drinking rate remains more than two percentage points higher than the national rate of 10.49 percent. Among young adults 18-25 years of age, Missouri's binge drinking rate was 47.07 percent in 2004/2005—considerably higher than the national rate of 41.54 percent for that age group. Binge alcohol use for Missouri adults over age 25 was 21.82 percent in 2004/2005 compared to 23.09 percent in 2003/2004. The national rate for this age group was 21.07 in 2004/2005.

Binge Drinking by ADA Planning Region: Consistent with past-month drinking rates, the average annual binge drinking rate based on the 2002-2004 NSDUH samples was highest in the Eastern Region at 26.85 percent. The Central Region was slightly lower at 26.35 percent, and the Northwest Region had a rate of 23.54 percent. The Southeast Region had a rate of 23.21 percent and the Southwest Region had Missouri's lowest binge drinking rate at 22.74 percent.

Perceptions of Binge Drinking Risk: The reduction in Missouri's binge drinking rate from 2003/2004 to 2004/2005 was accompanied by a corresponding increase in the percentage of Missouri residents who perceived great risk in binge drinking. In 2003/2004, an estimated 38.06 percent of Missouri's adolescents and adults 12 years of age and older perceived great risk of having five or more drinks of alcohol once or twice a week. In 2004/2005, this rate increased to 39.68 percent compared to the national rate of 41.19 percent. Missouri adolescents 12-17 years of age and adults over age 25 perceived greater risk in binge drinking in 2004/2005 than in 2003/2004 while rates for young adults 18-25 years of age were lower.

Illicit Drug Use: Missouri's estimated past-month use of any illicit drug among the population 12 years of age and older has been declining—from 9.17 percent in the 2002/2003 survey sample and 8.13 percent in 2003/2004 to 7.66 percent in 2004/2005. This latest rate is lower than the U.S. rate of 8.02 percent, which remained virtually unchanged from the national rate of 8.06 percent in 2003/2004. Illicit drug use among Missouri adolescents 12-17 years of age remained virtually unchanged at 10.92 percent, compared to 10.99 percent in 2003/2004, and was slightly higher than the national rate of 10.25 percent. Young adults 18-25 years of age had an illicit drug use rate of 18.28 percent in 2004/2005 compared to the national rate of 19.76 percent. Among adults older than 25, Missouri's rate of 5.32 percent was lower than the U.S. rate of 5.65 percent.

Marijuana Use: Marijuana accounted for most of the illicit drug use. In the 2004/2005 survey sample, an estimated 5.54 percent of Missouri's population age 12 and older used marijuana

during the month preceding the surveys—lower than the nationwide rate of 6.04 percent. More importantly, Missouri's 2004/2005 rate was statistically lower than its 2003/2004 rate of 6.38 percent. The 2002/2003 rate was 6.76 percent. All of the age groups had lower rates of marijuana use than in 2003/2004. Among 12-17 year olds, the 2004/2005 rate was 7.53 percent, compared to 8.17 percent in 2003/2004. Marijuana use rates among Missouri's young adults decreased from 16.47 percent in 2003/2004 to 14.90 percent in 2004/2005 while national rates dipped slightly to 16.36 percent for the 18-25 age group. Past-month marijuana use among Missouri adults over age 25 decreased considerably—from 4.33 percent to 3.60 percent—and dropped below the national rate of 4.07 percent for this age group.

Marijuana Use by ADA Planning Region: Missouri sub-state estimates of marijuana use were calculated by combining the NSDUH samples from 2002-2004. Among the population ages 12 and older, past-month use was highest in the Jackson County portion of the Northwest Region with an average annual rate of 7.71 percent, while the overall rate for that region was 6.63 percent. The Central Region had a rate of 7.16 percent. The Eastern Region's rate was 6.73 percent, but it was considerably higher in the St. Louis City and St. Louis County area at 7.04 percent than in the rest of the region. The Southwest Region had a past-month marijuana use rate of 5.23 percent and the Southeast Region posted the state's lowest rate at 4.73 percent.

Perceptions of Marijuana Risk: Consistent with the declining use rates, the percentage of Missouri residents who perceive great risk in using marijuana once a month has been increasing—from 36.69 percent in 2002/2003 to 38.25 percent in 2003/2004 and 40.82 percent in 2004/2005. Among adolescents 12-17 years of age, the increased perception of risk from 34.20 percent in 2003/2004 to 37.21 percent in 2004/2004 was statistically significant and surpassed the 34.45 percent nationwide adolescent rate. Missouri's young adults had a rate of perceived risk of 24.71 percent—slightly lower than the national rate of 25.03 percent for the 18-25 age group. Among Missouri adults age 26 and older, 44.20 percent perceived risk in using marijuana in 2004/2005 compared to only 41.49 percent in 2003/2005. The U.S. rate for this age group was 42.13 percent in the 2004/2005 survey sample.

