



Published in final edited form as:

*Addict Behav.* 2011 December ; 36(12): 1168–1173. doi:10.1016/j.addbeh.2011.07.017.

## METHAMPHETAMINE: HERE WE GO AGAIN?

**Jane Carlisle Maxwell, Ph.D.[Senior Research Scientist]** and

Addiction Research Institute, School of Social Work, The University of Texas at Austin, I  
University Station, Austin, TX 78712, 512-232-0610, jcm Maxwell@mail.utexas.edu

**Mary-Lynn Brecht, Ph.D.[Research Statistician]**

UCLA Integrated Substance Abuse Programs, 1640 S. Sepulveda, Ste. 200, Los Angeles, CA  
90025, 310-267-5275, lbrecht@mednet.ucla.edu

### Abstract

Following more than two decades of generally increasing trends in the use and abuse of methamphetamine in certain parts of the country, prevalence indicators for the drug began to decrease in the mid-2000's—but was this decrease signaling the end of the “meth problem”? This paper has compiled historical and recent data from supply and demand indicators to provide a broader context within which to consider the changes in trends over the past half decade. Data suggest supply-side accommodation to changes in precursor chemical restrictions, with prevalence indicators beginning to attenuate in the mid-2000's and then increasing again by 2009–2010. Results support the need for continuing attention to control and interdiction efforts appropriate to the changing supply context and to continuing prevention efforts and increased number of treatment programs.

### Keywords

methamphetamine; supply; demand; pseudoephedrine; phenyl-2-propanone

## 1. Introduction

The history of the methamphetamine epidemic in the U.S. has been marked by the interaction of supply and demand. Supply means not only the quantity of the drug available and seized, but also purity, price, formulation of the drug, and responses by criminal justice agencies. Demand is characterized by the initiation and continued use of the drug as shown in changes in incidence and prevalence in surveys and in adverse events as indicated by data such as emergency room and drug treatment program admissions. The cyclical nature of the increases and decreases in use after earlier methamphetamine precursor bans has been documented in studies by Cunningham et al. (2003, 2005, 2008a, 2008b, 2009, 2010). Decreases in use are often accompanied by a lessening of public policy attention to prevention, treatment, and interdiction needs. Yet, as discussed by Cunningham et al., during the past few decades, decreases in methamphetamine trends have been short-lived and followed by subsequent increases. In this paper, we seek to document the emerging effects of the latest precursor bans on methamphetamine supply and demand and consider future changes in the use of this drug.

## 2. Material and Methods

To help understand the changes and risk factors identified with methamphetamine, the most current data from surveys, emergency room and treatment admissions, arrestee drug testing, manufacturing processes, price and purity, and toxicological analyses of seized forensic items were retrieved from agency publications and national online sources. These data sources are described briefly along with their results. Data are displayed descriptively.

## 3. Results

### 3.1. Trends in indicators of methamphetamine supply

**3.1.1. Production/distribution**—Amphetamine tablets were available in the U.S. without a prescription until 1951. At that time, the illicit amphetamine market consisted of diverted pharmaceutical amphetamine (Anglin et al., 2000). In 1970, amphetamine was rescheduled, which lessened its availability for diversion and by 2009, amphetamine was only 3.6% of all the stimulants identified by federal, state, and local forensic laboratories, while methamphetamine comprised 85.3% of the stimulants (Drug Enforcement Administration [DEA], 2010a).

After amphetamine was rescheduled in 1970, illicit manufacturers began making methamphetamine using phenyl-2-propanone (“P2P”) and methylamine. Motorcycle gangs and small-scale local producers dominated the manufacturing and distribution process (Finckenauer et al., 2001), but after phenylacetone became Schedule II in the U.S. in 1980, operators of clandestine laboratories shifted to using ephedrine and pseudoephedrine. Large quantities of ephedrine and pseudoephedrine were smuggled from Mexico for use in “super labs” in the southern California desert. At the same time, quantities of a smokable and highly pure form of d-methamphetamine hydrochloride, known as “ice,” “crystal,” or “tina,” were imported from Far Eastern sources into Hawaii (Joe-Laidler & Morgan, 1997) and then into the West Coast of the U.S. with a gradual movement eastward towards the end of the 1990’s (Ling et al., 2006).

As methamphetamine use and abuse grew, there was an increase in small-time local producers in the U.S. who used over-the-counter cold medications and readily available chemicals to produce d-methamphetamine. The Birch reduction technique (“Nazi” method) used ephedrine or pseudoephedrine, lithium, and anhydrous ammonia, and the “cold” method used ephedrine or pseudoephedrine, red phosphorus, and iodine crystals (Bianchi et al., 2005).

Federal regulations targeting ephedrine and pseudoephedrine in forms used by large-scale producers in the U.S. were implemented in 1989, 1995, and 1997 and precursors in forms used by small-scale producers (e.g., over-the-counter medications) were implemented in 1996 and 2001. During 2004, in response to the proliferation of local laboratories, various states began to limit access to over-the-counter pseudoephedrine products and in March, 2006, U.S. federal legislation (P. L. 109–177) imposing limits became effective nationwide, with a resulting decline in methamphetamine items seized and examined in forensic laboratories reporting to DEA’s National Forensic Laboratory Information System (NFLIS) and in the number of methamphetamine clandestine laboratories reported in DEA’s National Clandestine Laboratory Database (Maxwell & Rutkowski, 2008; DEA 2011) (Figure 1). However, in 2008, the number of laboratory incidents began to increase, an indication that methamphetamine “cooks” had found ways to circumvent the legislation and obtain pseudoephedrine tablets and other ingredients used to produce the drug. In addition, Mexican producers shifted to other precursors to produce methamphetamine. These

increases are also seen in the proportion of methamphetamine items examined by toxicology laboratories (DEA, 2010a).

Canada, which had been a main supplier of pseudoephedrine to Mexico, enacted legislation in January 2005 to control its distribution (Government of Canada, 2005). Mexico began to limit imports of pseudoephedrine to manufacturers in 2006 and further restrictions were placed on the sale of over-the-counter cold medications in 2007 (Randewich, 2007). The seizure of a “rogue” commercial chemical company in Mexico that had illegally imported more than 60 tons of pseudoephedrine and the 2008 ban on all pseudoephedrine and ephedrine products in Mexico resulted in significant decreases in methamphetamine purity and treatment admissions in Texas and Mexico (Cunningham et al., 2010).

As the precursor bans in Mexico and the U.S. became effective, the purity dropped but later rose (DEA, 2010c) as the producers shifted to the P2P process, which uses chemicals other than pseudoephedrine (Logan, 2002). By the fourth quarter of 2010, 69% of the 2010 domestic and Mexican samples examined by the DEA Special Testing and Research Laboratory were produced using the P2P method, while the phosphorus-iodine method was identified by DEA in only 9% of the samples. The other 22% were mixed combinations or unknown precursors (DEA, 2010b).

