

EPIDEMIOLOGIC TRENDS IN DRUG ABUSE

Volume II

Proceedings of the Community
Epidemiology Work Group

June 2003

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
NATIONAL INSTITUTES OF HEALTH

NATIONAL INSTITUTE ON DRUG ABUSE
COMMUNITY EPIDEMIOLOGY WORK GROUP



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Division of Epidemiology, Services and Prevention Research
National Institute on Drug Abuse
6001 Executive Boulevard
Bethesda, Maryland 20892

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This publication, *Epidemiologic Trends in Drug Abuse, Volume II*, contains the papers presented and data reported at the June 2003 CEWG meeting by CEWG representatives from 21 areas, and researchers from Canada and Mexico. Volume II also contains a number of special presentations, including a panel on methadone-associated mortality, methamphetamine abuse in Missouri, and updates on the Arrestee Drug Abuse Monitoring (ADAM) program and the National Forensic Laboratory Information System (NFLIS).

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For more information about the Community Epidemiology Work Group and other researched-based publications and information on drug abuse and addiction, visit NIDA's Web site at: <http://www.drugabuse.gov>

Both Volumes I and II (available in limited supply) can be obtained by contacting the National Clearinghouse for Alcohol and Drug Information

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Foreword

This publication includes papers presented at the 54th semiannual meeting of the Community Epidemiology Work Group (CEWG) held in St. Louis, Missouri, on June 24–27, 2003, under the sponsorship of the National Institutes of Health, National Institute on Drug Abuse (NIDA). The CEWG is composed of researchers from 21 sentinel areas in the United States who have extensive knowledge and experience in community research and their local communities. They are also informed and have extensive knowledge about the drug literature, drugs of abuse, drug-abusing populations, the social and health consequences of drug abuse, drug trafficking patterns, and emerging drug problems within and across communities.

As in prior semiannual CEWG meetings, the CEWG members presented reports, citing the most current data on drug abuse patterns, trends, and emerging problems in their areas. Based on an issue identified at the December 2002 CEWG meeting, a panel reported data/information on methadone-associated mortality.

The meeting also provided an opportunity for local (city and State) researchers and authorities to present data from different sources. The purpose of these presentations was to shed light on local drug abuse, patterns, trends, and emerging problems.

At this meeting, researchers from Canada and Mexico also reported the most recent data from their drug abuse surveillance systems.

In addition, representatives of agencies that provide data to the CEWG members presented information on the current status of data sources. An update was given on the status of the Drug Abuse Warning Network (DAWN) and data were presented by representatives of the National Institute of Justice (Arrestee Drug Abuse Monitoring Program) and the Drug Enforcement Administration (National Forensic Laboratory Information System).

Information reported at each CEWG meeting is disseminated quickly to drug abuse prevention and treatment agencies, public health officials, researchers, and policymakers. The information is intended to alert authorities at the local, State, regional, and national levels, and the general public to the current drug abuse patterns and trends and emerging drug problems so that appropriate and timely action can be taken. Researchers also use this information to develop research hypotheses that might explain social, behavioral, and biological issues related to drug abuse.

As part of the CEWG's monitoring role, members continue work between meetings, using the Internet, conference calls, and mailings to alert one another to new issues and to follow-up on issues and emerging drug patterns identified at meetings. The results of this interim monitoring are often an agenda item at a subsequent meeting.

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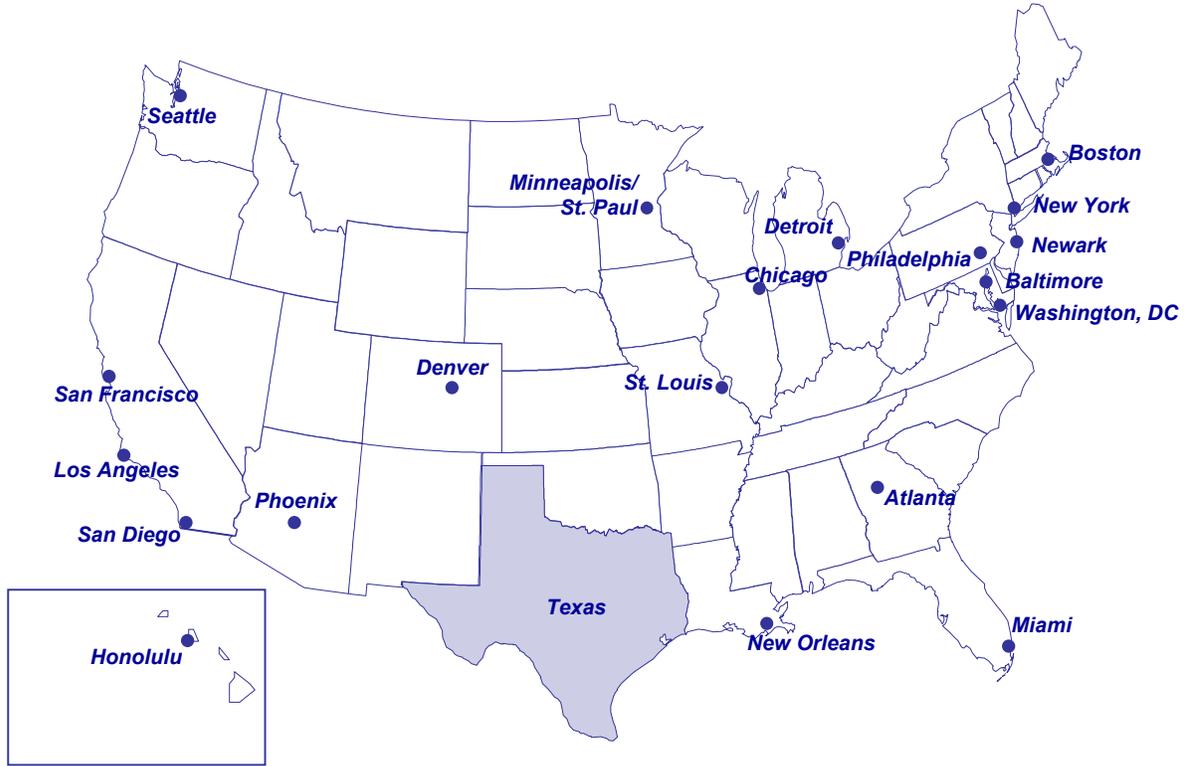
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Introduction

At the 54th meeting of the Community Epidemiology Work Group in St. Louis, Missouri (June 24–27, 2003), representatives from 21 CEWG areas presented

data on drug abuse patterns and trends in their areas. The 21 CEWG areas are depicted in the map below.



The individual CEWG site papers are presented in this publication. Other papers provide updates on the Arrestee Drug Abuse Monitoring program and the National Forensic Laboratory Information System, both data sources used by the CEWG. Papers from a panel on methadone-associated mortality present current information on deaths related to this drug. Other papers focus on drug problems in the host city and the State of Missouri, including those from a panel focused on methamphetamine production and abuse, club drugs, and the St. Louis drug courts. International papers provide updates on drug abuse patterns and trends in the neighboring countries of Canada and Mexico. Comparative data across CEWG sites, as well as summaries of findings from other meeting participants, can be found in NIDA’s June 2003 *Advance Report* and *Volume I: Proceedings of the Community Epidemiology Work Group*.

CEWG DATA SOURCES

To assess drug abuse patterns and trends, the 21 CEWG members access and analyze data from various sources. As will be apparent in the CEWG papers, members derive drug indicator data from many local

and State sources, including public health agencies, medical facilities, substance abuse treatment programs, criminal justice and correctional offices, law enforcement agencies, surveys, and qualitative studies (e.g., focus groups, key informant surveys, and ethnographic studies). In addition, national data sets that have information specific to CEWG sites are accessed and analyzed. The widely used national data sets are as follows:

- The Drug Abuse Warning Network (DAWN) emergency department (ED) data are managed by the Office of Applied Studies (OAS), Substance Abuse and Mental Health Services Administration (SAMHSA). The most recent time period represented in the DAWN ED data in this publication is January through June 2002 (preliminary estimates). Twenty CEWG areas are included in this data set.
- The DAWN mortality system data, also maintained by OAS, SAMHSA, provides information on drug-induced and drug-related deaths reported by medical examiner/coroner jurisdictions. Twenty CEWG areas are included in this data

set. The most recent full-reporting year represented in this publication is 2001.

- The Arrestee Drug Abuse Monitoring (ADAM) program is supported by the National Institute of Justice. Preliminary 2002 data represent adult male arrestees in 16 CEWG areas, adult female arrestees in 8 CEWG areas, and juvenile arrestees in 5 CEWG sites. CEWG reporting of ADAM data focuses on urinalysis results for various drugs.

- Drug Enforcement Administration (DEA) data on drug seizures, price and purity of heroin, and forensic laboratory data are from the National Forensic Laboratory Information System (NFLIS).

More detailed information on these national data sources is provided in Volume I of the June 2003 Proceedings.

Epidemiology of Drug Abuse:

Area Papers

Metropolitan Atlanta Drug Use Trends

Tara McDonald,¹ Kristin J. Wilson,² and Claire E. Sterk²

ABSTRACT

Cocaine and marijuana remain the most commonly used illicit drugs in the metropolitan Atlanta drug scene. Local epidemiological indicators for cocaine are higher than those at the national level; Atlanta has twice the rate of cocaine ED mentions than the coterminous United States. Cocaine accounts for 31 percent of Atlanta ME drug mentions and for 46 percent of metropolitan Atlanta treatment admissions. Ethnographic data show that while marijuana may not be as prevalent as other drugs in some indicators, its use is more widespread than use of all other illicit drugs. The rate of heroin ED mentions remained lower in Atlanta than in the Nation, but heroin treatment admissions in the metropolitan area were up in the first half of 2002—to 8 percent of all admissions. Heroin purity is still fairly high in Atlanta, with the DEA estimating it at 49 percent in 2001; the average cost was \$1.90 per milligram pure. The rate of ED mentions per 100,000 population for narcotic analgesics/combinations (16) was up in 2002, and narcotic analgesics accounted for 19 percent of all ME drug mentions, second only to cocaine. Methamphetamine indicators continue to rise, both in metropolitan and non-metropolitan counties. Law enforcement officials seized 110 clandestine methamphetamine labs in 2002, twice the 2001 number. In May 2003, a new State law was enacted to strengthen penalties associated with methamphetamine production and possession. Alprazolam (Xanax) was the most commonly found depressant in most indicators and accounted for 17 ME drug mentions. Ethnographic information suggests that MDMA use is still significantly higher than the epidemiologic indicators show, with many people using it in combination with other drugs, such as methamphetamine. There were 1,006 newly reported AIDS cases in 2002 in metropolitan Atlanta, less than in the previous year. Of those new cases, 4.5 percent of female and 9.6 percent male cases were associated with injection drug use.

INTRODUCTION

Area Description

The metropolitan Atlanta area is situated in the northwest corner of Georgia and is comprised of 20 of the State's 159 counties. At just over 6,100 square miles, the metropolitan area constitutes 10.5 percent of Georgia's total size, but, with an estimated 4.2 million residents, it holds just under one-half of the State's total population (U.S. Census Bureau 2001). Within the metropolitan area sits the city of Atlanta, with an estimated population in 2001 of 375,000—only 9 percent of metropolitan-area residents. The city is made up of parts of Fulton County (primarily) and DeKalb County, the two most populous metropolitan counties, making up 19.8 and 16.2 percent of the metropolitan population, respectively. A testament to the rapid growth in this region is the fact that between 2000 and 2002, 4 of the 20 metropolitan counties—Henry, Forsyth, Newton and Paulding—were among the 11 fastest growing in the Nation.

There are differences demographically between the city of Atlanta and the larger metropolitan area, which more closely reflects the State as a whole. African-Americans are the majority population within the city (63 percent), followed by Whites (31 percent), Hispanics (4 percent), and Asians (1 percent). When the whole metropolitan Atlanta area is considered, those numbers flip-flop, with Whites accounting for the majority (60 percent) followed by African-Americans (28 percent), Hispanics (7 percent, a 300-percent increase since 1990), and Asians (4 percent). Per capita family income in 2001 for both areas was similar (\$27,732 in the city and \$25,332 in the metropolitan area), but the city has a significantly higher percentage of individuals living below the poverty level (20 percent) than the metropolitan area as a whole (8 percent). While 16 percent of city housing was built since 1990, 34 percent of houses in the wider metropolitan area were built in the same time period. The vacancy rate outside the city is much lower than inside the city: 6.5 percent versus more than 13 percent.

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According to the Justice Programs Office, as of May 2003 there were six drug courts that had been operating for more than 2 years in Georgia (one is in Atlanta), seven that were recently implemented, and five that were in the planning stages. In 2001, 34 percent of those on probation in Georgia—17 percent of prisoners and 40 percent of parolees—had been convicted of a drug-related offense, the majority involving cocaine. Drug-related offenses accounted for 39.5 percent of 2001 Federal sentences in Georgia, with 92 percent of those being for drug trafficking. The majority of Federal drug sentences (55 percent) also involved cocaine (33 percent crack cocaine and 22 percent powder cocaine).

Data Sources

Principal data sources for this report include the following:

- **Emergency department (ED) drug mentions data** are from the Drug Abuse Warning Network (DAWN), Office of Applied Studies (OAS), Substance Abuse and Mental Health Services Administration (SAMHSA), and include estimates of drug mentions among individuals admitted to participating metropolitan Atlanta emergency departments between January 1994 and June 2002.
- **Drug abuse treatment program data** were provided by the Georgia Department of Human Resources and include data on the primary drugs of abuse among the approximately 3,561 clients admitted to Atlanta's public drug treatment programs between January 1, 2002, and June 30, 2002. Data for non-metropolitan Atlanta counties of Georgia were also reported ($n=9,267$).
- **Drug-related mortality data** were derived from DAWN's medical examiner data for 1997–2001.
- **Arrestee urinalysis data** are derived from the Arrestee Drug Abuse Monitoring (ADAM) program of the National Institute of Justice (NIJ). The data cover estimated drug use among recent arrestees in the local Atlanta pretrial detention center as well as local prisons and jails. Data are available for the third quarter of 2002, and the total sample size included 489 men. The findings for men are weighted and represent probability-based sampling.
- **Drug price, purity, and trafficking data** were derived from several sources. The Drug Enforcement Administration (DEA) provided

preliminary information for 2002 on price and purity. Data on the sources of heroin were provided by the DEA's Domestic Monitoring Program (DMP). Other data are from the Atlanta High-Intensity Drug Trafficking Area (HIDTA) Task Force, which is a coordination unit for drug-related Federal, State, and local law enforcement agencies, and the Metropolitan Atlanta Joint Intelligence Group (MAJIG). Data from the Atlanta HIDTA 2003 Drug Threat Assessment provided information not only about the price and purity of drugs distributed in the metropolitan area, but also information on trafficking trends.

- **Forensic data were provided by the Georgia Bureau of Investigations (GBI)** and cover information concerning evidence in suspected drug cases throughout Georgia that were tested by the GBI Forensic lab from January through October 2002.
- **Ethnographic drug-related information** was collected from local drug use researchers and is used for several purposes: (1) to corroborate the epidemiologic drug indicators; (2) to signal potential drug trends; and (3) to place the epidemiologic data in a social context. In addition, qualitative interviews were conducted with local treatment staff and clients, law enforcement officials, outreach workers, community health experts, and out-of-treatment users.
- **Acquired immunodeficiency syndrome (AIDS) data** were provided by the Georgia Department of Human Resources and include information on AIDS cases in Georgia and a 20-county Atlanta metropolitan area from January 1981 through the first quarter of 2002 (March 31).
- **Federal sentencing information** was provided by the Bureau of Justice Statistics published on the Department of Justice Web site at www.ojp.usdoj.gov/bjs.

DRUG ABUSE PATTERNS AND TRENDS

Cocaine/Crack

Atlanta EDs reported a rate of 127 cocaine mentions per 100,000 population in the first half of 2002, similar to the rate of 117 in the second half of 2001 (exhibit 1).

Atlanta continued to have a rate twice the national average (exhibit 2). In Atlanta, ED mentions were

higher among men than women, and the gap between the two has increased. For instance, in the 6-month period from January to June 2002, DAWN reported a rate of 180 cocaine mentions per 100,000 population for men, compared with a rate of only 75 for women. ED data point to an increase in cocaine mentions for most age groups. ED data also suggest that the cocaine-using population in Atlanta tends to fall in the 35–44-year-old range (287 mentions per 100,000 population). The rate of mentions for persons age 26–34 increased insignificantly, from 179 in July–December 2001 to 191 in January–June 2002, although those in the age 30–34 cohort had fewer mentions than in past years. Consistent with recent years, African-Americans were overwhelmingly represented at 75 percent of ED cocaine mentions. Whites represented another 15 percent of mentions, while less than 1 percent were Hispanic. Race/ethnicity was not available for nearly 7 percent of mentions.

Cocaine death mentions in DAWN totaled 137 in 2001, down from 151 in 2000 and 172 in 1999 (exhibit 3).

For those entering publicly funded treatment in metropolitan Atlanta in the first half of 2002, cocaine accounted for 46 percent of admissions, reflecting a continuing decline (exhibit 4). Men accounted for 57 percent of cocaine admissions (exhibit 5). African-Americans remained the largest racial/ethnic group among cocaine admissions at 75 percent, down some from 77 percent. The proportion of White cocaine admissions increased slightly to 24 percent, and Hispanics represented less than 1 percent. The vast majority of individuals seeking treatment for cocaine were older than 35. In the first half of 2002, this age cohort constituted 81 percent of treatment admissions in publicly funded centers.

Smoking remained the preferred route of administration for cocaine admissions in Atlanta (83 percent) (exhibit 6). Similar to last years' data, inhalation as a preferred route remained at 9 percent, and injection continued to be uncommon among treatment admissions at 1 percent. The current data show that alcohol was most likely to be the secondary drug of choice (39 percent). Fifteen percent of those seeking treatment for cocaine use chose marijuana as their secondary drug of choice. The remaining 6 percent chose secondary drugs from various categories, such as heroin, other opiates, methamphetamine, and benzodiazepines.

In non-metropolitan Atlanta, cocaine treatment admissions by gender paralleled those in metropolitan

Atlanta, with males constituting 56 percent of the total (exhibit 7). This pattern represents a change from last year, when females were less likely to be admitted to treatment for cocaine use. The race composition of treatment admissions barely changed from last year, with African-Americans, the majority, rising slightly to 58 percent and the proportion of Whites decreasing by 1 percent to 41 percent. Hispanics constituted less than 1 percent of the treatment admissions. As with metropolitan Atlanta, adults over 35 constituted the majority (80 percent) of those seeking cocaine treatment in public programs.

In non-metropolitan Atlanta, nearly 70 percent of cocaine admissions reported smoking as the preferred route of administration of the drug. In contrast to metropolitan Atlanta, 13 percent of non-metropolitan users prefer oral administration. Inhalation as the preferred route decreased some to 10 percent. As with the metropolitan area, injectors accounted for only 2 percent of the treatment population. Most cocaine users in the non-metropolitan public treatment population did not report a secondary drug of choice. About 32 percent chose alcohol, followed by marijuana (18 percent).

According to ADAM data for the third quarter of 2002 in Fulton and DeKalb Counties, 44.5 percent of male arrestees who were tested were positive for cocaine only (exhibit 8). Nearly 69 percent of male arrestees between the ages of 31 and 35 tested positive for cocaine, followed closely by the 36-and-older group (62 percent). A total of 42.7 percent of the male arrestees self-reported some type of cocaine use in the past 12 months. Crack was more popular, with nearly 28 percent reporting use of that form of the drug for an average of 127 days in the past year. Powder cocaine accounted for 15.1 percent of the self-reported cocaine use and was used an average of 67 days during the preceding year. Close to 60 percent of arrestees who tested positive for cocaine self-reported their use in the past 3 days and past 7 days. Among crack users arrested in Atlanta, more than 62 percent reported receiving some type of drug or mental health treatment. By comparison, only about 45 percent of powder cocaine users reported such treatment experiences.

According to the DEA and HIDTA, cocaine remains readily available wholesale and retail in the southeast, with Atlanta serving as the main transshipment and local distribution center, primarily for Mexican-based drug trafficking.

The Nation's southwest border and California, Texas, and southern Florida continue to be the main source areas for cocaine seized in Georgia. HIDTA intelligence analysts implicate Mexico-based drug trafficking organizations as the main source of cocaine entering Atlanta. Street-level groups distribute cocaine in specific neighborhoods. A law enforcement survey conducted by the Atlanta HIDTA MAJIG found that more than 91 percent of the 23 agencies responding reported high or moderate powder cocaine availability. In Georgia, more than 55 percent of Federal sentences were cocaine related, compared with about 43 percent nationally. The 2002 GBI lab test data show that most seized drugs were cocaine (38.9 percent), followed by marijuana (25.6 percent). The DEA's Atlanta Division found that powdered cocaine typically sells for \$100 per gram and \$1,100 per ounce. Crack, by comparison, sells for around \$900 per ounce.

Information gathered ethnographically in Atlanta continues to point to increasing recreational use of powder cocaine at clubs and parties. Survey results show that younger users seem more likely to snort the drug (61 percent) and that marijuana is overwhelmingly the primary or secondary drug of choice among 18–25-year-olds who use cocaine (41 percent). Many young people who use cocaine express disdain for crack and crack users. Marijuana laced with powder cocaine (“fruities”) continues to be mentioned by young adult users. HIDTA reports that some users smoke “turbo,” which is powdered cocaine combined with heroin and marijuana.

Heroin

The estimated rate per 100,000 population of heroin ED mentions has risen over the last few half-years, but the rate remained fairly stable from the second half of 2001 (12) to the first half of 2002 (11) (exhibit 1). The rates of heroin ED mentions in Atlanta have typically been much lower than the rates for the coterminous United States, but that gap is closing some (exhibit 9). Once again, African-Americans accounted for the majority of the total estimated mentions (55 percent), followed by Whites (34 percent); this is consistent with previous reporting periods. Hispanics represented just less than 2 percent of ED mentions, which is up from less than 1 percent previously. The ratio of male to female mentions continues to be high, down only slightly from 3.6:1 in 2001 to 3.4:1 in the first half of 2002. The highest estimated rate of heroin mentions occurred among those age 26–29 (34), which represented an insignificant increase from the previous half-year rate of 26. The only other age

group that experienced a rate increase was the 20–25-year-olds, from 9 to 16.

Heroin/morphine accounted for 17 ME drug mentions in 2001, none of which were single-drug deaths. That number was down considerably from 30 mentions in 2000 (exhibit 3).

Admissions to publicly funded treatment with heroin as the primary drug remained a small part of total admissions. Much like ED mentions, however, the proportion of heroin treatment admissions has steadily risen over the years, from 3.5 percent in the second half of 1996 to 8 percent in the first half of 2002 (exhibit 4). Historically, the gap between African-American and White heroin admissions in metropolitan Atlanta has been the smallest of all the major drugs, with the groups accounting for 49 percent and 45 percent, respectively, of such admissions in the first half of 2002 (exhibit 5). In recent reporting periods, the biggest change has been the growth in the proportion of Hispanic heroin admissions, which reached 4 percent in the first half of 2002. This is the largest proportion of Hispanic admissions for any drug. Males have long accounted for the majority of heroin admissions, increasing some from a ratio of 2:1 in 2001 to 2.4:1 in the first half of 2002.

The popularity of injection as the preferred route of administration among Atlanta heroin treatment admissions continues to grow, from 57 percent in the first half of 2001, to 61 percent in the second half, and up to 68 percent in the first half of 2002. Those who reported snorting as their primary route were the second largest group, at 22 percent (exhibit 6). Those age 35 and older continue to be the largest group of admissions (80 percent), consistent with the previous semester. Cocaine is still the secondary drug of choice for most heroin treatment admissions (35 percent), while most (80 percent) reported having no tertiary drug of choice. Almost no users of other drugs reported heroin as a secondary or tertiary choice.

Outside the metropolitan Atlanta area, the demographics of heroin treatment admissions are different. Heroin admissions account for an even smaller portion of total admissions there (2 percent), and the even split between Whites and African-Americans disappears. Whites accounted for 83 percent of non-metropolitan Atlanta heroin admissions in the first half of 2002, up from 81 percent in the previous half-year, and African-Americans accounted for 14 percent, up from 12 percent (exhibit 7). As with metropolitan admissions

for heroin, the largest proportion of non-metropolitan Atlanta Hispanic admissions occurred among heroin admissions at 2.4 percent; this represents a decrease from the peculiarly high 7.0 percent from the previous half-year. Injection is even more prevalent among non-metropolitan admissions, with 73 percent reporting it as their primary route of administration. Where both metropolitan and non-metropolitan admissions are similar is in the age breakdown, with those 35 and older accounting for 83 percent of the admissions.

Of male arrestees who were tested in the third quarter of 2002 in ADAM, 3.5 percent were positive for heroin, up slightly from 2.8 percent in 2000 (exhibit 8). A slightly higher percentage of African-Americans than Whites tested positive for heroin (3.7 and 2.9 percent, respectively). Those age 31–35 represented the largest number of heroin positives (6.3 percent), followed by those age 35 and older (5.0 percent). Heroin users were more likely than other user groups to report ever having had drug treatment (83.3 percent) or any mental health treatment (33.3 percent).

While heroin availability in metropolitan Atlanta remained relatively low compared with the availability of other drugs, 20 of 23 law agencies in 11 metropolitan counties surveyed by HIDTA MAJIG reported some level of heroin availability. Most availability was concentrated in the inner city. The primary source for heroin in Atlanta is South America; it is almost exclusively white powder and sells for an average of \$462 per gram, \$6,160 per ounce, and \$112,000 per kilogram. The most common amounts sold to individuals are \$10 and \$20 bags. Purity is still fairly high, with the DEA estimating it at 49 percent in 2001 with an average cost of \$1.90 per milligram pure (exhibit 10). Various law enforcement officials report that now most heroin is coming into Atlanta and being immediately bagged and sold instead of first being cut with other substances, which would account for the high purity levels. In 2002, law enforcement officials in Atlanta seized more than 32 kilograms of heroin at Hartsfield International Airport. Heroin cases accounted for 4 percent of Federal drug sentences in Georgia in 2001, nearly one-half the national number (7 percent).

Other Opiates/Narcotics

The rate of ED mentions per 100,000 population for narcotic analgesics/combinations declined recently, from a rate of 19 in the first half of 2000 to 12 in the second half of 2001. The preliminary rate rose again to 16, however, in the first half of 2002. None of these changes was statistically significant.

Within this group, the rate of mentions for oxycodone was 2, while the rates for hydrocodone and acetaminophen-hydrocodone (e.g., Vicodin) were both 1. The rate of methadone ED mentions declined significantly from 2 in the second half of 2001 to 1 in the first half of 2002.

In 2001, there were 85 narcotic analgesic ME mentions among drug deaths in the metropolitan area, accounting for 19 percent of all drug mentions captured, second only to cocaine (exhibit 3). Of those total mentions, 15 were single-drug deaths. Three of the top 10 ME drug mentions were narcotic analgesic/combinations: narcotic analgesics NOS (not otherwise specified) with 30 mentions, oxycodone with 16, and hydrocodone with 11.

The only data captured for publicly funded treatment admissions for other opiates are for secondary and tertiary drug choices. Other opiates still accounted for less than 1 percent of the total of both secondary and tertiary choices, but among primary heroin admissions, they accounted for 4.2 percent (including non-prescription methadone) and 1.0 percent, respectively. In non-metropolitan counties, other opiates accounted for 2.3 percent of secondary and about 1 percent of tertiary choices. Again, most of these were among primary heroin users (3.9 percent and 1.0 percent), although methamphetamine users were also likely to mention other opiates as a secondary or tertiary choice (2 and 4.2 percent, respectively).

Georgia law enforcement officials reported a number of recent pharmacy robberies in southern Georgia that appear to have been targeting OxyContin. Among cases in which the GBI tested evidence, 2.8 percent were found to be a narcotic analgesic/combination, which is higher than heroin positives. The majority (40 percent) were hydrocodone, followed by oxycodone (32 percent). Ethnographic data suggest that most significant narcotic analgesic use is happening outside the metropolitan Atlanta area, as has long been the case.

Marijuana

The estimated rate of marijuana ED mentions per 100,000 population continued to rise, but insignificantly, from 46 in the second half of 2001 to 57 in the first half of 2002—more than twice the national rate (exhibit 1). African-Americans constituted the majority of total mentions, up from 56 to 60 percent in the first half of 2002, followed by Whites (28 percent) and Hispanics (approximately 1 percent). The ratio of male to female mentions rose some from 2.3:1 in

2001 to 2.5:1 in the first half of 2002. Based on ED mentions, marijuana users appeared to be younger than those using heroin or cocaine. The bulk of mentions fell among patients age 18–19 (132 per 100,000 population) and those age 26–29 (130).

Marijuana was detected in 18 drug deaths in the Atlanta area in 2001; 12 were single-drug deaths (exhibit 3).

Among publicly funded treatment admissions in metropolitan Atlanta, those reporting marijuana as their primary drug of choice rose again from 17 percent in the second half of 2001 to 20 percent in the first half of 2002 (exhibit 4). African-Americans once again represented the majority at 58 percent, up from 54 percent previously. The percentage of White marijuana admissions fell from 42 to 38 percent, while admissions among Hispanics rose slightly from 2 to 3 percent. The ratio of male to female admissions was steady at 1.9:1 (exhibit 5). The largest proportion of individuals seeking treatment for marijuana as their drug of choice remained those age 35 and older (80 percent). The most common secondary drug choices among marijuana admissions remained alcohol (23 percent) and cocaine (14 percent); the third most common was methamphetamine (2.5 percent). Marijuana is often mentioned by users of other drugs as a secondary (15 percent) and tertiary (10 percent) drug choice; both of these numbers are higher than those for the previous half-year (12 and 7 percent, respectively).

In non-metropolitan Georgia counties in the first half of 2002, marijuana accounted for a larger percentage of total treatment admissions than in metropolitan Atlanta, at 25 percent, steady from the second half of 2001. As with other drugs, African-Americans were less widely represented among non-metropolitan marijuana admissions at 37 percent, with Whites the majority (62 percent) (exhibit 7). More marijuana users reported methamphetamine as their secondary drug of choice (3.7 percent) than in metropolitan Atlanta, but the ratio of male to female admissions was the same (1.9:1).

Marijuana was the second most common drug found in positive tests among male arrestees in the third quarter of 2002 (36.7 percent) (exhibit 8). Among African-Americans who tested positive for any drug 38 percent were marijuana positive, compared with Whites (32.4 percent) and Hispanics (16.7 percent). Among booked arrestees, marijuana had the highest self-report of use in the previous 12 months (53.2 percent) and in the previous 30 days (45.4 percent).

The DEA recognizes marijuana as the most readily available and commonly used illicit drug in the metropolitan Atlanta area, and ethnographic information supports this assertion. Most marijuana seized in Georgia (more than 990 kilograms in 2002) is brought into the State from Mexico and the southwestern United States, like most other drugs, but much is grown in the many rural parts of the State. According to the Governor's Task Force on Drug Suppression, 93 of Georgia's 159 counties have some significant outdoor cannabis growth. The minimum possession amount needed to incur Federal sentencing is rather high (1,000 pounds). Marijuana accounted for 18 percent of Georgia's drug-related Federal sentences in 2001, up from 13 percent in 2000. In drug cases in 2001 in which the GBI tested evidence, marijuana was found 26 percent of the time, second only to cocaine. The majority of those cases (57 percent) were in the metropolitan Atlanta area.

Stimulants

The rate of methamphetamine ED mentions per 100,000 population in Atlanta continues to closely mirror the average rate across the 21 DAWN sites, increasing from an estimated rate of 2 in the second half of 2001 to 3 in the first half of 2002 (exhibit 1). The rate of mentions per 100,000 population for amphetamines in Atlanta (8) was more than twice that of methamphetamine, up insignificantly from 4 in the previous half-year (exhibit 11). White patients continued to account for the majority of methamphetamine mentions (64 percent), although that number was down from the second half of 2001 (75 percent). The proportion of mentions made by African-Americans increased from 4 percent in the second half of 2001 to 24 percent in the first half of 2002; the number of mentions made by African-Americans rose nearly 767 percent.

Methamphetamine was cited in 8 drug deaths in 2001 (exhibit 3).

The number of clients in metropolitan Atlanta seeking treatment for methamphetamine as their primary drug of choice continued to rise, from 1.6 percent in the first half of 2001, to 2.4 percent in the second half, up to 4 percent in the first half of 2002 (exhibit 4). The large majority of methamphetamine admissions were White (95 percent), followed by African-Americans (3 percent) and Hispanics (2 percent) (exhibit 5). This is consistent with the previous reporting period. The ratio of male to female methamphetamine admissions remained stable at 1.4:1.

In terms of route of administration among methamphetamine admissions, there tends to be no single preferred route, as there is with other drugs, and there is much more fluctuation within the drug category between preferred routes (exhibit 12). Inhalation was the most popular route of administration at 31 percent, up from 23 percent in the second half of 2001. Injection was reported by 27 percent of methamphetamine admissions in 2000, 17 percent in the first half of 2001, 29 percent in the second half, and 15 percent in the first half of 2002. Oral use was reported by 30 percent of admissions, followed by smoking at 22 percent, both of which are consistent with the previous half-year. As these two routes of administration are sometimes seen as very similar, there is most likely overlap between them, meaning there are probably more who are smoking than is indicated.

The proportion of persons who entered publicly funded treatment in non-metropolitan counties for methamphetamine in the first half of 2002 was again larger than in the Atlanta area, rising from 5 percent in 2001 to just over 6 percent. Whites accounted for an even larger portion of the admissions (99 percent) (exhibit 7). While the male-to-female ratio for methamphetamine admissions has always been low, for the first time in all the drug categories there were slightly more females than males (289 vs. 283 total admissions). Admissions among younger users were also higher in non-metropolitan counties, with those younger than 17 accounting for 8 percent of methamphetamine admissions, compared with 2 percent in metropolitan Atlanta. Smoking remains the preferred route of administration among non-metropolitan methamphetamine admissions (39 percent), followed by oral (21 percent), injection (19 percent), and inhalation (17 percent).

Of male arrestees who were tested in the ADAM program in the third quarter of 2002 in Atlanta, only 2 percent were positive for methamphetamine, up from less than 1 percent in 2000 (exhibit 8). Whites who tested positive for any drug were most likely to have a methamphetamine-positive test (11.8 percent), followed by African-Americans (0.5 percent). For the prior 12 months, 5.7 percent of male arrestees self-reported methamphetamine use, with an average of 48 days of use in that time period. Self-reported use in the past 30 days for methamphetamine was 3.4 percent. Those reporting methamphetamine use were likely to have ever received treatment (43.8 percent), with 18.8 percent ever having had mental health treatment.

While the number of locally based methamphetamine labs is growing in Georgia, the majority of methamphetamine seized in the Atlanta area still originates in Mexico, California, and Texas. According to the Atlanta HIDTA, most local labs are small, portable, in rural areas, and run by White males. Most use the Birch reduction (Nazi) method; in a few instances, motorcycle gangs have been known to use the P2P (phenyl-2-propanone) method. In 2002, a total of 110 clandestine labs were seized across Georgia, more than double the number from 2001 (51). There is some variation in local methamphetamine prices, but the DEA estimates that grams typically sell for \$110, ounces for \$1,300, and pounds for \$8,250. In middle Georgia, where methamphetamine use and production is fast becoming an epidemic, individual hits of the drug are reported at \$20–\$25, with hits of ice costing \$45–\$50. In 2001, methamphetamine accounted for 18 percent of Federal drug sentences in Georgia, higher than the national rate (14 percent) but down from 25 percent in 2000.

Until recently, local law enforcement has deferred to Federal agencies with more expertise where methamphetamine was concerned. That is changing as more local agencies receive the funding and training needed to investigate and dismantle labs. Also, in response to the rise in both methamphetamine use and production, the Georgia State Legislature passed a new law in May 2003 to strengthen penalties associated with methamphetamine. Parts of the law created felonies related to stealing and possessing anhydrous ammonia, commonly used in methamphetamine production, as well as the possession of ephedrine, pseudoephedrine, or phenylpropanolamine in excess of 300 pills or 9 grams.

Depressants

After a peak rate of 26 ED mentions per 100,000 population in the second half of 1998, the rate of ED mentions for benzodiazepines dropped to 12 in the second half of 2001. The rate rose insignificantly in the first half of 2002 to 17. Within this category, the highest rate was for alprazolam (Xanax) (4), steady from the previous half-year but down from a high of 7 in 1999. Clonazepam (Klonopin), diazepam (Valium), and lorazepam (Ativan) each had an estimated rate of 1 per 100,000 population.

In 2001 there were 45 ME drug mentions of benzodiazepines (exhibit 3). Alprazolam and diazepam were among the top 10 drugs mentioned in 2001, with 17 and 16 mentions, respectively.

As with the other opiates data, publicly funded treatment programs only capture benzodiazepine data for secondary and tertiary drug choices. Previously, among metropolitan Atlanta admissions, benzodiazepines were most commonly reported by heroin users; however, in the first half of 2002, no heroin users reported them as a secondary choice, although 6 percent of methamphetamine clients did. Benzodiazepines were cited as a tertiary choice by almost 2 percent of metropolitan heroin clients. Among non-metropolitan admissions, benzodiazepines were reported by 1 percent of heroin admissions and 4 percent of methamphetamine admissions as a secondary drug choice and by 2 percent of each group as a tertiary choice.

In 2002, 2.8 percent of GBI drug evidence tests were positive for depressants. Alprazolam accounted for the majority of those tests (56 percent), followed by carisoprodol (12 percent). Atlanta HIDTA information confirms that most law enforcement agencies in the Atlanta area view both of these pharmaceuticals as widely available and used. Ethnographic data suggest that they are rarely used alone and are often used to ease the “come-down” from other drugs such as cocaine.

Hallucinogens

The estimated rate of ED mentions in metropolitan Atlanta concerning d-lysergic acid diethylamide (LSD) dropped significantly to zero in the first half of 2002 from 1 in the second half of 2001 (exhibit 11). The rate among males was 1 per 100,000 population, and for females it was zero. Over the years, while this rate did fall, it has stayed highest among those age 18–25. For the first half of 2002, the rate among those age 18–25 was 1. LSD use continues to be reported in ethnographic reports, although it is mentioned less and less frequently. LSD use remains, to some extent, common among regular users of methylenedioxymethamphetamine (MDMA). Less than 1 percent of drug evidence tested by the GBI was positive for any hallucinogen; the majority of those positives were for mushrooms.

Club Drugs

The estimated rate of MDMA ED mentions per 100,000 population in metropolitan Atlanta has been rising over the years, although it dropped slightly between the second half of 2001 and the first half of 2002, from a high of 3 to 2 (exhibit 11). While this number is low in comparison to other drug categories in Atlanta, it is higher than the national rate. The gap between the proportion of MDMA mentions made by

Whites and African-Americans appeared to have widened, with Whites accounting for 51 percent and African-Americans for 38 percent; the balance (11 percent) was unknown. The ratio of male to female mentions rose a little to 2:1. The highest rate occurred among patients age 18–25, at 34 mentions per 100,000; this is down from 48 in the second half of 2001. The next highest rate was among those age 26–34, which increased from 23 in the second half of 2001 to 29 in the first half of 2002. As shown in exhibit 11, GHB mentions remained steady between the second half of 2001 and the first half of 2002 at a rate of 1 per 100,000 population. All GHB mentions for whom race was known were among Whites, and almost all were males between the ages of 26 and 34.

Club drugs accounted for four ME drug mentions in 2001, three of which were single-drug deaths.

According to the DEA, most (80 percent) of the MDMA sold in Atlanta is produced in Europe (e.g., Netherlands) and imported into the area via Mexico along established heroin and cocaine smuggling routes. In 2002, 26.40 kilograms of MDMA were seized at Hartsfield International Airport by law enforcement. While MDMA sells for about \$8 at the wholesale level in the United States, it can sell for between \$10 and \$25 per tablet in the Atlanta area. Ethnographic data suggest MDMA can be bought in large quantities locally for as little as \$2 per pill. Some street-level dealers are known to be selling MDMA with Viagra, known to many as “sexctasy” when taken together.

INFECTIOUS DISEASES RELATED TO DRUG ABUSE

As of the end of December 2001, Georgia accounted for 3 percent of the national total of cumulative AIDS cases, ranking it ninth in the country according to the Centers for Disease Control and Prevention. The Georgia Department of Human Resources reported 26,139 cumulative adult and pediatric AIDS cases from 1981 through the end of the first quarter of 2003, with 12,490 of those currently living with AIDS. In 2002, 1,386 new cases were reported, down from 1,777 new cases in 2001. Injection drug use accounted for 22 percent of cumulative adult cases (17 percent were injection drug users [IDUs] and 5 percent were in the dual risk category of IDU/men who have sex with men [MSM]) (exhibit 13). Among cases diagnosed in 2002, however, only 9.1 percent were attributable to injection drug use (7.1 percent IDU and 2 percent MSM/IDU). Among cumulative cases, 25 percent of female and 21 percent of male cases (15 percent IDU and 6 percent MSM/IDU) were associated with injection drug use. In 2002 alone, injection drug use-

attributable cases accounted for 9.9 percent of male (7.2 percent IDU and 2.7 percent MSM/IDU) and 7.1 percent of female cases.

