U.S. Department of Justice
Office of Justice Programs
National Institute of Justice

METH MATTERS

Report on Methamphetamine Users in Five Western Cities

- Los Angeles
- Phoenix
- Portland
- San Diego
- San Jose

NATIONAL INSTITUTE OF JUSTICE

Research Report

U.S. Department of Justice
Office of Justice Programs
810 Seventh Street N.W.
Washington, DC 20531

Janet Reno
Attorney General
U.S. Department of Justice

Raymond C. Fisher
Associate Attorney General

Laurie Robinson
Assistant Attorney General

Noël Brennan
Deputy Assistant Attorney General

Jeremy Travis
Director, National Institute of Justice

Office of Justice Programs
World Wide Web Site
http://www.ojp.usdoj.gov

National Institute of Justice
World Wide Web Site
http://www.ojp.usdoj.gov/nij

Meth Matters: Report on Methamphetamine Users in Five Western Cities

Susan Pennell, Joe Ellett, Cynthia Rienick, and Jackie Grimes

April 1999
NCJ 176331

NIJ

Jeremy Travis
Director

Jack Riley
Program Monitor

This report was supported under award number 96–IJ–CX–0026 to the San Diego Association of Governments by the National Institute of Justice, Office of Justice Programs, U.S. Department of Justice. Findings and conclusions of the research reported here are those of the authors and do not necessarily reflect 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, the Bureau of Justice Statistics, the Office of Juvenile Justice and Delinquency Prevention, and the Office for Victims of Crime.

Acknowledgments

Many individuals contributed to this project and the San Diego Association of Governments (SANDAG) gratefully recognizes their efforts. We commend Jeremy Travis, Director of the National Institute of Justice (NIJ), for his willingness to provide the resources and thereby acknowledge that drug use is regional and that methamphetamine is a serious problem in parts of the country. Jack Riley, NIJ Program Monitor and Director of the Arrestee Drug Abuse Monitoring (ADAM) program, is appreciated as well for his support and thoughtful comments. Ann Marie Rocheleau of BOTEC Analysis, Inc., assisted in the design of the instrument and the development of questions. The project could not have taken place without the support and cooperation of the following ADAM Site Directors in the participating cities. We are grateful to Doug Anglin and Kiku Annon at UCLA. Diane Wiscarson in Portland and Barbara Zugor in Phoenix provided thoughtful comments during the design of the interview and review of findings. We appreciate the assistance of the following ADAM staff in San Jose: Cathy Casey, Linda Ramus, and Martha Wilson. We also would like to thank the members of the San Diego Meth Advisory Group, individuals who can tell the "meth story" and who helped us interpret our findings. The study would not have been possible without the support and cooperation of the ADAM interviewers; their work is admired and gratefully acknowledged. We also are appreciative of the arrestees who volunteered to share their experiences with meth. Finally, several staff in the SANDAG Criminal Justice Research Division contributed to the preparation and production of this report. Their contributions are significant and worthy of note: Donna Allnutt, Ami Caldwell, Angela Levinson, and Darlanne Hoctor Mulmat.

Susan Pennell, Joe Ellett, Cynthia Rienick, and Jackie Grimes
San Diego Association of Governments

Contents

Map, Tables, and Figures

Map

Tables

Figures

Executive Summary

Background

"Crank," "meth," "shabu," "glass," "shi-shi," "zip," "spoosh," and "load of laundry" are a few of more than 170 slang terms used for methamphetamine as reported by meth users in five western cities. According to one of more than 1,000 arrestees who reported using methamphetamine, "Meth is an equal opportunity destroyer." In February 1998 General Barry R. McCaffrey, Director of the Office of National Drug Control Policy, stated, "Methamphetamine has 'exploded' from 'a West Coast biker drug' into America's heartland and could replace cocaine as the Nation's primary drug threat" (Copely News Service, 1998). Indeed, extensive use of methamphetamine in the United States began in the West and was associated with motorcycle gangs. As early as 1996, however, indicators began emerging of increased methamphetamine manufacturing and trafficking in various locations throughout the country. This shift was attributed to the decline in the cocaine trade and greater interest in methamphetamine by Mexican national drug traffickers familiar with the dynamics of drug markets. In recent years, meth laboratory seizures have increased in areas east of the Rocky Mountains, along with parallel increases in overdose deaths and treatment admissions related to methamphetamine abuse (Drug Enforcement Administration, 1996; National Institute of Justice, 1998). This diffusion suggested the need to explore the dynamics of meth production, distribution, and use.

This study, supported by the National Institute of Justice (NIJ) and conducted by the Criminal Justice Research Division of the San Diego Association of Governments (SANDAG), used the Arrestee Drug Abuse Monitoring (ADAM) program to document methamphetamine use and its consequences among arrestees. The ADAM program is operational in 35 U.S. cities and also includes sites in Australia and England. The program began in 1987 to monitor drug use trends among offenders and identify potential drug epidemics. The interview obtains sociodemographic information about arrestees and solicits information about their current and historical drug use and drug treatment experience. Participants are asked to volunteer a confidential urine sample for analysis.

The ADAM process also has been used as a research platform to address additional issues in depth with the offender population. For example, patterns of cocaine and heroin use in six ADAM sites have been explored with an addendum to the ADAM interview (Riley, 1997). Answers to questions about the possession and use of illegal firearms have been examined in 11 ADAM sites (Decker et al., 1997).

Within this context, SANDAG researchers sought to learn more about the patterns of methamphetamine use and its consequences among a high-risk population of arrestees. In addition to a comparison across five sites, the analyses compared the results to other studies about drug abusers (Riley, 1997) and contrasted meth users with other ADAM arrestees. The results suggest that the production of meth, the profile of meth users, and the dynamics of the drug market warrant different enforcement and treatment approaches. Regional differences indicate that strategies must be tailored to communities.

This summary describes the results of interviews with persons arrested and booked into detention facilities in five cities: Los Angeles, San Diego,

and San Jose in California; Phoenix, Arizona; and Portland, Oregon. All of those interviewed reported using methamphetamine within 30 days of the time of the interview. Interviews were conducted in four ADAM quarterly periods, from October 1996 through September 1997.

What Is Methamphetamine?

Amphetamine is a sympathomimetic drug that alleviates fatigue and produces feelings of mental alertness and well-being. Chemically similar to adrenaline, a hormone produced by the adrenal gland, sympathomimetic drugs stimulate the sympathetic nervous system (part of the autonomic nervous system that is responsible for controlling bodily functions that are not consciously directed) and the central nervous system (the brain and spinal cord). Methamphetamine, or meth, represents the most widely used amphetamine. A form of methamphetamine also is found in some cold medicines. Similar to cocaine, both the rush and the high are believed to result from the release of high levels of dopamine into areas of the brain that regulate pleasure. However, unlike cocaine, meth is not metabolized to the same extent, and a larger percentage of the drug remains unchanged in the user's body. Because tolerance is developed so quickly, users are more likely to indulge in a "binge and crash" pattern in an attempt to maintain the original high, despite the fact that high concentrations remain in the body (National Institute on Drug Abuse, 1998).

Why Is Meth a Concern?

Certain aspects of the manufacturing, trafficking, and use of methamphetamine have consequences and ramifications quite different from those of other illegal drugs. These differences have implications for targeting law enforcement and for developing effective drug treatment strategies. Meth is homegrown in the United States and easy to make, and most of the chemicals in its recipe can be obtained with little difficulty. The consequences of manufacturing meth are far reaching: The volatile chemicals can explode when the ingredients are cooking. The invisible vapors that emanate from cooking meth create health problems for people living in the area. The waste and residue remaining from meth cooking are harmful to the environment. (Locations in which meth cookers have operated must be stripped and fumigated before future habitation occurs.) Chronic meth users lose control over their meth use as the drug twists their brain chemistry and nerve endings die due to the lack of oxygen, creating sensations like bugs crawling under the skin.

As with any drug that can be injected, there is the potential for transmission of hepatitis and HIV (Lucas, 1997). In the extreme, meth use has been associated with violent and destructive behavior, including the individual in San Diego, California, who commandeered an army tank and wreaked havoc on people and property before being shot by police in May 1997. This individual was an acknowledged methamphetamine user (*San Diego Union-Tribune*, 1998).

The dire and dangerous consequences of meth use present challenges for policymakers, educators, law enforcement agents, treatment providers, and families everywhere. The following discussion presents results of interviews with more than 1,000 meth users who participated in the ADAM program and responded to a series of questions regarding use of methamphetamine, drug market dynamics, and manufacturing of meth. It is hoped that these findings will be helpful to communities where meth use may be emerging so that appropriate prevention, enforcement, and treatment strategies can be implemented and targeted appropriately.

Study Findings

Who Is Using Meth?

In the early 1990s on the west coast, meth users were primarily white males and females in their early twenties. The majority of meth users in this study also were white, ranging from 54 percent in San Jose to 94 percent in Portland.

However, there were variations across sites. In recent years, the ADAM sites have seen an increase in the proportion of Hispanics testing positive for meth. For example, in Los Angeles, Hispanics represented 57 percent of the meth users. Meth use by blacks was relatively low based on urinalysis results, ranging from 1 percent in Phoenix to 11 percent in San Diego. One-third of the adult meth users were women. The average age of meth users was 30, slightly younger than the age of cocaine and heroin users in the Riley study (Riley, 1997). Of the 270 juvenile users in the five cities, Hispanics constituted the largest ethnic category (47 percent) followed by whites (41 percent).

Arrest Charge

About 40 percent of the adult meth users were charged with a drug or alcohol violation. About 25 percent were booked for a property offense, and 16 percent were arrested for violent behavior. The proportion of offenders with charges involving violence ranged from 8 percent in Phoenix to 35 percent in Los Angeles. Nonmeth arrestees were significantly more likely to be arrested for a violent offense, contrary to a common perception that associates meth use with violent behavior. However, meth users were more likely than other arrestees to have been both arrested and incarcerated previously.

Of the 929 adult meth users, 15 percent reported having possessed a gun within 30 days of the interview. This is similar to the firearm study conducted by Decker et al. (1997), in which 14 percent of arrestees in 11 sites reported gun possession. In Los Angeles and Phoenix, nearly 25 percent of the sample reported having had a gun. For the juvenile meth users, one in five reported firearm possession.

Drug Use Patterns

Meth users had higher rates of overall drug use than did the total sample of ADAM arrestees. For the 12-month period in which interviews were conducted, significantly more than half (65 percent) of the ADAM arrestees had positive urinalysis results for some illegal drug, ranging from 53 percent in San Jose to 74 percent in Portland and San Diego. For the meth users, proportionate usage ranged from 80 percent positive for any drug in Phoenix to 95 percent in San Diego. A high proportion of meth users in all sites also tested positive for marijuana. In Los Angeles, 30 percent of the meth users also showed recent use of cocaine, as did 25 percent of those in Portland. Compared with other ADAM arrestees, meth users were significantly more likely to show recent use of multiple drugs.

Initiation of Meth Use. Ten percent of the meth users indicated that they were introduced to meth by their parents or other family members. Most began using meth with their peers to experiment, get more energy, and get high. For meth users who had used cocaine, 64 percent indicated a preference for meth because the high lasts longer, is less expensive, and has fewer side effects. The relative lack of side effects is a misperception of new users and contradicts what arrestees reported about the consequences of meth use, which included sleeplessness, weight loss, dental problems, skin problems, violent behavior, paranoia, and social and financial problems. The consequences of methamphetamine use are consistent with the medical literature, which links the changes in the brain chemistry to effects in the central nervous system (Leshner, 1998; Stalcup, 1998). Route of administration of a drug is of interest because it suggests the intensity of use. Almost one-half of the meth users in this study (46 percent) snorted or inhaled meth and about one-third (31 percent) preferred smoking. Portland users were far more likely to inject meth (49 percent). Juvenile users overall were more likely to smoke meth (50 percent). Both injecting and smoking result in the drug getting to the brain more quickly. Arrestees used meth on average from 10.4 days in the month prior to the interview in San Jose to 15.8 days in Phoenix. Bingeing, or consecutive "runs" of use, is common among meth users.

Consecutive days of use ranged from 7.6 days in Portland to 11.7 days in Phoenix. About one in four users stated that they use meth four or more times in a typical day.

Treatment Experience. Despite the problems or consequences of meth use reported by meth users, only 28 percent have ever tried to get treatment. When asked why they had not tried to get treatment, the most common response was that they did not need it because they had control over their drug use. This perception is particularly dangerous because the crossover from initial use to loss of control is rapid for meth users, and generally they have lost control long before they can acknowledge it (Stalcup, 1998). This attitude of denial makes it difficult to convince meth abusers to enter and stay in treatment.

Drug Market Dynamics

Features of the meth market suggest that meth trafficking patterns differ from those of other illegal drugs in ways that warrant different law enforcement approaches to address meth: Most meth users report having a main source from whom they obtain the drug. Generally, meth is bought at a residence. The majority of meth users report never having bought from someone they did not know. These findings suggest a more closed market, compared with other drugs. In the cocaine study, less than 50 percent of the cocaine and crack users reported having a main source (Riley, 1997). Meth was widely available in the five cities during the course of the study, with 72 percent of the users stating they could not remember a time when they wanted meth but could not get it. A small percentage of users could not get meth in the past month primarily for these reasons: The dealer was not available, the dealer was out of meth, and police activity was intense. None of the users mentioned that the dealer was charging too much, which was one reason provided in the cocaine and heroin study. Price and purity are additional indicators of drug availability. In the study period (October 1996 through September 1997), almost one-half of the meth users (48 percent) thought the price of meth was the same as the year before.

Across sites, increases in price were noted by a range of 11 percent of the meth users in San Jose to 25 percent in San Diego. The increase in the use of additives to process meth may be associated with the finding that 47 percent of the users reported the quality of meth to be worse than 1 year earlier. Average price paid for meth in their last purchase was $40.

Drug Dealing. About one-third of all the meth users reported having been engaged in some illegal drug activity besides use, with selling drugs the most typical activity. About 4 in 10 juveniles reported dealing drugs. Variation across sites became apparent as the drug-related activities escalated from selling to increased involvement in manufacturing and trafficking. For example, 19 percent reported that they cut or packaged meth, but the range was from *none* in Los Angeles to 23 percent in San Diego. With respect to getting chemicals or equipment to make meth, 9 percent of the sample reported participating in this activity. Across sites, the response ranged from *none* in Los Angeles to 17 percent in Portland. Two percent of the users in San Diego reported that they make meth, compared with 9 percent in Portland. These findings suggest that manufacturing and distribution sites for meth may not coincide with locations that have a high number of users. For example, the St. Louis ADAM site shows minimal use of meth among arrestees, but other indicators, such as meth lab seizures, are increasing in Missouri.

Drug Dealers. A series of questions was asked of the 231 individuals who admitted to selling meth. Almost one-half of the sample had been selling meth prior to 1991. They started dealing to make money and to support their meth addiction. Of those who reported making a profit from selling meth, a significant proportion had made $800 and more in the previous month. One-quarter of the dealers reported that they sold meth outside the county in which they lived, and

11 percent said they sold outside the State in which they lived. The States mentioned most frequently by those 30 dealers included Arizona, New York, Texas, Nevada, California, Oklahoma, and Washington. An additional 4 percent reported selling outside the country, with the majority selling to individuals in Mexico.

Perception of Risk of Dealing. Meth users were asked if they worried about the risks of selling drugs. More than half feared "getting busted" or being arrested (60 percent). About one-quarter had no worries, and 16 percent feared "getting robbed" by drug users or other dealers. With respect to precautions taken to reduce their risk, one-half stated that they sell only to people they know. About one in five said they carry a weapon. Other cautionary measures include delivering directly to the customer, not carrying a lot of drugs or money, and not letting the customer come to the dealer's residence. The meth dealers in the ADAM sample appeared to be low- to mid-level street dealers who demonstrated a long history of selling drugs to support a drug habit. High-level traffickers may not be as revealing in an interview in a detention facility, and higher level dealers may be arrested by Federal agents and taken to Federal corrections centers rather than local jails.

Meth Cookers. Twenty-seven adult meth users also admitted to making meth and responded to a number of questions about how they learned to cook it and the chemicals and cooking methods they used. Most acquired the recipe from friends, and three individuals said their parents taught them. Most cooked meth at a residence, although some also made it in open fields in rural areas. Meth cookers indicated that it has become more difficult to obtain some of the chemicals needed to make meth. The most common ingredients are ephedrine, pseudoephedrine, red phosphorus, hydrochloric acid, iodine, Freon™, and tablets purchased commercially. Other chemicals mentioned were ether, lye, hydriodic acid, chloroform, Drano™, lighter fluid, Coleman™ fuel, rock salt, dry ice, and propane. In its purest form, meth is odorless and colorless. The cookers get their chemicals from other individuals, retail stores, and mail order catalogs. Most cookers used the flash method of cooking or pressure cookers. A new method is "dry cooking," which is particularly disturbing because it does not result in the suspicious odor that emanates from traditional cooking methods. Meth cookers who were interviewed showed little regard for the environment; most take little care when disposing of the residue from meth cooking and tend to pour it down the drain or dump it in the dirt.

Strategies to Address Manufacturing and Use of Methamphetamine

In those cities, such as San Diego, with a long history or recent surge of meth use, efforts have been made to curb the rise in manufacturing, trafficking, and using meth. Some of the strategies include:

- Enacting ordinances to regulate the sale of precursor chemicals.
- Educating and informing the public about the dangers and consequences of meth use.
- Training professionals in various disciplines (e.g., social workers and educators) to identify meth users and clandestine laboratories.
- Compiling indicators of meth use from a variety of sources so that resources can be targeted appropriately to prevention, enforcement, and treatment efforts.
- Expanding treatment capacity.
- Supporting legislation that increases penalties for meth manufacturing and trafficking.

Although this study includes only arrestees in five western cities who reported using meth, other indicators suggest that meth use is increasing well beyond the offender community. Its uniqueness lies in these facts: It can be made in the United States, the effects of meth on human brain chemistry are profound, and the chemicals used to make it are highly volatile.

The Federal Government has acknowledged the spread of meth in other areas of the country and responded by appropriating funds to address meth use before it becomes a national epidemic.

The findings presented in this study suggest that the production and use patterns of meth are different from those of other illegal drugs. These differences have policy implications for prevention, intervention, and control strategies. A few of these are highlighted.

- The public must be informed about the effects and consequences of meth production and use. The national campaign against drugs must incorporate information about meth.
- Law enforcement agencies need resources and training to identify and contain meth labs. The dynamics of the meth market warrant different enforcement tactics from those used against open-air drug markets.
- Individuals addicted to meth may need to be engaged in treatment in a different manner from that used for other drug users to encourage retention.

Introduction

Methamphetamine has "exploded" from "a West Coast biker drug" into America's heartland and could replace cocaine as the Nation's primary drug threat.

Barry R. McCaffrey
San Diego Union-Tribune
February 12, 1998

Certain aspects of the manufacturing, trafficking, and using of the illegal drug methamphetamine (meth) have consequences and ramifications that are quite different from those of other illegal drugs. These differences have implications for targeting law enforcement and for developing effective drug treatment strategies. Meth is homegrown in the U.S. and easy to make, and most of the chemicals in its recipe can be obtained with little difficulty. The consequences of manufacturing meth are far reaching: The volatile chemicals can explode when the ingredients are cooking. The invisible vapors that emanate from cooking meth create health problems for people living in the area. The waste and residue from cooking meth are harmful to the environment. Locations in which meth cookers have operated must be stripped and fumigated before future habitation occurs. Finally chronic meth users lose control over their meth use as the drug twists their brain chemistry and the nerve endings die due to lack of oxygen, creating sensations like bugs crawling under the skin.

The consequences of meth use present challenges for policymakers, educators, law enforcement, and treatment providers. This report increases our knowledge about a specific population of meth users: arrestees. The discussion includes a review of the current literature about methamphetamine. Findings from a study sponsored by the National Institute of Justice (NIJ) are then presented. The Criminal Justice Research Division of the San Diego Association of Governments (SANDAG) conducted this research with the assistance of administrators from other cities that are part of the Arrestee Drug Abuse Monitoring (ADAM) program.

In 1996 indicators began emerging of increased methamphetamine manufacturing and trafficking in various locations throughout the country. On the west coast, this increase was actually a resurgence from the late 1980s and early 1990s. Law enforcement experience suggested that the meth market, historically initiated by white motorcycle groups, was shifting—with more interest by Mexican nationals and drug traffickers familiar with the dynamics of drug markets. As a result of this shift, meth was appearing in laboratory seizure data and drug treatment admission indicators east of the Rocky mountains (Center for Substance Abuse Research, 1997; National Institute of Justice, 1998).

Also in 1996 SANDAG received funding support from NIJ to conduct a methamphetamine addendum to NIJ's ADAM program. The purposes of the meth study were to explore patterns of meth use and dynamics of the meth market.

The project used data from the ADAM program (formerly the Drug Use Forecasting (DUF) program) in which recently booked arrestees in detention facilities across the country participate in interviews about their drug use and voluntarily provide a urine sample for analysis. Other data collected include sociodemographic information, employment status, educational level, living situation, prior criminal history, and drug treatment experiences. The ADAM program provides an opportunity to monitor the drug use of a high-risk population over time. It also identifies potential

drug epidemics that have not yet reached the general population. In addition, the ADAM program allows for a research platform in which the arrestee population data can be used to address other issues of public policy.

San Diego has been an ADAM site since 1987 and has initiated and participated in several study addenda (Pennell, 1990; Decker, Pennell, and Caldwell, 1997). The meth addendum was patterned after another study that examined heroin and cocaine markets in six cities. BOTEC Analysis, Inc., developed the interview and conducted the research in which the San Diego site participated (Riley, 1997).

Prior to a discussion of findings, the following section describes the history of methamphetamine use, various indicators of use, and the physiological and environmental consequences of chronic meth use.

Nature, Uses, and Effects of Methamphetamine

History of Methamphetamine

Methamphetamine, a derivative of amphetamine, was first developed in 1919 by a pharmacologist in Japan. By the early 1930s, methamphetamine began to be used therapeutically when it was found to be useful in treating asthma and an epileptic seizure disorder called narcolepsy (a disorder in which the patient repeatedly lapses into sleep) (Julien, 1985). More recently, the drug and its derivatives have also been used as appetite suppressants and in treating certain attention deficit disorders in children.

In the United States, the original manufacturers, or "cookers," of the drug illicitly were members of motorcycle gangs and other individuals who made it for themselves and their friends. In recent years, manufacturing by the Mexican drug cartels has supplemented domestic production (Smith, n.d.). To illustrate, 795 *kilograms* of methamphetamine were seized along the Southwest border in 1996; only 6.5 *grams* had been seized 4 years earlier in 1992 (National Narcotics Intelligence Consumers Committee, 1997). Because ephedrine (a key ingredient in the manufacturing process) is not regulated in Mexico and these groups are already familiar with the trade of other illicit drugs, the addition of methamphetamine to their operations was relatively easy. These conditions possibly contributed to more widespread use by individuals outside the western regions of the United States (Lucas, 1997).

