



National Institute of Justice

Research in Brief

Jeremy Travis, Director

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Issues and Findings

Discussed in this Brief: Trends in methamphetamine use, based on data from the Drug Use Forecasting (DUF) program of the National Institute of Justice (NIJ). In the DUF program, arrestees in 23 major cities across the country are tested on a regular basis for evidence of recent use of several drugs, including methamphetamine.

Key Issues: DUF data have demonstrated that more than half of all adults arrested and booked in the 23 sites for serious crimes tested positive for use of drugs. In the past few years, methamphetamine appears to have become a significant presence in many communities across the country, though its prevalence seems highest in the West and Southwest. DUF data were obtained from EMIT™ and gas chromatography urinalysis techniques and examined for trends in methamphetamine use among adult arrestees.

Key Findings: Highest rates of methamphetamine use were found among arrestees in far Western and Southwestern cities, though the data suggest some expansion into the Midwest. White arrestees are much more likely than black or Hispanic arrestees to test positive for methamphetamine; female arrestees are more likely than male arrestees to test positive.

Target Audience: Drug enforcement and drug treatment practitioners; individuals responsible for coordinating drug policy at the local and national level.

Methamphetamine Use Among Adult Arrestees: Findings From the Drug Use Forecasting (DUF) Program

by Thomas E. Feucht, Ph.D., and Gabrielle M. Kyle

The apparent increase in the production, distribution, and use of methamphetamine is a matter of growing concern. A powerful central nervous system (CNS) stimulant, the drug is relatively easy to manufacture, and the required precursor drugs¹ (such as ephedrine or pseudoephedrine), widely available in Mexico, are believed to be smuggled into the United States in substantial quantities. The process of producing methamphetamine results in a host of toxic and corrosive substances. For this reason, seizing clandestine methamphetamine laboratories poses grave risks to law enforcement personnel.

Historically, methamphetamine production and distribution have been associated with motorcycle gangs. Recently, Mexican drug gangs have increased their share of the U.S. wholesale methamphetamine market. This is consistent with most reports that place the bulk of increased methamphetamine use in the Southwest. Concern continues to grow, however, that the increased number of seizures of clandestine operations and methamphetamine-related fatalities in other parts of the country might signal an impending methamphetamine pandemic.

Focus of analysis: the eight high-rate sites

The 1995 DUF data were analyzed to determine the extent of methamphetamine use among adult male and female arrestees. (See “Testing for Methamphetamine Use” for a discussion of how evidence of methamphetamine use is detected in urine specimens collected in the DUF program.) Overall, approximately 6 percent of all adult arrestees from the 23 DUF sites tested positive for methamphetamine, 41 percent for cocaine, 28 percent for marijuana, 8 percent for opiates, and about 2 percent for PCP.

While overall the prevalence of methamphetamine use is modest, there is considerable variation from site to site. Eight sites (San Diego, Phoenix, San Jose, Portland, Omaha, Los Angeles, Denver, and Dallas) reported significant rates of methamphetamine use among arrestees in 1995. (See exhibit 1.) Their geographic distribution is shown in exhibit 2. Other sites reported rates among arrestees at or near zero.

Testing for Methamphetamine Use

A

lthough the term “amphetamine” designates the specific substance phenylisopropylamine, it commonly refers to a class of related central nervous system (CNS) stimulants, including dextroamphetamine and methamphetamine. While they were once frequently prescribed as a general stimulant and appetite suppressant, amphetamines were placed among Schedule II drugs in 1971. (Schedule II drugs are those that have some medical uses but also present significant potential for abuse.)

EMIT™, an immunoassay screening test, cannot reliably distinguish amphetamines from several over-the-

counter medications—particularly some antihistamines—because of similarities in their chemical structures. Consequently, all DUF specimens identified by EMIT™ as presumptive positive for amphetamines are further analyzed by gas chromatography. This confirmatory procedure identifies with a high degree of accuracy the specific CNS stimulant used. The data reported here are based on gas chromatography results.

High rates of methamphetamine use (as opposed to use of other amphetamines) among arrestees are no doubt due in part to the relative ease with which this particular amphetamine can be illegally manufactured.