The methamphetamine molecule exists as two enantiomers: that processed with ephedrine or pseudoephedrine yields *d*-methamphetamine while the P2P recipe produces combinations of *d*- and *l*-methamphetamine, which in an equal mixture of *d*- and *l*- is a racemic mixture. Using isomer purification techniques, the proportion of *d*-methamphetamine made with the P2P process is increasing. In the first quarter of 2010, 50% of the samples were *d*-isomer only and 35% were *d*- with *l*-isomers. In the fourth quarter of 2010, 62% were *d*-isomer only and 25% were *d*- with *l*-isomers (DEA, 2010b).

The *d*-methamphetamine form is associated with more potent physiologic and behavioral effects and higher abuse liability (Mendelson et al., 2006), as well as being a more potent dopamine releaser (Kuczenski et al., 1995). Users injected with *d*-, *dl*-, or *l*-methamphetamine gave *l*-methamphetamine significantly lower ratings for its ability to produce “intoxication” and “drug liking.” *D*-methamphetamine produced more intense stimulant effects and higher abuse liability than *l*-methamphetamine (Fowler et al., 2007). At high doses, *l*-methamphetamine intoxication was similar to that of *d*-methamphetamine, but the psychodynamic effects were shorter-lived and less desired by users, whereas the racemic mixture had similar effects to *d*-methamphetamine (Mendelson et al., 2006).

In addition to the shift to the P2P process, DEA (2010d) reported that Mexican producers were increasingly turning to Central and South America and South Africa as sources of precursors (DEA, 2010d). An additional concern is the finding that the samples entering the U.S. from the Far East in 2010 were approaching 96% purity (DEA, 2010b).

**3.1.2. Price and purity—The System to Retrieve Information on Drug Evidence (STRIDE)** is a database of drug exhibits sent to DEA laboratories from law enforcement agencies. It is not a representative sample of drugs available in the U.S., but reflects evidence submitted to DEA laboratories for analysis. Figure 2 shows that from July 2007 through September 2010, the price per pure gram of methamphetamine decreased 61%, from \$270.10 to \$105.49, while the purity increased 114%, from 39% to 83% (DEA, 2010c).

### 3.2 Trends in indicators of methamphetamine demand

Similar to the trends seen in supply reduction, the demand for methamphetamine decreased after the precursor chemical bans. However, the demand for the drug has been characterized

over time by geographic variations, as well as by different types of the drug, different routes of administration, and different types of users.

**3.2.1. Survey findings—The Youth Risk Behavior Survey (YRBS)** is conducted every two years during the spring semester to provide data representative of students in grades 9–12 in public and private schools throughout the United States. Lifetime use of methamphetamine peaked in 2001 at 9.8% and dropped to 4.1% in 2009 (Centers for Disease Control and Prevention, 2009).

The **Monitoring the Future Survey (MTF)** is an annual national survey that tracks illicit drug use and attitudes toward drugs by approximately 50,000 eighth, tenth, and twelfth graders. The MTF survey reported that lifetime use of methamphetamine peaked at 8.2% for twelfth graders in 1999 and declined to 2.3% in 2010. The question on crystal methamphetamine (ice) has been asked since 1991, and the highest lifetime use by twelfth graders was reported in 1998 at 5.3%. By 2010, lifetime use had dropped to a low of 1.8% (Johnston et al., 2010).

The **National Survey on Drug Use and Health (NSDUH)** is an annual multistage area probability sample of 68,700 individuals that collects information on the prevalence, patterns, and consequences of alcohol, tobacco, and illegal drug use and abuse in the U.S. civilian non-institutionalized population ages 12 and older.

The survey instrument has changed since 1979 and the findings before 2002 about non-medical use of prescription stimulants cannot be compared statistically with later findings because questions about methamphetamine were not added until 2002. Even so, Figure 3 shows the cyclical changes in lifetime use of stimulants over time. (SAMHSA, 2010).

Of the 2009 respondents, the lifetime prevalence for methamphetamine was 0.8% for those ages 12–17, 4.5% for those 18–25, and 5.8% for those 26 and over. The lifetime prevalence for males was 6.2% and 4.0% for females (SAMHSA, 2010).

The upward trend in methamphetamine use is also shown in Figure 4, where past year initiation of methamphetamine is compared against past-month use of the drug. The increases in the incidence of new users and prevalence of past month use between 2008 and 2009 were significant at the  $p=.05$  level (SAMHSA, 2010).

**3.2.2. Drug use by arrestees—The Arrestee Drug Abuse Monitoring (ADAM II)** program collects information on drug use and related topics from adult male offenders within 48 hours of arrest in ten U.S. counties. ADAM was not operational between 2004–2006. ADAM data show general increases in the percentage of arrestees testing positive (urine tests) for methamphetamine at the beginning of the decade (2000–2003) and generally lower levels from 2007–2009 (Table 1). Only a small set of metropolitan area sites contributed data for this program across this period, but they were selected to represent geographic diversity. For Denver, Indianapolis, and Minneapolis, percentages have been relatively consistent during the period 2007–2009 at levels similar to those in 2000–2003. Following the pattern shown by treatment admission trends in many states, Portland and Sacramento show somewhat lower percentages in 2007–2009 than in 2003; the slight year-to-year decreases for 2007 to 2008 and 2008 to 2009 were not statistically significant (Office of National Drug Control Policy, 2010).

**3.2.3. Emergency department reports—The Drug Abuse Warning Network (DAWN)** emergency department (ED) component provides estimates of drug-related visits to EDs for selected metropolitan areas as well as for the nation. The number of emergency

department visits for methamphetamine dropped from 132,576 in 2004 to 64,117 in 2009 (SAMHSA, 2011a). The rate of visits has dropped from 45.3 per 100,000 in 2004 to 20.9 in 2009. Males were more likely to be seen in the EDs than females, with case rates of 26.6/100,000 for males versus 15.4 for females in 2009. The group most likely to be seen for methamphetamine problems were those ages 25–29, with a case rate of 59.7, followed by those ages 21–24 (55.6) and 30–34 (48.6). The case rate for those under 21 was 8.6 in 2009.

**3.2.3. Treatment admissions—**The **Treatment Episode Data Set (TEDS)** comprises admission data that are routinely collected by states in monitoring their treatment admission systems. At the time of preparing this article, state-level data were available through 2009 and 2010 for most states, but nationwide data were only available through 2008. While not representing the total national demand for substance abuse treatment, TEDS contains a significant proportion of all treatment admissions, and includes those that constitute a burden on public funds. A few states do not distinguish between methamphetamine and amphetamine in their TEDS reports; for brevity, both substances are referred to as “methamphetamine” in this paper. Numbers and percentages of methamphetamine admissions by state are shown in Table 2 for the period 2000–2010 (SAMHSA, 2011b)

Data from TEDS show increases in the number and percentage of treatment admissions for primary methamphetamine use from 21,073 (1.4% of all admissions reported to TEDS) in 1992 to a peak in 2005 of 172,270 (9.1% of total admissions) with decreases to 127,000 in 2008 (6.3% of total admissions) (SAMHSA, 2011b). The aggregate national picture masks considerable variability in the impact of methamphetamine abuse on the treatment system across states. For example, 11 states reported fewer than 1% of their TEDS admissions were for methamphetamine in 2010 while two states reported more than 27%. The ten states with the highest percentages of methamphetamine treatment admissions reached levels of more than 20% during the 2000–2010 period (Figure 5). These percentages represent one perspective of the magnitude of the “meth problem” relative to other substances, but should be interpreted along with the actual numbers of admissions from Table 2 since treatment system capacity can also change over time. These ten states accounted for over 60% of the methamphetamine admissions in 2009–2010. Similar trends are visible for these ten states, with increasing percentages in the first part of the decade, most peaking in 2005 but the timing of peaks ranging from 2003 (Hawaii) to 2006 (Idaho and Utah). For each state, some decrease in methamphetamine admissions has occurred following the peak; but all show some leveling of decreases or an increase in percentages from 2008 to 2010. If the number of admissions is considered, instead of the percentages, we see similar patterns for eight of these ten states; however, for Arkansas and Idaho, trends based on numbers or percentages differed somewhat during the second half of the decade.

