

Drug Abuse Trends in Minneapolis/St. Paul, Minnesota

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ABSTRACT

Most indicators regarding heroin and other opiate abuse remained at heightened levels in the Twin Cities in 2010, while the indicators related to the abuse of cocaine continued to fall. Heroin accounted for 3.3 percent of treatment admissions in 2000, compared with 6.7 percent in 2010 (first half). Other opiates accounted for 1.4 percent of treatment admissions in 2000, and 8.7 percent in 2010 (first half). Cocaine-related admissions accounted for 14.4 percent of treatment admissions in 2005, but only 5.8 percent in 2010 (first half). In Hennepin County cocaine-related deaths declined in 2010, as did cocaine-related emergency department visits and its use among adult male arrestees. The 2010 Minnesota Student Survey found continuing declines in the use of cocaine, alcohol, meth and tobacco among Minnesota public school students. The use of synthetic marijuana products, also known as “fake pot,” resulted in 76 reports to the Hennepin Regional Poison Center in 2010, and its use was banned in some Minnesota communities.

BACKGROUND AND AREA OVERVIEW

This report is produced twice annually for participation in the Community Epidemiology Work Group of the National Institute on Drug Abuse, an epidemiological surveillance network of researchers from 21 U.S. metropolitan areas. The Minneapolis/St. Paul (“Twin Cities”) metropolitan area includes Minnesota’s largest city, Minneapolis (Hennepin County), the capital city of St. Paul (Ramsey County), and the surrounding counties of Anoka, Dakota, and Washington. Population estimates from 2009 for each of these counties are as follows: Anoka, 335,308; Dakota, 400,675; Hennepin, 1,168,983; Ramsey, 517,748; and Washington, 236,517, according to the Minnesota Department of Administration Office of Geographic and Demographic Analysis, Office of the State Demographer. This totals 2,659,631 people, which is equal to one-half of the Minnesota State population. In the five-county metropolitan area, 84 percent of the population is White. African Americans constitute the largest minority group in Hennepin County, while Asians are the largest minority group in Ramsey, Anoka, Dakota, and Washington Counties.

DATA SOURCES

- **Treatment data** on characteristics of patients receiving addiction treatment services in the 5-county Twin Cities metropolitan area are reported on the Drug and Alcohol Abuse Normative Evaluation System (DAANES) of the Minnesota Department of Human Services (January through June 2010). Data on the number of people in treatment per 100,000 population by state are from the National Survey of Substance Abuse Treatment Services data from the 2009 survey of the Substance Abuse and Mental Health Services Administration, (SAMHSA), 2010.
- **Medical Examiner data** on accidental drug-involved deaths are reported by the Hennepin County Medical Examiner and the Ramsey County Medical Examiner (through December 2009).
- **Data on drug use among arrestees** are from the Arrestee Drug Abuse Monitoring (ADAM) program in Hennepin County (through December 2009), White House Office of National Drug Control Policy, Washington DC.
- **Crime lab data** are from the National Forensic Laboratory Information System (NFLIS), U.S. Drug Enforcement Administration (DEA), U.S. Department of Justice, on drugs seized by law

enforcement from January through June, 2010, nationally and in 7-county Twin Cities metro area.

- **Poison control data** on drug exposures (January - December 2010) are from the Hennepin Regional Poison Center located in Minneapolis, as reported on the American Association of Poison Control Centers, National Poison Data System (NPDS).
- **Hospital emergency department data** are weighted estimates derived from the Drug Abuse Warning Network (DAWN) from 2004 – 2009, administered by the Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, 2010.
- **Student survey data** on substance use by Minnesota public school students in grades 6, 9, and 12, are from the Minnesota Student Survey, 1992 - 2010 survey results. Data on substance use by a national sample of 12th graders are from the annual Monitoring the Future Survey, University of Michigan, from the 1992 - 2010 surveys, accessed online on 12/14/2010.

DRUG ABUSE PATTERNS AND TRENDS

COCAINE

The decline in **cocaine**-related treatment admissions continued into the first half of 2010. Cocaine was the primary substance problem for 5.8 percent of total treatment admissions in the first half of 2010, compared with 6.4 percent of total treatment admissions in 2009, 9.9 percent in 2008, 11.6 percent in 2007, and 14.1 percent in 2006. Most cocaine admissions were for crack cocaine, 73.7 percent of patients were age 35 or older, and one-half (50.1 percent) were African American. See exhibits 1 – 7.

Cocaine-related deaths fell in Hennepin County from 21 in 2008 to 10 in 2009. In Ramsey County there were 10 in 2008 and 11 in 2009 (exhibit 8). Cocaine use among arrestees also declined. In 2009, 18.7 percent of male arrestees in Hennepin County tested positive for cocaine, compared with 22.5 percent in 2008, and 27.5 percent in 2007 (exhibit 9). Cocaine accounted for 22.5 percent of items seized by law enforcement and identified by the National Forensic Laboratory Information System in the first half of 2010 in the Twin Cities, compared with 21.6 percent nationally (exhibit 10).

In 2009, the Substance Abuse and Mental Health Services Administration issued a nationwide alert about cocaine that had been adulterated with **levamisole**, a veterinary anti-parasitic drug approved for use in cattle, sheep and swine, but not approved for human use. Humans who ingest cocaine mixed with levamisole can experience reduced white blood cells, and suppressed immune function that impairs the body's ability to fight off even minor infection. Between March and May, 2010, the Minnesota Poison Control System identified 3 confirmed and 2 suspected cases of neutropenia associated with levamisole and recent cocaine. Two additional exposures were reported since July 2010. To help determine the extent to which cocaine in Minnesota was contaminated with levamisole, the Minnesota Bureau of Criminal Apprehension laboratory tested 198 cocaine samples between June 16 and August 31, 2010, and found that 47.9 percent of them contained levamisole. Cocaine samples with levamisole have increased nationwide since 2002. According to the U.S. Drug Enforcement Administration (DEA), 70 percent of cocaine samples analyzed nationwide in July 2009 contained levamisole.

Estimated cocaine-involved emergency department visits in the Twin Cities fell from 6,228 in 2004 to 3,843 in 2009. See exhibit 11. Past year cocaine use was reported by 4.7 percent of Minnesota 12th graders in 2010, compared with 2.9 percent reported by 12th graders nationally (exhibit 12).

HEROIN/OTHER OPIATES

Treatment admissions for both **heroin and other opiates** steadily increased in the Twin Cities since the turn of the century. In 2000, heroin accounted for 3.3 percent of total treatment admission and other opiates accounted for 1.4 percent. However, in this reporting period (January through June 2010), heroin-related admissions fell slightly and accounted for 6.7 percent of treatment admissions compared with 8 percent in 2009. Treatment admissions involving other opiates continued the upward trend, and accounted for 8.7 percent of total admissions in the first half of 2010, compared with 8.3 percent in 2009. For the most part, these admissions involve the nonmedical use of prescription pain medications. Of those clients admitted to treatment for other opiates, almost one-half (46.5 percent) were female, and oral was the primary route of administration (70 percent).

From 2008 to 2009, opiate-related deaths rose from 31 to 36 in Ramsey County and declined from 84 to 77 in Hennepin County. In 2009, 5.8 percent of male arrestees in Hennepin County tested positive for opiates, compared with 6.1 percent in 2008, and 4.7 percent in 2007. Heroin accounted for 3.2 percent of items seized and identified by NFLIS in the first half of 2010 in the Twin Cities, compared with 7.1 percent of all seizures nationally. Both oxycodone and hydrocodone represented a larger percentage of law enforcement drug seizures nationally than in Minnesota.

Estimated hospital emergency department visits in the Twin Cities involving heroin rose from 1,023 in 2005 to 1,855 in 2009. Overall the total number of episodes involving the non-medical use of narcotic analgesics in the Twin Cities emergency departments rose from 1,872 in 2005, to 3,391 in 2007, and 3,890 in 2009. From 2005 to 2009 fentanyl-involved episodes rose from 86 to 207, hydrocodone rose from 506 to 1,019, hydromorphone from 87 to 256, and oxycodone-involved episodes from 742 to 1,810.

Tramadol is a prescription medication used to treat moderate pain. It is not Federally scheduled in the United States, and is sometimes sold at online pharmacies. According to the Drug Abuse Warning Network, episodes involving tramadol increased in the Twin Cities with 73 episodes in 2005, 178 in 2007, and 203 in 2009.

The Minnesota Board of Pharmacy now maintains a program to help identify individuals who inappropriately obtain excessive amounts of controlled substances from multiple prescribers and pharmacies. The Minnesota Prescription Monitoring Program (PMP) has collected data (through 11/29/2010) on over 5.6 million controlled substance prescriptions. Pharmacies licensed and located in Minnesota must report to the PMP all schedule II, III and IV controlled substance prescriptions that they dispense.

Past year use of heroin was reported by 1.4 percent of Minnesota 12th graders in 2010, compared with 0.9 percent nationally. Past year use of prescription pain killers was reported by 6.3 percent of Minnesota 12th graders in 2010, compared with 8.7 percent of 12th graders nationally who reported the use of narcotics other than heroin.

MARIJUANA

Treatment admissions with **marijuana** as the primary substance problem accounted for 19.3 percent of total admissions in the Twin Cities in the first half of 2010, compared with 18.1 percent in 2009. Most patients (68.3 percent) admitted to treatment with marijuana as the primary substance problem were under age 26.

In 2009, 46.9 percent of male arrestees in Hennepin County tested positive for marijuana, compared with 42.7 in 2007. Marijuana accounted for 22.8 percent of items seized by law enforcement and identified by NFLIS in 2010 (first half) in the Twin Cities, compared with 36.9 percent nationally.

Estimated hospital emergency department visits involving marijuana in the Twin Cities rose from 4,302 in 2006 to 5,596 in 2009. Past year use of marijuana by Minnesota 12th graders increased from 21.8 percent in 1992 to 30.6 percent in 2010, but is still less than the percentage reported nationally in 2010 (34.8 percent). See exhibits 13 – 14.

The use of **synthetic marijuana** by youth created rising public concern throughout Minnesota in 2010. Known as “K2” or “Spice,” and other names, these new herbal mixtures are sold as incense, but when smoked, mimic the effects of actual marijuana. K2 is sold online and in “head-shops,” under numerous other names such as “Smoke XXXX,” “Stairway to Heaven,” “Karma Kind,” or “California Dreams.” Sold in small zip lock plastic bags with handmade packaging, these new synthetic marijuana mixtures are seen as a legal alternative to marijuana. They are loose mixtures of herbs allegedly sprayed with synthetic cannabinoids, the active ingredients in marijuana.

The U.S. DEA using its emergency scheduling authority, initiated action in November 2010 to temporarily control five chemicals that are used to make “fake pot” products -- JWH-018, JWH-073, JWH-200, CP-47,497, and cannabicyclohexanol. Several states and college towns in Minnesota, including Duluth, have already banned the sale and possession of these mixtures. Movements are underway in Minnesota to ban these products statewide as well, with pending action by the State Board of Pharmacy and a Minnesota legislator who intends to introduce a bill banning it statewide. Since the DEA action, several retail outlets that sell synthetic marijuana products in Minnesota are contending in pending litigation that the recent DEA emergency scheduling will have a significant detrimental economic impact on their businesses. One Minneapolis store, for example, reported that 70 percent of its sales from January through October, 2010 were synthetic marijuana, accounting for over \$609,000 in gross profits. The retailers claim that the DEA action is both unconstitutional and illegal. Reports from metro area, school-based counselors indicate growing abuse of these mixtures and several incidents in which use produced highly combative and aggressive behavior, vomiting, seizures, and one case of extreme hair loss by an adolescent who was using 3 grams per day. The Hennepin Regional Poison Center documented 76 synthetic THC exposures in 2010.

