STATUS REPORT ON MISSOURI'S ALCOHOL AND DRUG ABUSE PROBLEMS

Fifteenth Edition - 2009

MISSOURI DEPARTMENT OF MENTAL HEALTH

Division of Alcohol and Drug Abuse

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FIFTEENTH EDITION — 2009

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FOREWORD

I am pleased to present this Fifteenth Edition of the *Status Report on Missouri's Alcohol and Drug Abuse Problems.* Alcohol and drug abuse are behavioral problems with wide-ranging consequences. Substance abuse has undesirable social, mental health, medical, legal, productivity, and economic impacts on individuals, families, and society.

The *Status Report* monitors many of the unfortunate events that result from substance abuse. It includes data collected throughout Missouri and reported to state agencies, providing illustrative charts and county-level tables on alcohol and drug abuse indicators. Summary data from treatment and intervention programs funded by the Division of Alcohol and Drug Abuse provide additional knowledge on substance abuse patterns. The report also compares Missouri and national rates of alcohol, tobacco, and illicit drug use. This edition of the *Status Report* includes an Executive Summary for quick reference on major topics.

The Division of Alcohol and Drug Abuse has district and satellite offices located in Kansas City, Saint Louis, Jefferson City, Springfield, and Rolla. District staff can provide additional information and assistance regarding prevention, treatment, and compulsive gambling services. Please refer to the contacts listed on the district map in the *Status Report* appendix.

Inquiries and comments pertaining to the *Status Report* should be directed to the Missouri Department of Mental Health, Division of Alcohol and Drug Abuse, Research and Statistics Unit. The 2002-2009 editions are accessible at this website:

http://www.dmh.missouri.gov/ada/rpts/status.htm

Sincerely,

Mark Stringer

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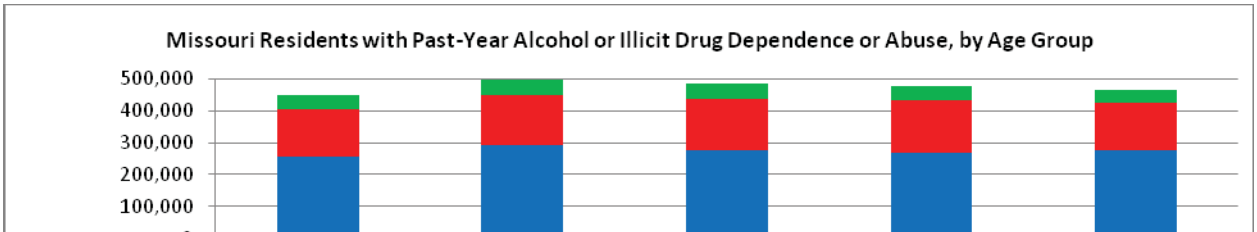
HIGHLIGHTS

Alcohol and drug abuse contribute to an array of tragic, life-changing events. Thousands of these events are recorded in Missouri every year. The involvement of substance abuse is often documented in overdose deaths, medical emergencies, traffic crashes, traffic deaths and injuries, and arrests for violations of alcohol and drug laws. Substance abuse is often an undocumented factor in many other events such as school failure, unemployment, divorce, and crime. Countless other alcohol and drug related incidents are known only by those who are personally involved. Substance abuse places a significant burden on the criminal justice, healthcare, and social services systems, and ultimately impacts everyone through societal economic costs that total an estimated $7.7 billion annually in Missouri.

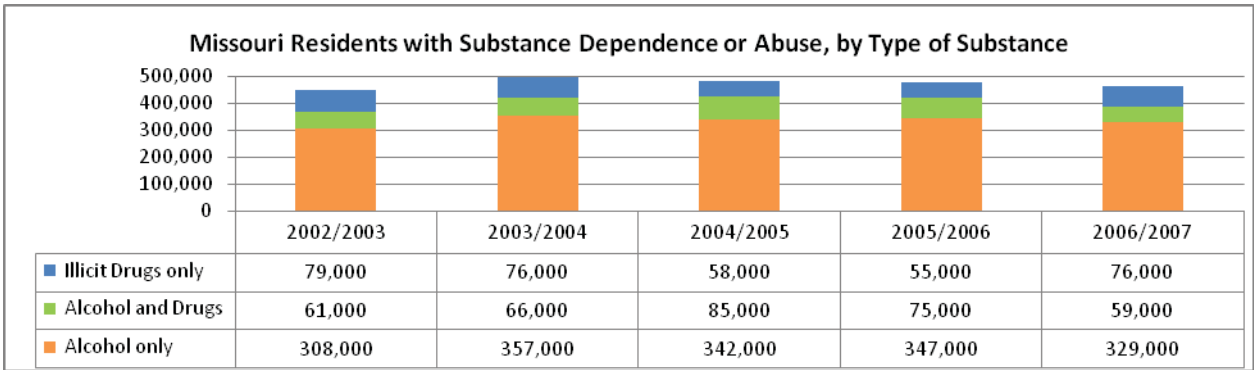
The Missouri Division of Alcohol and Drug Abuse produces the Status Report on Missouri's Alcohol and Drug Abuse Problems to support education, policy development, planning, and research. The report uses consistent year-to-year data sources and criteria to provide comparisons and document trends. The data are presented in tables that provide numeric counts of alcohol and drug related events, and in charts that illustrate multi-year trends for some of these problems. Alcohol and drug use rates are included, based on several national and state surveys. The Division of Alcohol and Drug Abuse arranges treatment and intervention for thousands of Missouri residents each year, and additional tables summarize those services. This section of the Status Report provides a brief overview of some of the most notable trends and impacts on the Missouri population.

Alcohol and drug abuse are declining in Missouri but remain substantial. The federal Substance Abuse and Mental Health Services Administration (SAMHSA) recently estimated that 464,000 Missouri residents have a problem with dependence on, or abuse of, alcohol or illicit drugs. The estimate is based on combined data from the 2006 and 2007 National Survey on Drug Use and Health (NSDUH). Although this represents 9.6% of the current Missouri population of adolescents and adults 12 years of age and older, the number with substance abuse dependence or abuse has been declining in recent years after reaching 499,000 in 2004 and 10.6% of that year's population ages 12 and older. Substance abuse rates are highest among Missouri residents 18-25 years of age, currently involving 23.1% of that age group.



	2002/2003	2003/2004	2004/2005	2005/2006	2006/2007
MO Ages 12-17	45,000	51,000	48,000	43,000	40,000
MO Ages 18-25	149,000	155,000	161,000	165,000	146,000
MO Ages 26+	254,000	293,000	276,000	269,000	277,000

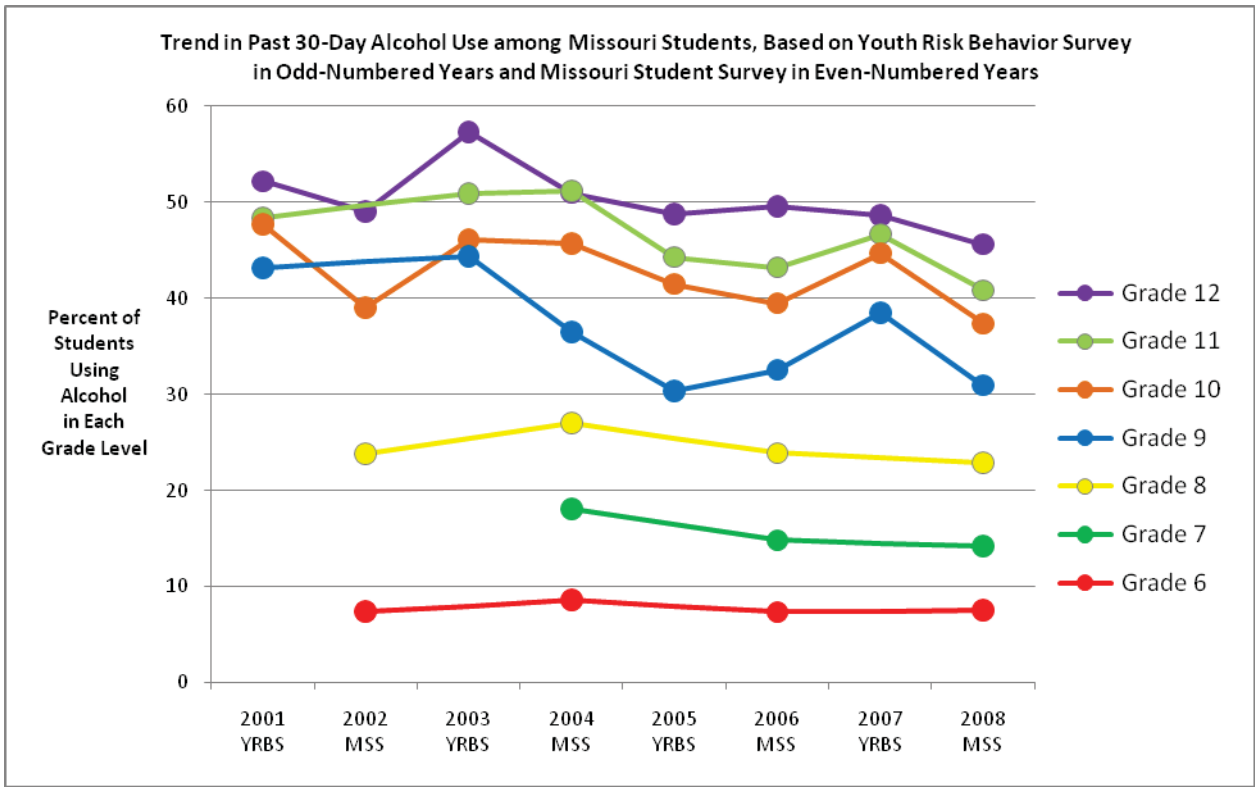
Alcohol accounts for many of the 464,000. An estimated 329,000 residents have only alcohol dependence or abuse, 76,000 have only illicit drug dependence or abuse, and 59,000 have dependence or abuse problems with alcohol and one or more illicit drugs. Among the high-prevalence group of 18-25 year-olds, approximately 15% abuse alcohol only, 4% abuse illicit drugs only, and 4% abuse alcohol and one or more illicit drugs.