As early as 1983, illicit methamphetamine production in California was noted as a significant problem that warranted considerable attention from law enforcement agencies (Bureau of Narcotic Enforcement, 1996). Since that time various strategies have been implemented to control the use of this substance, including targeting clandestine laboratories and enacting legislation to make the production more difficult. The Comprehensive Methamphetamine Control Act of 1996 cracked down on the mail order industry and chemical supply companies and increased the penalties for such crimes as possession, trafficking, and manufacturing of precursor chemicals and paraphernalia. In addition, the act permitted the government to seek a civil penalty of up to $250,000 for the sale of laboratory supplies to a person who uses them to manufacture a controlled substance when the sale is in "reckless disregard" of potential illicit use. At the local level, a number of counties and cities in California have considered measures to ban large purchases of over-the-counter cold medicines that contain pseudoephedrine, a potential precursor chemical for meth production (Winton and Riccardi, 1998).

What Is Methamphetamine?

Amphetamine is a sympathomimetic drug that alleviates fatigue and produces feelings of mental alertness and well-being. Chemically similar to adrenaline, a hormone produced by the adrenal gland, sympathomimetic drugs stimulate the sympathetic nervous system (part of the autonomic nervous system that is responsible for controlling bodily functions that are not consciously directed) and the central nervous system (the brain and spinal cord). Methamphetamine, is the most widely abused amphetamine and, along with other amphetamines, has been categorized as a Schedule II stimulant since 1971 because of its high potential for abuse (Feucht and Kyle, 1996). Street names for meth include "boo," "chicken feed," "geep," "spoosh," "load of laundry," "tick tick," "scootie," "jet fuel," "wake me up," "lemon drop," "trash," and

"schmiz," according to interviews with meth users.

Three types of methamphetamine, a synthetic drug, are currently produced. These types vary in strength, how they are produced, and severity of adverse effects associated with their use. Dextro-meth, or d-meth, is the most commonly abused type, largely because it is more pure than the other types, it does not have to be injected, and it produces no unwanted side effects such as shakes, stomach cramps, and tremors. Levo-meth, or l-meth, is the least abused of the three. This form of meth, which is typically found in cold medicines, has a greater effect on the cardiovascular, or circulatory, system (the heart and the network of blood vessels) than on the central nervous system. This means that negative side effects precede any pleasurable effects the user may be seeking. Dextro-levo meth, or dl-meth, is produced by the phenyl-2-propanone (P2P) method. This type of meth is less attractive to producers because the manufacturing process is more difficult, and it is less attractive to users because of its lower potency and greater number of severe negative side effects.

Methamphetamine Production

Labs that produce methamphetamine are located in both the United States and Mexico. Typically, Mexican labs are larger and more secure than their U.S. counterparts and produce greater quantities of the drug. Clandestine labs in the United States are often set up in residences, motels, trailers, public storage lockers, and vans (Johnson, 1997). In 1996, 52 percent of the labs seized by the Drug Enforcement Administration (DEA) were in urban or suburban sites, and 38 percent were in rural areas. In addition, it is fairly common for these labs to produce meth on an irregular basis and to move periodically from one location to another to avoid detection (National Narcotics Intelligence Consumers Committee, 1997).

California continues to lead the Nation in the number of labs seized, with 1,234 targeted in 1997. During the same year, DEA seized 1,273 methamphetamine labs nationwide, up from 879 in 1996. In addition, a significantly greater number of labs also were seized in the Midwestern States of Arkansas, Kansas, Missouri, and Oklahoma (California Border Alliance Group, 1998). As a result of these investigations, officials have noted disturbing trends, including an increase in the size and production capabilities of labs, and lab operators who are more willing to act violently. For instance, a number of recently discovered labs were equipped with scanning devices and booby-trapped (National Narcotics Intelligence Consumers Committee, 1997).

Methamphetamine can be produced in a variety of ways, using several types of chemicals. Since the beginning of the 1990s, the use of P2P to produce methamphetamine has increasingly been replaced by the ephedrine reduction method. Of the 32 chemicals that can be used to make methamphetamine, one-third are extremely hazardous and almost all are easily obtained through commercial sources or by clandestine production (McCrea and Kolbye, 1995). The purity of the drug varies from 20 to 90 percent across west coast cities, and prices range from $50 to $80 per gram (Office of National Drug Control Policy, 1997).

Ephedrine, which is either derived from the ephedra plant or made synthetically, was first used by the Chinese approximately 5,000 years ago. Ephedrine is the most important ingredient in the ephedrine-reduction method because it is just one step away from the final product. Specifically, ephedrine is chemically identical to meth except that it has one additional atom of oxygen, which can be removed by combining it with hydriodic acid. In the United States, ephedrine is currently controlled by Federal regulations, and individuals must register to sell it, maintain records of all sales, and report "suspicious" purchases (Smith, n.d.). However, international regulations do not exist, and a number of Mexican organizations may establish front businesses (e.g., auto body and paint shops and swimming pool service

companies) that require the use of large quantities of precursor chemicals and may then import them from such countries as China (Office of National Drug Control Policy, 1997). In addition, demonstrating their resourcefulness in obtaining precursor chemicals, other labs have resorted to using pseudoephedrine, which is used in over-the-counter cold medicines, as a substitute.

In the first phase of methamphetamine production, ephedrine is combined with red phosphorous and hydriodic acid. Red phosphorous, which is considered one of the most dangerous chemicals used in meth production, can be obtained from computer chips, flares, match sticks, and fireworks. It burns or turns into phosphine gas, a World War I nerve agent (Smith, n.d.). During the second stage of production, sodium hydroxide is added to convert the acidic mixture to a basic one, and Freon™ is used to extract the d-meth from it. The sodium hydroxide creates most of the waste material left at a production site. Finally, when treated with hydrogen chloride gas, the liquid d-meth converts into a white crystalline powder (McCrea and Kolbye, 1995).

Another method of production that has become more common (104 of the labs seized in 1996 used this method, up from 5 labs in 1995) is called the "Nazi method," or "dry cook." This technique, which uses ephedrine or pseudoephredine, sodium or lithium, and anhydrous ammonia, is growing in popularity because it is quick and inexpensive, requires little setup time or equipment, and produces a high yield of the drug (National Narcotics Intelligence Consumers Committee, 1997).

Methamphetamine Use

Methamphetamine can be smoked, snorted, orally ingested, or injected. Other forms of methamphetamine include a "meth speedball" (a combination of methamphetamine and heroin), "hot rolling" (liquefying methamphetamine in an eye dropper and inhaling the vapors), and "ice" (a crystallized form of methamphetamine that is high in purity).

Consumption preferences seem to vary by region of the country. For example, in Los Angeles, Minneapolis/St. Paul, Phoenix, and some parts of the East and Midwest, snorting is the preferred route of administration. In San Diego the primary route of administration has recently shifted from snorting to smoking. Smoking is the overwhelming choice in Hawaii and injecting is the most common route in Denver, San Francisco, Seattle, and the State of Texas (National Institute on Drug Abuse, 1998a).

Indicators of Methamphetamine Use

Nationally, a variety of measures are used to determine how drug use changes over time for different populations. In general, these statistics show that methamphetamine is most common in Western and Southwestern States and that the apparent decline in use noted a few years ago has most recently been followed by a return to previously higher levels. Following are descriptions of these various measures and the most recent figures on use.

- The **National Household Survey on Drug Abuse** (NHSDA) samples the civilian, noninstitutionalized population of the United States age 12 and older and is primarily used to monitor drug abuse trends in the general population. The NHSDA estimates that in 1997 the number of people who had tried methamphetamine in their lifetime was 5.3 million, or 2.5 percent of the population, a significant increase from 1994 when 1.8 million people were estimated to have tried the drug (Substance Abuse and Mental Health Services Administration, 1998a).
- The **Monitoring the Future Program,** administered by the University of Michigan, annually asks students in the 8th, 10th, and 12th grades about their history of substance use. The most recent statistics (1997) show that 4.4 percent of teens have tried methamphetamine in their lifetime, a significant increase from 3.3 percent in 1991 (Institute for Social Research, 1998).

- The **Treatment Episode Data Set** (TEDS) is collected by the Substance Abuse and Mental Health Services Administration (SAMHSA) and includes drug use profiles of clients who enter treatment facilities that receive public funding. According to TEDS, an increasing number of individuals are seeking drug treatment for meth use. For example, in San Diego clients admitted for primary stimulant abuse are the largest group in treatment (37 percent), and in other areas they nearly equal primary marijuana admissions (Hawaii) and heroin admissions (Arizona) (National Institute on Drug Abuse, 1998a).
- The **Arrestee Drug Abuse Monitoring** (ADAM) program, funded by NIJ, collects drug urinalysis and self-reported drug use information from adult and juvenile arrestees. Between 1994 and 1996, the rates of methamphetamine use in a number of cities that had previously reported increases had decreased. However, in 1997 these numbers had almost returned to their 1994 high for each city, with the exception of Los Angeles (National Institute of Justice, 1998).
- The **Drug Abuse Warning Network** (DAWN) collects information on drug-related episodes from hospital emergency departments in 21 metropolitan areas. DAWN data show that the 261-percent increase in methamphetamine-related episodes nationally between 1991 and 1994 (from 4,900 to 17,700) was followed by a 39-percent decrease between 1994 and 1996. However, there was an increase of 70 percent between the first and second half of 1996 (from 4,000 to 6,800) (Substance Abuse and Mental Health Services Administration, 1998b).

At the 44th meeting of the Community Epidemiology Work Group (CEWG) in June 1998, 21 representatives from around the country presented the most recent information available regarding drug trends and patterns in their communities. While approximately half of these areas had not noticed widespread or increased use of methamphetamine (Atlanta, Baltimore, Boston, Chicago, Miami, Newark, New Orleans, New York, Philadelphia, and Washington, D.C.), the other half had. The following information, compiled from the proceedings of this and the previous meetings (National Institute on Drug Abuse, 1998a; Community Epidemiology Work Group, 1998) and the most recently available ADAM data (National Institute of Justice, 1998), indicates how meth use varies across the country in these sites:

- **Dallas, Texas:** DEA agents seized seventy-seven labs in Dallas in 1996. In 1997, 3 percent of both male and female arrestees tested positive for methamphetamine and 6 and 7 percent, respectively, had previously injected it.
- **Denver, Colorado:** Between 1991 and 1997, methamphetamine use steadily increased in Denver, with a number of individuals using the drug concurrently or sequentially with crack. In 1996 there were 106 emergency room mentions of methamphetamine, up from 31 in 1992 and down from 193 in 1995. Additionally, the proportion of methamphetamine treatment admissions more than quadrupled, with 1,651 methamphetamine abusers entering treatment in 1997. Although injection remains the most common route of administration, an increasing number of users are reporting a preference for smoking the drug. Overall, females accounted for 48 percent of primary methamphetamine admissions in 1997, but constituted 82 percent of those 18 and younger using meth. As a result of recent regulations, red phosphorus has become more difficult to acquire, which has led to an increase in home-based production of a less potent form of the drug, “bathtub crank,” that cannot be injected. In 1996, 88 methamphetamine labs were seized in Denver where meth sold at $25 per one-quarter gram. Five percent of both male and female arrestees tested positive for methamphetamine in 1997.
- **Honolulu, Hawaii:** Crystal methamphetamine remains the drug of choice in the island chain. In 1997 methamphetamine treatment admissions increased 48 percent over 1996 and the number of methamphetamine cases reported by police departments also increased.

- **Los Angeles, California:** In 1996 there were 15 emergency department methamphetamine mentions and 52 labs were seized by DEA agents in Los Angeles. In 1997, 45 percent of methamphetamine admissions were female. Also in 1997, 5 percent of male and 9 percent of female arrestees tested positive for methamphetamine; 2 and 6 percent of each group, respectively, reported injecting the drug at least once.
- **Minneapolis/St. Paul, Minnesota:** Treatment admissions in the Minneapolis/St. Paul area more than doubled from 1996 numbers to 586 in 1997. Most of the treatment clients were white and reported sniffing as the primary route of administration. According to local law enforcement, availability and trafficking increased and emergency room mentions increased by 13 percent from 1995 to 1996. It appeared that Mexican nationals were the primary source of the drug, with local production also taking place in rural areas (19 clandestine labs were dismantled by law enforcement agents in Minnesota between January and October 1997). Also, a growing number of teenage girls are using the drug to suppress appetite and control weight. Methamphetamine sold for $100 per gram.
- **Phoenix, Arizona:** Although 1996 indicators suggested that methamphetamine use in Phoenix was declining or stabilizing, the most recent information suggests otherwise. For example, the number of emergency department methamphetamine mentions was the second highest in the Nation (35) and 83 labs were seized by DEA agents in 1996. ADAM data for 1997 show that 16 percent of males, 26 percent of females, and 7 percent of juveniles tested positive for methamphetamine.
- **St. Louis, Missouri:** Since 1995 various indicators have shown that methamphetamine use is increasing in St. Louis. For example, in 1996 treatment admissions for methamphetamine outnumbered heroin admissions, and the midwestern field division of DEA has been overwhelmed with clandestine methamphetamine labs; 292 labs were seized in 1996. Hispanic traffickers are the predominant distributors in this new methamphetamine scene. Women are heavily involved as producers and distributors, and use has become more widespread among high school and college students who do not consider it as dangerous as crack or cocaine. Methamphetamine sold for $37 to $100 per gram. Less than 1 percent of male arrestees and 2 percent of female arrestees tested positive for meth in 1997.
- **San Diego, California:** Following 1995 and 1996 decreases, methamphetamine treatment admissions rose in 1997 to 3,855 and accounted for 37 percent of all admissions in San Diego. Forty-two percent of these individuals reported smoking the drug, 39 percent reported snorting it, and 18 percent said they inject it. Sixty-two overdose deaths were associated with methamphetamine in 1997, the highest ever reported in San Diego. Additionally, there were 26 emergency department methamphetamine mentions in 1997 and 53 labs were seized by DEA agents in 1996. Methamphetamine sold for $50 to $80 per gram, and its purity in 1997 ranged from 20 to 40 percent. Forty percent of male arrestees and 42 percent of female arrestees tested positive for meth in 1997.
- **San Francisco, California:** Use of methamphetamine in the bay area is increasing, especially among young heterosexual whites. For example, 76 percent of the primary methamphetamine treatment admissions in 1997 were male. Injecting was the preferred route of use for more than half of these individuals. At 66, emergency department mentions were highest in San Francisco in 1997. Eighty-seven labs were seized by DEA agents in 1996. Methamphetamine sold for $60 to $100 per gram.
- **Seattle, Washington:** There were 10 emergency department methamphetamine mentions in Seattle in 1996. Prices per gram of methamphetamine varied from $80 to $120, and purity ranged from 35 to 90 percent.

Consequences of Methamphetamine Production and Use

Effects on the User

Methamphetamine is cheaper than cocaine, and because it is resistant to metabolism, the high lasts longer, making it popular among drug users. The effects of methamphetamine depend on who is using it, the route of administration, which chemicals are used, how much is used, and the settings in which it is consumed. Smoking or injecting methamphetamine generally results in a intense rush that lasts a few minutes, while snorting or oral ingestion produces a euphoric high within 5 minutes (for snorting) or 20 minutes (for ingesting) that is less extreme but longer lasting. As with cocaine, both the rush and the high are believed to result from the release of very high levels of the neurotransmitter dopamine into areas of the brain that regulate feelings of pleasure.

Methamphetamine is not metabolized to the same extent as cocaine, and a larger percentage of the drug remains unchanged in the user's body. Specifically, methamphetamine use can result in an 8- to 24-hour high, and 50 percent remains in the user's body 12 hours after consumption. In contrast, cocaine creates a 20- to 30-minute high, and 50 percent of the substance is removed from the body after 1 hour (National Institute on Drug Abuse, n.d.). Because tolerance develops quickly, users are likely to indulge in a "binge-and-crash" pattern in an attempt to maintain the original high, despite the fact that high concentrations of the drug remain in the body (National Institute on Drug Abuse, 1998b). The period of time between when a user binges and comes down is often called "tweaking." Chronic users are typically identifiable as appearing gaunt and having poor hygiene and rotten teeth (Potter, 1996).

In general, the drug has many effects. Users may initially take meth in search of feelings of euphoria, increased energy and self-confidence, and decreased appetite. However, other effects may include paranoia, depression, pupil dilation, tremors, memory loss, insomnia, irritability, a heightened sense of smell, increased sex drive, chest pain, hypothermia, hypertension, convulsions, and heart spasms. Additionally, injection of the drug is associated with increased risk of transmitting hepatitis B and C and HIV. The chemicals used in manufacturing methamphetamine have side effects as well, which include chemical pneumonia, sore throat, throat cancer, fainting, and nausea. Because lead acetate is sometimes used as a reagent in the production process, meth can become contaminated, and lead poisoning may also be a risk (National Institute on Drug Abuse, 1998b).

Long-term and heavy use of meth is often associated with addiction and tendencies toward violence. Abusers often experience delusions, anxiety, confusion, extreme paranoia, drastic mood swings, weight loss, homicidal and suicidal thoughts, and visual and auditory hallucinations. Heavy users have been described as closely resembling paranoid schizophrenics and may frequently carry weapons. Additionally, although users develop tolerance to these behaviors, sensitization (a reaction to multiple exposures that lead to the development of new effects, such as seizures) after one dosage, may also occur. Prolonged use may lead to brain damage or death. Animal studies have shown that a single high dose of the drug can cause nerve damage and that prolonged exposure to low levels can cause damage to 50 percent of the dopamine-producing cells in the brain (National Institute on Drug Abuse, 1998b). In addition, under conditions of unlimited access, animals self-administer methamphetamine until its toxic effects cause death (Lucas, 1997). In a NIDA-supported study, positron emission tomography (PET) scans of a monkey's brain following a 10-day regimen of amphetamine use showed diminished dopamine production that did not begin to return to normal levels until 1 year later; full recovery took almost 2 years (Office of National Drug Control Policy, 1997).

Although no physical manifestations of withdrawal are associated with methamphetamine (National Institute on Drug Abuse, 1998b), users may experience an intense need for the drug, depression, a decline in energy (anergia), and the inability to feel pleasure or interest in life (anhedonia) when they stop using it. In addition to sleeping for long periods of time, the drastic drop in mood can also make the potential for suicide a serious concern. "Ice" users may also have an increased heart rate, blood pressure, and temperature; may be nervous, nauseated, anxious, depressed, and irritable; and may experience hot flashes and mental confusion.

Effects on Infants and Children

Children constitute a growing percentage of the innocent victims of methamphetamine production and use. They are at risk when they are exposed to the drug before birth, they are at an increased risk of child abuse and neglect when their parent or caregiver uses the drug, and they are faced with the potential for physical injury when they live in a residence where the drug is produced.

In Iowa, for example, experts estimate that 4,000 newborns a year, or 10 percent of all newborns, are affected by drugs and that for 90 percent of these, the drug is methamphetamine (Lucas, 1997). Methamphetamine use during pregnancy can adversely affect the fetus through reduced blood flow or direct toxic effects on the developing brain. Specifically, methamphetamine, like cocaine, can rapidly cross the placenta and can result in premature birth, growth retardation, and altered neonatal behavioral patterns, such as abnormal reflexes and extreme irritability. Infants born addicted to the drug may experience physical trembling, have trouble making eye contact, have problems feeding, or become ill from their mother's breast milk. Infants exposed to the drug prenatally are very similar to infants exposed to cocaine, with a few important differences. These include a tendency to sleep very deeply for long periods of time and an aversion to being touched on the hands or feet. Additionally, because the effects of meth are longer lasting on users, they probably are more long lasting on the infants as well. One Swedish study, which followed children exposed prenatally to amphetamines for 16 years, found that, although they scored in the normal range on IQ tests, by the age of 7 or 8, they exhibited higher levels of aggressive behavior, had greater difficulty adjusting to different environments, and had higher rates of school failure than other children (Lucas, 1997).

The dangers of a parent's use also are not limited to prenatal exposure. In Riverside County, California, for example, a 40-year-old mother killed her children, ages 1, 2, and 3, when she was using her kitchen stove to cook meth, and an explosion ensued. Convicted of second degree murder, this case sparked State legislation that increased penalties for the presence of children at meth labs. Specifically, the Fourth District Court of Appeals ruled that manufacturing methamphetamine is an inherently dangerous felony for the purpose of the second degree felony-murder rule that states that any homicide directly caused by the commission of a felony constitutes at least second-degree murder (Manning and Vedder, 1998).

In California, as part of a State-funded project, children discovered in locations in which meth was manufactured are removed from the residence and tested for meth toxicity.

Effects on the Community

Because the chemicals used to make methamphetamine are highly toxic, the presence of clandestine laboratories in a community introduces the risk of toxic gases, fires, and explosions. In rural areas, buried meth waste can contaminate water supplies. In urban areas, meth fumes can travel through central air conditioning units to unsuspecting victims. During raids of clandestine labs, law enforcement officers may be putting themselves at risk of cancer and other chronic conditions that are directly traceable to

the chemicals with which they have come into contact (Green, 1996).

A number of highly volatile chemicals are used during production that pose a potential risk for anyone in the immediate vicinity. In addition, a lack of proper ventilation and temperature control at many locations adds to the potential for fire and explosion. Phosphine gas, which is generated when ephedrine, hydriodic acid, and red phosphorus are cooked dry, is a highly unstable and poisonous gas that is distinctive because of its garlic-like odor. Full-strength hydriodic acid will eat through most commercial containers (Lungren, n.d.). Red phosphorous, in addition to emitting toxic fumes, is highly flammable and will autoignite when combined with water or air and a nearby flame. In fact, various State authorities indicate that as many as one-third of all meth labs catch fire before being discovered (Smith, n.d.).

After a meth lab site has been abandoned, the risk of a chemical fire or explosion remains. For instance, vapors from hydriodic acid that has been allowed to boil out of a reaction vessel can remain in sink traps, open containers, and other equipment. When this vapor meets a spark or flame, a chemical fire results. Similarly, friction alone can ignite red phosphorous, making the dismantling of equipment a dangerous process. Chemical fires have been caused by red phosphorous that had been buried for as long as 10 years (McCrea and Kolbye, 1995).

Finally, waste left at a lab scene or buried also poses a risk to the environment. According to the Center for Substance Abuse Treatment (Lucas, 1997), for every pound of finished product, five to six pounds of chemical waste are left at an illicit lab site. The bulk of this waste is composed of sodium hydroxide solution, which is often discarded in Freon cans. The cost to clean up these chemical toxins can easily run into thousands of dollars per site (Office of National Drug Control Policy, 1997).

Treatment for Methamphetamine Abuse

The California Department of Alcohol and Drug Programs in collaboration with the California Drug and Alcohol Treatment Assessment, or CALDATA, embarked on an ambitious effort to determine the epidemiology of substance abuse and the outcomes of substance abuse treatment. A 1994 report revealed that individuals addicted to stimulants were more likely to receive outpatient treatment and that outpatient treatment was associated with a lower participant dropout rate than other treatment models. Additionally, the average outpatient treatment length was 150 days, with 24 percent remaining in treatment for less than 1 month, 33 percent for 2 to 3 months, and 44 percent for more than 3 months (Gernstein et al., 1994).