METHAMPHETAMINE

Treatment admissions for **methamphetamine (meth)** increased slightly in the first half of 2010 to 6.3 percent of all admissions, compared with 6 percent in 2009, and 12 percent in 2005, the highest year. Among these admissions, over one-third (36.1 percent) were female, 80.4 percent were White, and 78.5 were age 26 or older.

In 2009, 3.6 percent of adult male arrestees in Hennepin County tested positive for methamphetamine, compared with 3.2 percent in 2007. Seizures of meth by law enforcement in the Twin Cities accounted for 24.1 percent of items seized and identified by NFLIS in 2010 (first half), compared with only 10.5 percent of seizures nationally.

Estimated hospital emergency department visits involving methamphetamine in the Twin Cities fell from 2,209 in 2005 to 970 in 2009. Past year use of methamphetamine by Minnesota 12th graders declined

from 5.8 percent in 2001 to 1.4 percent in 2010, but still exceeds the 1.0 percent among 12th graders reported nationally in 2010. See exhibits 15 and 16.

OTHER SUBSTANCES

The drug 3, 4-methylenedioxymethamphetamine, known as **MDMA** or ecstasy, “X,” or “e,” sold for \$20 per pill. MDMA accounted for 5.9 percent of drugs samples in 2010 (first half) in the Twin Cities, according to NFLIS, compared with 1.6 percent nationally. Estimated hospital emergency department visits involving MDMA in the Twin Cities grew from 204 in 2004 to 475 in 2009.

The use of certain **bath salts** by adolescents to get high was infrequently and sporadically reported in the Twin Cities in 2010. Sold as Cloud 9, Ivory Wave and Vanilla Sky, the bath salts are injected, smoked or snorted for the psychoactive effects. Some include methylenedioxypropylone (MPDV), a compound that produces effects similar to stimulants or MDMA. The Hennepin Regional Poison Center documented 6 exposures to bath salts in 2010.

Kratom is a natural, legal product sold in various forms, and used by chewing, swallowing in pellets or brewing in tea to produce its mood-altering effects. Kratom are the leaves a large tree that is native to Southeast Asia. One website specializing in the sale of kratom claims its use can reduce loneliness, stress and fatigue. The Hennepin Regional Poison Center documented 2 exposures to kratom in 2010.

Salvia divinorum (a plant) and salvinorin A, produce short-acting hallucinogenic effects when chewed, smoked or brewed in tea. These are most often used by adolescents and young adults. Effective August 1, 2010 the sale or possession of these in Minnesota became punishable as a gross misdemeanor.

Estimated hospital emergency department visits involving **inhalants** in the Twin Cities declined from 181 in 2004, to 92 in 2009.

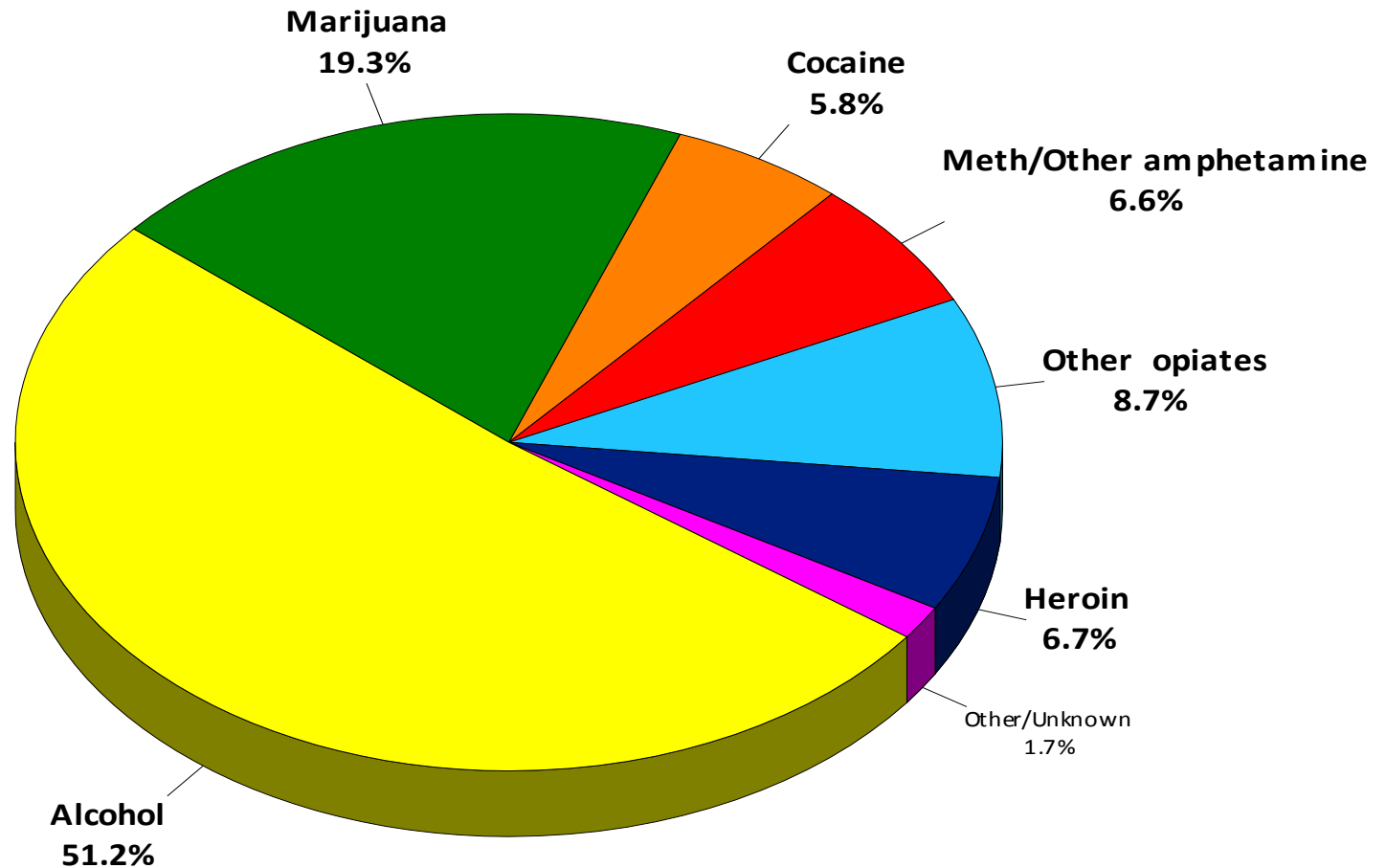
ALCOHOL AND TOBACCO

In the first half of 2010 in the Twin Cities, over half (51.2 percent) of admissions to addiction treatment programs were for **alcohol**. In Minnesota, the percentage of students reporting alcohol use declined continuously since 1992, from 79.9 percent of 12th graders in 1992 to 55.3 percent in 2010. The percentage of Minnesota 12th graders reporting alcohol use is also less than percentage of 12th graders reporting nationally (65.2 percent). See exhibits 17 and 18.

The use of **cigarettes** among youth also declined markedly in Minnesota. In 1998, at the height of youth smoking in Minnesota, 41.9 percent of 12th graders reported cigarette smoking in the past 30 days. In 2010 it was 19.2 percent of 12th graders. Smoking rates of Minnesota 12th graders exceeded those of 12th graders nationally until 2010. See exhibits 19 and 20.

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Percent of admissions to Twin Cities addiction treatment programs by primary substance problem - 2010 (first half)



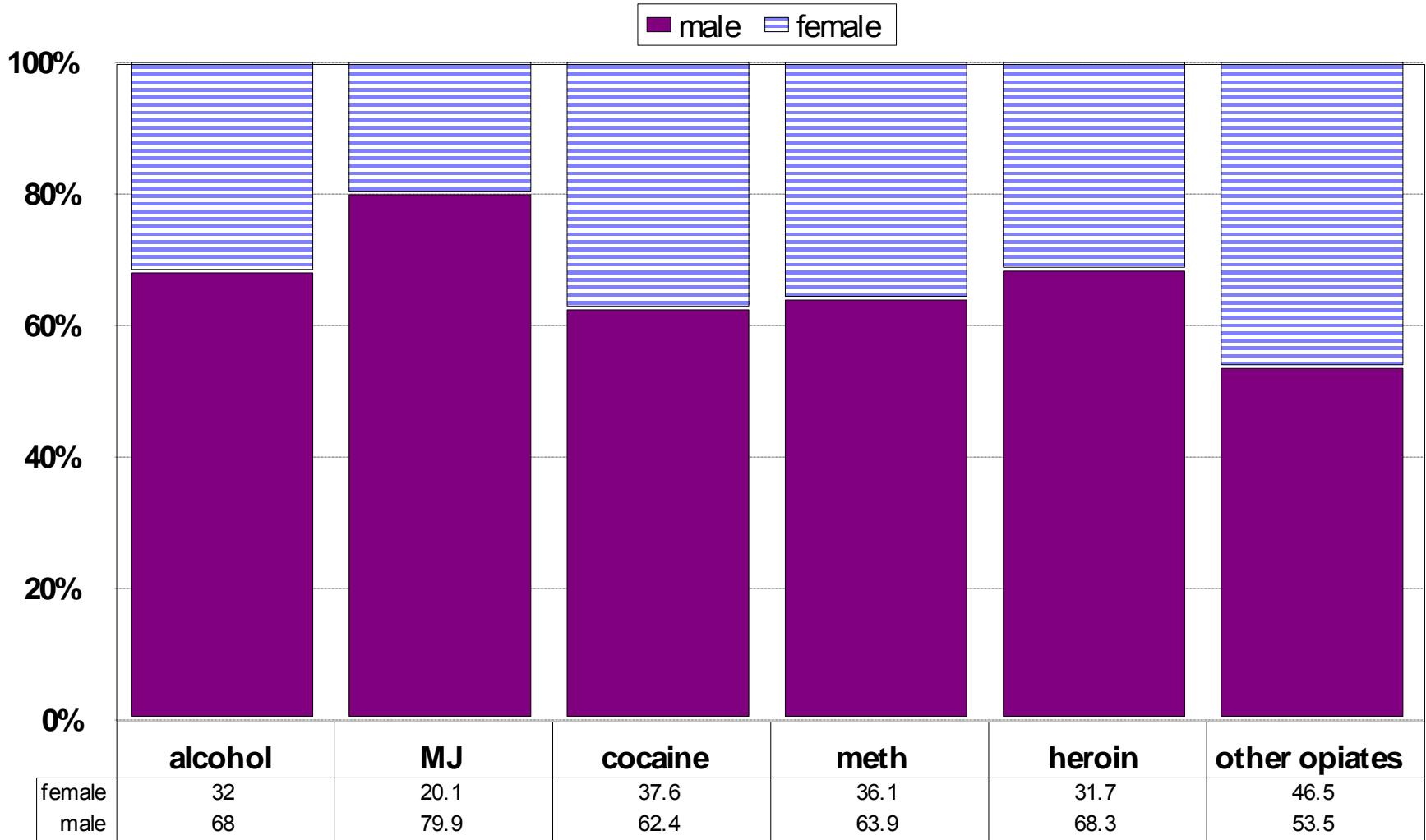
SOURCE: Minnesota Department of Human Services, Drug and Alcohol Abuse Normative Evaluation System (DAANES), November 2010.