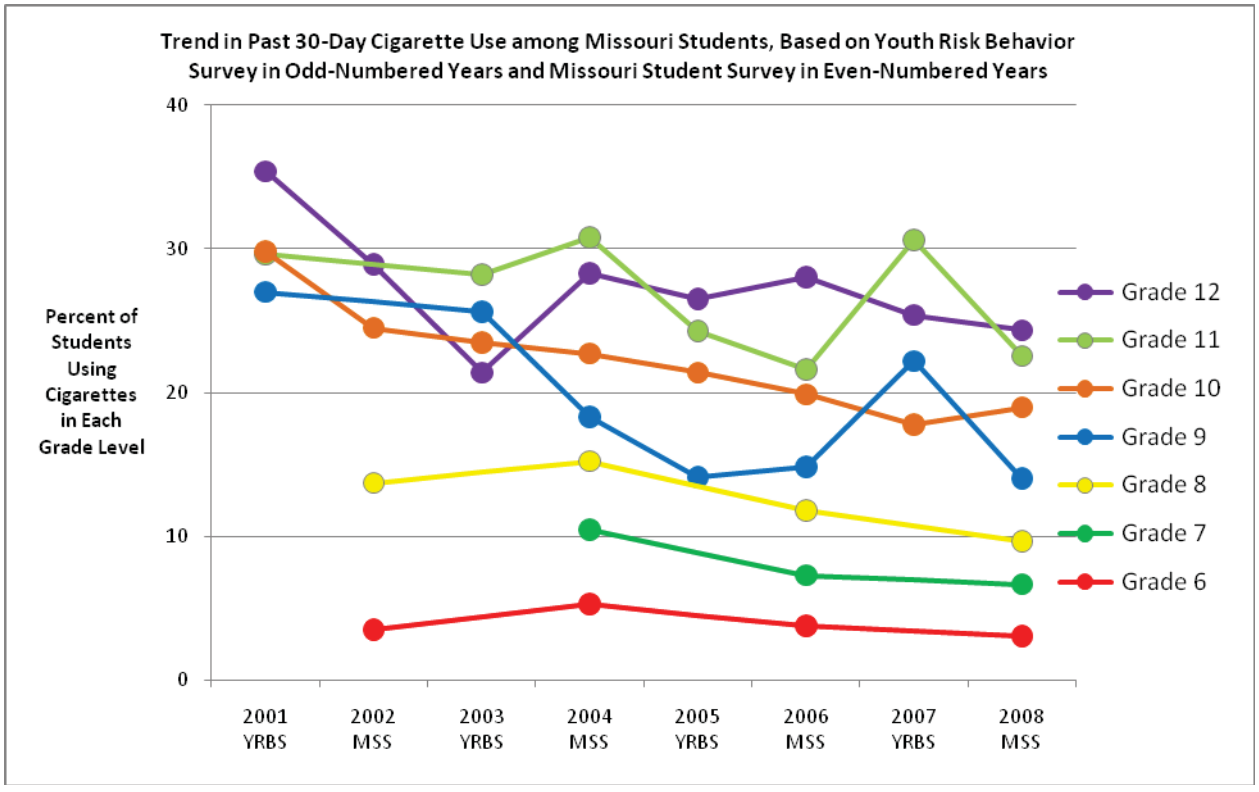


	2002/2003	2003/2004	2004/2005	2005/2006	2006/2007
Illicit Drugs only	79,000	76,000	58,000	55,000	76,000
Alcohol and Drugs	61,000	66,000	85,000	75,000	59,000
Alcohol only	308,000	357,000	342,000	347,000	329,000

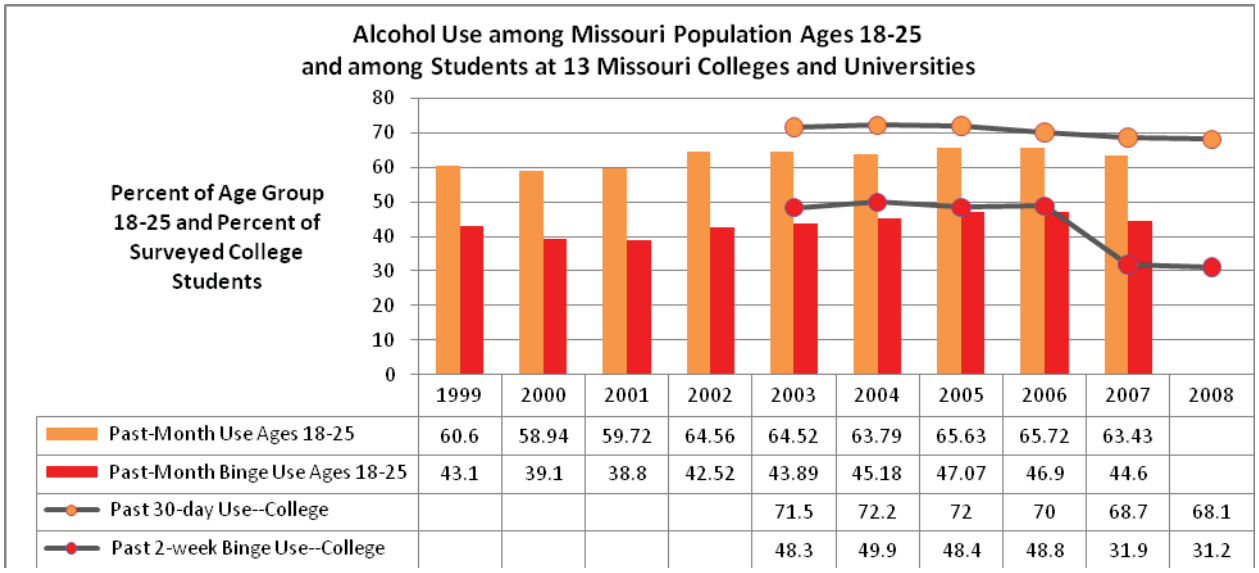
Adolescent alcohol and drug use in Missouri is declining. NSDUH surveys indicate past-month alcohol use among Missouri 12-17 year-olds peaked at an estimated 20.2 in 2004 and declined to 16.3% in 2007. Binge drinking (five or more drinks during a drinking occasion) has declined from 13.7% in 2004 to 10.3% in 2007. Past-month cigarette use in this age group reached 18.5% in 2002, but has since declined steadily to 11.8% in 2007. Adolescent past-month use of any illicit drug has gradually declined since 2004 to 9.5% in 2007. Marijuana use accounts for most of this drug use and it has declined from an estimated 8.2% in 2004 to 6.4% in 2007. Past-year cocaine use in the 12-17 age group has declined from 2.0% in 2003 to 1.6% in 2007. The Youth Risk Behavior Survey (YRBS) developed by the Centers for Disease Control and Prevention (CDC) provides Missouri estimates by high school grade level in odd-numbered years. In recent years, the YRBS has shown trends similar to those reported by the NSDUH. According to the Missouri Student Survey (MSS) conducted in even-numbered years, alcohol use rates were stable in the middle school grades in 2008 but continued to decline among high school students.

Cigarette use between 1995 and 2007 has declined from 39.22% to 22.2% among 9th graders, from 37.6% to 17.8% among 10th graders, from 41.9% to 30.6% among 11th graders, and from 40.1% to 25.4% among 12th graders. The continued downward trend in adolescent cigarette use is also apparent from the 2008 MSS data. Past 30-day marijuana use declined from 22.8% in 1995 to 12.5% in 2007 among 9th graders and from 22.4% to 16.7% among 10th graders. Between 1995 and 2007, it increased from 21.9% to 26.6% among 11th graders and from 19.5% to 21.2% among 12th graders. Marijuana trend data are difficult to interpret because marijuana use rates have generally been lower on the MSS than on the YRBS. According to the YRBS, lifetime use of methamphetamine among Missouri 12th graders reached 14.8% in 2001 but has dropped to 4.7% in 2007. Lifetime cocaine use was reported by 14.5% of 12th graders in 1997, but by 2007 it declined to 9.4%. Inhalant use also peaked at 16.6% of 12th graders in 1997 but dropped to 10.1% in 2007. During the past decade, similar reductions in the use of these drugs have been reported by Missouri 9th, 10th and 11th grade students.