Despite the prevalence of methamphetamine abusers in Western States for a number of years, there have been few evaluations of what treatment strategies are most successful for this type of abuse. Rather it appears that until recently, many providers applied their experiences and treatment models for working with cocaine abusers to this population (Huber et al., 1997). A recent comparison between cocaine and methamphetamine abusers who participated between 1988 and 1995 in the MATRIX drug treatment program operating in the Los Angeles area, suggests that this approach may not be totally inappropriate (Huber et al., 1997). Although the authors of this study found that the two populations had significantly different profiles (e.g., methamphetamine users were more likely to be female, Caucasian, single, and unemployed; to be more consistent users; and to have received no previous treatment), the two groups did not differ significantly in the number of treatment hours received, the number of breaks in treatment, the number of weeks in treatment, the number of urine samples given, or the percentage of samples testing positive for the primary drug. Similarly, CALDATA showed that treatment for problems with the major stimulant

drugs, including methamphetamine, was found to be just as effective as treatment for alcohol problems and somewhat more effective than treatment for heroin problems (Gernstein et al., 1994).

In the fall of 1998, SAMHSA announced a $31 million study to test the MATRIX treatment model. The study will compare 16- and 8-week programs in 7 sites to determine if the MATRIX program can be replicated with diverse treatment populations of methamphetamine users (Knopf, 1999).

Study Findings

Methamphetamine Addendum

The meth supplementary interview followed the ADAM (then DUF) protocol and contained 60 questions asked of arrestees who reported using meth in the previous 30 days. Interviews took place over four quarters, beginning in October 1996 and concluding in September 1997. (Meth interviews are still being conducted in San Diego due to the continued high usage rates and interest by policymakers.) Four additional ADAM sites participated in the meth interview based on what appeared to be increasing meth use in their cities: Los Angeles, California, Phoenix, Arizona, Portland, Oregon, and San Jose, California. Interviews were conducted with adults and juveniles. The meth addendum information was merged with the ADAM interview data for a complete profile of the arrestees. The following topic areas were covered in the interview questions:

- Arrestee profile
  - Gender
  - Age
  - Ethnicity
  - Arrest charges
  - Education level
  - Employment sources of income (legal and illegal)
  - Living arrangements
  - Prior criminal history (arrests, convictions, and time served)
- Drug use patterns
  - Urinalysis results
  - Initiation of use
  - Motivation for use
  - Preference of meth over cocaine or crack
  - Route of administration
  - Daily use
  - Duration of use
  - Cessation of use
  - Consequences of use
  - Quantity used
  - Treatment experience
- Drug market dynamics
  - Location of purchase
  - Dealer access and profile
  - Mode of contact
  - Frequency of purchase
  - Availability of meth
  - Quality of meth
  - Price fluctuation
  - Weapon possession and meth use
  - Drug-related activities
- Drug dealing and cooking
  - Length of time selling meth
  - Motivation for dealing
  - Profit from meth
  - Number of individuals sold to
  - Locations sold in
  - Kinds of precautions taken

— Meth cooking
— How learned to cook
— Type of location
— Access to chemicals
— Types of chemicals
— Cooking methods
— Handling of waste materials

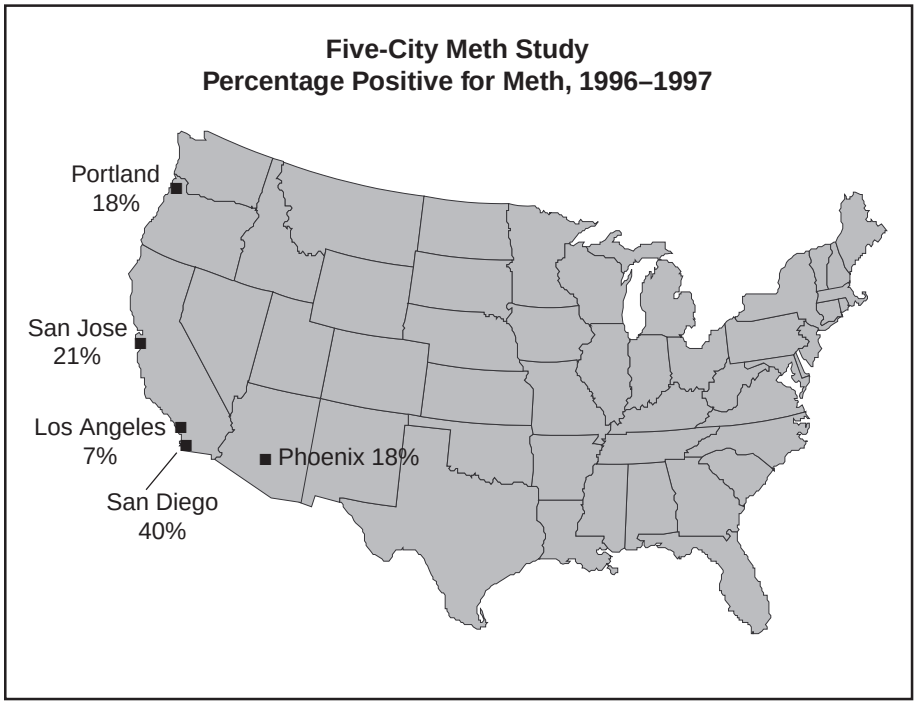
The questions began with meth use. If users admitted also to dealing and/or making meth, they moved to a second and third set of questions. If they did not report selling or cooking meth, the interview was terminated.

Study Methods

In the previous chapter, drug use indicators were summarized for a number of geographical locations. Each data set has limitations with respect to target population, time period, and the behavior or event measured (e.g., emergency room mentions, arrests, seizures, self-reported use, price, and purity). However, taken together, the indicators suggest that meth production, distribution, and use are occurring in a number of locations. The data also point out that drug use and manufacturing require local responses tailored to address the specific nature and scope of drug manufacturing and use in communities.

The data set used in this research has limitations. First, the study took place in locales in which methamphetamine use has been prevalent for some time. Second, the individuals who participated in the study were arrestees booked into local detention facilities. These factors suggest that the characteristics of these drug users may differ from other drug users, thus restricting the generalizability of the findings. Nonetheless, as meth indicators emerge in other areas, the results presented in this study may be of interest to law enforcement and drug treatment providers when they develop strategies to address methamphetamine in their communities.

The primary purpose of this research was to examine the characteristics of meth users and their patterns of drug use and drug market participation. The data collected from interviews permit several levels of comparative analyses. The total population of meth users in the five sites is compared, when appropriate, with another study of cocaine and heroin users in six cities. That research, supported by the National Institute of Justice and the Office of National Drug Control Policy, provided the foundation for the current study of meth users by addressing characteristics of users, patterns of use, and procurement activities within the ADAM population of arrestees (Riley, 1997). Two sites in the current meth study, Portland (Oregon) and San Diego, also participated in the cocaine and heroin procurement study.



The primary analysis of meth users is the across-site comparison, which highlights similarities and differences. The meth users also are compared with ADAM

arrestees in the five-site data set, suggesting diversity with regard to user characteristics as well as drug use patterns.

The results of the adult interviews are presented separately from the juvenile data set. Although 33 percent of all meth users were adult females, the analyses combine males and females. Our initial analysis of female meth users demonstrated that they were similar to females in the larger ADAM data set in that their drug use was proportionately higher than their male counterparts, as evidenced by urinalysis results. With the exception of marijuana, ADAM female arrestees generally had higher rates of positive drug tests (National Institute of Justice, 1998). Female meth users were also similar to other female drug users in that they were more likely than males to report drug dependency, less likely than males to be arrested for a violent offense, and more likely than males to report initial drug use at later ages.

There were 929 completed interviews across sites with arrestees who self-reported using meth in the month prior to the interview. The number of interviews represented 13 percent of the total 7,355 ADAM interviews in the 5 sites. The percentage of adult meth interviews of overall ADAM interviews ranged from 3 percent in Los Angeles (46) to 31 percent in San Diego (393) (table 1). (The meth interview totals constitute all completed interviews, regardless of whether a urine sample was collected. Data from the ADAM interview represent **only** those meth users who provided urine samples. This is the reason for different totals for certain variables.)

ADAM sites overall have high response rates to requests for voluntary urine samples. This was true for the five study sites as well for more than 90 percent of arrestees who agreed to provide urine samples. There was no difference between self-reported meth users and other ADAM arrestees with regard to provision of the sample.

Table 1. Number of Meth Interviews and Percentage of All ADAM Interviews, by Site
ADAM Adult Meth Users, 1996–1997

	Los Angeles	Phoenix	Portland	San Diego	San Jose	Total
Meth Interviews	46	162	148	393	180	929
ADAM Interviews	1,539	1,600	1,630	1,287	1,299	7,355
Percentage of ADAM Interviews	3	10	9	31	14	13

Table 2. Number of Arrestees Interviewed and Percentage Who Provided Urine Sample
ADAM Adult Arrestees and Meth Users, 1996–1997

	ADAM Arrestees		Meth Users	
	Interviewed	Provided Urine Sample (%)	Interviewed	Provided Urine Sample (%)
Los Angeles	1,539	97	46	100
Phoenix	1,600	99	162	99
Portland	1,630	85	148	85
San Diego	1,287	88	393	89
San Jose	1,299	93	180	93
Total	**7,355**	**92**	**929**	**91**

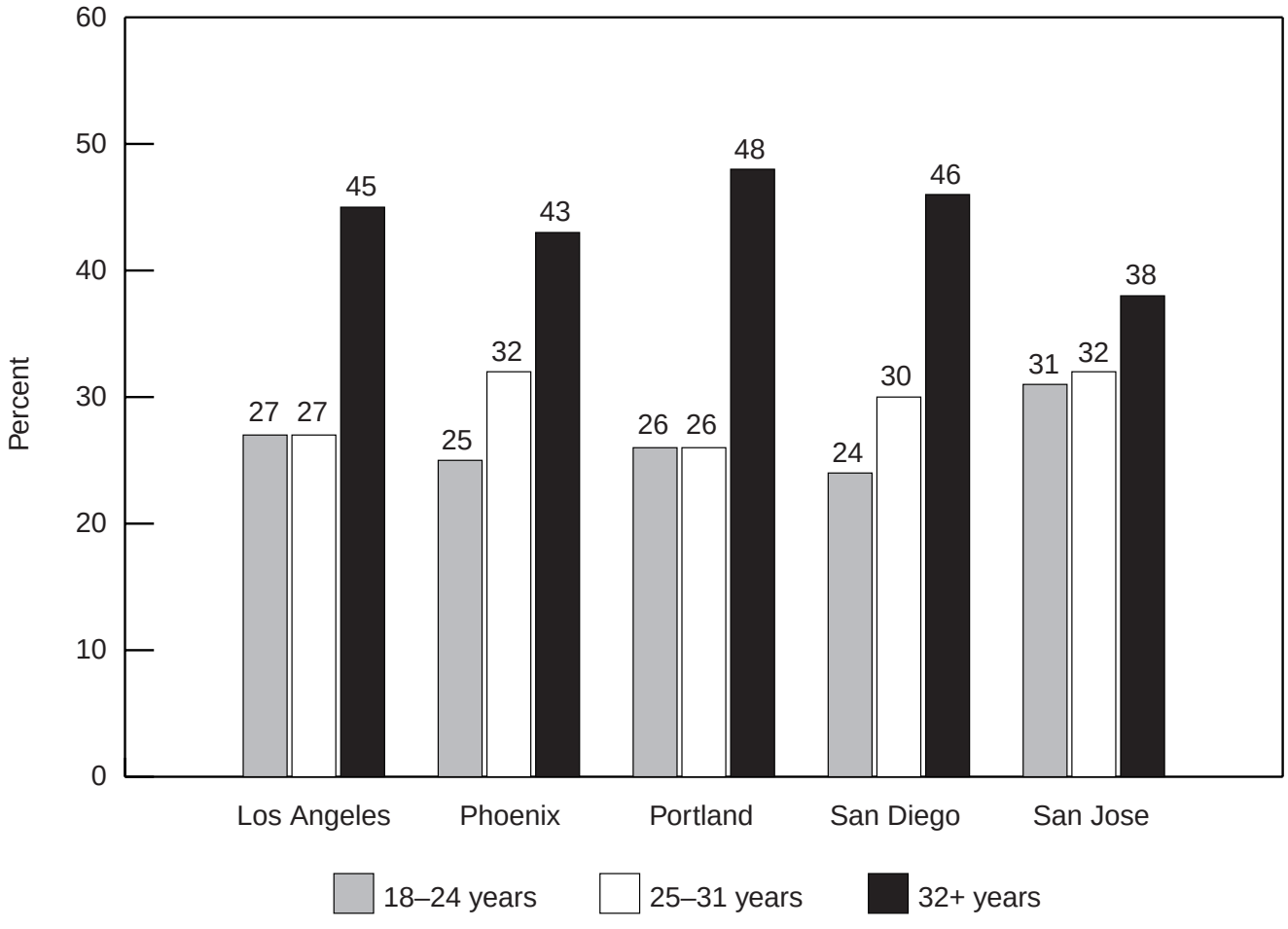
Very slight differences were noted across sites but not within sites. That is, the proportion agreeing to give urine samples was similar for ADAM arrestees and meth users, but some sites had slightly lower rates of volunteerism (for example, 85 percent in Portland versus 99 percent in Phoenix) (table 2).

User Profiles

Age

More than 40 percent of all meth users were age 32 or older, with a mean age of 30.2. This finding is not remarkable given that the arrestee population is aging along with the general adult population. Los Angeles and San Jose had slightly lower average ages of 28.8 and 29.1, respectively. This is consistent with the proportion of Hispanic meth users in Los Angeles. Census information suggests that the Hispanic general population is younger than the median age of the general population (age 26 compared with age 35) (U.S. Bureau of the Census, 1998). A recent NIJ report on heroin, cocaine, and crack suggests slightly older users of other types of drugs. For example, Portland arrestees who used both heroin and crack had median ages of 37.8. The same variable for San Diego users was age 33.6 for heroin and crack users. As the author of that report suggests, age has practical significance with respect to initiation rates (Riley, 1997). (See figure 1 for age of meth users by site.)

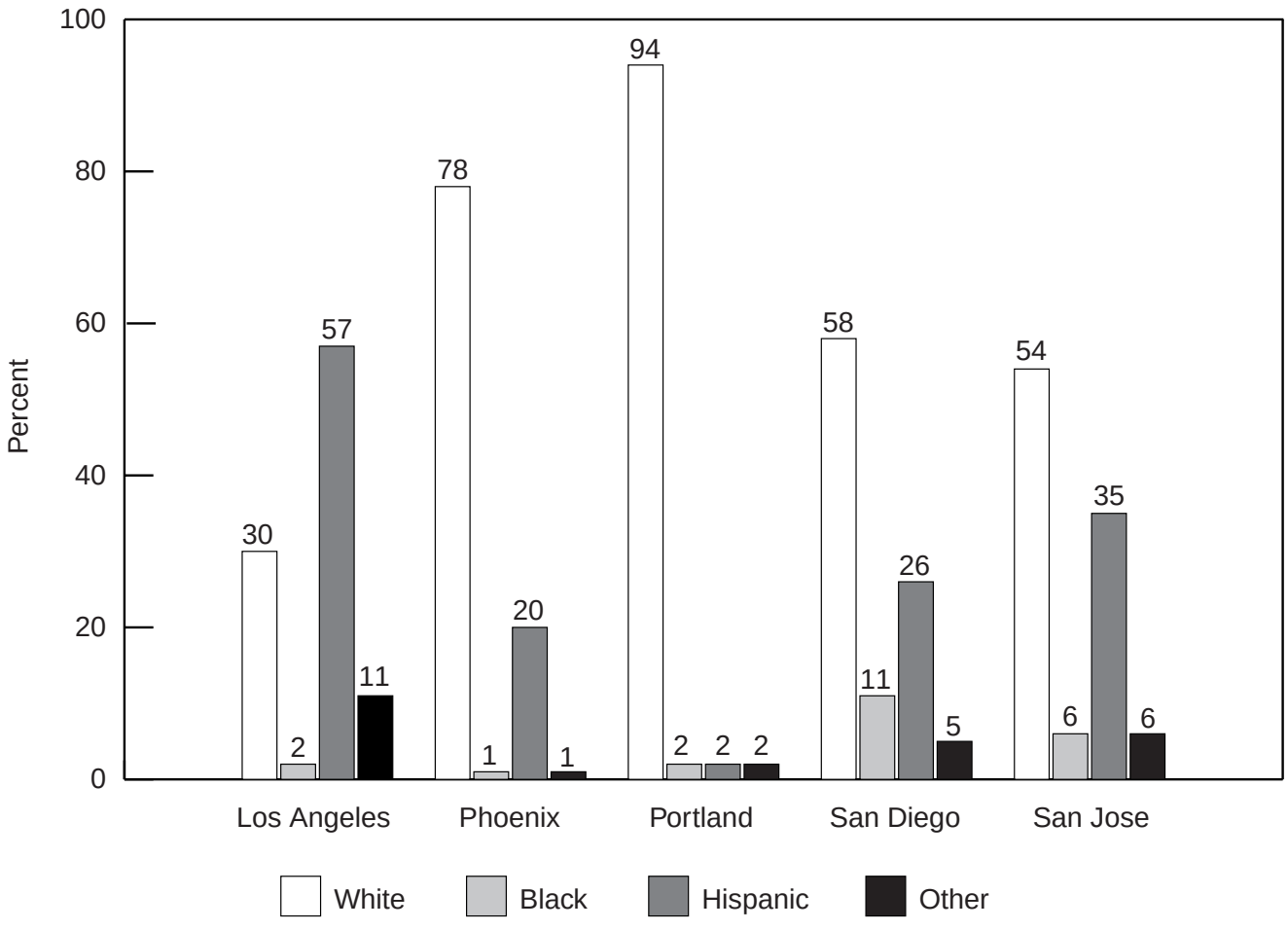
Figure 1. Age of Meth Users, by Site
ADAM Arrestees, 1996–1997



Ethnicity

Results from the ADAM data set presented in annual NIJ reports suggest that some drugs are more likely to be associated with specific ethnic groups. This association varies somewhat by region but not by arrest offense (drug versus nondrug offense). The aforementioned heroin and cocaine study showed the intersection of drugs and race and indicated that drug use among blacks is concentrated in crack, followed by heroin. Drug use among whites and Hispanics is fairly evenly distributed across cocaine and heroin (Riley, 1997). Methamphetamine users best demonstrate the wide disparity across racial groups with respect to drug preference. Overall, 25 percent of meth users were Hispanic. Differences were significant across sites. In four sites, whites constituted the majority of meth users, ranging from 54 percent in San Jose to 94 percent in Portland. In Los Angeles, however, whites represented only 30 percent of meth users and Hispanics reflected 57 percent. San Diego had the highest percentage of black meth users (11 percent). The range for blacks in the other sites was from 1 percent in Phoenix to 6 percent in San Jose. More than one-third (35 percent) of the meth users in San Jose were Hispanic. Hispanics reflected only 2 percent of the meth users in Portland and about 20 percent in Phoenix. Other ethnic groups represented 4 percent of the entire meth sample, from 1 percent in Phoenix to 11 percent in Los Angeles (figure 2).

Figure 2. Ethnicity of Meth Users, by Site*
ADAM Adult Meth Arrestees, 1996–1997



* Significant at the .05 level.

Living Arrangements

The majority of meth users (90 percent) stated that they lived in a house or apartment. The percentage of those living in houses, overall, was much higher than those in the cocaine and heroin study because of the impact of apartment dwellers in Manhattan and Chicago. The proportion living in public housing was also lower among meth users. These differences are more likely associated with geographic location than type of drug. That is, the east coast, compared with the western cities, has more apartment dwellers and higher population density contributing to more public housing units. Five percent or less of all meth sites, excluding Portland, had meth users reporting living on the street or being homeless. In Portland, 10 percent of the users stated that they were homeless. In the cocaine and heroin study, the figures for homelessness are much higher. The differences may be more associated with drug type rather than location. For example, although 5 percent of the San Diego meth users reported living on the street, 16 percent of the San Diego crack users in Riley's study said they were homeless, as did 43 percent of the users of both crack and heroin (Riley, 1997).

In this study meth users and other ADAM arrestees were equally likely (6 percent) to report being homeless, and 87 percent of the nonmeth users lived in a private residence.

Educational Achievement

With the exception of Los Angeles, more than 60 percent of the meth users at each site reported having graduated from high school or had a high school equivalent degree. Los Angeles was significantly lower at 35 percent.

Income

About three-quarters (74 percent) of all meth users reported legal sources of income from working either full or part time or from other sources, such as family. Only 10 percent of meth users (varying from 6 percent in Portland to 14 percent in San Diego) reported public assistance as their primary source of income, compared with 15 percent among other ADAM arrestees (significant at the .05 level). Public subsidy income was far more likely to be reported by cocaine and heroin users in the study authored by Riley (1997). For example, 20 percent or more of heroin and crack users in Portland reported receiving public assistance. Illegal income was reported by one in five (20 percent) of all meth users, varying from 13 percent in San Jose to 26 percent in Los Angeles and Portland (significant at the .05 level). Meth users were almost four times more likely than other ADAM arrestees to report drug dealing as income (11 percent versus 3 percent).

Money spent on drugs in an average month ranged from a median of $100 in San Jose and San Diego to $400 in Portland.

Arrest Charge

Forty percent of the meth arrestee sample was booked for a drug or alcohol violation. Sites varied significantly, from 20 percent in Los Angeles to 53 percent in San Diego. Violent offenses for meth users constituted 16 percent of the meth sample. This figure is higher than the 11.8 percent of heroin and cocaine users in the drug procurement study (Riley, 1997). Violent offense arrests showed wide disparity across sites, from 8 percent in Portland to 35 percent in Los Angeles (significant at the .05 level). Although violent behavior can be a consequence of meth use, the ADAM arrest data do not support this contention. When compared with other drug offenders, meth users were not more likely to be arrested for a violent offense. As tables 3 and 4 show, other nonmeth ADAM arrestees across sites were significantly more likely to be arrested for violent offenses. In San Diego, the differential was 14 percentage points (more nonmeth arrestees charged with violent offenses) (tables 3 and 4).

Nearly half of all meth users reported having been arrested in the 12 months prior to the interview (45 percent). Of these, 4 of 10 reported

**Table 3. Arrest Charge of Meth Users, by Site*
ADAM Adult Meth Arrestees, 1996–1997**

	Los Angeles (%)	Phoenix (%)	Portland (%)	San Diego (%)	San Jose (%)	Total (%)
Violent	35	11	8	15	26	16
Drug/Alcohol	20	22	36	53	39	40
Property	43	21	20	24	24	24
Other Charges	2	46	37	9	11	20

*Significant at the .05 level.

**Table 4. Arrest Charge of Nonmeth Users, by Site*
ADAM Adult Arrestees, 1996–1997**

	Los Angeles (%)	Phoenix (%)	Portland (%)	San Diego (%)	San Jose (%)	Total (%)
Violent	41	18	15	29	38	28
Drug/Alcohol	16	16	28	35	16	21
Property	33	26	19	23	27	26
Other Charges	10	40	38	13	19	25

*Significant at the .05 level.

having been arrested 2 or more times in the previous year. Thirty-nine percent had served time in the previous year.

Characteristics of Meth Arrestees and Other ADAM Arrestees

Arrest Charge

The merging of the ADAM interview data with the meth addendum provided the opportunity to compare meth users with other arrestees on a number of characteristics (table 5). As the site comparison suggested, meth users were significantly less likely than other arrestees to be charged with a violent offense (16 percent versus 28 percent). This is an important finding given the anecdotal information surrounding meth use and violent behavior, confirmed in part by the medical literature that reports the effects of meth on the brain chemistry and its possible association with paranoia. But the popular press has sensationalized those cases in which a violent act occurred while the suspect was under the influence of meth (*San Diego Union-Tribune*, 1998). Meth users in this data set were almost twice as likely as other arrestees to be charged with drug violations, either possession or sales (40 percent compared with 21 percent) (significant at the .05 level).