Initiation of Marijuana Use: The NSDUH also reports the percentage of the population that began using marijuana during a one-year period. Initial exposure or incidence rates usually influence future prevalence rates. Among Missouri's population of adolescents and adults, annual rates of first use of marijuana increased during the early part of the decade and reached a plateau at about two percent during the years 2002-2004 before declining to an average rate of 1.75 percent in 2004/2005, a statistically significant reduction. Nationwide, the average annual rates of initiation of marijuana use were 1.76 percent in 2003/2004 and statistically lower at 1.68 percent in 2004/2005. In the 12-17 age group, Missouri and the U.S. had dramatic declines. First use of marijuana among Missouri adolescents dropped from average annual rates of 6.90 percent in 2003/2004 to 5.90 percent in 2004/2005, while the nationwide rates for this age group decreased from 6.25 percent to 5.80 percent. Marijuana initiation also declined in Missouri's young adult population 18-25 years of age, from 7.62 percent in 2003/2004 to 6.70 percent in 2004/2005. Among Missouri adults over age 25, first use of marijuana remained very low and virtually unchanged at 0.2 percent.

Cocaine Use: Past-year use of cocaine, including crack cocaine, continued to decline among Missouri's population ages 12 and older. In the 2002/2003 NSDUH sample, 2.90 percent reported using cocaine in the year preceding the survey. This rate decreased to 2.60 percent in 2003/2004 and to 2.46 percent in 2004/2005, compared to the national rate of 2.31 percent. The adolescent age group had a lower rate of past-year cocaine use in 2004/2005 than in 2003/2004, declining from 1.99 percent to 1.70 percent, and use among the older adult age group dropped from 1.83 percent to 1.53 percent. The rate increased from 7.39 percent to 8.17 percent for young adults 18-25 years of age. Adolescents and young adults 12-25 years of age continued to have higher rates of past-year

cocaine use in Missouri than the national rates, but Missouri's rate for adults over 25 years of age was slightly lower than the U.S. rate of 1.62 percent.

Cocaine Use by ADA Planning Region: Based on the 2002-2004 NSDUH samples, the Central Region and the Northwest Region had virtually the same annual average estimates of past-year cocaine use at 3.08 percent and 3.06 percent, respectively. However, Jackson County in the Northwest Region had an estimated rate of 3.44 percent. St. Louis City and St. Louis County had a rate of 3.04 percent—slightly higher than the overall Eastern Region rate of 2.93 percent. The Southeast Region had a past-year cocaine use rate of 2.53 percent, and the Southwest Region was lowest with a rate of 2.36 percent.

Non-medical Use of Prescription Pain Relievers: Past-year illicit use of pain medication by the Missouri population 12 years of age and older decreased from 5.44 percent in the 2003/2004 NSDUH samples to 4.94 percent in 2004/2005. Among Missouri adolescents 12-17, the rate dropped from 8.55 percent to 7.70 percent. Nationally, this age group had a statistically significant reduction from 7.53 percent to 7.13 percent. Missouri's rates for the other age groups also declined, from 13.39 percent to 12.79 percent for the population 18-25 years of age and from 3.59 percent to 3.16 percent for those older than 25.

Non-medical Use of Pain Relievers by ADA Planning Region: Using data from the 2002-2004 NSDUH samples, an annual average of 4.92 percent of Missouri adolescents and adults used pain relievers non-medically in the past year. The rates were highest in the Central Region and the Jackson County portion of the Northwest Region at 5.48 percent and 5.47 percent, respectively. The overall Northwest Region rate was 5.03 percent and the Eastern Region had a rate of 4.78 percent. In contrast to most of the other drugs surveyed, the St. Louis City and St. Louis County area had a lower rate of non-medical use of pain relievers than the remainder of the Eastern Region. The rate for the Southwest Region was 4.75 percent and the Southeast Region had the lowest rate at 4.65 percent.

Tobacco Use: No percentage change occurred in the use of tobacco products by the Missouri population 12 years of age and older. After dropping slightly from 36.69 percent in the combined 2002/2003 NSDUH samples to 36.06 percent in 2003/2004, past-month tobacco use remained at an estimated 36.01 percent in 2004/2005. Although Missouri's overall rate of tobacco use was unchanged, use among adolescents 12-17 years of age declined from 20.33 percent in 2003/2004 to 19.21 percent in 2004/2005. This was offset by an increase in the rate for young adults 18-25 years of age—from 50.78 percent in 2003/2004 to 51.60 percent in 2004/2005. Among older adults, virtually no change occurred.