Trend in Past 30-Day Alcohol Use among Missouri Students, Based on Youth Risk Behavior Survey in Odd-Numbered Years and Missouri Student Survey in Even-Numbered Years
Percent of Students Using Alcohol in Each Grade Level
60
50
40
30
20
10
0
2001 YRBS
2002 MSS
2003 YRBS
2004 MSS
2005 YRBS
2006 MSS
2007 YRBS
2008 MSS
Grade 12
Grade 11
Grade 10
Grade 9
Grade 8
Grade 7
Grade 6


Trend in Past 30-Day Cigarette Use among Missouri Students, Based on Youth Risk Behavior Survey in Odd-Numbered Years and Missouri Student Survey in Even-Numbered Years
Percent of Students Using Cigarettes in Each Grade Level
40
30
20
10
0
2001 YRBS
2002 MSS
2003 YRBS
2004 MSS
2005 YRBS
2006 MSS
2007 YRBS
2008 MSS
Grade 12
Grade 11
Grade 10
Grade 9
Grade 8
Grade 7
Grade 6

Young adults continue to have Missouri's highest rates of alcohol and drug use. While the NSDUH estimates that 50.4% of the Missouri population ages 12 and older were past-month users of alcohol in 2007, 63.4% of young adults 18-25 years of age reported that they drank in the past month – a rate that was surpassed only by the 2006 estimate of 65.7%. Young adults also had a binge use rate of 44.6% – almost double the binge drinking rate of 22.7% among adults over age 25. Binge use among 18-25 year-olds reached 47.1% in 2005 before modest reductions in the past two years. Past-month alcohol use rates among college students responding to the Core Alcohol and Drug Survey and the Missouri College Health Behavior Survey (MCHBS) have declined from 71.5% in 2003 to 68.1% in 2008. Past 2-week binge alcohol use (during one sitting) among this college population declined to 31.2% in 2008 after reaching 49.9% in 2004.

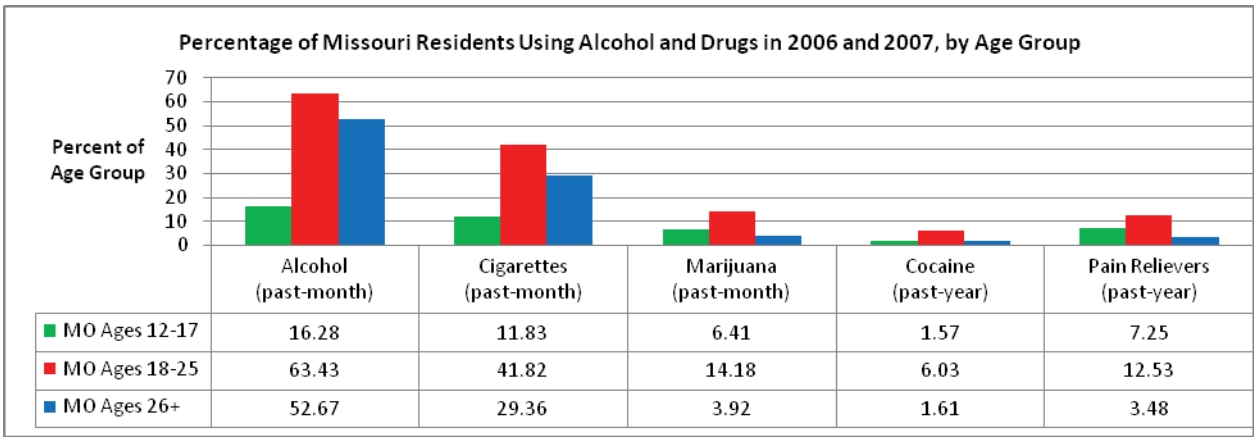


	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Past-Month Use Ages 18-25	60.6	58.94	59.72	64.56	64.52	63.79	65.63	65.72	63.43	
Past-Month Binge Use Ages 18-25	43.1	39.1	38.8	42.52	43.89	45.18	47.07	46.9	44.6	
Past 30-day Use--College					71.5	72.2	72	70	68.7	68.1
Past 2-week Binge Use--College					48.3	49.9	48.4	48.8	31.9	31.2

Cigarette smoking among Missouri young adults is the highest of any age group but has been declining steadily in recent years. In 2007, 41.8% of 18-25 year-olds reported past-month cigarette use compared to 49.1% in 2002. Nationwide, 37.3% of this age group used cigarettes in 2007. Past-month illicit drug use among young adults in Missouri reached 22.9% in 2002 before declining to 18.8% in 2007. Marijuana use in this age group has declined from 18.6% in 2003 to 14.2% in 2007. Within the Missouri college population, past-year marijuana use declined from 28.8% in 2003 to 21.8% in 2008. Past-year cocaine use among Missouri's 18-25 year-olds fluctuated from 7.2% to 8.2% during 2002-2005, but dropped to 6.0% in 2007. Past-year non-medical use of pain relievers in the age group 18-25 has remained close to 13% since being included in the NSDUH in 2003.

Alcohol and drug use among Missouri adults over age 25 is gradually rising. Estimates from the NSDUH indicate that past-month alcohol use among this age group increased in 2006 and again in 2007 to 52.7%, but remains slightly lower than the nationwide rate of 53.9%. The last two surveys also showed an increase in past-month use of illicit drugs to 5.9%, matching the U.S. rate. Past-month marijuana use comprised most of the illicit drug use, with the last two surveys indicating slight increases and a 2007 Missouri rate of 3.9% compared to the U.S. rate of 4.0%. Past-year use of cocaine and non-medical use

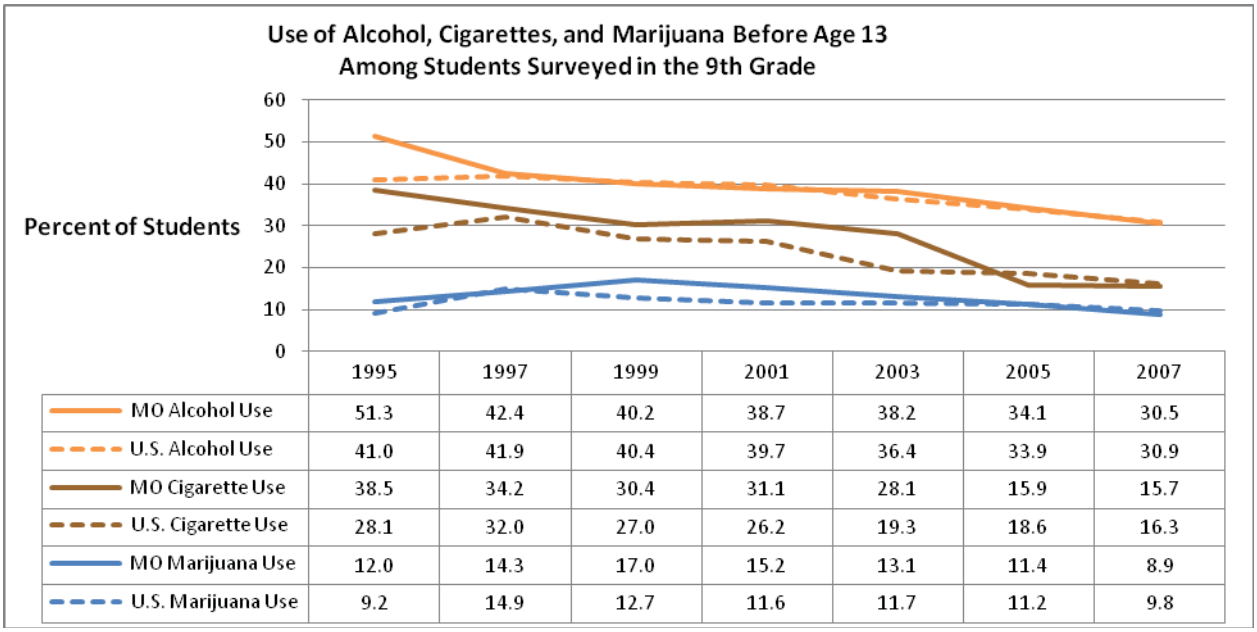
of pain relievers also increased slightly in the last two survey years but remained below nationwide rates. Despite the upward trend, NSDUH alcohol and illicit drug use estimates for Missouri adults remain lower than the rates from the early part of the decade. Based on the NSDUH, past-month cigarette smoking rates in the over-25 population have remained near 30% for several years – five percentage points higher than the U.S. rate for this age group. Using the Behavioral Risk Factor Survey, the CDC estimated Missouri's smoking rate for adults 18 and older was 24.9% in 2008 – more than six percentage points higher than the median rate of all states.