Characteristics of patients admitted to Twin Cities addiction treatment programs by primary substance problem: 2010 (first half)

TOTAL ADMISSIONS = 10,315	ALCOHOL = 5,279 (51.2%)	MARIJUANA = 1,991 (19.3%)	COCAINE = 593 (5.8%)	METH = 648 (6.3%)	HEROIN = 694 (6.7%)	OTHER OPIATES = 898 (8.7%)
GENDER						
% male	68	79.9	62.4	63.9	68.3	53.5
% female	32	20.1	37.6	36.1	31.7	46.5
RACE/ETHNICITY						
% White	75	54.5	38.3	80.4	62.8	82.3
% African Am	13.3	29	50.1	1.2	24.1	5.2
% Am Indian	3.5	3.8	4.7	1.9	6.9	7.3
% Hispanic	4.2	6.4	4	5.2	3.5	2.4
% Asian-Pacific Is	1.5	2	0.7	7.1	0.7	1.4
% Other	2.5	4.3	2.2	4.2	2	1.2
AGE						
% 17 and under	1.5	31.3	0.3	1.4	1.3	1.6
% 18 - 25	16	37	10.1	20.1	36.6	30.6
% 26 - 34	22.3	18	15.9	67.9	22.9	34.1
% 35 +	60.1	13.7	73.7	10.6	39.2	33.7
ROUTE of ADMINISTRATION						
% oral	100	1.8	0	3.2	0	70
% smoking	0	97.7	77.6	72.8	4.6	4.2
% snorting/inhalation	0	0	19.2	4.8	30.8	14.8
% injection	0	0	1.5	17.4	62.5	9.5
% unknown	0	0.5	1.7	1.7	2	1.4
% CURRENT CIGARETTE SMOKER	61.8	72.4	74.9	77.3	81.8	70.5

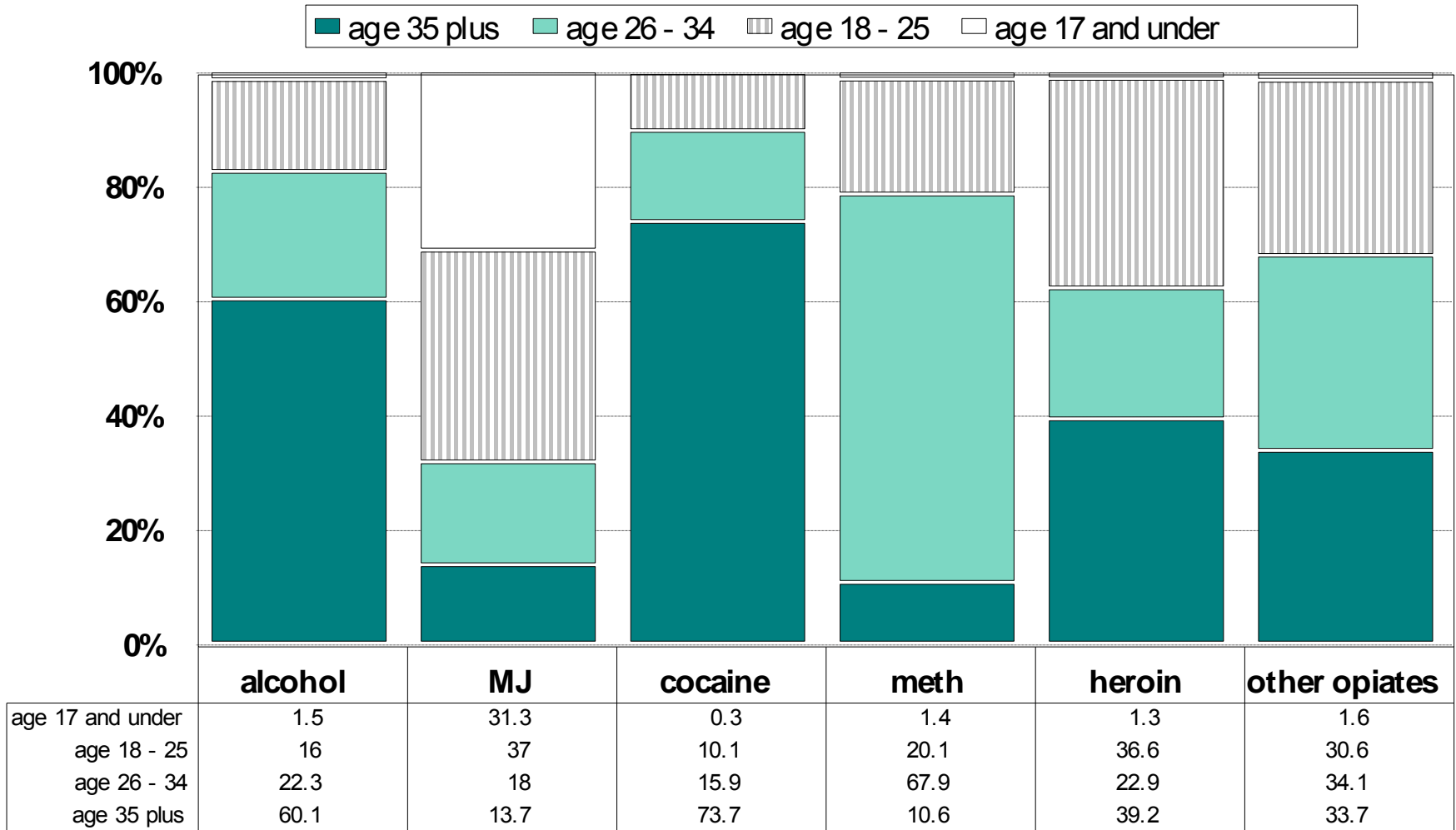
SOURCE: Minnesota Department of Human Services, Drug and Alcohol Abuse Normative Evaluation System (DAANES), November 2010.

Patient gender by primary substance problem among admissions to Tw in Cities addiction treatment programs: 2010 (first half)



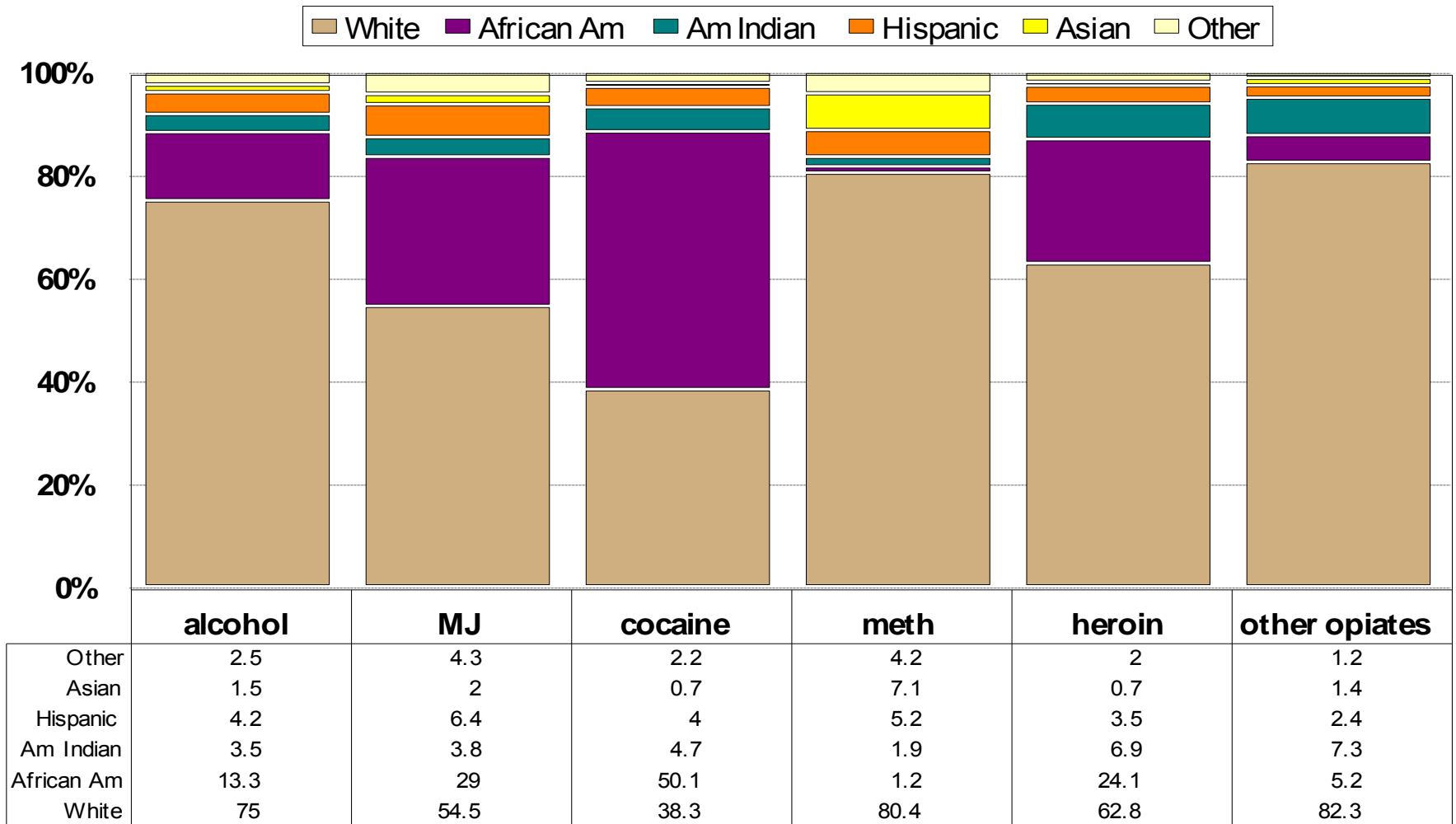
SOURCE: Minnesota Department of Human Services, Drug and Alcohol Abuse Normative Evaluation System (DAANES), November 2010.