Details of the analysis

- **Methamphetamine rates are highest in western and southwestern DUF sites.**

Methamphetamine appears prominently in drug use patterns at the eight sites. Its use rivals or surpasses that of cocaine, marijuana, and opiates at some of these sites, particularly San Diego, Phoenix, and San Jose. (See exhibit 3.)

- **Rates are typically higher among female arrestees.**

Among arrestees age 21 to 35—the age groups with the highest use rates—females are more likely than males to test positive for methamphetamine. The peak age of use among adult male arrestees is 26 to 30; among adult female arrestees, it is 21 to 25. (See exhibit 4 for rates of methamphetamine use by age and gender.)

Analysis by gender and charge at arrest shows higher rates of methamphetamine use among female arrestees in each offense category. (See exhibit 5.) Among females arrested for violent offenses, 11 percent tested positive for methamphetamine compared to 10 percent among male arrestees. Similarly, among people arrested for drug offenses or “other” offenses (a category that includes all property offenses), females were more likely than males to test positive for methamphetamine. (The number of male prostitution arrestees is too small to make statistical comparisons.)

- **Use among white arrestees far exceeds that among black or Hispanic arrestees.**

In the eight sites with the highest methamphetamine rates, white arrestees were much more likely than others to test positive for methamphetamine use: 26 percent of white male arrestees and 28 percent of white female arrestees tested

Exhibit 1: Methamphetamine Use in DUF Sites, 1995

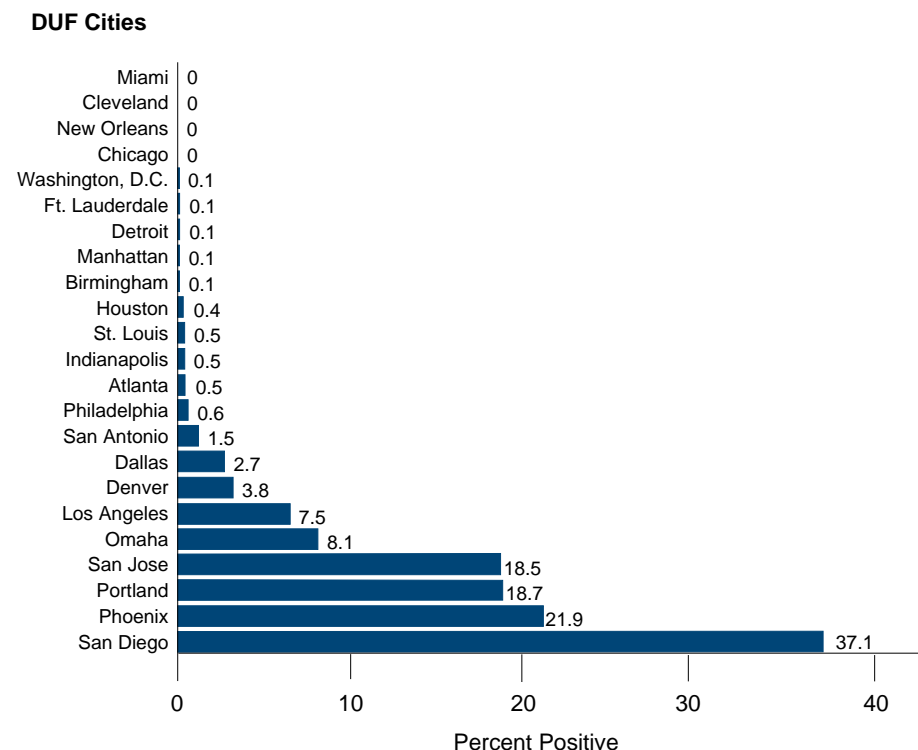
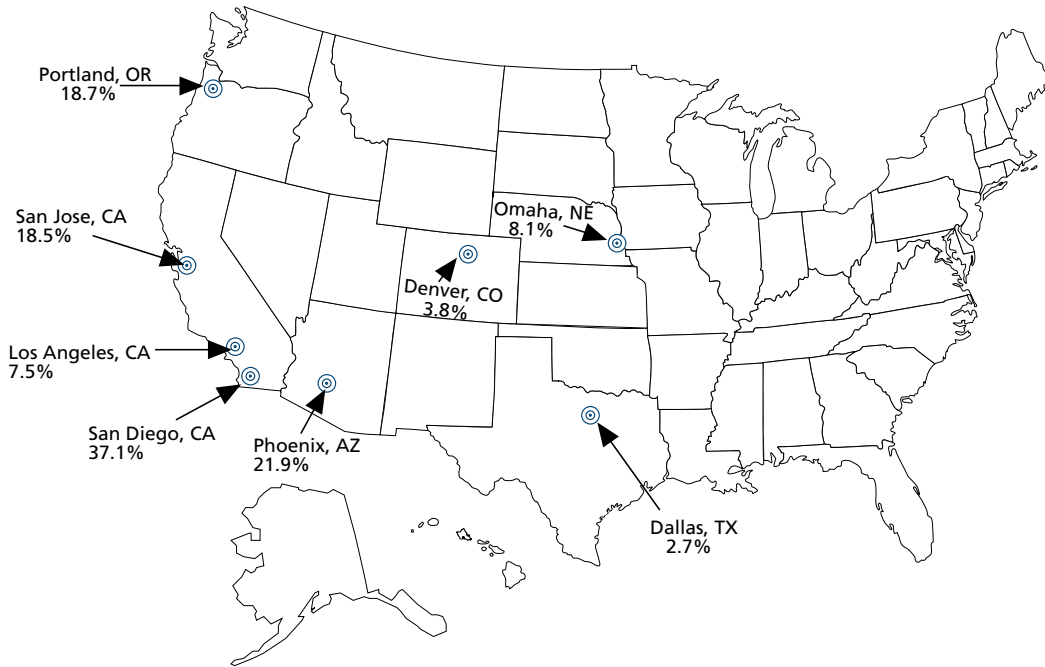