	Alcohol (past-month)	Cigarettes (past-month)	Marijuana (past-month)	Cocaine (past-year)	Pain Relievers (past-year)
MO Ages 12-17	16.28	11.83	6.41	1.57	7.25
MO Ages 18-25	63.43	41.82	14.18	6.03	12.53
MO Ages 26+	52.67	29.36	3.92	1.61	3.48

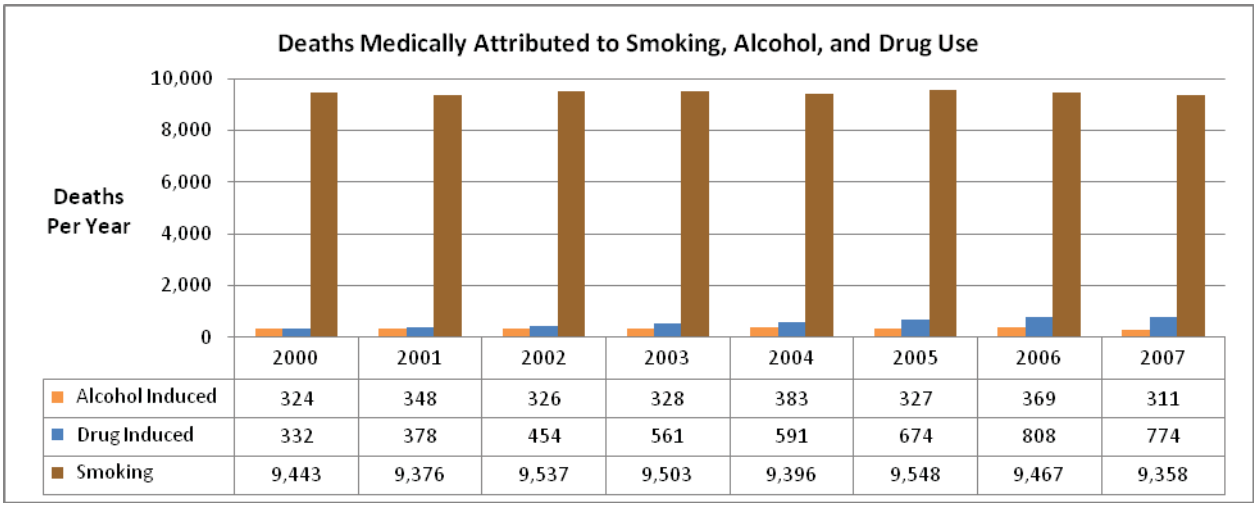
Annual rates of first use of substances, their first use at an early age, and attitudes toward their use have historically been good indicators of future use rates. Data from the 2007 NSDUH show that Missouri's rate of first use of marijuana is lower than the national average among 12-17 year-olds, and higher than the U.S. average for 18-25 year-olds. The data sources suggest that more Missouri adolescents may be delaying first use of marijuana until they are older. Indeed, the NSDUH survey shows that 35.7% of Missouri 12-17 year-olds perceive great risk in smoking marijuana once per month compared to 34.6% of U.S. adolescents in that age group. Consistent with the higher first-use rates of Missouri's young adults 18-25 years of age, their rates of perceived marijuana risk are lower than those of 18-25 year-olds nationwide.

Fewer Missouri adolescents are using alcohol, tobacco, and marijuana before age 13. In 2007, Missouri's rate for early marijuana use for all high school grades combined was lower than the national average for the first time since YRBS state estimates were introduced in 1995. Due to the time lag between students' early first use of substances and their high school recollections of first use, the 9th grade data might be the most valid. Although alcohol use prior to age 13 among 9th graders has declined 10 percentage points nationwide – from 41.0% in 1995 to 30.9% in 2007 – early alcohol use among Missouri 9th grade students has dropped 20 points – from 51.3% to 30.5%. Missouri has also had larger reductions in first-time use of cigarettes before age 13, declining from 38.5% in 1995 to 15.7% in 2007 among 9th grade students.



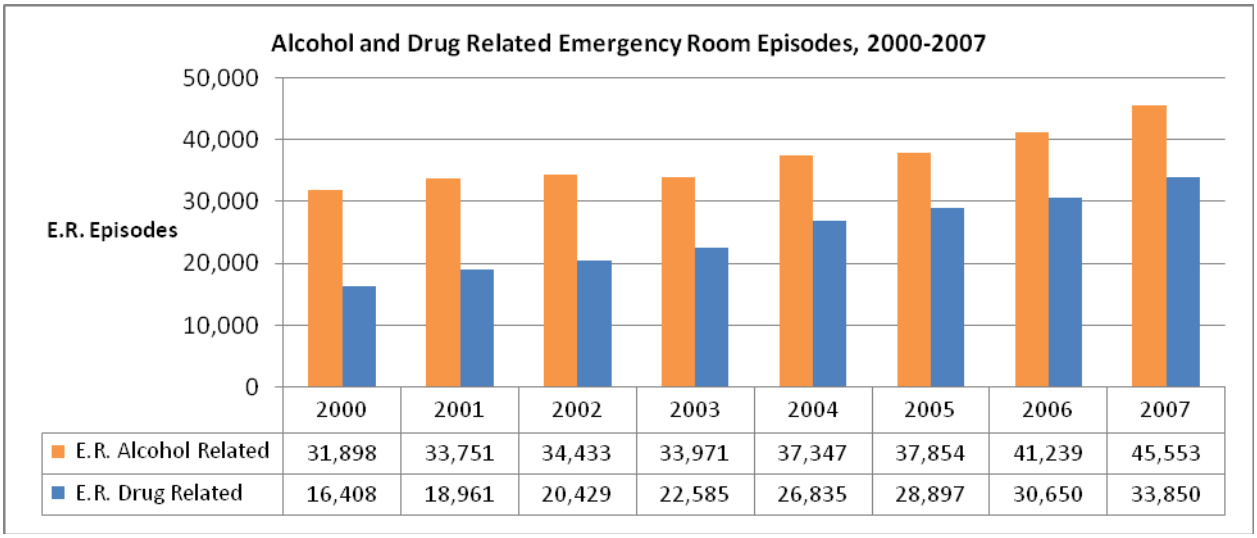
	1995	1997	1999	2001	2003	2005	2007
MO Alcohol Use	51.3	42.4	40.2	38.7	38.2	34.1	30.5
U.S. Alcohol Use	41.0	41.9	40.4	39.7	36.4	33.9	30.9
MO Cigarette Use	38.5	34.2	30.4	31.1	28.1	15.9	15.7
U.S. Cigarette Use	28.1	32.0	27.0	26.2	19.3	18.6	16.3
MO Marijuana Use	12.0	14.3	17.0	15.2	13.1	11.4	8.9
U.S. Marijuana Use	9.2	14.9	12.7	11.6	11.7	11.2	9.8

While the overall death rate in Missouri is declining, drug induced deaths are increasing and smoking related deaths are beginning to decrease. In the year 2000, 332 Missouri residents had drug induced deaths – those resulting from overdoses or medical disorders caused by drug abuse. These deaths reached 808 in 2006 and declined to 774 in 2007. The rate of these drug induced deaths doubled from 0.59 per 10,000 population in 2000 to 1.32 per 10,000 in 2007. Alcohol induced deaths – those resulting from alcohol overdoses and the medical consequences of alcohol abuse – have remained fairly constant. In 2007, Missouri had 311 alcohol induced deaths, the lowest annual total of the current decade and a rate of 0.53 per 10,000 population. Estimated smoking related deaths declined to 9,358 in 2007 – the lowest number since 1994. Despite the decrease, smoking still causes over 17% of Missouri deaths.



	2000	2001	2002	2003	2004	2005	2006	2007
Alcohol Induced	324	348	326	328	383	327	369	311
Drug Induced	332	378	454	561	591	674	808	774
Smoking	9,443	9,376	9,537	9,503	9,396	9,548	9,467	9,358

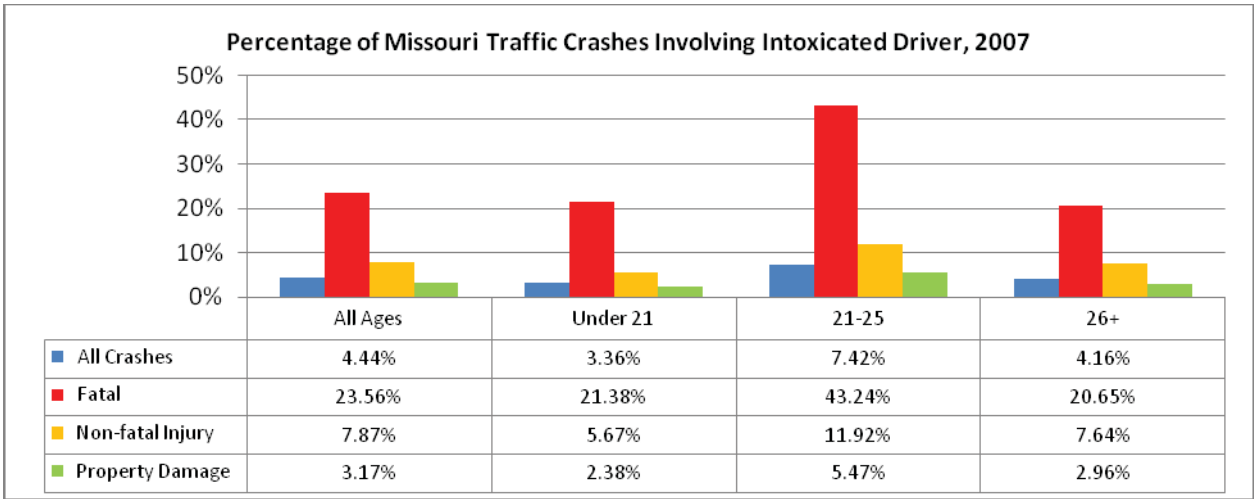
Emergency room episodes resulting from alcohol and drug use have been increasing at a faster rate than episodes not related to substance abuse. In the year 2000, Missouri residents had 2,141,391 emergency room (E.R.) episodes for all causes, a rate of 3,827 per 10,000 in the population. In 2007, these E.R. episodes totaled 2,676,546, a rate of 4,553 per 10,000. During this same time period, alcohol related E.R. episodes increased from 31,898 (57 per 10,000) to 45,553 (77 per 10,000) and drug related episodes doubled from 16,408 (29 per 10,000) to 33,850 (58 per 10,000). The portion of E.R. episodes attributed to alcohol and drug use has increased. Alcohol related episodes were 1.49% of all E.R. episodes in 2000 and 1.70% in 2007. Drug related episodes were 0.77% of all E.R. episodes in 2000 and 1.26% in 2007.