Patient age by primary substance problem among admissions to Tw in Cities addiction treatment programs: 2010 (first half)



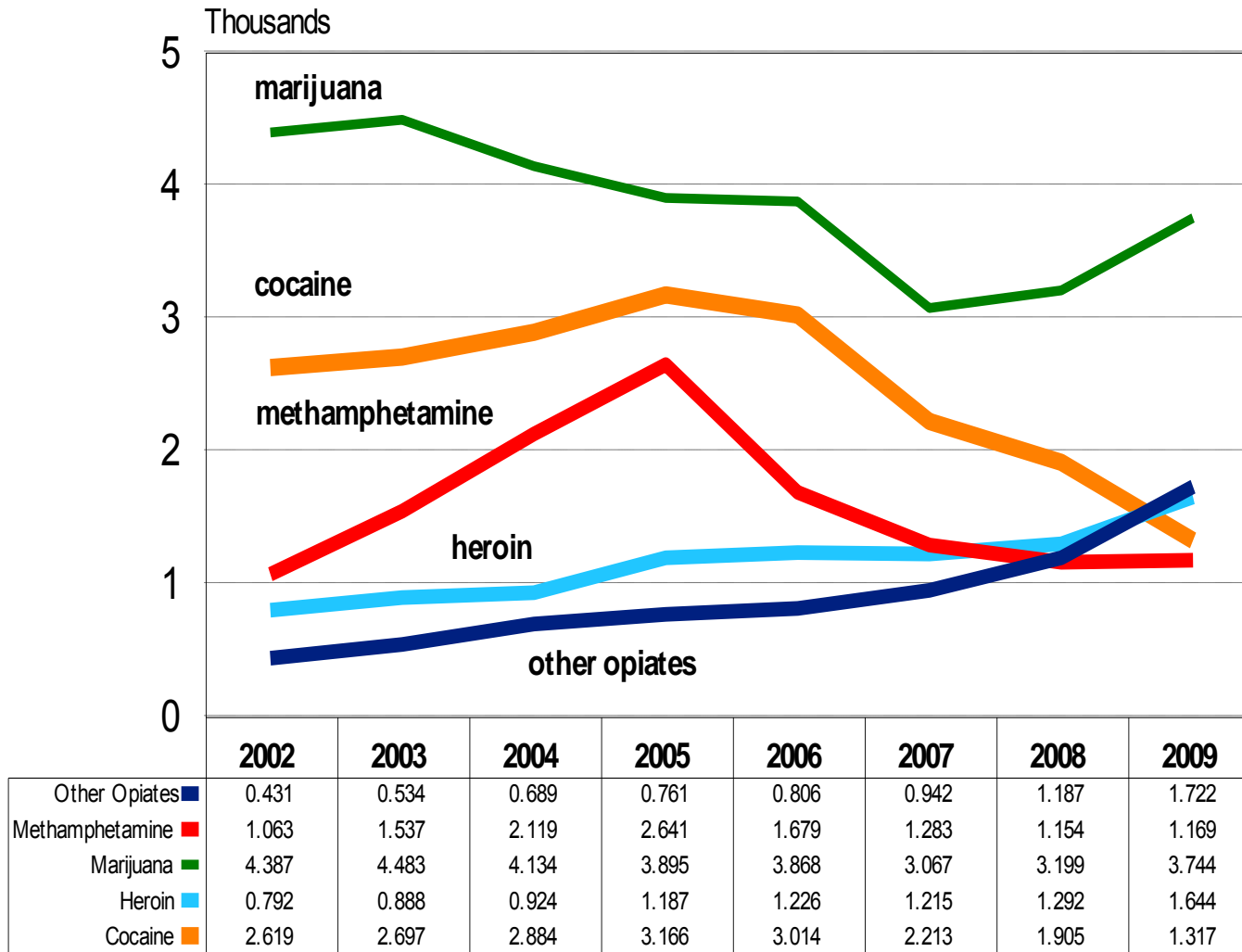
SOURCE: Minnesota Department of Human Services, Drug and Alcohol Abuse Normative Evaluation System (DAANES), November 2010.

Patient race/ethnicity by primary substance problem among admissions to Tw in Cities addiction treatment programs: 2010 (first half)



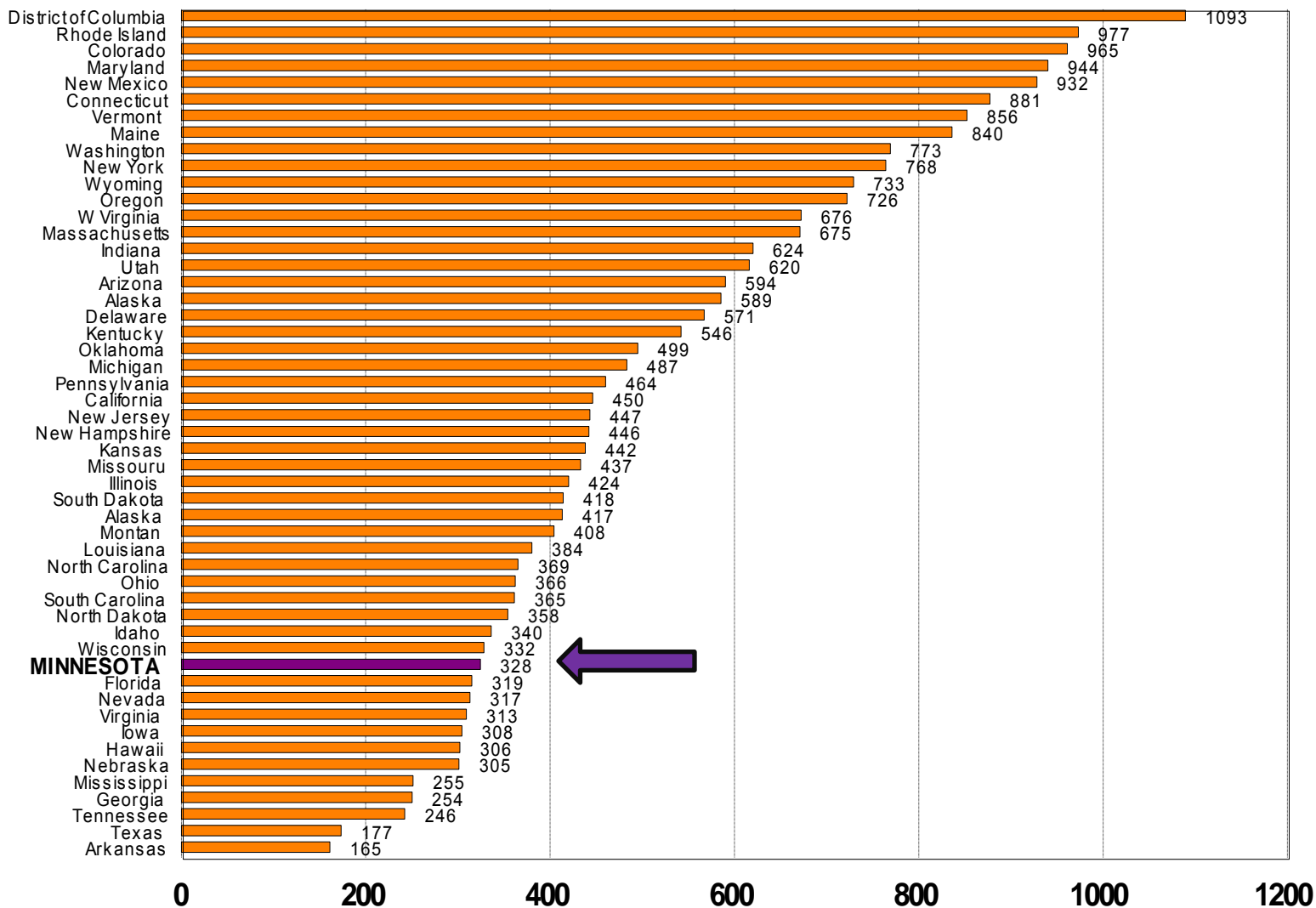
SOURCE: Minnesota Department of Human Services, Drug and Alcohol Abuse Normative Evaluation System (DAANES), November 2010.

Number of non-alcohol admissions to Twin Cities addiction treatment programs by primary substance problem 2002 - 2009



SOURCE: Minnesota Department of Human Services, Drug and Alcohol Abuse Normative Evaluation System (DAANES), 2010.

Clients age 18 and over in addiction treatment programs per 100,000 population by state: 2009



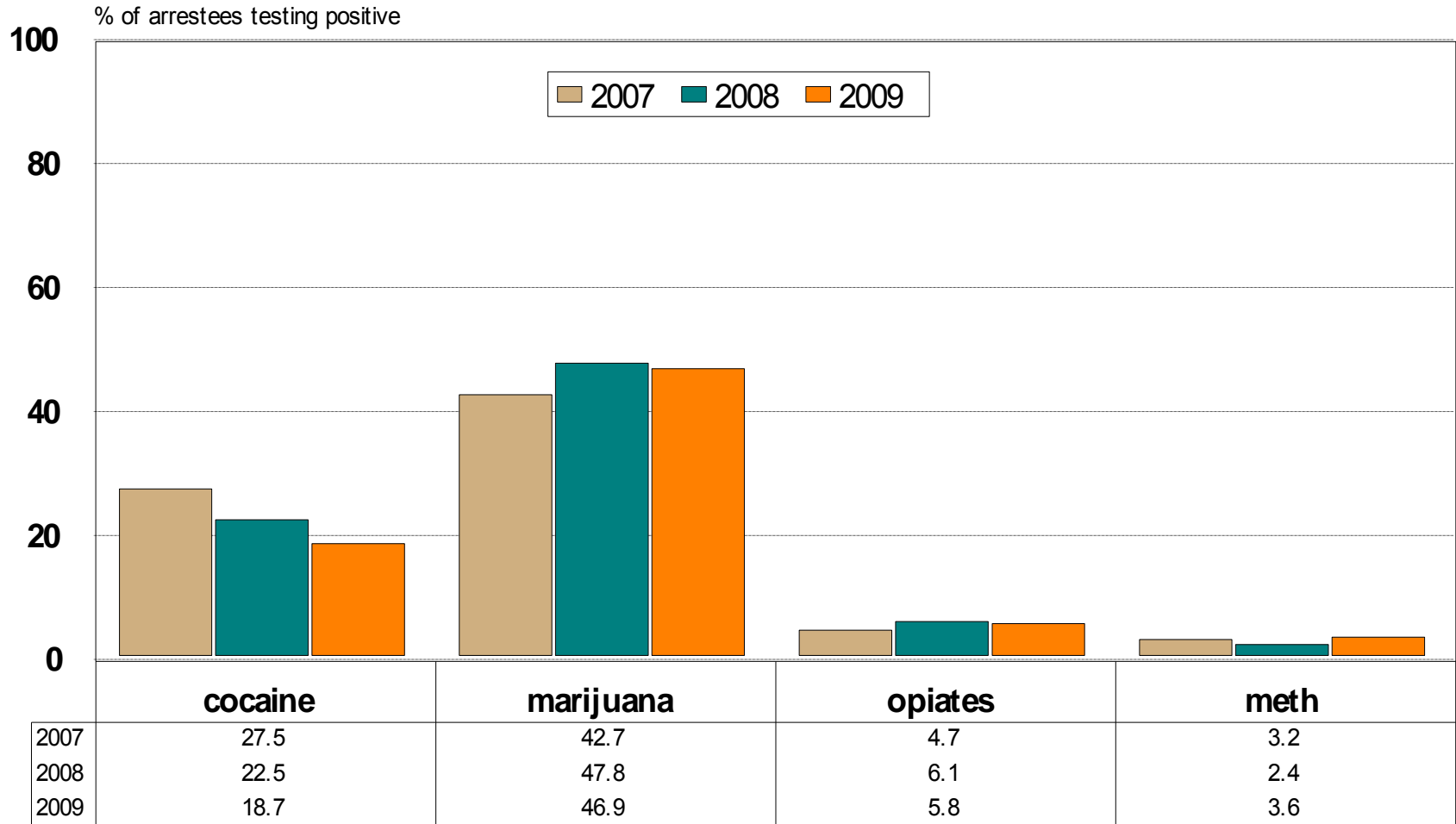
SOURCE: 2009 National Survey of Substance Abuse Treatment Services (N-SSATS), Substance Abuse and Mental Health Services Administration, 2010.

Drug-related deaths: Hennepin County and Ramsey County 2000 - 2009

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	
			Hennepin County								
cocaine	43	37	34	44	39	50	48	59	21	10	
opiates	41	58	59	50	47	60	69	67	84	77	
meth	6 (includes 3 MDMA)	8 (includes 1 MDMA)	11 (includes 3 MDMA)	15 (includes 1 MDMA)	19 (includes 8 MDMA)	10 (includes 3 MDMA)	8 (includes 1 MDMA)	6 (includes 2 MDMA)	9 (includes 1 MDMA)	6 (includes 1 MDMA)	
			Ramsey County								
cocaine	17	11	11	10	10	12	13	11	10	11	
opiates	17	19	18	19	25	42	27	39	31	36	
meth	11 (includes 3 MDMA)	2	3	10	9	7	6	7	5	7	

SOURCE: Hennepin County Medical Examiner and Ramsey County Medical Examiner, 2010.