In spite of some decrease since the mid-decade peaks, levels of methamphetamine admissions to treatment remain high in several states at levels also seen in the early 2000’s (see, e.g., Figure 5), well above levels from the 1990’s. For example, methamphetamine admissions accounted for 6.1% of the total in 2008 compared to 1.4% in 1992 nationwide, and 27.4% in California in 2009 compared to 7.8% in 1992 (SAMHSA, 2011b). The attenuation of declines since the mid-decade peaks seen graphically in Figure 5 is also seen nationally with nearly three-fourths of the states with data for 2010 posting an increase in percentage of methamphetamine admissions over 2009 levels (Table 2).

Analysis of the TEDS data from 1992 through 2008 showed that inhalation was the primary route of administration of methamphetamine among U.S. clients entering treatment until 1998, when smoking became the dominant method with the increase in the supply and popularity of the crystalline ice. Rates of smoking methamphetamine rose from 12% in 1992 to 68% in 2008. The demographics of the users entering treatment also changed from 85%

White in 1992 to 72% White in 2008, with the proportion who were Hispanic increasing from 8% to 23% in the same period. The proportion of clients who were female remained stable at about 45% (Maxwell, 2011; SAMHSA, 2011c).

#### 4. Conclusions

The supply and demand data show that methamphetamine indicators are again increasing in certain parts of the country, following a few years of decline in the mid-2000's. This change is seen in supply due to precursors shifting from ephedrine and pseudoephedrine back to the P2P recipe, with continuing refinement of production methods to produce purer and more potent methamphetamine. Of concern are reports from DEA intelligence that Mexican manufacturers are looking to other areas in the world for the required chemicals and the ability of Asian manufacturers who use ephedrine and pseudoephedrine to produce large quantities of high quality methamphetamine which may become another source of the drug in the U.S. in the future. At the same time, the declines in demand indicators which were seen from 2005–2008 are beginning to reverse in 2009–2010, with notable increases in those states which have had significant problems with methamphetamine use in the past. The current attenuation of the decreasing trends that accompanied the most recent precursor controls support the previously-identified temporary nature of the effects of such controls (e.g., Cunningham & Liu, 2008). This situation points to the need for continuing attention to control and interdiction efforts appropriate to the changing context and to continuing prevention efforts and increased supply of treatment programs.

The shifts in the manufacture of methamphetamine are also seen in the changing preferences in the routes of administration of methamphetamine. Over time, users have shifted to the crystalline version which can be smoked, rather than using the powdered version that can be injected or inhaled. Although methamphetamine users are most likely to be male and Anglo, the increasing proportion of Hispanics entering treatment is an indication of the spread of the drug into other populations, and the highest use rates among those in their twenties points to a cohort at future risk of becoming dependent and needing treatment. In addition, the increasing purity and potency of may result in the shortening of the time between initiation (first use) and dependence.

Finally, based on previous methamphetamine epidemics, it appears the U.S. may have reached a point where there will be communities with substantial numbers of dependent methamphetamine users regardless of supply reduction efforts, and methamphetamine will become established along with cocaine and heroin as major chronic drug problems. Each of these drugs has its own geographic pattern and specific user groups. If this predicted entrenchment of methamphetamine as a chronic drug problem proves to be accurate, there will be continuing and even increasing need for supply and demand reduction efforts in the affected areas.