	2000	2001	2002	2003	2004	2005	2006	2007
E.R. Alcohol Related	31,898	33,751	34,433	33,971	37,347	37,854	41,239	45,553
E.R. Drug Related	16,408	18,961	20,429	22,585	26,835	28,897	30,650	33,850

During the current decade, newly diagnosed cases of human immunodeficiency virus (HIV) among Missouri residents have averaged 567 per year, and those involving injection drug use as a risk factor have averaged 48 per year – over 8% of the total. New HIV cases associated with injection drug use declined to 32 in 2007. The highest number of such cases recorded during this decade was 61 in 2001. Injection drug use is also a risk factor for hepatitis B (which had 383 newly-diagnosed cases in Missouri in 2007), hepatitis C (4,468 newly-diagnosed cases in 2007), and tuberculosis disease (118 newly-diagnosed cases in 2007). More than 4,000 injection drug users enter Missouri ADA treatment programs each year.

While total motor vehicle crashes are declining in Missouri, the percentage that is alcohol related is increasing. In addition, Alcohol tends to be involved in the most severe crashes. Traffic crashes have declined in each of the last 10 years despite increases in total vehicle miles travelled. Missouri had 194,992 motor vehicle crashes in 1998, but only 166,052 in 2007. The number of alcohol related crashes has also been gradually declining – dropping to 7,380 in 2007 – but the percentage of crashes involving an intoxicated driver has been trending upward. In 2007, 4.44% of all traffic crashes and 23.56% of fatal crashes were alcohol related. Drivers under the legal drinking age of 21 and young adults 21-25 years of age have higher rates of alcohol related crashes than those over age 25. Among fatal crashes in 2007, 43.24% of drivers 21-25 years of age were intoxicated.



	All Ages	Under 21	21-25	26+
All Crashes	4.44%	3.36%	7.42%	4.16%
Fatal	23.56%	21.38%	43.24%	20.65%
Non-fatal Injury	7.87%	5.67%	11.92%	7.64%
Property Damage	3.17%	2.38%	5.47%	2.96%

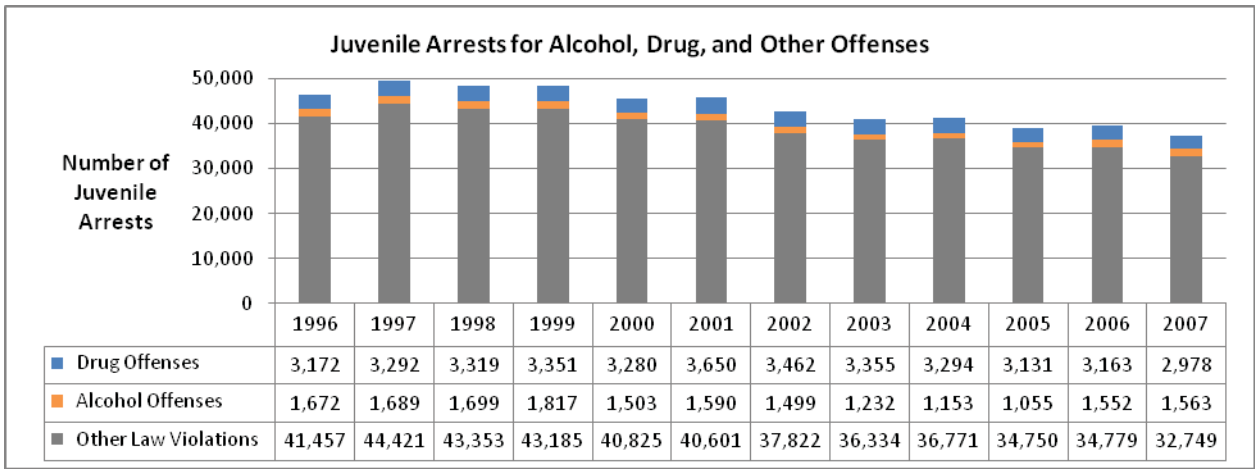
In addition to the large number of alcohol crashes, drug-involved crashes continue to increase and reached over 1,000 for the first time in 2007.

Many Missouri children are removed from their homes because of their parents' alcohol and drug abuse. Juvenile court out-of-home placements of children totaled 5,198 in 2007. One-third of these placements were due to parental substance abuse. Treatment and recovery for these parents is essential in order to reunite the children with their families.

Every year in Missouri, about 35,000 to 40,000 individuals are arrested for driving while intoxicated. There is no consistent trend in the annual number of arrests. During this decade, the years 2002 and 2006 had the most arrests – nearly 40,000 – while 2004 and 2007 had the least – around 35,000. During the same time period, arrests for boating while intoxicated were highest in 2001 and 2005 with about 500 arrests each year.

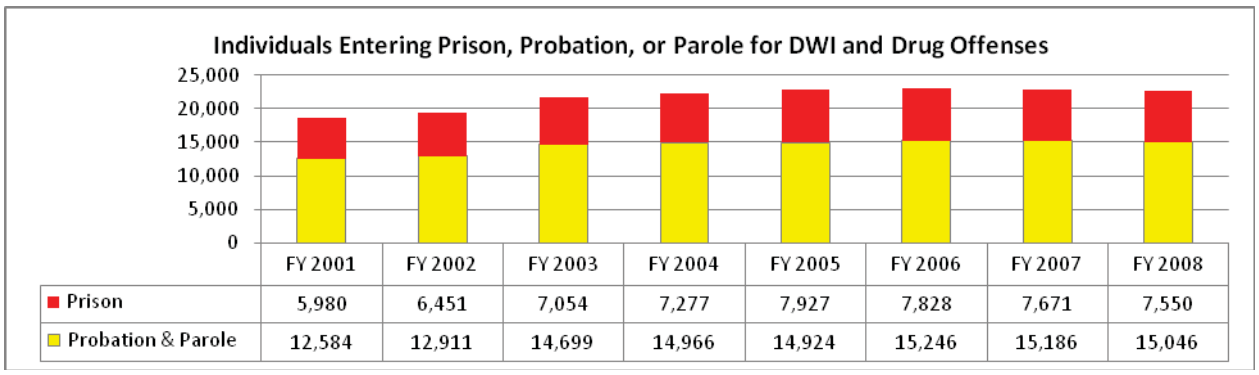
Every year in Missouri, about 40,000 to 45,000 individuals are arrested for drug manufacturing, sales or possession. In 2007, drug arrests reached their lowest level of the decade with a total of 41,525. This followed the year with the decade's most drug arrests – 45,814 in 2006. Methamphetamine lab incidents leveled off in 2006 and 2007 at 1,285 after reaching a peak of 2,860 in 2003.

Every year in Missouri, at least 10% of juvenile arrests are for alcohol and drug offenses. Total juvenile arrests reached a peak of nearly 50,000 in 1997 and declined to below 38,000 in 2007. Annual drug arrests have been trending downward to about 3,000. Alcohol arrests show little change from the beginning of the decade and remain at about 1,500 per year.



	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Drug Offenses	3,172	3,292	3,319	3,351	3,280	3,650	3,462	3,355	3,294	3,131	3,163	2,978
Alcohol Offenses	1,672	1,689	1,699	1,817	1,503	1,590	1,499	1,232	1,153	1,055	1,552	1,563
Other Law Violations	41,457	44,421	43,353	43,185	40,825	40,601	37,822	36,334	36,771	34,750	34,779	32,749

Over 7,000 Missouri residents enter prison every year due to serious drug or alcohol offenses. In each of the last five years, at least 6,000 have been incarcerated for drug convictions and 1,000 for repeatedly driving while intoxicated. Additionally, around 15,000 Missouri residents are assigned to probation or parole each year for alcohol and drug offenses. Last year, about 5,000 individuals were given the opportunity to receive substance abuse treatment services through drug courts instead of traditional corrections programs.