The 20-county metropolitan Atlanta area accounted for 70 percent of Georgia's cumulative AIDS cases and for 73 percent (1,006) of newly reported cases in 2002. Injection drug use was associated with 30 percent of female cases but with only 22 percent (including 7 percent MSM/IDU) of cumulative male cases. Among new cases in 2002, injection drug use is the risk factor cited in 4.5 percent of female cases and 9.6 percent (including 2.9 percent MSM/IDU) of male cases. The number of cases with no risk or other risk reported is

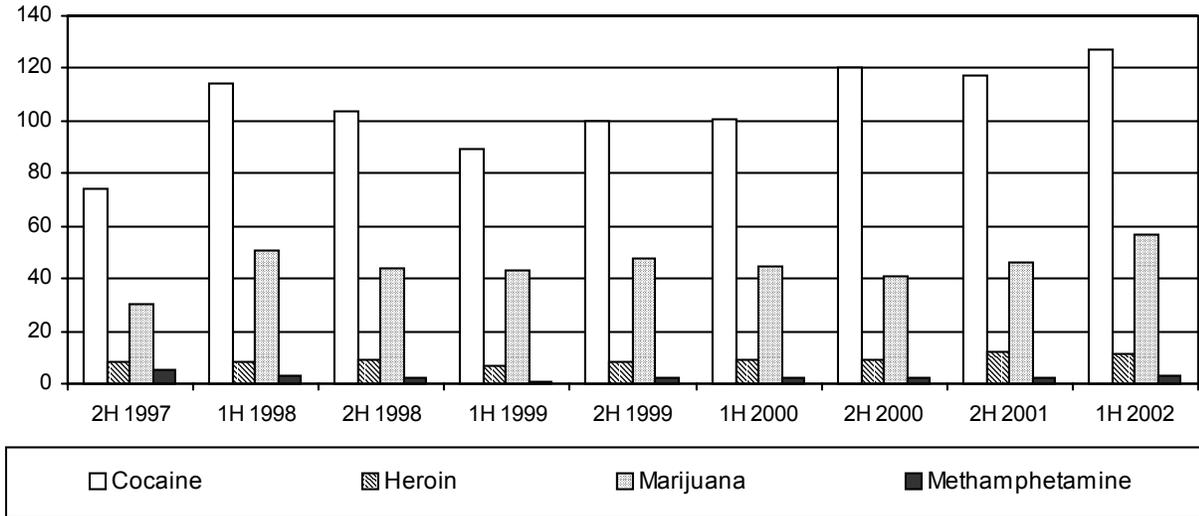
significantly higher among new cases in 2002 (40 percent) than among cumulative cases (14 percent), which may account for the large difference between cumulative and recent IDU-related cases.

REFERENCE

Centers for Disease Control and Prevention. *Basic Statistics—Ten States/Territories and Cities Reporting Highest Number of AIDS Cases*. Data from the semi-annual *HIV/AIDS Surveillance Report*. Atlanta, GA: 2002. Retrieved November 23, 2002, from the World Wide Web: <http://www.cdc.gov/hiv/stats.htm>.

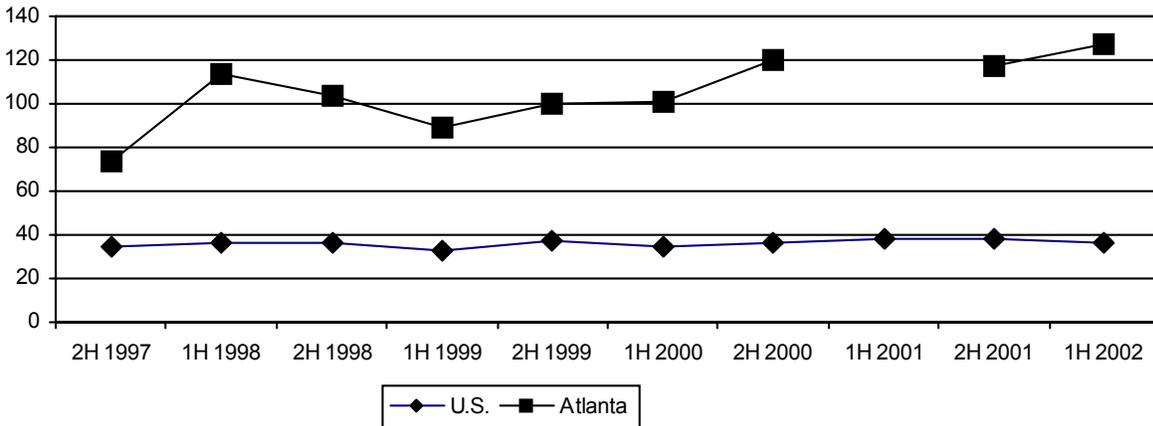
For inquiries concerning this report, please contact Kristin J. Wilson, Department of Sociology/General Classroom Building, Georgia State University, Atlanta, GA 30303, 404-651-1855, E-mail: sockjw@langate.gsu.edu.

Exhibit 1. Estimated Rates per 100,000 Population of ED Mentions of Major Drugs in Metropolitan Atlanta by Half-Year: July 1997–June 2002¹



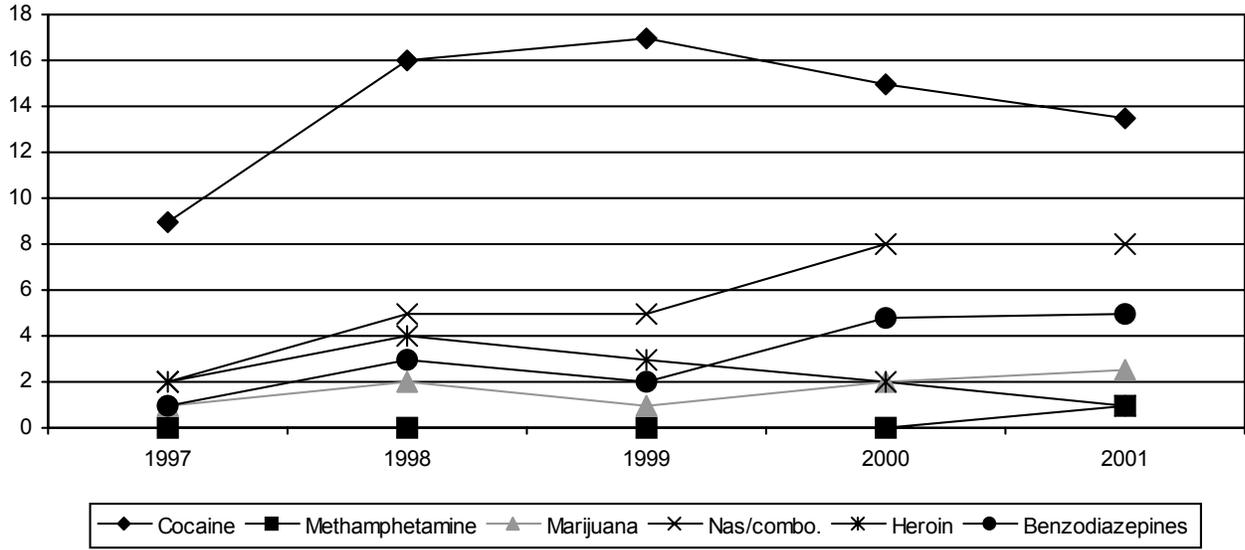
¹Estimates of ED mentions for the first half of 2001 were suppressed because the relative standard error exceeded 50 percent. SOURCE: DAWN, OAS, SAMHSA

Exhibit 2. Rates of ED Cocaine Mentions per 100,000 Population in Metropolitan Atlanta and the Coterminous United States: July 1997–June 2002



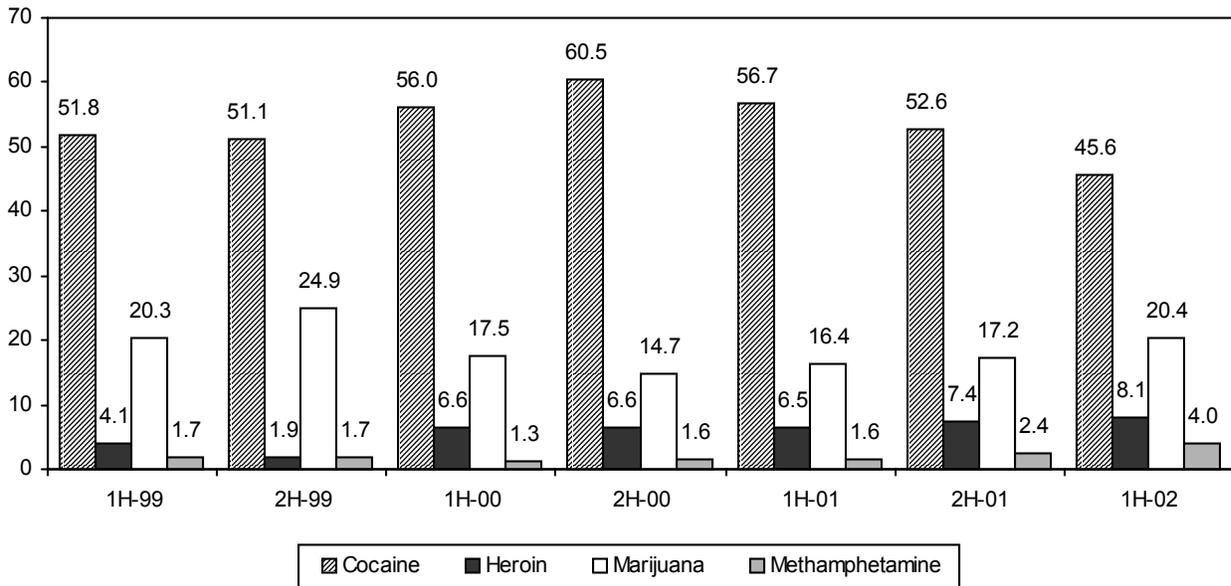
SOURCE: DAWN, OAS, SAMHSA

Exhibit 3. Numbers of Metropolitan Atlanta ME Drug Mentions by Drug and Year: 1997–2001



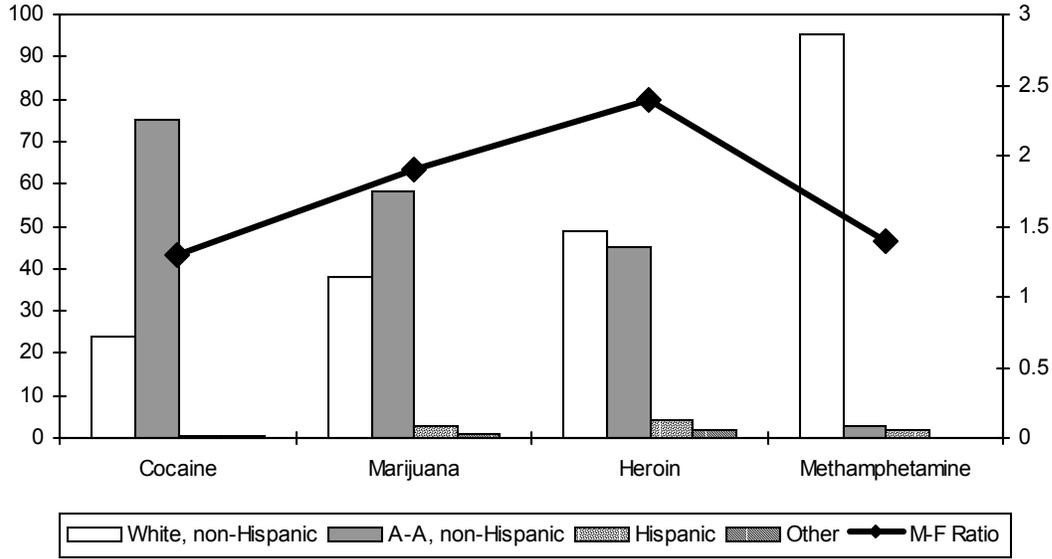
SOURCE: DAWN, OAS, SAMHSA

Exhibit 4. Percentages of Metropolitan Atlanta Treatment Admissions by Primary Drugs of Abuse and Percent: January 1999–June 2002



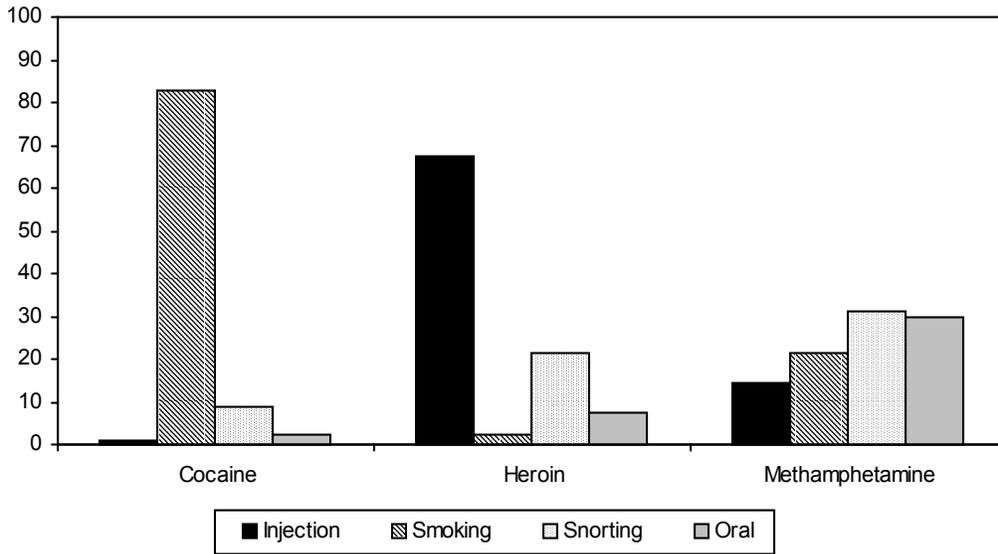
SOURCE: DHR

Exhibit 5. Metropolitan Atlanta Drug Treatment Admissions by Racial/Ethnic Percentages and Gender Ratios: First Half of 2002



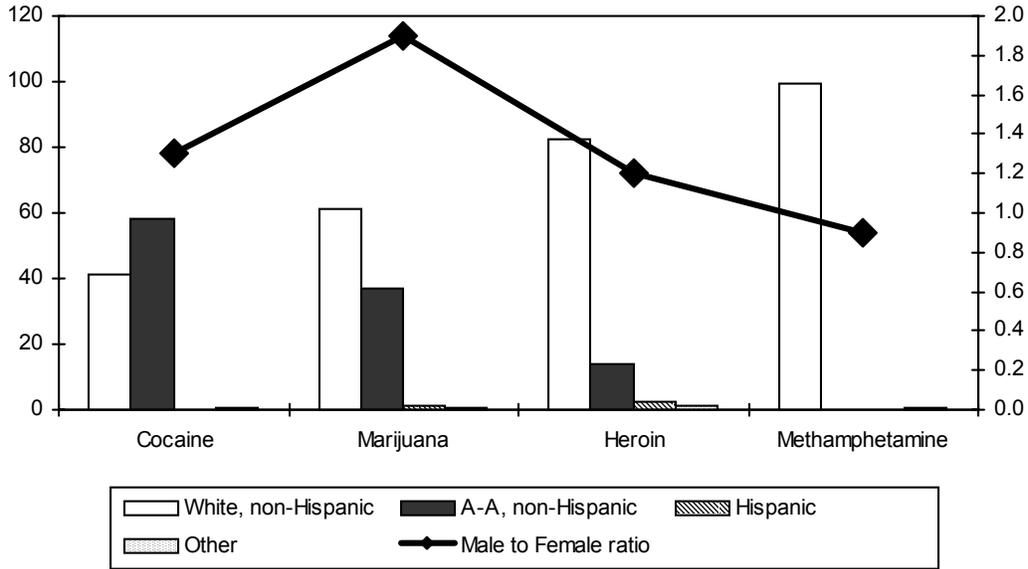
SOURCE: DHR

Exhibit 6. Routes of Drug Administration Among Metropolitan Atlanta Treatment Admissions by Percent: First Half of 2002



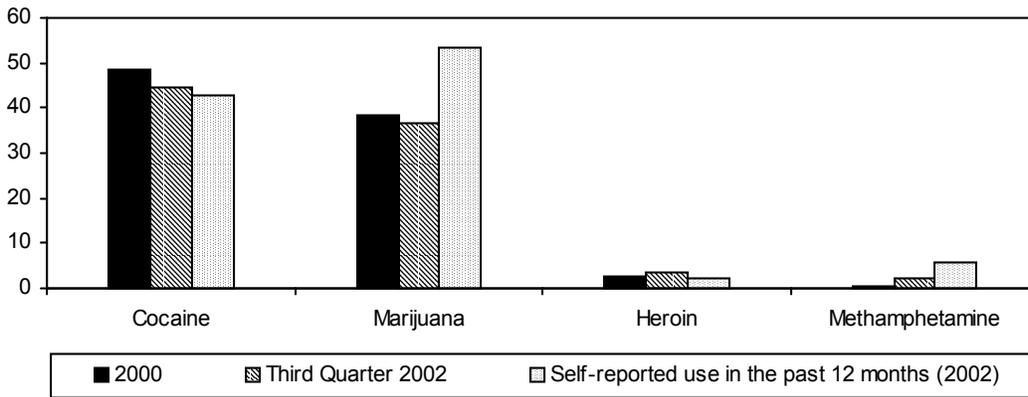
SOURCE: DHR

Exhibit 7. Non-Metropolitan Treatment Admissions by Racial/Ethnic Percentages and Gender Ratios: First Half of 2002



SOURCE: DHR

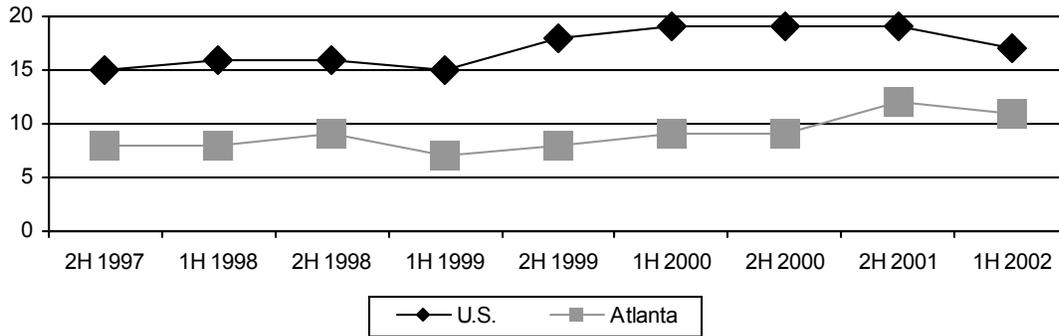
Exhibit 8. Percentages of Atlanta Male Adult Arrestees Testing Positive and Self-Reporting Use by Drug: 2000, 2002



¹ Data for 2002 are for the third quarter only.

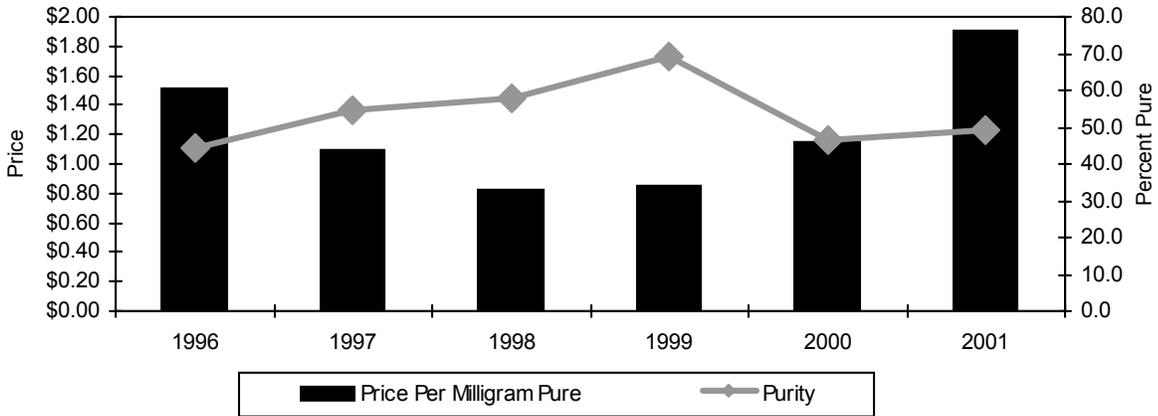
SOURCE: ADAM, NIJ

Exhibit 9. Rates of Heroin ED Mentions in Atlanta and the Coterminous United States: July 1997–June 2002



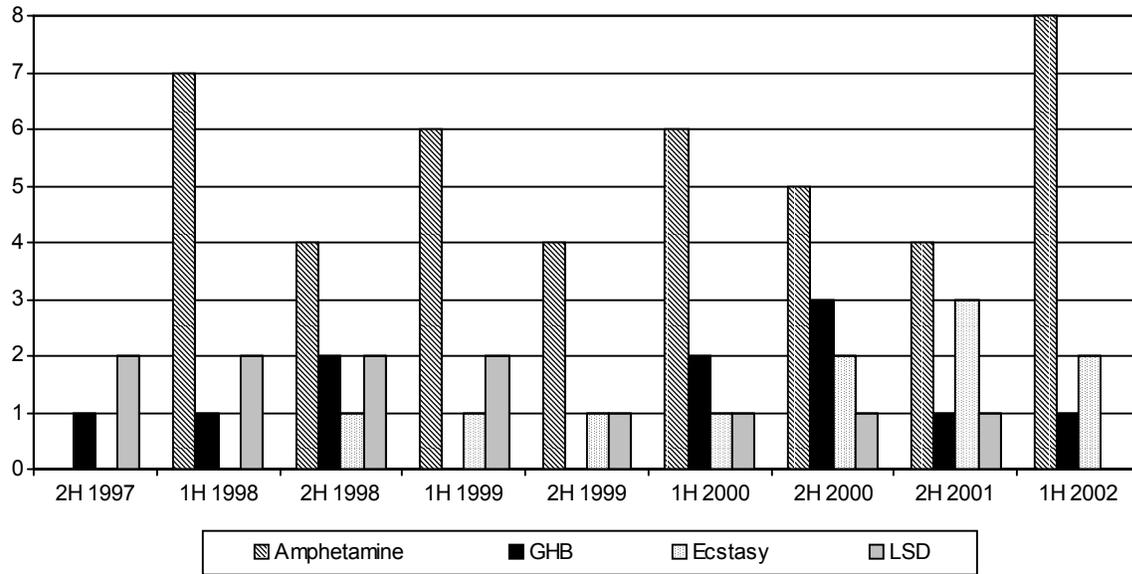
SOURCE: DAWN, OAS, SAMHSA

Exhibit 10. Heroin Prices and Purity in Metropolitan Atlanta: 1996–2001



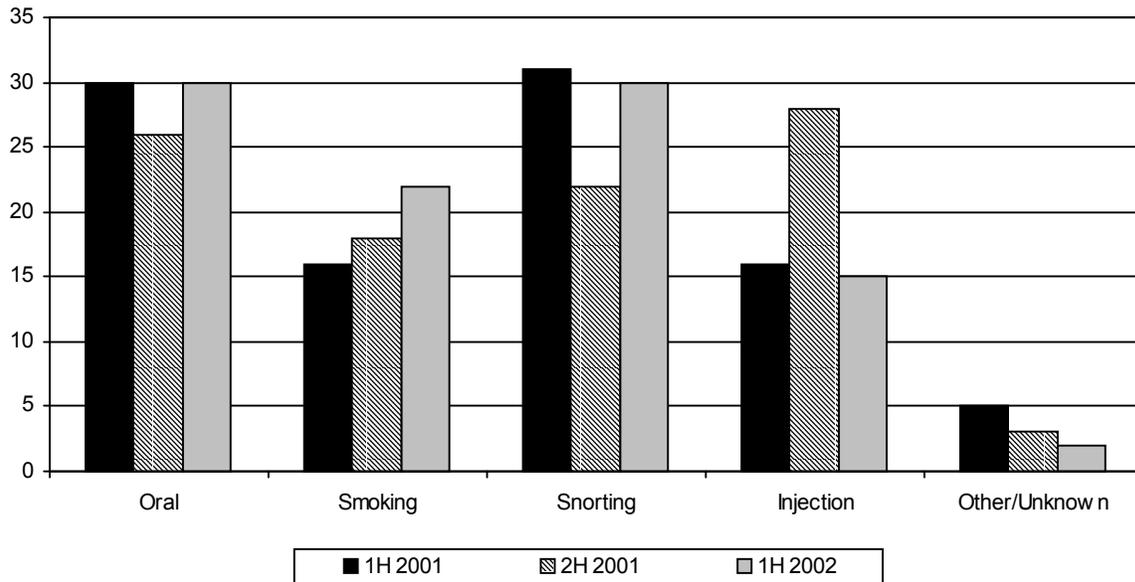
SOURCE: DEA

Exhibit 11. Estimated Rates of ED Mentions per 100,000 Population for Amphetamines and Club Drugs in Metropolitan Atlanta: July 1997–June 2002



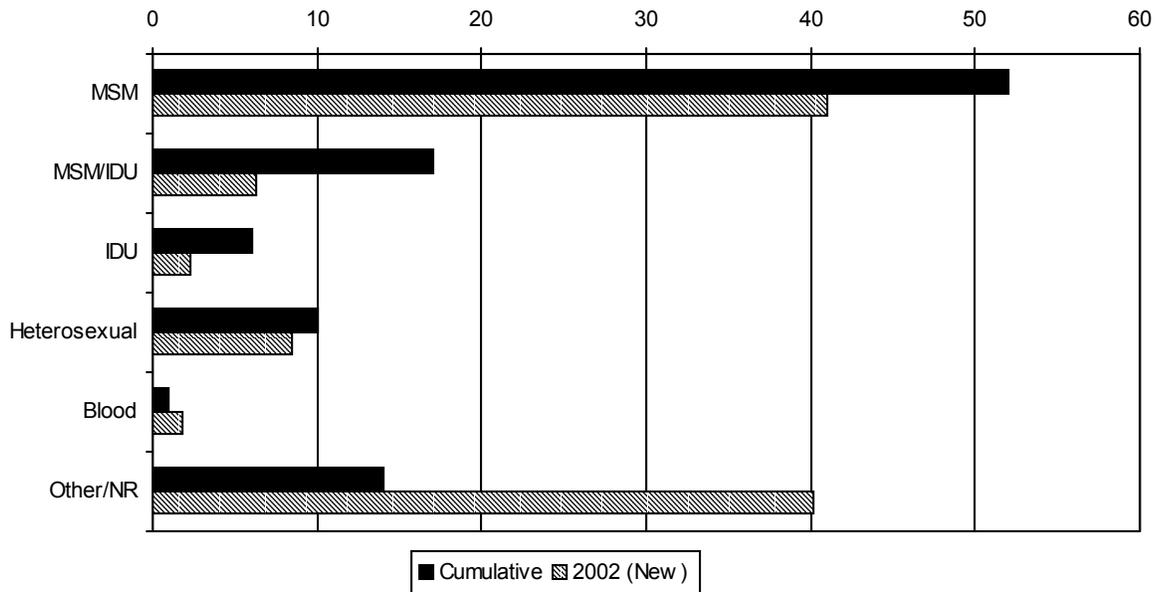
SOURCE: DAWN, OAS, SAMHSA

Exhibit 12. Routes of Methamphetamine Administration Among Metropolitan Atlanta Treatment Admissions by Percent: January 2001–June 2002



SOURCE: DHR

Exhibit 13. Metropolitan Atlanta AIDS Cases by Exposure Category—Cumulative Versus New by Percent: 1981–2002



SOURCE: DHR

Drug Use in the Baltimore Metropolitan Area: Epidemiology and Trends, 1998 Through the First Half of 2002

Leigh A. Henderson, Ph.D., and Doren H. Walker, M.S.¹

ABSTRACT

Heroin indicators (treatment admission rates and rates of ED mentions) were mixed in the Baltimore metropolitan area in the first half of 2002. The rate of heroin ED mentions increased over the previous 6-month period, but was lower than during the first half of 2001. Heroin treatment admission rates for both intranasal and injection use increased in Baltimore City, but they decreased in the suburban counties. In Baltimore City, the admission rate for intranasal heroin use was 37 percent higher than for injection. In the suburban counties, however, the rate for heroin injection was 23 percent higher than for inhalation. Admissions for intranasal heroin use were comprised predominantly of an aging African-American population. Admissions for heroin injection comprised two distinct populations: an aging African-American population and young White users. Cocaine treatment admission and ED rates increased slightly in the first half of 2002. The population in treatment for smoked cocaine (crack) continued to age. The marijuana treatment admission rate decreased in the first half of 2002, but the ED rate increased. Almost one-half (48 percent) of marijuana treatment admissions were younger than 18, and 61 percent entered treatment as the result of a judicial process. For opiates and narcotics other than heroin, both treatment admission and ED rates increased in the first half of 2002. Stimulants represented insignificant proportions of treatment admission and ED rates. Ecstasy use is spreading to the young African-American population, influenced by the hip-hop culture and rap music.

INTRODUCTION

Area Description

The Baltimore primary metropolitan statistical area (PMSA) was home to some 2.6 million persons in 2002. It comprises Baltimore City and the suburban counties of Anne Arundel, Baltimore, Carroll, Harford, Howard, and Queen Anne's. Baltimore City is the largest independent city in the United States.

The city's population declined by an estimated 14 percent during the 1990s, falling from 735,000 in 1990 to 633,000 in 1999. The 2000 census, however, reported the population as 649,000; this declined to 639,000 in 2002. The population of the surrounding counties has grown from approximately 1.7 million in 1990 to 2.0 million in 2002.

The city and the suburban counties represent distinctly different socioeconomic groups. In 1999, median household money income in the city was \$30,000, and 23 percent of the population lived in poverty. In the suburban counties, however, median household money income ranged from \$50,000 to \$74,000, and the poverty rate ranged from 4 to 7 percent. The 2000 population composition of the city differed markedly from that of the surrounding counties: 32 percent White and 65 percent African-American versus 79 percent White and 15 percent African-American, respectively. There were few persons of Hispanic or other ethnic origins in the area.

The Baltimore area is a major node on the north-south drug trafficking route. It has facilities for entry of drugs into the country by road, rail, air, and sea. Baltimore is located on Interstate 95, which continues north to Philadelphia, New York, and Boston, and south to Washington, DC, Richmond, and Florida. Frequent daily train service is available on this route. The area is served by three major airports (Baltimore-Washington International Airport in Baltimore County, and Reagan National and Dulles Airports in the vicinity of Washington, DC, approximately 50 miles from the Baltimore City center). Baltimore is also a significant active seaport. The area has numerous colleges and universities and several military bases.

Data Sources

Data sources for this report are detailed below:

- **Population and demographic data**, including population estimates for 1990–2002 and income and poverty estimates for 1999 for Maryland counties, were derived from U.S. Bureau of the Census data (electronic access: <<http://factfinder.census.gov>> and <<http://quickfacts.census.gov>>).

¹ The authors are affiliated with Synectics for Management Decisions, Inc., in Baltimore, Maryland, and Arlington, Virginia, respectively.

- **Emergency department (ED) drug mentions data** were provided by the Drug Abuse Warning Network (DAWN), Office of Applied Studies (OAS), Substance Abuse and Mental Health Services Administration (SAMHSA), for the Baltimore PMSA for 1998 through the first half of 2002.
- **Mortality data** were provided by DAWN, OAS, SAMHSA, for the Baltimore PMSA for 2001.
- **Treatment admissions data** were provided by the Maryland Alcohol and Drug Abuse Administration, Department of Health and Mental Hygiene, for 1998 through the first half of 2002. Data are presented for the PMSA as a whole, as well as separately for Baltimore City and the suburban counties. Included are those programs receiving both public and private funding. All clients are reported, regardless of individual source of funding. Significant omissions are the Baltimore City and Fort Howard Veterans' Administration Medical Centers, which do not report to the State data collection system.
- **Data on infectious diseases related to drug abuse** were provided by the Maryland Department of Health and Mental Hygiene, Acquired Immunodeficiency Syndrome (AIDS) Administration, "The Maryland 2002 HIV/AIDS Annual Report" (2001 demographic and risk category data); <<http://www.dhmh.state.md.us/AIDS/epictr.htm>> (data on persons living with HIV/AIDS).
- **Heroin price and purity data** were provided by the Drug Enforcement Administration (DEA)'s Domestic Monitor Program (DMP) for 2001. The data are preliminary.

DRUG ABUSE PATTERNS AND TRENDS

Polydrug use in general appears to be the norm in the Baltimore PMSA. Three-quarters of drug-related treatment admissions in the first half of 2002 reported problems with at least one substance other than their primary substance. An average of 1.9 drugs was mentioned per ED visit in the first half of 2002. In 2001 (the latest year for which mortality data were available), multiple drugs were found in 89 percent of the 486 drug-involved deaths; the average number of drugs found was 3.

Distribution

In Baltimore, one or two "kingpins" no longer control the drug market. Instead, many dealers in all parts of

the city have carved out a piece of "turf," or market, that they control. The most successful drug dealers take advantage of modern technology to distribute their product. Cell phones, fax machines, and online chat rooms are used to advertise, set up, and make sales. Many dealers use code words such as the number of "car parts" a client requires. The drug market is extremely mobile and competitive. Dealers threaten physical violence if a client attempts to purchase drugs from competitors.

Naloxone

The Baltimore City Health Department has begun a new initiative to test the efficacy of a strategy to decrease the number of fatal overdoses in Baltimore. The initiative will use a test group of 50 "hard-core" heroin users currently participating in the city's needle exchange program. These persons will be trained and certified by the city's emergency medical technicians to administer naloxone (Narcan), a competitive narcotic antagonist, to narcotic overdose victims. Naloxone reverses the effects of opioids and synthetic opioid agents; it can take less than a minute to reverse the central nervous system and respiratory depression induced by opioids. There is some concern that those who are administered naloxone will not seek medical attention or treatment after administration, and may take more narcotics after they recover from the overdose.

Cocaine/Crack

Cocaine indicators (treatment admission rates and rates of ED mentions) increased in the first half of 2002 (exhibit 1). The rate of cocaine-related ED episodes (120 per 100,000 population for the first half of 2002) represented a significant increase over the previous 6-month period. Cocaine remained highly prevalent among treatment admissions, in the Baltimore PMSA and the annual treatment admission rate for cocaine increased slightly, to 175 per 100,000 population age 12 and over (exhibit 2).

Cocaine use in the indicator data was generally associated with the use of alcohol and other drugs as well. Almost all (85 percent) cocaine-related ED episodes involved another drug in addition to cocaine (exhibit 3). While cocaine was reported as a primary substance by 14 percent of Baltimore PMSA treatment admissions in the first half of 2002, it was reported as a secondary substance by an additional 38 percent (exhibit 2).

Crack cocaine represented about 77 percent of the treatment admissions for primary cocaine use in the Baltimore PMSA in the first half of 2002 (exhibit 2).

The population in treatment for cocaine smoking has aged (exhibit 4). Almost three-quarters (71 percent) were age 35 or older in the first half of 2002 (exhibit 5). The median age at admission to treatment was 38 years, compared with 34 years in 1998. Almost one-half (47 percent) of those in treatment for smoking cocaine were women, and two-thirds (67 percent) were African-American. Well over one-half (61 percent) of the crack smokers had been in treatment before, and most (65 percent) were referred through sources outside the criminal justice system. Daily crack use was reported by 37 percent, and use of other drugs in addition to crack was reported by more than two-thirds (71 percent). Alcohol was the most common secondary drug (used by 49 percent), followed by marijuana (26 percent) and opiates used intranasally (19 percent). Only 2 percent of crack smokers reported opiate injection.

Interviews with cocaine/crack users indicate that they realize that cocaine is the most addictive substance that they have ever used. However, the drug provides such an intense high that the user quickly becomes insatiable. Purchasing patterns for most users are illogical by traditional consumer standards. Users will repeatedly purchase small amounts of crack or cocaine throughout the course of a day, eventually paying twice as much than if they had purchased an eightball (one-eighth ounce) at a cost of approximately \$130. This may be a “self-delusional syndrome,” in which the user believes that he/she has the discipline and self control to manage his/her limited resources in order to take care of other responsibilities and expenses. Once cocaine use begins, however, the self-discipline quickly fades.

Because of the potency and addictive nature of crack, many professionals in the substance abuse field in Baltimore believe that there is a related increase in prostitution accompanied by a major decrease in the cost for sexual acts as crack users try to pay for their addiction.

Conversion from powder cocaine to crack is a relatively simple process that not only removes impurities and concentrates the drug, but increases its “shelf life.” Cocaine users state that the longer one keeps powder cocaine, the more it will “fall” or lose its potency. Crack cocaine will not “fall,” but will maintain its potency much longer. Users are purchasing crack cocaine when powder cocaine is unavailable or is of lower quality, and injection of crack appears to be increasing in Baltimore. Lemon juice or white vinegar is used to “cold shake” the crack, and then it is injected to obtain a more intense high.

Heroin

Heroin indicators for the Baltimore metropolitan area as a whole were mixed in the first half of 2002 (exhibit 1). The rate of heroin ED mentions (87 per 100,000 population in the first half of 2002) represented a small but significant increase from 81 per 100,000 in the previous 6-month period. Overall, however, the rate of heroin ED mentions continued to decline, and it was significantly lower in the first half of 2002 than in the first half of 2001. Treatment admissions for primary heroin use increased in the first half of 2002 to an annual rate of 683 admissions per 100,000 population age 12 and older, compared with 651 per 100,000 in 2001 (exhibit 2).

Heroin use in the Baltimore metropolitan area is complex. There are several groups of heroin users that differ by urbanicity, route of administration, age, and race. The heroin treatment admission rate was more than 6 times higher in Baltimore City than in the suburban counties (exhibit 2). Snorting heroin is the method of choice for most new users, while injection is the preferred method for older, long-time users. Those snorting heroin normally snort “raw dope” because it is of higher purity and less harmful to the nasal membranes. “Scrambled dope” (heroin of lower purity, containing a higher proportion of adulterants and diluents) will more quickly destroy the nasal membranes and is rarely snorted, but instead it is used intravenously.

While heroin treatment admission rates for both intranasal and injection use rose in the city in the first half of 2002, admission rates for both routes decreased in the suburban counties (exhibits 2 and 6). In Baltimore City, intranasal use was the preferred route of administration, and the admission rate for intranasal use was 37 percent higher than for injection. In the suburban counties, however, the rate for heroin injection was 22 percent higher than for inhalation.

Exhibit 7 compares the number of treatment admissions in the first half of 2002 by age and race for heroin injection and heroin inhalation. Baltimore has a core of older African-American heroin users, both injectors and intranasal users. White users entering treatment for heroin were younger and were predominantly injectors.

In the total PMSA, the proportion of White heroin injectors entering treatment was stable at 47 percent in the first half of 2002 (exhibit 8). The proportion of admissions younger than 26 was also stable, at 19 percent. In the suburban counties, 33 percent of

admissions in the first half of 2002 were younger than 26. The median age at admission for heroin injectors was 40 in Baltimore City and 31 in the suburban counties. Women accounted for 41 percent of admissions in the total PMSA. Most persons in the PMSA reported daily use (74 percent), and relatively few had been referred through the criminal justice system (23 percent). The proportion receiving treatment for the first time was 31 percent in the first half of 2002. Use of other drugs was reported by 77 percent of heroin injectors entering treatment: 54 percent used cocaine by routes other than smoking, 11 percent smoked cocaine, 26 percent had an alcohol problem, and 13 percent used marijuana.

Among heroin intranasal users in the total PMSA (exhibit 9), most admissions were African-Americans (82 percent) age 26 and older (91 percent). The median duration of use before first entering treatment was 10 years. Women made up 44 percent of admissions for heroin intranasal use. The proportion of intranasal users younger than 26 decreased from 18 percent in 1998 to 9 percent in the first half of 2002. The median age at admission was 36. Two-thirds (67 percent) reported daily heroin use. Intranasal users were more likely than injectors to be referred through the criminal justice system (33 percent) and to be receiving treatment for the first time (38 percent). Heroin intranasal users were somewhat less likely than injectors to report use of other drugs (71 percent), and the drugs used were different. Cocaine smoking was much more common among heroin intranasal users (36 percent), and 16 percent reported using cocaine by other routes. Alcohol use, at 28 percent, was similar in the two groups, but marijuana use was somewhat higher among intranasal users (19 percent).

Heroin purity remained low in 2001, the latest year for which data were available, at 24 percent, below the national metropolitan average of 34 percent. Price also remained low, at \$0.33 per milligram pure, compared with \$1.30 per milligram pure as the national metropolitan average. Heroin was predominantly from South America, although a significant proportion was reported to have originated in Southwest Asia.

An interesting phenomenon occurs when there is a heroin overdose in Baltimore. Heroin dealers market their product under brand names, and dealers and users agree that a heroin overdose is the best advertisement for selling the drug. News of a heroin overdose is disseminated throughout the city very quickly. Once heroin addicts learn of an overdose, they make a concerted effort to obtain the same “brand” of heroin that caused the overdose, believing that it must be “some great dope.” Many of the brand

names have an association with death or killing, usually something that is commonly known to the community, such as “death row” or “Tupac.”

Other Opiates and Narcotics

For opiates and narcotics other than heroin, indicators increased in the first half of 2002 (exhibit 1). Narcotic analgesics and narcotic analgesic combinations have been mentioned with increasing frequency in drug-related ED episodes. In the first half of 2002, they were mentioned at a rate of 83 per 100,000 population, significantly more than the 64 per 100,000 in the previous 6-month period. The specific narcotic analgesics involved were specified for only 14 percent of mentions. Nonetheless, ED rates for both methadone and oxycodone/oxycodone combinations increased significantly over the previous 6-month period. Treatment admission rates for opiates other than heroin more than doubled between 1998 and the first half of 2002, from 18 per 100,000 population age 12 and over to 40 per 100,000.

Many opiate addicts prefer OxyContin (oxycodone) when it is available. However, it has been relatively scarce and very expensive lately in Baltimore. OxyContin is preferred because its production is regulated; it gives the same high as heroin, but with less risk from impurities.

Marijuana

Indicators of marijuana use were mixed between 2001 and the first half of 2002 (exhibit 1). The marijuana ED rate increased significantly over the previous 6-month period among most age groups and for both males and females. The annual marijuana treatment admission rate decreased from 206 per 100,000 population age 12 and over in 2001 to 192 per 100,000 in the first half of 2002 (exhibit 2).

Marijuana was more frequently reported as a secondary substance than as a primary substance by treatment admissions in the total PMSA in the first half of 2002, at 21 and 15 percent, respectively (exhibit 2).

The proportion of marijuana treatment admissions in the first half of 2002 was higher in the suburban counties (19 percent) than in Baltimore City (12 percent), but the annual admission rate was higher in the city (345 per 100,000 population age 12 and over, compared with 143 per 100,000 in the counties; exhibit 2).

More often than not, marijuana use in the indicator data sets was associated with the use of alcohol or other drugs. Most (64 percent) marijuana ED episodes involved multiple substances (exhibit 3).