**Table 5. Arrest Charge, by Meth Use*
ADAM Adult Arrestees, 1996–1997**

	Meth User n=849 (%)	Nonmeth User n=5,921 (%)
Violent	16	28
Drug/Alcohol	40	21
Property	24	26
Other Charges	20	25

*Significant at the .05 level.

Ethnicity

The drug procurement study by Riley showed that cocaine and crack users were predominately black. In contrast, meth arrestees were significantly more likely than other arrestees to be white. Nearly two-thirds (65 percent) of the meth users were white compared with 36 percent of the entire ADAM sample in the five sites. Conversely, only 6 percent of the meth users were black, whereas other ADAM arrestees were almost five times more likely to be black (28 percent). Hispanic arrestees were more proportional, reflecting 25 percent of the meth users and 30 percent of the other ADAM arrestees (significant at the .05 level) (table 6).

Table 6. Comparison of Arrestee Characteristics, by Meth Use ADAM Adult Arrestees, 1996–1997

	Meth User	Nonmeth User
Ethnicity*		
White	65%	36%
Black	6%	28%
Hispanic	25%	30%
Other	4%	5%
Total	849	5,901
Age*		
≤ 24	26%	27%
25–31	30%	26%
≥ 32	44%	47%
Mean Age	30.2	31.6
Total	847	5,920
High School Grad/GED		
Yes	62%	60%
No	38%	40%
Total	848	5,916
Prior Arrests in the Past 12 Months*		
Yes	45%	37%
No	55%	63%
Total	849	5,924
Time Served in the Past 12 Months*		
Yes	39%	28%
No	61%	72%
Total	849	5,916
Positive for Two or More Drugs*		
	67%	26%

*Significant at the .05 level.

Age

Nearly half of both the meth users and the other ADAM arrestees were age 32 or older. The difference in mean age, although significant, is not as great as shown in the comparison with the cocaine and heroin users from the procurement study. Meth users were an average age of 30.2 and other arrestees had a mean age of 31.6 (table 6).

Education

The majority of both groups of offenders (60 percent or more) had graduated from high school or had attained an equivalent degree (table 6).

Criminal History

Meth users were significantly more likely to report having been arrested previously (45 percent versus 37 percent) as well as having served time or been incarcerated in the previous 12 months (39 percent versus 28 percent) (table 6).

Serious Drug Use

More than two-thirds (67 percent) of the meth users showed positive results for two or more drugs compared with only 26 percent of the other ADAM arrestees, suggesting that meth users are more likely to use multiple drugs (significant at the .05 level) (table 6).

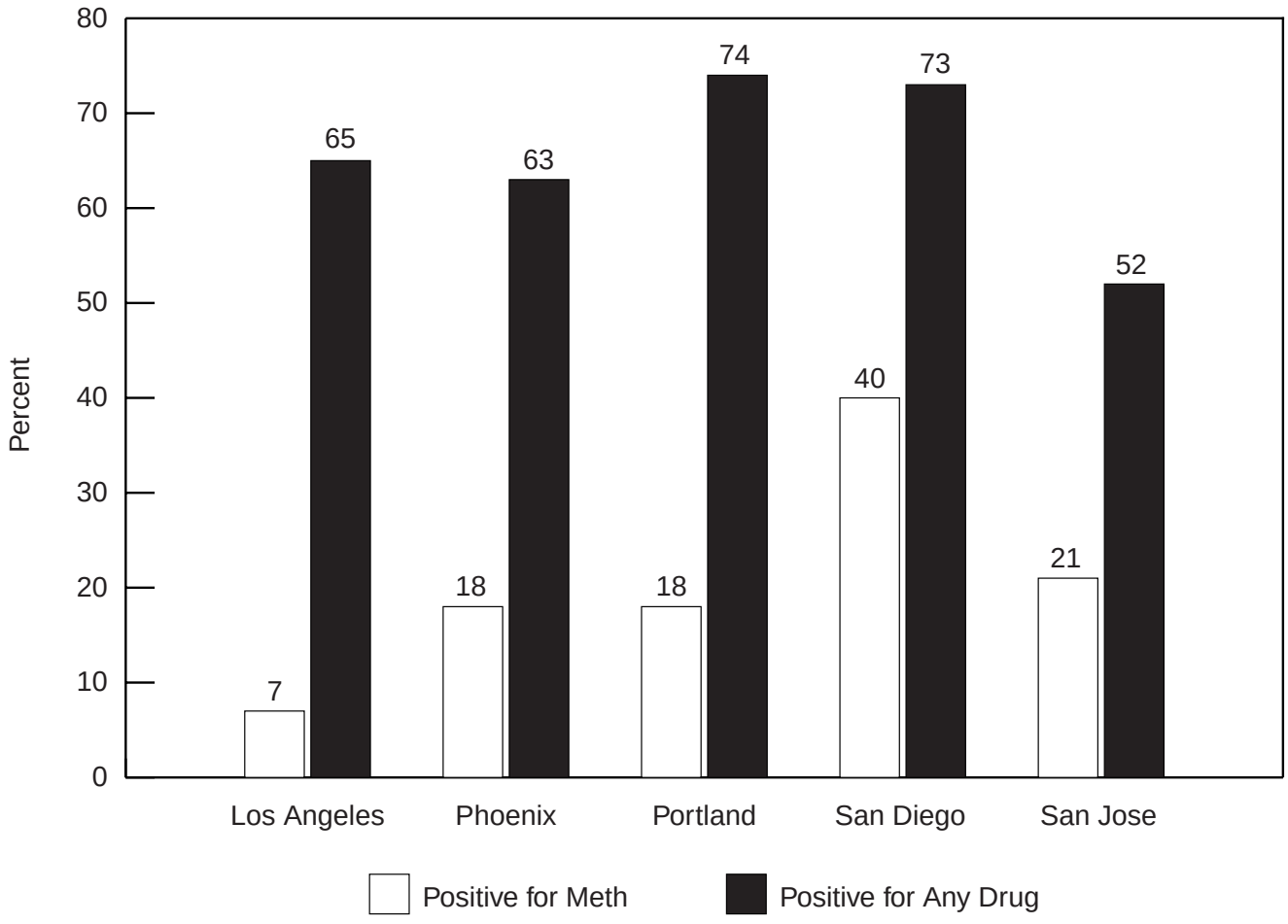
Gun Possession

In the entire meth sample, 15 percent of the arrestees admitted to possession of a gun in the 30 days prior to the interview. This is similar to the finding in the firearm study that showed that 14 percent of the ADAM arrestees in 11 sites reported possessing guns (Decker et al., 1997). In Los Angeles and Phoenix, the percentages were higher (24 percent and 23 percent, respectively) (significant at the .05 level). The lowest proportion of meth users reported having guns was in Portland (10 percent). When asked if they had a gun in the past month when procuring meth, the percentages were far lower but showed parallel results to the previous question in that arrestees in Los Angeles and Phoenix were the sites more likely to respond affirmatively (11 percent and 17 percent), compared with arrestees in the other three sites, in which 4 percent or less said they had carried a gun during a meth purchase (significant at the .05 level).

Drug Use Patterns

For the 12-month period in which the interviews were conducted, urinalysis results indicate that significantly more than half (65 percent) of all the ADAM arrestees showed recent use of some illegal drug, varying significantly from 52 percent in San Jose to 74 percent in Portland (figure 3).

Figure 3. Annualized Drug Use, by Site*
ADAM Adult Arrestees, 1996–1997



* Significant at the .05 level.

Meth users had higher rates of *overall use* than users in the total ADAM sample, varying from 80 percent of the meth arrestees in Phoenix to 95 percent of the meth users in San Diego. Overall use is the percentage testing positive for any illegal drug (table 7).

With respect to comparisons of meth positives for the *entire* ADAM sample in the 5 sites, 4 in 10 (40 percent) of the San Diego arrestees showed recent meth use based on an average of the 4 study quarters. Los Angeles had the lowest percentage of meth use at 7 percent. About one in five arrestees in San Jose were meth positive (21 percent), and the Phoenix and Portland sites each had 18 percent of the arrestees reflecting recent meth use. Differences were significant across sites (figure 3).

For the 849 meth user interviews with urine results, 73 percent tested positive for meth, ranging from 54 percent in Los Angeles to 86 percent in San Diego. Again, differences were significant across sites (table 7).

Meth users, similar to many drug abusers, also reflect multiple drug use. In Los Angeles, one in five meth users (22 percent) also had positive urinalysis results for marijuana, and nearly one-third (30 percent) tested positive for cocaine. Only 7 seven percent in Los Angeles tested positive for heroin or opiate use.

In Phoenix, more than one-third (39 percent) of the meth users also tested positive for marijuana, and one out of five showed cocaine use. Nine percent tested positive for heroin.

Portland had the highest proportion of meth users who also tested positive for marijuana (47 percent). One-quarter (25 percent) of the meth users tested positive for cocaine, and 18 percent showed recent use of heroin.

Forty-two percent of San Diego meth users also tested positive for marijuana. Thirteen percent in San Diego showed recent use of cocaine, and 7 percent tested positive for heroin.

Meth users in San Jose followed similar patterns of multiple drug use, with 43 percent showing evidence of marijuana use and 4 percent testing positive for cocaine and heroin use.

Patterns of Meth Use

Age of Initiation

Early initiation of drug use has been associated with both drug abuse in adulthood and multiple drug use (Merrill et al., 1994; Galvin, 1995). Before examining patterns of meth use, the ADAM arrestees and the meth users were compared regarding the age they first tried various substances. With the exception of heroin, meth users initiated their drug use at earlier ages than nonmeth users for all the listed drugs. Both arrestee groups followed the same progression of use from alcohol, tobacco, and marijuana to cocaine, heroin, and methamphetamine. However, meth users reported first trying alcohol at an

Table 7. Meth Users' Positive Drug Results, by Drug and Site*
ADAM Adult Meth Arrestees, 1996–1997

	Los Angeles (%)	Phoenix (%)	Portland (%)	San Diego (%)	San Jose (%)
Marijuana	22	39	47	42	43
Cocaine	30	20	25	13	4
Heroin	7	9	18	7	4
Meth	54	59	69	86	70
Any Drug	85	80	92	95	86

*Significant at the .05 level.

Table 8. Age First Tried Various Drugs, by Meth Use ADAM Adult Arrestees, 1996–1997

	Meth User		Nonmeth User	
	Age	N	Age	N
Alcohol*	13.0	840	15.0	5,622
Tobacco*	13.2	812	14.6	4,955
Marijuana*	13.8	821	15.2	4,459
Cocaine/Crack*	18.5	385	20.3	1,675
Heroin*	23.1	287	22.2	1,124
Methamphetamine*	20.1	849	21.6	1,404
Inhalants	14.8	212	15.1	457

*Significant at the .05 level.

average age of 13, compared with age 15 for other ADAM arrestees. Marijuana use occurred at age 13.8 for meth users and at age 15.2 for other drug users. Similarly, initial meth use by meth arrestees was at an average of 20.1 and 21.6 for others. These results imply that meth users become involved in substance use at earlier ages than other arrestees who have used drugs (significant at the .05 level) (table 8).

Initiation of Use and Motivation for Using

Their peers and friends most likely introduced meth users to meth, although parents' use of drugs also had an impact. Overall, 10 percent of the meth sample indicated that either their parents or other family members had introduced them to meth. When asked specifically if their parents had used drugs, 29 percent said yes. In Los Angeles and Portland, the percentages were significantly higher: 43 and 40 percent, respectively (figure 4). As to motivation for using meth, sites had similar responses: to experiment (34 percent); because their friends used it (25 percent); to get high (18 percent); and to get more energy (17 percent).

Preference for Meth

The meth users were asked if they preferred meth to cocaine or crack. Eighteen percent of the sample stated that they had never used cocaine or crack. But 64 percent reported that they *preferred* meth to cocaine. Across sites, preferences for meth varied significantly, from 60 percent in Phoenix to 71 percent in Portland.

When arrestees were asked why they preferred meth, the following reasons were given: The high lasts longer (53 percent); the high is better (41 percent); it is cheaper (20 percent); and it has fewer side effects (12 percent). The last reason is of interest given what arrestees report as the consequences of meth use.

Consequences of Meth Use

Respondents were given a list of potential results or consequences of using meth and asked if they had experienced any of them. The following conditions were mentioned most frequently: sleeplessness (85 percent), weight loss (72 percent), family problems (64 percent), legal problems (58 percent), financial problems (50 percent), work problems (46 percent), dental problems (43 percent), paranoia (42 percent), hallucinations (37 percent), violent behavior (33 percent), and skin problems (28 percent) (table 9).

Table 9. Consequences of Meth Use* ADAM Adult Meth Arrestees, 1996–1997 n=882 (%)

Sleeplessness	85
Weight Loss	72
Family Problems	64
Legal Problems	58
Financial Problems	50
Work Problems	46
Dental Problems	43
Paranoia	42
Hallucinations	37
Violent Behavior	33
Skin Problems	28

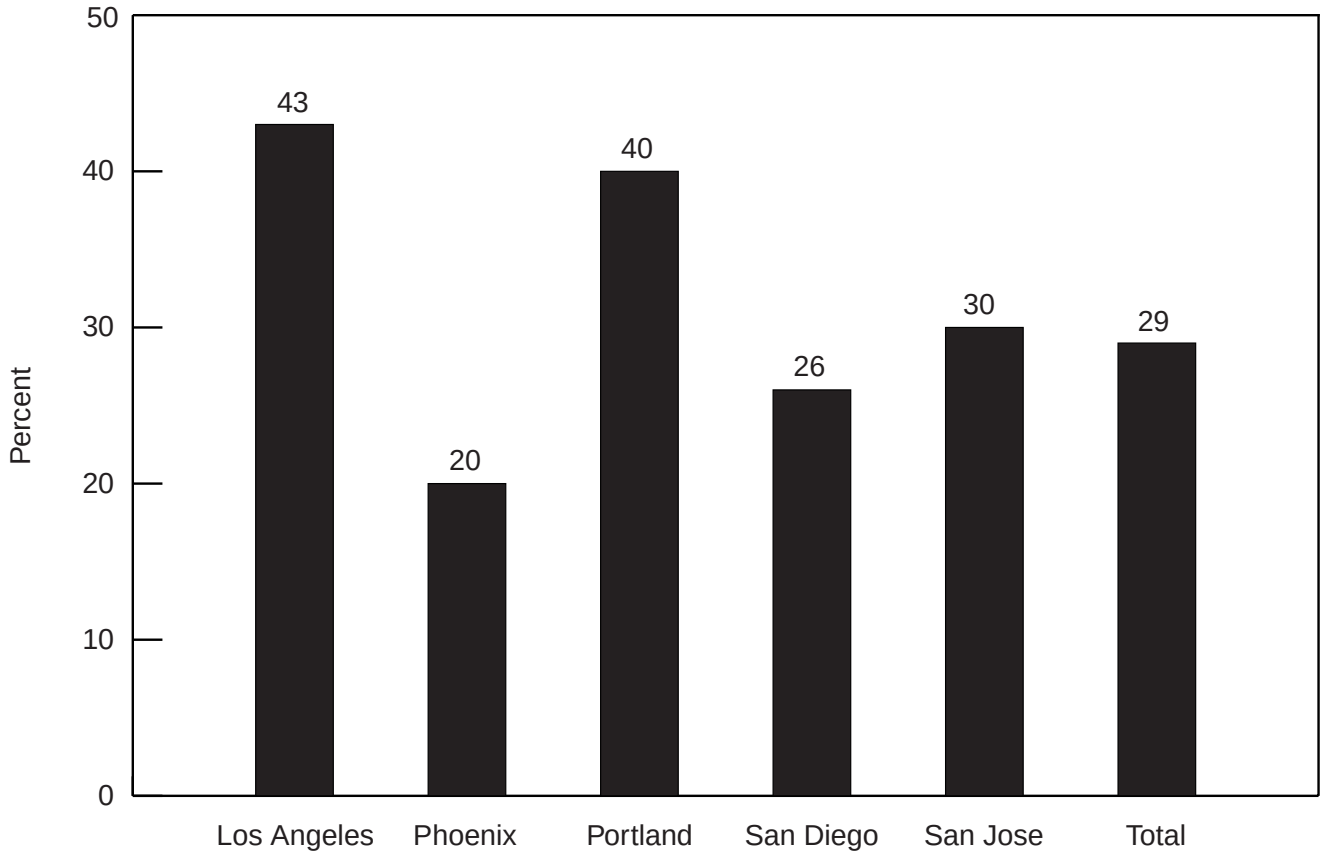
*Includes multiple responses.

Route of Administration

Similar to other drugs, there are various ways to ingest methamphetamine. The differences are associated with how quickly the drug, or "high," gets to the brain to produce the desired result. Overall, nearly half of the meth arrestees (46 percent) reported snorting as the method most often used. Smoking was mentioned by 31 percent of the total but was less likely used in Los Angeles, Phoenix, and Portland. In Portland users have a high proportion of injectors (49 percent) as do Phoenix users (27 percent). In Los Angeles, injection levels are lower (11 percent); snorting was preferred by 68 percent and smoking by 18 percent of arrestees. The reasons for higher injection use in Phoenix and Portland are associated with the relatively high proportion of heroin users in those sites. Differences were significant across sites (table 10).

Table 11 suggests that the route of administration of meth may be related to the types of consequences or effects reported by users. For example, 59 percent of those who injected meth had dental problems, compared with about one-third (34 percent) of the users who snorted, and about half of those who reported smoking meth (47 percent). Nearly one-quarter of the injectors (23 percent) admitted to having medical problems, compared with 12 percent of the smokers and 8 percent of the snorters. Four in 10 of the smokers and those who snort stated that feeling paranoid was an effect of meth, whereas 53 percent of the injectors reported this effect. Obviously, there are confounding factors regarding

Figure 4. Parents' Use of Drugs, by Site*
ADAM Adult Meth Arrestees, 1996–1997



* Significant at the .05 level.

Table 10. Route of Meth Administration, by Site*
ADAM Adult Meth Arrestees, 1996–1997

	Los Angeles (%)	Phoenix (%)	Portland (%)	San Diego (%)	San Jose (%)	Total (%)
Snort	68	43	28	46	57	46
Smoke	18	27	17	39	32	31
Inject	11	27	49	12	5	19
Other	2	3	5	2	6	3

*Significant at the .05 level.

Table 11. Consequences of Meth Use, by Route of Administration*
ADAM Adult Meth Arrestees, 1996–1997

	Route of Administration		
	Snort n=386 (%)	Smoke n=274 (%)	Inject n=175 (%)
Weight Loss	67	73	84
Sleeplessness	85	84	86
Dental Problems	34	47	59
Money Problems	43	49	65
Family Problems	56	71	69
Work Problems	39	46	58
High Blood Pressure	13	18	21
Skin Problems	27	30	28
Paranoia	40	40	53
Hallucinations	34	35	51
Violent Behavior	31	35	38
Legal Problems	51	58	72
Medical Problems	8	12	23
Other	5	5	5

*Includes multiple responses.

these differences, such as the use of dirty needles, risk of infection, length of drug use, and general mental and physical health of the arrestees. Nonetheless, it is clear that when drugs are injected, they affect the bloodstream and brain chemistry in ways different from other routes of administration.

Frequency of Use

Examining drug use patterns can elaborate on the severity of use by and different profiles of users. Arrestees were first asked how many days in the past month that they had used meth. Across sites, the mean number of days varied significantly, from 10.4 days in San Jose to 15.8 days in Phoenix. About one in four meth users stated that they use meth four or more times in a typical day. When asked how many consecutive days, or "runs," of meth they had had in the previous 30 days, responses varied significantly, from 7.6 days in Portland to 11.7 days in Phoenix (table 12).

The converse of the "use" question was asked: "During the last month, what were the most days that you went *without* using meth?" Consecutive days that meth was *not* used varied significantly, from 12.6 in San Diego to 16.2 in Portland (table 12).

When asked why they did not use meth for a number of days, 38 percent of the 739 users replied that they were not daily or dependent users. Other reasons (10 percent or less) included the following: wanted to change/improve life; tired of life associated with meth; needed to sleep; in jail; could not afford it; and health reasons.

A related variable was the number of times in the previous 7 days the meth users had bought

Table 12. Frequency of Meth Use*
ADAM Adult Meth Arrestees, 1996–1997

	Mean Days Used in the Past Month	Consecutive Days Used	Consecutive Days Without Meth
Los Angeles	10.8	8.6	15.8
Phoenix	15.8	11.7	13.6
Portland	10.8	7.6	16.2
San Diego	14.1	10.1	12.6
San Jose	10.4	7.7	14.9
Overall	13.0	9.5	14.0

*Significant at the .05 level.

Table 13. Meth Use in the Past 3 Days and Positive for Meth, by Site*
ADAM Adult Meth Users, 1996–1997

	Used in Past 3 Days (%)	Positive Drug Result† (%)
Los Angeles	64	74
Phoenix	66	70
Portland	54	91
San Diego	73	94
San Jose	66	86

*Significant at the .05 level.
†Drug results based on number of persons who admitted meth use in the past 3 days.

meth. For the total sample, 42 percent reported having bought meth in the previous 7 days and 60 percent of these users stated that they bought two or more times the week before their arrest. These numbers may be misleading because they refer only to meth procured for a dollar amount. In another question, arrestees were asked if they obtained meth in the past 30 days *without* paying for it; 77 percent said yes.

Perhaps a more reliable indicator of meth use is those who reported use in the 3 days prior to arrest and booking. Table 13 shows the percentages by site of those who admitted recent meth use. Slightly more than one-half (54 percent) of the meth arrestees in Portland reported using meth in the previous 3 days. The highest proportion of arrestees reporting recent meth use was in San Diego at 73 percent (significant at the .05 level) (table 13).

Of interest in table 13 is the congruence between those who reported recent meth use and the percentage that actually tested positive for meth use. The range across sites was 70 percent of the meth users in Phoenix to 94 percent of the arrestees in San Diego who reported using and who also had positive urinalyses (significant at the .05 level).

Treatment Experience

Despite the relatively high proportion of arrestees who reported meth use in the 5 sites, only 28 percent of the 924 meth users have ever tried to get treatment for their drug use. The range for sites varied significantly, from 9 percent in Los Angeles to 34 percent in Portland who had either received treatment or tried to get treatment. When asked why they had not sought treatment, three-quarters (75 percent) of the meth users stated that they do not need treatment. Another 14 percent said they do not want treatment. Elaboration of these responses included these typical comments: "not a daily user," "can stop anytime," "have control over it," and "use is not a problem." These comments characterize the classic denial of drug abusers. According to Dr. Alex Stalcup, an expert on meth addiction, this view is particularly dangerous for meth users because the loss of control over use can occur quickly. Generally, the users have lost control long before they can acknowledge it (Stalcup, 1998).