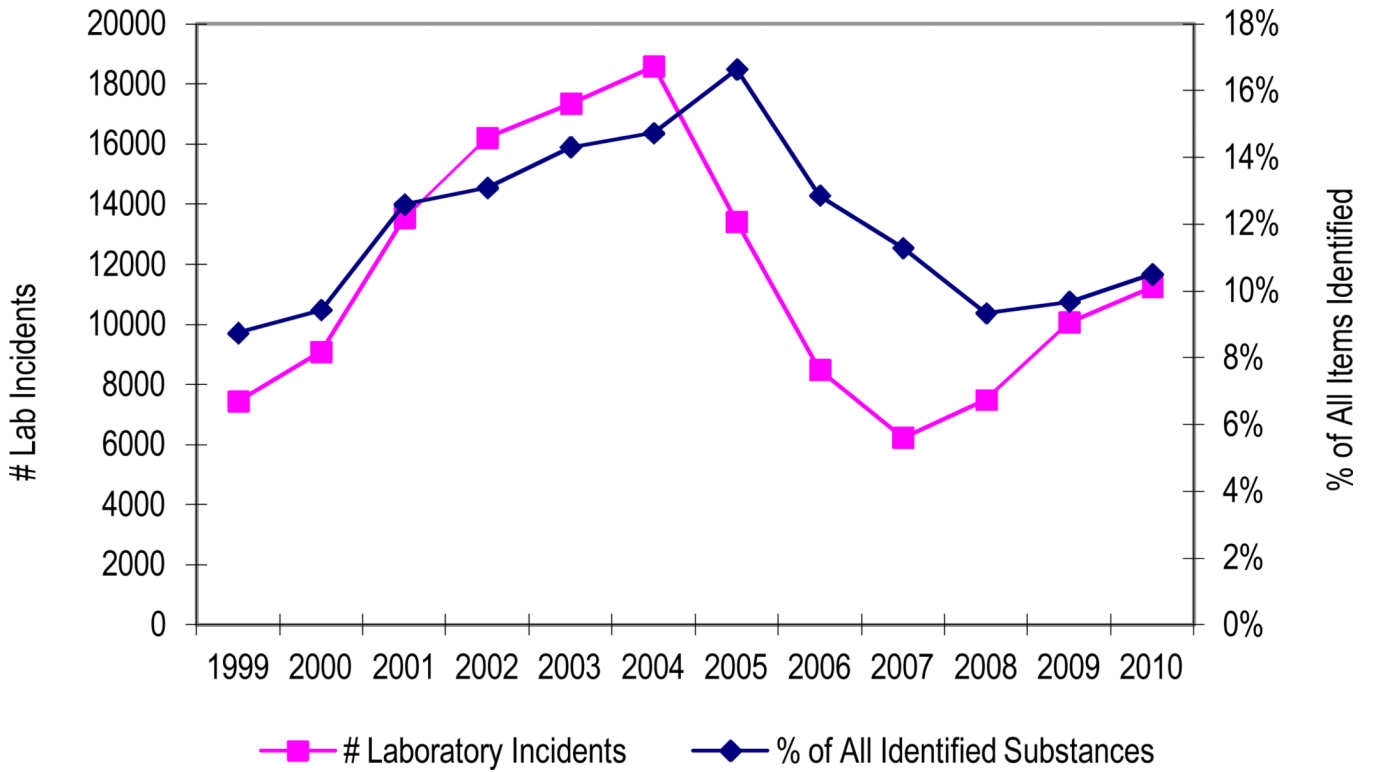
#### REFERENCES

- Anglin MD, Burke C, Perrochet B, Stamper E, Dawud-Noursi S. History of the methamphetamine problem. *Journal of Psychoactive Drugs*. 2000; 32:137–141. [PubMed: 10908000]
- Bianchi RP, Shah MN, Rogers DH, Mrazik TJ. Laboratory analysis of the conversion of pseudoephedrine to methamphetamine from over-the-counter products. *DEA Microgram Journal*. 2005; 3(No. 1–2)
- Centers for Disease Control and Prevention (CDC). [Retrieved on September 22, 2010] High school youth risk behavior survey. 2009. from <http://apps.nccd.cdc.gov/youthonline> dataset.
- Cunningham JK, Liu LM. Impacts of federal ephedrine and pseudoephedrine regulations on methamphetamine-related hospital admissions. *Addiction*. 2003; 98:1229–1237. [PubMed: 12930210]

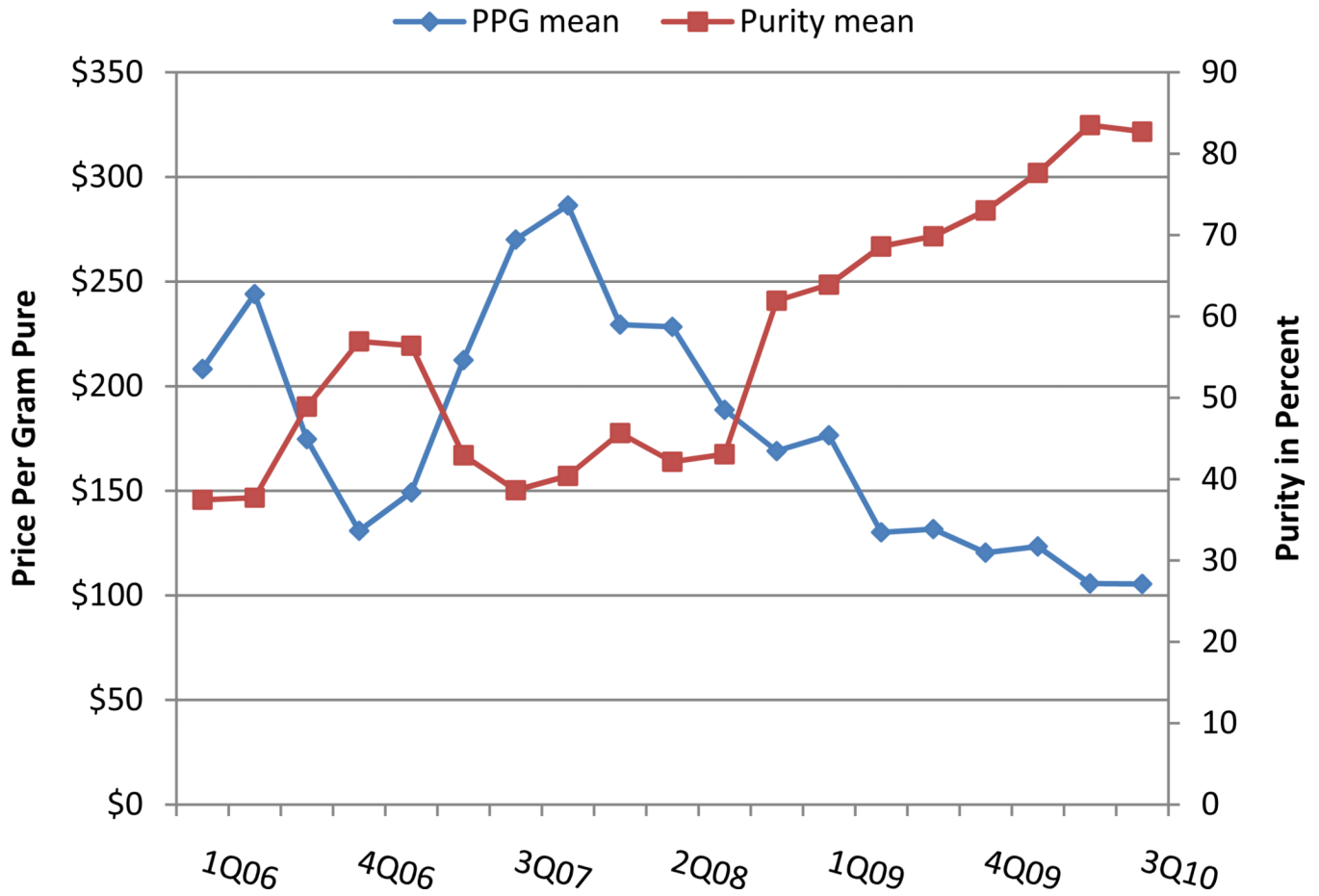
- Cunningham JK, Liu LM. Impacts of federal precursor chemical regulations on methamphetamine arrests. *Addiction*. 2005; 100:479–488. [PubMed: 15784062]
- Cunningham JK, Liu LM. Impact of methamphetamine precursor chemical legislation, a suppression policy, on the demand for drug treatment. *Social Science & Medicine*. 2008a; 66:1463–1473. [PubMed: 18222587]
- Cunningham JK, Liu LM, Callaghan R. Impact of US and Canadian precursor regulation on methamphetamine purity in the United States. *Addiction*. 2009; 104:441–453. [PubMed: 19207353]
- Cunningham JK, Liu LM, Muramoto M. Methamphetamine suppression and route of administration: precursor regulation impacts on snorting, smoking, swallowing and injecting. *Addiction*. 2008b; 103:1174–1186. [PubMed: 18422822]
- Cunningham JK, Bojorquez I, Campollo O, Liu LM, Maxwell JC. Mexico's methamphetamine precursor chemical interventions: impacts on drug treatment admissions. *Addiction*. 2010; 105:1973–1983. [PubMed: 20707864]
- Drug Enforcement Administration, Office of Diversion Control. National Forensic Laboratory Information System: Year 2009 annual report. Washington, DC: U.S. Drug Enforcement Administration; 2010a.
- Drug Enforcement Agency. Office of Forensic Sciences, Special Testing and Research Laboratory. Methamphetamine profiling program, fourth quarter CY2010. 2010b
- Drug Enforcement Administration, Intelligence Division, Indications and Warning Section. All methamphetamine purchases, domestic STRIDE data, January 2007–September 2010. 2010c. Received from DEA Domestic Unit Special Strategic Intelligence Section on March 3, 2011.
- Drug Enforcement Administration, Strategic Intelligence Section. Methamphetamine trends. Presented at the National Rural Law Enforcement Methamphetamine Summit; June 22, 2010; Denver CO. 2010d. from <http://methpedia.org/download/nrlemi/RLEMI-MichaelVrakatitsis2.pdf>
- Drug Enforcement Administration. [Retrieved on January, 2011] Methamphetamine clandestine lab incidents. 2011. from [http://www.justice.gov/dea/concern/map\\_lab\\_seizures.html](http://www.justice.gov/dea/concern/map_lab_seizures.html)
- Finckenaer, JO.; Fuentes, JR.; Ward, GL. Mexico and the United States: neighbors confront drug trafficking. National Institute of Justice Publications; 2001. from <http://www.ncjrs.gov/pdffiles1/nij/218561.pdf>
- Fowler JS, Kroll C, Ferrieri R, Alexoff D, Logan J, et al. PET studies of d-methamphetamine pharmacokinetics in primates: comparison with l-methamphetamine and (–)-cocaine. *Journal of Nuclear Medicine*. 2007; 48:1724–1732. [PubMed: 17873134]
- Government of Canada. [Retrieved on October 15, 2010] Controlled drugs and substances act: Precursor control regulations. 2005. from <http://www.cscb.ca/listinfo/precursors.pdf>
- Joe-Laidler, K.; Morgan, P. Kinship and community: The 'ice' crisis in Hawaii. In: Klee, H., editor. *Amphetamine misuse: International perspectives on current trends*. Amsterdam: Harwood Academic Publishers; 1997. p. 163-179.
- Johnston, LD.; O'Malley, PM.; Bachman, JG.; Schulenberg, JE. Monitoring the future: National results on adolescent drug use, overview of key findings. Ann Arbor, MI: Institute for Social Research, University of Michigan; 2010. from <http://www.monitoringthefuture.org/pubs/monographs/mtf-overview2010.pdf>.
- Kuczenski R, Segal DS, Cho AK, Melega W. Hippocampus norepinephrine, caudate dopamine and serotonin, and behavioral responses to the stereoisomers of amphetamine and methamphetamine. *Journal of Neuroscience*. 1995; 15:1308–1317. [PubMed: 7869099]
- Ling W, Rawson R, Shoptaw S. Management of methamphetamine abuse and dependence. *Current Psychological Reports*. 2006; 8:345–354.
- Logan BK. Methamphetamine effects on human performance and behavior. *Forensic Science Review*. 2002; 14:134–151.
- Maxwell, JC. [Retrieved March 8, 2011] Overcoming challenges in accessing and using substance use data. 2011. from <http://methpedia.org/uploads/Webinar3-8-2011/RuralMethMaxwell2011rev.pdf>
- Maxwell JC, Rutkowski BA. The prevalence of methamphetamine and amphetamine abuse in North America: a review of the indicators, 1992–2007. *Drug and Alcohol Review*. 2008; 27:229–235. [PubMed: 18368603]