Exhibit 2: DUF Sites Where Methamphetamine Use Was Highest in 1995

In 1995 eight sites had significant levels of methamphetamine positives



Note: Data on exhibits 2 through 8 are for these eight sites only.

positive for the drug, compared to 3 percent among both black male and black female arrestees. Eleven percent of Hispanic male arrestees and 15 percent of Hispanic female arrestees tested positive. (See exhibit 6.)

● Few arrestees test positive for both methamphetamine and cocaine.

DUF data have consistently demonstrated high rates of cocaine use by arrestees. (Cocaine, another CNS stimulant, is commonly used in a smokable form known as crack cocaine but can also be injected or taken intranasally. Urinalysis cannot distinguish among these routes of administration, however.) At the eight sites, 33 percent of adult arrestees tested positive for cocaine, and 15 percent tested

positive for methamphetamine. (See exhibit 7.) Comparison of urinalysis results for the two drugs shows only a small proportion of arrestees (2 percent) test positive for both.

● Five-year trend data indicate increasing use of methamphetamine.

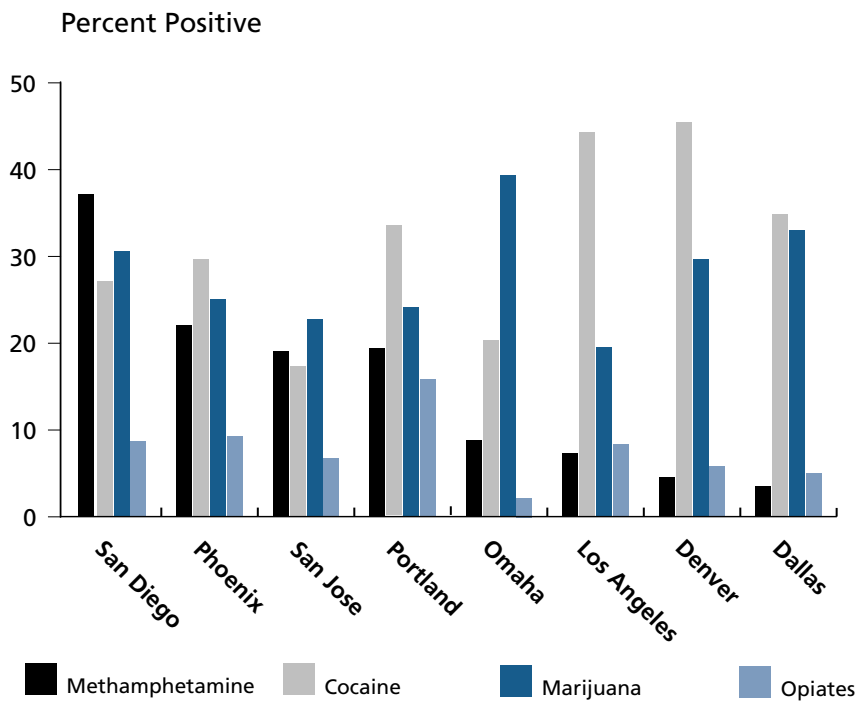
Trend data from 1991 through 1995 in the eight cities show an overall increase in methamphetamine use among arrestees. (See exhibit 8.) While San Diego and Phoenix continue to report the highest rates, these two cities showed a slight moderation from 1994 to 1995. At the same time, Omaha reported a sharp increase in the percentage of arrestees who tested positive for methamphetamine (from 3 percent in 1994 to 8 percent in 1995).