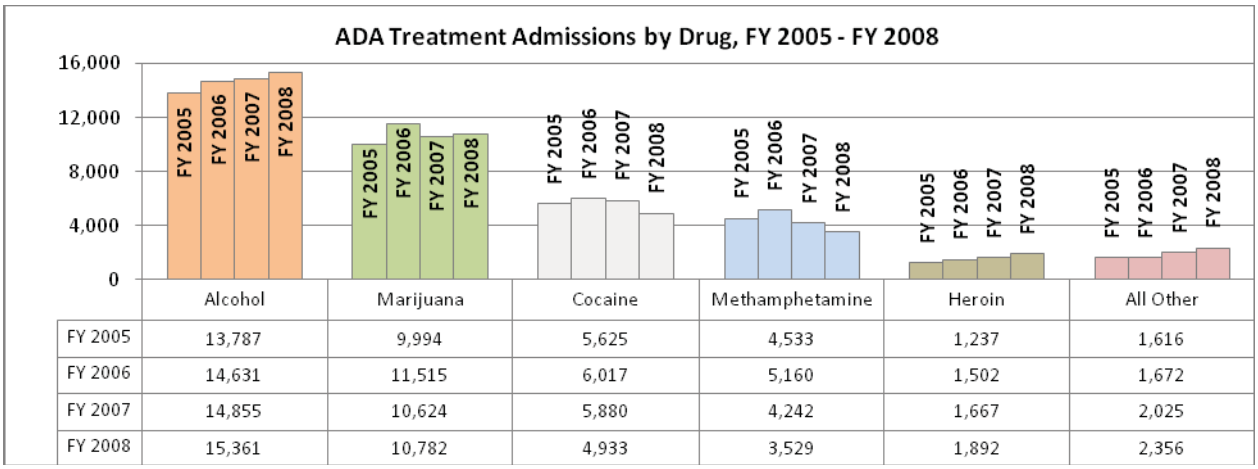


	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008
Prison	5,980	6,451	7,054	7,277	7,927	7,828	7,671	7,550
Probation & Parole	12,584	12,911	14,699	14,966	14,924	15,246	15,186	15,046

The Division of Alcohol and Drug Abuse annually provides treatment or intervention services to about 75,000 people. The Division plans, funds, and coordinates specialized treatment and intervention services for alcohol and drug abuse and compulsive gambling. In fiscal year 2008, 39,025 Missouri residents were admitted for substance abuse treatment services and 35,451 were admitted to a Substance Abuse Traffic Offenders Program (SATOP) for assessment and intervention services or referral to treatment. An additional 6,921 individuals accessed recovery support services without treatment, 1,129 were admitted for co-dependency services, and 209 were admitted for compulsive gambling problems.

Treatment admissions for pharmaceutical analgesics and heroin are increasing the most rapidly. Since FY 2005, treatment admissions have increased 65.7% for analgesics (pain relievers), 53.0% for heroin, 34.6% for tranquilizers, 11.4% for alcohol, and 7.9% for marijuana. Admissions have decreased 22.1% for methamphetamine and 12.3% for cocaine. Alcohol continues to have the most treatment admissions for

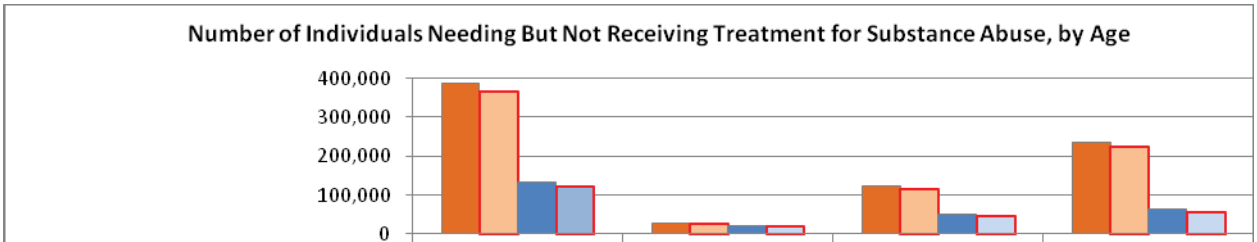
primary drug of abuse followed by marijuana, cocaine, methamphetamine, heroin, analgesics, and tranquilizers. Criminal justice referrals account for more than half of the treatment program admissions. An increasing portion of the individuals entering ADA treatment programs are required to do so as a result of a legal problem. Criminal justice referrals accounted for less than one-fourth of the treatment admissions a decade ago but 58.3% of the FY 2008 admissions. In addition, virtually all of the SATOP admissions result from arrests for alcohol or drug impaired driving.



	Alcohol	Marijuana	Cocaine	Methamphetamine	Heroin	All Other
FY 2005	13,787	9,994	5,625	4,533	1,237	1,616
FY 2006	14,631	11,515	6,017	5,160	1,502	1,672
FY 2007	14,855	10,624	5,880	4,242	1,667	2,025
FY 2008	15,361	10,782	4,933	3,529	1,892	2,356

CHALLENGES

In recent surveys, the vast majority of Missouri residents who indicated a need for alcohol or drug abuse treatment have not received help. Based on the 2006 and 2007 NSDUH, an estimated 388,000 have an unmet need for treatment for alcohol dependence or abuse and 135,000 for illicit drug dependence or abuse. These numbers overlap because some individuals – 59,000 – have an unmet need for both alcohol and illicit drug treatment. The estimates are derived from responses to survey items that measure diagnostic criteria.



	All Ages (12 & Older)	Ages 12-17	Ages 18-25	Ages 26 & Older
Alcohol Dependence/Abuse	388,000	29,000	122,000	237,000
Unmet Need for Alcohol Treatment	366,000	27,000	114,000	225,000
Illicit Drug Dependence/Abuse	135,000	22,000	50,000	63,000
Unmet Need for Illicit Drug Treatment	123,000	20,000	47,000	56,000

The NSDUH indicates that nationwide only a small portion of individuals with an untreated substance abuse problem acknowledge that they need treatment. More public awareness and education are needed to recognize and de-stigmatize substance abuse, intervene when someone has a problem, and seek appropriate help. Among those who seek treatment, lack of insurance coverage and unavailability of services are cited as major barriers. The Division of Alcohol and Drug Abuse cannot meet current treatment demand. The Division's treatment programs are providing services at their funded capacities. Placing substance abusers on waiting lists discourages many of them from seeking services, and the delays can result in a progression of their alcohol and drug dependencies and related problems. Among the estimated 464,000 Missouri residents who have substance dependence or abuse, only 8.4% of them were admitted to ADA treatment programs and 7.7% to SATOP intervention programs in FY 2008.

Declines in Missouri state revenues are forcing reductions in the number of individuals who can be treated for substance abuse. Missouri general revenue provides a substantial portion of the funding for the Primary Recovery detoxification and treatment programs that account for approximately one-half of the state's treatment admissions. Reductions in state funding have capped the number of individuals who can be served in these programs. Furthermore, the reductions jeopardize Medicaid-funded treatment services and the federal matching funds that support those services.

Proposed health care reform has uncertain impacts on the current national system of publicly funded substance abuse treatment and prevention. Most published reports and summaries of the proposed insurance marketplace and other health care plans do not discuss substance abuse treatment coverage.

Under a proposed opt-out provision, some states might chose not to participate in the public plan. Also unknown is whether the roles of the federal Center for Substance Abuse Treatment (CSAT) and the Center for Substance Abuse Prevention (CSAP) will change, and whether CSAT and CSAP block grant funding to the states for state-administered treatment and prevention services will be affected under the new system.

Rising unemployment might further exacerbate alcohol and drug use and substance related problems. The drug-free workplace provides one of the best environmental controls on alcohol and drug use. The loss of that environment could lead to more opportunities for affected individuals to use alcohol and drugs. Stress, anxiety, depression, and other situational mental health conditions are potential job loss consequences that are known to be closely associated with substance abuse.

THE DOLLARS AND SENSE OF ECONOMIC COSTS

Alcohol and drug abuse are well-known contributors to unsatisfactory family and social relationships, child abuse, vehicle crashes, job loss, medical problems, addiction, and a spectrum of other behavioral problems. Substance abusers – and their families, friends, co-workers, and others who have been victims of their impaired judgment, intoxication, or erratic behavior – are among the millions who have personally experienced the human costs of alcohol and drug abuse. These human impacts can be described but never adequately measured. However, there are also many economic costs of substance abuse that have a broader reach than the personal impacts. Several economic studies have quantified these costs, which burden virtually everyone in society through remedial taxes at all levels of government and higher costs for goods and services.

These costs are huge and rank alcohol abuse and drug abuse as two of the most costly health problems in the United States. A 1998 study funded by the National Institute on Alcohol Abuse and Alcoholism (NIAAA) concluded that alcohol abuse costs the United States an estimated $184.6 billion each year. A similar study that focused on drug abuse costs was updated in 2002 by the Office of National Drug Control Policy (ONDCP). Drug abuse has an estimated annual nationwide impact of $180.8 billion. The Centers for Disease Control and Prevention (CDC) conducted a study in 2006 to determine U.S. and state costs associated with cigarette smoking in 2004. Nationwide, the costs of cigarette smoking are an estimated $194.45 billion per year and Missouri's portion is $4.56 billion.