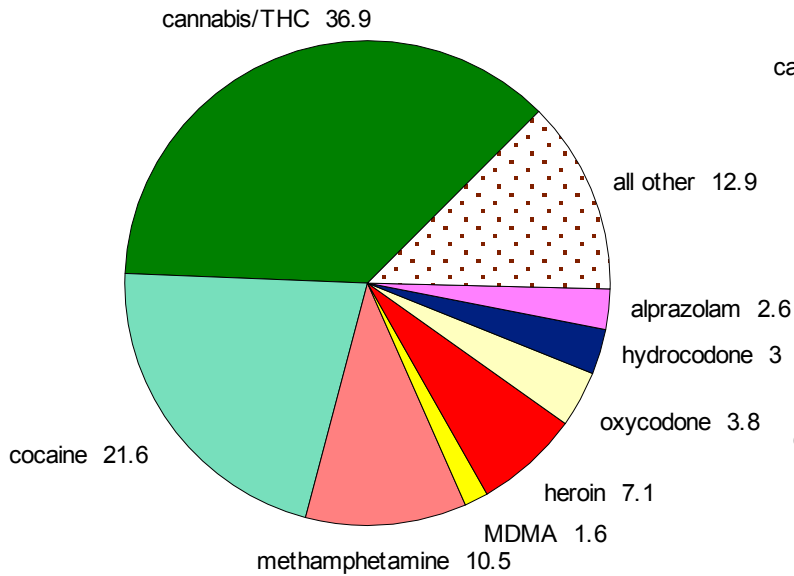
Percent of male arrestees who tested positive for drugs in Hennepin County: 2007 - 2009



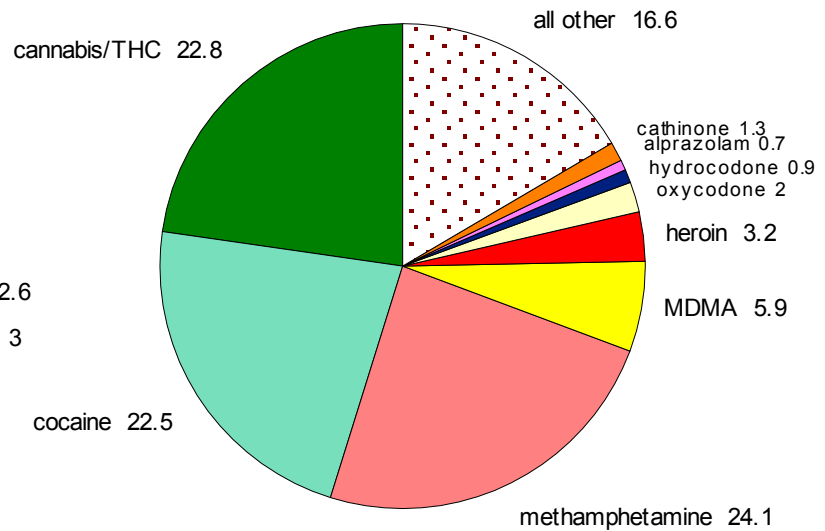
SOURCE: Arrestee Drug Abuse Monitoring (ADAM) II 2009 Annual Report, White House Office of National Drug Control Policy, Table 3.4 and Table 3.5. Sampled eligible arrestees in 2007 = 881, in 2008 = 854, and in 2009 = 996.

Drug seizures: Nationally and in Tw in Cities metro area 2010 (first half)

United States

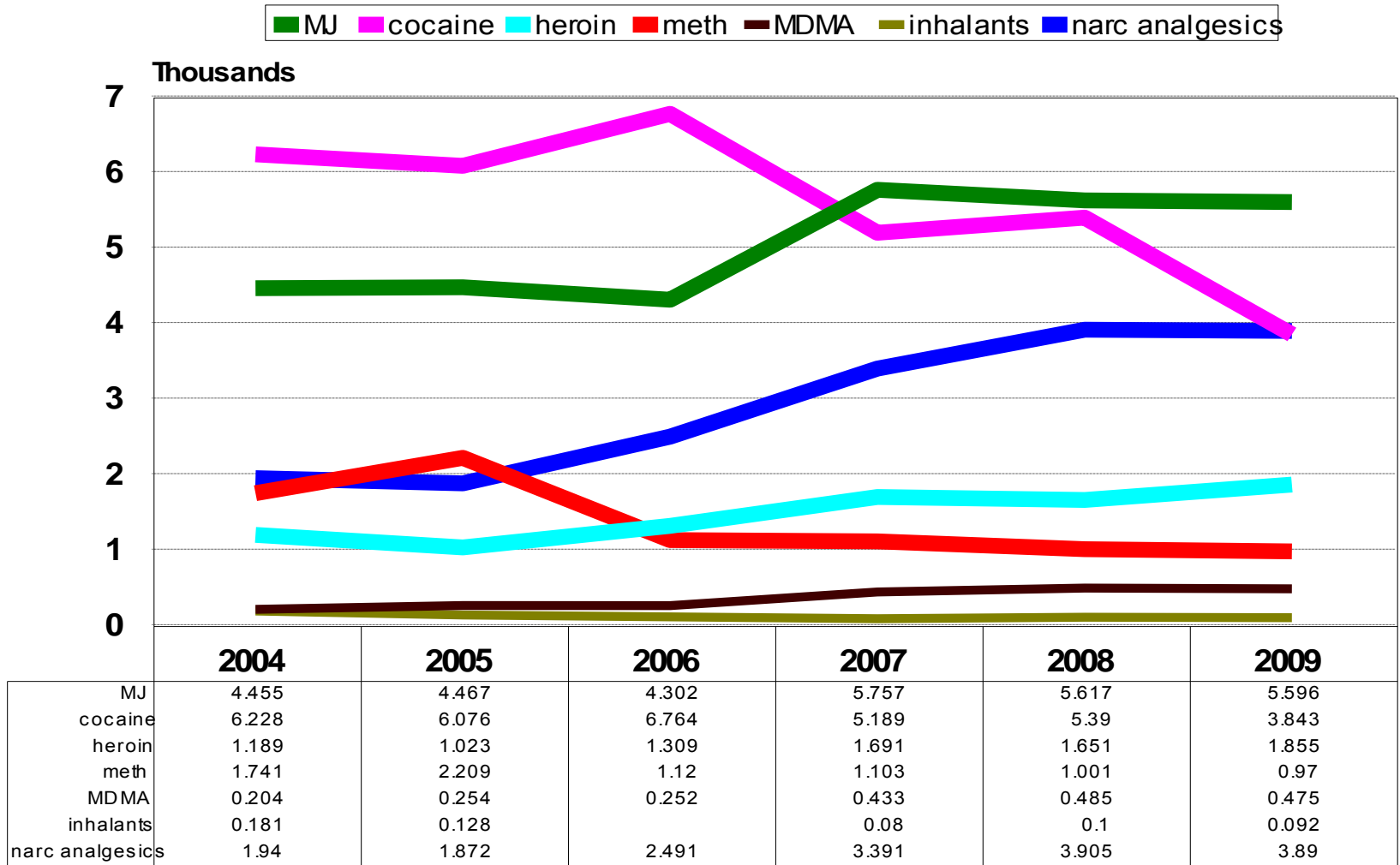


Tw in Cities



SOURCE: National Forensic Laboratory Information System (NFLIS) Data Query System, accessed on 12/16/2010, US Drug Enforcement Administration. All federal, state and local laboratory submission data are reported by location of seizure for US (total items = 729,722) and 7-county metropolitan area of Minneapolis and St. Paul, Minnesota, (total items = 2,973) which includes the counties of Hennepin, Ramsey, Dakota, Washington, Anoka, Scott and Carver. Figures in charts are percentages.

Tw in Cities metropolitan area estimates of drug-related emergency department visits by drug category: 2004 - 2009



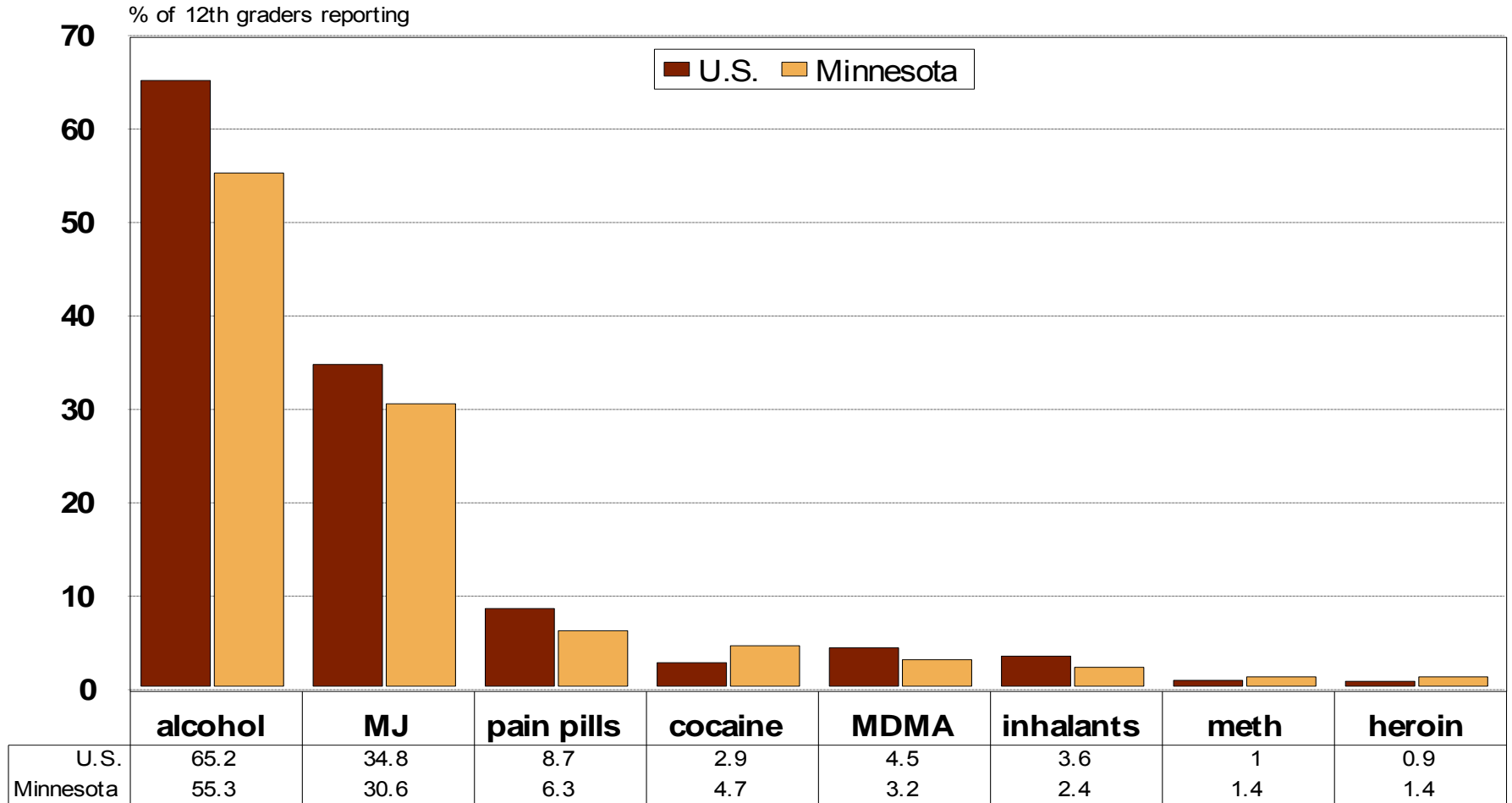
SOURCE: Drug Abuse Warning Network (DAWN), Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, 2010. Analytic group = drug misuse and abuse visits. Table: ED visits by drug.