Discussion

The DUF data offer several key insights into methamphetamine use, at least as it is manifested among people entering criminal justice supervision (i.e., arrestees). First, in this population, methamphetamine use remains largely a regional phenomenon, though the most recent data suggest that sites like Denver, Omaha, and St. Louis could experience significant increases in use if current trends continue.

Some observers caution that since DUF data do not tap into the wide range of potential users *outside* the criminal justice system, the apparent regional pattern of methamphetamine use may not accurately reflect use of this drug in the general population. The degree to which these data can be

Exhibit 3: Drug Positives Among Arrestees at DUF Sites, 1995

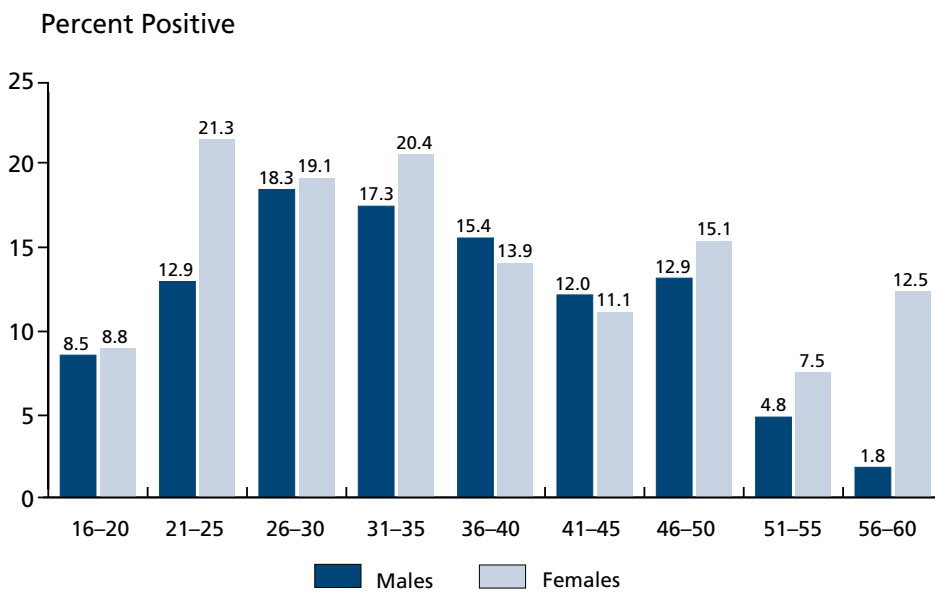


generalized to other, noncriminal justice populations is limited. Nevertheless, it is not clear why arrestees in western sites should evidence very high rates compared to those in eastern sites if there were no significant regional trend in distribution and use of the drug. Clearly, DUF data suggest a leading edge of methamphetamine use in western and southwestern cities; data recently received from Denver and Omaha indicate that use may be expanding to the Midwest.