The economic impacts of substance abuse are typically categorized as health care costs, welfare costs, crime and property damage costs, and lost productivity costs. The NIAAA study determined that almost three-fourths of the economic impact of alcohol is from lost productivity due to workplace absenteeism, under-performance, unemployment, alcohol-related crime, and premature death. Lost productivity accounted for 71% of the drug abuse costs in the ONDCP study. The Missouri Division of Alcohol and Drug Abuse (ADA) periodically reviews national and state data from the National Survey on Drug Use and Health (NSDUH) to project Missouri's portion of these economic costs. Based on the Missouri estimates of alcohol dependence and abuse from the NSDUH for years 2003-2006, ADA estimates the economic cost of alcohol abuse on the state is almost $4.2 billion per year. The same methodology, applied to the NSDUH drug dependence and abuse figures for Missouri, yields a state drug abuse cost of more than $3.5 billion per year. Overall, the estimated annual societal cost of alcohol and drug dependence and abuse in Missouri exceeds $7.7 billion. These huge costs are generated by 329,000 individuals with alcohol dependence or abuse, 76,000 with drug dependence or abuse, and 59,000 with alcohol and drug dependence or abuse – an average cost of over $16,000 per substance abuser.

Estimated Costs of Alcohol and Drug Abuse in Missouri

	Alcohol Abuse	Drug Abuse	Total
Missouri Economic Cost	$4.2 Billion	$3.5 Billion	$7.7 Billion
Number of Substance Abusers	388,000	135,000	464,000*
Cost Per Substance Abuser	$11,000	$26,000	$16,000

* includes 59,000 who abuse both alcohol and illicit drugs

Based on a 1998 analysis, substance abusers and their households bear an estimated 45% of the nationwide costs of alcohol abuse and 44% of the drug abuse costs. The remaining costs fall on society. Government incurs 39% of the alcohol costs and 46% of the drug costs. Private insurance pays 10% of the alcohol costs and 3% of the drug costs. Victims' losses account for the remaining 6% of the alcohol costs and 7% of the drug costs. When applied to the estimated Missouri costs of alcohol and drug abuse, these proportions provide an approximation of how costs might be distributed and Missouri residents financially affected:

Distribution of Estimated Costs*

	Total Cost	Per-Capita Cost
Missouri Costs Incurred	$7.7 Billion	$1,300
Incurred by Alcohol Abusers	$1.9 Billion	$4,900
Incurred by Drug Abusers	$1.5 Billion	$11,600
Incurred by Non-Substance Abusers	$4.3 Billion	$800

* all figures are rounded

Although the per-capita economic burden of these costs exceeds $1,300 per year, substance abusers and members of their households incur much larger individual costs chiefly due to reduced earnings and expenditures for criminal justice, health care, and other substance abuse related direct costs.

In contrast to the high costs of untreated substance abuse, the average cost to treat an individual with a substance abuse problem in a Division of ADA program over the course of a year is only $1,400. Substance abuse treatment is a low-cost investment in people who have the potential to be productive, contributing citizens. The investment in treatment can reduce costs for government and the private sectors, resulting in financial savings for everyone.

ABOUT THE SURVEYS – A QUICK REFERENCE

Survey data represent a valuable source of information on prevalence estimates, use and behavior patterns, drug preferences, and emerging trends. Survey data, however, are not without limitations. No single survey exists which covers all populations abusing substances. Substance abuse surveys typically fall into the following categories: 1) household surveys, 2) criminal justice surveys, and 3) school surveys. These surveys can miss segments of the population that have been impacted by substance abuse including the homeless population and school dropouts. The survey data are self-report data and have inherent validity concerns due to respondent dishonesty, forgetfulness, or poor comprehension. Assessments of validity have been mixed. Research suggests that validity concerns are more evident for the criminal justice population and for reporting use of some drugs such as cocaine and heroin that may have an associated stigma. Nevertheless, collection of alcohol and drug use data via surveys provides useful information on large diverse populations that would not otherwise be available. Characteristics and highlights of the following survey data sources are provided:

Behavioral Risk Factor Survey (BRFS)

- **Conducted by:** Centers for Disease Control (CDC) in partnership with state health departments
- **Established:** 1984
- **Frequency of Reporting:** Annual
- **Type of survey:** Household
- **Mode of survey:** Telephone interview
- **Age groups:** Ages 18 or older
- **Completed interviews:** About 431,000 nationwide and about 5,200 in Missouri.
- **Level of reporting:** National, state, and Missouri Department of Health and Senior Services planning regions
- **Some strengths:** BRFS does include data on adult consumption of alcohol and use of tobacco. BRFS has a relatively large sample size. The survey allows for year-to-year comparisons.

- **Some limitations:** BRFS does not include data on drug use nor does it include adolescents in its target population**.**
- **Other notes:** BRFS definitions of binge drinkers and heavy drinkers differ from that of the National Survey on Drug Use and Health (NSDUH) – BRFS definitions depend upon gender.
- **Website:** **http://www.cdc.gov/brfss** and **http://cntysvr1.lphamo.org/pubdocs/brfss/index.php**

Core Alcohol and Drug Survey

- **Conducted by:** Missouri Partners in Prevention
- **Established:** 1990 for the University of Missouri in Columbia. The other eleven public campuses began implementation in 2001.
- **Frequency of Reporting:** Annual
- **Type of survey:** School/Higher Education
- **Mode of survey:** Paper Questionnaire
- **Grade levels:** Undergraduate students at 12 Missouri higher education institutions
- **Completed interviews:** Varies by campus
- **Level of reporting:** Campus level
- **Some strengths:** Core captures data on attitudes, perceptions, and opinions about use of alcohol and drugs in addition to use and consequences of use.
- **Some limitations:** Core is used primarily as a tool at the local campus level.
- **Website:** http://coreinst.siuc.edu/

Missouri College Health Behavior Survey (MCHBS)

- **Conducted by:** Missouri Partners in Prevention
- **Established:** 2007 to replace annual Core Alcohol and Drug Survey
- **Frequency of Reporting:** Annual
- **Type of survey:** School/Higher Education
- **Mode of survey:** On-line Survey
- **Grade levels:** Undergraduate students at 13 Missouri higher education institutions
- **Completed interviews:** Varies by campus
- **Level of reporting:** Campus level
- **Some strengths:** The MCHBS measures attitudes, perceptions, and opinions about use of alcohol and drugs in addition to use and consequences of use. Other behaviors surveyed include gambling, safe driving, mental health issues, and tobacco use. Measure has been validity tested against the Core Alcohol and Drug Survey with favorable results.
- **Some limitations:** MCHBS is not a national survey.
- **Website:** http://pip.missouri.edu/mchbs/

National Survey on Drug Use and Health (NSDUH)

- **Conducted by:** Substance Abuse and Mental Health Services Administration (SAMHSA)
- **Established:** 1971
- **Frequency of Reporting:** Annual
- **Type of survey:** Household
- **Mode of survey:** Face-to-face interview
- **Age groups:** Ages 12 or older
- **Completed interviews:** About 68,000 nationwide and about 900 in Missouri.
- **Level of reporting:** National but can also obtain state and sub-state planning regions by combining multiple survey years
- **Some strengths:** NSDUH allows for year-to-year comparisons for national data and a rolling multi-year comparison for state and sub-state data. In addition to substance use data, NSDUH provides data on past year alcohol or illicit drug dependence or abuse.
- **Some limitations:** NSDUH does not capture or under-reports on the homeless population, hard-core drug users, IV drug users, and institutionalized individuals. Limited drug and demographic data are available at the state level because of the small sample size. NSDUH does not separate out smokeless tobacco and chewing tobacco. Age categories generally limited to 12-17, 18-25, and 26 and older.
- **Other notes:** NSDUH definitions of binge drinkers and heavy drinkers differ from that of the Behavioral Risk Factor Survey (BRFS) – NSDUH definitions do not depend on gender.
- **Website:** **http://www.oas.samhsa.gov/nsduh.htm**

Missouri Student Survey (MSS)

- **Conducted by:** Missouri Department of Mental Health (DMH)
- **Established:** 2000
- **Frequency of Reporting:** Every even numbered year
- **Type of survey:** School
- **Mode of survey:** Web-based
- **Grade levels:** Grades 6th through 12th but more concentrated on 9th grade
- **Completed interviews:** 115,000
- **Level of reporting:** State and county
- **Some strengths:** MSS is offered to all Missouri public school districts. MSS includes the younger middle school population in addition to the high school population. MSS also captures data on risk and protective factors and antisocial behaviors in addition to substance use patterns.
- **Some limitations:** Some school districts opt out of the survey – 106 (20%) in 2008. Caution must be used if using data combining grades because weighting is not applied. Data is available only every other year.
- **Other notes:** MSS definition of binge drinking is different than that of NSDUH. MSS combines ecstasy with other club drugs which is different than NSDUH.