Among treatment admissions for primary marijuana use in the total PMSA, 67 percent reported using additional substances (exhibit 10). More than one-half (57 percent) reported alcohol abuse, 9 percent reported cocaine use, and 6 percent reported use of heroin or other opiates. Some 7 percent of admissions used other secondary substances, primarily hallucinogens and inhalants.

Persons entering treatment for marijuana use were young: 48 percent were younger than 18, and the median age at admission to treatment was 18 (exhibit 10). Marijuana admissions were primarily male (82 percent) and increasingly likely to be African-American (54 percent in the first half of 2002, compared with 43 percent in 1998). A large proportion of marijuana treatment admissions (61 percent) represented referrals through the criminal justice system. Admissions were likely to be experiencing their first treatment episode (72 percent), and more than one-third (39 percent) reported daily marijuana use.

Stimulants

Stimulants were rarely mentioned as the primary substance of abuse by treatment admissions (exhibit 2). ED mentions of amphetamines were stable at low numbers in the first half of 2002, accounting for only 2 percent of drug-related ED mentions. There were only four ED mentions of methamphetamines in the first half of 2002.

Depressants

Benzodiazepines were mentioned in 12 percent of drug-related ED episodes in the first half of 2002, at a stable rate of 31 per 100,000 population.

Hallucinogens

The number of lysergic acid diethylamide (LSD) mentions in drug-related ED episodes was stable, at seven in the first half of 2002. The number of phencyclidine (PCP) mentions increased significantly in the first half of 2002 over the previous 6-month period, from 34 to 39.

Club Drugs

Interviews with substance users and prevention and treatment providers indicate that methylenedioxy-

methamphetamine (MDMA or ecstasy), once known as a White, young adult, suburban drug, is becoming much more prevalent in Baltimore City among the young African-American population. In part, the increase may be associated with the hip-hop culture and rap music; many popular rappers glamorize ecstasy in their music. An increase in use of ecstasy by other subcultures, such as the African-American transgender and homosexual populations, has also been reported.

ED mentions of MDMA were stable and low between the first half of 2002 ($N=30$) and the previous 6-month period, representing less than 1 percent of drug-related ED episodes. There were six ED mentions of gamma hydroxybutyric acid (GHB), three of ketamine, and none of Rohypnol in the first half of 2002.

INFECTIOUS DISEASES RELATED TO DRUG ABUSE

The Baltimore metropolitan area had an AIDS incidence rate of 34.7 per 100,000 population for 2001, and a human immunodeficiency virus (HIV) incidence rate of 44.5 per 100,000. Baltimore City accounted for 50 percent of Maryland's incident HIV infections in 2001 and 51 percent of its incident AIDS cases in 2001; the suburban counties (excluding Queen Anne's County) accounted for 14 percent and 12 percent of 2001 incident HIV and AIDS cases, respectively. As of March 31, 2003, 63 percent of the 25,103 persons in Maryland living with HIV or AIDS were in the Baltimore metropolitan area (excluding Queen Anne's County).

In 2001, Baltimore City's prevalent AIDS cases were about 67 percent male and 89 percent African-American. Sixty-three percent of prevalent AIDS cases in Baltimore City in which the risk category was determined were among injection drug users (IDUs), 17 percent were among non-IDU men who had sex with men, and 21 percent involved heterosexual transmission. In the suburban counties (excluding Queen Anne's County), prevalent AIDS cases were 70 percent male and 57 percent African-American; 37 percent of prevalent AIDS cases were among IDUs, 33 percent were among non-IDU men who had sex with men, and 26 percent involved heterosexual transmission. In Maryland as a whole, IDUs represented 50 percent of incident AIDS cases and 39 percent of incident HIV cases in 2001.

Hepatitis C (HCV) was present in 86 percent of IDUs in a study conducted in Baltimore City (Sulkowski and

Thomas 1998). New initiates to injection drug use were reported to become HCV positive soon after initiation.

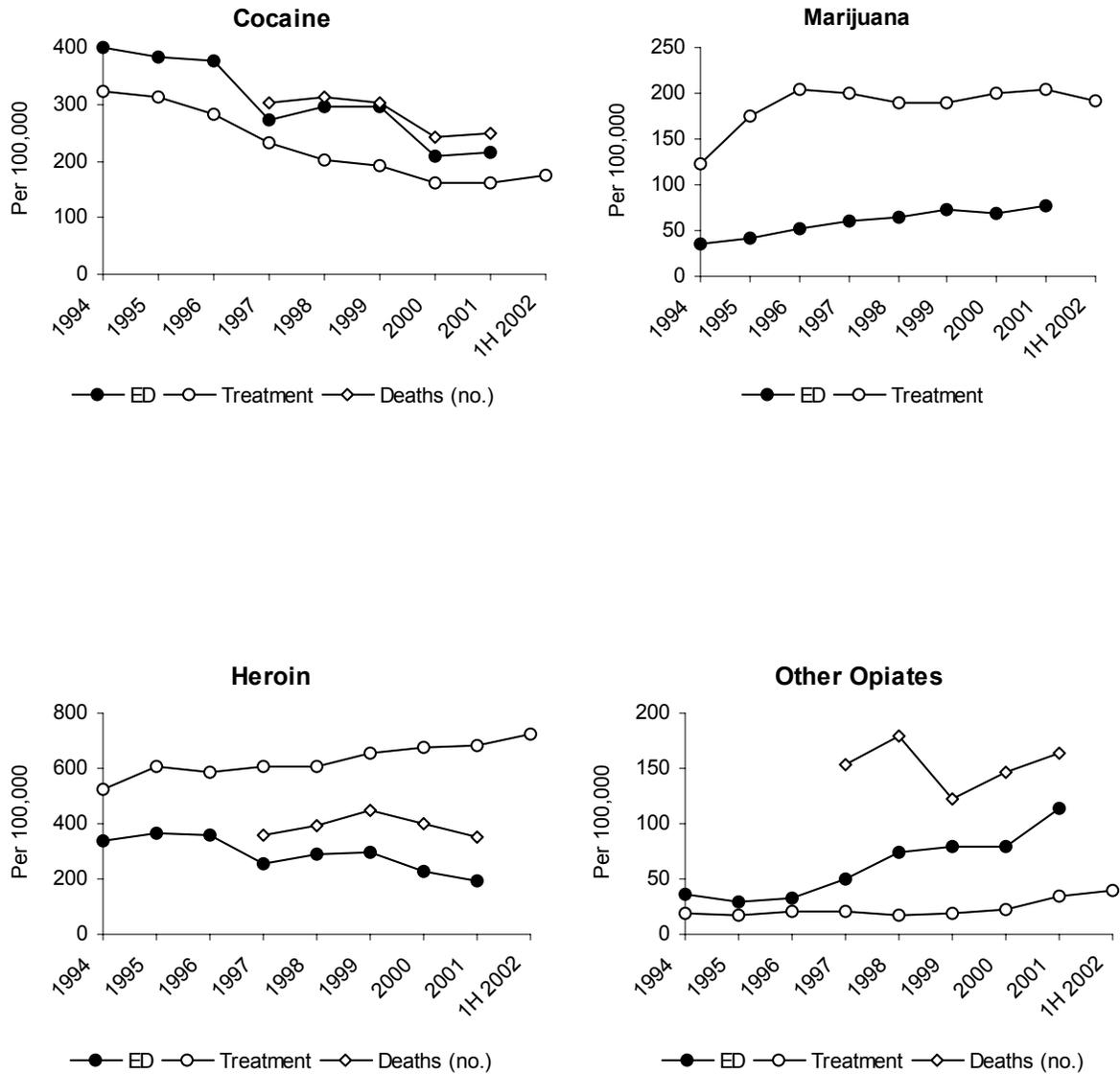
Maryland ranked 15th among States reporting chlamydia in 2001, 9th for gonorrhea, and 5th for syphilis. Distribution by county was similar to that seen for HIV and AIDS cases.

REFERENCE

Sulkowski, M.S., and Thomas, D.L. "Viral hepatitis among injection drug users." *Viral Hepatitis Reviews* 4(4):229-44 (1998). Cited in AIDS Administration. Maryland Department of Health and Mental Hygiene. "The Maryland 2002 HIV/AIDS Annual Report," p. 115 (2002).

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Exhibit 1. Annual Rates of Drug-Related Treatment Admissions and ED Mentions per 100,000 Population, and Number of Drug-Related Deaths in Baltimore: 1994–First Half of 2002¹



¹ Data for the first half of 2002 are preliminary.

SOURCES: ED and death data adapted from DAWN, OAS, SAMHSA, and treatment data are from Alcohol and Drug Abuse Administration, Maryland Department of Health and Mental Hygiene.

Exhibit 2. Characteristics of Drug-Related Treatment Admissions in Baltimore: 1998–First Half of 2002¹

	Total PMSA			Baltimore City			PMSA excluding Baltimore City								
	1998	1999	2000	1998	1999	2000	1998	1999	2000						
(Number of Admissions)	26,291	(26,863)	(27,104)	(27,999)	(14,004)	(12,589)	(13,317)	(13,520)	(12,981)	(7,740)	(13,702)	(13,546)	(13,584)	(15,018)	2002 ¹ (6,264)
Primary Substance (%)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Alcohol with Secondary Drug	20.3	19.2	17.9	17.5	14.7	10.7	10.0	8.8	8.5	9.0	29.3	28.2	26.9	25.3	21.6
Cocaine	15.9	14.9	12.7	12.5	13.5	15.6	14.8	12.8	13.3	14.1	16.1	15.0	12.7	11.8	12.8
Smoked	11.7	10.8	9.5	9.3	10.4	11.4	10.8	9.8	10.4	11.3	11.9	10.9	9.2	8.4	9.4
Injected	1.4	1.3	1.0	0.9	1.2	1.8	1.7	1.2	1.0	1.3	1.0	1.0	0.8	0.8	1.0
Other	2.8	2.8	2.2	2.3	1.9	2.5	2.3	1.8	1.9	1.4	3.2	3.2	2.7	2.6	2.5
Marijuana/Hashish	14.9	14.7	15.6	15.8	14.9	11.2	10.3	11.5	12.3	11.7	18.4	19.0	19.7	18.8	18.7
Heroin	46.4	48.8	51.0	49.9	52.8	61.3	63.9	65.8	64.3	63.7	32.6	34.0	36.4	37.4	39.3
Injected	22.6	23.5	23.7	22.3	23.4	27.3	28.4	27.8	25.7	25.4	18.2	18.7	19.7	19.4	20.8
Snorted	20.7	21.6	24.6	24.9	26.9	29.9	30.4	34.8	35.6	34.8	12.2	13.1	14.5	15.6	17.0
Other	3.1	3.7	2.7	2.7	2.6	4.0	5.2	3.1	3.0	3.5	2.1	2.2	2.2	2.4	1.4
Other Opiates	1.4	1.5	1.8	2.6	3.1	0.7	0.5	0.7	1.1	1.1	2.2	2.4	2.8	3.9	5.6
Stimulants	0.0	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	-	0.1	0.0	0.0	0.0	0.1
All Other	1.0	0.9	0.9	1.7	1.1	0.5	0.5	0.4	0.5	0.4	1.5	1.4	1.4	2.8	1.9
Primary Substance (annual admissions per 100,000 population aged 12+)	260	249	228	228	190	253	256	223	207	266	262	246	229	235	165
Alcohol with Secondary Drug	202	193	162	163	175	370	378	324	326	414	144	131	108	110	98
Cocaine	149	140	122	122	135	270	275	249	254	333	107	95	79	78	72
Smoked	18	17	12	12	15	42	42	30	26	40	9	9	7	7	7
Injected	36	36	28	30	24	58	60	45	46	42	28	28	23	24	19
Other	190	190	199	206	192	265	264	292	300	345	165	166	168	175	143
Marijuana/Hashish	591	633	651	651	683	1,454	1,636	1,666	1,572	1,876	292	297	310	348	301
Heroin	288	305	303	291	302	648	726	704	629	748	163	164	168	180	159
Injected	264	281	314	324	348	710	777	882	869	1,026	109	114	124	145	130
Snorted	39	48	34	35	33	96	132	80	74	102	19	19	19	22	11
Other	18	19	23	34	40	16	14	18	27	33	19	21	24	37	43
Other Opiates	1	0	0	0	0	-	-	0	1	-	1	0	0	0	0
Stimulants	13	12	12	22	14	13	12	11	13	13	13	12	12	26	14
All Other	23.9	23.8	25.6	24.9	24.2	25.4	25.4	28.7	28.4	25.7	22.5	22.2	22.5	22.0	22.3
Secondary Substance (%)²	27.9	28.1	28.7	30.2	30.1	27.5	27.4	28.2	30.9	29.9	28.2	28.8	29.3	29.5	30.4
Alcohol	37.7	37.9	36.1	35.5	38.0	45.3	45.5	42.9	42.2	44.1	30.8	30.4	29.3	29.7	30.5
Cocaine	25.2	23.7	23.2	21.8	21.4	17.0	15.9	15.0	14.6	16.5	32.7	31.5	31.4	28.0	27.6
Marijuana/Hashish	8.7	8.9	8.4	8.6	10.2	8.9	9.1	8.4	7.8	9.4	8.6	8.7	8.4	9.4	11.2
Heroin/Other Opiates	5.2	5.3	5.6	7.9	5.7	2.7	2.9	2.3	2.9	2.6	7.6	7.6	8.9	12.3	9.5
All Other															

¹ Data for the first half of 2002 are preliminary.

² "Secondary substance" totals equal more than 100 percent because they include secondary and tertiary substances.

- Quantity is zero

SOURCE: Alcohol and Drug Abuse Administration, Maryland Department of Health and Mental Hygiene

Exhibit 3. Cocaine, Heroin, and Marijuana ED Mentions in Baltimore, by Demographic Characteristics: 1998–First Half of 2002¹

	Cocaine				Heroin				Marijuana						
	1998	1999	2000	2001	2002 ¹	1998	1999	2000	2001	2002 ¹	1998	1999	2000	2001	2002 ¹
(Number of Mentions)	(6,871)	(6,921)	(4,943)	(4,930)	(2,795)	(6,711)	(6,999)	(5,405)	(4,481)	(2,021)	(1,495)	(1,679)	(1,620)	(1,786)	(945)
Percent of All Episodes	50.0	48.8	43.0	42.4	46.2	48.9	49.4	47.0	38.5	33.4	10.9	11.8	14.1	15.4	15.6
Percent of All Mentions	29.2	27.9	24.9	23.7	25.0	28.5	28.3	27.2	21.6	18.0	6.4	6.8	8.2	8.6	8.4
Annual Rate of Mentions ² per 100,000 Population															
Total	296	295	208	214	120	289	299	227	195	87	64	72	68	78	41
12–17	40	26	20	21	17	42	35	24	16	6	146	159	169	174	114
18–25	300	285	216	240	135	378	379	330	303	128	174	206	185	231	114
26–34	667	651	442	528	275	579	628	469	450	199	107	115	109	122	55
35 and older	278	290	206	211	123	274	282	210	182	86	29	32	30	35	18
Percentage Distributions ³															
Multiple-Drug Episode	79.9	80.6	81.3	84.0	85.3	57.8	60.0	53.1	58.1	55.3	67.6	66.8	63.3	63.0	64.3
Sex															
Male	62.5	60.8	61.1	62.2	64.2	61.5	59.8	61.4	62.8	63.0	65.4	65.6	63.6	65.5	64.9
Female	36.7	38.6	38.1	36.8	35.2	37.8	39.5	37.5	35.9	36.0	34.0	33.5	35.6	33.4	34.5
Unknown	0.8	0.5	0.8	1.0	0.6	0.7	0.6	1.1	1.2	1.0	0.5	0.9	0.8	1.2	0.7
Race/ethnicity															
White	26.1	28.1	32.3	35.5	38.1	26.4	27.1	37.0	39.7	42.0	50.1	52.2	56.9	58.4	65.8
Black	70.7	68.9	64.2	56.2	56.7	70.9	70.3	61.0	49.3	50.7	42.9	38.5	30.7	31.9	31.3
Hispanic	0.4	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.6	0.5	0.3	0.5	0.4	0.5	0.5
Race/Ethnicity NTA	0.2	0.3	0.1	0.4	0.6	0.2	0.2	0.3	0.3	0.4	0.5	0.6	0.4	0.7	0.6
Unknown	2.6	2.5	3.1	7.4	4.2	2.1	2.1	1.4	10.1	6.4	6.2	8.2	11.7	8.3	1.7
Age at Admission															
12–17	1.1	0.8	0.8	0.9	1.4	1.3	1.0	0.9	0.8	0.7	19.1	18.6	20.9	21.1	26.1
18–25	11.2	10.7	11.7	12.9	12.9	14.4	14.1	16.3	17.9	17.0	29.8	31.9	30.4	34.2	32.2
26–34	34.7	33.0	31.0	29.7	27.3	30.9	31.5	30.0	27.8	27.4	25.6	24.1	23.3	18.9	16.2
35 and older	52.6	55.3	56.3	56.2	58.4	53.1	53.2	52.5	53.3	54.9	25.5	25.3	25.4	25.7	25.5
Unknown	0.3	0.2	0.2	0.3	0.1	0.3	0.2	0.3	0.3	0.0	0.1	0.1	–	0.1	–
Reason for ED Contact															
Unexpected reaction	10.9	10.9	8.1	7.6	6.2	7.4	10.5	4.4	5.0	4.9	18.7	18.9	18.8	20.2	14.0
Overdose	9.9	9.7	11.2	10.0	9.6	11.7	10.2	12.8	13.7	14.1	11.4	11.0	11.6	9.0	8.7
Chronic effects	30.6	27.6	22.8	23.5	21.9	34.4	29.1	25.4	25.2	27.3	12.6	10.1	5.4	7.8	6.6
Withdrawal	5.8	4.4	5.1	5.4	5.8	13.2	10.7	12.9	14.2	16.6	2.2	1.6	3.0	3.5	3.7
Seeking detox.	11.2	13.6	16.3	18.8	19.2	9.4	10.9	17.4	20.7	21.7	11.6	14.5	15.5	16.2	14.8
Accident/injury	3.3	3.6	2.8	2.3	2.1	4.6	4.4	2.4	1.5	2.1	7.6	7.4	3.9	5.3	3.7
Other	11.9	24.0	29.3	27.3	29.9	7.4	18.3	22.8	17.7	12.0	19.9	30.2	31.5	24.2	35.9
Unknown	16.3	6.2	4.3	5.1	5.3	11.8	5.9	1.9	1.9	1.2	16.0	6.3	10.3	13.9	12.6

¹ Data for the first half of 2002 are preliminary.
² Rates for 2002 are not annual; they are for January–June only.
³ Percentages may not sum to 100.0 because of rounding of DAWN estimates.
 – Quantity is zero

SOURCE: DAWN, Office of Applied Studies, SAMHSA

Exhibit 4. Number of Cocaine Treatment Admissions in Baltimore, by Age: 1994, 1998, and First Half of 2002¹



¹ Data for the first half of 2002 are preliminary.

SOURCE: Alcohol and Drug Abuse Administration, Maryland Department of Health and Mental Hygiene

Exhibit 5. Characteristics of Primary Smoked Cocaine (Crack) Treatment Admissions in Baltimore, by Percent: 1998—First Half of 2002¹

	Total PMSA				Baltimore City				PMSA excluding Baltimore City						
	1998	1999	2000	2001	2002 ¹	1998	1999	2000	2001	2002 ¹	1998	1999	2000	2001	2002 ¹
(Number of Admissions)	(3,063)	(2,905)	(2,585)	(2,616)	(1,460)	(1,433)	(1,432)	(1,330)	(1,350)	(874)	(1,630)	(1,473)	(1,255)	(1,266)	(586)
Primary Use of Substance	11.7	10.8	9.5	9.3	10.4	11.4	10.8	9.8	10.4	11.3	11.9	10.9	9.2	8.4	9.4
Sex															
Male	56.6	55.4	55.4	52.7	53.3	49.5	45.5	46.4	45.5	49.2	62.8	65.0	64.9	60.4	59.4
Female	43.4	44.6	44.6	47.3	46.7	50.5	54.5	53.6	54.5	50.8	37.2	35.0	35.1	39.6	40.6
Race/Ethnicity															
White	39.2	37.0	31.6	32.5	31.4	18.6	16.1	13.2	12.0	12.8	57.4	57.3	51.1	54.3	59.0
African-American	59.2	61.5	67.0	66.2	67.4	80.3	82.8	85.9	87.0	86.7	40.7	40.8	47.0	44.1	38.6
Hispanic	0.8	0.8	0.7	0.5	1.1	0.3	0.4	0.4	0.3	0.5	1.2	1.2	1.1	0.8	2.0
Other	0.8	0.7	0.7	0.8	0.1	0.8	0.7	0.5	0.7	-	0.7	0.7	0.8	0.8	0.3
Age at Admission															
Younger than 18	1.6	0.6	0.5	0.8	0.4	1.2	0.4	0.3	0.9	0.2	1.9	0.8	0.7	0.7	0.7
18–25	8.7	8.3	6.6	7.2	4.8	6.0	4.7	4.4	4.3	2.5	11.0	11.7	8.8	10.4	8.2
26–34	40.8	36.8	33.9	25.6	23.6	38.1	34.8	31.5	22.6	17.8	43.3	38.6	36.5	28.8	32.2
35 and older	48.9	54.4	59.0	66.3	71.2	54.7	60.1	63.8	72.2	79.4	43.7	48.9	53.9	60.1	58.9
(Median Age at Admission)	(34 yrs)	(35 yrs)	(36 yrs)	(37 yrs)	(38 yrs)	(35 yrs)	(36 yrs)	(37 yrs)	(38 yrs)	(39 yrs)	(33 yrs)	(34 yrs)	(35 yrs)	(36 yrs)	(37 yrs)
Daily Use	35.9	35.4	35.1	36.5	36.8	41.7	43.2	44.1	42.1	43.7	30.9	27.8	25.6	30.6	26.6
First Treatment Episode	41.9	42.9	42.4	40.0	38.6	43.1	43.0	38.8	39.3	37.1	40.9	42.9	46.1	40.6	41.0
(Median Duration of Use) ²	(9 yrs)	(10 yrs)	(10 yrs)	(11 yrs)	(11 yrs)	(9 yrs)	(10 yrs)	(10 yrs)	(10 yrs)	(11 yrs)	(9 yrs)	(10 yrs)	(11 yrs)	(11 yrs)	(12 yrs)
Criminal Justice Referral	35.9	37.3	40.5	36.5	34.8	32.9	30.9	32.7	30.1	30.0	38.5	43.6	48.8	43.4	42.0
Secondary Substance ³															
None	32.9	30.0	31.1	31.1	28.5	36.7	32.5	35.0	35.5	31.6	29.5	27.6	27.0	26.4	23.9
Alcohol	48.3	47.8	47.8	48.5	49.2	43.5	42.7	41.4	43.3	45.3	52.5	52.8	54.6	54.1	54.9
Cocaine	0.2	0.1	0.1	0.0	0.5	0.1	0.1	0.1	-	0.7	0.2	0.1	0.1	0.1	0.3
Smoked cocaine (crack)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other cocaine	0.2	0.1	0.1	0.0	0.5	0.1	0.1	0.1	-	0.7	0.2	0.1	0.1	0.1	0.3
Marijuana/hashish/THC	29.6	29.7	28.5	26.2	26.0	25.0	24.7	23.3	20.7	21.5	33.7	34.6	34.1	32.1	32.8
Heroin/other opiates	15.5	18.5	18.5	19.6	23.8	21.0	24.2	23.8	24.8	28.4	10.7	13.0	12.7	14.1	17.1
Injected	2.3	2.5	2.0	2.9	2.3	2.7	2.8	2.1	2.5	2.7	2.0	2.3	1.9	3.2	1.7
Snorted	11.1	13.3	13.2	13.6	19.2	16.2	18.9	19.2	20.2	24.9	6.7	7.9	6.9	6.6	10.6
Other	2.2	2.7	3.3	3.3	2.6	2.4	2.6	2.6	2.2	0.9	2.1	2.8	4.1	4.4	5.1
All other	2.2	2.4	2.9	3.7	2.1	0.9	1.3	1.1	1.0	-	3.4	3.5	4.8	6.6	5.1

¹ Data for the first half of 2002 are preliminary.

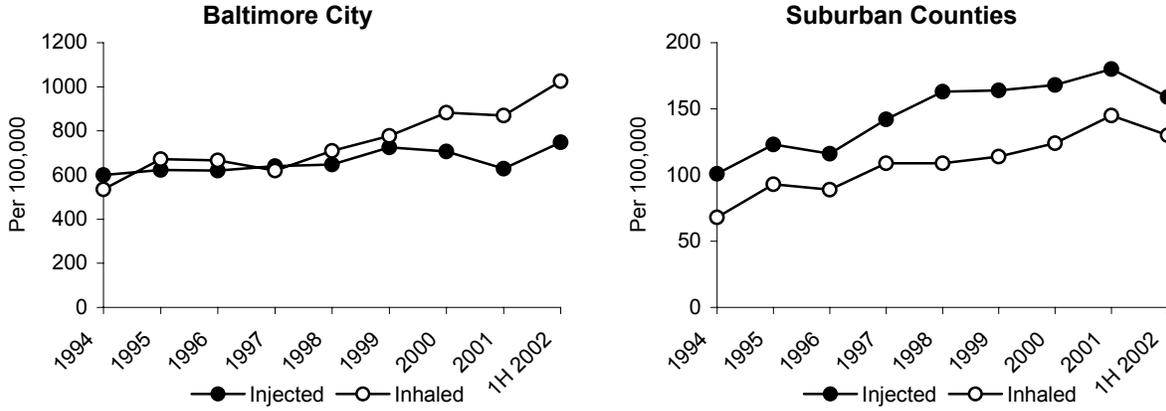
² For first-time treatment admissions.

³ "Secondary substance" totals equal more than 100 percent because they include secondary and tertiary substances.

- Quantity is zero

SOURCE: Alcohol and Drug Abuse Administration, Maryland Department of Health and Mental Hygiene

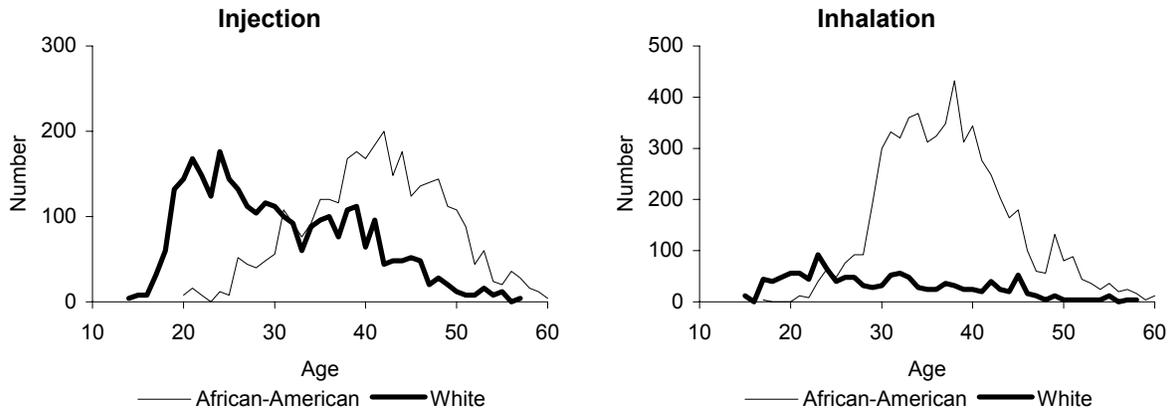
Exhibit 6. Annual Rates of Heroin Treatment Admissions per 100,000 Population in Baltimore, by Urbanicity and Route of Administration: 1994–First Half of 2002¹



¹ Data for the first half of 2002 are preliminary.

SOURCE: Alcohol and Drug Abuse Administration, Maryland Department of Health and Mental Hygiene

Exhibit 7. Number of Heroin Treatment Admissions in Baltimore, by Route of Administration, Age, and Race: First Half of 2002¹



¹ Data for the first half of 2002 are preliminary.

SOURCE: Alcohol and Drug Abuse Administration, Maryland Department of Health and Mental Hygiene

Exhibit 8. Characteristics of Primary Injected Heroin Treatment Admissions in Baltimore, by Percent: 1998–First Half of 2002¹

	Total PMSA				Baltimore City				PMSA Excluding Baltimore City						
	1998	1999	2000	2001	2002 ¹	1998	1999	2000	2001	2002 ¹	1998	1999	2000	2001	2002 ¹
(Number of Admissions)	(5,942)	(6,316)	(6,436)	(6,244)	(3,270)	(3,442)	(3,780)	(3,758)	(3,337)	(1,964)	(2,500)	(2,536)	(2,678)	(2,907)	(1,306)
Primary Use of Substance	22.6	23.5	23.7	22.3	23.4	27.3	28.4	27.8	25.7	25.4	18.2	18.7	19.7	19.4	20.8
Sex															
Male	58.7	59.7	58.0	60.7	58.7	56.2	56.8	54.3	57.7	55.9	62.0	64.0	63.2	64.0	62.8
Female	41.3	40.3	42.0	39.3	41.3	43.8	43.2	45.7	42.3	44.1	38.0	36.0	36.8	36.0	37.2
Race/Ethnicity															
White	45.6	44.6	44.9	48.7	47.0	24.4	24.6	25.1	27.6	29.6	74.8	74.4	72.5	72.9	73.0
African-American	53.0	53.6	53.7	49.3	51.5	74.6	74.3	73.9	71.4	69.5	23.3	22.6	25.3	23.8	24.5
Hispanic	0.7	1.0	0.8	1.0	0.7	0.5	0.3	0.5	0.5	0.3	0.9	2.1	1.2	1.5	1.4
Other	0.7	0.8	0.7	1.1	0.8	0.5	0.7	0.5	0.5	0.6	0.9	0.9	1.0	1.7	1.1
Age at Admission															
Younger than 18	2.0	1.4	1.0	1.0	0.8	1.0	0.6	0.5	0.4	0.5	3.4	2.6	1.6	1.6	1.2
18–25	17.2	17.2	17.9	19.6	17.7	9.6	8.2	8.7	10.2	8.6	27.6	30.7	30.8	30.3	31.4
26–34	24.5	22.8	23.4	23.4	23.7	23.9	22.3	22.1	21.0	21.9	25.2	23.4	25.2	26.2	26.3
35 and older	56.4	58.6	57.8	56.0	57.8	65.5	68.8	68.7	68.3	69.0	43.8	43.3	42.4	41.9	41.0
(Median Age at Admission)	(36 yrs)	(37 yrs)	(37 yrs)	(36 yrs)	(37 yrs)	(38 yrs)	(39 yrs)	(39 yrs)	(39 yrs)	(40 yrs)	(33 yrs)	(32 yrs)	(32 yrs)	(32 yrs)	(31 yrs)
Daily Use	75.0	72.7	74.9	74.4	74.3	77.6	75.7	79.7	77.4	77.4	71.4	68.3	68.0	70.9	69.5
First Treatment Episode	34.0	37.1	32.6	31.3	31.0	32.0	34.5	30.9	31.4	32.5	36.6	41.1	35.1	31.3	28.6
(Median Duration of Use) ²	(11 yrs)	(11 yrs)	(12 yrs)	(10 yrs)	(12 yrs)	(15 yrs)	(15 yrs)	(16 yrs)	(15 yrs)	(14 yrs)	(6 yrs)	(7 yrs)	(7 yrs)	(7 yrs)	(7 yrs)
Criminal Justice Referral	24.2	22.9	24.2	23.3	22.9	25.2	23.2	22.5	24.9	24.6	22.7	22.6	26.7	21.5	20.4
Secondary Substance ³															
None	23.4	27.1	28.1	24.7	22.6	17.8	23.4	25.8	22.4	20.3	31.2	32.6	31.3	27.3	26.2
Alcohol	23.1	22.9	23.0	26.5	26.1	23.2	23.6	24.2	29.1	26.0	23.0	21.9	21.4	23.5	26.2
Cocaine	64.4	61.1	58.7	61.3	64.9	74.0	68.5	64.8	67.6	70.4	51.2	50.0	50.1	54.0	56.7
Smoked cocaine (crack)	8.5	8.7	9.0	10.0	10.7	7.8	8.6	9.2	10.2	10.8	9.4	8.8	8.7	9.7	10.6
Other cocaine	56.0	52.4	49.7	51.3	54.2	66.2	60.0	55.6	57.4	59.6	42.1	41.2	41.5	44.3	46.1
Marijuana/hashish/THC	12.5	11.5	12.2	12.2	12.9	8.3	7.2	7.9	7.8	8.7	18.3	17.9	18.3	17.2	19.3
Heroin/other opiates	3.0	2.7	3.3	3.9	4.1	1.5	1.7	1.6	1.7	2.9	5.1	4.2	5.8	6.3	6.0
Injected	0.4	0.4	0.4	0.5	0.6	0.1	0.2	0.1	0.1	0.2	0.8	0.7	0.8	0.9	1.1
Snorted	0.2	0.0	0.2	0.1	—	—	0.0	0.0	0.1	—	0.4	0.1	0.4	0.2	—
Other	2.5	2.3	2.8	3.3	3.5	1.4	1.5	1.5	1.5	2.6	3.9	3.5	4.7	5.3	4.9
All other	4.0	3.9	4.0	4.8	4.9	2.6	2.9	2.4	3.0	3.1	5.9	5.4	6.3	6.8	7.7

¹ Data for the first half of 2002 are preliminary.

² For first-time treatment admissions.

³ "Secondary substance" totals equal more than 100 percent because they include secondary and tertiary substances.

— Quantity is zero

SOURCE: Alcohol and Drug Abuse Administration, Maryland Department of Health and Mental Hygiene

Exhibit 9. Characteristics of Primary Inhaled Heroin Treatment Admissions in Baltimore, by Percent: 1998–2002¹

	Total PMSA			Baltimore City			PMSA excluding Baltimore City			
	1998	1999	2000	1998	1999	2000	1998	1999	2000	2002 ¹
(Number of Admissions)	(5,441)	(5,814)	(6,679)	(6,961)	(3,762)	(3,770)	(4,046)	(4,708)	(4,615)	(2,696)
Primary Use of Substance	20.7	21.6	24.6	24.9	26.9	29.9	30.4	34.8	35.6	34.8
Sex										
Male	51.8	52.7	52.9	52.4	56.1	46.1	46.3	47.6	48.3	52.9
Female	48.2	47.3	47.1	47.6	43.9	53.9	53.7	52.4	51.7	47.1
Race/Ethnicity										
White	23.0	19.2	16.8	17.1	16.8	9.6	8.1	6.9	6.9	7.8
African-American	76.0	79.7	82.2	81.8	82.3	89.8	91.3	92.3	92.5	91.5
Hispanic	0.6	0.7	0.4	0.5	0.5	0.3	0.3	0.3	0.2	0.4
Other	0.5	0.5	0.5	0.6	0.4	0.3	0.3	0.4	0.3	0.2
Age at Admission										
Younger than 18	2.4	2.0	0.4	0.4	0.8	1.4	1.3	0.1	0.2	0.4
18–25	15.5	11.0	8.6	8.2	8.1	10.0	7.2	4.8	4.5	5.6
26–34	46.8	46.5	41.7	38.2	33.6	51.4	48.8	41.6	38.2	33.8
35 and older	35.4	40.5	49.3	53.2	57.4	37.2	42.7	53.5	57.2	60.1
(Median Age at Admission)	(32 yrs)	(33 yrs)	(34 yrs)	(35 yrs)	(36 yrs)	(32 yrs)	(33 yrs)	(35 yrs)	(36 yrs)	(37 yrs)
Daily Use	70.4	65.6	71.0	70.4	66.5	72.9	68.1	76.5	73.4	68.0
First Treatment Episode	41.9	42.7	38.6	37.5	37.7	40.2	40.1	34.8	35.9	38.1
(Median Duration of Use) ²	(7 yrs)	(8 yrs)	(9 yrs)	(10 yrs)	(10 yrs)	(8 yrs)	(10 yrs)	(10 yrs)	(11 yrs)	(11 yrs)
Criminal Justice Referral	33.5	34.6	31.6	31.3	32.9	33.3	34.3	29.3	32.1	36.4
Secondary Substance ³										
None	33.4	32.6	35.6	33.5	29.4	33.7	32.1	35.5	35.4	30.3
Alcohol	24.2	24.3	24.5	27.2	27.6	22.7	24.4	24.1	26.1	26.7
Cocaine	47.5	48.9	45.8	47.4	51.0	50.3	51.9	48.5	49.3	52.6
Smoked cocaine (crack)	29.3	30.2	29.3	32.7	35.5	33.3	34.8	33.8	36.9	38.5
Other cocaine	18.3	18.7	16.5	14.8	15.5	17.0	17.2	14.7	12.4	14.1
Marijuana/hashish/THC	19.1	17.5	17.1	15.8	18.6	16.3	15.2	14.3	12.6	17.0
Heroin/other opiates	2.1	2.5	2.3	3.0	3.7	1.3	1.5	1.3	1.3	1.7
Injected	0.0	0.0	0.0	0.0	–	–	0.0	–	–	–
Snorted	0.2	0.2	0.2	0.3	0.5	0.1	0.1	0.1	0.0	0.1
Other	1.9	2.2	2.1	2.7	3.2	1.2	1.4	1.2	1.3	1.6
All other	2.3	2.0	1.9	2.4	2.2	1.6	1.4	1.3	1.1	1.0

¹ Data for the first half of 2002 are preliminary.

² For first-time treatment admissions.

³ "Secondary substance" totals equal more than 100 percent because they include secondary and tertiary substances.

– Quantity is zero

SOURCE: Alcohol and Drug Abuse Administration, Maryland Department of Health and Mental Hygiene

Patterns and Trends in Drug Abuse: Greater Boston

Daniel P. Dooley¹

ABSTRACT

In Greater Boston, heroin, cocaine, and marijuana continue to dominate as the major street drugs. Heroin was mentioned in more than 50 percent of the 374 drug abuse deaths in 2001, and it dominates increasingly as the primary drug of choice among those seeking treatment. Heroin ED mentions were second only to those for cocaine (excluding alcohol-in-combination) in the first half of 2002. Cocaine was mentioned in 35 percent of the drug abuse deaths (second only to heroin) in 2001 and was stable as the top drug reported in ED visits. Cocaine treatment proportions remained stable, with 25 percent of those seeking treatment reporting current (past-month) cocaine use. Marijuana ED mentions and treatment admissions remained relatively stable. Half-year numbers of ED mentions for MDMA (ecstasy) were down 48 percent. Narcotic analgesics were mentioned in 55 percent of drug abuse deaths, and benzodiazepines were mentioned in 36 percent. The proportion of drug arrests among all arrests in the city of Boston rose 20 percent between 2001 and 2002. The drug class distribution for drug arrests shifted between 2001 and 2002, with a 14-percent increase in Class D (mainly marijuana) drug arrests and a 15-percent decrease in Class A (mainly heroin) drug arrests. Class B (mainly cocaine/crack) arrests remained stable and accounted for the highest proportion (42 percent) of all drug-related deaths. Despite various successful interdiction efforts, including eradication of 1,853 marijuana plants between July and September 2002, the DEA reported that heroin, cocaine, and marijuana remain relatively cheap, pure, and widely available. New HIV cases in Boston totaled 173 in 2001. The primary transmission risk of new cases included 12 percent who were IDUs, 3 percent who had sex with an IDU, and 31 percent with an unknown/undetermined transmission status. In 2001, there were 148 new AIDS cases. By transmission risk, this included 28 percent who were IDUs, 1 percent who had sex with an IDU, and 30 percent for whom the risk behavior was unknown/undetermined.

INTRODUCTION

Area Description

According to the 2000 U.S. census, Massachusetts ranks 13th in population (6,349,097 people) in the Nation. The 746,914 people in the Boston metropolitan area represent 12 percent of the total Massachusetts population. In the city of Boston, 50 percent of residents are White non-Hispanic, 23 percent are Black non-Hispanic, 14 percent are Hispanic, and 8 percent are Asian.

Several characteristics influence drug trends in Boston and throughout Massachusetts:

- Contiguity with five neighboring States linked by a network of State and interstate highways
- Proximity to Interstate 95, which connects Boston to all major cities on the east coast, particularly New York
- A well-developed public transportation system that provides easy access to communities in eastern Massachusetts
- A large population of college students in both the greater Boston area and western Massachusetts
- Several seaport cities with major fishing industries (now in decline) and harbor areas
- Two international airports (Boston and Springfield) and an expanding domestic travel airport (Worcester)
- A struggling economy with increasing unemployment, declining State revenues, and social service cutbacks
- A record number of homeless individuals seeking shelter

¹ The author is affiliated with the Boston Public Health Commission.

Data Sources

Data sources for this report include the following:

- **Drug abuse death data** for the Boston metropolitan statistical area (MSA) were provided by the Drug Abuse Warning Network (DAWN), Office of Applied Studies (OAS), Substance Abuse and Mental Health Services Administration (SAMHSA), for 1996–2001.
- **Emergency department (ED) drug mentions data** for the Boston MSA were provided by DAWN, OAS, SAMHSA for half-years from 1997 through the first half of 2002. Data for the first half of 2002 are preliminary.
- **Treatment admissions data** were provided by the Massachusetts Department of Public Health (DPH), Bureau of Substance Abuse Services, for fiscal year (FY) 1997 (which began in July 1996) through the first three quarters of FY 2003 (through March 31, 2003).
- **Drug arrest, availability, price, purity, and distribution patterns data** were provided by the Boston Police Department, Drug Control Unit and Office of Research and Evaluation, and the Drug Enforcement Administration (DEA).
- **Drug forensic analysis data** are from the DPH Drug Analysis Laboratory and cover analyses of seized drug samples from January 1, 1997, through December 31, 2002.
- **Drug mentions data from helpline calls** are from the Massachusetts Substance Abuse Information and Education Helpline for 1999 through 2002.
- **Drug use among school students data** are derived from the Youth Risk Behavior Survey (YRBS) in Boston for 2001, through support from the Centers for Disease Control and Prevention.
- **Acquired immunodeficiency syndrome (AIDS) and human immunodeficiency virus (HIV) data** were provided by the DPH, AIDS Surveillance Program, by year between 1993 and 2001, and cumulative through May 1, 2003.

