

Other Surveys

The Missouri Student Survey is conducted in even-numbered years throughout Missouri for students in grades 6 through 12, with a primary focus on grade 9. The survey became web-based in 2004, and the statewide prevalence rates from that survey are summarized in the table on page 48 [59]. The next survey will be administered in 2006.

The Core Alcohol and Drug Survey, a project supported by Southern Illinois University, was administered to 68,000 undergraduate students at 133 colleges and universities in 2004 [43, 58]. Missouri Partners in Prevention administered the survey on 12 Missouri campuses. The survey measures binge drinking and past-month and past-year use of alcohol, tobacco, and illicit drugs. In 2004, binge alcohol use—consuming five or more drinks at one sitting at least once during the two weeks prior to the survey—was reported by 48.8 percent of the students nationally and 49.9 percent of the Missouri college students. In 2005, Missouri's binge drinking rate decreased to 48.4 percent.

Other Consumption Data

The National Institute on Alcohol Abuse and Alcoholism manages the Alcohol Epidemiologic Data System. Using data on sales of beer, wine, and distilled spirits, the system estimates annual consumption of ethanol (absolute alcohol). In 2003, per capita consumption of alcohol among the Missouri population age 14 and older was 2.26 gallons of ethanol, a decrease from the two-decade record of 2.39 gallons reached in 2002. Missouri's 2003 alcohol consumption was slightly higher than the national average of 2.22 gallons of ethanol [50].

CONSEQUENCES DATA

Health

Prenatal alcohol, tobacco, and drug exposure can cause low birth weight, newborn addiction, serious birth defects, mental retardation, and lifelong impairments. This report includes medical conditions of newborns identified on birth certificates and hospital data on maternal drug exposure using International Classification of Diseases, 9th Revision (ICD-9) coding developed by the World Health Organization. Substance abuse during pregnancy showed no improvement in 2004 [15, 16]. The reported number of mothers of newborns who drank during their pregnancies increased from 464 in 2003 to 472 in 2004, a slight rate increase to 60.7 per 10,000 live births. Studies have shown that alcohol use during pregnancy is substantially underreported, so the number of babies at-risk for fetal alcohol syndrome and fetal alcohol effects is unknown. Illicit drug use by pregnant women is also underreported, yet hospitals reported 302 drug-affected births in 2004, compared to 258 in 2003 and 222 in 2002. Although maternal smoking during pregnancy puts the newborn at-risk for low birth weight and other problems, 14,083 births among women who smoked were reported in 2004, over 18 percent of the live births [16]. Division of Alcohol and Drug Abuse treatment programs admit pregnant women on a priority basis in accordance with federal requirements. Among the 13,582 women served during fiscal year 2005, 518 were pregnant when admitted to treatment [23]. Clients in CSTAR Women and Children programs had 91 births during their treatment, and 88 of those babies were documented to be born drug-free.

Several communicable diseases, including hepatitis, tuberculosis, and HIV/AIDS are frequently acquired through substance abuse. In 2004, Missouri had 3,150 reported cases of Hepatitis C compared to 3,071 in 2003. Hepatitis B cases have increased substantially, from 135 in 2002 to 339 in 2003 and 529 in 2004 [19]. The total number of HIV cases that have been reported in Mis-

souri increased from 4,526 in 2003 to 4,629 in 2004, an increase of 103 new cases. Cumulative AIDS cases reached 9,810 in 2004, an increase of 186 from the 2003 total of 9,624.

Alcohol, drug, and smoking related deaths are attribution estimates derived from mortality data using ICD-10 codes. Due to the development of a new algorithm for calculating smoking attributable deaths, smoking related death estimates for 2004 and prior years have been revised. Missouri had 9,396 resident deaths attributable to smoking in 2004, a reduction from the 9,537 and 9,503 deaths estimated for 2002 and 2003, respectively [18]. Drug related deaths increased from 561 in 2003 to 591 in 2004, and death attributable to alcohol increased from 328 in 2003 to 383 in 2004 [11].

Alcohol and drug related hospital and emergency room episodes increased in 2004. Alcoholic cirrhosis episodes increased from 3,280 in 2003 to 3,536 in 2004 and all other alcohol related episodes increased from 43,117 to 45,333. Drug related episodes increased from 33,700 in 2003 to 38,606 in 2004 [12, 13, 14].

Public Safety, Law Enforcement, and Corrections

Alcohol related traffic crashes increased from 8,081 in 2003 to 8,301 in 2004. However, fatal crashes attributed to alcohol intoxication declined to 218, compared to 249 in 2003 [33]. The 218 fatal crashes resulted in 252 deaths [36]. There were also 3,692 alcohol related non-fatal injury crashes in 2004, slightly more than the 3,603 recorded in 2003, and these crashes resulted in 5,450 injuries—virtually the same number of alcohol related injuries reported in 2003. Drug related crashes continued to increase and reached 955 in 2004, yet only 17 of these crashes were fatal [34].