Second, methamphetamine use among arrestees is largely confined to white (and to a lesser degree, Hispanic) arrestees. This pattern contrasts sharply with that of cocaine, in which rates among black arrestees are often twice those among white arrestees.

Third, female arrestees test positive for methamphetamine at rates higher than those for male arrestees. It is unclear whether this finding is a function of law enforcement practices that target males and females differently, slower metabolism of the drug by women (and thus an increased likelihood of testing positive hours after arriving at the lockup), differential effects of dosage by virtue of body size, or simply more widespread use by women.

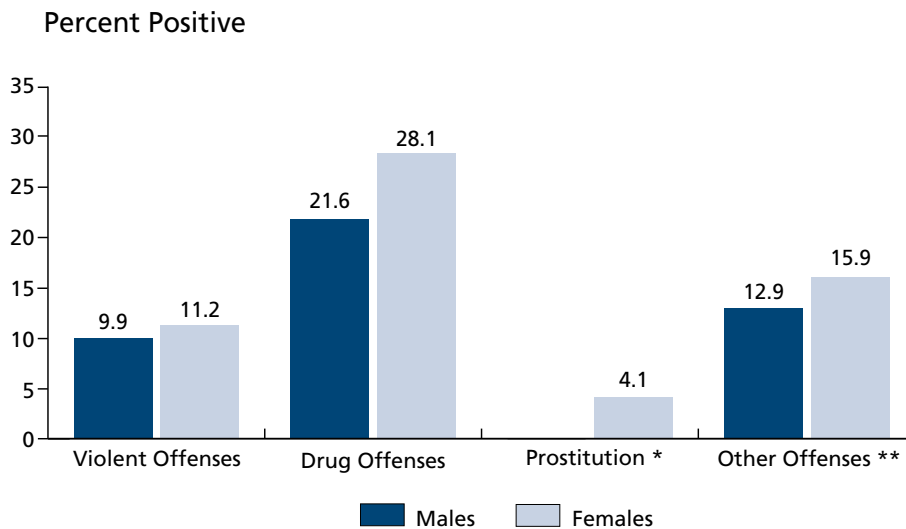
Exhibit 4: Methamphetamine Use by Age and Gender, 1995



Ways to approach the problem

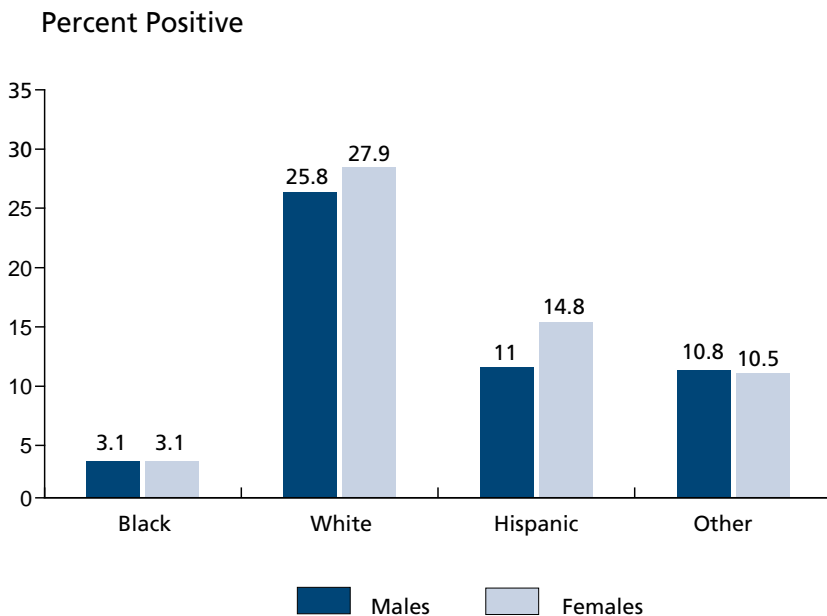
Some law enforcement and drug treatment experts assert that methamphetamine use is not limited to urban drug users and is widely available in many smaller, rural communities. This belief is consistent with intelligence reports that frequently have found remote rural locations to be sites for the manufacture and distribution of methamphetamine. Since the DUF program is in central-city areas only, the data cannot be used to test these assertions. NIJ is exploring the possibility of

Exhibit 5: Methamphetamine Use by Top Charge Classification, 1995



* Number of male prostitutes too small to make statistical comparisons.
 ** All property crimes are included in the "Other" category.