Tobacco Use by ADA Planning Region: Tobacco product usage is more prevalent in the rural than in the urban areas of Missouri. In contrast to alcohol and illicit drugs, rates of tobacco use are highest in the southern regions. Based on the combined three-year NSDUH samples from 2002-2004, the Southeast Region had a past-month tobacco use rate of 40.77 percent among the population at least 12 years of age. The rate was 37.74 percent in the Southwest Region and 37.25 percent in the Central Region. The Northwest Region had a rate of 36.91 percent, but the rate was lower in Jackson County (primary host county for Kansas City) at 34.74 percent than the 36.05 percent rate in the non-urban portion of the region. Similarly, the Eastern Region rate of 34.97 percent consisted of a much lower rate of 34.02 percent for the St. Louis City and St. Louis County area than the 36.05 percent for the remainder of that region.

Cigarette Use: According to NSDUH estimates, past-month cigarette smoking is declining. Among Missouri's population of adolescents and adults, 31.51 percent were current smokers in 2002/2003. The rate dropped to 30.61 percent in 2003/2004 and further dropped to 29.90 percent in 2004/2005. Among 12-17 year-olds, the rate fell two percentage points in two years—from 17.88 percent in 2002/2003 to 17.14 percent in 2003/2004 and to 15.81 percent in 2004/2005. Rates for

young adults 18-25 years of age dropped from 47.59 percent in 2002/2003 to 45.50 percent in 2003/2004 and to 44.84 percent in 2004/2005. Smoking rates for adults over age 25 dipped from 30.56 percent to 29.11 percent during the same time period.

Cigarette Use by ADA Planning Region: Consistent with regional rates for use of tobacco products, cigarette smoking rates based on the 2002-2004 NSDUH samples were higher in the non-urban regions of the state. Past-month use of cigarettes was highest among the adolescent and adult population 12 years of age and older in the Southeast Region at 35.02 percent, considerably higher than the statewide estimate of 31.10 percent. The Central Region had the second-highest cigarette smoking rate at 31.85 percent, followed closely by a Southwest Region rate of 31.49 percent. The Northwest Region had a past-month smoking rate of 30.32 percent, and there was virtually no difference between rates in Jackson County and the remainder of the region. The Eastern Region had a smoking rate of 29.80 percent, but the St. Louis City and St. Louis County had a rate of 29.30 percent compared to 30.81 percent in the less-urban counties.

Perceptions of Cigarette Smoking Risk: The overall percentage of Missouri residents who perceive great risk in smoking one or more packs of cigarettes per day has not changed appreciably in recent years, although more adolescents are recognizing such risk. Data from the combined 2002/2003 NSDUH samples indicate that 68.02 percent of the Missouri population 12 years of age and older perceived great smoking risk, compared to 71.27 percent of the U.S. population. In 2003/2004, the nationwide rate increased to 72.83 percent—a statistically significant change—and the Missouri rate increased to 69.41 percent. In 2004/2005, the Missouri rate remained virtually unchanged at 69.74 percent while the U.S. rate again increased significantly to 74.35 percent. Although smaller percentages of adolescents than adults perceive great risk in smoking one or more packs of cigarettes per day, their percentages are increasing nationwide and in Missouri. Among Missouri's population 12-17 years of age, perceived risk increased from 61.78 percent in 2002/2003 to 63.07 percent in 2003/2004, and then statistically increased to 65.95 percent in 2004/2005. During this time period, the U.S. rate for adolescents increased from 63.67 percent in 2002/2003 to 65.87 percent in 2003/2004 and to 67.94 percent in 2004/2005. Both of these national rate increases for this age group were statistically significant. Young adults 18-25 years of age have also made some progress in recognizing smoking risk. While Missouri's young adults had an estimated rate of 61.37 percent in 2002/2003, the national rate was 65.46 percent. Both of these rates increased significantly in 2003/2004 to 65.29 percent in Missouri and 67.81 percent in the U.S. In 2004/2005, Missouri's rate was 64.66 percent while the national rate continued to advance to 69.82 percent. Perceived smoking risk has not changed significantly among Missouri adults older than 25. Missouri's rate for this age group was 70.06 percent in 2002/2003, 71.02 percent in 2003/2004, and 71.17 percent in 2004/2005. Nationwide, statistically significant gains have occurred during these years. The U.S. rate for older adults increased from 73.33 percent in 2002/2003 to 74.67 percent in 2003/2004, and then increased to 76.02 percent in 2004/2005.

Other NSDUH Measures: Implications of the NSDUH survey data are summarized in the *Substance Abuse Treatment Need* section on page 19. These include estimates of alcohol abuse and dependence, illicit drug abuse and dependence, co-occurring substance abuse and mental health disorders, and unmet need for treatment.

Youth Risk Behavior Survey

The Youth Risk Behavior Survey (YRBS) is administered by the federal Centers for Disease Control and Prevention. The survey is conducted nationwide to students in high school grades 9-12 every two years. It uses a sampling methodology that provides national and state estimates. Among the data collected by the survey are lifetime and current use of alcohol, tobacco, and illicit drugs—and use of these substances before age 13. The tables on pages 46 and 47 provide estimated percent-