DRUG ABUSE PATTERNS AND TRENDS

Cocaine/Crack

The most recent cocaine/crack indicators are stable and show continued levels of high use and abuse of cocaine in Greater Boston.

In 2001, cocaine was indicated in 132 of the 374 drug abuse deaths (35.3 percent)—second only to heroin/morphine. Twenty-one of the mentions represented deaths involving only cocaine (i.e., were “single drug deaths”).

In the first half of 2002, there were 2,414 cocaine ED mentions (exhibit 1), 29.5 percent of all drug episodes. The proportion of cocaine ED mentions remained stable during the three most recent half-year periods of reporting (January–June 2001, July–December 2001, and January–June 2002).

The 2001 rate of cocaine/crack ED mentions (the most recent annual rate) for males was more than 1½ times the rate for females (174 vs. 103 per 100,000 population). The highest age group rate, 317, was among those age 26–34.

In the first three quarters of FY 2003, there were 1,372 treatment admissions (8.1 percent of all clients) who reported cocaine/crack as their primary drug (exhibit 2a), and 4,280 mentions (25.2 percent of all clients) of past-month cocaine/crack use among clients admitted to State-funded treatment programs (exhibit 3). A comparison of the last full year of data (FY 2002) to previous years shows the proportion reporting cocaine as their primary drug did not change from FY 2001 to FY 2002, but decreased 25 percent from FY 2000 to FY 2002. The percentage of mentions of current cocaine use decreased slightly (4 percent) from FY 2001 to FY 2002.

Demographic data on cocaine/crack treatment admissions are shown in exhibit 2a. For further demographic comparisons of annual treatment data, see “Patterns and Trends in Drug Abuse: Greater Boston–December 2002,” in *Epidemiologic Trends in Drug Abuse. Volume II: Proceedings of the Community Epidemiology Work Group*, December 2002.

Class B arrests (mainly cocaine and crack) accounted for the largest proportion of drug arrests (42 percent) in the city of Boston (exhibit 4), and there was no change from 2001 to 2002. However, the proportion of Class B arrests decreased 11.9 percent between 1997 and 2002.

The proportion of White Class B arrests (32 percent of the total) decreased 21.2 percent from 2000 to 2002, while the proportion of Black Class B arrests (67 percent) increased 16.8 percent during the same period. The proportion of female Class B arrests (13 percent) decreased 15.6 percent between 2000 and 2002. Class B arrests among those age 20–24 (20 percent) increased 24.5 percent from 2000 to 2002,

while arrests of those age 25–39 (44 percent) decreased 12.9 percent during the same period.

A comparison of drug lab submissions of confiscated drug samples in the Greater Boston area show a 9-percent decrease in cocaine submissions from 2001 to 2002, when they accounted for 33 and 30 percent, respectively, of all submissions.

Greater Boston area calls to the Massachusetts Substance Abuse Helpline for cocaine remained stable at between 15 and 13 percent from 1999 through 2002—second highest among illicit drugs.

The DEA reports that a gram of cocaine costs between \$50 and \$100, and crack costs \$10–\$20 per rock. Both powder cocaine and crack are “readily available” in Massachusetts.

Heroin

Heroin is arguably Boston’s most abused drug. Heroin deaths and ED mentions are at stable high levels. Heroin treatment numbers appear to still be rising.

In 2001, heroin/morphine was indicated in 195 drug abuse deaths—more than any other drug among the 374 drug abuse deaths (52.1 percent). Twenty-seven of those deaths were single drug deaths.

In the first half of 2002, there were 1,973 heroin ED mentions (exhibit 1), 24.1 percent of all drug episodes. The proportion of heroin ED mentions remained unchanged during the three most recent half-year reporting periods (2001–June 2002).

The 2001 data by gender show that the heroin rate for males was approximately 2½ times the female rate (173 vs. 73 per 100,000 population). The highest rate by age group (367 per 100,000 population) was among those age 26–29.

In the first three quarters of FY 2003, there were 8,113 treatment admissions (47.8 percent of all clients) in the Greater Boston area who reported heroin as their primary drug (exhibit 2a), and 7,813 mentions (46 percent of all clients) of current (past-month) heroin use among those admitted to State-funded treatment programs (exhibit 3). A comparison of the last full year of data (FY 2002) to previous years shows the percentage reporting heroin as their primary drug increased 10 percent from FY 2001, 24 percent from FY 2000, and 59 percent from FY 1996. The proportion of mentions of current heroin use increased 8 percent from FY 2001, 20 percent from FY 2000, and 45 percent from FY 1996 compared with FY 2002.

Demographic data on heroin/opiate admissions are shown in exhibit 2a. For further demographic comparisons of annual treatment data, see “Patterns and Trends in Drug Abuse: Greater Boston–December 2002,” in the December 2002 CEWG publication.

As shown in exhibit 4, the proportion of Class A drug arrests (mainly heroin and other opiates) among all drug arrests (22.5 percent) in the city of Boston decreased 14.8 percent from 2001 to 2002 and 17.0 percent from 2000 to 2002.

The proportion of Class A Hispanic arrests (33 percent of the total Class A arrests) decreased 16.4 percent from 2001 to 2002. The percentage of Class A arrests for persons age 20–24 (16 percent) increased 25.4 percent from 2001 to 2002.

A comparison of drug lab submissions of confiscated drug samples in Greater Boston show a 21-percent decrease in heroin submissions from 2001 to 2002, when they accounted for 19 and 15 percent, respectively, of all submissions.

Greater Boston area calls to the Massachusetts Substance Abuse Helpline for heroin remained stable from 1999 through 2002 at 23 percent—the highest among illicit drugs.

The DEA continues to report that heroin is cheap, pure, and “readily available throughout the New England area.”

Marijuana

The most recent marijuana indicators for Greater Boston are stable.

Marijuana is not routinely tested and reported in Boston DAWN drug abuse death surveillance.

In the first half of 2002, there were 1,721 marijuana ED mentions (exhibit 1), 21.1 percent of all drug episodes. The proportion of marijuana mentions remained stable during the three most recent half-year reporting periods (2001– June 2002).

The 2001 marijuana ED mentions rate for males was nearly 2½ times the rate for females (136 vs. 58 mentions per 100,000 population). The highest age group rate, 246, was among those age 18–25.

In the first three quarters of FY 2003, there were 660 treatment admissions (3.9 percent of all clients) who reported marijuana as their primary drug (exhibit 2b), and 1,890 mentions (11.1 percent of all clients) of current marijuana use among those admitted to State-

funded treatment programs. Comparison of the last full year of data (FY 2002) to previous years shows the percentage reporting marijuana as their primary drug did not change from FY 2001. However, the percentage of mentions of current marijuana use decreased 15 percent from FY 2001 and FY 2000, and decreased 31 percent from FY 1996.

Demographic characteristics of the 2002 marijuana treatment admissions are shown in exhibit 2b. For further demographic comparisons of annual treatment data, see “Patterns and Trends in Drug Abuse: Greater Boston—December 2002,” in the December 2002 CEWG publication.

The percentage of Class D arrests (mainly marijuana) among all drug arrests (32.7 percent) in the city of Boston in 2002 increased 14.0 percent from 2001 (exhibit 4). The proportion of White Class D arrests (37 percent) decreased 14.0 percent from 2000 to 2002, while the proportion of Black Class D arrests (62 percent) increased 10.8 percent during the same period. The proportion of Class D arrests among those age 25–39 (28 percent) increased 17.3 percent from 2000 to 2002, while arrests among those younger than 20 (37 percent) decreased 11.1 percent.

A comparison of drug lab submissions of confiscated drug samples in the Greater Boston area show an 8.8-percent increase in the percentage of marijuana submissions from 2001 to 2002, when they accounted for 34 and 37 percent, respectively, of the submissions.

Greater Boston area calls to the Massachusetts Substance Abuse Helpline for marijuana remained stable at 4 percent from 1999 through 2002.

Youth Risk Behavior Survey data show that 42 percent of Boston high school students reported having used marijuana in their lifetime, and 23 percent reported use within the past month.

The DEA reports that marijuana is readily available in Massachusetts and sells for \$900–\$1,400 per pound.

Narcotic Analgesics

Narcotic analgesics were mentioned in 55.1 percent of the 374 drug abuse deaths in 2001—up from 34.4 percent of the drug abuse deaths in 2000.

In the DAWN Boston MSA, there were 1,467 narcotic analgesics/combinations (NA/C) ED mentions in the first half of 2002. The 2001 NA/C

rate of 81 ED mentions per 100,000 population was fourth highest among the 21 DAWN sites. Also in 2001, Boston had the highest oxycodone/combinations ED rate (a subset of the NA/C category) among the 21 DAWN sites, at 27 per 100,000 population.

There was a 54-percent increase in the number of oxycodone drug lab samples from 2001 to 2002 (138 and 212 samples, respectively). Also in 2002, there was a 22-percent increase in Greater Boston area calls related to oxycodone to the Massachusetts Substance Abuse Helpline ($n=445$ oxycodone calls in 2002).

Statewide, there were 93 OxyContin (a time-release version of oxycodone) thefts from pharmacies during 2002, compared with 139 thefts in 2001 and only 26 thefts in 2000.

Methylenedioxymethamphetamine (MDMA)

There were 40 MDMA (ecstasy) ED mentions in the first half of 2002 (down 48 percent from the second half of 2001) (exhibit 1). Of these, 82.5 percent were among males, and 65.0 percent were among patients younger than 26. The DEA reports that “MDMA availability has remained high.”

Other Drugs: Amphetamines, Methamphetamine, Ketamine, Benzodiazepines, Barbiturates, Lysergic Acid Diethylamide (LSD), and Phencyclidine (PCP)

There were 208 amphetamine ED mentions in the first half of 2002 (exhibit 1). The 2001 rate was the highest amphetamines ED mentions rate that Boston had experienced in the most recent 8 years of DAWN reporting. The numbers of amphetamine submissions to the DPH lab increased each year from 2000 to 2002 (4, 25, and 42, respectively).

There were few (seven) ED mentions of methamphetamine in the first half of 2002 (exhibit 1).

Comparison of DPH lab submissions for ketamine show small but increasing numbers of submissions over the past few years (20, 18, and 43 samples for 2000, 2001, and 2002, respectively).

Benzodiazepines were mentioned in 136 (or 36.4 percent) of the 374 drug abuse deaths in 2001, up dramatically from the 25 mentions in 2000 (7.3 percent of drug abuse deaths in that year). In the first half of 2002, there were 1,740 benzodiazepines ED mentions. The 2001 benzodiazepines ED rate of 95 mentions per 100,000 population was the highest among all 21 DAWN sites.

There were 336 barbiturates ED mentions in the first half of 2002. The 2001 ED rate of 15 mentions per 100,000 population was the highest barbiturates rate of the prior 8 years of DAWN reporting in the Boston area.

There were few ED mentions of LSD (12) or PCP (18) in Boston during the first half of 2002.

INFECTIOUS DISEASES RELATED TO DRUG ABUSE

In 2001, there were 173 new HIV cases in Boston (exhibit 5a & 5b). The transmission risks in these cases

included 12 percent who were injection drug users (IDUs), 3 percent who had sex with an IDU, and 31 percent with an unknown/undetermined transmission status. In 2001, there were 148 new AIDS cases. By transmission risk, this group included 28 percent who were IDUs, 1 percent who had sex with an IDU, and 30 percent for whom the risk factor was unknown/undetermined.

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Exhibit 1. Semiannual Estimated ED Mentions in Boston for Selected Drugs and Percentages of Mentions in Total Drug Episodes¹: July 1997–June 2002

Drug	1997		1998				1999				2000				2001				2002 ²	
	Jul–Dec		Jan–Jun		Jul–Dec		Jan–Jun		Jul–Dec		Jan–Jun		Jul–Dec		Jan–Jun		Jul–Dec		Jan–Jun	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Alcohol-in-combination	2,315	(39)	2,545	(38)	2,585	(37)	2,228	(38)	2,211	(38)	2,360	(33)	2,615	(34)	2,675	(33)	3,144	(36)	2,557	(31)
Cocaine	1,672	(28)	2,051	(30)	2,475	(36)	1,722	(30)	1,838	(31)	1,883	(26)	2,217	(29)	2,267	(28)	2,666	(31)	2,414	(30)
Heroin	1,229	(21)	1,358	(20)	1,380	(20)	1,360	(24)	1,500	(26)	1,820	(25)	2,048	(27)	2,022	(25)	2,336	(27)	1,973	(24)
PCP	12	(<1)	10	(<1)	11	(<1)	5	(<1)	2	(<1)	4	(<1)	7	(<1)	5	(<1)	18	(<1)	18	(<1)
LSD	10	(<1)	18	(<1)	35	(<1)	25	(<1)	19	(<1)	11	(<1)	31	(<1)	18	(<1)	16	(<1)	12	...
Amphetamines	... ³	...	85	(1)	95	(1)	115	(2)	100	(2)	196	(3)	173	(2)	188	(2)	204	(2)	208	(3)
Methamphetamine	9	(<1)	3	(<1)	3	(<1)	8	(<1)	...	...	7	(<1)	...	...	4	(<1)	10	(<1)	7	(<1)
MDMA	...	...	10	(<1)	29	(<1)	37	(1)	49	(1)	48	(1)	77	(1)	63	(1)	77	(1)	40	(<1)
Marijuana/hashish	847	(14)	1,484	(22)	1,423	(21)	967	(17)	993	(17)	1,425	(20)	1,520	(20)	1,684	(21)	1,739	(20)	1,721	(21)
Total Drug Episodes	5,868		6,738		6,917		5,783		5,885		7,229		7,672		8,163		8,690		8,175	
Total Drug Mentions	10,653		12,235		12,640		10,502		10,715		12,504		13,349		14,154		15,641		14,608	

¹ Percentage of episodes for which each drug was mentioned (mentions/total drug episodes).

² Preliminary data.

³ Dots (...) indicate that the estimate did not meet the standard of precision or was less than 10.

SOURCE: DAWN, OAS, SAMHSA

Exhibit 2a. Client Characteristics in Greater Boston State-Funded Substance Abuse Treatment Programs, by Drug of Choice¹ and Percent: July 1, 1997–March 31, 2003

Demographic Characteristic	Cocaine/Crack						Heroin/Opiates					
	FY ² 1998	FY 1999	FY 2000	FY 2001	FY 2002	3Q FY 2003 ³	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	3Q FY 2003 ³
Gender												
Male	60	59	59	62	63	56	72	72	75	76	77	76
Female	40	41	41	38	37	44	28	28	25	24	23	24
Race/Ethnicity												
White	23	22	23	26	25	24	47	49	51	50	53	51
Black	64	63	65	60	61	63	24	24	22	21	18	20
Hispanic	10	11	10	12	11	10	23	22	23	25	25	24
Other	3	3	3	3	3	4	6	5	5	5	4	5
Age at Admission (Average age)	(33.7)	(35.2)	(35.5)	(36.0)	(36.7)		(34.6)	(35.2)	(35.3)	(35.1)	(34.6)	
Younger than 19	1	1	<1	1	<1		1	1	<1	1	1	
19–29	28	19	18	15	15		29	27	27	29	32	
30–39	53	56	55	55	51	49	42	42	40	39	37	36
40–49	16	21	23	26	29	30	24	25	27	25	24	27
50 and older	2	4	4	4	5	6	4	6	5	6	6	7
Marital Status												
Married	10	11	10	11	12	11	10	10	11	10	10	8
Separated/divorced	19	18	16	17	19	18	21	20	19	17	15	16
Never married	71	71	74	72	69	71	69	70	70	73	75	76
Annual income												
Less than \$1,000	56	56	59	58	60	58	67	67	72	73	78	81
\$1,000–\$9,999	28	28	24	22	23	27	23	23	16	15	11	11
\$10,000 and above	16	16	17	20	18	15	10	10	12	12	11	8
Homeless	27	23	21	24	28	27	26	26	22	29	35	45
Criminal Justice System Involvement	29	34	34	35	37		19	22	22	22	22	
Mental Health Problem	26	29	30	32	33	34	20	21	18	18	18	14
Needle Use in Past Year	5	6	5	7	7	9	63	63	63	58	62	72
Total (N)	(3,869)	(3,165)	(2,837)	(2,283)	(2,230)	(1,372)	(9,240)	(8,915)	(9,137)	(10,553)	(11,828)	(8,113)

¹ Excludes prisoners and out-of-State admissions.

² Fiscal years (FYs) run July 1–June 30, with the year named for the January–June portion of the year.

³ Through third quarter of FY 2003 (7/1/2002–3/31/2003).

SOURCE: Massachusetts Department of Public Health, Bureau of Substance Abuse Services

Exhibit 2b. Client Characteristics in Greater Boston State-Funded Substance Abuse Treatment Programs, by Drug of Choice¹ and Percent: July 1, 1997–March 31, 2003

Demographic Characteristic	Marijuana						Alcohol					
	FY ² 1998	FY 1999	FY 2000	FY 2001	FY 2002	3Q FY 2003 ³	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	3Q FY 2003 ³
Gender												
Male	79	76	73	78	77	76	81	81	82	82	82	80
Female	21	24	27	22	23	24	19	19	18	18	18	20
Race/Ethnicity												
White	30	28	28	28	27	22	56	55	55	51	51	48
Black	45	44	47	46	48	56	30	30	31	32	32	36
Hispanic	22	23	21	22	20	19	11	12	12	14	13	13
Other	4	4	4	3	5	4	3	3	3	3	4	4
Age at Admission (Average age)	(23.8)	(25.1)	(25.4)	(24.2)	(24.8)		(38.1)	(39.1)	(39.4)	(39.2)	(39.8)	
Younger than 19	34	24	19	27	24		2	1	1	1	1	
19–29	44	50	56	51	50		17	15	14	14	13	
30–39	17	17	18	16	19	18	41	39	38	36	36	30
40–49	5	6	5	6	6	7	27	32	34	35	36	39
50 and older	1	2	2	1	1	1	13	14	14	14	15	17
Marital Status												
Married	6	4	5	5	6	6	10	10	10	10	11	10
Separated/divorced	5	6	7	6	7	6	26	24	22	21	22	21
Never married	89	90	88	89	88	88	64	66	68	69	67	69
Annual Income												
Less than \$1,000	55	59	55	57	60	61	53	51	55	57	65	68
\$1,000–\$9,999	28	26	27	22	21	23	27	28	24	22	14	14
\$10,000 and higher	17	14	18	21	18	16	20	21	21	21	21	18
Homeless	7	9	10	11	12	11	40	40	41	43	44	44
Criminal Justice System Involvement	55	62	57	55	57		28	28	26	25	27	
Mental Health Problem	32	28	31	29	32	26	23	24	23	22	24	20
Needle Use in Past Year	2	2	2	2	2	2	4	4	5	4	6	5
Total (N)	(1,143)	(1,125)	(1,109)	(1,098)	(1,054)	(660)	(11,980)	(11,154)	(11,099)	(11,025)	(10,196)	(6,172)

¹ Excludes prisoners and out-of-State admissions.

² Fiscal years (FYs) run July 1–June 30, with the year named for the January–June portion of the year.

³ Through third quarter of FY 2003 (7/1/2002–3/31/2003)

SOURCE: Massachusetts Department of Public Health, Bureau of Substance Abuse Services

Exhibit 3. Percentage of Admissions to State-Funded Substance Abuse Treatment Programs in Greater Boston and the Remainder of Massachusetts¹ by Drug Used in the Past Month: July 1, 1993–March 31, 2002

Drug Used Past Month	FY ² 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	3Q FY 2003 ³
Greater Boston									
Alcohol	59	58	60	58	59	58	56	52	51
Heroin/other opiates	28	29	28	32	34	35	39	42	46
Cocaine/crack	40	37	34	29	30	28	25	24	25
Marijuana	16	16	16	14	14	13	13	11	11
Other ⁴	7	8	8	9	9	10	10	10	3
Total (N)	(23,282)	(24,363)	(25,470)	(26,505)	(24,653)	(24,478)	(25,269)	(25,586)	(16,960)
Remainder of Massachusetts									
Alcohol	60	60	59	57	56	54	51	50	54
Heroin/other opiates	23	25	25	29	31	33	34	34	35
Cocaine/crack	26	25	22	20	21	20	19	19	19
Marijuana	16	18	17	18	18	17	16	15	14
Other ⁴	10	10	10	10	10	11	11	11	3
Total (N)	(76,414)	(73,801)	(77,673)	(86,297)	(87,848)	(90,919)	(91,852)	(95,249)	(71,797)

¹ Excludes prisoners and out-of-State admissions.

² Fiscal years (FYs) run July 1–June 30, with the year named for the January–June portion of the year.

³ Through third quarter of FY 2003 (7/1/2002–3/31/2003).

⁴ Includes barbiturates, other sedatives, tranquilizers, hallucinogens, amphetamines, “over-the-counter,” and other drugs.

SOURCE: Massachusetts Department of Public Health, Bureau of Substance Abuse Services

Exhibit 4. Boston Police Department Arrests, by Substance¹: 1997–2002

Drug Class	1997		1998		1999		2000		2001		2002	
	#	%	#	%	#	%	#	%	#	%	#	%
A	1,392	22.7	1,061	22.5	984	24.0	1,022	27.1	905	26.4	947	22.5
B	2,918	47.5	2,225	47.1	1,847	45.1	1,532	40.6	1,428	41.7	1,762	41.9
D	1,617	26.3	1,211	25.6	1,133	27.7	1,093	29.0	982	28.7	1,375	32.7
Other	216	3.5	226	4.8	133	3.3	123	3.3	111	3.2	125	3.0
Total Drug Arrests	6,143		4,723		4,097		3,770		3,426		4,209	
Total Arrests	27,843		25,481		23,592		22,216		20,470		21,025	
Drug Percentage of Total Arrests		23.7		18.5		17.4		17.0		16.7		20.0

¹ Includes all arrests made by the Boston Police Department (i.e., arrests for possession, distribution, manufacturing, and trafficking), and includes possession of hypodermic needles, conspiracy to violate false substance acts, and forging prescriptions.

SOURCE: Boston Police Department, Office of Planning and Research

Exhibit 5a. Trends in HIV Cases in Boston, by Risk Factor and Year of Diagnosis: Cumulative Cases Reported as of May 1, 2003¹

HIV Cases ²	1998 and Earlier		1999		2000		2001		Total ³	
Mode of Exposure	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Men Who Have Sex With Men (MSM)	580	51.1	72	41.9	81	45.3	83	48.0	913	49.0
Injection Drug User (IDU)	255	22.5	30	17.4	25	14.0	19	11.0	350	18.8
MSM & IDU	55	4.9	5	2.9	2	1.1	2	1.2	70	3.8
Recipient of Blood Products	3	0.3	2	1.2	1	0.6	0	0.0	6	0.3
Heterosexual	91	8.0	25	14.5	17	9.5	15	8.7	170	9.1
Sex with an IDU	43	3.8	6	3.5	6	3.4	5	2.9	64	3.4
Sex with a bisexual male	2	0.2	2	1.2	0	0.0	1	0.6	5	0.3
Sex with recipient of blood products	1	0.1	0	0.0	0	0.0	0	0.0	1	0.1
Sex with HIV/AIDS-positive partner	45	4.0	17	9.9	11	6.1	9	5.2	100	5.4
Undetermined/Other	150	13.2	38	22.1	53	29.6	54	31.2	353	19.0
Presumed heterosexual/unknown	112	9.9	29	16.9	40	22.3	38	22.0	256	13.7
Risk of partner ⁴										0.0
Undetermined/Other ⁵	38	3.4	9	5.2	13	7.3	16	9.2	97	5.2
Pediatric	N/A		N/A		N/A		N/A		N/A	
Total (% of total)	1,134	60.9	172	9.2	179	9.6	173	9.3	1,862	100.0

¹ Boston cases do not include prisoners.

² HIV data reflect only those individuals reported with HIV infection who have not yet progressed to an AIDS diagnosis.

³ Row totals include cases diagnosed in 2002 and 2003.

⁴ Risk of partner unknown and primary risks denied; definition revised July 1, 1999.

⁵ Includes those still being followed up for risk information, those who have died with no determined risk, those lost to follow-up, and one person with confirmed occupational exposure.

SOURCE: DPH, AIDS Surveillance Program

Exhibit 5b. Trends in AIDS Cases in Boston, by Risk Factor and Year of Diagnosis: Cumulative Cases Reported as of May 1, 2003¹

AIDS Cases	1993 or Earlier		1994		1995		1996		1997		1998		1999		2000		2001		Total ²	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
MDM	1,825	54	192	44	163	41	122	39	86	36	98	34	71	35	56	30	48	32	2,716	47
IDU	848	25	115	27	113	29	90	29	67	28	76	26	56	27	43	23	34	23	1,476	26
MSM & IDU	136	4	21	5	26	7	7	2	4	2	6	2	5	2	3	2	8	5	220	4
Recipient of Blood Products	58	2	1	0	4	1	5	2	3	1	5	2	2	1	0	0	1	1	79	1
Heterosexual	177	5	59	14	47	12	48	15	44	18	36	13	24	12	30	16	12	8	507	9
Sex with an IDU	92	3	27	6	16	4	14	4	11	5	11	4	6	3	11	6	1	1	200	4
Sex with a bisexual male	3	0	1	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0	7	0
Sex with a blood product recipient	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3	0
Sex with HIV/AIDS-positive partner	80	2	31	7	31	8	33	10	32	13	25	9	18	9	18	10	11	7	297	5
Undetermined/Other	275	8	41	9	41	10	39	12	36	15	67	23	48	23	57	30	45	30	696	12
Presumed heterosexual/unknown ³	196	6	18	4	25	6	24	8	22	9	53	18	44	21	46	24	34	23	496	9
Undetermined/Other ⁴	79	2	23	5	16	4	15	5	14	6	14	5	4	2	11	6	11	7	200	4
Pediatric	46	1	5	1	3	1	5	2	0	0	1	0	0	0	1	1	0	0	62	1
Total (% of total)	3,365	59	434	8	397	7	316	6	240	4	289	5	206	4	190	3	148	3	5,756	100

¹ Boston cases do not include prisoners.

² Row totals include cases diagnosed in 2002 and 2003.

³ Risk of partner unknown and primary risks denied; definition revised July 1, 1999.

⁴ Includes those still being followed up for risk information, those who have died with no determined risk, those lost to follow-up, and one person with confirmed occupational exposure.

SOURCE: DPH, AIDS Surveillance Program

Patterns and Trends of Drug Abuse in Chicago

Lawrence Ouellet, Ph.D., Dita Davis, Susan Bailey, Ph.D., Wayne Wiebel, Ph.D.¹

ABSTRACT

Heroin ED mentions stabilized at high levels and treatment admissions declined, suggesting stable but high levels of heroin use in Chicago during 2001. Between the second half of 2001 and first half 2002, the number of heroin ED mentions did not change significantly, following the national trend. However, the rate of heroin ED mentions per 100,000 population in Chicago increased 142 percent from 1994 to 2001 and 26 percent between 1999 and 2001. Indicators of cocaine use leveled off from previous increases, but some began to show a slight increase in 2001 and during the first half of 2002. Many cocaine indicators remained the highest for all substances except alcohol. Marijuana use, alone and in combination with other drugs, appeared to be increasing, especially among the youth in the Chicago metropolitan area. MDMA (ecstasy) ED mentions remained low after a 44 percent decrease in the previous reporting period and continued to be reported most frequently by White youth. LSD and PCP indicators suggest the beginning of a downward trend in use. Methamphetamine indicators continue to show low levels of use in Chicago. The proportion of new AIDS cases attributed to injection drug use continued to increase, especially among women.

INTRODUCTION

Area Description

The 2000 U.S. census estimated the population of Chicago at 2.9 million, Cook County (which includes Chicago) at 5.4 million, and the metropolitan statistical area (MSA) at slightly more than 8 million (ranking third in the Nation). The city population declined 4 percent between 1970 and 1980 and another 7 percent in the 1980s. Based on 2000 census data, the city population increased about 4 percent between 1990 and 2000. The number of Hispanics living in Chicago increased 38 percent during this period, while the number of Whites and African-Americans declined by 14 and 2 percent, respectively.

According to the 2000 census, the Chicago population is 36 percent African-American, 31 percent White, 26 percent Hispanic, and 4 percent Asian-American/Pacific Islander. In 2000, the median age of

Chicagoans was 31.5, with 26 percent of the population younger than 18 and 10 percent 65 or older.

Data Sources

Most of this analysis highlights developments over the past few years, but in some instances a broader timeframe is used to reveal long-term trends. This paper is based on the most recent data available from the various sources detailed below.

- **Emergency department (ED) drug mentions data** were provided by the Drug Abuse Warning Network (DAWN), Office of Applied Studies (OAS), Substance Abuse and Mental Health Services Administration (SAMHSA), for 1994 through June 2002. The 2000 ED data were unavailable for methamphetamine, and January–June 2002 data are preliminary estimates.
- **Treatment data** were provided by the Illinois Office of Alcoholism and Substance Abuse (OASA) and include admissions data for the State of Illinois for fiscal years (FYs) 1999–2002 (July 1–June 30). These data have not been updated since the Chicago CEWG December 2002 report.
- **Drug-related mortality data** were derived from the DAWN mortality system for 1998–2001. The DAWN system covered 56 percent of the MSA jurisdictions and 91 percent of the MSA population in 2000. Data on pediatric toxicity were available from the Illinois Department of Public Health (IDPH) Adverse Pregnancy Outcome Reporting System (APORS) reports through 1999. Data on deaths related to accidental drug poisonings, based on the International Classification of Diseases, Ninth Revision (ICD-9) codes on death certificates of Chicago residents, were also provided by IDPH (1980–1998) and the Chicago Department of Public Health (CDPH) (1980–2001).
- **Arrestee drug testing data** were provided by the Arrestee Drug Abuse Monitoring (ADAM) program, National Institute of Justice (NIJ), for 1991 through 2002. Male and female arrestee urine toxicology results were from Treatment Alternatives for Special Clients (TASC). The 2000 data are based only on the first through

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third quarters, and 2001 data are based only on the fourth quarter. Female results were unavailable for 2001 and 2002. Provisional unweighted data were obtained for males for 2002.

- **Heroin price and purity data** were provided by the Drug Enforcement Administration (DEA), Domestic Monitor Program (DMP), for 1991 through 2001; the data are preliminary and subject to updating. Price and purity data on drug samples analyzed from August 1989 to April 2003 were provided by the Illinois State Police (ISP), Division of Forensic Science. The Illinois Criminal Justice Information Authority (ICJIA) (using data from the ISP) provided analyses of methamphetamine lab seizures in Illinois in 2001–2002. Data on drug availability, demand, production, cultivation, and distribution for the State of Illinois were available from the Illinois Drug Threat Assessment, National Drug Intelligence Center, U.S. Department of Justice, in a report published in January 2001 (2001-SO382IL-001) and in the most recent update published in May 2002 (2002-SO382IL-001). The National Drug Threat Assessment reports for 2002 (2002-Q0317-001) and 2003 (2003-Q0317-001) were also reviewed. Data on drug seizures and arrests were taken from the Drugs and Drug Abuse State Factsheet for Illinois provided by the U.S. DEA. Ethnographic data on drug availability, price, and purity are from observations and interviews conducted by the Community Outreach Intervention Projects (COIP), School of Public Health, University of Illinois at Chicago (UIC).
- **Survey data on student and household populations** were derived from several sources. OASA provided data from a statewide household survey to determine need for alcohol and other drug treatment services, funded by the Center for Substance Abuse, as well as data from Illinois Youth Surveys among junior and senior high school students (1990, 1993, 1995, 1997, 1998, and 2000). (The 2000 survey does not include figures for heroin or methamphetamine use.) Data on student drug use were also derived from the national Monitoring the Future (MTF) Study conducted by the Institute for Social Research, University of Michigan, through support from the National Institute on Drug Abuse (NIDA) (1991–2002), and from the Chicago Youth Risk Behavior Survey (YRBS), as part of the Centers for Disease Control and Prevention (CDC) Youth Risk Behavior Surveillance System (1991–2001). YRBS gathers data from a representative sample of Chicago public school

students in grades 9–12 and is conducted every other year to monitor changes in the prevalence of behaviors that contribute to the leading causes of death, disease, and injury among the Nation's youth. Except for the MTF survey, this data set has not been updated since the Chicago CEWG December 2002 report. Data from the 2002 National Household Survey on Drug Abuse, OAS, SAMHSA, are also reported.

- **Most recent drug use estimates** were derived from two currently ongoing studies of young heroin users in metropolitan Chicago conducted by COIP at the UIC School of Public Health. Collaborative Injection Drug Users Studies/Drug User Intervention Trial (CIDUSIII/DUIT) is a CDC-funded study that evaluates drug and sexual practices associated with the human immunodeficiency virus (HIV) and hepatitis C (HCV) infection among current injection drug users age 15–30 ($n=525$ as of May 2003). Current non-injecting heroin users (NIHUs) age 16–30 were recruited for the NIDA-funded study, NIHU Study, to evaluate the rate of transition to injection and drug and sexual practices associated with HIV, hepatitis B (HBV), and HCV ($n=262$ as of May 2003).
- **Acquired immunodeficiency syndrome (AIDS) and HIV data** were derived from both agency sources and UIC studies. IDPH and CDPH surveys provided statistics on AIDS and HIV through November 2001. CDC's "HIV/AIDS Surveillance Report," December 2001, provided additional data on HIV and AIDS. The agency data are complemented by UIC's studies of injection drug users (IDUs) conducted by COIP at UIC's School of Public Health. One is the NIDA-funded "AIDS Intervention Study," based on a panel of IDUs participating from 1988 to 1996. The second is the CDC-funded HIV Incidence Study (CIDUS I and II). The CIDUS data are from analyses of a 1994–1996 study of 794 IDUs, age 18–50, in Chicago (Ouellet et al. 2000) and a 1997–1999 study of 700 IDUs, age 18–30, in Chicago and its suburbs (Thorpe et al. 2000; Bailey et al. 2001). Sources have not been updated since the Chicago CEWG December 2002 report.

Some of the sources traditionally used for this report have not been updated by their authors or were unavailable at the time this report was generated. Because some information has not changed—and to avoid redundancy—this report occasionally refers readers to a previous Chicago CEWG report for more information in a particular area. For a discussion of the limitations of survey data, the reader is referred to the December 2000 Chicago CEWG report.

DRUG ABUSE PATTERNS AND TRENDS

This report of drug abuse patterns and trends is organized by major pharmacologic categories. Readers are reminded, however, that multidrug consumption is the normative pattern among a broad range of substance abusers in Chicago. Various indicators suggest that drug combinations play a substantial role in drug use prevalence. The latest DAWN data show that 18 percent of all reported ED drug mentions in Chicago between January and June 2002 were alcohol-in-combination mentions, a figure similar to those in previous reporting periods for Chicago and comparable to proportions in nationwide reports.

In terms of public health impact, drug abuse causes significant morbidity and mortality. According to DAWN ED data, Chicago reports the highest ED drug mentions among the 21 DAWN metropolitan areas. A CDPH trend analysis of death certificates suggests that after a more than 30-percent increase in drug-related mortality in Chicago over the 10-year period from 1989 to 1998, the total annual number of deaths from accidental drug poisoning continued to increase in 1999 and peaked at 393 in 2000. In 2001, 337 deaths were listed as overdoses on death certificates.

According to DAWN medical examiner (ME) data, drug-related mortality for Chicago's greater six-county region remained relatively stable from 1999 to 2001. The total number of drug abuse-related deaths reported to DAWN ME sites in 2001 was 854, compared with 869 in 2000 and 878 in 1999.

While DAWN ME cases and CDPH death certificates differ in the information they provide, both indicators suggest that total drug-related deaths have increased over the past decade, but they remained stable or decreased slightly between 2000 and 2001. Drug-specific analyses later in this report provide more insight into factors that have shaped this overall drug mortality trend.

Cocaine/Crack

In this reporting period, the majority of quantitative cocaine indicators varied, but they again suggested that use has increased slightly or remained stable at high levels and that cocaine continues to represent a serious drug problem in Chicago and Illinois.

Cocaine ED mentions peaked at 14,373 in 1997 and remained relatively stable until 2001, when mentions increased to 16,202, a 21-percent increase from 13,399 mentions in 1999. In the first half of 2002,

8,258 total ED mentions were reported, which is a nonsignificant increase from 7,933 cocaine mentions reported during the previous 6 months.

The rate of ED mentions per 100,000 population increased from 1999 (225) to 2000 (246) and continued to increase in 2001 (277), a 23-percent change from 1999. Rates of ED mentions for the first half of 2002 indicate a nonsignificant increase to 140 from the 134 reported during the second half of 2001 (exhibit 1). Chicago continued to have the most cocaine ED mentions among DAWN sites during the first half of 2002 and the highest rate of mentions (140 per 100,000 population).

After a slight increase in cocaine ED mentions across nearly every demographic group between 2000 and 2001, cocaine ED mentions remained relatively stable during the first half of 2002 among most groups. ED mentions decreased 35 percent in the 12–17 age category between the first halves of 2001 and 2002, from 83 mentions to 54. Between the second half of 2001 and the first half of 2002, ED mentions decreased 12 percent (from 741 to 650) among 26–29-year-olds. In addition, increases of 27 and 37 percent were reported for those age 45–54 and 55 and older, respectively, during this period. The most cocaine ED mentions continued to be reported for the 35–44 age group, which accounted for 42 percent of all mentions. African-Americans continued to report the highest number of cocaine ED mentions (4,851) during the first half of 2002, followed by Whites (1,137) and Hispanics (948) (race/ethnicity was unknown for 1,274 of the 8,258 cocaine ED mentions). Males accounted for more cocaine ED mentions (61 percent) than females.

According to DAWN ME data, deaths associated with cocaine increased 9 percent, from 468 in 1998 to 511 in 1999, decreased 9 percent to 464 in 2000, and increased again by nearly 11 percent to 514 deaths in 2001. Of the 854 total drug abuse deaths in 2001, 60 percent had a mention of cocaine, which makes cocaine a factor in more deaths in the Chicago area than any other illicit drug. This trend is supported by the CDPH report on deaths caused by accidental poisoning. In 2001, 48 percent of these death certificates listed cocaine abuse as a cause of death.

Cocaine use appears common among heroin users in Chicago. In an ongoing study of non-injecting heroin users (NIHU Study), 68 percent of participants reported ever using powder cocaine, of which 41 percent used in the prior 6 months. Crack cocaine use is reported more often (73 percent), and of those participants, 83 percent reported using in the past 6 months. Among injection heroin users (CIDUSIII/DUIT

study), use of cocaine or freebase cocaine 3 months prior to interview was reported by 62 percent of study participants.

State-supported drug treatment program data have not been updated since the last Chicago CEWG report. In summary, the latest drug treatment admissions report indicates that cocaine abuse remained the most common reason for entering treatment (excluding primary alcohol-only abuse) (exhibit 2). A total of 28,131 cocaine-related admissions to treatment were reported in Illinois in FY 2002, a decrease from 31,321 in 2001. Between 2001 and 2002, the proportion of cocaine-related admissions slightly decreased across all demographic groups. The largest decrease was reported among African-Americans (13 percent), although they continued to constitute the largest proportion of total admissions (64 percent). Cocaine-related admissions decreased by nearly 10 percent for both females and males between FYs 2001 and 2002. Smoking continued to be the most common route of cocaine administration (82 percent) among treatment admissions in FY 2002.

According to the 2002 preliminary ADAM report, data for adult male arrestees showed that 48 percent tested cocaine-positive (exhibit 3). This is a 17-percent increase from 2001 and the highest percentage since 1997.

Based on analyses of drug seizures, the ISP crime labs indicate that cocaine purity remained relatively stable over the past decade until 2001. Across the State, the average purity of samples weighing 2–25 grams was 60–70 percent during 1991–1999. As of December 2001, the average purity of 2–25-gram samples increased to 82 percent among Chicago seizures. There were too few exhibits reported by ISP in 2002 to make a reasonable comparison with earlier data. The DEA reported 61,594 kilograms in cocaine seizures in the State of Illinois in 2002, an increase from 59,426 kilograms seized in 2001 and the largest amount since 1994.

Cocaine prices and availability have historically been subject to wide variability. Ounce prices for powder cocaine were reported to be between \$400 and \$800, depending on the drug's quality and the buyer's relationship to the seller. Gram prices for powder and rock cocaine during this reporting period ranged from \$50 to \$150, with most reports around \$75. Ounces of crack cocaine ("rock") sell for about the same price as ounces of powdered cocaine, with reports ranging from \$900 to \$1,600. Bags of crack cocaine—the typical unit for street-level transactions—usually sell for \$5, \$10, or \$20. Grams and

fractions of ounces are available—usually in off-street sales—and the typical buyers are said to be crack smokers who support their drug use through small-scale selling. Reported kilogram prices for powder and rock cocaine ranged from \$18,500 to \$28,000, virtually the same as reported in the 2002 Illinois Drug Threat Assessment, using DEA data. Compared with reports 5 and 10 years ago, current ounce prices are somewhat lower, gram prices are about the same or slightly higher, and bag prices are unchanged (unadjusted for inflation).

The Illinois Youth Survey has not been updated since 2000. The most recent reports indicated that between 1990 and 1993, the proportion of lifetime cocaine use among Chicago-area high school students decreased from 5 to 4 percent in the year prior to the survey. Results from the 1995 and 1997 surveys showed a slight rebound to 4 and 5 percent prevalence, respectively. In 2000, lifetime cocaine use prevalence remained at 5 percent. According to the MTF Study, cocaine and crack use increased for 10th and 12th graders between 2001 and 2002, while decreasing slightly for 8th grade students.

The latest published report of Chicago YRBS (in 2001) showed a steady decline in levels of cocaine use among 9th–12th graders since 1995, from 6 percent in 1995 to 4 percent in 2001. The rates for the United States, on the other hand, have been increasing since 1995, reaching rates twice as high as Chicago in 2001. This finding parallels trends reported among young people age 12–17 in the 2000 National Household Survey on Drug Abuse. Findings from the 1998 Illinois YRBS were discussed in the Chicago CEWG June 2000 report.

Heroin

Heroin abuse indicators in this reporting period reveal that heroin continues to be a significant problem in Chicago.