MINNESOTA STUDENT SURVEY

The Minnesota Student Survey is conducted every three years among students in Minnesota public schools, including charter schools and tribal schools in grades 6, 9, and 12.

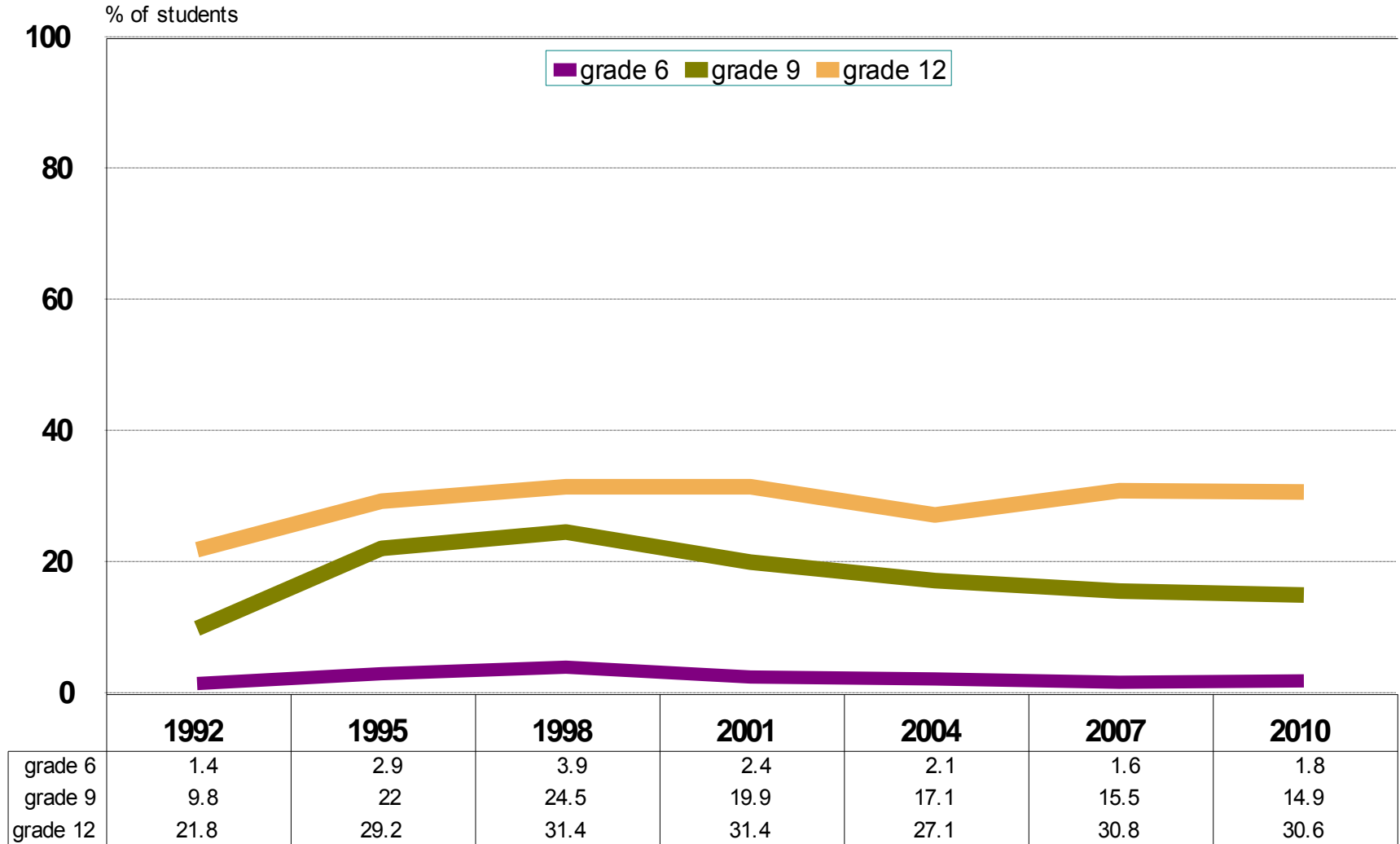
- Of the 335 public operating school districts, 295 agreed to participate (88%).
- Student participation was voluntary. Pen and pencil surveys were anonymous.
- Across the state, approximately 79% of public school sixth graders, 75% of public school ninth graders, and 59% of public school twelfth graders participated in the 2010 Minnesota Student Survey.
- Overall participation across the three grades was approximately 71% of total enrollment.

Selected substance use in past year by 12th graders Nationally and in Minnesota - 2010



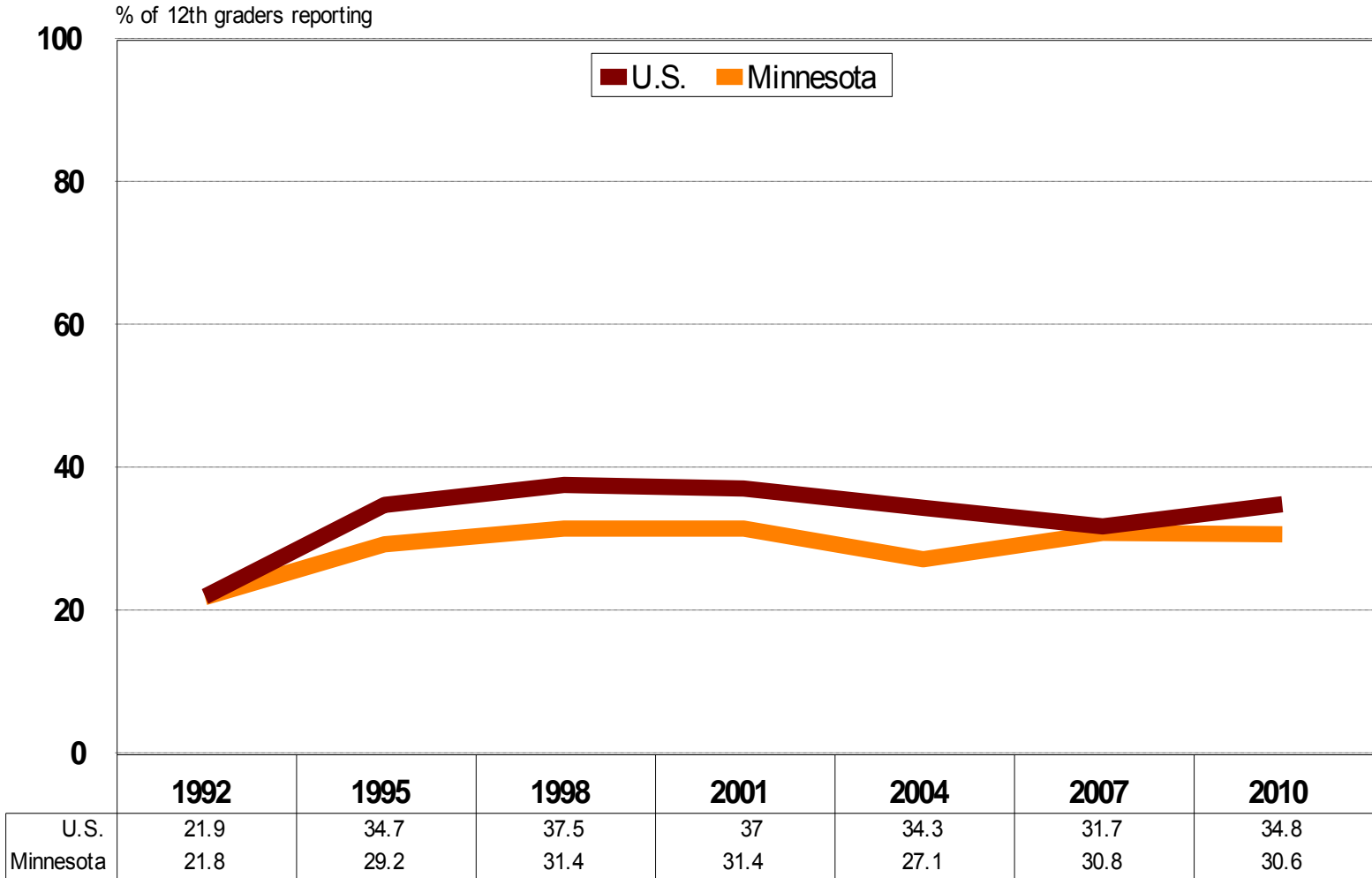
SOURCE: Monitoring the Future Study, University of Michigan News Service: Ann Arbor, MI. Retrieved 12/14/2010 from <http://www.monitoringthefuture.org>, and the Minnesota Student Survey. Pain pills in MTF Survey refers to "narcotics other than heroin."

Marijuana use in past year by Minnesota students: 1992 - 2010



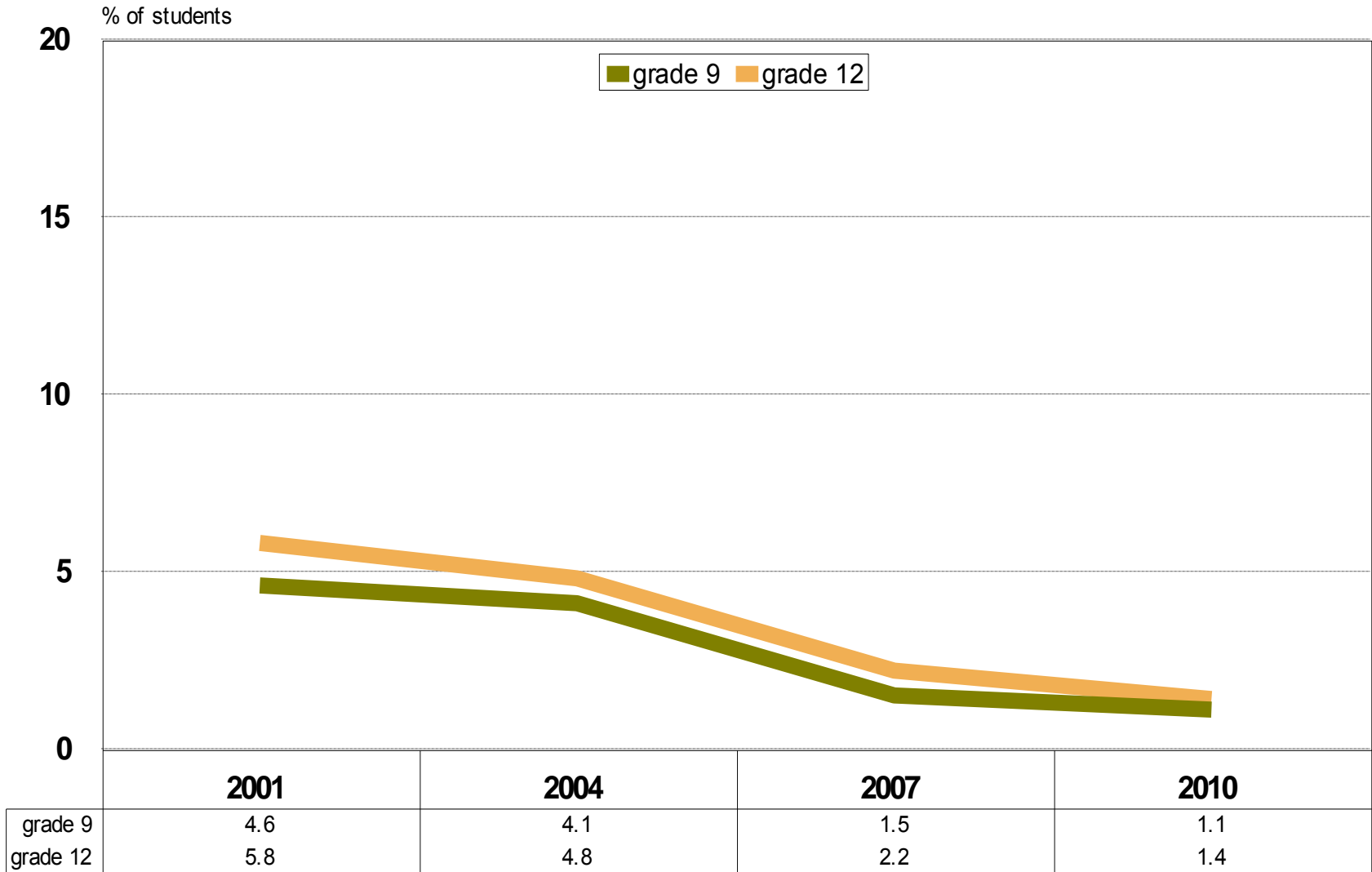
SOURCE: Minnesota Student Survey, 2010.