Exhibit 6: Methamphetamine Use by Race, 1995

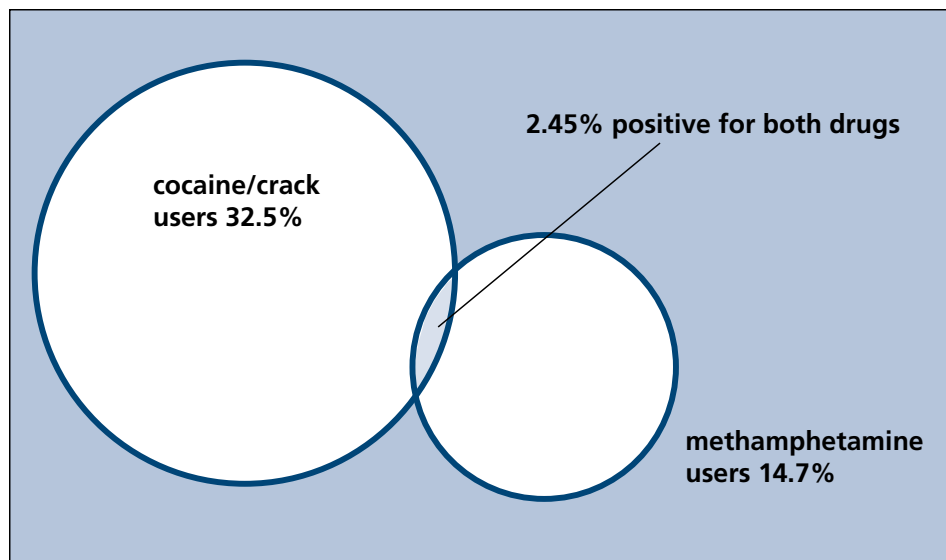


expanding DUF coverage to arrestees in rural and suburban communities. Unquestionably, this would provide more accurate empirical evidence of the use of methamphetamine and other drugs in communities throughout the country.

A heads-up for law enforcement. Given the sharp rise in methamphetamine rates at the Omaha DUF site, the potential for increased use throughout the Midwest (and, ultimately, other areas of the country) cannot be ignored. Law enforcement agencies should remain alert to the potential for increased availability and use of methamphetamine, and treatment providers should have at hand strategies that anticipate a significant increase in methamphetamine referrals, especially from the criminal justice system. (See “Some Street Names for Methamphetamine.”)

Pilot programs. A useful approach to developing such a strategy might be to create a demonstration program for methamphetamine-involved offenders in one or more jurisdictions that have significant numbers of methamphetamine users. NIJ has begun to explore the feasibility of a demonstration project that would test drug treatment protocols designed specifically for people in the criminal justice system who are involved with methamphetamine. Drawing on the expertise of drug treatment professionals, NIJ hopes to facilitate the advancement of treatment approaches that can meet the challenge posed by methamphetamine and that could be integrated into the criminal justice system as it confronts the continuing challenges of drugs and crime.

Exhibit 7: Percentage of Arrestees Testing Positive for Cocaine/Crack and/or Methamphetamine, 1995