The rate of heroin ED mentions in Chicago increased significantly from 84 per 100,000 population in 1994 to 203 in 2001, an increase of 142 percent. The rate of heroin ED mentions remained high during the first half of 2002 at 112 (exhibit 1), and Chicago ranked first in heroin ED rates in the contiguous United States. The number of heroin ED mentions nearly doubled between 1996 (6,268) and 2001 (11,902). Preliminary reports for the first half of 2002 indicate a nonsignificant increase in mentions from the previous 6-month period, from 5,724 to 6,632.

Within Chicago, heroin ED mentions were highest among African-Americans, followed by Whites and

Hispanics. Between the second half of 2001 and the first half of 2002, heroin ED mentions remained relatively stable across all race/ethnic groups. In the first half of 2002, ED mentions for heroin were higher among males (3,786) than females (2,842). Between the first half of 2001 and second half of 2002, ED mentions decreased 51 percent for the 12–17 age group and increased 67 percent for those age 55 and older.

DAWN ME reports indicate that heroin/morphine-related deaths have increased more than twofold from the late 1980s, when less than 200 per year were reported. In 2001, 352 heroin/morphine deaths were reported, a 29-percent decrease from the previous year, when 499 such deaths were recorded. Of the 854 total drug abuse deaths in 2001, 41 percent had a mention of heroin/morphine.

In a study of non-injecting heroin users (NIHU Study), 26 percent of participants reported using crack cocaine with heroin at least one-half the time in the 30 days prior to interview. Along with ethnographic reports, these data suggest that heroin may be used by some to temper the effects of crack cocaine.

The number of heroin admissions in State-supported treatment programs in FY 2002 was 21,909, a decrease of 10 percent from FY 2001 (exhibit 2). The proportion of heroin admissions who reported intranasal “snorting” as their primary route of administration remained high and increased slightly, from 68 to 70 percent between FYs 2001 and 2002. During FY 2002, inhaling heroin was more common among African-American admissions, while White patients were almost equally as likely to inhale or inject.

Between FYs 2001 and 2002, heroin-related admissions decreased 12 percent among African-Americans, 5 percent among Whites, and 15 percent among Hispanics. Heroin-related admissions decreased 11 percent for males, from 13,615 in 2001 to 12,125 in 2002. Among females, heroin-related admissions decreased 10 percent, from 10,848 in 2001 to 9,784 in 2002.

The provisional, partially unweighted ADAM data for 2002 suggest that the percent of male arrestees positive for opiates increased slightly between 2001 (22 percent) and 2002 (26 percent) (exhibit 3).

The DEA’s DMP makes street-level purchases of heroin in Chicago and analyzes them for content and purity. During the 1980s, Chicago’s heroin purity was among the lowest of any major metropolitan area (averaging 1–2 percent). Since then, the quality of street-level heroin has steadily increased, from an average purity of approximately 10 percent in 1991 to

31 percent in 1997; however, it declined to 25 percent in 1998 and 1999 (exhibit 4). In 2001, heroin purity in DMP samples averaged 19 percent. The price per pure milligram of heroin reached a low of \$0.58 in 1998, but increased to \$0.67 in 1999. In 2000, the price per pure milligram decreased to \$0.54, but it increased to \$1.96 in 2001. The DEA reported 705 kilograms of heroin seized in 2002, a slight decrease from 2001, when 752 kilograms were seized.

DEA laboratory analyses confirmed that recent heroin exhibits in Chicago came predominantly from South America and Southwest Asia, but Southeast Asian and Mexican varieties were also available. Southwest Asian heroin, which became more available in recent years, tends to have the highest purity levels on average. It seems likely, therefore, that there may be an increase in purity during 2002. The DEA estimated that in the first half of 2001, 50 percent of the heroin in Chicago was from South America.

On the street, heroin commonly is sold in \$10- and \$20-units (bags), although \$5 bags are also available. Prices for larger quantities vary greatly, depending on the type and quality of heroin, the buyer, and the area of the city where the heroin is sold. At outdoor drug markets, purchases of multibag quantities—versus grams and fractions of ounces—are the most common means of buying larger amounts of heroin. For example, buyers on the West Side can obtain 12 \$10 bags for \$100 (sometimes called a “jab”). Sunday sales of two bags for the price of one were also reported. In sales conducted off the street, gram prices for white heroin generally were \$125–\$200, with some prices reported as low as \$50 and as high as \$300. There were reports of one-eighth of an ounce (“eightballs”) selling for \$150–\$200 and ounces selling for \$1,500–\$3,000.

Prices for brown and black tar heroin were reported as somewhat lower than for white heroin: \$60–\$150 per gram and \$900–\$2,000 per ounce. Kilogram prices were reported from \$15,000 for lower grade brown heroin to \$65,000 for white heroin.

Between 1991 and 1996, there was a large proportional increase nationwide in heroin use among students in grades 8, 10, and 12, as reported in the MTF Study (Johnston et al. 2001). Heroin use in the MTF study peaked in 1996 among 8th graders, in 1998 among 10th graders, and in 2000 among 12th graders. Student usage rates declined for all three groups in 2001 and remained stable in 2002.

Among Illinois high school students, however, increases in heroin use have not yet been evidenced in periodic representative surveys. The Illinois Youth

Survey indicates that heroin use among Chicago-area students is still relatively rare. Results from surveys conducted every 2 years between 1990 and 1997 found that 1.3–1.5 percent of high school students reported past-year use. The youth subgroup reporting the highest level of use in 1990 was Hispanic males (3.1 percent), followed by African-American males (2.7 percent) and White males (2.4 percent). By 1995, the youth subgroup reporting the highest prevalence of past-year heroin use had changed to White males (2.6 percent), followed by African-American males (1.8 percent) and Hispanic males (1.5 percent). Heroin use was excluded from the 1998 and 2000 Illinois Youth surveys. According to YRBS, the percentage of students (grades 9–12) in Chicago who reported at least one use of heroin in their lifetimes was 3.1 in 1999 and 2.5 in 2001.

APORS data indicate that opioid toxicity remained stable between 1995 and 1998 among infants who were tested for controlled substances. In 1995, 8 percent tested positive for opiates, including heroin, averaging 44 infants per quarter-year. In 1998, 9 percent of infants tested positive for opioids. Data from 1999 show a slight decline, with 7.1 percent testing positive.

Other Opiates

Hydromorphone (Dilaudid), the pharmaceutical opiate once preferred by many Chicago IDUs, is available, though in limited quantities (typical sources are said to be cancer patients). It sells for approximately \$25 per tablet. Street sales of methadone are more common, with the drug typically costing \$1 per milligram.

Abuse of codeine, in both pill (Tylenol 3s and 4s) and syrup form, has been declining over the past decade. Codeine ED mentions totaled 48 in 1999, a slight decrease from the 56 mentions in 1994, and increased to 79 in 2001, a statistically significant increase from 1999. During the first half of 2002, 45 codeine mentions were reported.

In 2001, 43 codeine-related deaths were reported from sentinel DAWN ME sites in the six-county Chicago area, a 51-percent decrease from the previous year. Codeine syrup is reported to sell for about \$30 for 4 ounces. Codeine often is used by heroin users to moderate withdrawal symptoms or to help kick a drug habit.

Acetaminophen-codeine ED mentions increased significantly from 61 in 1999 to 100 in 2000, a 64-percent increase. A nonsignificant decline to 85

mentions occurred in 2001. Forty-one acetaminophen-codeine mentions were reported in the first half of 2002, compared with 38 mentions in the second half of 2001. On the street, acetaminophen-codeine pills sell for \$1–\$3.50 each, though lower if bought in quantities of 10 or more.

There were 284 hydrocodone/combination ED mentions reported in Chicago in 2000 (the fourth highest among CEWG cities) and 339 in 2001. During the first half of 2002, 171 mentions were reported, which represents a nonsignificant decrease from the previous 6 months, when 190 mentions were reported. Methadone mentions increased significantly between 1994 (103) and 2001 (355). Preliminary DAWN data for the first half of 2002 indicate a significant 37-percent decline in methadone ED mentions from the second half of 2001, from 177 to 112 mentions. A 37-percent decline was also observed between the first half of 2001 (179) and the first half of 2002. Oxycodone and oxycodone/combinations ED mentions increased significantly from previous years, but remained relatively low with 37 and 50 mentions, respectively, reported in 2001. A significant increase continued to be reported during the first half of 2002 for both oxycodone/combinations and oxycodone. There were 39 oxycodone mentions reported in the first half of 2002, which was a 144-percent change from the first half of 2001, when only 16 mentions were reported. Reports of OxyContin use remain uncommon.

Use of opiates other than heroin is common among young non-injecting heroin users in Chicago. Sixty-one percent of NIHU Study participants reported ever trying codeine, Tylenol 3 and 4, Dilaudid, Demerol, morphine, or methadone without a legal prescription. Sixty-one percent of young IDUs reported street methadone use in the 3 months prior to interview.

After large increases in treatment admissions related to the use of opioids, tranquilizers, and sedatives across all demographic groups between FYs 1999 and 2000, admissions continued to increase in 2001, except for African-Americans, for whom there was a 6-percent decrease. In FY 2002, treatment admissions remained stable among Whites; they decreased 33 percent among African-Americans and 31 percent among Hispanics. Whites continued to constitute the largest proportion of all admissions (68 percent). After increasing 159 percent, from 313 in 1999 to 810 in 2000, treatment admissions for males increased only 7 percent to 870 in 2001, and decreased by 8 percent to 799 in 2002. Among females, after increasing 98 percent from 1999 (446) to 2000 (883), admissions increased 30 percent to 1,149 in 2001 and decreased by 19 percent to 928 in 2002.

Marijuana

Marijuana remains the most widely available and used drug in Chicago and Illinois.

The number of marijuana ED mentions increased significantly by 133 percent between 1994 (2,226) and 2001 (5,186). Marijuana ED mentions totaled 2,482 in the second half of 2001 and 2,284 in the first half of 2002. A significant decline of 16 percent was reported between the first half of 2001 (2,704) and the first half of 2002 (2,284). The rate of marijuana ED mentions per 100,000 population was 89 for both 2000 and 2001. The rate per 100,000 population decreased 17 percent between the first halves of 2001 (47) and 2002 (39).

The number of marijuana ED mentions in Chicago has been higher among African-Americans and Whites than among Hispanics since 1994. In the first half of 2002, 21 percent of all mentions were among Whites, 38 percent were among African-Americans, and 9 percent were among Hispanics. However, 31 percent of mentions were of unknown race/ethnicity. Between the first half of 2001 and the first half of 2002, marijuana mentions decreased for both Whites (23 percent) and Hispanics (37 percent).

Marijuana ED mentions remained relatively stable across all age groups during the first half of 2002, except for the 18–25 and 35–44 age groups. Between the first halves of 2001 and 2002, mentions decreased by 28 and 18 percent, respectively, in these two age groups.

Males continued to have more than twice as many mentions as females. In DAWN mortality data, marijuana was mentioned in 2 percent of drug-related deaths reported in 2001.

Marijuana use is common among both the young non-injecting heroin users (NIHU study) and young injectors in UIC studies. Sixty-six percent of non-injecting heroin users and 70 percent of young injectors smoked marijuana in the 3–6 months prior to interview.

As noted earlier, State-supported drug treatment data have not been updated since the December 2002 Chicago CEWG report. In summary, marijuana users represented 19 percent of all treatment admissions in Illinois in FY 2002 and 28 percent of admissions when those for primary alcohol abuse are excluded; these proportions reflect a slight increase from FY 2001 (17 and 26 percent, respectively). Total marijuana admissions increased from 20,773 in FY 2000 to 25,626 in FY 2001 to 26,371 in FY 2002 (exhibit 2).

Between 2001 and 2002, marijuana-related treatment admissions remained stable among African-Americans and Whites and increased 9 percent among Hispanics. Marijuana-related admissions increased nearly 4 percent for males, from 19,825 in 2001 to 20,545 in 2002; among females, marijuana-related admissions remained stable in 2002 at 5,826.

According to 2001 ADAM data, 50 percent of adult male arrestees tested positive for marijuana (exhibit 3). The provisional unweighted data for adult males for 2002 showed that 49 percent were marijuana positive, suggesting a stable trend.

APORS data also show increases in marijuana use. Among the 2,304 Illinois infants who tested positive for controlled substances in 1995, 103 (4.5 percent) tested positive for marijuana. Positive tests increased to 6.0 percent in 1996, 7.5 percent in 1997, and 8.0 percent in 1998, evidencing a slow, continued upward trend. Data from 1999 show that 8.6 percent of all infants tested cannabis positive.

The 1995 Illinois Youth Survey reflected a dramatic increase in marijuana use among youth. In 1990, 17 percent of students in the Chicago area reported marijuana use in the previous year, and use remained at approximately the same level in 1993. Use then increased sharply to 28 percent in 1995, 30 percent in 1997, and 38 percent in 2000. According to the MTF Study, student marijuana use decreased slightly between 2001 and 2002.

The 2001 Chicago YRBS showed that the proportion of high school respondents who reported ever using marijuana steadily increased from 1993 to 2001. In 2001, the proportion of 9th–12th graders who reported using marijuana at least once in their lifetime was nearly 50 percent. Similarly, the proportion of those who reported current marijuana use increased from 1993 and reached 29 percent in 2001. Ten percent of respondents reported current use on school property. Similar trends were reported on the national level, although the ever-used proportion slightly decreased between 1999 and 2001. Compared with the Chicago-area sample polled in the Illinois Youth Survey, the Chicago YRBS revealed higher concentrations of marijuana users within Chicago's neighborhoods.

In general, currently available marijuana is of variable quality. The abundance and popularity of marijuana across the city has led to an increased array of varieties and prices. The price for a pound of marijuana is reported to range from \$650 to \$4,000, depending on the type and quality. Ounces typically

sell for about \$80–\$200. On the street, marijuana is most often sold in bags for \$5–\$20 or as blunts.

Stimulants

Methamphetamine (“speed”) use in Chicago remains low, but it is more prevalent in many downstate counties.

According to 2002 ADAM data, only 0.3 percent of male arrestees in Chicago tested positive for methamphetamine. However, the most recent data from the ISP indicate that in 2002, more methamphetamine was seized than cocaine or heroin in nearly 50 percent of Illinois counties. The most recent report from ICJIA indicates a nearly 40-percent decrease in the number of methamphetamine labs seized in Illinois between 2001 and 2002, from 666 labs to 403. This decrease is concentrated in just six counties, however, and it is not known whether it reflects changes in law enforcement resources and strategies or actual declines in the number of labs. One lab was seized in metropolitan Chicago in 2001, and none were in 2002.

Within Chicago, a low but stable prevalence of methamphetamine use has been reported in some areas of the city in the past 2 years, especially on the North Side, where young gay men, homeless youth, and “ravers” congregate. Of note, ethnographic data suggest that methamphetamine availability has increased since June 2001 among at least some networks of gay White men on the North Side. However, the use of methamphetamine is not confined to these groups and seems more likely to occur among drug-using youth who travel beyond metropolitan Chicago to areas where methamphetamine is readily available. In the study of non-injecting heroin users, 19 percent of participants reported ever trying amphetamine or methamphetamine. Until 1999, ED figures for methamphetamine had been slowly increasing during the 1990s in Chicago. In 1999, ED mentions numbered 22, down from a high of 31 in 1998. Data on methamphetamine ED mentions in Chicago were not available for 2000 and the first half of 2001. The number of ED mentions remained stable between the second half of 2001 and the first half of 2002, when 35 and 33 mentions were reported, respectively. The rate of mentions per 100,000 population was 1 during both of these reporting periods (exhibit 1).

Amphetamine ED mentions have been increasing since 1994. Between the first halves of 2000 and 2001, mentions increased 55 percent, from 143 to 223. ED mentions remained stable between the second half of 2001 (185) and the first half of 2002 (183).

Methylphenidate (Ritalin) remained readily available in some South Side neighborhoods, where it could be purchased for injection, either alone or in combination with heroin. Pills, often referred to as “beans” in these areas, are sold for \$1.50 to \$5.00 each, depending on the quantity being purchased.

Stimulants accounted for nearly 4 percent of all State treatment admissions (excluding primary abuse of alcohol only) in FY 2001 and 2002, up from 2 percent in FY 2000. Total stimulant admissions dramatically increased from 1,270 in FY 2000 to 3,771 in FY 2001; however, admissions decreased 15 percent to 3,190 in 2002 (exhibit 2). Between 2001 and 2002, stimulant/methamphetamine-related treatment admissions increased 10 percent among Whites; they decreased 61 percent among African-Americans and 42 percent among Hispanics. Admissions decreased 11 percent for males, from 2,092 in 2001 to 1,858 in 2002. Among females, stimulant-related admissions decreased 21 percent, from 1,679 in 2001 to 1,332 in 2002.

Based on the 2000 National Household Survey on Drug Abuse, annual prevalence of overall stimulant use in the U.S. population during the previous year was estimated at 0.3 percent. The 1997 Illinois Youth Survey shows that 6 percent of all Chicago-area students reported using stimulants in the previous year. The 2001 Chicago YRBS reported a decrease between 1999 and 2001 from 4.2 to 2.8 percent. The national rates were almost four times higher in 2001.

Methamphetamine prices have not changed significantly, with bags selling for \$20; many drug users still report that the drug is difficult to obtain. However, several street reports suggest that some Mexico-based drug dealers are attempting to introduce methamphetamine for local consumption by offering free samples, which may eventually change the low and stable trend of methamphetamine use in Chicago.

Depressants

Three patterns of depressant-in-combination use have been common in Chicago and throughout Illinois:

- Depressants are taken with narcotics to potentiate the effect of opiates. Pharmaceutical depressants are frequently combined with heroin.
- Depressants are taken with stimulants to moderate the undesirable side effects of chronic stimulant abuse. Chronic cocaine and speed abusers often take depressants along with stimulants, or when concluding “runs,” to help

induce sleep and to reduce the craving for more stimulants (especially in the case of cocaine).

- Alcohol, also a central nervous system depressant, is taken with pharmaceutical depressants (such as hypnotics or tranquilizers). The practice of mixing alcohol with other depressants may indicate illicit pharmaceutical depressant use.

The number of barbiturate ED mentions increased 47 percent between 1999 and 2001. ED mentions have remained relatively stable from 2000 to the first half of 2002, with 243 mentions reported in the second half of 2001 and 244 in the first half of 2002.

ED mentions of benzodiazepines increased significantly between 1998 and 2000 (35 percent) and from 1999 (1,911 mentions) to 2000 (2,564), a 34-percent increase, and continued to increase in 2001 (2,675) though not significantly. Benzodiazepines mentions remained stable between the second half of 2001 and the first half of 2002, with 1,407 and 1,391 mentions reported. During the first half of 2002, alprazolam (Xanax) was reported most often (160), a 22-percent increase from the previous 6-month period (131 mentions). Clonazepam (Klonopin) was the second drug most often mentioned during the first half of 2002 (115), followed by diazepam (Valium) (85), and lorazepam (Ativan) (83). Consistent with ED mentions, ethnographic reports indicate that alprazolam appears to be the benzodiazepine most readily available on the street, closely followed by clonazepam and lorazepam, with variations in different areas of the city.

Treatment admissions data for opioids, tranquilizers, and sedatives suggest that depressants are not the primary drugs of choice for most users. Treatment admissions in this category increased 19 percent from 1,693 in FY 2000 to 2,019 in FY 2001 and decreased 14 percent to 1,727 in FY 2002. Primary opioid, tranquilizer, and sedative users represented only about 1 percent of all treatment admissions.

According to APORS, the proportion of infants testing positive for depressants was less than 2 percent ($n=22$) in 1998 and about 1.3 percent in 1999.

On the street, alprazolam typically sells for \$2–\$3 for 0.5-milligram tablets and \$5–\$10 for 1-milligram tablets.

Hallucinogens

Following a nonsignificant increase in lysergic acid diethylamide (LSD) ED mentions from the first half of

2000 to the first half of 2001, a significant decrease occurred between the first and second halves of 2001, from 58 to 11 mentions. Thirteen mentions were reported during the first half of 2002. The rate of LSD mentions per 100,000 population declined during the second half of 2001 from the previous 6-month reporting period and remained low during the first half of 2002. This recent decline suggests a possible downward trend in LSD use in Chicago.

In the study of young non-injecting heroin users, 31 percent of participants reported ever trying LSD, but only a few reported use in the 6 months prior to interview.

LSD hits typically cost \$5–\$10. LSD is available in the city and suburbs.

According to some accounts by White youth, hallucinogenic mushrooms remain available. Reported prices were \$20–\$40 per bag, with one report of \$150 per ounce.

Though not significant, recent ED mentions for phencyclidine (PCP) and its combinations increased from 429 in the first half of 2000 to 519 in the first half of 2001. In the second half of 2001, there was a significant decline in ED mentions to 355, a 32-percent change from the first half of the year. This decline continued during the first half of 2002, when 249 mentions were reported. As with LSD, this recent change in ED mentions may indicate the beginning of a downward trend in use.

Recent reports from young heroin snorters indicate that PCP use may be more common in this population. Fifty-seven percent of study participants reported ever trying PCP, and 26 percent admitted use within 6 months prior to interview.

Recent trends in hallucinogen treatment admissions have been uneven, but overall admissions have been relatively high compared with trends earlier in the decade. Admissions increased steadily from 85 in FY 1992 to 550 in FY 1996. In FY 1997, treatment admissions dropped to 131, but rebounded to 455 in FY 1998 and to 401 in FY 1999. For FY 2000, treatment admissions were up again, to 517; they increased another 5 percent to 544 in FY 2001, but decreased 12 percent to 479 in FY 2002 (exhibit 2).

According to the 2001 ADAM report, 5.1 percent of adult male arrestees tested positive for PCP. Data for PCP in the 2002 ADAM report were included in the “multiple drug” category, and a separate percentage was not available.

In the 2001 Illinois Youth Survey, 6 percent of high school students reported “any hallucinogen” use in the past year. This category includes LSD and PCP.

Ethnographic reports suggest that PCP use in Chicago has remained constant and that the drug can be found in all areas of the city. Users can easily identify drug-dealing locales in the city where PCP is readily available. The demographic characteristics of users vary widely and include suburban youth. PCP is typically smoked and is sold in various forms. “Leaf” (also known as “love leaf”) is a moist, loose, tobacco-like substance sprayed with PCP and wrapped in tinfoil. Some say the substance is marijuana, others say it looks and tastes like cigarette tobacco, but most often it is said to be parsley, which is frequently purchased in bags at neighborhood stores. On the west side, 2–3 “sticks” about the size of toothpicks can be purchased for as little as \$5–\$10. Some “wicky sticks” are said to also include embalming fluid, and these cost more. Sherm sticks typically are cigarettes or small cigars dipped in PCP, drained, and dried. The cigarettes—most often Mores—are sold for about \$20–\$30 each and are mainly available on the far South Side. PCP was also said to be sold in sugar cubes for \$20 each. Liquid PCP (“water”) was said to sell for \$120 per vial and \$800–\$2,000 per bottle (unit amounts were not verified).

Club Drugs

In the Chicago area, methylenedioxymethamphetamine (MDMA or ecstasy) is the most prominently identified of the club drugs used. After an 85-percent increase in ED mentions of MDMA in Chicago from the first half to the second half of 2000, mentions decreased to 87 in the first half of 2001 and continued to decrease to 34 in the second half of 2001, a 61-percent decline. MDMA mentions (39) remained low during the first half of 2002, showing a 55-percent decrease from the first half of 2001. ED mentions per 100,000 population decreased by 42 percent between 2000 and 2001, from about 4 to 2. The rate during the first half of 2002 was 1 per 100,000 population. Of all the CEWG sites, Chicago had the most MDMA ED mentions in 2000 (215), but mentions decreased significantly in 2001 and remained low (10th among all CEWG sites) in the first half of 2002.

Illinois OASA began reporting treatment admission data related to club drugs for the first time in FY 2002. During this period, there were 50 admissions, of which 68 percent were among males and 74 percent were among Whites.

Ecstasy, once limited to the rave scene, can be found in most mainstream dance clubs and at many house parties, according to ethnographic reports. Street reports suggest that ecstasy—or drugs sold as ecstasy—is widely available among high school and college students. It continued to be sold in pill or capsule form, and the price range remained unchanged: \$20–\$40 per pill. Individuals with connections to suppliers or producers report prices as low as \$12–\$15 per pill. Ecstasy is usually sold at dance clubs, rave parties, house parties, or through individual dealers; it is typically used in social settings. Along with other club drugs, it continues to be used predominantly by White youth, but there have been increasing reports of ecstasy use from low-income African-Americans in their twenties and thirties who have been involved in club scenes. Among participants in the NIHU study, 31 percent reported MDMA use. Thirty-four percent of young injectors reported using some club drugs, including MDMA, in the 3 months prior to interview.

Gamma hydroxybutyrate (GHB), a central nervous system depressant with hallucinogenic effects, is used infrequently in Chicago, mainly by young White males. Recent ED mentions for GHB decreased 42 percent, from 88 in the first half of 2000 to 52 in the first half of 2001, and remained stable at 53 in the second half of 2001. During the first half of 2002, 39 mentions were reported. GHB ED mentions per 100,000 population have remained at 1 for the 6-month reporting periods since the second half of 1998.

GHB is sold as a liquid, in amounts ranging from drops (from a dropper at raves or parties) to capfuls. Prices for a capful have been reported at \$10–\$25. Compared with other club drugs, overdoses are more frequent with GHB, especially when used in combination with alcohol. GHB is not tracked in most quantitative indicators, but its use is perceived to be low compared with ecstasy.

Ketamine, an animal tranquilizer, is another depressant with hallucinogenic properties and is often referred to as “Special K.” Ketamine ED mentions during the first half of 2002 did not differ from the previous reporting period (both 5). The rate of ED mentions per 100,000 population (0.1) also remained unchanged. Street reports indicate that ketamine is usually sold in \$5–\$30 bags of powder or in liquid form. The drug is somewhat available at rave parties or in clubs frequented by younger adolescents.

INFECTIOUS DISEASES RELATED TO DRUG ABUSE

Through November 2001, 26,127 diagnosed AIDS cases were reported to the State. More than one-quarter of adult AIDS cases occurred among IDUs, while an additional 6.5 percent involved male IDUs who had sex with other men. Within Illinois, 80 percent of the cumulative AIDS cases reported to date originate in the Chicago metropolitan area.

The most recent report on AIDS cases in Chicago indicates that by December 2001, 22,703 AIDS cases were reported to CDC. While new drug therapies continue to reduce the incidence of AIDS cases by delaying the onset of AIDS, the decline appears to be leveling off. The proportion of cases among women tripled, from 7 percent in 1988 to 23 percent in 2001. African-Americans accounted for 68 percent of new AIDS cases in 2001, although they constituted only 39 percent of the Chicago population. Of the remaining new cases, 19 percent were among Whites and 12 percent were among Hispanics.

Between 1988 and 2001, IDUs as a proportion of AIDS cases increased from 16 to 24 percent, while the proportion of cases among men who have sex with men (MSM) declined from 71 to 42 percent. Four percent of cases occurred among homosexual or bisexual IDUs.

AIDS mortality rates in Chicago declined 7 percent in 1999. Declines were smaller for women and people of color, and they were lowest for IDUs. Given the long latency between HIV infection and AIDS diagnosis, these figures do not reflect the full scope of the epidemic. Data from the authors' AIDS intervention and CIDUS studies provide additional information on the extent of HIV infection among IDUs. It should be noted, however, that the studies are not directly comparable, because each had unique sampling and recruitment strategies.

In the early AIDS intervention study, 25 percent of the 850 IDUs tested at baseline in 1988 were HIV-positive. The rate of new infections dropped (from about 9 to 2 percent per person-year observed) over a 4-year time period (Wiebel et al. 1996).

For the CIDUS I study, a cohort of 794 active injectors was recruited in 1994–1996 from inner-city Chicago neighborhoods for a longitudinal study. Race/ethnicity and age stratification were incorporated into the sampling design. The HIV prevalence within this cohort was lower than expected—18 percent. While the study did not evaluate a specific intervention, participants were exposed to a variety of HIV

prevention activities, and a community-based organization had begun a needle exchange program that expanded during the study. The rate of new HIV infections among study participants was 1 percent per person-year observed (Ouellet et al. 2000).

In an ongoing evaluation of needle exchange programs, 18 percent of the 683 needle exchange users who enrolled between 1996 and 1998 were HIV seropositive. Data indicate a rate of new HIV infections in this group slightly over 1 percent per person-year observed.

While HIV seroprevalence was only 3 percent among the 700 young (age 18–30) IDUs studied between 1997 and 1999, the participants reported high levels of HIV risk practices (Thorpe et al. 2001). Of particular concern is the finding that young IDUs living in the suburbs reported the highest rates of needle sharing of any group observed during the 1990s. The prevalence and incidence of hepatitis C virus among this sample was 27 percent (Thorpe et al. 2000) and 10 percent per person-year observed, respectively (Thorpe et al. 2002). In this study, the sharing of paraphernalia other than needles—particularly cookers—was associated with new HCV infections.

Together, these findings suggest that HIV prevalence and the rate of new HIV infections have declined among IDUs in Chicago since peaking in the late 1980s.

High rates of mortality among those infected early in the epidemic and the many HIV prevention activities taking place in Chicago almost certainly account for much of the observed reductions in infections. The findings also suggest that young IDUs, especially those in the suburbs, are engaging in high levels of HIV risk behavior and have avoided HIV infection only because they have yet to become integrated into social networks of older IDUs where infection is more common. Although the prevalence and incidence of HCV infection was high among young IDUs, the findings from these studies indicate that the time between the initiation of drug injection and subsequent infection with HCV is long enough for the majority of young IDUs to benefit from HCV prevention interventions that target young, new injectors.

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Exhibit 1. Estimated Rates of ED Mentions per 100,000 Population in Chicago for Selected Drugs by Half-Year: 1994–2002

Year	Cocaine	Heroin/Morphine	Marijuana	Methamphetamine
1994				
1H	86	41	18	... ¹
2H	105	44	22	11
1995				
1H	106	40	27	28
2H	82	44	24	...
1996				
1H	100	46	29	0.0
2H	120	63	33	0.0
1997				
1H	122	68	35	0.0
2H	125	80	41	0.0
1998				
1H	117	77	44	0.0
2H	114	81	41	0.0
1999				
1H	104	78	38	0.0
2H	122	84	38	0.0
2000				
1H	122	102	42	...
2H	124	104	48	...
2001				
1H	142	106	47	...
2H	134	97	42	1
2002 ²				
1H	140	112	39	<1

¹ Dots (...) indicate that an estimate with a relative standard of error greater than 50 percent has been suppressed.

² Estimates for this time period are preliminary.

SOURCE: Adapted from DAWN, OAS, SAMHSA

Exhibit 2. Semiannual Illinois Treatment Admissions to Publicly Funded Programs by Primary Drug of Abuse: FY 2000–FY 2002

Primary Drug	FY 2000			FY 2001			FY 2002		
	Dec. 1999	June 2000	Total	Dec. 2000	June 2001	Total	Dec. 2001	June 2002	Total
Cocaine	18,531	12,937	31,468	16,967	14,354	31,321	14,581	13,550	28,131
Heroin	11,733	8,121	19,854	13,745	10,718	24,463	10,747	11,162	21,909
Cannabinoids	12,484	8,289	20,773	14,253	11,373	25,626	11,811	14,560	26,371
Hallucinogens	290	227	517	323	221	544	237	242	479
Stimulants	577	693	1,270	1,969	1,802	3,771	1,517	1,673	3,190

SOURCE: Illinois Office of Alcoholism and Substance Abuse

Exhibit 3. Percentages of ADAM Adult Male Arrestees Testing Positive in Chicago for Selected Drugs by Year: 1991–2002

Year	Marijuana	Cocaine	Opiates
1991	23	61	21
1992	26	56	19
1993	40	53	28
1994	38	57	27
1995	41	51	23
1996	45	51	19
1997	51	48	24
1998	42	45	18
1999	45	42	20
2000 ^{1,2}	45	37	27
2001 ^{1,2}	50	41	22
2002 ^{1,3}	49	48	26

¹ Figures for 2000, 2001, and 2002 are based on a new method of data collection and cannot be compared with those from previous years.

² Data for 2000 are for the first through third quarters; data for 2001 are for the fourth quarter only.

³ Data for 2002 are provisional, with some data yet unweighted.

SOURCE: ADAM, NIJ

Exhibit 4. Domestic Monitor Program Trends for Chicago—Heroin Purity (Percent) and Price Per Milligram Pure: 1993–2001

Trend	1993	1994	1995	1996	1997	1998	1999	2000	2001
Purity (%)	31.4	17.4	28.0	30.4	31.0	24.8	24.8	22.9	18.7
Price per milligram pure	\$0.70	\$1.90	\$1.12	\$0.84	\$0.68	\$0.58	\$0.67	\$0.54	\$1.96

SOURCE: DMP, DEA

Patterns and Trends in Drug Abuse: Denver and Colorado

Bruce Mendelson, M.P.A.

ABSTRACT

Most amphetamine and methamphetamine indicators have increased in the past 2 years. Specifically, methamphetamine treatment admissions reached their highest level ever in the first half of 2002, and amphetamine-related deaths in 1999–2002 more than doubled over the prior 4-year time period. Also, local treatment clinicians say that some stimulant users have switched from cocaine to methamphetamine because of the price, availability, and longer lasting high. Marijuana continues to be a major problem in Colorado, although most current indicators are stable or decreasing slightly. For example, clients whose primary drug was marijuana constituted the largest proportion of drug-related treatment admissions in the first half of 2002, even though this percentage was down slightly from 2001. Also, marijuana ED mentions, which had increased by 55 percent from 1995 to 2000, stabilized during 2001 and declined slightly in the first half of 2002. Conversely, marijuana-related hospital discharges climbed to their highest level in the 1996–2002 time period. Cocaine indicators were mixed in the past 2 years, with ADAM data and treatment admissions remaining relatively stable, while the proportion of new users in treatment declined somewhat. However, cocaine-related deaths increased in 2002, as did ED mentions and hospital discharges. A mixed pattern is also evident for heroin indicators, with hospital discharges, ED mentions, and deaths increasing, ADAM data remaining stable, and treatment admissions and new users in treatment declining slightly. Finally, limited indicator data, a recent treatment study, data from the 2002 Colorado Youth Survey, and most anecdotal data point to a substantial club drug problem in Colorado, mostly among adolescents and young adults.

INTRODUCTION

Area Description

Denver, the capital of Colorado, is located somewhat northeast of the State's center. Covering only 111.32 square miles, Denver is bordered by several large suburban counties: Arapahoe on the southeast, Adams on the northeast, Jefferson on the west, and Douglas on the south (the Denver primary metropolitan statistical area [PMSA]). In recent years, Denver and the surrounding counties have experienced rapid population

growth. According to the 1990 census, the Denver PMSA population was 1,622,980. By the 2000 census, it had grown by 30 percent to 2,109,282. In general, Colorado has been one of the top five fastest growing States in the country, with the population increasing from 3,294,394 in 1990 to 4,324,920 in 2000, or by 31.3 percent. The Denver metropolitan area accounts for a large percentage of Colorado's total population.

Several considerations may influence drug use in Denver and Colorado:

- Two major interstate highways intersect in Denver.
- The area's major international airport is nearly at the midpoint of the continental United States.
- Its remote rural areas are ideal for the undetected manufacture, cultivation, and transport of illicit drugs.
- A young citizenry is drawn to the recreational lifestyle available in Colorado.
- The large tourism industry draws millions of people to the State each year.
- Several major universities and small colleges are in the area.
- Colorado and the Denver metropolitan area, though prospering economically, have seen small increases in unemployment rates. Colorado's unemployment rate averaged 5.7 percent for 2002, up from 3.7 percent for 2001. Likewise, Denver's unemployment rate averaged 6.9 percent in 2002, compared with 4.4 percent in 2001.

Data Sources

Data presented in this report were collected and analyzed in April through June 2003. Although these indicators reflect trends throughout Colorado, they are dominated by the Denver metropolitan area. The data sources are presented below:

- **Qualitative and ethnographic data** for this report were available mainly from clinicians in treatment programs across the State, local researchers, and street outreach workers.

- **Drug-related emergency department (ED) mentions** for the Denver metropolitan area for 1996 through the first half of 2002 were provided by the Substance Abuse and Mental Health Services Administration (SAMHSA), Office of Applied Studies (OAS), through its Drug Abuse Warning Network (DAWN).
- **Drug-related mortality data** for the Denver metropolitan area for 1997 through 2001 were provided by SAMHSA through DAWN. Statewide mortality data provided by the Colorado Department of Public Health and Environment (CDPHE) are for 1996–2002.
- **Statewide hospital discharge data** for 1996–2002 were obtained from the Colorado Hospital Association (CHA) through CDPHE, Health Statistics Section. Data included are diagnoses based on the International Classification of Disease (ICD-9-CM codes) for inpatient clients at discharge for all acute care hospitals and some rehabilitation and psychiatric hospitals. These data do not include ED care.
- **Drug treatment data** are from the Drug/Alcohol Coordinated Data System (DACODS) completed on clients at admission and discharge from all Colorado alcohol and drug treatment agencies receiving public monies. Annual figures are for 1996 through the first half of 2002. DACODS data are collected and analyzed by the Alcohol and Drug Abuse Division (ADAD), Colorado Department of Human Services.
- **Availability, price, and distribution data** were available from local Drug Enforcement Administration (DEA) Denver Division officials in their second quarter fiscal year (FY) 2003 report. Additional information on heroin was obtained from the DEA’s Domestic Monitor Program (DMP) for the first three quarters of 2002.
- **Rocky Mountain Poison and Drug Center (RMPDC) data** are presented for Colorado. The data represent the number of calls to the center regarding "street drugs" from 1996 through 2002.
- **Arrestee urinalysis results** were derived from the Arrestee Drug Abuse Monitoring (ADAM) program reports, based on quarterly studies conducted under the auspices of the National Institute of Justice (NIJ). ADAM data in Colorado are collected and analyzed by the Division of Criminal Justice. In 2000, NIJ changed its procedures for adult male arrestees from a convenience to a probability sample, and findings

have been weighted since 2000. Thus, no ADAM data trend analysis is presented. Rather, 2001 and 2002 use percentages by drug type are indicated.

- **School survey findings** were derived from the Colorado Youth Survey (CYS), an annual statewide survey of 6th through 12th graders; questions are organized around risk and protective factors and drug use. The CYS was conducted in 1998, 2000, and 2002. The 2002 sample included more than 26,000 students.
- **Data on acquired immunodeficiency syndrome (AIDS)** were provided by CDPHE for 1996 to 2002.

DRUG ABUSE PATTERNS AND TRENDS

Cocaine/Crack

Cocaine indicators remained mixed in 2001 and 2002.

The rate of Denver metropolitan cocaine ED mentions per 100,000 population increased steadily from 53 in 1996 to 87 in 1999, but declined slightly to only 69 per 100,000 population for 2001. However, in the first half of 2002, the 47 cocaine mentions per 100,000 represented a significant 44.3-percent increase over the 33 per 100,000 reported in the first half of 2001.

Also, statewide hospital discharge data (exhibit 3) showed that cocaine mentions per 100,000 population increased from 59 in 1996 to 62.8 in 1998, and remained relatively stable through 2001 (63.2 per 100,000). However, in 2002 the cocaine rate increased sharply to 73.6.

In 1996, there were 47 calls to the RMPDC concerning cocaine. Calls remained at about this level through 1999 (i.e., 50 calls) and increased slightly to 59 calls in 2000. In 2001, however, cocaine calls more than doubled to 127; they declined slightly to 115 in 2002.

Conversely, the proportion of cocaine treatment admissions has declined considerably over the past 7 years (exhibit 1). In 1996, primary cocaine abuse accounted for 30.6 percent of all drug abuse treatment admissions, compared with only 21.6 percent for the first half of 2002.

Of the cocaine users entering treatment, the proportion of “new” cocaine users, defined as those admitted to treatment within 3 years of initial cocaine use, remained relatively level from 1996 (15.3 percent) to 2001 (15.7 percent), but declined to 13.8 percent during the first half of 2002 (exhibit 2).

Treatment admission data indicate that cocaine injection remained relatively stable, accounting for 11–13 percent of cocaine treatment admissions from 1996 through the first half of 2002. Smoking percentages declined steadily from 67.4 percent in 1996 to 57.9 percent in 2001, but increased to 62.1 percent in the first half of 2002 (the same proportion as in 1999). Conversely, inhalation steadily increased from 17.6 percent in 1996 to 25.9 percent in 2001, but declined to 21.5 percent in the first half of 2002.

Curiously, a cross sectional analysis of route of drug administration by race/ethnicity reveals that the very recent increase in cocaine smoking is attributable to Hispanic rather than African-American clients. From 1996 to 2001, the percentage of Hispanics who inhaled cocaine increased from 26.7 percent to 37.9 percent. However, in the first half of 2002, that proportion dropped to only 27.2 percent. Conversely, the percentage of Hispanics smoking cocaine had declined somewhat from 54.4 percent in 1996 to 50.2 percent in 2001, but increased sharply to 60.8 percent in the first half of 2002. On the other hand, the percentage of African-Americans smoking cocaine declined steadily from 89.5 percent in 1996 to 78.5 percent in the first half of 2002, while the percentage inhaling cocaine increased from 6.1 percent in 1996 to 12.8 percent in 2002. This may be related to the intertwining of the crack and powder cocaine distribution networks (see discussion of cocaine trafficking below).

In general, the race/ethnicity proportions for cocaine treatment admissions have been changing. Whites accounted for the largest percentage of cocaine admissions in the first half of 2002 (41.3 percent). However, this is a substantial decline from their proportion of total cocaine clients in 2001 (47.3 percent). The proportion of Hispanic cocaine admissions had increased dramatically from only 17.5 percent in 1996 to a high of 28.8 percent in 2000. However, this proportion declined to 26.3 percent in 2001 and stayed at that level (26.4 percent) through the first half of 2002. Conversely, African-American cocaine admissions declined almost by one-half during the same time period, dropping from 36.3 percent in 1996 to only 19.7 percent in 2001. This proportion increased slightly to 22.7 percent in the first half of 2002.

Likewise, age categories of cocaine treatment admissions have been changing since 1996. In 1996, 57 percent of cocaine admissions were younger than 35; this decreased to 45.2 percent in the first half of 2002. Conversely, the proportion of cocaine admissions age 35 and older climbed steadily during the same time period, from 43.0 to 54.8 percent. Cocaine admissions remain predominantly male, with the proportion

remaining relatively constant from 1996 (59.6 percent) through the first half of 2002 (59.5 percent).