- Mendelson J, Uemura N, Harris D, Nath RP, Fernandez E, Jacob P, et al. Human pharmacology of the methamphetamine stereoisomers. *Clinical Pharmacology & Therapeutics*. 2006; 80:403–420. [PubMed: 17015058]
- Office of National Drug Control Policy. ADAM II 2009 annual report. Washington DC: ONDCP; 2010. from <http://www.whitehousedrugpolicy.gov/publications/pdf/adam2009.pdf>
- Public Law 109-177. [Retrieved October 29, 2010] Title VII, The Combat Methamphetamine Epidemic Act of 2005. 2005. from [http://www.dea diversion.usdoj.gov/meth/pl109\\_177.pdf](http://www.dea diversion.usdoj.gov/meth/pl109_177.pdf)
- Randewich, N. [Retrieved October 15, 2010] Mexico limits some cold remedies in narcotics war. 2007 Jul 29. from <http://www.reuters.com/article/worldNews/idUSN1927125520070719?sp=true>.
- Substance Abuse and Mental Health Services Administration. [Retrieved January 4, 2011] Detailed tables: National estimates, drug-related emergency department visits for 2004–2009. 2011a. from <https://dawninfo.samhsa.gov/data/ed/National/National.zip>
- Substance Abuse and Mental Health Services Administration. [Retrieved March 20, 2011] Quick statistics from the drug and alcohol services information system 1992–2010. 2011b. from <http://www.dasis.samhsa.gov/webt/information.htm>.
- Substance Abuse and Mental Health Services Administration. [Retrieved September 22, 2010] Results from the 2009 national survey on drug use and health: Volume I. Summary of national findings. 2010. from <http://oas.samhsa.gov/NSDUH/2k9NSDUH/tabs/TOC.htm>, Tables 1.1A, 4.5B
- Substance Abuse and Mental Health Services Administration. [Retrieved March 4, 2011] Treatment episode data set -- Admissions (TEDS-A) -- Concatenated, 1992 to present. 2011c. from <http://www.icpsr.umich.edu/icpsrweb/SAMHDA/series/00056> database.



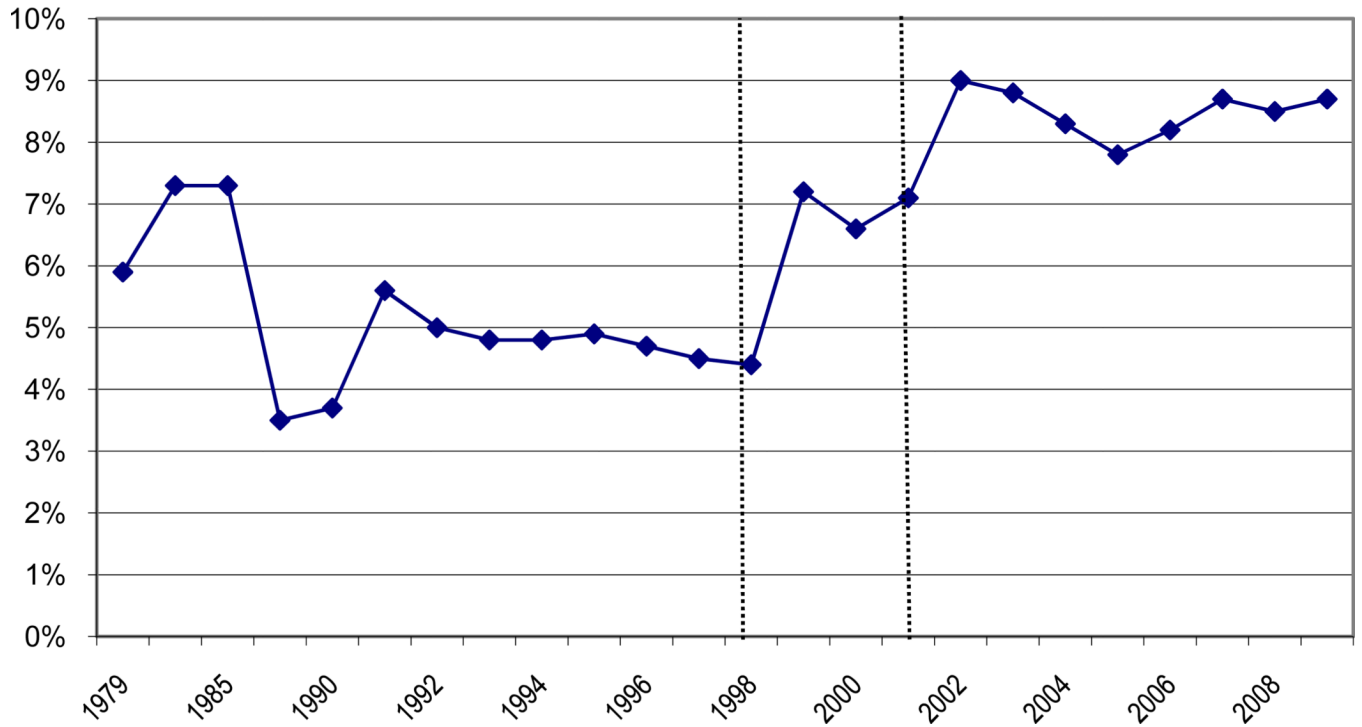


**Figure 1.** Number of methamphetamine clandestine laboratory incidents and percentage of all substances identified that were methamphetamine in the U.S.: National Clandestine Laboratory Database and National Forensic Laboratory Information System 1999–2009