Some Street Names for Methamphetamine²

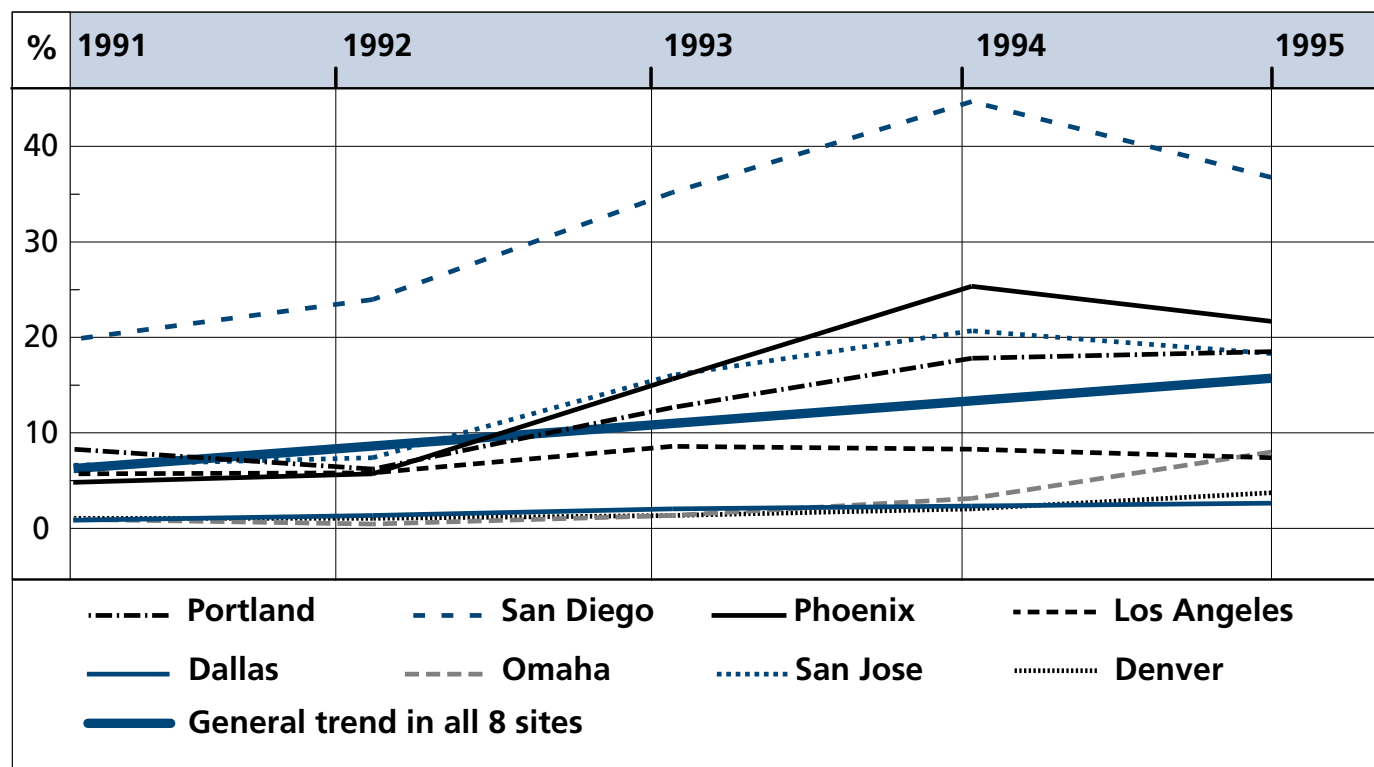
- Crank*
- Crypto
- Crystal*
- Crystal meth
- Meth
- Quill
- Speed*
- Tweek (a methamphetamine-like substance)
- White cross*
- Yellow bam

Some smokable forms

- Cristy
- Hanyak
- Ice
- L.A. glass
- Quartz

* Amphetamine or methamphetamine

Exhibit 8: Methamphetamine Trends, 1991–1995



About NIJ's Drug Use Forecasting (DUF) Program

The DUF program is a measurement system established in 1987 by NIJ to test booked arrestees for illicit drug use. On a quarterly basis, through anonymous, voluntary interviews and urinalysis, data are collected from adult and juvenile booked arrestees in central lockups in 23 cities across the country. Urinalysis can reveal evidence of recent use of any of 10 illicit substances, including opiates, cocaine, methamphetamine, and marijuana. Response rates are consistently high: more than 90 percent of arrestees agree to the interview, and over 80 percent of these agree to provide a urine specimen. The resultant data are analyzed to furnish estimates of recent drug use in this high-risk subgroup.