Of those who sought treatment (257), 79 percent got into a program. The most frequently mentioned type of treatment was inpatient residential (46 percent), followed by outpatient, drug-free treatment (33 percent). When asked if they had

completed the most recent treatment, 55 percent stated that they had not. Of the 104 arrestees who did not complete treatment, the following reasons were most often cited: wanted to start using again (18 percent); got arrested or other circumstances made it impossible (18 percent); and got "kicked out" of program (6 percent). Thirteen percent provided reasons related to the type of program or problems with staff. Fourteen percent were still enrolled in the program or had not yet started the program. Retention of treatment clients is a major issue for practitioners. There may be aspects of meth use, in particular, that affect retention behavior, such as the effects of meth on the brain and certain "triggers" that encourage use some months after abstinence, according to Stalcup (1998).

Of the 52 arrestees who attempted to but did not get in a program, the primary reasons offered were the following: too expensive, got arrested, waiting list too long, did not take the initiative, and changed their mind.

Drug Market Dynamics

A number of the features related to the meth market suggest a closed market compared with other types of drugs; this closed market has implications for law enforcement strategies. Fifty-nine percent of meth users reported having a main source from whom they get their meth, varying significantly from 49 percent in Portland to 70 percent in Los Angeles. This is in contrast to buying patterns of heroin and cocaine users reported in the drug procurement study, in which less than 50 percent cited using a main source. Also, according to the current study, blacks were least likely to buy from a single source, but differences across ethnicity were not significant (table 14). Similar to the Riley (1997) study, meth users tended to buy from individuals within their own ethnic group, with the exception of 45 percent of blacks who were more likely to use a Hispanic source for meth (table 15). About half (48 percent) of all users had used this source for 1 year or longer. Forty-one percent reported that their source of meth lived in their neighborhood. Almost two-thirds of the arrestees (66 percent) reported *never* having bought meth from someone they did not know, ranging from 63 percent in Portland and San Jose to 72 percent in Los Angeles. When asked what they usually do if their main source is not available, more than half of the meth users (55 percent) reported that they would not buy and, instead, go without meth. Slightly more than one-third (36 percent) said they would buy from someone else. This finding is consistent with responses to the question: "How many different people have you bought meth from in the past 7 days?" The average answer was 2.7, ranging from 1.7 in Los Angeles to 4.8 in Portland.

Dealers were generally contacted by telephone (51 percent), followed by direct contact at residence (33 percent), by beeper (26 percent), and on the street (10 percent).

Location of Purchase

In contrast to other types of drug dealing, meth purchases were primarily made indoors (81 percent) rather than outdoors (18 percent), and the

Table 14. Have a Main Source, by Ethnicity
ADAM Adult Meth Arrestees, 1996–1997

	White n=545 (%)	Black n=54 (%)	Hispanic n=208 (%)	Other n=37 (%)	Total n=844 (%)
Yes	62	54	57	59	59
No	39	46	43	41	41

Table 15. Ethnicity of Dealer, by Ethnicity of User
ADAM Adult Meth Arrestees, 1996–1997

Dealer Ethnicity	White n=326 (%)	Black n=29 (%)	Hispanic n=118 (%)	Other n=22 (%)	Total n=495 (%)
White	76	31	26	32	60
Black	3	14	5	0	4
Hispanic	17	45	61	18	28
Other	5	10	8	50	8

*Differences significant at the .05 level between white users and other users and between Hispanic users and other users.

majority of meth indoor buys occurred at residences (93 percent). In the drug procurement study, purchases of crack and heroin were far more likely to occur outdoors (Riley, 1997).

Gender and Ethnicity of Main Source

Most meth connections were male (73 percent) according to the meth arrestees. The ethnicity of the main source often was the same as that of the meth user: 60 percent of the connections were white, 28 percent were Hispanic, 8 percent represented Asian and other ethnic categories, and only 4 percent were black (table 15). There were significant differences across sites. The range of connections who were white varied from 46 percent in San Jose to 86 percent in Portland. Main sources who were of Hispanic descent ranged from 9 percent in Portland to 43 percent in San Jose.

Other Drugs

When asked if they get drugs other than meth from their main source, only 23 percent said yes. Of those, marijuana was the drug most frequently mentioned.

Meth Availability

An indicator of the wide availability of meth was revealed by 72 percent of meth users reporting that they could not remember a time in the previous month when they had the money to buy meth but could not get it. (This is in contrast to the cocaine and heroin study, despite the variation by drug and across sites; the percentages were higher for those with failed transactions in the past year.) For the 28 percent of users who had failed to purchase meth, the primary reasons were that the dealer was not available (37 percent), the dealer was out of meth (34 percent), and police activity levels were high (12 percent). Phoenix users were most likely to report that police activity levels were high, while Los Angeles users were least likely to mention this as a reason for not being able to obtain meth (significant at the .05 level). None of the meth users mentioned that the dealer was charging too much as a reason for failure to obtain meth. With the exception of the last reason, the heroin and cocaine study revealed similar reasons for failed transactions (e.g., dealer not available, dealer out of the drug, and police activity), with variation across sites (Riley, 1997).

The majority of meth users (77 percent) stated that they obtained meth in the past month without paying cash for it. Of the 710 respondents, 80 percent stated they got it for free, most often from a friend. A smaller percentage reported that their dealer owed them or their dealer “fronted” the meth (allowed them to pay later).

Slightly more than 40 percent stated that they had bought meth in the previous 7 days. When asked how many times they had bought, the average was 3.6 times, with San Diego arrestees buying the most times (4.7).

When asked how much they paid for meth in their most recent purchase, the average across

sites for 587 meth users was $40, with Phoenix and Portland users reporting that they paid $50.

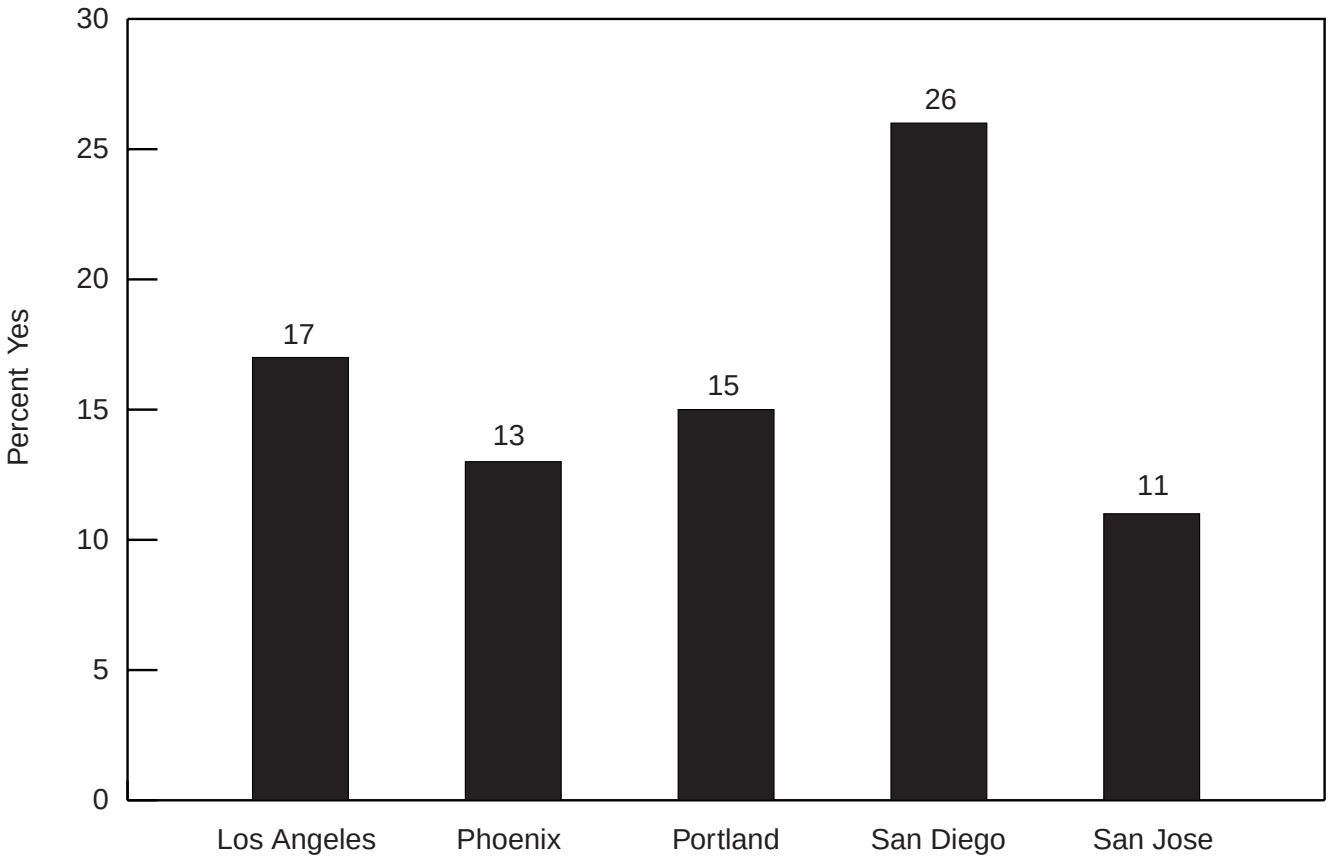
Price and Purity of Meth

Measures of price and purity are of interest to law enforcement because they are indirect indicators of availability and they reflect supply and demand. Meth users were asked if they detected any changes in the past year regarding meth price and quality.

With respect to price, nearly half of the arrestees (48 percent) reported that the price was the same as it was a year earlier. The percentages of those who thought the price of meth had increased varied significantly, from 11 percent in San Jose to 26 percent in San Diego (figure 5). Just over one-quarter (26 percent) of the users in Los Angeles stated that the price was *lower* than a year earlier.

Of interest is the finding that 47 percent of the entire sample perceived the quality or purity of meth to be worse at the time of the interview, compared with a year earlier. This finding may be associated with the additive chemicals used to process meth. Across sites, one-third (33 percent) of the San Jose users felt that the quality of meth was worse; 55 percent of the users in San Diego said the same thing (significant at the .05 level) (figure 6).

Figure 5. Perception That Price Is Higher Than 1 Year Ago*
ADAM Adult Meth Arrestees, 1996–1997



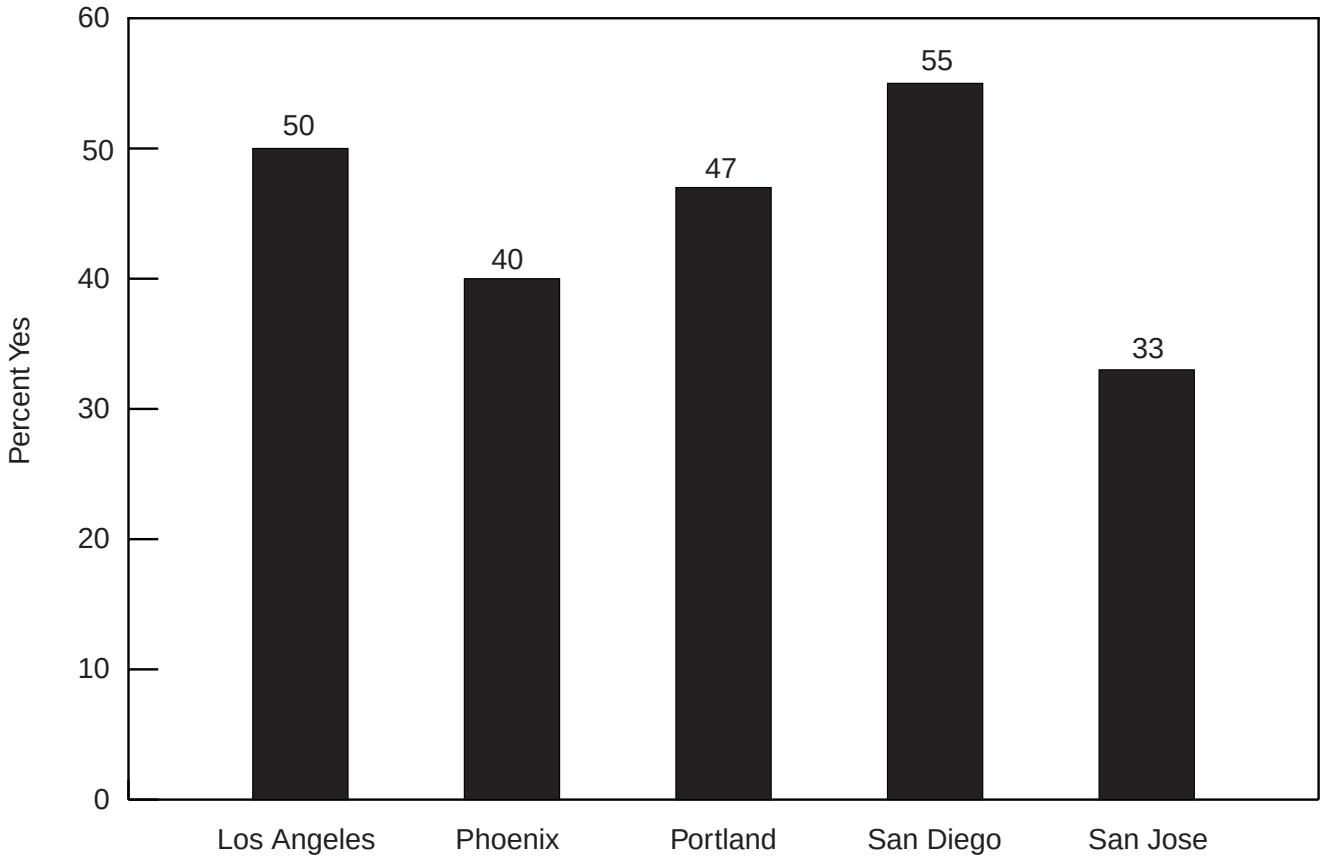
* Significant at the .05 level.

Drug Dealing

Meth Users Who Are Also Meth Dealers

About one-third of all the meth users admitted to engaging in some illegal drug-related activities. The most typical response to a list of such activities was that of selling drugs (65 percent), followed by acting as a middleman (59 percent). Variation across sites became more apparent as the drug activities escalated from selling to increased involvement in manufacturing and trafficking. For example, 18 percent of the sample reported that they cut or packaged meth, but the range was *none* in Los Angeles to 23 percent in San Diego. Nine percent of the total sample reported getting chemicals or equipment to make meth; across sites, the response ranged from *none* in Los Angeles to 17 percent in Portland. Two percent of the users in San Diego reported that they made meth, compared with 9 percent in Portland (table 16). These findings suggest that manufacturing and distribution sites for meth may differ from sites in which meth is used heavily. For example, in St. Louis, an ADAM site, minimal meth use has been measured through urinalysis tests of arrestees. However, other indicators, such as lab seizures, are increasing (Community Epidemiology Work Group, 1998).

Figure 6. Perception That Quality Is Worse Than 1 Year Ago*
ADAM Adult Meth Arrestees, 1996–1997



* Significant at the .05 level.

Table 16. Illegal Drug Activity, by Type and Site*
ADAM Adult Meth Arrestees, 1996–1997

	Los Angeles n=15 (%)	Phoenix n=43 (%)	Portland n=46 (%)	San Diego n=148 (%)	San Jose n=40 (%)	Total n=292 (%)
Sell Drugs	73	51	57	74	53	65
Act as Middleman	47	42	46	70	58	59
Hold Drugs or Money	7	30	39	57	35	45
Cut/Package Meth	0	7	22	23	13	18
Provide Street Security	0	9	15	23	10	17
Act as Enforcer	7	5	9	19	10	13
Get Chemicals or Equipment for Cooking	0	12	17	6	8	9
Make Meth	7	7	9	2	3	4

*Includes multiple responses.

Comparison of Arrestees Who Participate in Drug-Related Activities and Those Who Do Not

Some interesting differences emerged when meth arrestees who admitted to drug-related activities besides use were compared with those who did not report such illegal behavior. Drug-involved offenders were significantly more likely to be younger (65 percent were age 31 or younger), with a mean age of 28.7 compared with age 31 for other arrestees. Those who admitted involvement in other drug-related activities reported less legal income but more illegal income and more money spent on drugs in the past 30 days than meth arrestees who did not report participation in other drug-related activities. Perhaps not surprising, drug-involved meth users were also more likely to have been arrested for drug and alcohol violations (significant at the .05 level). Also significant was that arrestees involved in other drug-related activities were almost four times more likely to have had a gun in the 30 days prior to the interview (28 percent versus 8 percent). Drug-involved meth users revealed a median of 20 days of meth use in the previous month compared with 6 days of meth use by other arrestees. Also, the arrestees who were involved in other drug activities had an average of 7 days of consecutive use compared with 3 days for the other arrestees (table 17).

The next section presents information about arrestees who admitted to also being drug dealers. Issues discussed include the length of time selling drugs, motivation for selling, profits made, and precautions taken to protect themselves.

The majority of the meth users in all sites reported that they *neither sold nor made meth* in the 12 months prior to the interview (75 percent). The following findings refer to the 231 individuals (25 percent) who stated that they had dealt and/or cooked meth in the past 12 months. Results for the five sites are combined in table 18.

Sixty-six percent of the arrestees had sold meth for more than 2 years and an additional 13 percent had been selling for more than 1 year. Almost half began selling prior to 1991. One in five said they had been selling less than 1 year. When asked why they started dealing meth, respondents most frequently reported the reason for dealing was to make money (48 percent). An additional 40 percent said they did it to support their addiction. Only 1 percent said they were already dealing another drug before they started selling meth.

Table 17. Characteristics of Drug Activity Participants ADAM Adult Meth Arrestees, 1996–1997

	Participated in Drug Activities Yes		Participated in Drug Activities No	
Ethnicity				
White	65%		64%	
Black	4%		7%	
Hispanic	27%		24%	
Other	3%		5%	
Total	289		553	
Age*				
≤ 24	34%		22%	
25–31	31%		30%	
≥ 32	35%		48%	
Mean Age	28.7		31.0	
Total	288		552	
Past 30 Days		n		n
Legal Income	$600	215	$700	496
Illegal Income	$1,000	190	$600	78
Money Spent on Drugs	$225	200	$100	320
Most Serious Charges*				
Property	27%		22%	
Drug/Alcohol Offense	43%		38%	
Violent	13%		18%	
Other Charge	17%		22%	
Total	289		553	
Own or Possess a Gun in Past 30 Days*				
Yes	28%		8%	
No	72%		92%	
Total	307		609	
		n		n
Median Days Used in Past 30 Days	20	284	6	549
Median Days Used in a Row	7	307	3	605
Number of Times Used in a Day	3	302	2	576

*Significant at the .05 level.

One-third (33 percent) of the meth dealers reported no profit or money gained from selling meth in the 30 days prior to the interview. Of those who reported earnings, 45 percent made more than $800 in the past month. The median figure across sites was $500 (table 19).

The majority of the dealers said they sell to persons outside their own racial or ethnic group. When asked how many individuals they had sold to in the previous 7 days, 31 percent said they had sold to *no one*, perhaps suggesting a population of relatively low-level street dealers. However, a smaller proportion (17 percent) had sold to four to six different individuals and 28 percent had sold to more than seven people in the previous week, implying a somewhat higher level of drug dealing. Across sites, the median number of individuals to whom drugs were sold was 5, with a high of 15 in Los Angeles (table 19).

One-quarter of the dealers (25 percent) reported that they sold meth outside of the county in which they lived. Eleven percent of the 224 dealers admitted to selling meth outside the State in which they lived. Of the 25 dealers who said they sold outside their State, 14 were San Diego arrestees. The States mentioned most frequently included Arizona, New York, Texas, Nevada, California, Oklahoma, and Washington. An additional 4 percent stated that they sold meth outside the United States, with the majority stating that they sold to customers in Mexico.

When asked what they worry about when dealing drugs, more than one-half (60 percent) mentioned "getting busted," 27 percent said they had no worries, and 16 percent expressed concern about getting robbed. Only 5 percent worried about getting hurt.

Table 18. Making and Selling Meth, by Site*
ADAM Adult Meth Arrestees, 1996–1997

	Los Angeles n=46 (%)	Phoenix n=162 (%)	Portland n=147 (%)	San Diego n=390 (%)	San Jose n=177 (%)	Total n=922 (%)
Sold	22	12	20	27	17	21
Made	0	0	1	<1	1	<1
Sold/Made	4	4	5	3	2	3
Neither Made nor Sold	74	83	73	70	80	75

*Difference significant at the .05 level by site for those who sold and/or cooked and those who did not.

Table 19. Number of Customers and Profit Made by Meth Dealers
ADAM Adult Meth Arrestees, 1996–1997

	Los Angeles	Phoenix	Portland	San Diego	San Jose	Total
Median Number of Customers in Past 7 Days	15	6.5	4	5	9.5	5
Median Dollar Amount Made From Meth in Past 30 Days	$1,600	$1,000	$750	$400	$1,100	$500

Arrestees responded to a closed-end question about the types of safety and security precautions they take when dealing meth. Among the 194 dealers, slightly more than half (51 percent) said that they sell only to friends. Twenty-five percent reported that they carry a weapon. Other responses included delivering directly to the customer (22 percent), not carrying a lot of drugs (18 percent) or money (12 percent), and not letting the customer come to the dealer's house (13 percent).

The following question was asked of meth dealers: "When you are selling meth for someone else, how do you get paid?" Forty-one percent responded that they get a cash portion of the profits. Thirty-four percent stated that they were singular dealers and sold only for themselves, not for anyone else. Another 18 percent stated that they received meth as payment.

More than half of the dealers (57 percent) reported that they no longer were selling meth. The reasons given include: in jail (29 percent), tired of the lifestyle (27 percent), for my family (9 percent), and tired of getting busted (6 percent). Police activity as a reason for not selling was noted by only 2 percent.

This brief description of meth dealers suggests that users who also sell do so to support a drug habit or make a profit. The impression is that these dealers are relatively low-level meth dealers, with perhaps a few who are at higher levels of marketing. Also, high-level dealers whose life business is trafficking meth may be reluctant to share this information in a jail setting. Known high-level drug traffickers targeted by the Drug Enforcement Administration or a local or regional narcotics task force are less likely to be booked into local detention facilities. These drug violators, if arrested, would likely show up in the Federal detention center and be charged with Federal narcotics violations.

Meth Cooking

Meth Users Who Are Also Meth Cookers

Only 34 of the 929 meth users admitted to being meth cookers. They responded to questions about how they learned how to make it, the location of cooking, chemicals used, and cooking methods.

The majority of meth cookers learned the recipe from friends, and three said their parents or other family members taught them how to cook it. Multiple responses were given regarding the location of cooking, with most stating that it took place inside, at their own residence or that of a friend. Twelve individuals indicated that they cooked in an open area, such as a field. Six said they cooked in a vehicle, and five said they cooked meth at a hotel or motel.

Most thought it was difficult to obtain the chemicals needed to make meth. When asked which chemicals were used, the following chemicals were reported (the corresponding number of individuals who mentioned each chemical are presented in parentheses): red phosphorus (24), ephedrine (19), hydrochloric gas/acid (19), iodine (15), pseudoephedrine (12), Freon (12), tablets (7), lactose (2), and caffeine (2).

Eleven individuals also noted additional chemicals, including ether, acetone, lye, hydriotic acid, denatured alcohol, chloroform, miratic acid, Drano, lighter fluid, Coleman fuel, rock salt, dry ice, and propane.

When asked where they get the ephedrine and other chemicals needed, 12 individuals said they got them from someone dealing in meth or chemicals. Fourteen said they got chemicals from a retail outlet store, and three said they got them from mail order catalogs.