Cocaine death mentions (single and in combination with other drugs) in the Denver metropolitan area more than doubled from only 56 in 1997 to 126 in 2001. Statewide, the number of cocaine deaths climbed from 102 in 1996 (27 per million) to 146 in 1999 (36 per million). While they declined to 116 in 2000 (27 per million), they increased again to 134 in 2001 (30.4 per million), and to 153 in 2002 (34.1 per million), the highest number of deaths and the second highest rate in the time period indicated.

According to recent ADAM data for a sample of Denver arrestees, 35.4 percent of males and 45.0 percent of females had cocaine-positive urine samples in 2001. These numbers were down slightly in 2002, with 32.7 percent of males and 44.6 percent of females testing positive.

The Denver Field Division of the DEA reports the substantial availability of cocaine hydrochloride (HCl) across the State in ounce, pound, and kilogram quantities. Mexican polydrug trafficking groups control the majority of cocaine distribution in the Denver metropolitan area through Hispanic, White, and African-American distributors. For the most part, cocaine is brought into Colorado in vehicles from the southwest border and southern California on interstate and local highway systems. Kilograms of cocaine are often sold in bricks covered in industrial tape. Smaller amounts of cocaine are usually packaged in zip-lock plastic bags with no special markings. The DEA also indicates that, despite declining use, crack cocaine availability remains stable in Colorado, with supplies continuing to come from street gangs in Los Angeles and Chicago. The crack is transported in passenger vehicles, commercial buses, or airlines from the aforementioned cities. Upper level crack organizations are primarily Mexican with gang affiliations and are intertwined with African-Americans who control street-level distribution.

Seizure data from the Federal-wide Drug Seizure System (FDSS) also show the widespread availability of cocaine in Colorado. According to the recent Colorado Drug Threat Assessment produced by the National Drug Intelligence Center (NDIC), Federal law enforcement officials reported cocaine seizures in the following quantities: 59.8 kilograms in 1998, 88.6 kilograms in 1999, 132.7 kilograms in 2000, and 69.3 kilograms in 2001.

The DEA reports current cocaine prices as follows: \$18,000–\$20,000 per kilogram and \$700–\$1,000 per ounce in the Denver metropolitan area, with purity in

the 50–90 percent range; \$15,000–\$25,000 per kilogram, \$500–\$1,100 per ounce, and \$100–\$125 per gram (50 percent purity) in Colorado Springs (south of Denver on the Front Range); and \$21,000 per kilogram (60–70 percent purity) and \$800–\$1,000 per ounce (65–85 percent purity) in Grand Junction (Western Slope of Colorado). Crack prices remained relatively stable at \$900–\$1,000 per ounce and \$10–\$20 per rock in Denver.

Reports from clinicians, researchers, and street outreach workers around the State corroborate the continuing cocaine problems reflected in the indicator data. However, some qualitative reports indicate a shift to methamphetamine among some stimulant users. Clinicians in programs in northeast Colorado say that many of the new stimulant users are using methamphetamine rather than cocaine because it is cheaper and provides a “longer high.” On the other hand, many in that part of the State report widespread cocaine availability. In addition, they report that cocaine is not just a “rich man’s drug” anymore and that there is increasing use by lower-income laborers (e.g., meat packing workers) so that they can work longer hours. This has corroborated reports about increased use among Hispanics. For example, treatment programs in southeastern Colorado report increased use among Hispanics who have a history of family use. Likewise, some treatment programs in the Denver metropolitan area report that Hispanics are “doing what they are bringing in—they’ve always had it now they are using it.”

Programs around the State report some new users, but mostly describe older clients (i.e., 35 and older) entering treatment. In addition, programs across Colorado report cocaine/crack use in combination with other drugs like heroin (speedballs) and marijuana (primos).

Heroin

For 2001 and 2002, heroin indicators were mixed, with some increasing, some stable, and some declining.

DAWN data show that the rate of heroin ED mentions per 100,000 population nearly doubled from 1996 (22) to 2000 (41). This rate remained stable in 2001 at 40 per 100,000 population. However, in the first half of 2002, the 27 heroin mentions per 100,000 population represent a significant 35.9-percent increase over the 20 per 100,000 reported in the first half of 2001.

Similarly, hospital discharge data (exhibit 3) indicate that opiate (narcotic analgesic) mentions per 100,000 population climbed steadily from only 19.9 in 1996 to 58.0 in 2002 (a nearly 200-percent increase).

Heroin-related calls to the RMPDC were relatively steady between 1996 (20 calls) and 1998 (22 calls), but increased to 36 in 1999. This was followed by a decline in such calls to only 12 in 2000, an increase to 36 in 2001, and a decline to 18 in 2002.

Among Colorado treatment admissions (exhibit 1), the proportion and number of heroin admissions remained fairly stable from 1996 (15.1 percent) through 2000 (14.5 percent), with a slight decline to 14.0 percent in 2001 and to 12.5 percent during the first half of 2002. Likewise, the proportion and number of new heroin users entering treatment, after increasing from 17.0 percent in 1996 to 18.7 percent in 2000, declined to 16.6 percent in 2001 and to 14.0 percent in the first half of 2002 (exhibit 2).

Like cocaine, there have been some changes in the demographic proportions of heroin users entering treatment. The proportion of female heroin admissions remained stable from 1996 (32.3 percent) through the first half of 2002 (31.6 percent). However, race/ethnicity proportions changed during this same time period. Whites increased as a percentage of the total from 57.6 percent in 1996 to 65.5 percent in the first half of 2002, while the proportion of Hispanics decreased from 29.4 to 19.7 percent. Also, the 25-and-younger age group increased as a percentage of heroin admissions from only 10.9 percent in 1996 to 16.9 percent in the first half of 2002.

Accompanying the heroin client demographic realignments are small changes in route of administration, with heroin smoking and inhalation becoming more common. In 1996, only 5.9 percent of treatment admissions reportedly smoked or inhaled heroin, compared with 7.5 percent in 1997, 9.0 percent in 1998, 8.5 percent in 1999, 10.2 percent in 2000, 9.6 percent in 2001, and 12.1 percent in the first half of 2002.

The heroin smoker, inhaler, and injector groups in treatment are distinctly different from each other demographically. Heroin smokers are much more likely to be White (78 percent) than inhalers (59 percent) or injectors (62 percent). Also, smokers are younger than the other heroin users, with nearly 20 percent being 25 or younger, compared with 14 percent of inhalers and 15 percent of injectors. Accordingly, more than 3 in 5 smokers have abused heroin for 4 years or less, compared with only 41 percent of inhalers and 31 percent of injectors. Gender differences are small, however, with females constituting 36 percent of the smokers, 32 percent of inhalers, and 34 percent of injectors. As to educational levels, one-half of smokers have at least some college, versus only 39 percent of inhalers and 32 percent of injectors. Thus, not surprisingly, smokers are more likely

to be employed full-time or part-time (55 percent) than inhalers (50 percent) or injectors (42 percent). Conversely, a much greater proportion of injectors had a prior arrest (48 percent) than did their smoking and inhaling counterparts (39 and 36 percent, respectively). Finally, smokers are somewhat more likely (78 percent) to live outside the city and county of Denver than inhalers (71 percent) or injectors (67 percent).

Heroin/morphine death mentions (single and in combination with other drugs) in the Denver metropolitan area rose from 53 to 79 from 1997 to 1999, declined to 66 in 2000, and then increased to 77 in 2001. Statewide, opiate-related deaths increased from 128 (33.5 per million population) in 1996 to 182 (45.9 per million) in 1998. From this peak, such deaths declined to 142 (35.2 per million) and 147 (34 per million) in 1999 and 2000, respectively. However, opiate-related deaths climbed to 160 (36.3 per million) in 2001 and 164 (36.5 per million) in 2002.

According to recent ADAM data on samples of Denver arrestees, in 2001, 5.2 percent of males and only 2.4 percent of females tested positive for opiates. However, in 2002, more females (5.4 percent) than males (4.0 percent) tested positive for opiates.

The Denver DEA reports that heroin is widely available in the large metropolitan areas. In the Denver metropolitan area, the majority of heroin sales take place in the lower downtown area. Marketing is controlled by Mexican nationals. They also control the street-level heroin market in the form of small autonomous distribution cells. Street-level heroin is usually packaged in balloons, plastic sandwich bags, or tin foil for gram and ounce quantities. Larger seizures have encountered heroin wrapped in wax paper, further contained within foil paper and clear plastic wrap, and then flattened out to fit in hidden compartments.

Street-level heroin is usually sold in grams for \$100 to \$150, with ounces going for \$1,500 to \$3,000. The DEA's DMP buys for the first three quarters of FY 2002 reveal that the purity of Mexican heroin ranges from 14 to 29 percent (average purity is around 20 percent). In Colorado Springs, heroin sells for \$1,800 to \$3,500 per ounce and \$75 to \$300 per gram. The average purity is around 40 percent.

According to recently reported FDSS data in the NDIC Colorado Drug Threat Assessment, Federal law enforcement officials seized 4.9 kilograms of heroin in 1998, 2.0 kilograms in 1999, 4.9 kilograms in 2000, and 1.2 kilograms in 2001.

Reports from clinicians, researchers, and street outreach workers around the State describe both similarities and variation in heroin and other opiate use. In northeast Colorado, clinicians say they do not "see a large number of heroin users," but they do report a slight increase in users who inhale heroin. At the same time, they describe increased levels of hepatitis C among heroin injectors. In the southeast and south central part of the State, programs describe heroin as "easier to get." For example, the San Luis Valley is considered a major dropping point for drugs from Mexico, including heroin. Clinicians in this part of the State are reporting increases in heroin inhalation and smoking because of clients' fears of "infectious diseases." However, they are also reporting some inhalers and smokers switching to injection because the high is "faster and more intense."

In the Denver metropolitan area, programs are also reporting more White users from suburban areas who are smoking or inhaling heroin because they don't think they can get addicted, and because they are afraid of infectious diseases. However, they also report some conversion to injecting because of the faster and more intense high. Across the State, clinicians are reporting increased use of Vicodin and OxyContin.

Marijuana

Most marijuana indicators were stable or decreased in 2001 and 2002.

From 1996 to 2000, the rate per 100,000 population of marijuana ED mentions increased more than 2.5 fold from 19 to 51. The 2001 rate remained stable at 50 per 100,000 population. However, in the first half of 2002, the 22 marijuana mentions per 100,000 represent a small but insignificant decrease from the 24 per 100,000 reported in the first half of 2001. Marijuana hospital discharge occurrences per 100,000 (exhibit 3) rose dramatically from 45.6 in 1996 to 67.2 in 2002.

Marijuana-related calls to the RMPDC were nearly nonexistent between 1994 and 1998, with only one or two per year. However, in 1999, 2000, and 2001, there were 47, 58, and 97 calls, respectively, related to marijuana effects.

The proportion of marijuana treatment admissions increased from 38.8 percent in 1996 to 43.7 percent in 1999. However, since that time they have declined slightly to 40.6 percent in 2001 and to 39.1 percent in the first half of 2002. In general, marijuana users

have accounted for the largest proportion of all Colorado drug treatment clients since 1996 (exhibit 1). These increases may be partly related to user accounts of increased drug potency and a more casual attitude about marijuana use in society in general.

The proportion of new users entering treatment for marijuana had been declining steadily from 1996 (35.8 percent) through 1999 (25.4 percent). In 2000, however, this proportion climbed slightly to 29.9 percent. It remained at that level (29.2 percent) during 2001, but dropped to 25.5 percent in the first half of 2002 (exhibit 2).

Data indicate only slight changes in the demographics of marijuana treatment clients. Race proportions remained relatively stable from 1996 through the first half of 2002. The percentage of Hispanic marijuana admissions increased from 31.4 percent in 1995 to 36.3 percent in 1999, but declined thereafter to only 26.1 percent through the first half of 2002. The proportion of Whites has fluctuated up and down only slightly from 1996 (57.3 percent) through the first half of 2002 (53.8 percent). African-Americans constituted between 6.5 and 9.2 percent of marijuana admissions between 1996 and 2001, but rose to 10.7 percent in the first half of 2002, the highest proportion during the 6½ year time period. Male-to-female marijuana admission ratios remained at approximately 3 to 1 from 1996 to the first half of 2002. There have also been small changes in the marijuana age group proportions from 1996 through the first half of 2002. The proportion of those age 12–17 decreased slightly from 41.0 percent in 1996 to 38.3 percent in 2001, but dropped sharply to only 31.0 percent in the first half of 2002. Conversely, the 18–25 age group proportion, which had been fluctuating between 27.0 and 31.0 percent from 1996 through 2001, increased to 33.2 percent during the first half of 2002. Similarly, the 26–34 age group proportion grew slightly from 15.4 percent in 2001 to 17.9 percent in 2002, the highest percentage in the 6½ year time period. Likewise, the 35-and-older age group proportion, which had increased from 12.4 percent in 1996 to 23.8 percent in 1999 and then dropped to 15.6 percent in 2001, increased to 18.0 percent in the first half of 2002.

The 2001 ADAM data indicated that 40 percent of the male arrestee sample and 33 percent of the female arrestee sample had positive marijuana urine screens. These percentages remained stable in 2002, with 40.3 percent of males and 33.3 percent of females testing positive.

The Denver DEA states that the most “abundant supply of marijuana is Mexican grown and is trafficked

into the area from the border areas of Texas, New Mexico, and Arizona by Mexican poly-drug trafficking organizations. Vehicles with hidden compartments are used to transport shipments weighing from pound to multi-pound quantities.” Mexican marijuana sells at a price range of \$500 to \$800 per pound. The DEA also indicates that high tetrahydrocannabinol (THC) seedless marijuana from British Columbia, known as “BC Bud” or “Triple A,” continues to be increasingly available and popular in Colorado at prices of \$600 per ounce and \$3,200–\$4,500 per pound.

According to the DEA, locally grown marijuana is almost always cultivated indoors by independent operators with grow equipment varying from basic to elaborate (with sophisticated lighting and irrigation systems). Domestically grown marijuana prices range from \$1,500 to \$4,000 per pound and \$200 to \$500 per ounce.

FDSS seizure data presented in the NDIC Colorado Drug Threat Assessment further demonstrate the ready availability of marijuana across the State. Federal law enforcement officials seized 882.5 kilograms of marijuana in 1998, 901.6 kilograms in 1999, 718.1 in 2000, and 1,591.5 kilograms in 2001.

Uniformly across the State, program staff describe two major aspects of marijuana use: it is readily available in a variety of prices and potencies, and it is “not taken seriously as a hard drug by society.” Moreover, many clinicians say that their clients talk about marijuana’s health properties (i.e., medicinal use) as proof that it should be legalized.

Stimulants

While methamphetamine and other stimulant use in Denver and across Colorado fluctuated from 1996 through 2002, most indicators increased during the last few years.

The rate of methamphetamine ED mentions per 100,000 population in Denver increased from 7 in 1996 to 19 in 1997, but then declined to only 5 in 2001. Further, the rate of 4 methamphetamine mentions per 100,000 in the first half of 2002 is nearly the same as the 3 reported in the first half of 2001. Conversely, amphetamine ED mentions per 100,000 rose from 6 in 1996 to 21 in 2000 and remained at that level in 2001. Moreover, the rate of 12 amphetamine mentions per 100,000 in the first half of 2002 represents a significant 41.8-percent increase over the rate of 8 in the first half of 2001. Amphetamine-related hospital discharge occurrences per 100,000 persons (exhibit 3) have also shown a fluctuating

pattern from 1996 to 2002. However, overall they have increased during that time period from 13.9 to 32.6 per 100,000 population.

Amphetamine-related calls (street drug category) to the RMPDC decreased from 1994 (36 calls) to 1996 (16 calls), but increased sharply in 1997 (38 calls). While such calls dropped to only 11 in 1998, they rebounded sharply to 291, 269, and 581 in 1999, 2000, and 2001, respectively.

Methamphetamine treatment admissions have shown peaks and valleys over the past 6½ years. Overall they doubled from only 8.9 percent of drug admissions in 1996 to 17.9 percent in the first half of 2002. Amphetamine admissions are typically only a fraction of those for methamphetamine. However, from 1996 to 2000 they increased from 65 to 171, (from 0.5 percent to 1.3 percent of all drug treatment admissions), but declined slightly to 128 admissions (1 percent) during 2001 and to only 52 (1 percent) during the first half of 2002.

In 1996, 25.8 percent of primary methamphetamine users entering treatment were new users (exhibit 2). This percentage rose to 30.5 in 1997. However, by 2002, the proportion of new users had declined to only 18.6 percent.

Injecting had been the most common route of administration for methamphetamine. However, the injection drug user (IDU) proportion declined from 1996 (40.0 percent) to the first half of 2002 (30.6 percent), while smoking became increasingly common. In the first half of 2002, about 52 percent of methamphetamine treatment admissions smoked the drug, compared with only 22 percent in 1996.

Demographically, the methamphetamine smokers in treatment tend to be somewhat younger and more often Hispanic than their inhaling or injecting counterparts.

Methamphetamine treatment admissions for the first half of 2002 remained predominately White (80.2 percent), although the proportion of Hispanics increased from 6.9 percent in 1996 to 12.9 percent in the first half of 2002. Females accounted for slightly less than one-half of methamphetamine admissions in 2001 and the first half of 2002 (45.9 and 47.3 percent, respectively). Regarding age, from 1996 to the first half of 2002, those 25 and younger continued to constitute about one-third of admissions. The proportion of those age 26–34 declined from 40.0 percent to 32.1 percent of admissions, and the percentage of those age 35 and older increased from about one-fourth to one-third of primary methamphetamine admissions.

Methamphetamine death mentions (single and in combination with other drugs) in the Denver metropolitan area more than tripled from 6 in 1997 to 19 in 2001. However, amphetamine death mentions increased only slightly from 5 in 1997 to 8 in 2001. Although the number of amphetamine-related deaths in Colorado are far fewer than those for opiates or cocaine, the number has increased sharply from only 16 between 1995 and 1998 to 38 between 1999 and 2002 (a 138-percent increase).

According to ADAM data, only a small percentage of positive methamphetamine urine screens were reported in 2001, 3.4 percent of the male arrestee sample and 4.3 percent of the female arrestee sample. These figures did not change for males in 2002 (3.8 percent), but increased slightly for females (6.8 percent).

The DEA describes widespread methamphetamine availability, with a majority of the drug originating in Mexico or from large-scale laboratories in California. However, methamphetamine lab seizures in Colorado increased significantly from around 25 in 1997 to 452 in 2001. These laboratories, generally capable of manufacturing an ounce or less per “cook,” varied from being primitive to quite sophisticated. The ephedrine reduction method remains the primary means of manufacturing methamphetamine in the area. Most lab operators are able to get the precursor chemicals from legitimate businesses (e.g., discount stores, drug stores, chemical supply companies). The purity for methamphetamine ranges from 10 to 20 percent. The DEA reports that Colorado methamphetamine street prices are stable at \$80–\$120 per gram, \$700–\$1,000 per ounce, and \$4,500–\$7,500 per pound.

Reports from clinicians, researchers, and street outreach workers around the State all describe the widespread and growing availability of methamphetamine. In northeast and southeast Colorado, program staff talk of increased use among Hispanics for a drug that has more typically been seen as an “Anglo drug”. They also report more use among younger age groups (adolescents and those in their early twenties). In the Denver metropolitan area, staff of one program described more gay, White men entering treatment for methamphetamine use. A clinician from another program stated “there may have always been a large number of Hispanic users, only now they are coming to America” (i.e., a large influx of low-income workers from Mexico). From some programs, there are reports of more females using “speed” both for the psychotropic effects and for weight loss. In general, across the State, clinicians attribute methamphetamine’s increased use to its cheap price and its “longer lasting high” (e.g., in comparison to cocaine).

Club Drugs

Club drugs, a group of synthetic drugs commonly associated with all-night dance clubs called raves, include methylenedioxymethamphetamine (MDMA, or ecstasy), gamma hydroxybutyrate (GHB), flunitrazepam (Rohypnol or “roofies”), ketamine (“Special K”) and dextromethorphan (DXM).

Information on use of these drugs in Colorado is still limited. While ADAD has added club drugs to an expanded treatment client data set, the new information will not be available until mid-2003. Also, hospital discharge and ADAM data do not have routinely collected separate breakouts for these drugs. However, there are currently two sources of institutional indicator data that include the club drugs—DAWN and the RMPDC. In addition, ADAD has worked with OMNI Research and Training, a Denver-based firm, to add club drug questions to the CYS.

Also, in the summer of 2001, ADAD conducted a survey on club drug use among young adults and adolescents admitted to selected treatment programs across the State ($N=782$). Some results of this study are presented in this section, along with DAWN, RMPDC, and CYS data. In addition, some anecdotal information on club drugs is provided from the DEA and from clinicians and researchers around the State.

MDMA, or ecstasy, was originally developed as an appetite suppressant and is chemically similar to the stimulant amphetamine and the hallucinogen mescaline. Thus, MDMA produces both stimulant and psychedelic effects. The handful of MDMA-related calls to the RMPDC ranged from only 3 to 11 during the 1994 to 1999 time period. MDMA ED mentions, however, jumped from 6 in 1998 to 15 in 1999 and significantly to 57 in 2000, but then declined significantly to 42 in 2001. Also, the 20 MDMA mentions in the first half of 2002 represent a small but insignificant decline from the 27 reported in the first half of 2001.

Exhibit 4 shows data from the 2002 Colorado Youth Survey. As indicated, lifetime MDMA use was reported by 0.7 percent of 6th graders, 1.1 percent of 7th graders, 3.0 percent of 8th graders, 4.4 percent of 9th graders, 5.2 percent of 10th graders, 10.8 percent of 11th graders, and 9.8 percent of 12th graders.

In ADAD’s treatment survey sample of 782, 267 (34.0 percent) reported lifetime use of ecstasy, with 4.5 percent having used it in the 30 days prior to survey. The average age of the users was 17.3, and the average age of first use was 15.9.

The above information still does not come close to providing a complete view of MDMA prevalence in Colorado. The DEA reports that ecstasy has emerged as a popular drug in the Rocky Mountain region. It is readily obtainable by individuals at raves, nightclubs, strip clubs, or private parties. The traffickers are typically White and in their late teens or twenties and get their MDMA from Las Vegas, Nevada, and various cities in California and on the east coast, with source connections in Europe. They place the one tablet or capsule price at \$15–\$20, with larger quantities selling for \$8–\$12 per tablet.

GHB, a central nervous system depressant that can sedate the body and at high doses slow breathing and heart rate dangerously, can be produced in clear liquid, white powder, tablet, and capsule forms. It is often used in combination with alcohol, making it even more dangerous. During the 1994 to 1998 time period, the RMPDC reported only one to six calls about GHB. However, in 1999, the number of GHB calls jumped to 92. GHB ED mentions also increased from 7 in 1997 to 13 in 1998 to 71 in 1999. However, such mentions dropped significantly to 43 in 2000, and again to 16 mentions in 2001. The 11 GHB mentions in the first half of 2002 represent a small but insignificant increase over the 10 reported in the first half of 2001.

According to the CYS (exhibit 4), lifetime GHB use was reported by 0.4 percent of 6th graders, 0.6 percent of 7th graders, 1.2 percent of 8th graders, 1.3 percent of 9th graders, 1.5 percent of 10th graders, 1.4 percent of 11th graders, and 1.2 percent of 12th graders.

In ADAD’s treatment survey sample of 782, 73 (10 percent) reported lifetime use of GHB, with 0.5 percent having used in the prior 30 days. The average age of the users was 17.8, and the average age of first use was 16.1.

The DEA reports that GHB is increasing in popularity in Colorado and is readily available at raves, nightclubs, strip clubs, and private parties. The price is \$5–\$10 per dosage unit (i.e., one bottle capful).

Rohypnol is a benzodiazepine sedative (others include Valium and Xanax) approved as a treatment for insomnia in more than 60 countries, but not in the United States. Rohypnol is tasteless, odorless, and dissolves easily in carbonated beverages; its effects are aggravated by alcohol use. There does not appear to be widespread use of this drug among either the general population or the rave scene in Colorado. The number of calls received by RMPDC about Rohypnol jumped from 1 in 1994 and 1995 to 22 in 1998. However, such calls declined to only 7 in 1999. Also,

there were only two Rohypnol ED mentions from 1994 through the first half of 2002.

In ADAD's treatment survey sample of 782, only 14 (2 percent) reported lifetime use of Rohypnol, with 0.3 percent having used it in the prior 30 days. The average age of the users was 19, and the average age of first use was 16.

Ketamine, often called Special K on the street, is an injectable anesthetic that has been approved for both human and animal use in medical settings. However, about 90 percent of the ketamine legally sold today is intended for veterinary use. Produced in liquid form or white powder, it can be injected, inhaled, or swallowed. Similar to phencyclidine (PCP) in its effects, it can bring about dream-like states and hallucinations. The RMPDC did not report any ketamine calls from 1994 to 1999. There were only 3 ketamine ED mentions from 1994 to 1999, but there were 12 and 11 such mentions in 2000 and 2001, respectively. However, there were no ketamine mentions in the first half of 2002.

Interestingly, the CYS results indicated greater lifetime ketamine use than GHB use. As shown in exhibit 4, lifetime ketamine use was reported by 0.5 percent of 6th graders, 1.0 percent of 7th graders, 1.7 percent of 8th graders, 3.0 percent of 9th graders, 2.5 percent of 10th graders, 4.8 percent of 11th graders, and 3.3 percent of 12th graders.

In ADAD's treatment survey sample of 782, 139 (19 percent) reported lifetime use of ketamine, with 2.2

percent having used in the prior 30 days. The average age of the users was 17, while the average age of first use was 15.6.

Dextromethorphan is an opioid agent used as a cough suppressant in a number of over-the-counter cough and cold products. Most products contain 10–15 milligrams of DXM. However, Coricidin HBP contains 30 milligrams, the largest dose on the market. DXM produces a dissociative high, like an out of body experience. Large doses can cause a fast heart, slurred speech, confusion, hallucinations, and possibly seizures.

In ADAD's treatment survey sample of 782, 78 (11 percent) reported lifetime use of DXM, with 2.2 percent having used in the prior 30 days. The average age of the users was 16, while the average age of first use was only 14.9.

In general, reports from clinicians, researchers, and street outreach workers around the State describe widespread use of the various club drugs, especially MDMA. However, it is uncommon to find clients entering treatment reporting a club drug as their primary drug of abuse.

INFECTIOUS DISEASES RELATED TO DRUG ABUSE

Of the 7,720 acquired immunodeficiency syndrome (AIDS) cases reported in Colorado through March 31, 2003, 9.1 percent were classified as IDUs, and 11.1 percent were classified as homosexual or bisexual males and IDUs (exhibit 5).

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Exhibit 1. Treatment Admissions¹ in Colorado by Primary Drug of Abuse and Percent: 1996–1H 2002

Drug	1996	1997	1998	1999	2000	2001	2002 ²
Total Admissions (N)	(12,991)	(11,757)	(14,301)	(14,511)	(13,109)	(13,183)	(6,529)
Cocaine/Crack	30.6	27.1	26.6	23.7	21.1	20.7	21.6
Heroin	15.1	13.7	13.2	14.4	14.5	14.0	12.5
Other Opiates	2.2	2.2	2.3	2.7	3.2	3.8	3.6
Non-Rx Methadone	0.3	0.1	0.2	0.2	0.2	0.2	0.4
Marijuana	38.8	37.9	39.8	43.7	42.5	40.6	39.1
Methamphetamine	8.9	14.9	13.5	10.7	13.0	15.6	17.9
Other Stimulants	0.7	0.9	0.7	1.1	1.5	1.2	1.3
PCP	0.0	0.0	0.0	0.1	0.1	0.1	0.0
Other Hallucinogens	0.8	0.7	0.7	0.7	0.8	0.7	0.5
Other Drugs ³	2.6	2.7	3.1	2.8	3.1	3.3	3.2

¹ Excludes alcohol-only and alcohol-in-combination admissions.

² First half of 2002.

³ Includes barbiturates, sedatives, tranquilizers, inhalants, and other drugs (each accounting for very small percentages, usually less than 1 percent).

SOURCE: DACODS

Exhibit 2. Annual Numbers and Percentages of Cocaine, Heroin, Marijuana, and Methamphetamine Users Entering Treatment in Colorado Within 3 Years of Initial Use: 1996–1H 2002

Drug	1996	1997	1998	1999	2000	2001	2002 ¹
Cocaine							
(N)	(599)	(433)	(587)	(516)	(447)	(418)	(193)
Percent	15.3	14.0	15.8	15.5	16.5	15.7	13.8
Heroin							
(N)	(328)	(262)	(362)	(356)	(352)	(301)	(113)
Percent	17.0	16.6	19.6	17.6	18.7	16.6	14.0
Marijuana							
(N)	(1,783)	(1,430)	(1,669)	(1,547)	(1,644)	(1,538)	(648)
Percent	35.8	33.1	30.5	25.4	29.9	29.2	25.5
Methamphetamine							
(N)	(296)	(514)	(517)	(312)	(347)	(406)	(217)
Percent	25.8	30.5	27.3	20.5	20.5	20.0	18.6

¹ First half of 2002

SOURCE: DACODS

Exhibit 3. Numbers and Rates Per 100,000 Population of Hospital Discharge Mentions for Selected Drugs in Colorado: 1996–2002

Drug	1996	1997	1998	1999	2000	2001	2002
Cocaine (N) Rate	(2,255) 59.0	(2,245) 57.7	(2,492) 62.8	(2,517) 62.3	(2,732) 63.2	(2,787) 63.2	(3,305) 73.6
Marijuana (N) Rate	(1,740) 45.6	(2,118) 54.4	(2,227) 56.1	(2,204) 54.6	(2,455) 56.8	(2,755) 62.5	(3,016) 67.2
Amphetamine (N) Rate	(532) 13.9	(959) 24.6	(815) 20.5	(682) 16.9	(942) 21.8	(1,161) 26.3	(1,463) 32.6
Narcotic Analgesics (N) Rate	(760) 19.9	(1,458) 37.5	(1,566) 39.5	(1,639) 40.6	(2,053) 47.5	(2,237) 50.8	(2,605) 58.0
Population	3,819,789	3,892,996	3,966,198	4,039,402	4,324,920	4,407,305	4,487,727

SOURCES: CHA and CDPHE

Exhibit 4. Lifetime Use of Three Club Drugs Among 6th–12th Graders in the Colorado Youth Survey: 2002

Grade	MDMA			Ketamine			GHB		
	(N)¹	(n Used)	% Used	(N)¹	(n Used)	% Used	(N)¹	(n Used)	% Used
6th	5,651	57	0.7	5,673	30	0.5	5,664	25	0.4
7th	3,079	35	1.1	3,108	31	1.0	3,102	18	0.6
8th	7,112	215	3.0	7,136	124	1.7	7,139	89	1.2
9th	847	37	4.4	853	25	3.0	848	11	1.3
10th	3,705	194	5.2	3,710	93	2.5	3,709	54	1.5
11th	1,047	113	10.8	1,052	50	4.8	1,051	14	1.4
12th	2,240	219	9.8	2,247	75	3.3	2,241	27	1.2

¹N=Total sample number.

SOURCE: Omni Research and Training

Exhibit 5. Colorado Cumulative AIDS Cases by Gender and Exposure Category: Through March 31, 2003

Category	Number of Confirmed Cases	Percent
Total	7,720	100.0
Gender		
Male	7,139	92.5
Female	581	7.5
Exposure Category		
Men/sex/men (MSM)	5,239	67.9
IDU	705	9.1
MSM and IDU	860	11.1
Heterosexual contact	438	5.7
Other	184	2.4
Risk not identified	294	3.8

SOURCE: CDPHE

Drug Abuse Trends in Detroit/Wayne County and Michigan

*Richard F. Calkins*¹

ABSTRACT

Cocaine indicators continued to stabilize. With increases in heroin-involved treatment admissions and heroin-involved deaths, heroin indicators are increasing. Data on other opiates reflected increases in abuse, especially for hydrocodone. Marijuana continued to be the top illicit drug, but indicators remained stable. Indicators for methamphetamine showed continuing increases, while indicators for abuse of LSD, GHB, ketamine, and Coricidin HBP showed some recent stabilizing or decreases. Twenty-nine percent of the cumulative AIDS cases in Michigan are among injection drug users.

INTRODUCTION

Area Description

Detroit and surrounding Wayne County are located in the southeast corner of Michigan's Lower Peninsula. In 2000, the Detroit/Wayne County population totaled 2.1 million residents and represented 21 percent of Michigan's 9.9 million population.

Currently, Michigan is the eighth most populous State in the Nation. The Detroit metropolitan area ranks 10th among the Nation's major population centers. In 2000, the city of Detroit's population was 951,000. Michigan's population increased by 6.9 percent between 1990 and 2000. Population growth above the statewide average occurred among those age 10–14 (12 percent), 15–17 (8.5 percent), and 5–9 (7.6 percent). There was a net population loss among those younger than 5 (4.3 percent) by 2000 because of declining birth rates since the mid-1990s. The following factors contribute to probabilities of substance abuse in the State:

- Michigan has a major international airport, with 277,688 flights in 2000; 10 other large airports also have international flights, with more than 200,000 arrivals in 2000. Additionally, there are 235 public and private small airports. Long-term projections for the Detroit Metro airport forecast a 31-percent increase in flights during the next 10 years.
- The State has an international border of 700 miles with Ontario, Canada; land crossings at Detroit, Port Huron, and Sault Ste. Marie; and

water crossings through three Great Lakes and the St. Lawrence Seaway, which connects to the Atlantic Ocean. Between Port Huron and Monroe, many places along the 85 miles of heavily developed waterway are less than one-half mile from Canada. Michigan has 940,000 registered boats. In 2001, two major bridge crossings from Canada (Windsor Tunnel and Ambassador Bridge) had 7.9 million cars, 1.7 million trucks, and 93,000 buses cross into Detroit. Southeast Michigan, the busiest port on the northern U.S. border, had about 21 million vehicle crossings with Canada in 2000. Detroit and Port Huron also have nearly 10,000 trains entering from Canada each year. The Foreign Mail Branch in Detroit processes 250,000 foreign parcels and about 900,000 letter-class pieces monthly.

- Michigan's numerous colleges and universities have many out-of-State or international students.
- The State has a large population of skilled workers with relatively high income (especially in the automotive industry), as well as a large population with low or marginal employment skills.
- There are chronic structural unemployment problems. Michigan has prospered in recent economic periods, with low unemployment. As the national economy slowed in 2002, so did the Michigan economy.

Data Sources

Data for this report were drawn from the sources shown below:

- **Hospital emergency department (ED) drug mentions data** through 2001 and preliminary data for the first half of 2002 were obtained from the Drug Abuse Warning Network (DAWN), Office of Applied Studies (OAS), Substance Abuse and Mental Health Services Administration (SAMHSA).
- **Treatment admissions data** were provided by the Division of Quality Management and Planning, Michigan Department of Community Health (MDCH), for the State and Detroit/Wayne County, as reported by State and federally funded programs. Reporting practices, which changed on

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October 1, 1998, affect the capability to reliably track trends in client characteristics, drugs of abuse, and other data reported in admissions records. During fiscal year (FY) 2001 and FY 2002, State reporting requirements were revised, which also challenged reporting continuity. The admissions volume reported has been declining over the past several years; it is difficult to identify whether changes in data reflect reporting practices or actual changes in the populations entering treatment, as all data are no longer reported. Software delays during FY 2002 resulted in large volumes of unresolved errors in data submissions and an inability to produce data sets for analysis until yearend. FY 2003 data just recently became available for use in this report. Based on data from the first 6 months of FY 2003, treatment admissions could increase by 4 percent by year-end.

- **Drug-related mortality data** were provided by the Wayne County Office of the Medical Examiner (ME) and the MDCH. The Wayne County ME provided data on deaths with positive drug toxicologies from 1993 through March 2003. These drug tests are routine when the decedent had a known drug use history, was younger than 50, died of natural causes or homicide, was a motor vehicle accident victim, or there was no other clear cause of death. The MDCH provided statewide data on probable psychostimulant-involved deaths for 1999–2001.
- **Heroin purity data** were provided by the Drug Enforcement Administration (DEA). Preliminary data on heroin purity between mid-2001 and mid-2002 were from the DEA's Domestic Monitor Program (DMP).
- **Drug seizure data and arrest trends** were provided by the Michigan State Police for 2001, 2002, and for the first part of 2003.
- **Drug distribution data**, from the High Intensity Drug Trafficking Area, Investigative Support and Deconfliction Center, of Southeast Michigan (HIDTA–SEM), were derived from FY 2002 Threat Assessment data.
- **Poison control case data** were provided by the Children's Hospital of Michigan Poison Control Center and represent contact data on cases of intentional abuse of substances January through May 2003. This center is one of two in Michigan; its catchment area is primarily eastern Michigan, although contacts can originate anywhere.

- **Drug-related infectious disease data** were provided by the MDCH on the acquired immunodeficiency syndrome (AIDS) and human immunodeficiency virus (HIV) prevalence estimates as of January 1, 2003.

DRUG ABUSE PATTERNS AND TRENDS

Cocaine/Crack

Between 1994 and 1999, cocaine was the most frequent DAWN ED drug mention in Detroit metropolitan counties (exhibit 1). The Detroit area rate of cocaine ED mentions per 100,000 population was 178 in 1999, 179 in 2000, and 186 in 2001. During 2000, the 7,870 cocaine mentions represented a slight but nonsignificant increase from 1999, while data for 2001 showed there was a slight but nonsignificant decrease for the year compared with 2000. This decreasing trend continued into the first half of 2002.

Among cocaine mentions, the typical cocaine ED case continued to be a male, age 35 or older, who went to the emergency department seeking help for unexpected reaction, chronic effects, or overdose, and was treated and released in a multidrug-involved episode. There was a significant decrease in cases among those younger than 35 in the first half of 2002.

Cocaine (including crack) has been the foremost primary illicit drug of abuse among admissions to State-funded treatment programs statewide since FY 1986. During FY 2001, cocaine/crack was the top illicit drug among statewide admissions, accounting for 18 percent of total admissions, while in FY 2002, cocaine/crack accounted for 17 percent of statewide admissions. In the first half of FY 2003, cocaine was the primary drug in 19 percent of all admissions in Michigan. In Detroit/Wayne County, cocaine represented 28 percent of total admissions in FY 2001, 26 percent in FY 2002, and 27 percent in the first half of FY 2003. Primary cocaine admissions were exceeded only by those for heroin, which accounted for 34 percent in FY 2001, 29 percent in FY 2002, and 28 percent in the first half of FY 2003.

Cocaine (including crack) was involved (as either a primary, secondary, or tertiary drug) in 35 percent of all treatment admissions statewide in FY 2002 and in 37 percent in the first half of FY 2003. In Detroit/Wayne County, the proportions were 52 and 49 percent, respectively. Cocaine-involved treatment admissions are projected to increase by 9 percent statewide in FY 2003. About one of every three cocaine-involved admissions statewide in FY 2002 and in the first half of FY 2003 was in Detroit/Wayne County.

The number of decedents with a positive drug toxicology for cocaine in Detroit/Wayne County was basically stable between 1995 and 1999, with plus or minus 1–12-percent fluctuations year to year (exhibit 2). In 2000, there was a 16-percent increase in cocaine deaths over 1999. In 2001, cocaine deaths increased by less than 3 percent from 2000, to 406 cases. In 2002, the 417 cocaine deaths were a slight increase over 2001. The 94 cocaine-present deaths in the first 3 months of 2003 suggest a slightly decreasing pattern may be developing.

Availability, prices, and purity for cocaine powder and crack remained relatively stable. Ounce and kilogram prices have been stable for at least the past 9 years. The cost of crack rocks has now increased to as high as \$50, with \$10 the most common unit price in Detroit neighborhoods. Higher-priced units are more typical when sold to outsiders in Detroit, or when sold outside Detroit. Ounce amounts of cocaine and crack usually sold for the same price (\$750–\$1,300) in 2001 and 2002 in Detroit. Small plastic bags (heat-sealed or Ziploc) or aluminum foil are now the most common packaging.

Numerous organizations distribute cocaine in the metropolitan area and statewide, according to the FY 2002 Threat Assessment by the HIDTA–SEM. The Detroit metropolitan area remains a source hub for other areas of Michigan and the larger Midwest. Gangs control a number of distribution points and are major suppliers to many markets, although it is reported that there is less organized street gang activity than in the past. Michigan State Police reported that several homicides occurred in Saginaw in early 2003 as a result of gang activity and drug sales competitions.

Heroin

ED mentions for heroin have trended gradually upward since 1994 (exhibit 1). In 1999, the Detroit metropolitan area rate of heroin mentions was 61.5 per 100,000 population; in 2000, the rate was 75.8. In 2001, the rate increased significantly to 93, while in the first half of 2002 the rate declined significantly to 39 from 51 in the first half of 2001. The number of heroin ED mentions was 51 percent higher in 2001 than in 1999.

Among heroin mentions, the typical heroin ED case continued to be a male, age 45–54, who sought help in an emergency department for unexpected reactions or chronic effects and was treated and released.

Heroin as the primary drug among treatment admissions accounted for 29 percent of all admissions in Detroit/Wayne County in FY 2002 and for 28 percent in the first half of 2003. It accounted for 12 percent of admissions statewide both in FY 2002 and in the first

half of FY 2003. The 2,362 admissions in Detroit/Wayne County involving heroin (as primary, secondary, or tertiary drug) accounted for 54 percent of the statewide total of 4,353 heroin-involved admissions in the first half of FY 2003. Total heroin-involved admissions in Michigan are expected to increase by 10 percent in FY 2003 based on patterns in the first half of the year. One in three admissions in Detroit/Wayne County involved heroin, while heroin was involved in 14 percent of all statewide admissions in FY 2002.

Heroin deaths have been steadily increasing in Detroit/Wayne County since 1992. In 1996, there were 240 heroin-present deaths; by 2000, the annual number had nearly doubled (exhibit 2). Deaths with heroin metabolites present in 1999 represented a 24-percent increase from 1998, while in 2000, heroin cases increased again, by 23 percent over the 1999 total. The 465 heroin-present deaths in 2001 were a slight decrease from the 473 deaths in 2000. During 2002, 496 heroin-present deaths were identified, which again exceeded the number of cocaine-involved deaths.