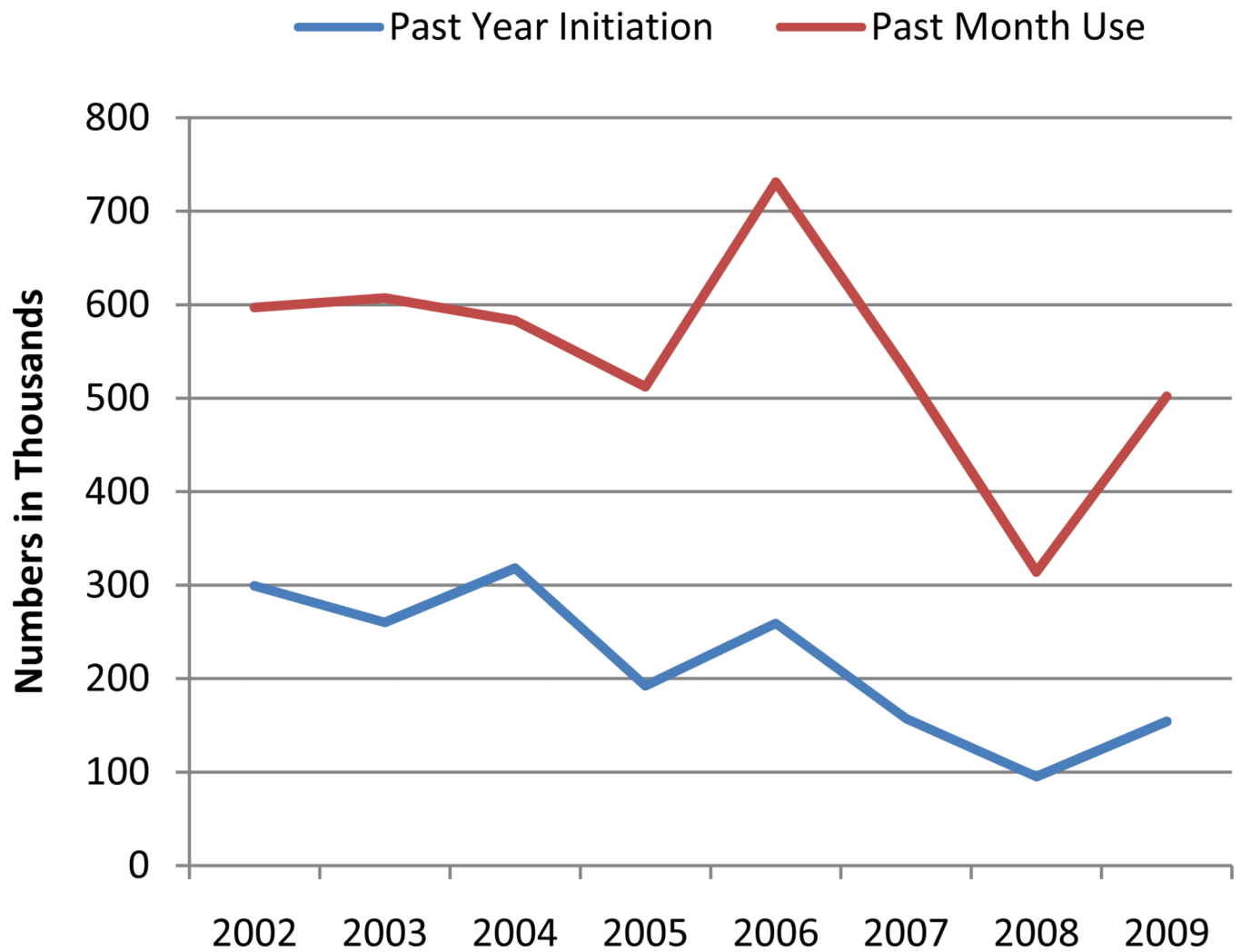


**Figure 2.**  
All domestic methamphetamine purchases: STRIDE data 2006–2010

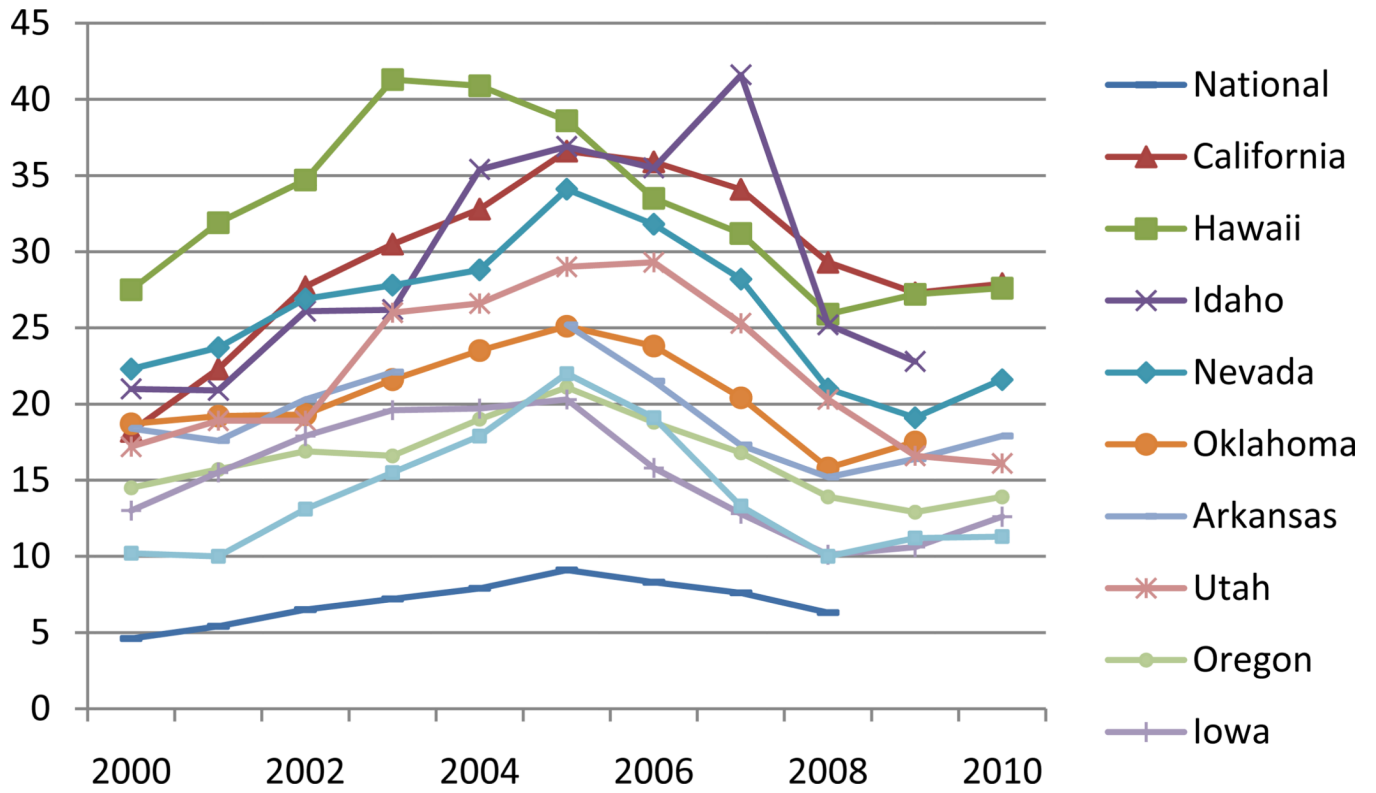
Data from 1979-1998 cannot be compared to 1999-2001, and 1999-2001 cannot be compared to 2002 forward