Most cookers used the flash method of cooking or pressure cookers (12 each). Eight said they "dry" cooked, and five stated that they crushed tablets.

As mentioned previously, the chemicals used in meth are highly toxic and dangerous to the environment. Drug cookers appear to have little regard for this fact, given what they do with the waste products after cooking the meth. Most pour it down the drain (9), bury it (8), or dump it on the ground (2). Four stated that they abandoned the leftover chemicals in containers.

Comparison of Dealers and Cookers With Nondealers and Noncookers

The interview results of the meth arrestees who admitted being involved in drug sales and making or cooking meth were combined and compared with meth users who reported no illegal drug activity besides use. Similar to the previous analysis, the dealers and cookers were significantly younger than other arrestees (mean age 28.7 versus 30.7) and significantly more likely to be white (71 percent versus 62 percent) (table 20).

Also, the dealers and cookers reported more illegal income and more money expended on drugs than the other meth users. Three of 10 dealers and cookers reported possessing a firearm within 30 days of the interview, but only 1 of 10 of the nondealers reported carrying a gun (significant at the .05 level) (table 20).

The drug use patterns of the dealers and cookers affirms the likelihood of more serious drug involvement. The dealers and cookers reported a median of 21 days during which meth was used in the previous month. The arrestees who were not dealers had a comparable figure of 6 days of meth use. Dealers and cookers reflected more chronic meth use, with an estimated 12 days of consecutive use compared with only 3 days by the nondealer arrestees. Finally, the dealers and cookers reported an average meth use of three times a day, with nondealers reporting two times a day (table 20). These results, along with the previous analysis, suggest that meth users who also sell and make drugs and get involved in

other drug-related activities are more likely to engage in serious drug use. These findings have implications for the justice system as well as the treatment community with regard to targeting offenders who may benefit from drug treatment but may be incarcerated in State prison based on drug sales or manufacturing convictions.

Table 20. Characteristics of Meth Dealers and Nondealers ADAM Adult Meth Arrestees, 1996–1997

	Dealer/Cooker		Nondealer/ Noncooker	
Ethnicity*				
White	71%		62%	
Black	3%		7%	
Hispanic	22%		26%	
Other	3%		5%	
Total	214		629	
Age*				
≤ 24	35%		23%	
25–31	31%		30%	
≥ 32	35%		47%	
Mean Age	28.7		30.7	
Total	214		627	
Past 30 Days		n		n
Legal Income	$652.5	166	$700	546
Illegal Income	$1,000	152	$750	116
Money Spent on Drugs*	$250	143	$100	378
Most Serious Charges*				
Property	28%		22%	
Drug/Alcohol Offense	45%		38%	
Violent	11%		18%	
Other Charge	17%		21%	
Total	214		629	
Own or Possess a Gun in Past 30 Days*				
Yes	30%		10%	
No	70%		90%	
Total	231		686	
		n		n
Median Days Used in Past 30 Days	21	213	6	620
Median Days Used in a Row	12	229	3	683
Number of Times Used in a Day	3	227	2	652

*Significant at the .05 level.

Juvenile Meth Users

This chapter presents findings from the meth addenda interviews with juveniles in the five ADAM sites. All sites except San Diego interviewed boys and girls. A total of 270 juveniles responded to the meth interview questions, with San Diego having 81 and Portland having 24 youths. Overall, the meth interviews constituted 11 percent of all the ADAM interviews of juveniles in the timeframe under study, ranging from 5 percent in Portland to 19 percent in San Diego (table 21). Generally, the analysis combines interview results of all sites.

Urinalysis Results

Annualized urinalysis results suggested a youthful offender population of drug users in the five sites. Almost three-quarters (72 percent) of the 263 juvenile meth users who provided a urine specimen were positive for some illegal drug, varying from 45 percent in Portland to 92 percent in San Diego (significant at the .05 level). The proportions that revealed meth use paralleled the overall drug use; 18 percent of the juveniles in Portland were positive for meth and 47 percent of the San Diego youths were meth-positive (figure 7).

Juvenile Profile

The juveniles interviewed were primarily males, with about one in five (19 percent) being females. Nearly half (47 percent) were Hispanic, varying significantly from 14 percent in Portland to 62 percent in San Diego. Only 4 percent were black, with a range from 1 percent in San Diego to 9 percent in Portland. Overall, 41 percent were white, with a wide disparity across sites ranging from 26 percent in Los Angeles to 73 percent in Portland (significant at the .05 level). Juveniles in other ethnic groups represented 8 percent of all the juveniles. The majority of the juveniles were over age 14 at time of arrest, with an overall mean age of 15.8 years (see table 22).

Arrest Charge

In Los Angeles 35 percent of the juveniles were arrested for a violent offense, compared with 13 percent in Phoenix (significant at the .05 level). Eleven percent of the entire sample was involved in a drug or alcohol violation, varying significantly across sites from 5 percent in Los Angeles and Portland to 19 percent in San Diego.

School Attendance

Fifty-nine percent of all youths were attending school according to interview responses. Of the 108 who did not go to school, 64 percent stated that they had dropped out and 29 percent reported having been suspended or expelled.

Table 21. Number of Juvenile Meth Interviews and Percentage of ADAM Interviews, by Site
ADAM Juvenile Meth Users, 1996–1997

	Los Angeles	Phoenix	Portland	San Diego	San Jose	Total
Meth Interviews	43	61	24	81	61	270
ADAM Interviews	617	502	509	429	362	2,419
Percentage of ADAM Interviews	7	12	5	19	17	11

Criminal History

Most of the juveniles admitted being arrested in the 12 months prior to the interview (70 percent). Fifty-nine percent had been incarcerated in the previous 12 months. More than one in five (23 percent) of the juveniles reported owning or possessing a gun in the 30 days prior to the interview, varying significantly from 13 percent in San Jose to 46 percent in Portland.

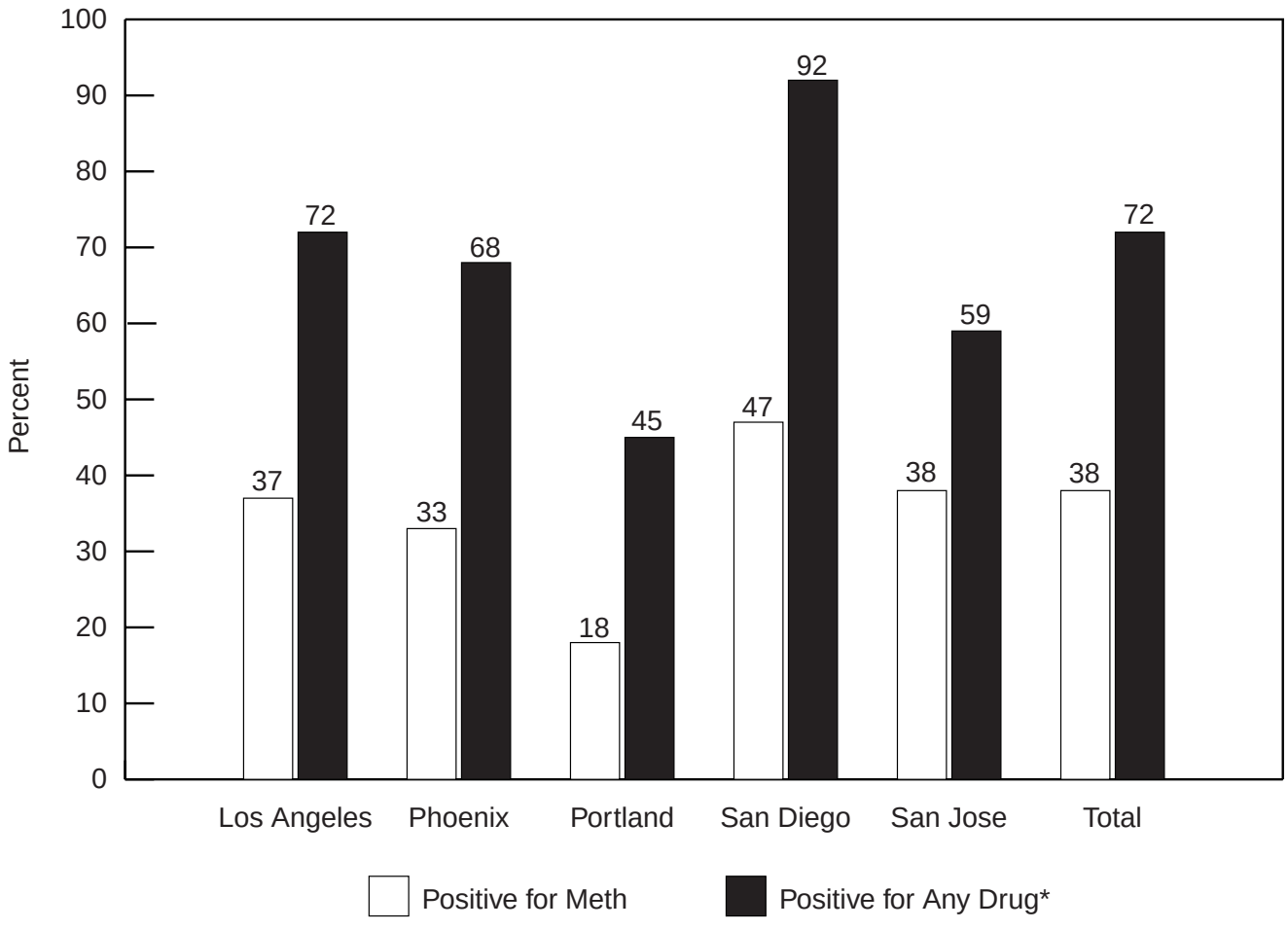
Juvenile Meth Users Compared With Other Juvenile ADAM Arrestees

Table 23 compares characteristics of juveniles who reported meth use with those who did not use meth. All differences were significant.

Eighty-eight percent of meth users were Hispanic or white. Blacks were five times more likely to be nonusers than users.

Meth users tended to be older than the other ADAM arrestees, with 87 percent age 15 or older. According to self-reports, meth users were far less likely to attend school (59 percent versus 72 percent), were more likely to have been arrested previously (70 percent versus 57 percent), and were more likely to have been incarcerated (59 percent versus 46 percent). Finally, juvenile meth users were much more likely than nonusers to test positive for two or more drugs (39 percent versus 11 percent).

Figure 7. Annualized Drug Use, by Site
ADAM Juvenile Meth Users, 1996–1997



* Significant at the .05 level.

Source of Income and Expenditures on Drugs

More than one-third (35 percent) of the juveniles reported their families as their primary source of income. Seventeen percent were employed either full or part time. Slightly more than one-quarter (27 percent) obtained their primary source of income through illegal means, primarily drug dealing (table 24). When asked how much money they had made illegally in the previous 30 days, the median figure across sites was $200.

Table 22. Demographic Data, by Site
ADAM Juvenile Meth Users, 1996–1997

	Los Angeles	Phoenix	Portland	San Diego	San Jose	Total
Gender*						
Male	88%	72%	54%	100%	72%	81%
Female	12%	28%	46%	0%	28%	19%
Total	43	61	24	81	61	270
Ethnicity						
Black	7%	2%	9%	1%	7%	4%
White*	26%	67%	73%	27%	34%	41%
Hispanic*	58%	28%	14%	62%	49%	47%
Other	9%	3%	5%	9%	10%	8%
Total	43	60	22	77	61	263
Age						
11–12	0%	0%	0%	1%	2%	1%
13–14	9%	3%	27%	10%	16%	11%
15–16	53%	68%	45%	43%	59%	54%
17–18	37%	28%	27%	45%	23%	33%
Mean Age	15.9	16.0	15.3	16.1	15.5	15.8
Total	43	60	22	77	61	263
Arrest Charge*						
Violent	35%	13%	18%	26%	26%	24%
Drug/Alcohol	5%	7%	5%	19%	13%	11%
Property	26%	30%	32%	32%	11%	26%
Juvenile/Status	5%	5%	9%	10%	16%	10%
Other	30%	45%	36%	12%	33%	29%
Total	43	60	22	77	61	263
Attend School*						
Yes	72%	42%	73%	64%	56%	59%
No	28%	58%	27%	36%	44%	41%
Total	43	60	22	77	61	263
Reasons Not in School						
Grad/GED	8%	9%	0%	4%	7%	6%
Suspended/Expelled	8%	20%	50%	29%	44%	29%
Dropped Out	83%	71%	50%	68%	44%	64%
Other	0%	0%	0%	0%	4%	1%
Total	12	35	6	28	27	108

*Significant at the .05 level.

This figure was higher than funds obtained legally ($90) and the amount spent on drugs ($60) (table 25).

Drug Use Patterns

Unlike their adult counterparts, juvenile meth users were more likely to smoke meth. Half (50 percent) of the juveniles reported this method as the most frequently used, and almost half (47 percent) inhaled or snorted meth. Only 2 percent reported injecting meth (table 26). There were minimal differences by age with respect to route of administration. Juveniles were initiated to meth most likely through friends, and the primary reason for first use of meth was "to experiment," according to 75 percent of the youths. Other reasons included: because friends used (24 percent), to get high (13 percent), to stay awake (6 percent), and to get more energy (4 percent).

Table 23. Comparison of Arrestee Characteristics, by Meth Use ADAM Juvenile Arrestees, 1996–1997

	Meth User	Nonmeth User
Ethnicity*		
White	41%	30%
Black	4%	22%
Hispanic	47%	39%
Other	8%	9%
Total	263	2,054
Age*		
≤ 12	1%	3%
13–14	11%	19%
15–16	54%	50%
≥ 17	33%	29%
Mean Age	15.8%	15.5%
Total	263	2,065
Attend School*		
Yes	59%	72%
No	41%	28%
Total	263	2,064
Prior Arrests in Past 12 Months*		
Yes	70%	57%
No	30%	43%
Total	263	2,063
Time Served in Past 12 Months*		
Yes	59%	46%
No	41%	54%
Total	263	2,061
Positive for Two or More Drugs*	39%	11%
Total	263	2,065

*Significant at the .05 level.

When asked if their parents had ever used drugs, nearly half (47 percent) of the juvenile meth users said yes and 9 percent indicated that they had been introduced to drugs by either their parents or another family member. Consequences of meth use reported by juveniles were similar to the adult responses, with sleeplessness, weight loss, paranoia, family problems, hallucinations, and violent behavior most frequently reported.

Juveniles were asked questions about various drugs, including self-reported drug use (table 27). Almost all of the 263 juvenile meth users had tried alcohol, tobacco, and marijuana (98 percent or more) at some time. More than two-thirds (68 percent) had used cocaine and 39 percent admitted to using inhalants. Of the total sample, 17 percent had tried heroin. With respect to age at first use, alcohol and tobacco were first tried at an average age of 11.6, followed by marijuana at age 12. Inhalant use was tried at age 12.8, followed by cocaine and methamphetamine at age 13.9 and 14, respectively. Those who reported heroin use first initiated it at age 14.3. With respect to recent use (prior 3 days), 45 percent of the juveniles who had used in the past 12 months reported having used alcohol, and 92 percent admitted to tobacco use. The urinalysis tests do not

Table 24. Source of Income
ADAM Juvenile Meth Users, 1996–1997
(%)

Family	35
Employment	17
Other Legal	8
Welfare or Supplemental Security Income	1
Illegal Means	27
No Income	11

Table 25. Money Received and Spent on Drugs in Past 30 Days
ADAM Juvenile Meth Users, 1996–1997

	Median ($)	N
Legal	90	201
Illegal	200	106
Spent on Drugs	60	138

Table 26. Route of Meth Administration
ADAM Juvenile Meth Users, 1996–1997
n=262
(%)

Smoke*	50
Snort	47
Inject	2
Other	1

*Alone or in combination with other drugs.

screen for these two drugs. More than half of the youths who had used in the past 12 months (55 percent) reported marijuana use in the prior 3 days, and 56 percent of the sample tested positive for marijuana, reflecting high congruence between self-reports and urinalysis results. Nearly half (47 percent) admitted using meth recently, and 38 percent showed positive results. Although 37 percent reported recent cocaine or crack use, only 18 percent revealed a positive urine test. Similarly, 31 percent of those who had used in the past 12 months reported heroin use, but 15 percent tested positive. This could indicate that many youths are not certain which drugs they are ingesting.

Youths were asked how many days they had used specific drugs in the previous 30 days. Tobacco revealed the highest usage, with 24.9 days reported. Marijuana followed with 14.4 days used (table 27). Despite the seemingly regular use of illegal drugs, the majority of youths did not think they needed treatment for drug use. Thirty-two percent reported having received treatment and 34 percent expressed a need for treatment (table 28).

Meth was reported to be used 8.9 days in the previous 30 days, followed by alcohol (8.1 days). When asked how many *consecutive* days they had used meth, the average across sites was 5.8 days. Youths in San Jose reported the least number of days (4) and Los Angeles juveniles

Table 27. Self-Reported Drug Use Compared With Positive Drug Result
ADAM Juvenile Meth Users, 1996–1997

	Ever Tried (%)	Mean Age First Tried	Number of Days Used in Past 30 Days*	Used in Past 3 Days* (%)	Positive Drug Test* (%)
Alcohol	98	11.6	8.1	45	n/a
Tobacco	98	11.6	24.9	92	n/a
Marijuana	99	12.0	14.4	55	56
Cocaine/Crack	68	13.9	6.1	37	18
Heroin	17	14.3	10.1	31	15
Methamphetamine	100	14.0	8.9	47	38
Inhalants	39	12.8	2.6	16	n/a

*Based on respondents who admitted use in the past 12 months.

Table 28. Treatment Experience ADAM Juvenile Meth Users, 1996–1997

Have you received treatment?	
Yes	32%
No	68%
Total	263
Could you use treatment?	
Yes	34%
No	66%
Total	263

reported the most consecutive days of meth use (7.6). Conversely, when asked how many days in a row they had not used meth, the average across sites was 15.6 days, with San Diego youths significantly lower at 13.2 days. The use of meth by youths was similar to that of their adult counterparts.

A more precise indicator of level of use is how many times meth is used in a typical day. Across sites, the number of times used was 3.4, varying from 2.4 in Phoenix to 4.2 in Los Angeles.

Juvenile drug use is less likely than adult use to be affected by having the money to buy drugs. Ninety-one percent of the youths reported obtaining meth without paying cash for it in the 30 days prior to the interview. About the same percentage said they got it for free, most often from a friend. Only 11 percent stated that they got it from their dealer or took it "off the top" as dealers themselves. These responses explain why only 58 youths reported buying meth in the 7 days prior to the interview. When asked how many *times* they had bought, the average across sites was 1.9, with San Diego youths revealing the most buys (3.1) (significant at the .05 level).

Drug Market Dynamics

The drug procurement activities by juvenile meth users generally paralleled those of their adult counterparts.

- Almost two-thirds (64 percent) of the juveniles got their meth indoors, from a residence.
- Dealers were contacted by telephone (36 percent), directly (33 percent), or by beeper (30 percent).
- When asked how many different people they obtained meth from in the previous 7 days, 30 percent stated none and 40 percent said one. The average across sites was 3.4, with Los Angeles youths stating the highest number of individuals (4.7).
- About half (52 percent) of the juveniles reported having a main source for meth (clearly proportionately less than adults). Of those, 49 percent had used that source for more than 6 months.
- The main source also supplied other drugs, according to 47 percent of the youths. Drugs secured by the main source included marijuana, cocaine, and LSD.
- If their source is not available, most youths (51 percent) do without, but 37 percent buy from someone else.
- More than half (55 percent) reported that their source was a dealer or middleman, and 17 percent noted that the source was a dealer *and* a cooker.
- Similar to the youthful *users*, 49 percent of the main source individuals were Hispanic, according to the respondents. Forty percent were white.
- Youths were not likely to buy from someone they did not know, and for 83 percent there was no time during the previous 30 days when meth was not available to them.
- A total of 130 youths responded to the question: "How much did you pay the last time you bought meth?" The median dollar amount across sites was $40, with Portland and Phoenix juveniles paying more ($80 and $60, respectively) and Los Angeles juveniles paying the least ($20).
- Thirty-nine percent of youths replied affirmatively when asked if they had participated in any drug-related activities besides use in the previous 30 days. Activities included: selling drugs (59 percent), acting as a middleman (40 percent), holding drugs or money (37 percent), providing street security or protection (20 percent), cutting or packaging meth (10 percent), and acting as an enforcer or

Table 29. Drug-Related Activities ADAM Juvenile Meth Users, 1996–1997 (%)

Participation in Drug-Related Activities	
Yes	39
No	61
Types of Activities*	
Sell Drugs	59
Act as Middleman	40
Hold Drugs or Money	37
Provide Street Security	20
Cut/Package Meth	10
Act as Enforcer/"Taxman"	10

*Includes multiple responses.

"taxman" (10 percent) (table 29). The primary reasons given for drug involvement were to make money and to get drugs.

- Eighty-eight youths admitted to selling or making meth in the year prior to the interview. Half (52 percent) said they began selling within 6 months of initiating meth use; 15 percent dealt meth before they began using it. Forty-four percent had been dealing for 1 year or more, and 71 percent started dealing to make money. Asked why they currently deal, 39 percent said for the profit and 35 percent said for both the profit and the drug habit.
- About one-third (34 percent) of the juveniles reported making no money from dealing in the previous 30 days. Of the 55 juveniles who had made money, about half reported making more than $200, with a median figure across sites of $250.
- Of 84 juveniles responding, 39 percent stated that they had sold to no one in the previous 7 days. For those who sold, 59 percent said that they had sold to more than 4 people, with an average across sites of 7.4 individuals.
- Seven juveniles reported that they sold meth outside the State in which they lived. The States included California, Hawaii, Idaho, Nevada, New Mexico, Texas, and Washington.
- Asked what they worry about when they are dealing meth, the most frequently expressed response was "getting busted" (58 percent); about one-quarter of the youths (27 percent) said they had no worries. Other responses included getting robbed and getting hurt.
- About half (51 percent) of the dealers reported carrying a weapon for security when they were dealing meth. Other precautions included selling only to friends (37 percent), not carrying a lot of drugs (13 percent) or cash (12 percent), using a pay phone (13 percent), and delivering to the customer (13 percent).
- When working for someone else, 43 percent of the juveniles reported that they got paid cash out of the profits made, and 20 percent stated that they got paid with meth. About one-quarter (27 percent) said that they sold for themselves and did not work for anyone else.
- Almost half (49 percent) of 85 youths responding said they were currently selling meth. For those who said they were no longer dealing, the most prevalent reason was that they were in jail. Other reasons given were associated with not being a regular dealer, being tired of the lifestyle, getting busted, and police activity being a deterrent.
- Nine juveniles reported being meth cookers. The majority of these learned the process from their friends. Ephedrine and pseudoephedrine, red phosphorous, and iodine were the most frequently used chemicals. Chemicals were obtained primarily from other cookers or from retail outlets. Three juveniles reported using a "dry cook" method. The waste from cooking is poured down the drain, dumped on the ground, or abandoned in containers, according to the cookers.

The analysis of juveniles also compared youths who reported involvement with drug activity with those youths who did not admit such involvement. The differences between the two groups were not as striking as those for the adults. One significant difference was that 38 percent of those with illegal drug involvement reported gun possession in the previous month. Only 13 percent of the other juvenile arrestees reported having a gun.