Drug arrests and arrests for driving under the influence of alcohol or drugs declined in Missouri in 2004. Arrests for boating while intoxicated increased from 270 in 2003 to 350 in 2004. Law enforcement agencies reported 41,773 drug arrests, compared to 42,839 in 2003. Arrests for the sale or manufacturing of drugs, which reached 8,010 in 2002 before dropping to 7,313 in 2003, declined further to 7,179 in 2004 [30].

The manufacturing of methamphetamine creates an especially hazardous environment. Confiscated methamphetamine labs, chemicals, and equipment are entered into the Clandestine Laboratory Seizure System and reported by the Drug Enforcement Administration's El Paso Information Center [31]. Missouri's methamphetamine lab seizures increased annually until reaching 2,860 in 2003—the most recorded in the United States. The state experienced its first decrease in methamphetamine labs in 2004 with 2,788, and this number continued to decline in 2005 to 2,252. In 2004, there were 34,594 arrests in Missouri for possession of drugs [30].

Probation and parole openings totaled 13,560 for drug offenses and 1,798 for driving while intoxicated, comprising 40.5 percent of all new probation/parole cases [5]. State prison admissions in fiscal year 2005 included 6,846 admissions for drug offenses and 1,082 for driving while intoxicated, constituting 39.4 percent of the total [4].

Fully one-third of all children removed from their homes and separated from their parents in 2004 by juvenile courts were removed due to alcohol and drug abuse by their parents [40]. Out-of-home placements totaled 5,653—251 resulting from parental alcohol abuse, 1,446 caused by parental drug abuse, and 188 from parental alcohol and drug abuse. The portion of placements related to parental substance abuse has been increasing since 2000. Referrals for juvenile alcohol offenses declined to 1,153 in 2004—considerably lower than the recent peak of 1,817 alcohol referrals in 1999. Juvenile court referrals for drug offenses totaled 3,294, the third straight year of decreases after reaching 3,650 in 2001 [41].

TREATMENT NEED

Alcohol and Drug Dependence and Abuse

Criteria for identifying substance dependence and abuse are specified in the *Diagnostic and Statistical Manual of Mental Disorders, 4th Edition*. Based on two years of combined data from the National Survey on Drug Use and Health (NSDUH), an estimated annual average of 10.6 percent of the Missouri population 12 years of age and older was dependent on, or abused, alcohol or illicit drugs during the one-year periods preceding the combined 2003/2004 surveys. This rate was higher than the 9.6 percent reporting dependence or abuse in the 2002/2003 surveys. It was also higher than the national rate of 9.2 percent reported in both two-year periods [52, 53, 55]. Using Missouri's 2003/2004 rates, the NSDUH analysis provides Missouri population estimates (rounded to the nearest thousand) for past month and past year alcohol and illicit drug use, dependence, abuse, and unmet treatment need.

Based on Missouri estimates for dependence and abuse, the state has approximately 499,000 individuals who need treatment for alcohol or illicit drug dependence or abuse. This figure is very similar to the estimate of 491,223 derived from the Missouri treatment needs assessment completed in 2003 by the Research Triangle Institute [42]. Alcohol is the largest component of Missouri's dependence and abuse problem, with a rate of 9.0 percent and a treatment need of 423,000 among adolescents and adults. Illicit drugs comprise a rate of 3.0 percent and a treatment need of 142,000. The separate alcohol and illicit drug rates and estimated numbers total more than the combined rate of 10.6 percent and 499,000 because some individuals are dually dependent on both alcohol and illicit drugs. Therefore, 357,000 need treatment only for alcohol dependence or abuse, 76,000 only for illicit drug dependence or abuse, and 66,000 for both alcohol and illicit drug dependence or abuse. The tables on pages 38 and 39 present the Missouri prevalence rates and population estimates by age group from the 2003/2004 NSDUH.

Missouri's adolescent age group of 12-17 has an alcohol dependence or abuse rate of 7.1 percent and illicit drug dependence or abuse rate of 5.8 percent, with a combined rate of 10.5 percent based on the 2003/2004 surveys. Nationally, the alcohol and illicit drug combined rate for this age group is 8.8 percent. The Missouri rates yield estimates of adolescent treatment need of 51,000, including 23,000 for alcohol dependence or abuse only, 16,000 for illicit drug dependence or abuse only, and 12,000 for both alcohol and illicit drugs.

Among young adults 18-25 years of age, Missouri's dependence/abuse rates are 19.4 percent for alcohol, 8.9 percent for illicit drugs, and 24.0 percent for alcohol and illicit drugs combined, compared to a U.S. combined rate of 21.2 percent. Based on these estimated rates, 155,000 young adults in Missouri need substance abuse treatment—98,000 for alcohol only, 30,000 for illicit drugs only, and 27,000 for both alcohol and illicit drugs.