Marijuana use in past year by 12th graders Nationally and in Minnesota: 1992 - 2010



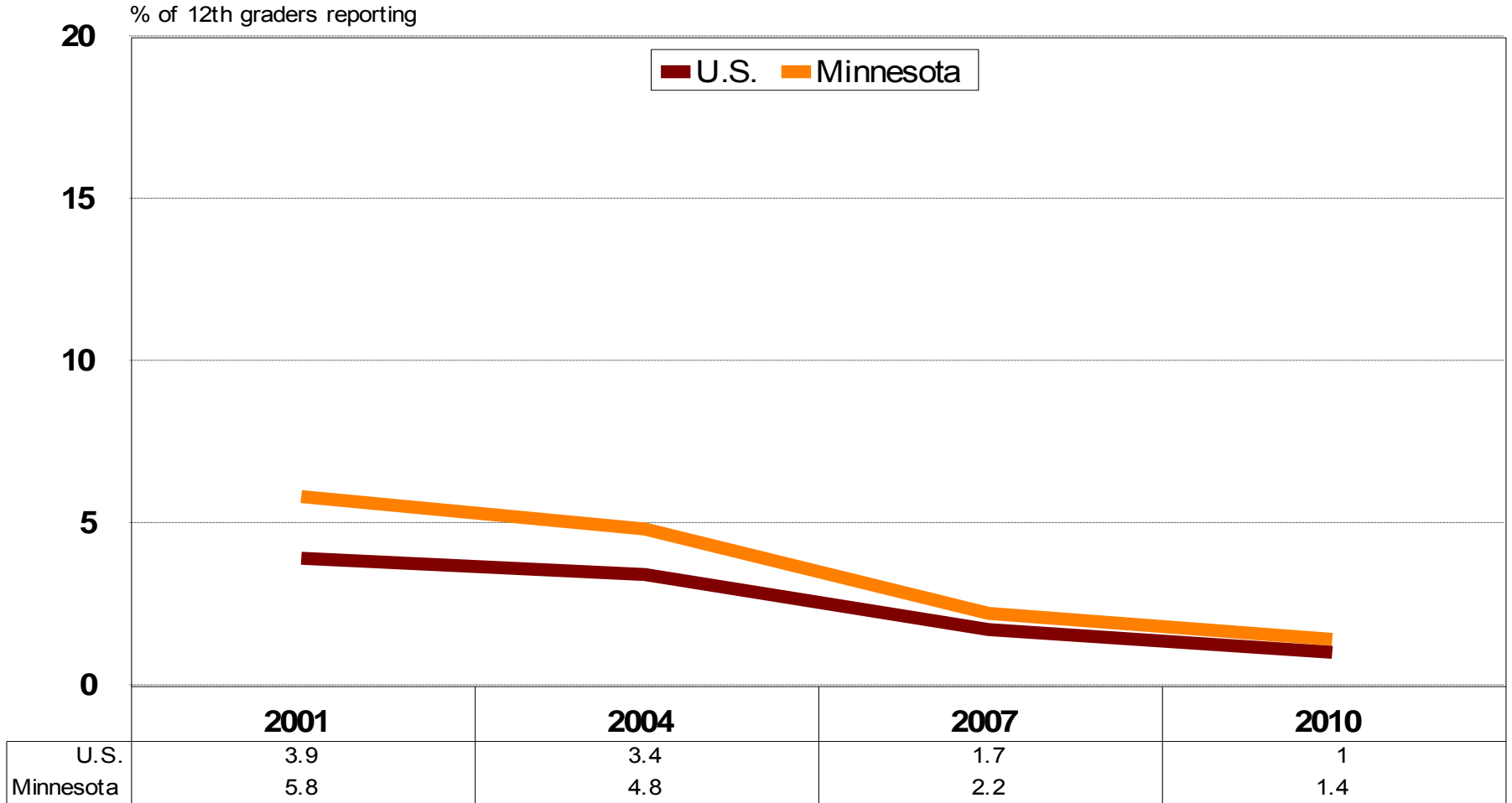
SOURCE: Monitoring the Future Study, University of Michigan News Service: Ann Arbor, MI. Retrieved 12/14/2010 from <http://www.monitoringthefuture.org>, and the Minnesota Student Survey.

Methamphetamine use in past year by Minnesota students: 2001 - 2010



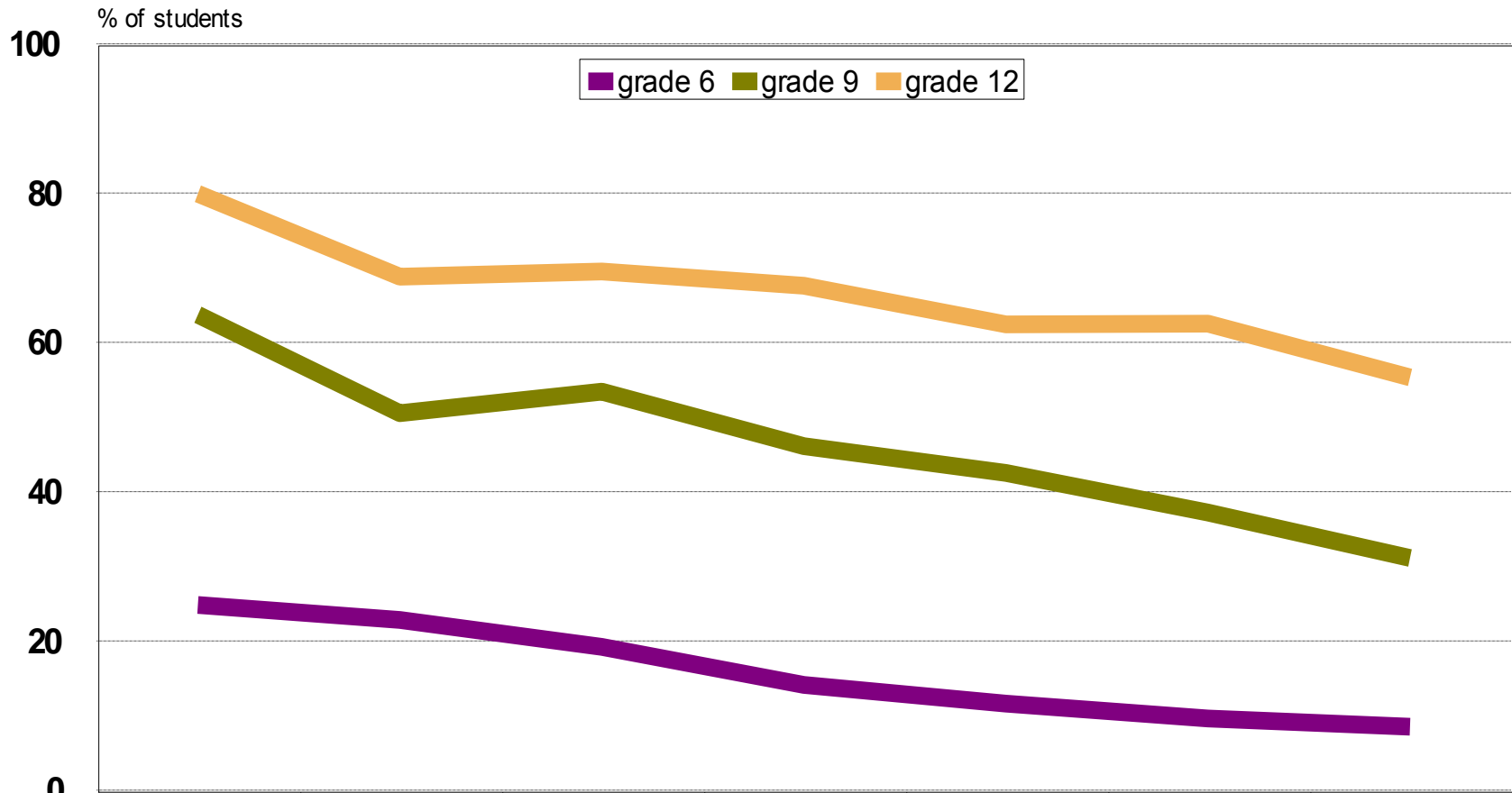
SOURCE: Minnesota Student Survey, 2010.

Methamphetamine use in past year by 12th graders Nationally and in Minnesota 2001 - 2010



SOURCE: Monitoring the Future Study, University of Michigan News Service: Ann Arbor, MI. Retrieved 12/14/2010 from <http://www.monitoringthefuture.org>, and the Minnesota Student Survey.