Concluding Remarks

[M]eth is an equal opportunity destroyer that does not discriminate. . . . [It] will wreck your life, if given a chance.

Meth User

This study includes only arrestees in five western cities who reported using meth, but other indicators suggest that meth use is increasing well beyond the offender community. Its uniqueness lies in that it can be made in the United States and that its effects are profound with respect to human brain chemistry and volatility of the chemicals. The Federal Government has acknowledged the spread of meth in other areas of the country and responded by appropriating funds to address meth use before it becomes a national epidemic.

The findings presented in this study suggest that the production and use patterns of meth are different from those of other illegal drugs. These differences have policy implications for prevention, intervention, and control strategies. A few of these are highlighted.

First, the public needs to be informed about the effects and consequences of meth production and use. The national campaign against drugs must incorporate information about meth.

Law enforcement agencies need resources and training to identify and contain meth labs. The dynamics of the meth market warrant different enforcement tactics than those used in open-air drug markets.

To encourage retention in treatment, individuals addicted to meth may need to be engaged in treatment in a different manner than other users are.

Addressing any type of drug abuse requires a multifaceted approach that includes many agencies and systems. An example of one region's efforts is described below.

Meth Matters: The San Diego Approach to Prevention and Reduction of Meth Production, Distribution, and Use

San Diego has had a long history of meth use and trafficking, interrupted sporadically by intense enforcement efforts and regulation of chemicals. As noted earlier, what once was a business controlled by motorcycle gangs has become a lucrative venture for those Mexican nationals already proficient in the manufacturing and trade of cocaine. The instability of the Mexican government is one obstacle to effectively targeting the availability or supply of meth.

Both the supply of and the demand for meth are being targeted by the Methamphetamine Strike Force in San Diego, a group spearheaded in March 1996 by a member of the San Diego County Board of Supervisors. The supervisor convened a diverse group of more than 70 representatives of myriad agencies and systems, including the criminal justice arena, schools, public health, social services, universities, and the medical community. The group divided into subcommittees representing prevention, intervention, treatment, and interdiction and developed an integrated regional plan to reduce methamphetamine problems in San Diego County. The strike force is cochaired by the undersheriff and the director of the county Health and Human Services Agency. Early on, it was acknowledged that drug use—and meth use in particular—required a coordinated approach. Drug use is not solely a police problem, or solely a school

problem. To effectively address drug use requires interagency cooperation in and commitment to a long-term comprehensive strategy. The strike force is still in operation, and the dedication of the involved individuals has not wavered. As the undersheriff stated: "Never before in the time I have been in the county have I seen this number of people with such diverse backgrounds come together to concentrate on a problem like methamphetamine."

Following a number of meetings and conferences, the strike force developed a series of recommendations centered on prevention, intervention, treatment, and interdiction. An annual report card on methamphetamine was developed to assess the efforts of the strike force by measuring changes in meth indicators, including arrests, seizures, price, purity, treatment admissions, overdose deaths, hospital mentions, and ADAM results. A July 1998 progress report summarized a number of past efforts that may have future impacts on meth trafficking and use. The strike force is not directly responsible for all of the following accomplishments but had a hand in most of them. These efforts are described below (San Diego County, 1998):

- Intensive media efforts educated and informed the public about methamphetamine use and its consequences. Currently, the county is coordinating efforts with the Partnership for a Drug-Free America.
- Videotapes were made and distributed to county schools. The videos feature experts on drug abuse summarizing ADAM juvenile arrestee interview results and personal accounts from youthful users who are in recovery for meth use.
- The county sponsored two, 2-day conferences on methamphetamine, with local and statewide experts providing information about the nature and scope of meth use, profiles of users, and types of treatment modalities. Both conferences were well attended by educators, medical personnel, law enforcement agents, social service providers, and researchers.
- The presiding judge of the juvenile court developed a drug dependency court, based on the finding that a significant number of children are in foster homes because their parents have drug abuse problems. The dependency court mandates parents into drug treatment and also shortens the time for families to unify before the child is eligible for adoption.
- Both the city and the county of San Diego drafted and passed ordinances modeled after those in San Bernardino and Chino, California, that restrict the sale of precursor, over-the-counter ingredients used to make methamphetamine.
- State funding has allowed San Diego to develop a pilot project to assist children who are exposed to meth cooking. A team comprising law enforcement, the district attorney's office, and the Health and Human Services Children's Bureau takes immediate action when a child is in a home in which a lab seizure takes place. The children are taken into protective custody and tested for meth toxicity.
- Based on the San Diego County Treatment on Demand Initiative, about 400 residential and nonresidential treatment slots have been added for adolescents.
- Based on the success of a north county program, screening, behavioral, and intervention (SBI) services were identified by strike force members as promising technology for screening and monitoring drug use. Several health care organizations have developed plans to integrate SBI prevention services into their current service delivery systems.
- A meth hotline was set up by the Narcotics Information Network of the California Department of Justice. Staffed by volunteers, the hotline receives several hundred calls each month regarding suspected meth labs or dealers and questions about treatment. Since its inception in December 1996, 54 arrests were made and 2 meth labs were seized as a direct result of hotline calls.

- The California Border Alliance Group, through the Office of National Drug Control Policy, is providing funding for the strike force infrastructure.
- The San Diego Association of Governments (SANDAG) and the EYE, a local drug treatment agency, became partners to implement and evaluate a specialized treatment program for female meth users. Funding is provided by the Center for Substance Abuse Treatment of the U.S. Department of Health and Human Services.
- A number of strike force members participated in a video about meth issues developed by the California State Attorney General's Office to be disseminated around the State.

The Methamphetamine Strike Force Progress Report acknowledges that meth is a "chronic and persistent problem in San Diego, and no single measure or time period can direct public policy." Strike force members remain committed to action and hope that their efforts will have an impact on the meth problem in San Diego. The next step will be to select a target community within the county that will tackle the meth problem using an integrated approach. The strike force will commit resources to the target community and assess its efforts with an eye toward creating a model for the entire county, and quite possibly the Nation.

Meth Users Speak

The interviews with meth users afforded an opportunity to obtain comments that were not directly related to the structured interview questions. The following quotes illustrate the many observations made by meth users:

- ". . . would like to know more about the effects of long-term use. . . like to see real studies of physical effects."
- ". . . learned how to cook meth in high school biochemistry. . . . That's what started [my] career."
- "Don't do it. It turns everybody into a slave. I'm sorry to the people I've ever sold to."
- ". . . turns you into a human rollercoaster. I've got to stop. . . wish there was more information about support or counseling and what is really in it."
- "At this point in my life I wish the drug didn't control me, and I wish that I and my old lady could stay clean."
- ". . . very bad drug. . . ruins your family and your life."
- ". . . need more rehab places, instead of prisons."
- "The legal system needs to treat drug use differently—with more compassion, not necessarily less seriously."
- "Everybody needs help if they use meth. It destroys a lot of people's lives. It needs to be stopped."
- "If you snort it, don't smoke or slam it. If you smoke, don't slam. Don't move up to the next level; stay where you are. Don't use it if you're pregnant until you've given birth and you are done breastfeeding."
- "Since the day I first used meth, it has gripped my life. . . more addictive psychologically than physically."
- "My friend told me that everything I make goes right back into it. I didn't want to believe it, but when I honestly think about it, it's true."
- ". . . highly addictive. . . ruins your life. . . not a joking matter."
- "Meth is a very addictive drug. The comedown is terrible, so that's where the addiction comes in. [With] other drugs, like cocaine, the addiction comes into play during the rush. You want that rush again. With meth, you feel like garbage. You want to stop that feeling, so you use."

References

Arrestee Drug Abuse Monitoring (ADAM) Program (1998). *1997 Drug Use Forecasting: Annual Report on Adult and Juvenile Arrestees.* Washington, D.C.: U.S. Department of Justice, National Institute of Justice, NCJ 171672.

Bureau of Narcotic Enforcement (1996). *Methamphetamine: The New Epidemic*. Sacramento, CA: Office of the Attorney General.

California Border Alliance Group (1998). *FY 1999 Narcotics Threat Assessment.* San Diego: San Diego/Imperial County Regional Narcotic Information Network.

Center for Substance Abuse Research (1997). *Methamphetamine Use in the Western United States: An In-Depth Look*, CESAR FAX. College Park: Center for Substance Abuse Research, University of Maryland, Vol. 6, No. 29, July 28.

Community Epidemiology Work Group (1998). *Epidemiologic Trends in Drug Abuse: Advance Report.* Washington, D.C.: National Institutes of Health, National Institute on Drug Abuse, December.

Copley News Service (1998). "Methamphetamine Seen As Next Major Threat." *San Diego Union-Tribune,* February 12.

Decker, S., S. Pennell, and A. Caldwell (1997). *Illegal Firearms: Access and Use by Arrestees.* Research in Brief. Washington, D.C.: U.S. Department of Justice, National Institute of Justice, NCJ 163496.

Drug Enforcement Administration (1996). *The Supply of Illicit Drugs to the United States: The NNICC Report 1996.* Washington D.C.: U.S. Department of Justice, Drug Enforcement Administration.

Feucht, T.E., and G.M. Kyle (1996). *Methamphetamine Use Among Adult Arrestees: Findings From the Drug Use Forecasting (DUF) Program*. Washington, D.C.: U.S. Department of Justice, November, NCJ 161842.

Galvin, D. (1995). *Findings From the High Risk Youth Grants: A Preliminary Report.* Presentation to the Annual Conference on Criminal Justice Research and Evaluation, Washington, D.C., July 11.

Gernstein, D.R., R.A. Johnson, H.J. Harwood, D. Fountain, N. Suter, and K. Malloy (1994). *Evaluating Recovery Services: The California Drug and Alcohol Treatment Assessment (CALDATA) General Reports.* Sacramento: Department of Alcohol and Drug Programs.

Gil-Rivas, V., M.D. Anglin, and J. Annon (1997). "Patterns of Drug Use and Criminal Activities Among Latino Arrestees in California: Treatment and Policy Implications." *Journal of Psychopathology and Behavioral Assessment 19,* 161–174.

Golub, A.L., and B. Johnson (1997). *Crack's Decline: Some Surprises Across the United States. Research in Brief.* Washington, D.C.: U.S. Department of Justice, NCJ 165707.

Green, R. (1996). "Some Meth Raiders of '80s Now Ill." *San Diego Union-Tribune,* December 9, A3–A4.

Huber, A., W. Ling, S. Shoptaw, V. Gulati, P. Brethen, and R. Rawson (1997). "Integrating Treatments for Methamphetamine Abuse: A Psychosocial Perspective." *Journal of Addictive Diseases 16,* 41–50.

Institute for Social Research (1998). *The Monitoring the Future Study.* Available online at (http://www.isr.umich.edu).

Johnson, R. (1997). "Meth Labs: An Explosive Problem." *San Francisco Chronicle,* January 6, A19.

Julien, R.M. (1985). *A Primer of Drug Action.* New York: W.H. Freeman and Company.

Knopf, A. (ed.) (1999). *Substance Abuse Report.* Vol. 30, No. 2. Boston: Warren, Gorham, and Lamont, January 15.

Leshner, Alan I. (1998). "Addiction Is a Brain Disease and It Matters." *National Institute of Justice Journal Issue 237.* Washington, D.C.: U.S. Department of Justice, National Institute of Justice, NCJ 173825, October.

Lucas, S.E. (1997). *Proceedings of the National Consensus Meeting on the Use, Abuse, and Sequelae of Abuse of Methamphetamine With Implications for Prevention, Treatment, and Research.* Rockville, MD: U.S. Department of Health and Human Services, DHHS Publication No. SMA 96–801 3.

Lungren, D. (n.d.). *Methamphetamine: California's Deadly "Speed" Trap.* Sacramento, CA: Office of the Attorney General.

Manning, T., and D. Vedder (1998). "Toxic Chemicals. Toxic Kids." *Law Enforcement Quarterly 27,* 20–23.

McCrea, B.A., and K.F. Kolbye (1995). *Hazards of D-Methamphetamine Production: Baseline Assessment*. Washington, D.C.: U.S. Department of Justice, National Drug Intelligence Center, June, NDIC Pub. No. 95–C0109–002, NCJRS, NCJ 164382.

Merrill, J.C., K. Fox, S.R. Lewis, and G.E. Pulver (1994). *Cigarettes, Alcohol, Marijuana: Gateways to Illicit Drug Use.* New York: Center on Addiction and Substance Abuse at Columbia University.

National Institute of Justice (1998). *1997 Annual Report on Adult and Juvenile Arrestees.* Washington, D.C.: U.S. Department of Justice, National Institute of Justice, NCJ 171672.

National Institute of Justice (1997). *1996 Drug Use Forecasting Annual Report on Adult and Juvenile Arrestees.* Washington, D.C.: U.S. Department of Justice, National Institute of Justice, NCJ 165691.

National Institute on Drug Abuse (n.d.). *Comparing Methamphetamine and Cocaine.* Available online at (http://www.nida.nih.gov).

National Institute on Drug Abuse (1998a). *Epidemiologic Trends in Drug Abuse: Community Epidemiology Work Group (Volume II: Proceedings December 1997).* Washington, D.C.: National Institutes of Health, National Institute on Drug Abuse, NIH Publication No. 98–4298.

National Institute on Drug Abuse (1998b). *Methamphetamine Abuse and Addiction Research Report Series.* Available online at (http://www.nida.nih.gov).

National Narcotics Intelligence Consumers Committee (1997). *The Supply of Illicit Drugs to the United States.* Available online at (http://www.usdoj.gov/dea).

Office of National Drug Control Policy (1997). *Pulse Check: National Trends in Drug Abuse.* Washington, D.C.: Office of National Drug Control Policy.

Pennell, S., (1990). "Ice: DUF Interview Results From San Diego," *NIJ Reports.* Washington, D.C.: U.S. Department of Justice, National Institute of Justice, Summer, No. 221.

Potter, M.J. (1996). *Effects of D-Methamphetamine.* Washington, D.C.: U.S. Department of Justice, National Drug Intelligence Center, NDIC Pub. No. 96–C0109–003.

Riley, J.K. (1997). *Crack, Powder Cocaine, and Heroin: Drug Purchase and Use Patterns in Six U.S. Cities,* Research Report. Washington D.C.: U.S. Department of Justice, National Institute of Justice and Office of National Drug Control Policy, NCJRS, NCJ 167265.

San Diego Association of Governments (1997). *DUFINFO.* San Diego, CA: San Diego Association of Governments.

San Diego County (1998). *Methamphetamine Strike Force Progress Report.* San Diego, CA: San Diego County, July.

San Diego Union-Tribune (1998). Search Results. "959 documents found for query: (methamphetamine)" Available online at (http://www.uniontrib.com/news/utarchives/cgi/libsearch.cgi).

Smith, J.M. (ed.) (n.d.). *Drug Pharmacology (Second Edition).* Washington, D.C.: U.S. Department of Justice, Drug Enforcement Administration.

Stalcup, A. (1998). Methamphetamine Training, San Diego, California. Personal observation, January.

Substance Abuse and Mental Health Services Administration (1998a). *Preliminary Results From the 1997 National Household Survey on Drug Abuse.* Available online at (http://www.samhsa.gov).

Substance Abuse and Mental Health Services Administration (1998b). *Year End Preliminary Estimates From the 1996 Drug Abuse Warning Network.* Available online at (http://www.samhsa.gov).

Substance Abuse and Mental Health Services Administration (1997). *The Basics of Brain Imaging.* Available online at (http://www.samhsa.gov).

U.S. Bureau of the Census (1998). *United States Population Estimates, by Age, Sex, Race, and Hispanic Origin, 1990 to 1997,* PPL–91. Suitland, MD: U.S. Bureau of the Census, Population Division, Nov. 1.

Winton, R., and N. Riccardi (1998). "Meth War Hits Close to Home—at Local Pharmacy." *Los Angeles Times,* January 31, A1.

APPENDIXES

APPENDIX A: Adult ADAM Interview

OMB No. 1121-0137

ADULT ADAM INTERVIEW NATIONAL INSTITUTE OF JUSTICE	**NOTICE**–Information contained on this form which would permit identification of any individual or released to others without the consent of the individual or the establishment has been collected with a guarantee that it will be held in strict confidence, will be used only for purposes stated for this study, and will not be disclosed or released to others without the consent of the individual or the establishment in accordance with section 42 USC 3789g and 28 CODE (CFR) Part 22. Public reporting burden for this collection of information is estimated to average 15 minutes per response. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Director, National Institute of Justice, 810 Seventh Street, NW, Washington, DC 20531; and to the Office of Management and Budget, Paperwork Reduction Project (0920–0214), Washington, DC 20503.		
	INTERVIEW DATE ___ ___/___ ___/___ ___	**ADAM SITE ID#** ___ ___	**PERSON ID#** ___ ___ ___ ___ ___

INFORMATION FROM RECORDS **(COMPLETE BEFORE APPROACHING ARRESTEE)**

Year of Birth: ____ ____ SEX: 1 - Male 2 - Female

Ethnicity Information:

1 - Black (Not Hispanic) 2 - White (Not Hispanic) 3 - Hispanic 4 - American Indian or Alaskan Native

5 - Asian or Pacific Islander 6 - Other: Specify _____

Precinct/location of arrest: _____

Location of arrest ZIP Code ___ ___ ___ ___ ___
(or other code) _____
Arrestee's residence ZIP Code ___ ___ ___ ___ ___
(or other code) _____

Was the person charged with a warrant only? 0 - NO 1 - YES

Was the person charged with a probation/parole/ROR violation? 0 - NO 1 - YES

Law Enforcement 1 2 3 4 5 6 7 8 9 0

(WRITE IN CHARGE, WITH NO ABBREVIATIONS)

	Charge Code (from list below)	Penal Law Code	Misd	Felony	Status
Most serious charge: _____	_____	_____	M	F	S
Second most serious charge: _____	_____	_____	M	F	S
Third most serious charge: _____	_____	_____	M	F	S

VIOLENT OFFENSES

1.01 Assault
1.02 Blackmail/Extortion/Threat
1.03 Kidnapping
1.04 Manslaughter by negligence
1.05 Murder/Homicide (Non-negligent Manslaughter)
1.06 Robbery
1.07 Sexual Assault/Rape by force
1.08 Weapons
1.09 Domestic Violence
1.10 Child Abuse
1.11 Spouse/Partner Abuse
1.12 Child Neglect
1.13 Violation of Protection Order

DRUG/ALCOHOL-RELATED OFFENSES

2.01 Driving While Intoxicated Driving Under the Influence
2.02 Drug Possession
2.03 Drug Sale
2.04 Liquor
2.05 Possession of alcohol
2.06 Under the influence of a Controlled Substance

PROPERTY OFFENSES

3.01 Arson
3.02 Bribery
3.03 Burglary
3.04 Burglary Tools
3.05 Damage/Destroy Property
3.06 Forgery
3.07 Fraud
3.08 Larceny/Theft
3.09 Stolen Property
3.10 Stolen Vehicle
3.11 Trespassing

MISCELLANEOUS OFFENSES

5.01 Commercial Sex/Prostitution
5.02 Embezzlement
5.03 Fare Beating
5.04 Flight/Escape/Bench Warrant
5.05 Gambling
5.06 Obscenity (e.g., indecent exposure)
5.07 Obstructing Police/Resisting Arrest
5.08 Other (specify above)
5.09 Public Peace/Disturbance/ Mischief/ Reckless Endangerment
5.10 Pickpocket/Jostling
5.11 Sex Offenses
5.12 Unspecified Probation/Parole/ ROR Violation

NOTE: INTERVIEWER INSTRUCTIONS ARE IN CAPITAL LETTERS. READ ANSWER CHOICES TO THE RESPONDENT ONLY WHEN INSTRUCTED TO DO SO. EVERYTHING ELSE IN LOWER CASE OR INITIAL CAPS MUST BE READ TO RESPONDENT. USE PEN, NOT PENCIL, TO COMPLETE INTERVIEW.

Interviewer's Initials: ___ ___

READ AS WRITTEN: This interview is part of a federally funded study. Your participation is voluntary. The information you provide is confidential and anonymous, and it will not help or hurt your case. At the end of the interview I will ask you to provide a urine sample.

(CIRCLE ONE)

1 Agreed to interview
2 Declined
3 Not available (ill, asleep, taken to court)
4 Other reason not interviewed (Specify) _____

INTERVIEW CONDUCTED IN:

(CIRCLE ONE)

1 Spanish
2 English
3 Other

1. How many hours ago were you arrested?

(IF GREATER THAN 48 HOURS, DISCONTINUE INTERVIEW)

_____ HRS

2. What is the highest grade you have successfully finished in school?

___ ___

(**EXAMPLES**: 9th Grade=09; H.S. Graduate=12;
1 Year College=13; Never Attended School=00)

3. Did you graduate from high school or get a GED certificate?

(CIRCLE ONE)

1 High School Graduate
2 GED
3 Currently in High School
4 Neither
10 Other (Specify)_____

4. What is your current marital status?

(READ ALL CHOICES, CIRCLE ONE)

1 Single, Never Married
2 Married
3 Separated, Divorced
4 Living with boyfriend/girlfriend
5 Widowed

5. In the past month, what kind of place did you live in? (PROBE: What kind of building? Where did you stay? Was it public or private housing?)

(PROBE AND CODE INTO ONE OF THE FOLLOWING CATEGORIES)

0 Public housing	(**GO TO QUESTION 6**)
1 Private apartment/condo./hotel	(**GO TO QUESTION 6**)
2 House/mobile home	(**GO TO QUESTION 6**)
3 Emergency or short-term shelter	(**GO TO QUESTION 7**)
4 Jail or prison	(**GO TO QUESTION 7**)
5 Half-way or honors facility	(**GO TO QUESTION 7**)
6 Drug/alc. treatment facility	(**GO TO QUESTION 7**)
7 No fixed residence; on the street	(**GO TO QUESTION 7**)
8 Other (Specify) _____	(**GO TO QUESTION 7**)

6. In the past month, how many people have lived in your household on a regular basis, including yourself?

_____
(**1=SELF, IF GREATER THAN 1, ASK A**)

A. How are these people related to you?

CIRCLE ALL THAT APPLY: SPECIFY NUMBERS OF FOLLOWING:

0 Mother	6 _____ Grandparents
1 Father	7 _____ Parent(s)-in-law
2 Stepmother	8 _____ Biological Children
3 Stepfather	9 _____ Adopted or stepchildren
4 Spouse	10 _____ Brothers or sisters
5 Boyfriend/girlfriend	11 _____ Other relatives
	12 _____ Friends/roommates
	13 _____ Other unrelated people

7. In the past 30 days, what was the main source of your income or spending money?

(READ ALL CHOICES, CIRCLE ONE, SELF-EMPLOYED IS FULL- OR PART-TIME WORK, DO NOT RECORD EMPLOYER'S NAME)

0 Welfare, SSI
1 Working Full-Time
(Specify type of employment) _____
2 Working Part-Time or Odd-Jobs
(Specify type of employment) _____

	3 Family 4 Other Legal (Specify)_____ 5 Prostitution 6 Dealing/Drug Sales 7 Other Illegal (Specify)_____ 8 No Income
8. In the past 30 days, how much money did you receive from all legal sources (such as wages, food stamps, and/or welfare)?	$ ___ ___ ___ ___ ___.00 COMPARE THE RESPONSE IN Q7 FOR CONSISTENCY.
9. In the past 30 days, how much money did you receive from all illegal sources?	$ ___ ___ ___ ___ ___.00
READ AS WRITTEN: The next several questions concern drugs used illegally and do not include drugs prescribed by a doctor. 10. In the past 30 days how much did you spend on drugs for yourself (not including alcohol and tobacco)? Remember, everything you tell me is confidential.	$ ___ ___ ___ ___ ___.00 IF AMOUNT EXCEEDS DOLLAR AMOUNT IN Q8 & Q9, PROBE REASONS FOR EXCESS.