**Figure 3.** Percentages reporting lifetime use of stimulants in the National Survey on Drug Use and Health: 1979–1994 and National Household Survey on Drug Abuse: 1994–2009



**Figure 4.**  
Past year initiation of methamphetamine use and past month use: NSDUH 2002–2009



**Figure 5.** Primary methamphetamine/amphetamine admissions to substance abuse treatment reported to TEDS: National and selected states, 2000–2010

**Table 1**

Percentage with Methamphetamine-Positive Urine Test Results: Adult Male Arrestees, ADAM Sites, 2000–2003 and 2007–2010

	2000	2001	2002	2003*	2007	2008	2009	2010
Atlanta, GA			2.7	1.3	0.7	0.4	0.2	0.5
Charlotte, NC	2.2	0.9	1.2	1.6	0.9	0.5	0.1	0.3
Chicago, IL	0.0	1.0	0.8	1.3	0.7	0.4	0.6	0.6
Denver, CO	3.4	4.2	6.5	6.5	5.7	3.1	4.4	4.0
Indianapolis, IN	1.7	1.9	3.5	3.5	2.6	2.0	1.0	2.7
Minneapolis, MN	3.2	1.7	2.4	3.4	3.2	2.4	3.6	2.4
New York, NY	0.2	0.3	0.6	0.3	0.1	0.1	0.0	0.1
Portland, OR	20.8	21.5	22.3	26.8	20.4	14.6	13.3	19.8
Sacramento, CA	31.1	31.0	36.4	45.8	35.6	34.5	30.7	33.2
Washington, DC			2.1	1.8	5.8	1.8	0.4	1.0

\* ADAM not collected for 2004–2006

Source: Office of National Drug Control Policy (2011) ADAM II 2010 Annual Report.

**Table 2**  
 Number and Percentage of Methamphetamine/Amphetamine Treatment Admissions by State and Year 2000–2010, TEDS.

YEAR	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010 <sup>a</sup>											
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%										
Alabama	496	2.8	922	5.3	1,344	6.9	1,713	8.1	1,987	10	1,956	9.7	1,768	8.5	1,118	3.0	129	2.4	146	2.5	2.6	
Alaska	53	1	50	1.3	80	1.6	71	1.8														
Arizona	614	4.5	1,267	9	1,277	6.9	1,625	10.2	3,301	8.9	4,566	14.9	3,702	13.7	3,104	14.7	2,872	13.7	2,385	12.4	13.8	
Arkansas	2,461	18.4	2,139	17.6	2,812	20.3	3,015	22.1			3,471	25.2	2,943	21.5	2,605	17.3	4,340	15.2	4,037	16.4	17.9	
California	33,427	18.2	39,911	22.3	59,258	27.7	62,139	30.5	60,343	32.8	67,157	36.6	71,087	35.9	68,923	34.1	59,155	29.3	49,239	27.3	27.9	
Colorado	1,785	3.2	1,558	3.6	2,593	3.8	3,318	5.2	4,875	7.1	6,396	8.3	6,076	7.7	5,939	7.5	5,334	6.2	4,946	5.6	6.9	
Connecticut	41	0.1	128	0.3	110	0.2	114	0.2	99	0.2	110	0.2	90	0.2	85	0.2	119	0.3	98	0.2	0.2	
Delaware	10	0.1	5	0.1	12	0.2	15	0.2	18	0.2	32	0.4	38	0.5	24	0.3	22	0.3	9	0.1	0.2	
Florida	420	0.5	467	0.7	741	0.8	1,022	1.2	686	1.7	1,194	2.5	1,142	2.2	981	1.9	1,222	1.5	1,297	1.7	1.9	
Georgia	632	2.1	987	2.7	1,588	4.6	2,820	7.8	2,887	9.2	5,685	12.7										
Hawaii	1,834	27.5	2,089	31.9	2,241	34.7	2,570	41.3	2,382	40.9	2,625	38.6	2,181	33.5	2,184	31.2	1,918	25.9	1,980	27.2	27.6	
Idaho	1,238	21	1,763	20.9	1,295	26.1	820	26.2	2,205	35.4	2,355	36.9	2,303	35.5	1,540	41.6	1,563	25.2	1,496	22.8		
Illinois	557	0.9	986	1.3	1,547	1.9	2,158	2.5	2,608	3.2	2,568	3.3	2,395	2.8	1,302	1.8	1,001	1.3	892	1.3	1.4	
Indiana	673	1.8	757	2.7	1,167	3.8	1,419	4.5	1,967	5.2	2,315	6.2	2,209	6	1,459	5	993	5.2	938	5.2	4.9	
Iowa	3,386	13	4,183	15.5	4,839	17.9	5,335	19.6	5,558	19.7	5,779	20.3	4,513	15.8	3,436	12.8	2,652	10.1	2,945	10.6	12.6	
Kansas	1,003	7	1,180	8.3	1,408	9.7	1,443	10.2	1,808	11.7	2,190	13.9	1,578	12.1	1,961	13.1	1,815	10.8	2,036	10.8	12.8	
Kentucky	250	1.3	454	1.8	455	1.7	696	2.2	532	2.6	1,307	5.8	1,249	5.1	1,045	4.3	844	3.8	833	3.9	4.4	
Louisiana	355	1.3	405	1.5	680	2.4	792	2.9	1,055	3.7	1,229	4.9	950	4.2	978	4	718	2.8	746	2.6	3.2	
Maine	39	0.4	38	0.3	39	0.3	51	0.4	62	0.5	79	0.6	104	0.7	80	0.5	72	0.5	70	0.5	0.7	
Maryland	73	0.1	104	0.2	131	0.2	173	0.2	204	0.3	215	0.3	222	0.3	219	0.3	165	0.2	148	0.2	0.2	
Massachusetts	70	0.1	80	0.1	69	0.1	101	0.2	119	0.2	152	0.3	194	0.2	171	0.2	102	0.1	92	0.1	0.2	
Michigan	179	0.3	249	0.5	430	0.7	567	0.9	755	1.3	797	1.4	605	0.9	452	0.7	599	0.9	665	1	1.2	
Minnesota	1,698	4.2	2,707	6.3	3,252	7.9	4,293	10.1	5,934	12.9	7,159	15.8	5,380	11.2	4,903	9.8	3,686	7.4	3,600	6.9	8.2	
Mississippi	311	3.2	564	5.2	623	5.4	664	6.1	615	6	643	7.2	487	6	481	5.8	443	5.0	425	5.3		
Missouri	3,457	7.8	3,928	8.6	4,028	9.8	3,969	10.5	4,914	12.5	6,154	14.1	5,295	11.7	4,513	9.5	4,544	9.2	5,056	9.6	10.2	
Montana	776	11	895	12.9	938	13.5	1,116	14.4	1,185	15.4	1,476	18.1	1,128	14.2	964	10	517	6.9	424	5.8	6.3	
Nebraska	902	10.6	1,294	14.3	1,485	15.9	1,722	16.2	2,064	13.6	2,100	13.8	1,662	11.1	1,591	9.6	1,148	7.1	1,068	6.7	7.5	