Since 1996, the Wayne County ME lab has tested decedents for 6-monoacetylmorphine (or 6-AM) to determine whether its presence parallels increases in heroin (morphine) positivity. Until nearly the end of 2001, findings of 6-AM were at about one-half the level for heroin-present cases. Findings of this drug are most typical in decedents with more acute effects of heroin use. In late 2001 and the first 3 months of 2002, there were roughly four heroin (morphine) cases for every one case of 6-AM. Overall in 2002, there were 185 findings of 6-AM and 496 findings of heroin (morphine); this is a ratio of about 37 percent of 6-AM to heroin being present. This same ratio pattern persisted in the first 3 months of 2003.

Nearly all available heroin continued to be white in color. South America (Colombia) remains the dominant source, although in the past 3–4 years, heroin originating in both Southeast Asia and the Middle East has been identified. Heroin from these latter two sources was not very common between the mid-1990s and 2000. Heroin originating in Mexico was available in some parts of Michigan outside the Detroit metropolitan area.

Heroin street prices remained stable and relatively low in Detroit. Packets or “hits” available in Detroit are typically sold in \$10 units, while outside the area individual units sometimes cost \$15–\$25 or more. Price is also affected by whether the buyer is known to the seller, as well as whether the buyer and seller are of the same racial/ethnic origin. Bundles of 10 hits cost between \$75 and \$150. Packaging is often

tinfoil, lottery papers, coin envelopes, balloons, fingers cut off from surgical gloves, or small plastic Ziploc bags. There are reports of some outstate users of oxycodone switching to heroin because of less availability of oxycodone.

According to the most recent information from the DEA, heroin purity, which had increased from the early 1990s to a peak of nearly 50 percent in 1999, ranged from 23–57 percent for South American heroin and averaged about 60 percent for middle eastern heroin during the period of mid-2001 to mid-2002.

Among new heroin users are a number of young, affluent, employed females in suburban areas outstate.

Other Opiates/Narcotic Analgesics

In the Detroit area, indicators for opiates and narcotics other than heroin remained lower than those for cocaine and heroin, continuing a long-term trend since the early 1980s. Codeine and its prescription compounds (Schedule III and IV drugs) remained the most widely abused other opiates; codeine indicators were stable. However, there were further increases in hydrocodone (typically Vicodin, Lortab, or Lorcet), carisoprodol (Soma), and oxycodone (OxyContin) poison control cases. These drugs are available in myriad combinations that involve other drugs in the formulation of the pill or capsule.

As primary drugs among treatment admissions in FY 2002, other opiates were reported in 284 cases in Detroit/Wayne County and in 1,930 cases statewide. In the first half of FY 2003, there were 1,193 primary other opiate admissions statewide, with 262 in Detroit/Wayne County. At this rate, such admissions in Detroit/Wayne County could nearly double those of FY 2002 by the end of FY 2003. Other opiates (as primary, secondary, or tertiary drugs) were involved in 7 percent of statewide admissions and in 6 percent of Detroit/Wayne County admissions in FY 2002. This compares to 8 percent in the first half of FY 2003 both statewide and in Detroit/Wayne County. The other opiates-involved admissions in Detroit/Wayne County accounted for one of every five statewide other opiates-involved admissions during FY 2002. In the first half of FY 2003, Detroit/Wayne County other opiate-involved admissions accounted for 23 percent of the total statewide cases.

Toxicology findings from the Wayne County ME lab showed 241 cases of codeine positivity in 2002, compared with 48 cases from January through March 2003.

Hydrocodone and hydrocodone/combinations began to appear in southeast Michigan hospital ED drug

mentions in 1994, with sharp and significant increases in 1998 (185 mentions), 1999 (238), 2000 (371), 2001 (483), and in the first half of 2002 (290) (exhibit 1). This drug was identified by the Wayne County ME lab in 60 decedents in 2000, 80 in 2001, and 120 in 2002. Information from the Children's Hospital of Michigan Poison Control Center on intentional hydrocodone abuse cases for 2001 identified about 40 cases; approximately one-half were female. In the first 5 months of 2003, 107 cases of intentional hydrocodone abuse were reported to the poison control center, which is more than twice as many cases as in 2002.

Carisoprodol was identified in 20 Wayne County decedents in 2000, 30 in 2001, and 24 in 2002. There were 21 cases of intentional carisoprodol abuse reported to the poison control center during the first 9 months of 2002 and 36 cases in the first 5 months of 2003. Southeast Michigan DAWN ED data show 170 mentions in 1998, 145 in 1999, 146 in 2000, 183 in 2001, and 82 in the first half of 2002.

The most recent revised southeast Michigan ED drug mentions data from DAWN show 21 oxycodone/combinations mentions in 1996, 15 in 1997, 19 in 1998, 17 in 1999, 45 in both 2000 and 2001, and a significant increase to 65 mentions in the first half of 2002. Since about 2000, oxycodone (OxyContin) has been steadily reported by law enforcement agencies in arrests, primarily in the western and northern lower Michigan areas, but more recently all over the State. It has been reported that it is not uncommon for persons in emergency departments to ask specifically for this drug for various ailments. Pharmacy break-ins and armed robberies specifically related to this drug continued to be reported, but they may be declining as some pharmacies have posted signs that they do not carry this drug. Oxycodone was found in 10 decedents in Wayne County in 2000, 13 in 2001, and 12 in 2002. It was involved in 14 cases reported to the poison control center in the first 5 months of 2003. OxyContin pills still sell for \$0.50–\$1.50 per milligram. About 75 arrests were made by Michigan State Police in 2002 for oxycodone, while 29 such arrests were reported in the first 4 months of 2003. Some oxycodone reportedly is being smuggled from Canada. Some users are reportedly switching to heroin because of less availability of oxycodone in some outstate locations.

Methadone was found in 35 decedents in Wayne County between April and September 2001, in 26 decedents between October 2001 and March 2002, and in 72 decedents in 2002. Use of this drug in treatment of chronic pain has reportedly increased.

Marijuana

Marijuana indicators remain stable. Mexican marijuana continued to be the dominant form available.

Detroit metropolitan area ED marijuana data show a steady increasing trend since 1994, with some fluctuations in a few years (exhibit 1). In 1999, the case rate for marijuana mentions per 100,000 population was 95; in 2000, the case rate was 99, in 2001 the case rate was 121, while in the first half of 2002 the case rate was 66. Although these rates are increases (paralleled by the number of marijuana mentions over this same time period), they were not significant.

Among marijuana ED mentions, the typical case was a male, age 35 or older, who was experiencing unexpected reactions, chronic effects, or overdose, and who was treated and released in a multi-drug use episode. There were significant increases in cases involving 18–25- and 26–35-year-olds between the first half of 2001 and the first half of 2002.

Treatment admissions during FY 2002 in Detroit/Wayne County for marijuana as primary drug totaled 1,105, while the total in the first half of FY 2003 was 583. For FY 2002 statewide, there were 8,834 marijuana admissions as primary drug, while for the first half of FY 2003 there were 4,214 such admissions. Marijuana was involved (as primary, secondary, or tertiary drug) in 40 percent of statewide admissions and in 31 percent of Detroit/Wayne County admissions in FY 2002. In the first half of FY 2003, these proportions were 38 and 29 percent, respectively. The Detroit/Wayne County marijuana-involved admissions accounted for about one of every six (17 percent) statewide marijuana-involved admissions in FY 2002, with a slight increase (to 18 percent) in the first half of FY 2003.

The majority of marijuana seized in Michigan originates in Mexico and is transported in both large and small quantities by a variety of methods. Law enforcement agencies continue to report increases in seizures in hydroponically grown marijuana from Canada, which is grown and smuggled by Asian organized crime operations.

Stimulants

Indicator data showed increasing levels of methamphetamine abuse in the State, mostly in the southwestern corner of lower Michigan. Amphetamine abuse has also been increasingly identified, although it is more stable than the methamphetamine patterns. A detailed baseline report, examining up to 5 years of

data in some cases, has just been completed in line with the Michigan Methamphetamine Strategy.

Southeast Michigan DAWN ED drug mentions for methamphetamine declined to near zero from 1996 to 2000 and remained at that level in 2001 (exhibit 1). Between 1992 and 1996, there were increases in amphetamine mentions, but they declined after 1996 and then increased (nonsignificantly) in 2001 to 437 mentions. In the first half of 2002 there were 207 amphetamine mentions.

Methcathinone (“cat”), an easily manufactured stimulant, was identified in Michigan’s Upper Peninsula around 1990; an epidemic ensued until about 1994, when no further labs were found. A trickle of reported admissions to treatment involving this drug continued; there were 9 primary methcathinone admissions statewide in FY 2000, 4 in FY 2001, and 10 in FY 2002. There were four methcathinone admissions statewide in the first half of FY 2003.

In FY 2002, there were 280 primary methamphetamine admissions statewide, with 5 in Detroit/Wayne County. In the first half of FY 2003, there were 165 primary methamphetamine admissions statewide, with 1 in Detroit/Wayne County. The 280 methamphetamine admissions in FY 2002 lived in 43 of the 83 counties in Michigan, mostly in rural areas, with more admissions in western and southern counties; 5 lived in Detroit/Wayne County. In the first half of FY 2003, methamphetamine admissions lived in 28 counties.

Among primary drug methamphetamine admissions statewide in FY 2002, smoking was reported as the route of administration by 43 percent, followed by inhalation (33 percent), oral (17 percent), and injection (8 percent). Smoking increased to 48 percent of first-half FY 2003 methamphetamine admissions, followed by inhalation (26 percent), injection (16 percent), and oral (11 percent) routes.

One important finding in the detailed baseline report noted earlier is that virtually all of the stimulant-involved treatment cases for the past 5 fiscal years were daily users, regardless of whether the drug was a primary, secondary, or tertiary drug of abuse.

Mortality data from the Wayne County ME lab show 2 methamphetamine-positive cases among decedents between April and September 2001, 1 case between October 2001 and March 2002, and 10 cases in all of 2002. The majority of these cases had multiple drugs present (including methylenedioxyamphetamine [MDA] or methylenedioxymethamphetamine [MDMA]), and almost all were homicide cases.

A new analysis of statewide death certificate data conducted with MDCH Vital Statistics found there were as many as 52 deaths where there was probable involvement of amphetamines or stimulants for the period 1999–2001 in Michigan. Exact numbers are elusive, as the coding structure available is complex and does not permit reporting of methamphetamine alone because it covers a wide variety of other drugs as well.

Michigan's border with Canada has been the focus of efforts to stop the flow of large amounts of pseudoephedrine and ephedrine into the United States. These imports are the necessary ingredients for making methamphetamine and have been destined for the western United States and Mexico. Intensified efforts by law enforcement after the September 11, 2001, terrorist attacks resulted in the indictment of numerous individuals and seizures of millions of pseudoephedrine dosage units. One such seizure in June 2002 involved 21 million tablets. Law enforcement efforts within Canada recently began activity to stop large shipments of this drug.

Michigan State Police reported seizing 40 methamphetamine labs in 2000 (all outside Detroit), compared with 14 labs in 1999. During 2001, 91 labs were seized by the Michigan State Police, and 120 were seized by the State Police, DEA, and local departments combined. In 2002, Michigan State Police seized 189 labs, twice as many as in 2001. Environmental cleanups are an increasing problem. Most of the lab seizures have been in southwestern lower Michigan (particularly Allegan, Van Buren, and Barry Counties). The majority of labs seized so far have been relatively small in production capability, although more recently some larger labs have been found.

Michigan has a long history of high per capita distribution of methylphenidate (Ritalin). According to the DEA, Michigan ranks third per capita in distribution, with the amount of this drug distributed increasing by 45 percent since 1998. Consequently, distribution is 60 percent higher in Michigan than the national average for all States. Indicators show little evidence of intentional abuse, yet anecdotal reports of such cases continue.

Khat, a plant grown in the Middle East that must be freshly harvested to produce its desired stimulant effects, continued to be seized in quantity at Michigan airports.

Depressants

All indicators are relatively stable for depressants.

Depressant treatment admissions in FY 2002 and the first half of FY 2003 remained low in relation to those for alcohol, cocaine, heroin, and marijuana. Such admissions typically involved benzodiazepines or sedatives/hypnotics. Barbiturates or tranquilizers were reported less often. Depressants remained more often involved as secondary or tertiary drugs among treatment admissions. In the first half of FY 2003, there were 735 admissions involving depressants, with 226 of these in Detroit/Wayne County.

Hallucinogens

Lysergic acid diethylamide (LSD) continued to be sporadically reported, and its use may be declining overall from already low levels of use. LSD is generally limited to high-school-age suburban and rural youth. Dose forms are primarily paper cutouts of various designs.

Hospital ED mentions for hallucinogens have been declining overall since about 1995 (exhibit 1). In the first half of 2002, there were no LSD mentions.

During FY 2002, there were 63 primary hallucinogen treatment admissions statewide, with 8 of these cases involving phencyclidine (PCP). In the first half of FY 2003, there were 165 admissions with hallucinogens involved, mostly as tertiary drugs. Six of these cases involved PCP.

Club Drugs

In this report, the category of club drugs includes ecstasy, gamma hydroxybutyrate (GHB), flunitrazepam (Rohypnol), and ketamine. Indicators increased for ecstasy, stabilized for ketamine, and declined for GHB. There is still no information from any source or indicator data to suggest that flunitrazepam is being used in Michigan.

The drug known as ecstasy is typically MDMA or MDA. Both drugs have been identified in lab testing of ecstasy samples, sometimes in combination. There have been many anecdotal reports of widespread and increasing use since about 1997, but these drugs rarely appear in traditional indicators identifying abuse. Ecstasy users are typically college students or young professionals, often in dance settings. Many urban and suburban areas outside Detroit are noted as having significant ecstasy use. There are now reports of some use by high school students. Some sources report that ecstasy is now harder to buy, so some users are returning to marijuana.

Southeast Michigan ED drug mentions first began to reflect MDMA use in 1998, with six mentions

reported (exhibit 1). MDMA mentions rose to 40 in 1999 and 60 in 2000. The change between 1998 and 2000 represented a 900-percent increase. Data for 2001 show 111 MDMA mentions, a significant increase from 1999. An estimate could not be made for the first half of FY 2002.

During FY 2002, there were 158 ecstasy-involved (as primary, secondary, or tertiary drug) treatment admissions statewide; 31 of these occurred in Detroit/Wayne County. In the first half of FY 2003, there were 93 ecstasy-involved admissions statewide, with 25 in Detroit/Wayne County. It continues to be more common for ecstasy to be the tertiary or secondary drug than the primary drug involved among those seeking treatment.

The Children's Hospital of Michigan Poison Control Center received reports of 13 cases involving ecstasy in the 5-month period between January and June 2003. This is fewer cases than reported in 2002.

The Wayne County ME lab identified one MDMA/MDA death in 1998, two in 1999, and three in 2000. Two cases were found among decedents between April and September 2001; one was a homicide victim. In 2002, there were a total of 11 decedents with MDMA present, with most being homicide victims; multiple drugs were found in all of these cases.

Ecstasy, sold in various colored and often stamped pill forms, has been seized throughout Michigan. Sources remain Western Europe and Canada. Wholesale prices can be as low as \$10 per pill for quantities of 500 via Canada. Projections for 2002 were that the U.S. Customs Service in Detroit would have seized 1.2 million ecstasy pills by the end of the year. The Michigan State Police seized more than 300,000 tablets and made 40 arrests for ecstasy in 2002.

Since 1998, there have been several indicators of increasing ketamine use. Break-ins to veterinary clinics have continued (but these may be slowing recently) in efforts to obtain this drug. The Children's Hospital of Michigan Poison Control Center was consulted on seven cases of intentional ketamine abuse during the first 5 months of 2003. There were 11 ketamine-involved treatment admissions statewide in FY 2002 and 10 such cases in the first half of FY 2003.

GHB and its precursor gamma butyrolactone (GBL) abuse began to be reported in about 1997, with the number of ED mentions and poison control case reports peaking in about 1999. Use has been primarily

at nightclubs (recent use appears to be more confined to gay scenes) and private parties. ED mentions of GHB totaled 45 in 1999, 22 in 2000, 31 in 2001, and 9 in the first half of 2002 (exhibit 1). The Children's Hospital of Michigan Poison Control Center GHB case reports totaled 100 in 1999, about 35 in 2000, and about one-half that many in 2001. In 2002, the Children's Hospital of Michigan Poison Control Center was notified of only about 10 cases of intentional GHB abuse. It is believed that GHB is now being underreported to this source, with only three cases reported during the first 5 months of 2003. During FY 2002 there were 4 admissions to treatment in Michigan involving GHB as the primary drug and 12 total cases in which GHB was involved. In the first half of FY 2003, there were two admissions statewide with GHB as primary drug, and seven total cases in which it was involved.

Other Drugs

Inhalants continued to be reported as commonly used, mostly by teens and young adults. Paint, furniture polish, and cleaning products were the most common inhalants, and males and females were equally likely to be inhalant users.

Intentional abuse of Coricidin HBP tablets, the over-the-counter cold and flu medicine, increased in case reports to Children's Hospital of Michigan in 2000 and 2001. These tablets contain dextromethorphan. Multiple tablets are taken for a dissociative effect; use of up to 40 pills at a time has been reported. During 2000, 44 Coricidin HBP cases were reported to the poison control center, while in the first 10 months of 2001, at least 52 cases involved this drug. Most cases were teens, and nearly two of every three cases were male. About two of every three cases required hospitalization. In the first 9 months of 2002, 54 intentional Coricidin abuse cases were reported to the poison control center. In the first 5 months of 2003, there were 25 cases of intentional Coricidin abuse reported; all cases were among patients younger than 19.

Abuse of cough syrup (also containing dextromethorphan) continued to be noted, with shoplifting being a common way of obtaining the substance.

INFECTIOUS DISEASES RELATED TO DRUG ABUSE

Michigan ranks 17th among all States, with an AIDS case rate of 113.9 per 100,000 population. As of January 1, 2003, a cumulative total of 12,623 cases of AIDS had been reported in Michigan.

Injection drug users (IDUs) continued to account for 29 percent of total AIDS cases; 22 percent have only

this risk factor and 7 percent are IDUs who also have male-to-male sex as a risk factor.

Of the 8,115 male cases currently living with AIDS or HIV, 12 percent are IDUs and 7 percent are in the dual risk group.

Among the 2,402 females living with AIDS or HIV, 28 percent are IDUs, 41 percent were infected

through heterosexual contact, and 28 percent have undetermined risk factors.

Statewide, HIV prevalence is now estimated at a maximum of 2,950 IDUs and 930 IDUs who also engage in male-to-male sex. The total HIV prevalence estimate for Michigan is now 15,500 cases.

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Exhibit 1. Estimated Numbers of ED Drug Mentions in a Seven-County Area in Southeast Michigan: 1994–First Half of 2002¹

Drug Mentions	1994	1995	1996	1997	1998	1999	2000	2001	2002
Alcohol-in-Combination	7,220	8,379	9,087	7,984	7,992	7,199	8,447	9,109	4,248
Cocaine	8,268	8,763	10,435	8,093	8,617	7,699	7,870	7,730	3,357
Heroin	2,160	2,390	3,188	3,028	2,879	2,653	3,328	3,870 ²	1,657 ²
PCP/PCP Combinations	26	56	21	19	20	24	21	38	...
LSD	99	143	57	74	27	63	35	15	0
Amphetamine	305	292	440	359	362	178	...	437	207
Methamphetamine/Speed	17	15	...	...	0	...	...	...	...
Marijuana/Hashish	2,955	3,875	4,210	3,742	4,335	4,100	4,344	5,017	2,788
GHB	...	0	...	...	11	45	22	31	10
Ketamine	-	0	0	...	...	...	...	12	0
MDMA (ecstasy)	...	0	0	...	6	40	60	111	...
Rohypnol	-	0	0	0	0	0	0	0	1
Hydrocodone/Combinations	89	129	165	160	185	238	371	483	290
Drug Episodes	17,653	18,626	20,796	17,604	17,477	16,125	17,042	19,265	9,374
Total Drug Mentions	31,633	34,152	38,952	32,487	32,582	30,207	32,740	38,159	18,229
Total ED Visits (in 1,000s)	1,436	1,513	1,537	1,449	1,461	1,481	1,474	1,583	794
Drug Episodes (rate/100,000)	432	451	498	417	409	374	388	463	223
Drug Mentions (rate/100,000)	775	828	933	770	763	700	746	893	434

¹ Data for 2002 are for the first half only and are preliminary and subject to change. Dots (...) indicate that an estimate with a relative standard error greater than 50 percent has been suppressed.

² Heroin excludes a small, but unknown, number of morphine/combinations mentions, which have been moved to the narcotic analgesics category during this time period.

SOURCE: DAWN, OAS, SAMHSA

Exhibit 2. Detroit/Wayne County Positive Drug Toxicology Cases Involving Heroin or Cocaine as an Independent Cause of Death: 1995–March 2003

Month		1995	1996	1997	1998	1999	2000	2001	2002	2003
January	Heroin	16	21	17	21	23	43	52	29	26
	Cocaine	31	36	29	32	21	39	50	25	25
February	Heroin	14	16	27	26	31	37	40	35	47
	Cocaine	23	29	33	27	20	27	36	28	38
March	Heroin	11	13	13	21	41	34	45	48	22
	Cocaine	28	15	29	27	33	38	39	32	31
April	Heroin	12	11	24	23	29	42	38	41	
	Cocaine	25	33	29	35	34	24	32	37	
May	Heroin	19	10	14	16	28	56	33	41	
	Cocaine	36	19	22	32	33	46	27	29	
June	Heroin	25	25	24	33	40	42	36	43	
	Cocaine	31	32	30	38	32	32	30	38	
July	Heroin	25	21	30	21	30	44	46	51	
	Cocaine	27	32	26	32	25	36	42	33	
August	Heroin	13	23	27	25	29	35	46	47	
	Cocaine	14	29	28	25	31	36	36	44	
September	Heroin	12	18	33	29	31	23	32	46	
	Cocaine	16	25	22	37	21	24	24	38	
October	Heroin	16	29	27	27	37	39	47	42	
	Cocaine	29	34	32	33	35	26	42	44	
November	Heroin	21	20	27	32	41	40	23	35	
	Cocaine	29	28	28	32	32	35	22	26	
December	Heroin	19	33	24	35	23	38	27	38	
	Cocaine	28	37	36	35	25	33	26	43	
Total	Heroin	203	240	287	309	383	473	465	496	
	Cocaine	317	349	344	385	342	396	406	417	

SOURCE: Wayne County Office of the Medical Examiner Laboratory

Illicit Drug Use in Honolulu and the State of Hawaii

D. William Wood, M.P.H., Ph.D.¹

ABSTRACT

The State continues to be caught in the grip of its own 'ice' epidemic. The problems associated with this drug now date back nearly 15 years, yet little is being done to counter its many negative impacts. The use of methamphetamine in Hawaii is characterized by any of a number of sentinel indicators. Data show more individuals seeking treatment for methamphetamine as their primary drug of abuse than for any other drug, including alcohol. The medical examiner similarly reports more decedents with 'ice' present in their toxicological screens than any other substance, including alcohol. Arrestees interviewed and toxicologically screened by the ADAM program show more testing positive for methamphetamine (as high as 49 percent) than for any other drug. As 2002 closed, few, if any, substance abuse-related initiatives were being proposed at the legislature; treatment programs remained poorly funded; and enforcement agencies were somewhat frustrated with capturing and recapturing many of the same individuals for what has become an exceptionally high number of thefts and domestic violence incidents. The summary of drug activity in Hawaii from July to December 2002 is that methamphetamine use has increased. Cocaine use appears to be reduced, with fewer arrests and slight declines in deaths and treatment episodes. Heroin use has been eclipsed in the data by the rapid increase in use of other opiates, mainly oxycodone. Marijuana use remained elevated, and it remains a major drug of choice by many in Hawaii. It appears, however, that marijuana is not as relevant to law enforcement officials as other drugs, in spite of the very active continuation of the 'Operation Green Harvest.' Oxycodone and methadone are now established among the drugs of use in Hawaii, and MDMA (ecstasy) use is clearly present but does not appear to be a major problem for any of the reporting agencies. As the year ended, the State had elected its first female and first Republican Governor since statehood, was about to open a solidly Democratic House and Senate, and had a potential \$200 million budget shortfall with a weak economy; there was no apparent end to the mandated services for children in schools and adults in prisons.

INTRODUCTION

This report presents current information on illicit drug use in the city and county of Honolulu (Oahu) and the neighboring island of Hawaii, based on data presented at the Honolulu Community Epidemiology Work Group (CEWG) meeting on April 9, 2003. Data were not provided from the neighbor islands' police departments, since all reported shortages of staff because of both the increased county security needs and the activation of some members by the National Guard. Therefore, this report will be strictly about Oahu and its drug activities in 2002.

Area Description

The estimated 1.3 million residents of the Aloha State are extremely tolerant of the many "prices" one has to pay for the privilege of living in paradise. The cost of living in Hawaii, as indexed by the Cost-of-Living Adjustment (COLA) to Federal payroll, is approximately 25 percent higher than the national average, although those who do not have access to the Post Exchange (PX) on the military bases would suggest it is considerably higher. Except for those things that were a part of the original ecosystem, everything in Hawaii has come there by sea or by air, meaning that transportation expense is a fact of life for all residents. The general wages in Hawaii are about 7 percent lower than for comparable employment on the mainland.

The complexity of survival in Hawaii is compounded by the economic dependence on tourism and civil service employment. Since the demise of the plantations at the beginning of World War II, government, in the form of military or civil service, has dominated employment throughout the State.

As has been mentioned in previous CEWG reports, the economy of Hawaii has been depressed for several years. As a result, the State had many concerns that emerged with the Iraq war. On the one hand, the strong military presence in the islands was seen as an economic opportunity, but the fact that this was not a "typical" war meant just the opposite to the State. Long deployments of navy ships and marine and army forces and the activation of the National Guard and reserves resulted in an outflow of residents. The

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unknown duration of the deployment also meant that many military families went back to their mainland roots with their families. The net effects were all negative. Additionally, tourists do not make long trips during war periods, particularly with the threat of terrorist activities still present. And, still lingering as a problem, the slow recovery of the mainland economy along with the continued uncertainty in major Asian markets has meant that predictions for the future are tentative at best.

This report is for the period July 1, 2002, through December 31, 2002. A State gubernatorial election was held and the first female and the first Republican governor since statehood was elected. The State legislature only changed minimally in terms of the imbalance between the majority Democrats and the minority Republicans.

Data Sources

Data from the following sources are reported as annual data (for 2002) except as otherwise noted.

- **Quantitative and qualitative data** were compiled from participants in the April 9, 2003, Honolulu CEWG meeting. The State of Hawaii Narcotics Enforcement Division and the Federal Drug Enforcement Agency (DEA), although invited, did not participate in this meeting.
- **Treatment admissions and demographic data** were provided by the Hawaii State Department of Health, Alcohol and Drug Abuse Division (ADAD). Previous data from ADAD are updated for this report whenever ADAD reviews its records. These data represent all State-supported treatment facilities (95 percent of all facilities). About 5 percent of these programs and two large private treatment facilities do not provide data. During this reporting period, approximately 45 percent of the treatment admissions were paid for by ADAD; the remainder were covered by State health insurance agencies or by private insurance.
- **Drug-related death data** were provided by the Honolulu City and County Medical Examiner (ME) Office. These data are based on toxicology screens performed by the ME Office on bodies brought in for examination. The sorts of circumstances that would lead to the body being examined by the ME include unattended deaths, deaths by suspicious cause, and clear drug-related deaths. In short, while the ME data are consistent; they are not comprehensive and account for only about one-third of all deaths on Oahu.

- **Law enforcement case data** are usually provided by the Vice Divisions of the Honolulu, Maui, Kauai, and Hawaii Police Departments. These data are updated whenever possible to include cases that had occurred during a previous period but were under current investigation. In the current report, no data were received from the Kauai or East Hawaii Police Departments, but all others are included.
- **Arrestee drug testing data** were provided by the Arrestee Drug Abuse Monitoring (ADAM) program of the National Institute of Justice (NIJ). The ADAM program now reports its data regularly to the CEWG. The latest report is based on 2002 data, although first quarter data from 2003 are available. The local ADAM project collects data at the Central Receiving Unit of the Honolulu Police Department. Data on the results of the urine testing are presented.

Emergency department (ED) drug mentions data have not been available in Hawaii since 1994, because ADAD has canceled the Hawaii Emergency Department Episode Data (HEED) project. It is unlikely that HEED will be reinstated any time soon given the State's financial situation. Discussions with the Healthcare Association of Hawaii regarding inclusion in the DAWN program have resulted in a briefing of all hospital chief executive officers and the sharing of DAWN information. However, with the Iraq war and the elevated terrorist threat looming, no decisions were possible during this period.

DRUG ABUSE PATTERNS AND TRENDS

Indicators reflect the principal areas of activity regarding substance abuse in the State of Hawaii. The participating agencies have, in the past, focused their activities around alcohol and tobacco. However, crystal methamphetamine became the major drug of concern almost 2 years ago, and it appears that it will have many implications for the foreseeable future in terms of agency activity, including that of the ME's Office. Police, treatment, and ME activity all increased from previous reports. Methamphetamine and alcohol, in addition to cocaine, heroin, and marijuana, all form the focus of substance abuse activity over this time period.

Hawaiians and Whites remain the majority user groups within the 17 identified ethnic groups (plus 2 other categories: "other" and "unknown/blank") accessing ADAD facilities for substance abuse treatment. During the July through December 2002 period, 40.9 and 26.6 percent of the admissions,

respectively, were Hawaiians and Whites. All other groups accounted for significantly lower proportions of admissions.

Methamphetamine has again assumed the lead as the primary substance of abuse for those admitted to treatment (36.3 percent of admissions). Alcohol, the leading primary substance for many years, now accounts for 30.3 percent of admissions. It is important to note that almost all polydrug treatment admissions list alcohol as a substance of abuse. Marijuana remains the third most frequently reported (19.8 percent) primary substance of abuse among treatment admissions. The 25–44-year-old age group had the highest representation among treatment admissions. While marijuana abuse accounts for the majority of treatment admissions among those younger than 18, the abuse of crystal methamphetamine still looms as a major treatment category for this age group.

Price data for this period from the Honolulu Police Department (HPD) Narcotics/Vice Division suggest that, for the most part, prices have been stable, except for some minor increases for smaller amounts of crystal methamphetamine. The size of the drug supply makes for a relatively stable drug market, with only a few market adjustments caused by seizures of specific drugs or oversupply of others.

Because of a lack of security forces at neighbor island airports, and thousands of miles of coastline with only a small Coast Guard presence in the State, shipping drugs to Hawaii is relatively safe and easy. From the neighbor islands, inter-island flights are used because of reduced security. The mainland supply chain is the main source of the material used for reprocessing as crystal methamphetamine, and the need for clandestine manufacture of the drug is not present. The purity of ice in Hawaii is reported to approach 100 percent, but no DEA price and purity reports have been received for several years.

The final police evidence of increased ice availability is that of clandestine labs, almost exclusively reprocessing labs that continue to be closed at a regular pace. The Hawaii DEA continued efforts with the HPD to deal with crystal methamphetamine and, in particular, to break the supply route to California for the chemicals necessary to operate Hawaii's ice labs. During this period, the HPD seized and closed 15 clandestine methamphetamine laboratories and seized 40,510 grams of ice and about 1,000 grams of powdered methamphetamine.

Marijuana remains a drug for which arrest results from circumstance, bad luck, or stupidity. The Big

Island Police Department continues to partner with the Air National Guard for “Operation Green Harvest.” This program has been in operation for more than a decade, with the effort being to destroy the plants rather than to seek interdiction directly. Close to 100,000 plants are seized each half-year on the Hilo (east) side of the island, and about an additional 30,000 plants are seized on the Kona (west) side of the island. Oahu efforts during 2002 were almost the same as in 2001, with 41,966 plants and 52,269 grams of dried marijuana seized (the 2001 seizures involved 47,141 plants and 16,434 grams).

In the following sections, the police data exhibits show all neighbor island data combined and titled “neighbor island.” Unfortunately, these data could not be updated for this report. Because of the inconsistencies in data reporting from these police departments, the data cannot be seen as very reliable. The Honolulu data represent reports from the HPD. To allow a direct comparison between ME data and treatment data, the ME data have been multiplied by 10. The stability of these data are assured.

Cocaine/Crack

Cocaine/crack treatment admissions somewhat stabilized during the most recent reporting period. In 2001, there were 433 such admissions, compared with 428 in 2002 (exhibit 1). This shows that admissions for cocaine use, after being quite stable for 4 years, began a decline in 2000 and have now begun to stabilize. Cocaine/crack now ranks fourth among primary drugs of treatment admissions, after methamphetamine, alcohol, and marijuana.

Over the past 8 years, the Honolulu MEs have consistently reported between 22 and 32 deaths per year with cocaine-positive toxicology screens (exhibit 1). Data for 2002 are no exception, as the number of deaths with a cocaine-positive toxicology was 23 (not 230 as shown on the exhibit, where data have been adjusted to allow for their presentation on the same axes).

According to the HPD, cocaine prices remained stable during this period. With the apparent declining use of the drug, police arrests have declined slightly as well. The number of HPD cocaine cases has plummeted over the past 6 years, with only 122 cases reported in 2002 (exhibit 2). Neighbor island data are only for the first 6 months of the year and show 74 cocaine-related arrests.

In the 2002 ADAM program in Honolulu, 8.3 percent of adult male arrestees tested cocaine-positive, as did 7.2 percent of their female counterparts (exhibit 3).

Heroin and Other Opiates

Black tar heroin monopolizes the heroin market in Hawaii and is readily available in all areas of the State. “China white” has been uncommon in Hawaii, but it is present. Seizure data normally show a 20-to-1 ratio between tar and powder seized, but in 2002 that ratio dropped to 2:1. According to the HPD, heroin prices remained stable in Honolulu, at \$50 per quarter gram, \$200 per gram, and \$5,000 per ounce.

Heroin treatment admissions continued the decline begun in 1999. In 1998, record levels of treatment admissions were recorded, with more than 500 individual admissions that year (exhibit 4). As a primary drug, heroin ranked fifth among treatment admissions, at 3.3 percent.

The Honolulu ME reported that deaths in which opiates were detected stabilized from the previous years; for heroin specifically, deaths declined slightly to 1997 levels. The group of decedents with a positive toxicological result for opiates was primarily comprised of decedents in whom oxycodone was detected.

Honolulu police reported only 17 heroin cases in all of 2001 (exhibit 5). In 2002, a total of 49 cases were reported. No specific explanation of this “spike” in the data was provided. Neighbor Island police reported 13 heroin cases during the first 6 months of 2002, which is about one-half the number recorded for the first 6 months of the year over the past 2 years.

The 2002 ADAM data show that approximately 3 percent of adult male arrestees tested opiate positive in the first three quarters of the year (exhibit 3). Slightly more than 2 percent of females tested opiate positive in 2002.

Marijuana

Statewide, marijuana treatment admissions tapered off during 2002 (exhibit 6). They remain high ($n=1,514$) but represent a slight decline from the previous year (1,544). In examining these treatment data, it is important to remember that the number of persons in treatment for marijuana use is triple the number in treatment in 1992. It is also important to note that, while marijuana is listed as the primary drug of use at admission, many of these clients also used other substances.

Between 1995 and 1998, there were 15–20 deaths per year in which marijuana was found in the specimens submitted for toxicology screening. In 2001, there

were 36 such deaths, and in 2002 there were 30, a continuation of a 4-year increase.

Honolulu Police continue to monitor, but to not specifically report, case data for marijuana (exhibit 7). As mentioned in previous CEWG reports, possession cases remain steady at about 650 per year, although distribution cases have continued to increase. Law enforcement sources speculate that much of the Big Island's marijuana is brought to Oahu for sale.

As shown in exhibit 3, nearly one-third of adult male arrestees tested marijuana positive in the first three quarters of 2002 (exhibit 3). Only slightly more than one-fifth of the adult female arrestees in ADAM tested marijuana positive.

Methamphetamine

On the basis of several indicators, Hawaii retains its title as the crystal methamphetamine capital of the Nation. It remains the drug of choice in the island chain. California-based Mexican sources use Hawaii's cultural diversity to facilitate smuggling and distribution to and within the islands. Analysis of confiscated methamphetamine reveals that the product is still a high-quality *d*-methamphetamine hydrochloride in the 90–100 percent purity range.

Methamphetamine treatment admissions remained extremely high but stable during this reporting period, still exceeding those for alcohol. A total of 2,677 admissions occurred during 2002, compared with 2,419 in 2000 and 2,644 in 2001. Exhibit 8 shows the trend over the past decade. The rate of increase in demand for treatment space for methamphetamine abuse has been nearly geometric and not linear. This situation has so far outstripped treatment system capacity that even people who might want treatment would not be likely to receive it in a timely manner.

From 1994 to 2000, the Oahu ME detected crystal methamphetamine in 24–36 cases per year. In 2001, however, the total was 54, and there was another increase to 62 in 2002. The numbers of deaths with a positive toxicology for ice continue to exceed the numbers found with alcohol present.

Crystal methamphetamine prices have remained stable during this period for larger quantities. It is sold in the islands as “clear” (a cleaner, white form) or “wash” (a brownish, less processed form). Prices for ice vary widely according to these two categories and availability, as illustrated by prices on Oahu: \$50 (wash) or \$75 (clear) per 0.1 gram; \$200–\$300

(wash) or \$600–\$900 (clear) per gram; \$450–\$600 (wash) or \$1,000–\$2,000 (clear) per quarter ounce; and \$2,200–\$3,000 (wash) per ounce.

HPD methamphetamine arrest cases (exhibit 9) decreased again in 2002. The annual number of cases peaked in 1995 and has subsequently declined annually. There were 616 Honolulu cases in 2002 and 631 in 2001; during the first 6 months of 2002, 269 cases were reported on the neighbor islands.

Weighted data on adult male arrestees in ADAM in 2001 and unweighted 2002 data show that the drug most frequently found in the urines of male arrestees was amphetamines—almost entirely methamphetamine. The proportion of male arrestees with positive toxicology screens for methamphetamine was nearly 44 percent in the first three quarters of 2002, up from 36 percent in 2000. The unweighted female data for 2002 show that one-half tested methamphetamine positive.

Depressants

Barbiturates, sedatives, and sedatives/hypnotics are combined in this category. Few data were provided about these drugs in the islands.

ADAD maintains three categories under this heading: benzodiazepines, other tranquilizers, and barbiturates.

Treatment admissions for these drugs are minimal in terms of impact on the system. Annually, the numbers admitted to treatment for these drugs total less than 10.

The number of ME mentions for depressants has remained stable for several years at five or less.

The HPD has not reported depressant case data since 1991. Neighbor island police reported fewer than 15 cases per year since 1996.

Prices remain stable at \$3–\$20 per unit for barbiturates and \$2–\$3 per pill for secobarbital (Seconal or "reds").

Hallucinogens

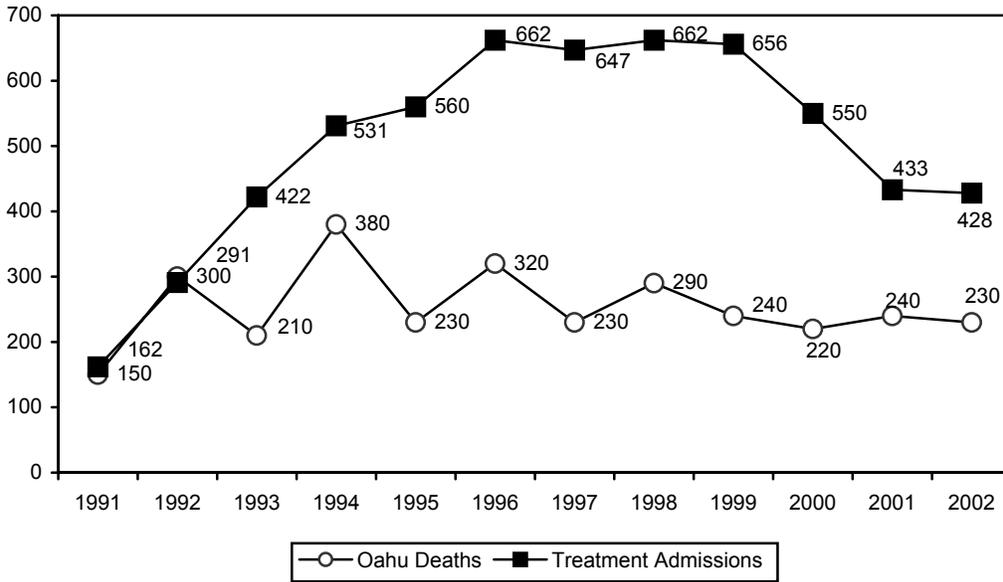
Hallucinogen treatment admissions are less than 5 per year. No hallucinogen ME mentions have been reported since the beginning of data collection.

Prices for lysergic acid diethylamide (LSD) were \$4–\$6 per "hit" and \$225–\$275 per 100 dosage unit sheets (a "page") in this reporting period.

No hallucinogen case data were generated for 2002.