(CIRCLE "0" FOR NO AND "1" FOR YES)

AGE_____ (CALCULATE FROM Y.O.B. AND VERIFY WITH ARRESTEE) 11. Have you ever tried any of the following drugs? **(READ ALL DRUGS)**	Alcohol	Tobacco	Marijuana	Crack	Powder Cocaine	Heroin, Black Tar, Dilaudid, Morphine (opiates)	PCP/Angel Dust	Amphetamines/ Speed (pills)	Downers/ Barbiturates	Quaaludes/Ludes	Street Methadone	Methamphetamine/ Crystal Meth.	Valium or other Tranquilizers	LSD/Acid	Inhalants
	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1
PROCEED DOWN THE COLUMNS FOR EACH DRUG THE ARRESTEE EVER TRIED															
12. When you first tried (NAME DRUG) how old were you?															
13. Have you used (NAME DRUG) during the last 12 months?	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1
IF NO, SKIP TO QUESTION 18 (SKIP MAY DIFFER FOR EACH DRUG)															
14. In the past 3 days did you use (NAME DRUG)?	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1
15. How many days did you use (NAME DRUG) in the past 30 days? **IF RESPONSE IS 28 OR MORE DAYS, CHECK CONSISTENCY WITH Q14.**															
16. During the past 12 months, have you consciously tried to cut down or quit using (NAME DRUG) on your own?	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1
A. If yes, were you successful?	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1
17. Have you felt that you needed or were dependent on (NAME DRUG) in the past 12 months?	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1
18. Are you now receiving treatment or detox for (NAME DRUG)?	0 1		0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1
19. Have you received treatment or detox for (NAME DRUG) in the past?	0 1		0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1
20. Do you feel you could use treatment for (NAME DRUG)?	0 1		0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1

21. Are there any <u>other</u> drugs that you have used illegally in the past 30 days?	0 No 1 Yes (Specify) _____

22. Have you ever injected drugs illegally?

0 No **(GO TO QUESTION 24)**
1 Yes **(ASK A)**

A. What drugs have you EVER injected?

(CIRCLE ALL THAT APPLY)

1 Heroin
2 Cocaine
3 Amphetamines/speed/crystal meth
4 Other(s) (Specify) _____

COMPARE THESE ANSWERS TO Q11. MUST BE CONSISTENT WITH DRUGS EVER TRIED.

---

23. When was the last time you injected any drug illegally?

1 Within the past 30 days
2 More than 1 month ago but less than 6 months ago
3 6 or more months ago but less than 1 year ago
4 1 or more years ago

---

24. At the time the police said you committed this crime:

A. Were you in need of drugs or alcohol?

(**CIRCLE ALL THAT APPLY**)

0 No
1 Alcohol
2 Cocaine/Crack
3 Marijuana
4 Other(s) (Specify) _____

B. Were you under the influence of drugs or alcohol?

(**CIRCLE ALL THAT APPLY**)

0 No
1 Alcohol
2 Cocaine/Crack
3 Marijuana
4 Other(s) (Specify) _____

---

25. Are there any new drugs on the street that you have heard are being used?

0 No
1 Yes (Specify Effects, How Used, Cost, etc.) _____
_____

---

26. Have you ever been a patient at a Hospital Emergency Room for a drug overdose or any other drug-related incident?

0 No **(GO TO QUESTION 27)**
1 Yes **(ASK A)**

A. Was it during the past 12 months?

0 No
1 Yes

READ AS WRITTEN: The next several questions concern previous arrests, not including the current charge.

27. During the past 12 months, have you been arrested and booked for breaking a law, whether or not you were guilty?

0 No **(GO TO QUESTION 28)**
1 Yes **(ASK A AND B)**

A. How many times during the past 12 months?

___ ___
Number of Times

B. What were the charges?

(LIST ALL CHARGES AND NUMBER OF TIMES DURING THE PAST 12 MONTHS FOR EACH, I.E., Charge/Number of Times)

_____/_____ _____/_____ _____/_____

SUPERVISOR: WRITE OFFENSE CODE BELOW. (LIST IN ORDER OF MOST SERIOUS TO LEAST SERIOUS.)

_____ _____ _____

---

28. Have you served time in the past 12 months?

0 No
1 Yes

---

29. **SPECIMEN (AFTER ANY ADDITIONAL QUESTIONS/ADDENDA) WAS:**

0 Refused/did not try
1 Provided
2 Tried/could not produce specimen

READ AS WRITTEN: As I mentioned at the start of the interview, the last part of the interview is getting a urine sample. Again, this is completely confidential. No names will appear on the specimens and the results will not be given to the police or affect the outcome of your case. I'm going to ask the Officer to take you to a restroom for me. After you've finished I can give you a (*incentive*) for participating in the study. Thank you.

APPENDIX B: Methamphetamine Addendum

METHAMPHETAMINE ADDENDUM

DUF ID __ __ __ __ Interviewer Initials __ __
SEX ___ (1 = man, 2 = woman, 3 = boy, 4 = girl)
SITE # __ __
DATE __ __ / __ __ / __ __

INTRODUCTION

You said earlier that you've used crystal meth in the past 30 days. Now I'd like to ask you some more detailed questions about your experience with meth. Remember that everything you say is still confidential. It's very important for the research that we get accurate and honest information, so if there's a question you don't want to answer, just let me know.

(1) What term do you use to refer to meth? (CIRCLE ALL THAT APPLY)
1. Crystal
2. Tweek
3. Shit
4. Dope
5. Speed
6. Crank
7. Go-Fast
8. Root beer
9. Peanut butter
10. Other _____ __ __

(2) How do you usually use meth? (ONE ANSWER - PROBE FOR METHOD USED MOST OFTEN)
1. Snort
2. Smoke alone
3. Smoke in combo with _____ __ __
4. Inject
5. Inject in combo with _____ __ __
6. Eat/drink
7. Other _____ __ __

(3) Who introduced you to meth? (CIRCLE ONE)
1. Friend
2. Parents
3. Spouse/boyfriend/girlfriend
4. Other family
5. Co-worker
6. Dealer
7. Other _____ __ __

(4) Do/Did your parents ever use drugs?
1. Yes
2. No
3. Don't know

(5) Why did you start using meth? (CIRCLE ALL THAT APPLY)
1. To get high
2. To get more energy
3. To lose weight
4. To experiment
5. To escape
6. To stay awake
7. To replace another drug
8. Friends/peers use
9. Other _____ __ __

(6) Do you prefer meth over cocaine or crack?
1. Yes (ASK Q. 6a)
2. No (SKIP TO Q. 7)
3. No cocaine or crack use (SKIP TO Q. 7)

(6a) Why do you prefer it? (CIRCLE ALL THAT APPLY)
1. The high is better
2. It's easier to get
3. I can make it
4. Fewer side effects
5. It's cheaper
6. The high lasts longer
7. Other _____ __ __

(7) Has your meth use resulted in any of the following: (READ AND CIRCLE ALL THAT APPLY)
1. Weight loss
2. Sleeplessness
3. Dental problems
4. Financial problems
5. Family problems
6. Work problems
7. High blood pressure
8. Skin problems
9. Paranoia
10. Hallucinations
11. Violent behavior
12. Legal problems
13. Required medical treatment
14. Other _____ __ __

(8) Do you usually buy/get meth indoors, outdoors, or from a vehicle?
1. Indoors (ASK Q. 8a)
2. Outdoors (SKIP TO Q. 9)
3. Mobile vehicle (SKIP TO Q. 9)

(8a) Do you usually buy at a: (READ ALL, CIRCLE ONE)
1. Residence
2. Business
3. Hotel/motel
4. Your workplace
5. Other _____ __ __

(9) How do you contact your dealer? (CIRCLE ALL THAT APPLY) (IF FRIEND SUPPLIES, ASK HOW THE FRIEND IS CONTACTED) (IF ONLY ONE ANSWER CIRCLED, GO TO Q. 10)
1. Street
2. House
3. Phone
4. Beeper
5. Mobile vehicle
6. Face to face at your workplace
7. Fax/e-mail
8. Other _____ __ __

(IF MORE THAN ONE METHOD, ASK)
(9a) Which method do you use most often? (CODE NUMBER FROM ABOVE) __ __

(10) How many different people have you gotten meth from in the past 7 days? _____ (NO RANGES!)

(11) Do you get meth within the county? IF YES, WHAT PART?
1. North county region
2. South county region
3. East county region
4. West county region

(12) Do you have a main source—one dealer you usually hook up with?
1. Yes
2. No (SKIP TO Q. 13)

(12a) How long have you used that person?
_____ days
_____ months
_____ years

(12b) Does that person live in your neighborhood?
1. Yes
2. No
3. Don't know

(12c) Do you get other drugs from that main source? (CROSS CHECK WITH DUF GRID)
1. Yes
2. No (SKIP TO Q. 12e)

(12d) If Yes, what other drugs? (CIRCLE ALL THAT APPLY)
1. Marijuana
2. Prescription drugs (Valium, Soma, Darvon, Percodan, etc.)
3. Cocaine/crack
4. Heroin
5. LSD
6. Mushrooms
7. PCP
8. Other _____ __ __

(12e) What do you usually do if your main source isn't around? (CIRCLE ALL THAT APPLY)
1. Buy from someone else
2. Get it through a friend
3. Use another drug
4. Don't buy, do without
5. Other _____ __ __

(12f) Is your main source male or female?
1. Male
2. Female

(12g) Is your main source a: (READ)
1. Dealer and cooker
2. Dealer/Middleman
3. Don't know

(12h) What is the ethnicity of your main source?
1. White
2. Black
3. Hispanic
4. Asian/Pacific Islander
5. American Indian/Alaskan native
6. Other _____ __ __

(13) Have you ever bought from someone you didn't know?
1. Yes
2. No

(14) In the past 30 days was there a time when you had money to get meth, but couldn't buy any?
1. Yes
2. No (SKIP TO Q. 16)

(15) Why do you think it was hard to get? (CIRCLE ONE)
1. Dealer not available
2. Dealer out of meth (due to supply, lack of chemicals)
3. Dealer charging too much
4. Police activity hot
5. Holiday/Sunday
6. In jail
7. Lab shut down/blew up
8. No reason/don't know
9. Other _____ __ __

(16) During the last month, what was the most days in a row (longest run) you used meth? (# DAYS, NO RANGES) __ __

(17) During the last month, what was the most days in a row (longest run) you went *without* using meth? (# DAYS, NO RANGES) (IF ZERO, SKIP TO Q. 19) __ __

(18) Why did you go that long without using it? (DON'T READ—CIRCLE ONE, MOST SPECIFIC)
1. Tired of life associated with meth (passive answer)
2. Wanted to change/improve life (active answer)
3. Couldn't afford it
4. In treatment
5. In jail
6. Because of family and friends
7. Switched to another drug
8. Subjected to drug testing
9. Meth hard to find
10. Health reasons
11. Not a daily or dependent user
12. Needed to sleep
13. Other _____ __ __

(19) In the past 30 days did you get meth without paying cash for it?
1. Yes
2. No (SKIP TO Q. 21)

(20) Why or how did you get meth without paying cash for it? (READ AND CIRCLE ALL THAT APPLY)
1. Traded something for it (including sex)
2. Given to you (got it for free)
3. Dealer owed you
4. Dealer fronted you the meth
5. Stole it
6. Cooked it yourself
7. You deal, and took some off the top
8. Other _____ __ __

If Q. 20 indicates got drugs for free, ASK

(20a) Who gave it to you for free? (CIRCLE ALL THAT APPLY)
1. Friend
2. Parents
3. Spouse/boyfriend/girlfriend
4. Other family member
5. Co-worker
6. Dealer
7. Other _____ __ __

(21) In the past 30 days did you participate in any drug-related activities?
1. Yes (ASK THE FOLLOWING:)

(21a) Did you do it:
1. For money
2. For drugs
3. For drugs and money

2. No (SKIP TO Q. 22)

(21b) If yes, did you: (READ AND CIRCLE ALL THAT APPLY)
1. Sell drugs
2. Act as a middleman
3. Hold drugs or money
4. Provide street security or protection
5. Make meth
6. Get the chemicals for someone else to cook it
7. Find a cooking location
8. Get equipment to cook meth
9. Cut/package meth
10. Act as an enforcer/"taxman"
11. Anything else? _____ __ __

(22) Have you ever been in the military?
1. Yes
2. No (SKIP TO Q. 23)

(22a) Are you a veteran?
1. Yes
2. No

(23) In the past 30 days did you own or possess a gun?
1. Yes
2. No

(24) In the past 30 days have you carried a gun or other weapon while you were getting meth?
1. Yes, gun
2. Yes, other weapon (i.e., knife)
3. Yes, both
4. No

(25) Have you ever tried to get treatment for your meth use?
1. Yes (ASK 25b-e)
2. No (ASK 25a)

(25a) If no, why not? (CIRCLE ONE. PROBE FOR MAIN REASON) (SKIP TO Q. 26)
1. Don't need treatment
2. Can't afford it
3. Don't think it's available/don't know how to get
4. Other _____ __ __

(25b) Did you get into a program?
1. Yes (IF YES, SKIP TO 25d)
2. No

(25c) If no, why not? (CIRCLE ONE. PROBE FOR MAIN REASON) (THEN SKIP TO Q. 26)
1. Waiting list too long
2. Changed my mind
3. Got arrested
4. Too expensive
5. No transportation, too far away
6. Other _____ __ __

(25d) What type of program was it? (IF MORE THAN ONE, REFER TO MOST RECENT)
1. In-patient (residential)
2. Out-patient
3. Detox
4. Jail/prison program
1. NA/AA
2. Other _____ __ __

(25e) Did you complete the program? (REFER TO THE SAME PROGRAM AS ABOVE)
1. Yes
2. No

(25f) If no, why not? (CIRCLE ONE. PROBE FOR MAIN REASON)
1. Program too long
2. Didn't get along with staff
3. Wasn't doing any good
4. Wanted to start using again
5. Program too strict
6. Couldn't afford it
7. Other _____ __ __

(26) How is meth <u>usually</u> packaged? (CIRCLE ONE)
1. In a baggie/plastic
2. In paper
3. In foil
4. Other packaging _____ __ __

(27) How much meth do you use each time you get high? __ __

Specify fractions of grams _____
or
Specify other measure _____

(28) How often do you use meth in a typical day? __ __ (# OF TIMES, NO RANGES)

(29) Compared to a year ago, what if any changes have you noticed about the quality of the meth you're using? (CIRCLE ONE)
1. Quality is worse
2. Quality is the same
3. Quality is better
4. Don't know/NA

(30) Compared to a year ago, what if any changes have you noticed about the price you're paying for meth? (CIRCLE ONE)
1. Price is lower
2. Price is the same
3. Price is higher
4. Don't know/NA

(31) The last time you got meth, how much did you get? (MEASURED QUANTITY, NOT COST HERE) __ __
Specify grams _____
or
Specify other measurement _____

(32) How much did you pay for that amount? _____

(33) Have you bought meth in the last 7 days? (CROSS CHECK)
1. Yes
2. No (SKIP TO Q. 34)

(33a) How many times did you buy in the last 7 days?
_____

[PHOENIX: OMIT QUESTION 34]

(34) Do you know any police, corrections, or customs officers who are involved in dealing meth or protection activities?
1. Yes
2. No

(35) Are you a legal resident of the United States?
1. Yes
2. No

(36) Have you, yourself, sold or made meth in the last year?
1. Yes, sold only (GO TO Q. 37)
2. Yes, made only (SKIP TO Q. 54)
3. Yes, both sold and made (GO TO Q. 37)
4. No (END INTERVIEW - THANK YOU FOR YOUR TIME... REQUEST SAMPLE)

(37) How soon after you started using, did you start selling it?
_____ # days
_____ # months
_____ # years (IF SOLD BEFORE THEY USED CODE 9999 IN YEARS)

(38) How long have you sold meth?
_____ # days
_____ # months
_____ # years

(39) Why did you start to deal meth? (CIRCLE ONE. PROBE FOR MAIN REASON)
1. To support your habit
2. To make money
3. Already selling another drug
4. Exciting
5. Other _____

(40) In what year did you start dealing meth? __ __ __ __

(41) Now do you deal for: (READ ALL, CIRCLE ONE)
1. Profit
2. To support your habit
3. Both for profit and habit
4. Other _____

(42) In the past 30 days how much money have you made selling meth? _____ (NO RANGES! CROSS CHECK WITH DUF QUESTION 9)

(43) In the past 7 days about how many different people have you sold to? _____ (NO RANGES)

(44) Do you sell outside the county?
1. Yes
2. No

(45) Do you sell outside the state? (SPECIFY STATE)
1. Yes _____ __ __
2. No

(46) Do you sell outside the country? (SPECIFY COUNTRY)
1. Yes _____ __ __
2. No

(47) Do you sell to people outside your race or ethnic group?
1. Yes
2. No

(48) What do you worry about when you deal meth? (CIRCLE ALL THAT APPLY) (CROSS CHECK WITH Q. 23, 24)
1. Getting busted
2. Not selling enough to pay the bills
3. Getting robbed? If yes, by whom?
_____ __ __
4. Getting hurt? If yes, by whom?
_____ __ __
5. No worries
6. Other _____

(49) What kinds of safety/security precautions do you take when dealing meth? (CIRCLE ALL THAT APPLY)
1. Carry a weapon (CROSS CHECK WITH Q. 23, 24)
2. Hire street security/protection
3. Don't carry a lot of drugs
4. Don't carry a lot of money
5. Secure home
6. Use pay phone
7. Use clone cell phone
8. Use beeper
9. Don't let customer come to house
10. Deliver to customer
11. I only sell to friends
12. Other _____

(50) What's the smallest amount you sell?
_____ __ __
(specify grams)

(51) When you're selling meth for someone else, how do you get paid? (CIRCLE ONE. PROBE FOR MAIN REASON)
1. Cash by the hour
2. Cash cut out of profits
3. Meth directly
4. Sell for myself, not for anyone else
5. Get other drugs _____ __ __
6. Other _____ __ __

(52) Are you currently selling meth?
1. Yes (SKIP TO Q. 54 IF HE MAKES METH, OTHERWISE END AFTER Q. 53)
2. No

(53) Why did you stop selling meth? (CIRCLE ONE. PROBE FOR MOST IMPORTANT REASON)
1. Tired of getting busted
2. Tired of the lifestyle
3. Started selling another drug
4. For my family
5. Police activity hot
6. Feared for my life
7. In jail
8. Other _____

IF ARRESTEE ONLY DEALS, AND DOESN'T MAKE METH, STOP HERE

READ: YOU SAID EARLIER THAT YOU COOK/MAKE METH...

(54) Who taught you how to cook it?
1. Friend
2. Parents
3. Cell mate
4. Internet
5. Dealer/cooker
6. Another user

(55) Where do you cook it? (CIRCLE ALL THAT APPLY)
1. Your house/apartment
2. Someone else's house/apt.
3. Motel/hotel
4. Mobile vehicle
5. Storage unit
6. Outdoors (field, desert)
7. Other _____

(56) Is it hard to get the chemicals you need?
1. Yes
2. No
3. Sometimes (EXPLAIN) _____

(57) What do you use to make meth? (CIRCLE ALL THAT APPLY)
1. Ephedrine
2. Pseudoephedrine
3. Freon
4. Red phosphorus
5. Tablets (over the counter, specify type _____)
6. Caffeine
7. Vitaflex
8. Lactose
9. MSM
10. Iodine
11. Hydrochloric gas/acid
12. Other _____

(58) Where do you get the ephedrine or other chemicals needed to make meth? (CIRCLE ALL THAT APPLY)
1. From someone else dealing meth/chemicals __ __
_____
(SPECIFY STATE/COUNTRY)
2. I buy it myself from __ __
_____
(SPECIFY STATE/COUNTRY)
3. From a mail order catalog
4. From a retail store outlet
5. Other _____

(59) What cooking methods do you use to cook it? (CIRCLE ALL THAT APPLY)
1. Flash
2. Pressure cooker
3. Tablets
4. Dry cook
5. Other _____

(60) What do you do with the toxic waste?
1. Abandon it in containers
2. Dump it on the ground
3. Bury it
4. Pour it down the drain

END OF INTERVIEW - THANKS FOR YOUR COOPERATION (REQUEST SAMPLE, ETC.)

About the National Institute of Justice

The National Institute of Justice (NIJ), a component of the Office of Justice Programs, is the research agency of the U.S. Department of Justice. Created by the Omnibus Crime Control and Safe Streets Act of 1968, as amended, NIJ is authorized to support research, evaluation, and demonstration programs, development of technology, and both national and international information dissemination. Specific mandates of the Act direct NIJ to:

- Sponsor special projects, and research and development programs, that will improve and strengthen the criminal justice system and reduce or prevent crime.
- Conduct national demonstration projects that employ innovative or promising approaches for improving criminal justice.
- Develop new technologies to fight crime and improve criminal justice.
- Evaluate the effectiveness of criminal justice programs and identify programs that promise to be successful if continued or repeated.
- Recommend actions that can be taken by Federal, State, and local governments as well as by private organizations to improve criminal justice.
- Carry out research on criminal behavior.
- Develop new methods of crime prevention and reduction of crime and delinquency.

In recent years, NIJ has greatly expanded its initiatives, the result of the Violent Crime Control and Law Enforcement Act of 1994 (the Crime Act), partnerships with other Federal agencies and private foundations, advances in technology, and a new international focus. Some examples of these new initiatives:

- New research and evaluation are exploring key issues in community policing, violence against women, sentencing reforms, and specialized courts such as drug courts.
- Dual-use technologies are being developed to support national defense and local law enforcement needs.
- The causes, treatment, and prevention of violence against women and violence within the family are being investigated in cooperation with several agencies of the U.S. Department of Health and Human Services.
- NIJ's links with the international community are being strengthened through membership in the United Nations network of criminological institutes; participation in developing the U.N. Criminal Justice Information Network; initiation of UNOJUST (U.N. Online Justice Clearinghouse), which electronically links the institutes to the U.N. network; and establishment of an NIJ International Center.
- The NIJ-administered criminal justice information clearinghouse, the world's largest, has improved its online capability.
- The Institute's Drug Use Forecasting (DUF) program has been expanded and enhanced. Renamed ADAM (Arrestee Drug Abuse Monitoring), the program will increase the number of drug-testing sites, and its role as a "platform" for studying drug-related crime will grow.
- NIJ's new Crime Mapping Research Center will provide training in computer mapping technology, collect and archive geocoded crime data, and develop analytic software.
- The Institute's program of intramural research has been expanded and enhanced.

The Institute Director, who is appointed by the President and confirmed by the Senate, establishes the Institute's objectives, guided by the priorities of the Office of Justice Programs, the Department of Justice, and the needs of the criminal justice field. The Institute actively solicits the views of criminal justice professionals and researchers in the continuing search for answers that inform public policymaking in crime and justice.