*Addict Behav.* Author manuscript; available in PMC 2012 December 1.

YEAR	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010 <sup>1</sup>	
Nevada	No. 2,409 % 22.3	No. 2,562 % 23.7	No. 2,830 % 23.7	No. 3,257 % 26.9	No. 3,338 % 27.8	No. 3,420 % 28.8	No. 3,186 % 34.1	No. 2,776 % 31.8	No. 1,967 % 28.2	No. 1,893 % 21	No. 1,911 % 19.1	No. 2,160 % 21.6
New Hampshire	18 0.3	18 0.3	76 0.3	17 1.5	32 0.3	56 0.5	75 1.1	53 1.2	51 0.9	45 0.8	45 0.7	70 0.7
New Jersey	116 0.2	131 0.2	138 0.2	137 0.3	195 0.2	173 0.4	190 0.3	203 0.3	189 0.3	245 0.3	245 0.4	245 0.3
New Mexico	103 1.2	198 2.8	197 2.8	269 2.9	315 3.9	703 5.7	910 7.7	1,018 7.3	846 8.5	721 7.3	721 7.1	846 8.5
New York	361 0.1	460 0.2	547 0.2	699 0.2	673 0.2	704 0.2	610 0.2	783 0.2	694 0.3	805 0.2	805 0.3	805 0.3
North Carolina	165 0.5	189 0.6	227 0.6	283 0.8	333 1	490 1.3	302 2	320 1.7	495 1.4	791 1.3	791 1.5	791 1.4
North Dakota	90 4.6	153 6.9	377 6.9	240 11.5	374 11.7	419 13.5	378 18.1	249 14.3	190 10.3	128 7.6	128 5.3	128 5.3
Ohio	109 0.2	185 0.3	330 0.3	320 0.5	423 0.6	832 0.8	750 1.1	734 1	554 0.7	566 0.5	566 0.6	566 0.6
Oklahoma	2,599 18.7	3,323 19.2	3,471 19.2	3,555 19.3	4,007 21.6	4,194 23.5	3,728 25.1	3,365 23.8	2,687 20.4	2,965 15.8	2,965 17.5	2,965 17.5
Oregon	7,665 14.5	8,744 15.7	9,463 15.7	7,548 16.9	8,561 16.6	10,062 19	9,226 21.1	8,803 18.8	7,354 16.8	6,283 13.9	6,283 12.9	6,283 12.9
Pennsylvania	245 0.4	221 0.4	233 0.4	260 0.4	464 0.4	433 0.5	351 0.6	304 0.5	274 0.4	221 0.4	221 0.4	221 0.4
Rhode Island	14 0.1	16 0.1	21 0.1	10 0.2	13 0.1	16 0.1	22 0.1	28 0.2	32 0.2	28 0.3	28 0.3	28 0.3
South Carolina	118 0.4	164 0.5	233 0.5	302 0.8	424 1.2	788 1.8	713 2.9	605 2.7	596 2.3	551 2.2	551 2	551 2
South Dakota	194 2.1	206 3	446 3	575 4.9	668 6.3	1,346 7.1	1,157 10	911 7.3	623 4.1	599 4.1	599 4	599 4
Tennessee	143 1.9	195 2	280 2	368 2.9	558 3.3	541 5.1	414 4.6	287 3.7	277 2.8	338 2.8	338 3.3	338 3.3
Texas	1,367 4.7	1,844 6	2,349 6	2,969 6.6	3,736 8.3	5,827 10.1	5,432 13.5	4,816 12.4	3,677 10.6	3,799 8	3,799 8.3	3,799 8.3
Utah	3,362 17.2	3,013 18.9	2,178 18.9	3,322 18.9	3,377 26	3,576 26.6	3,999 29	3,585 29.3	2,969 25.3	2,479 20.3	2,479 16.6	2,479 16.6
Vermont	26 0.4	10 0.1	22 0.1	19 0.3	19 0.3	37 0.3	19 0.4	30 0.2	19 0.4	20 0.2	20 0.3	20 0.3
Virginia	86 0.4	130 0.5	222 0.5	417 0.6	545 0.8	514 0.9	351 1.4	363 1	282 1.1	298 0.8	298 1	298 1
Washington	3,614 11.8	4,241 14.1	4,056 14.1	4,330 14.4	5,148 14.7	6,464 16.1	6,551 18.1	6,378 17.6	5,233 16.7	4,522 13.2	4,522 11.3	4,522 11.3
West Virginia	70 0.3	110 0.5	160 0.5	238 0.8	259 1	483 1.1	187 2.6	138 2.4	147 1.8	68 1.5	68 1.1	68 1.1
Wisconsin	437 10.2	596 10	695 10	933 13.1	1,018 15.5	1,296 17.9	873 22	686 19.1	642 13.3	289 10	289 11.1	289 11.1
Wyoming	80,066 4.6	95,855 5.4	123,018 5.4	133,876 6.5	144,177 7.2	172,270 7.9	161,132 9.1	146,004 8.3	127,000 7.6	63	63	63

<sup>1</sup> Because data reported here may not yet cover the complete year 2010, only percentages are given for 2010. The total number of meth/amphetamine admissions available for 2010 in TEDS Quick Statistics was 85,747 as reported through 1/6/11.

<sup>2</sup> Total is for all reporting states and jurisdictions (as a total from source below) and may not be exactly the same as column sum in Table 2 from specific states.

Source: US Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Office of Applied Studies, Treatment Episode Data Set (TEDS), 1992–2010. From state-specific data as reported through 1/6/11 on Quick Statistics available at <http://www.dasis.samhsa.gov/web/NewMapv1.htm> accessed on March 20, 2011.