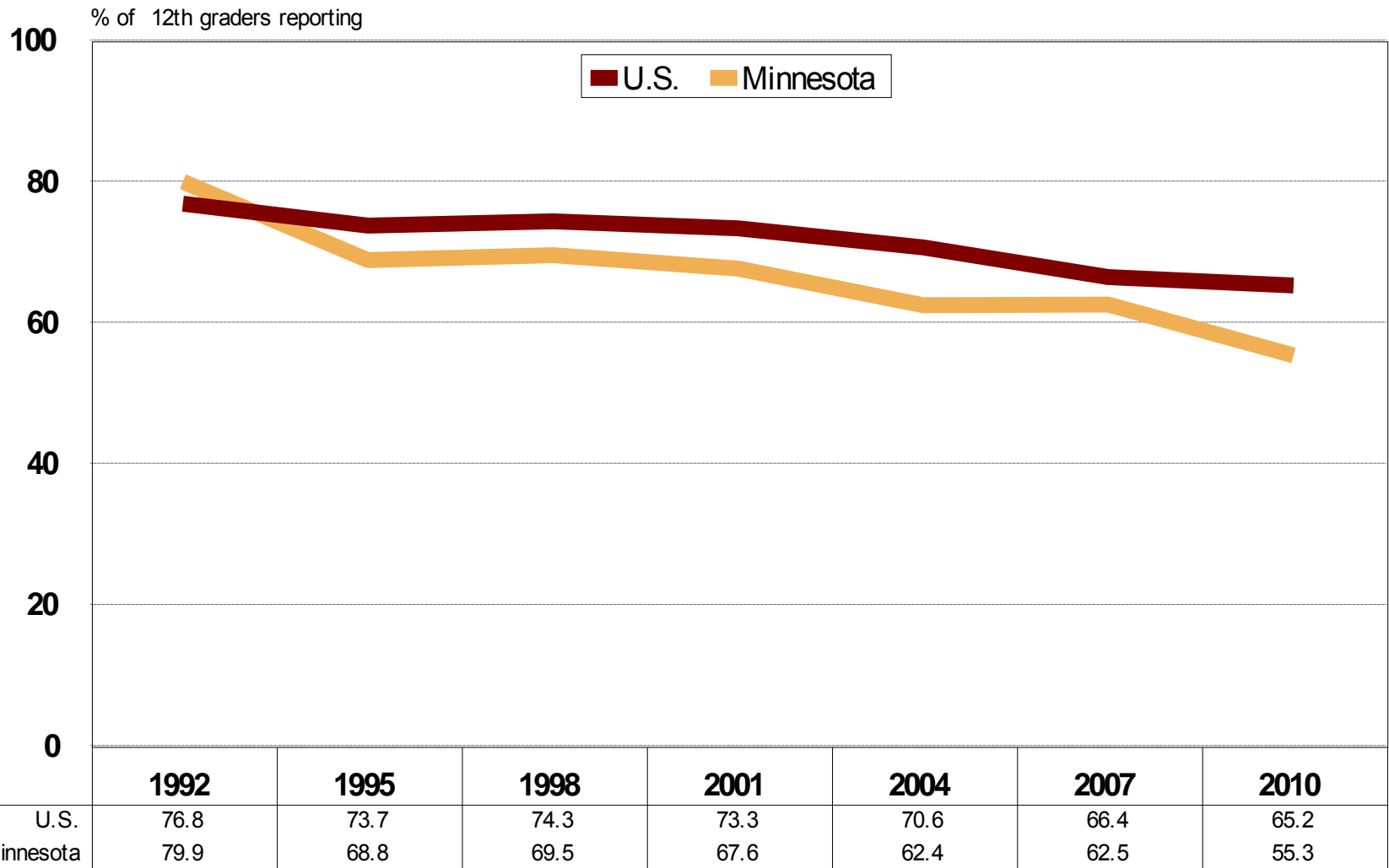
Alcohol use in the past year by Minnesota students: 1992 - 2010



	1992	1995	1998	2001	2004	2007	2010
grade 6	24.8	22.8	19.2	14.1	11.6	9.6	8.5
grade 9	63.7	50.5	53.4	46.1	42.5	37.2	31.1
grade 12	79.9	68.8	69.5	67.6	62.4	62.5	55.3

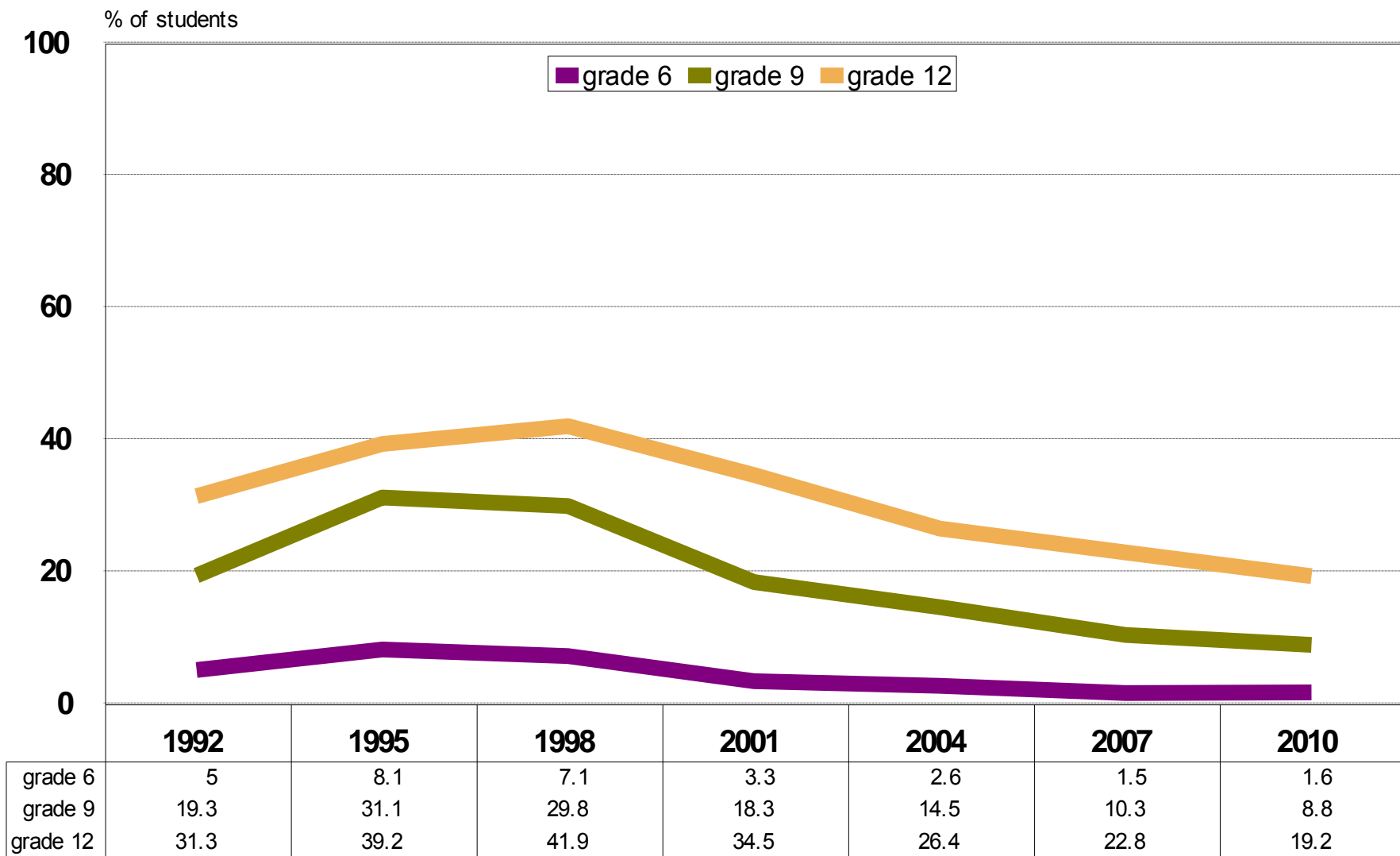
SOURCE: Minnesota Student Survey, 2010.

Alcohol use in the past year by 12th graders Nationally and in Minnesota: 1992 - 2010



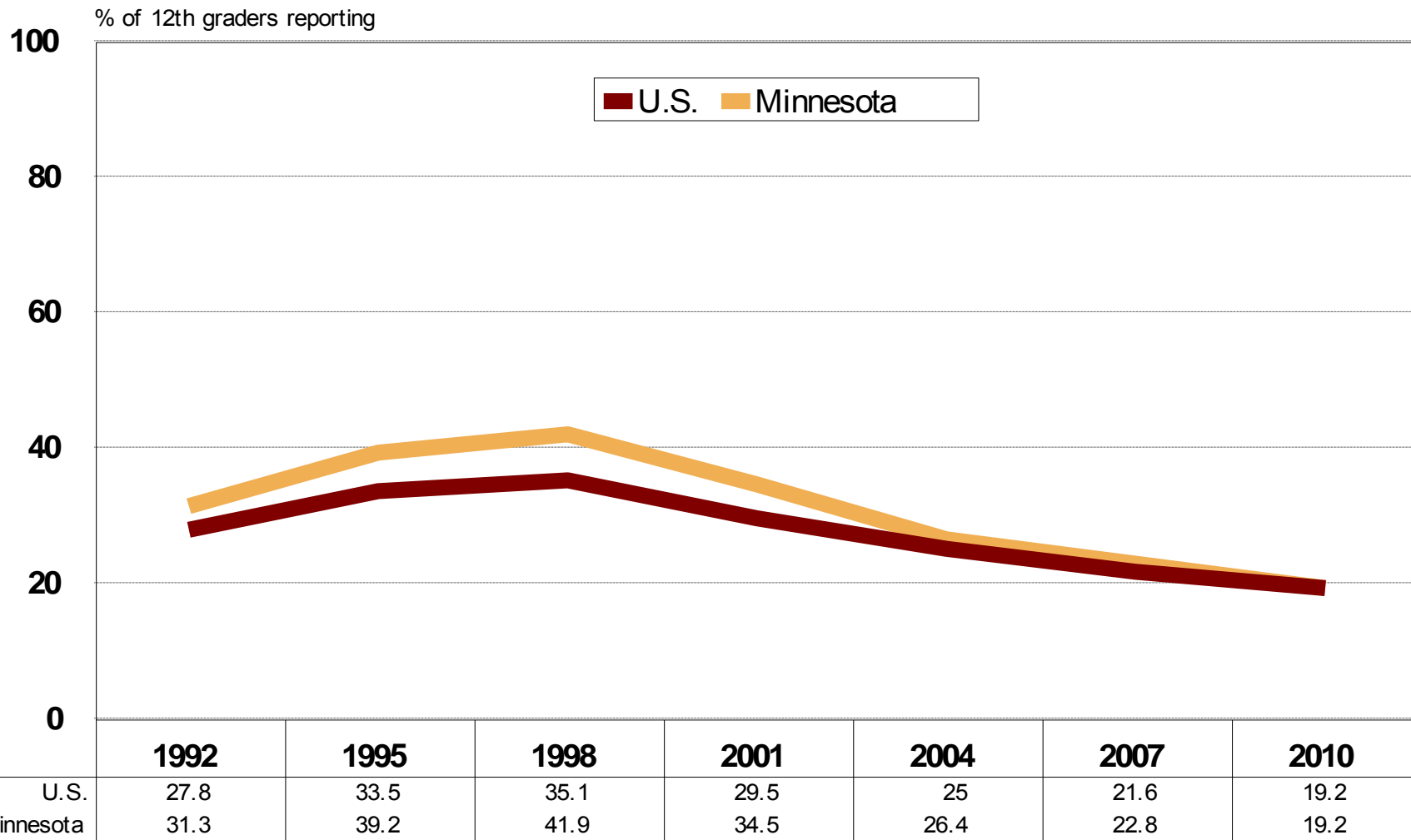
SOURCE: Monitoring the Future Study, University of Michigan News Service: Ann Arbor, MI. Retrieved 12/14/2010 from <http://www.monitoringthefuture.org>, and the Minnesota Student Survey.

Cigarette smoking in past 30 days by Minnesota students: 1992 - 2010



SOURCE: Minnesota Student Survey, 2010.

Cigarette smoking in past 30 days by 12th graders Nationally and in Minnesota: 1992 - 2010



SOURCE: Monitoring the Future Study, University of Michigan News Service: Ann Arbor, MI. Retrieved 12/14/2010 from <http://www.monitoringthefuture.org>, and the Minnesota Student Survey.