DUF data play a key role in helping policymakers, law enforcement professionals, and citizens better understand the Nation's drug problem. The findings are published in the DUF annual report. The most recent annual report is *1995 Drug Use Forecasting: Annual Report on Adult and Juvenile Arrestees*, Research Report, U.S. Department of Justice, National Institute of Justice, June 1996. (NCJ 161721).

The data collected in the DUF program are archived at the Interuniversity Consortium for Political and Social Research, University of Michigan, and are available for use by qualified researchers. Information may be obtained from the ICPSR by calling 800-999-0690 or 313-763-5011.

Notes

1. A precursor drug is one that is necessary in the manufacture of another. Precursor drugs are usually legal but controlled substances.

2. For a more complete list of street names for methamphetamine and other drugs, see *Street Terms: Drugs and the Drug Trade*, Drugs & Crime Data, Office of National Drug Control Policy, Drugs & Crime Clearinghouse, February 1995. (NCJ 151622). Copies can be obtained from the Clearinghouse by calling 800-666-3332.

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Points of view in this document do not necessarily represent the official position or policies of the U.S. Department of Justice.

The National Institute of Justice is a component of the Office of Justice Programs, which also includes the Bureau of Justice Assistance, Bureau of Justice Statistics, Office of Juvenile Justice and Delinquency Prevention, and the Office for Victims of Crime.

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Recent NIJ Publications on Drug Abuse and Crime

Listed below are some recent NIJ publications related to issues of illicit drug use. These publications are free, except as indicated, and can be obtained from the National Criminal Justice Reference Service (NCJRS): telephone 800-851-3420, e-mail askncjrs@ncjrs.org, or write NCJRS, Box 6000, Rockville, MD 20849-6000.

These documents also can be downloaded through the NCJRS Bulletin Board System or at the NCJRS Anonymous FTP site in ASCII or graphic formats. They can be viewed online at the Justice Information Center World Wide Web site. Call NCJRS for more information.

Please do note that when free printed publications are out of stock, they are available as photocopies or through interlibrary loan.

1995 Drug Use Forecasting: Annual Report on Adult and Juvenile Arrestees, NIJ Research Report, 1996, NCJ 161721.

Blumstein, Alfred, Ph.D., *Youth Violence, Guns, and Illicit Drug Markets*, VHS videotape, 1995, NCJ 152235, U.S. \$19, Canada and other foreign countries \$24. Also a brief summary is available at no cost. Ask for FS000129.

Case Management with Drug-Involved Arrestees, NIJ Research Preview, 1996, FS000098.

Chaiken, Marcia R., *The Rise of Crack and Ice: Experiences in Three Locales*, NIJ Research in Brief, 1993, NCJ 139559.

Finn, Peter, *The Manhattan District Attorney's Narcotics Eviction Program*, NIJ Program Focus, 1995, NCJ 153146.

Harrell, Adele, William Adams, and Caterina Gouvis, *Impact of Systemwide Drug Testing in Multnomah County*, NIJ Update, 1995, FS000083.

Inciardi, James A., Ph.D., *A Corrections-Based Continuum of Effective Drug Abuse Treatment*, VHS videotape, 1995, NCJ 152692, U.S. \$19, Canada and other foreign countries \$24. Also a brief summary is available at no cost. Ask for FS000145.

Ireland, Timothy, and Cathy Spatz Widom, *Childhood Victimization and Risk for Alcohol and Drug Arrests*, NIJ Research Preview, 1995, FS000108.

Lipton, Douglas L., *The Effectiveness of Treatment for Drug Abusers under Criminal Justice Supervision*, NIJ Research Report, 1995, NCJ 157642.

Tunis, Sandra, et al., *Evaluation of Drug Treatment in Local Corrections*, Research Report, 1996, NCJ 159313.

Correction Notice

In the *1995 Drug Use Forecasting Annual Report on Adult and Juvenile Arrestees*, published by the National Institute of Justice in June 1996, the data on the front and back covers represent *combined adult and juvenile* arrestees' methamphetamine use. Accordingly, the same data presented in figure 1 of the *DUF Annual Report* (page 12) also represent *combined adult and juvenile* arrestee use. The data in figures 2 and 3 (page 13), also illustrating arrestee methamphetamine use, reflect adults only.

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