- **Website:** http://www.dmh.missouri.gov/ada/rpts/survey.htm

Monitoring the Future (MTF)

- **Conducted by:** National Institute on Drug Abuse (NIDA)
- **Established:** 1975
- **Frequency of Reporting:** Annual
- **Type of survey:** School
- **Mode of survey:** Paper questionnaire
- **Grade levels:** 8th, 10th, and 12th graders; college students; and young adults
- **Completed interviews:** About 46,000 students nationwide
- **Level of reporting:** National
- **Some strengths:** MTF provides data on lifetime, past year, and past 30 day use of various illicit drugs including methamphetamine. Questions regarding prescription drug use including use of OxyContin, Vicodin, and Ritalin have been added in recent years. MTF also captures data on perception of harm and disapproval.
- **Some limitations:** MTF does not provide state level data.
- **Other notes:**
- **Website:** http://www.monitoringthefuture.org/

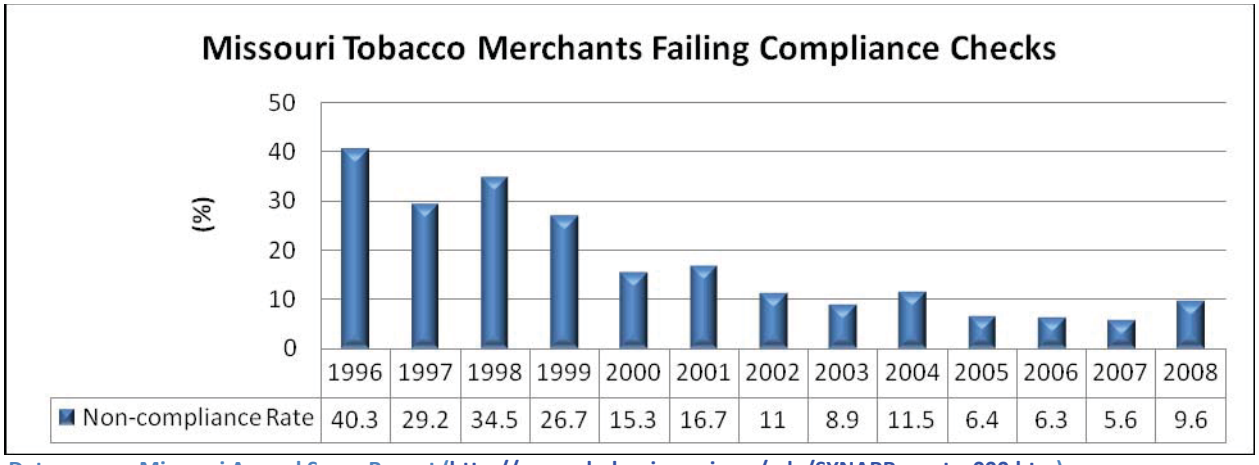
Youth Risk Behavior Survey (YRBS)

- **Conducted by:** Centers for Disease Control
- **Established:** 1991
- **Frequency of Reporting:** Every odd-numbered year
- **Type of survey:** School
- **Mode of survey:** Paper questionnaire
- **Grade levels:** 9th through 12th
- **Completed interviews:** About 14,000 nationwide and 1,500 in Missouri
- **Level of reporting:** National and State
- **Some strengths:** YRBS includes questions on alcohol, drug, and tobacco use. YRBS includes questions on lifetime steroid use and lifetime IV drug use.
- **Some limitations:** Some states do not participate in the YRBS -- six in 2007. YRBS does not capture data on private schools or home-school children. Current drug use limited to marijuana and cocaine. Limited data are available at the state level due to small sample size. Data only available every other year.
- **Other notes:** YRBS definition of binge drinking similar to that of the National Survey on Drug Use and Health (NSDUH).
- **Website:** http://www.cdc.gov/HealthyYouth/yrbs/index.htm

MISSOURI YOUTH TOBACCO ACCESS AND USE

Missouri Youth Tobacco Access and Possession Laws

- No Tobacco Sales to Persons under Age 18: Missouri state law prohibits the selling of tobacco products to anyone under the age of 18 years. Merchants are also required to post a state law sign at every tobacco display, including cigarette machines. *(RSMO 407.926-407.927)*
- State Law Enforcement: The Department of Public Safety, Division of Alcohol and Tobacco Control has the authority to enforce the state's laws related to the control and sale of tobacco. *(RSMO 407.934)*
- Vending Machines: As of January 1, 2002, vending machines are required to be located within employee's line of sight or be equipped with a locking device. Vending machines located in areas where patrons must be over the age of 18 or in places not generally accessible to the general public are exempt from this requirement. *(RSMO 407.931)*
- Minor Possession: No person under the age of 18 shall purchase, attempt to purchase, or possess tobacco products unless in the course of employment. Persons under the age of 18 will have their tobacco products confiscated. *(RSMO 407.933)*
- Tobacco Registry: The Department of Revenue is required to establish and maintain a listing of establishments that sell tobacco products in the state. *(RSMO 407.934)*
- Federal Synar Regulation: Federal Synar regulation, administered by the U.S. Department of Health and Human Services, requires all states to establish laws that make it unlawful to sell or distribute tobacco products to any individual under the age of 18 years and to enforce such laws in a manner that can reasonably be expected to reduce youth access to tobacco products. It also requires states to annually measure compliance through random, unannounced inspections. All states are expected to achieve a violation rate of no more than 20 percent. *(42 U.S.C. 300x-26 and 45 C.F.R. 96.130)*



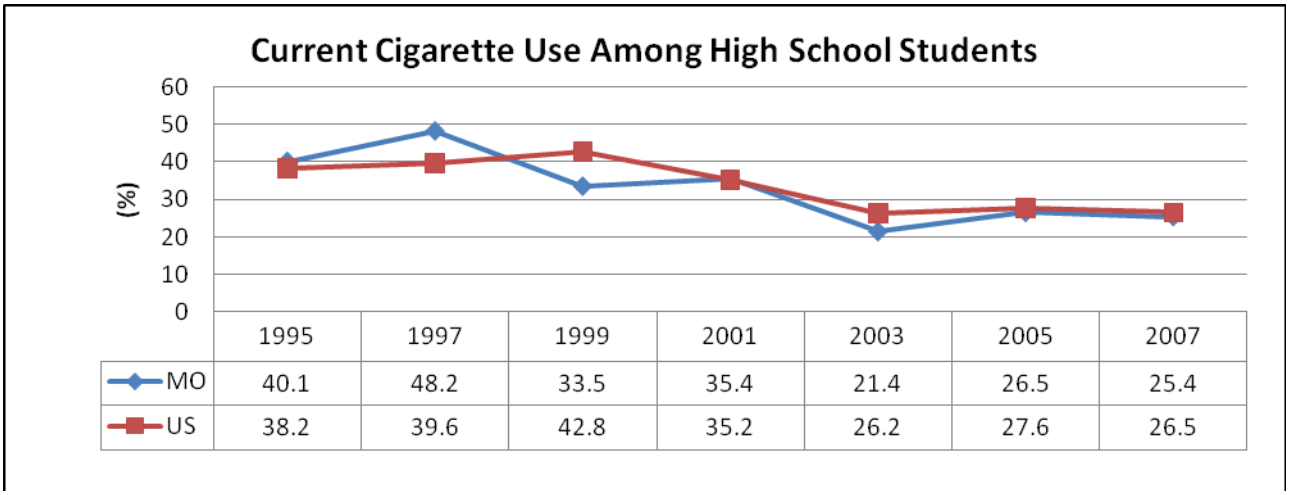
	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Non-compliance Rate	40.3	29.2	34.5	26.7	15.3	16.7	11	8.9	11.5	6.4	6.3	5.6	9.6

Data source: Missouri Annual Synar Report (http://www.dmh.missouri.gov/ada/SYNARReports_000.htm)

Merchant Compliance with Access Laws

In 2008, an estimated 9.6 percent of Missouri merchants, when tested, failed to refuse the sale of cigarettes to individuals under the age of 18 years. This is lower than the maximum 20 percent allowed

by federal Synar regulation but higher than the prior year's measured rate of 5.6 percent. The State has used a combination of law enforcement and merchant education activities in order to bring down the non-compliance rate from a high of 40 percent in 1996 (baseline year) to a rate less than 20 percent.



	1995	1997	1999	2001	2003	2005	2007
MO	40.1	48.2	33.5	35.4	21.4	26.5	25.4
US	38.2	39.6	42.8	35.2	26.2	27.6	26.5

Data source: Youth Risk Behavior Survey (http://www.cdc.gov/HealthyYouth/yrbs/index.htm)

Current Status of Youth Tobacco Use

From the most recent survey data, about 54 percent of Missouri high school students surveyed reported that they had ever tried cigarette smoking and about 25 percent reported use in the past 30 days. These figures are down considerably from those reported in 1995 when 76 percent reported having ever tried cigarettes and 40 percent reported current use. The next Missouri Youth Risk Behavior Survey is scheduled for 2009.

State Initiatives Aimed at Youth Tobacco Access

To address youth access to tobacco, the state uses a combination of enforcement and merchant education activities throughout the year. Responsible for enforcing the state tobacco laws, the Division of Alcohol and Tobacco Control (ATC) performed about 270 enforcement checks between October 2007 and June 2008. Of these checks, 95 were issued citations due to non-compliance. Merchant education activities are conducted by the Division of Alcohol and Drug Abuse (ADA) including distribution of "age checker" calendars, periodic informational mailings, and compliance tests that do not involve enforcement. If a merchant is found non-compliant during a compliance test, the clerk receives a warning card and a follow-up letter is sent to the owner/manager discussing the importance of checking identification and denying the sale of tobacco products to youth. ADA completed about 3,900 compliance tests between October 2007 and July 2008. Trainings are also offered to merchants. In March and May 2007, merchant visits were conducted at about 5,750 outlets whereby merchant education materials and state law signs were distributed.