Adults age 26 and older are more likely than the younger age groups to have a dependence or abuse problem with alcohol only. The alcohol dependence/abuse rate for this population in Missouri is 7.4 percent, the illicit drug rate is 1.6 percent, and the combined rate is 8.2 percent. Among this older adult population nationwide, the dependence/abuse rate for alcohol and illicit drugs is one percentage point lower at 7.2 percent. The Missouri rates indicate that 293,000 Missouri adults older than age 25 need treatment. Of these, 237,000 have only alcohol dependence or abuse, 29,000 have only illicit drug dependence or abuse, and 27,000 have a dependence or abuse problem with alcohol and illicit drugs.

Co-Occurring Mental Health Problems

The NSDUH also examines the relationship between substance abuse and two types of mental health problems—serious psychological distress (SPD) and major depressive episodes (MDE).

Based on the 2004 NSDUH, an estimated 9.9 percent of the United States adult population age 18 and older scored above the criteria threshold for past year SPD, previously referred to as serious mental illness (SMI). The survey also found that an estimated 14.7 percent of the U.S. population age 12 and older had at least one episode of MDE in their lifetime and 8.1 percent had an episode in the past year [54]. The rates of SPD and MDE are much higher for individuals who have substance dependence or abuse problems. Among those meeting the criteria for past year SPD in 2004, 21.3 percent had alcohol or illicit drug dependence or abuse, compared to only 7.9 percent of individuals without SPD. Similarly, 22.0 percent of individuals who had a past year MDE also had substance dependence or abuse, compared to 8.6 percent without a past year MDE. Among the 22 percent with MDE, 16.8 percent had alcohol dependence or abuse and 9.6 percent had illicit drug dependence or abuse. Consistent with these findings, individuals with past year SPD and MDE had higher rates of substance use. Among those with SPD, 9.7 percent reported past month heavy alcohol use, consisting of at least five episodes of binge drinking, while heavy drinking was reported by 7.0 percent of individuals not meeting the criteria for SPD. Past month illicit drug use was much higher at 27.6 percent for those with SPD compared to 11.8 percent without that mental health disorder. Past month cigarette use was also reported by 40.8 percent of individuals with past year SPD but only 24.5 percent of those without SPD. Individuals with past year MDE had higher rates of heavy alcohol use (9.2 percent verses 6.0 percent), illicit drug use (28.8 percent verses 13.8 percent), and cigarette smoking (25.5 percent verses 15.1 percent) than individuals without MDE.

Among U.S. adults 18 years of age and older with past year illicit drug use in 2004, 20.6 percent had past year SPD, while only 8.3 percent without illicit drug use had SPD. Similar relationships exist for substance abuse and MDE. Among individuals 12 years of age or older in the U.S. with past year substance dependence or abuse, 18.5 percent had a past year MDE in 2004. Only 7.0 percent of those without substance dependence or abuse had a past year MDE.

The combined 2003/2004 surveys found that 11.5 percent of Missouri adults had past year SPD, compared to a national rate of 9.6 percent for the same two-year survey period. Missouri's past year SPD rate was 15.5 percent for young adults 18-25 years of age while the national rate was 13.6 percent. Among those 26 years of age and older, 10.7 percent of the Missouri population and 8.9 percent of the U.S. population had past year SPD [53, 55].

UNMET NEED AND TREATMENT ACCESS

Based on the combined 2003 and 2004 results from the National Survey on Drug Use and Health (NSDUH), an annual average of 8.6 percent of the Missouri population 12 years of age and older have an unmet need for treatment of alcohol use and 2.8 percent have an unmet need for treatment of illicit drug use [55]. By comparison, the U.S. population has lower rates, with unmet needs for alcohol treatment and illicit drug treatment of 7.3 percent and 2.7 percent respectively [52]. Using Missouri's 2003/2004 rates, the NSDUH analysis provides population estimates for unmet need rounded to the nearest thousand. In Missouri, an estimated 405,000 adolescents and adults have an unmet need for treatment of alcohol use and 134,000 have an unmet need for drug treatment. Based on the estimates presented in the *Treatment Needs* section above which identified 423,000 needing treatment for alcohol dependence or abuse and 142,000 needing treatment for illicit drug dependence or abuse in Missouri, only 4.3 percent of the individuals needing alcohol treatment and 5.6 percent of those needing drug treatment are accessing services.

Among adolescents 12-17 years of age, an estimated 35,000 need treatment for alcohol dependence or abuse, yet the unmet need is 34,000—a treatment rate of only 2.9 percent. In that same age group, 28,000 have illicit drug dependence or abuse and 26,000 have an unmet need for drug