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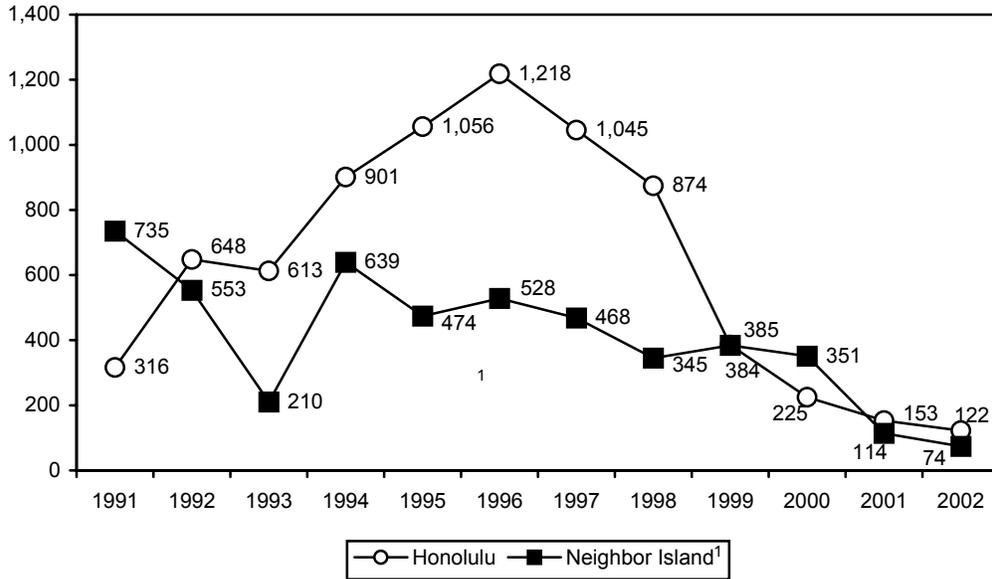
Exhibit 1. Number of Cocaine-Involved Deaths¹ and Treatment Admissions in Hawaii: 1991–2002



¹Mortality cases have been multiplied by 10 to fit exhibit axes.

SOURCES: Honolulu ME and ADAD

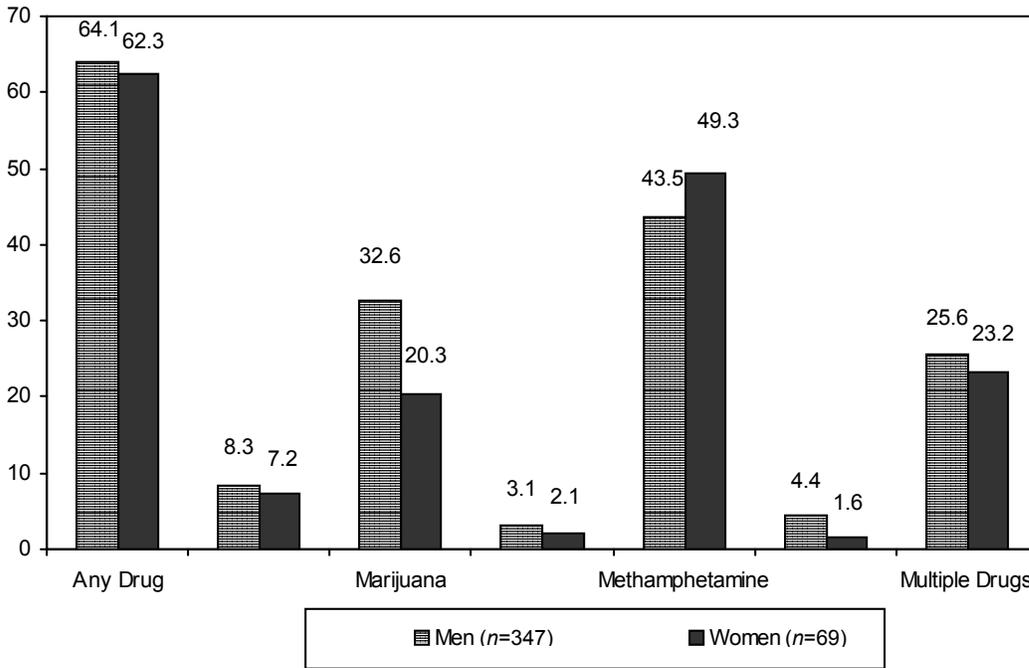
Exhibit 2. Number of Cocaine-Related Arrests in Hawaii: 1991–2002



¹Neighbor Island data represent only the first 6 months of 2002.

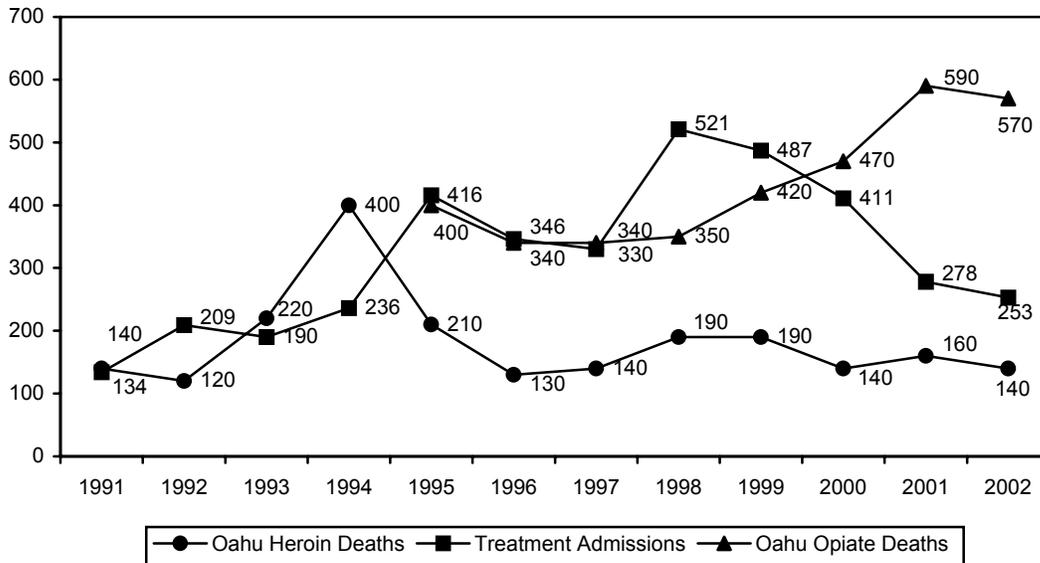
SOURCES: Police departments

Exhibit 3. Percentages of Arrestees in the ADAM Program Testing Positive, by Drug: 2002¹



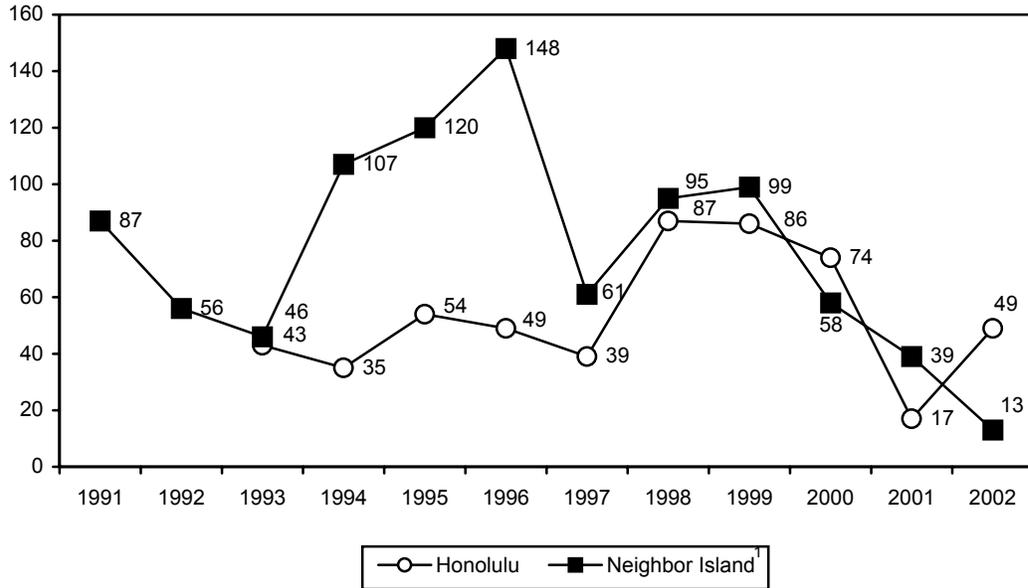
¹Male data are weighted and are for the first through third quarters; female data are unweighted and represent all four quarters.
 SOURCES: ADAM, NIJ

Exhibit 4. Number of Heroin- and Opiate-Involved Deaths¹ and Treatment Admissions in Hawaii: 1991–2002



¹Mortality cases have been multiplied by 10 to fit exhibit axes.
 SOURCES: Honolulu ME and ADAD

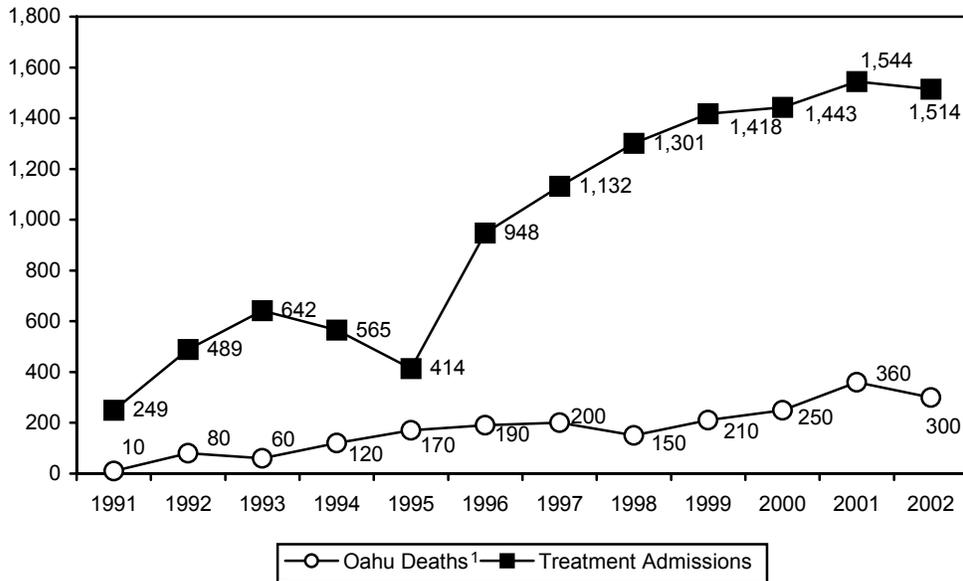
Exhibit 5. Number of Heroin-Related Arrests in Hawaii: 1991–2002



¹Neighbor Island data represent only the first 6 months of 2002.

SOURCES: Police departments

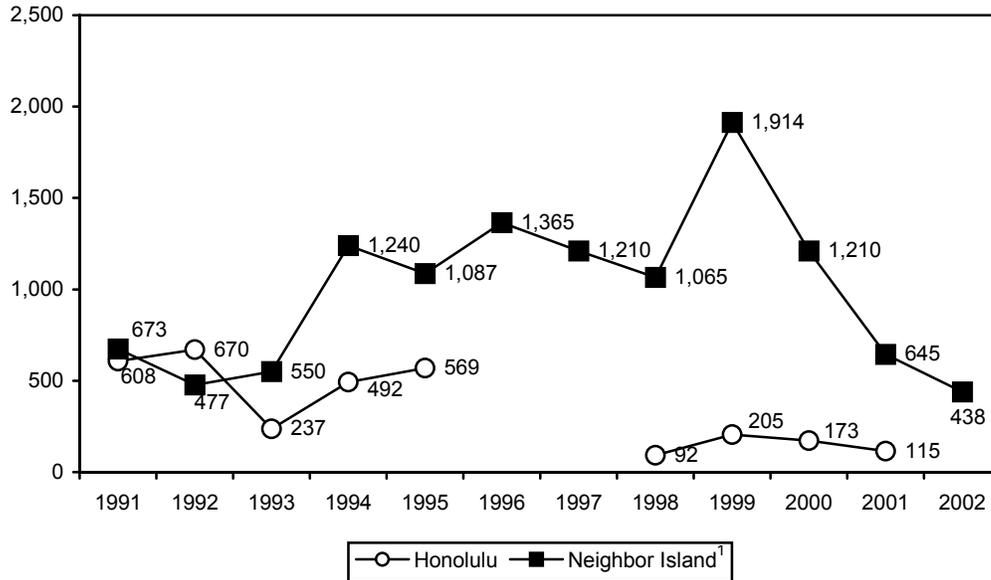
Exhibit 6. Number of Marijuana-Involved Deaths¹ and Treatment Admissions in Hawaii: 1991–2002



¹Mortality cases have been multiplied by 10 to fit exhibit axes.

SOURCES: Honolulu ME and ADAD

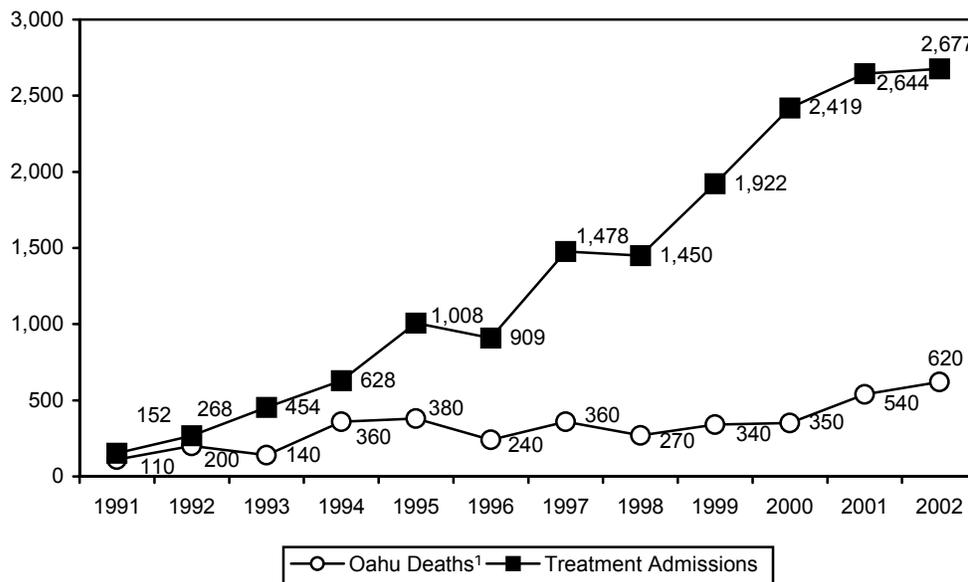
Exhibit 7. Number of Marijuana-Related Arrests in Hawaii: 1991–2002



¹Neighbor Island data represent only the first 6 months of 2002.

SOURCES: Police departments

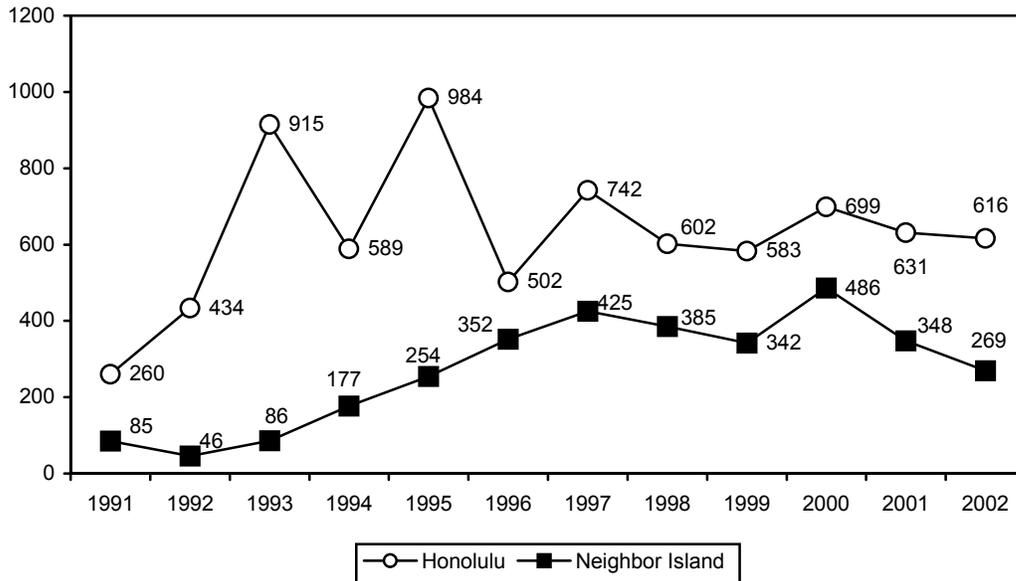
Exhibit 8. Number of Methamphetamine-Involved Deaths and Treatment Admissions in Hawaii: 1991–2002



¹Mortality cases have been multiplied by 10 to fit exhibit axes.

SOURCES: Honolulu ME and ADAD

Exhibit 9. Number of Methamphetamine-Related Arrests in Hawaii: 1991–2002



SOURCES: Police departments

Patterns and Trends in Drug Abuse: Los Angeles County, California

Beth Finnerty, M.P.H.¹

ABSTRACT

Illicit drug trends in Los Angeles County are largely unchanged from recent reporting periods. Heroin and cocaine/crack, the principal illicit drugs of abuse in the county, continue to dominate many of the traditional substance abuse indicators. The proportion of heroin treatment admissions fell to 31 percent, but they still constituted the largest proportion of alcohol and other drug treatment and recovery program admissions. Cocaine/crack admissions remained stable at 19 percent. Methamphetamine use is considered by some to be supplanting cocaine/crack use and is the illicit drug of choice for more and more Los Angeles County residents. Treatment admissions for primary methamphetamine abuse continued to climb in the latter half of 2002, accounting for 16 percent of all admissions. In terms of user demographics, the proportion of White methamphetamine admissions has declined, while the proportion of Hispanic methamphetamine admissions has increased. No significant changes in the estimated number of ED mentions of the major substances of abuse occurred between 2001 and the first half of 2002, with the exception of LSD, which declined. From July to December 2002, one-third of a sample of city of Pasadena male arrestees who participated in the ADAM program tested positive for recent marijuana use, followed by cocaine (32 percent) and methamphetamine (15 percent). The Los Angeles HIDTA led all California HIDTAs in terms of clandestine methamphetamine laboratory seizures, accounting for 55 percent of the 1,136 seizures made in California during 2002. Recent secondary school survey data indicated that the percentages of 7th, 9th, and 11th graders who reported past-30-day use of several substances, including alcohol, marijuana, inhalants, cocaine, methamphetamine, and LSD, was either stable or down from percentages reported in prior survey years. Most major drugs of abuse remain widely available throughout the county and are stable in terms of price and purity. Indicator data for prescription drugs, PCP, LSD, MDMA (ecstasy), and GHB remain limited, but anecdotal evidence and existing data sources suggest that the drugs are used recreationally and abused.

INTRODUCTION

Area Description

Los Angeles County has the largest population (9,902,700 as of July 2002) of any county in the Nation. If Los Angeles County were a State, it would rank ninth in population behind California, New York, Texas, Florida, Pennsylvania, Illinois, Ohio, and Michigan. Approximately 29 percent of California's residents live in Los Angeles County. Nearly 90 percent of all Los Angeles County residents live within 88 incorporated cities; the remaining 10 percent reside in unincorporated areas of the county. The five most populated cities are, in descending order of population: Los Angeles (3,694,820), Long Beach (461,522), Glendale (194,973), Santa Clarita (151,088), and Pomona (149,473).

Los Angeles County encompasses approximately 4,080 square miles and includes the islands of San Clemente and Santa Catalina. The county is bordered on the east by Orange and San Bernardino Counties, on the north by Kern County, on the west by Ventura County, and on the south by the Pacific Ocean. Los Angeles County's coastline is 81 miles long.

Two of the busiest maritime ports in the world—Long Beach and Los Angeles—are located in Los Angeles County. The Port of Long Beach is the Nation's busiest maritime cargo container facility, while the Port of Los Angeles ranks second, according to a report by the National Drug Intelligence Center (NDIC) in 2001. Los Angeles County is also home to the world's third busiest airport—Los Angeles International Airport. The airport handles over 1,000 cargo flights each day; 50 percent of this activity is international in origin or destination (NDIC 2001). Residents of Los Angeles County primarily rely on automobiles for transportation, and the Los Angeles area has one of the most intricate highway systems in the world.

Of these, Interstates 5, 10, and 15 connect the area to the rest of the Nation. Interstate 5 runs from the U.S.-Canada border to the U.S.-Mexico border and links Los Angeles to other key west coast cities, such as San Diego, Oakland, San Francisco, Sacramento,

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Portland, and Seattle. Interstate 10 originates in Santa Monica, California, and runs across the United States to I-95 in Jacksonville, Florida. Interstate 15 originates in the area and runs northeast through Las Vegas, Nevada, to the U.S.-Canada border in Montana. In addition, State highways 1 and 101 are extensively traveled roadways.

California is one of the most active drug smuggling and production areas in the United States. The State's proximity to the Pacific Ocean and Mexico contributes to the trafficking of large quantities of methamphetamine, cocaine, heroin, marijuana, and other dangerous drugs to markets within and outside California. Los Angeles is a national-level transportation hub and distribution center for many illicit drugs. Because of this, all major drugs of abuse are readily available in the State, according to a report by NDIC in 2002.

In March 2003, the Institute for the Study of Homelessness and Poverty at the Weingart Center released a report entitled *Just the Facts: Poverty in Los Angeles*. The report focused on several sources of data, including statistics from the 2000 U.S. census. The U.S. Census Bureau defines poverty by calculating the minimum pretax income needed by families for basic sustenance. Those who live below these poverty thresholds (i.e., the poverty line) are considered "poor." According to the 2000 census, an estimated 1,674,599 men, women, and children residing in Los Angeles were poor. According to the institute's study, nearly 18 percent of individuals, 14 percent of families, and 15 percent of households in Los Angeles County were considered to be living in poverty (exhibit 1). Poverty was concentrated in the central part of the county, with additional pockets occurring in the Harbor area, Pomona, and parts of the San Fernando and San Gabriel Valleys.

Other key points from the institute's report include the following:

- Up to 84,300 individuals are homeless on any given night in Los Angeles County, and up to 236,400 individuals are homeless in the course of 1 year.
- More than 1,000,000 public school students (K-12) in the county are eligible to receive free or reduced cost meals, based on their family's income.
- The gap between the rich and the poor is greater in the county than in any other major region of California or the United States.

Data Sources

This report describes drug abuse trends in Los Angeles County from January 1996 to December 2002. Information was collected from the following sources:

- **Emergency department (ED) drug mentions data** were accessed from the Drug Abuse Warning Network (DAWN), Office of Applied Studies (OAS), Substance Abuse and Mental Health Services Administration (SAMHSA), for 1998–June 2002.
- **Drug treatment data** were derived from the California Department of Alcohol and Drug Programs (ADP), California Alcohol and Drug Data System (CADDSS), and correspond to Los Angeles County alcohol and other drug treatment and recovery program admissions from January 2000 to December 2002. It should be noted that admissions for heroin treatment are disproportionately represented because of reporting requirements for facilities that use narcotic replacement therapy to treat heroin users. Both private and publicly funded narcotic treatment providers must report their admissions to the State, while for other drug types, only publicly funded providers must report.
- **Arrestee drug use and urinalysis data** were accessed from the National Institute of Justice (NIJ), Arrestee Drug Abuse Monitoring (ADAM) program for the third and fourth quarters of 2002 for males and for the fourth quarter of 2002 for females.
- **Drug availability, price, purity, and distribution data** were derived from the Los Angeles Police Department (LAPD), the Los Angeles High Intensity Drug Trafficking Area (HIDTA), the Los Angeles County Regional Criminal Information Clearinghouse (LA CLEAR), the National Drug Intelligence Center, and the Drug Enforcement Administration (DEA).
- **Demographic and geographic data** were provided by the United Way of Greater Los Angeles, Los Angeles County Online, and the Los Angeles County Department of Health Services, Public Health.
- **Acquired immunodeficiency syndrome (AIDS) and human immunodeficiency virus (HIV) data** (cumulative through December 2002) were provided by the Los Angeles County Department of Health Services, HIV Epidemiology Program.
- **Poverty statistics** were derived from a report released by the Institute for the Study of

Homelessness and Poverty at the Weingart Center entitled *Just the Facts: Poverty in Los Angeles*, March 2003.

- **Adolescent substance use data** were accessed from the Los Angeles County-level California Healthy Kids Survey (CHKS) data for the 1997–1998, 1998–1999, 1999–2000, 2000–2001, and 2001–2002 school years from WestEd. The CHKS is a modular survey that assesses the overall health of secondary school students (in grades 7, 9, and 11). One module is comprised of questions on alcohol, drug, and tobacco use, and attitudes associated with perceived use, harm, and availability.

DRUG ABUSE PATTERNS AND TRENDS

Cocaine/Crack

Cocaine/crack continues to rank highest (after alcohol-in-combination) of any drug among Los Angeles-Long Beach metropolitan area ED mentions. In the first half of 2002, cocaine/crack mentions accounted for 21 percent of all ED mentions and 38 percent of all ED drug episodes (exhibit 2). As shown in exhibits 2 and 3, ED cocaine/crack mentions totaled 4,159 in the first half of 2002, a nonsignificant decrease of 23 percent from the second half of 2001.

Of the estimated 4,159 ED cocaine/crack mentions reported between January and June 2002, 68 percent occurred among males, 46 percent among Blacks, and 62 percent among individuals age 35 and older. Significant declines in the frequency of mentions occurred among young patients (age 12–17) and patients age 30 to 34. Three-quarters of all ED cocaine mentions were part of multidrug episodes. In these instances, at least one other substance (including alcohol) was mentioned during the episode. When asked about drug use motive, nearly one-half (47 percent) of the patients reported cocaine dependence. Approximately 45 percent of the cocaine mentions were for patients who reported visiting the ED because of an unexpected reaction. An additional 30 percent of the mentions were for patients who reported chronic effects as the main reason for ED contact.

The estimated rate per 100,000 population of cocaine ED mentions did not change significantly from the second half of 2001 (62) to the first half of 2002 (48). With regards to population-adjusted rates of ED cocaine mentions in the six western CEWG sites (Denver, Los Angeles, Phoenix, San Diego, San Francisco, and Seattle), Los Angeles ranked third after San Francisco (71) and Seattle (58) (exhibit 4).

Approximately one-fifth of all Los Angeles County treatment and recovery program admissions in January–June 2002 reported crack or powder cocaine as the primary drug of abuse (exhibit 5). As a percentage of the total, cocaine admissions have remained stable for several CEWG reporting periods. Demographics of primary cocaine admissions have stabilized as well. Alcohol was the most commonly reported secondary drug of abuse among primary cocaine admissions (42 percent) for several reporting periods, followed by marijuana (18 percent). The preferred route of administration for approximately 86 percent of the cocaine admissions was smoking; another 10 percent of the cocaine admissions reported inhalation as their preferred route of administration (exhibit 6). When asked whether they had used any drug intravenously in the year prior to admission, slightly less than 5 percent of all primary cocaine admissions reported that they had used needles to administer one or more drugs intravenously at least once during the specified time period (exhibit 7).

Sixty-four percent of the primary cocaine admissions reported in the first half of 2002 were male. Blacks continued to constitute the largest percentage of cocaine admissions (at 58 percent), followed by Hispanics (23 percent) and Whites (12 percent). Compared with admissions for other drugs, primary cocaine admissions had the largest proportion of Blacks. In terms of age at admission, the majority of cocaine admissions were 36 or older (62 percent), with 24 percent of all primary cocaine admissions being age 36–40.

More than one-third of the primary cocaine/crack treatment admissions were homeless at the time of admission (35 percent), and slightly more than one-quarter (26 percent) were referred by the court or criminal justice system. Thirty-five percent did not have a history of prior treatment episodes, and an additional 30 percent had a history of one prior treatment episode. Forty-four percent had graduated from high school. At the time of admission, 13 percent were employed full- or part-time.

According to long-term trends calculated from CHKS data spanning over the most recent 5 school years (exhibit 8), the pattern of past-30-day cocaine (powder or crack) use among responding secondary school students (in grades 7, 9, and 11) was similar to usage patterns for other licit and illicit drugs. After rising from 3.6 percent in 1997–1998 to a peak level of 4.9 percent in 1999–2000, current use of cocaine decreased to 3.9 percent in 2001–2002.

According to recent ADAM data collected from a sample of Pasadena adult male arrestees during the last

two quarters of 2002, an average of 31.9 percent had cocaine-positive urine samples (exhibit 9). Fourteen percent of these arrestees reported past-30-day crack use, and 5 percent reported past-30-day use of powder cocaine. Past-12-month percentages were similar (14.7 and 6.3 percent, respectively). Unweighted adult female program findings for the fourth quarter showed that 21.4 percent of females tested positive for recent cocaine use. One-fifth of adult female arrestees reported past-30-day crack cocaine use, compared with 13.3 percent who reported past-30-day use of powder cocaine. Furthermore, past-12-month crack and powder use percentages were 21.4 percent and 20 percent, respectively.

A total of 3,040 cocaine arrests were made within the city of Los Angeles in 2002. This represented an 11-percent decrease from the number of cocaine arrests made in 2001. Cocaine arrests accounted for 12 percent of all narcotics arrests made in 2002.

Citywide cocaine (including crack and powder) seizures decreased 15 percent, from 1,040 pounds seized in 2001 to 887 pounds seized in 2002. The street value of the seized cocaine accounted for 35 percent of the total street value of all drugs seized in 2002.

Cocaine continues to be widely available throughout Los Angeles County. Current mid-level and retail prices of crack cocaine are \$10 per 0.1-gram rock and \$500–\$1,200 per ounce. The current wholesale price for 1 kilogram of powder cocaine ranges from \$14,000 to \$17,000, which is identical to the wholesale price reported in the December 2002 CEWG report. The current mid-level and retail prices of powder cocaine are \$500–\$600 per ounce and \$80 per gram. The purity of powder cocaine is approximately 78 percent, similar to the purity cited in the last few CEWG reports.

Heroin

Heroin was the fourth most frequently mentioned major substance of abuse in the Los Angeles-Long Beach metropolitan area in the first half of 2002, accounting for approximately 6 percent of all DAWN ED drug mentions and 10 percent of all ED drug episodes (exhibit 2). As shown in exhibits 2 and 3, ED heroin mentions totaled 1,142 in the first half of 2002, a nonsignificant decrease of 21 percent from the second half of 2001.

Of the estimated 1,142 ED heroin mentions reported in the first half of 2002, 74 percent were for patients who were male. Although Hispanics continued to account for the highest proportion of mentions, at 36 percent, the proportion of Hispanics decreased significantly (32 percent) from the second half of

2001. Whites accounted for an additional 34 percent, followed by Blacks (18 percent); race was unknown in 9 percent of the cases. Like ED cocaine mentions, the highest percentage of heroin mentions was among the 35-and-older patient group (73 percent). Significant declines in the frequency of heroin mentions occurred among patients age 26–34 (a 27-percent decrease), particularly among 26–29-year-olds (a 36-percent decrease).

One-half of all ED heroin mentions reported in the first half of 2002 were made during multidrug episodes. Heroin dependence was reported as the drug use motive for the vast majority (83 percent) of patients who mentioned heroin during their drug-related ED episode. Chronic effects (45 percent) and overdose (26 percent) were the two most frequently reported reasons for ED contact. However, the proportion of those reporting a heroin overdose as the reason for contacting the ED decreased significantly from the second half of 2001. In terms of patient disposition among heroin mentions, slightly more patients were admitted to the hospital (48 percent) than were treated in the ED and released (42 percent).

The estimated population-adjusted rate of heroin ED mentions in the Los Angeles-Long Beach metropolitan area in the first half of 2002 remained relatively stable at 13 per 100,000 population. For population-adjusted rates of ED heroin mentions in the six western CEWG cities, San Francisco continued to lead the group, with 88 mentions per 100,000 population. Seattle was a far second, with a rate of 46 per 100,000, and Phoenix and San Diego had rates nearly identical to Los Angeles (12 and 13, respectively) (exhibit 4).

The percentage of primary heroin treatment admissions to Los Angeles County treatment and recovery programs continued to decrease slightly overall, from nearly 33 percent of all admissions (7,767 admissions) in January–June 2002 to 31 percent (7,096 admissions) in July–December 2002 (exhibit 5). Despite this decline, heroin admissions continued to account for the highest percentage of all treatment and recovery program admissions in the county. In the second half of 2002, primary heroin admissions were predominantly male (72 percent), older than 35 (73 percent), and somewhat more likely to be Hispanic (42 percent) than White (38 percent) or Black (14 percent) (exhibit 6). Compared with other major types of illicit drug admissions, primary heroin admissions from the second half of 2002 had the largest proportion of users age 36 and older. If primary heroin admissions abused another drug secondarily to heroin, it was most likely to be cocaine/crack (23 percent), followed by alcohol (9

percent). Eighty-eight percent of the primary heroin admissions injected heroin, 7 percent smoked the drug, and 4 percent snorted (inhaled) the drug. When asked whether they had used any drug intravenously in the year prior to admission, 90 percent of all primary heroin admissions reported that they had used needles to administer one or more drugs intravenously at least once during the specified time period (exhibit 7).

Twelve percent of all primary heroin admissions were homeless at time of admission, and only 5 percent were referred by the court or criminal justice system. Thirteen percent indicated that they had never received treatment for their substance abuse problem. Forty-nine percent had graduated from high school, and, at the time of admission, 25 percent were employed full- or part-time.

According to recent ADAM data collected from a sample of Pasadena adult male arrestees during the last two quarters of 2002, an average of 5.8 percent tested positive (on urinalysis) for recent heroin use (exhibit 9). Four percent of adult male arrestees reported past-30-day heroin use, and 6.2 percent reported past-12-month use. Unweighted adult female program findings for the fourth quarter of 2002 showed that 14.3 percent of female arrestees tested positive for recent heroin use. Seven percent of adult female arrestees reported past-30-day and past-12-month heroin use.

A total of 8,729 heroin arrests were made within the city of Los Angeles in 2002. This represented a 23-percent increase from the number of heroin arrests made in 2001. Heroin arrests accounted for approximately 35 percent of all narcotics arrests made in 2002.

Thirty-eight pounds of black tar heroin were seized within the city of Los Angeles in 2002, a decline of 88 percent from the amount seized in 2001. Similarly, seizures of other types of heroin decreased 43 percent, from 38 pounds seized in 2001 to 22 pounds seized in 2002. The street value of seized heroin accounted for approximately 3 percent of the total street value of all drugs seized in 2002.

Mexican heroin continues as the heroin of choice among users in Los Angeles County. Los Angeles is a major transshipment area for the distribution of black tar heroin to the Pacific Northwest, Southwest, and Midwest. Recent purity levels (for 1 gram samples) from the DEA Domestic Monitoring Program range from 3 to 48 percent. Street samples now average 16 percent pure. The wholesale price per kilogram of black tar heroin is approximately \$19,200–\$23,200

(identical to the wholesale price reported in December 2002). The current mid-level and retail prices are \$500–\$800 per “pedazo” (Mexican ounce) and \$90–\$100 per gram. A regular ounce is 28.5 grams, whereas a pedazo is 25.0 grams.

Mexican brown heroin sells for a wholesale price of \$24,000–\$34,000 per kilogram. Southeast Asian heroin (i.e., China white), which is not often encountered on the streets of Los Angeles, has a wholesale price range of \$35,000–\$40,000 for a 300–350-gram unit and \$70,000–\$80,000 for a 700–750-gram unit. The lack of China white on the streets is related, in part, to local users’ preference for black tar. Los Angeles is, however, a major transshipment center for the distribution of Southeast Asian heroin to east coast cities.

The LA HIDTA continues to report that there are some indications that Colombian drug trafficking organizations are expanding their heroin trafficking operations within the Los Angeles area. The wholesale price for a kilogram of Colombian heroin is \$86,000–\$100,000. This type of heroin has a purity level of 94 percent. The LA HIDTA also reports that because the Los Angeles metropolitan area has one of the largest Middle Eastern populations in the United States, Southwest Asian opium trafficking activities have increased in the area. Southwest Asian opium has a wholesale cost of \$25,000 for a kilogram and \$650–\$800 for an 18-gram stick.

Other Opiates/Narcotics

An estimated 991 ED narcotic analgesics/combination mentions were reported in Los Angeles-Long Beach in the first half of 2002. Of these, roughly three-quarters were mentions of a single formulation narcotic analgesic. The remaining one-quarter of mentions was for narcotic analgesics produced in combination. Almost all of the 206 hydrocodone/combinations mentions were mentioned as an acetaminophen-hydrocodone combination (98 percent). Twenty-one of the 32 oxycodone/combinations mentions were for oxycodone alone (66 percent); an additional 28 percent were for an acetaminophen-oxycodone combination. Mentions of methadone have fluctuated over the years, from 92 mentions in the second half of 1997 to 225 mentions in the second half of 2001. From the second half of 2001 to the first half of 2002, methadone mentions fell to 142—a statistically significant decrease of 37 percent.

In July–December 2002, 408 (2 percent of all admissions) Los Angeles County treatment and recovery program admissions reported other opiates/synthetics as their primary drug of choice. This number was

nearly identical to the number of admissions for primary other opiates/synthetic abuse reported in the first half of 2002. Other opiates/synthetics admissions were male (64 percent), White (66 percent), and age 36–45 (39 percent).

Retail prices are now available for select diverted pharmaceuticals. According to LA CLEAR, Vicodin, a member of the hydrocodone family of opiate pain relievers, retails for \$5 to \$10 per tablet in Los Angeles County. OxyContin, the trade name for the powerful analgesic oxycodone hydrochloride, sells on the streets for \$1 per milligram. Codeine sells for \$5 per tablet.

Marijuana

Marijuana was the third most frequently mentioned major substance of abuse in the Los Angeles-Long Beach metropolitan area in 2001, accounting for 13 percent of all ED drug mentions and 24 percent of all ED drug episodes (exhibit 2). Of the estimated 2,665 ED marijuana mentions reported in the first half of 2002, 65 percent were among patients who were male, 25 percent were among Hispanics, and 16 percent were among Whites. The majority of the ED marijuana mentions occurred during multidrug episodes; only about 15 percent occurred during an episode in which marijuana was the only drug mentioned. When asked about drug use motive, 23 percent of the mentions were among patients reporting marijuana dependence. Thirty-four percent represented patients who were treated in the emergency department and released.

The estimated rate per 100,000 population of ED marijuana mentions did not change significantly from the second half of 2001 (35) to the first half of 2002 (31). With regards to population-adjusted ED marijuana mentions in the six western CEWG sites, Los Angeles led the group in the first half of 2002. Seattle, Phoenix, and San Diego followed closely, with rates of 27, 26, and 25 per 100,000 population, respectively. Denver, with 20 mentions per 100,000 population, and San Francisco, with 18 per 100,000, rounded out the group (exhibit 4).

The number of primary marijuana admissions in Los Angeles County increased another 5 percent from January–June 2002 (when they accounted for 11 percent of all admissions) to July–December 2002 (when they accounted for 12 percent) (exhibit 5). For the most part, primary marijuana demographics were stable between the first and second halves of 2002. Males (74 percent) and individuals younger than 18 (51 percent) constituted the majority of these admissions; 48 percent were Hispanic, 27 percent were

Black, and 16 percent were White (exhibit 6). Alcohol was identified as a secondary drug problem for 45 percent of the primary marijuana admissions in the second half of 2002. An additional 12 percent reported methamphetamine and 10 percent reported cocaine/crack as their secondary drug problem. Compared with other major illicit drug admissions, primary marijuana admissions had the largest proportion of males (74 percent) and users age 17 and younger (51 percent). When asked whether they had used any drug intravenously in the year prior to admission, approximately 1 percent of all primary marijuana admissions answered affirmatively (exhibit 7).

Close to 7 percent of the primary marijuana treatment admissions in the second half of 2002 were homeless at the time of admission, and 38 percent were referred to treatment by the court or criminal justice system. Sixty-eight percent were entering treatment for the first time. Twenty-three percent had graduated from high school, and, at the time of admission, 14 percent were employed full- or part-time. Such characteristics reflect the fact that one-half of all primary marijuana admissions were younger than 18 at the time of admission.

According to long-term trends calculated from CHKS data spanning over the last 5 school years (exhibit 8), past-30-day marijuana use among responding secondary school students (in grades 7, 9, and 11) decreased consistently, from a peak of 16.7 percent in 1997–1998 to a low of 12 percent in 2001–2002.

As for recent ADAM data collected from a sample of Pasadena adult male arrestees during the last two quarters of 2002, an average of 37.2 percent had marijuana-positive urine screens (exhibit 9). This was the highest average percentage encountered during the 6-month period. Thirty-five percent of adult male arrestees reported past-30-day marijuana use, and 37 percent reported past-12-month use. Unweighted adult female program findings showed that in the fourth quarter of 2002, 35.7 percent tested positive for recent marijuana use. Thirty-three percent of adult female arrestees reported past-30-day and past-12-month marijuana use.

The number of marijuana arrests made within the city of Los Angeles remained stable from 2001 to 2002; the total was 4,818 in 2002.

Marijuana arrests accounted for 20 percent of all narcotics arrests made in 2002.

Citywide marijuana seizures decreased 13 percent, from 12,805 pounds seized in 2001 to 11,100 pounds seized in 2002. The street value of the seized

marijuana accounted for approximately 40 percent of the total street value of all drugs seized in 2002.

Mexican low-grade marijuana is prevalent throughout Los Angeles. The wholesale price of low-grade marijuana ranges from \$300 to \$400 per pound. The mid-level and retail prices of commercial grade marijuana are \$60–\$80 per ounce and \$10 per gram. All prices remained stable since the second half of 2002. According to LA CLEAR, domestic mid-grade outdoor and indoor growers continue to increase their share of the local marijuana market. The wholesale price of domestic mid-grade marijuana ranges from \$1,000 to \$1,200 per pound. Mid-level and retail prices are \$200–\$250 per ounce and \$25 per gram. The wholesale price of high-grade sinsemilla is \$2,500–\$6,000 per pound. An ounce of sinsemilla sells for \$400–\$600 per ounce and a one-eighth ounce quantity sells for \$60–\$80. Indications regarding the local availability of “BC Bud,” a hybrid type of cannabis bud grown in Canadian British Columbia, continued to circulate. A pound of BC Bud, which would cost approximately \$1,500 in Vancouver, has a wholesale value of \$6,000. Supposedly, a pound of BC Bud can be swapped straight across for a pound of cocaine. Demand for hashish, the compressed form of tetrahydrocannabinol (THC)-rich resinous cannabis material, remained limited throughout the Los Angeles HIDTA; when it is available, it has a wholesale price of \$8,000 per pound.

Stimulants

Amphetamines and methamphetamine rounded out the top six most frequently mentioned major substances of abuse in the DAWN Los Angeles-Long Beach metropolitan area in the first half of 2002, with an estimated 691 and 687 mentions, respectively. ED amphetamine and methamphetamine mentions each accounted for 3.4 percent of all ED drug mentions and 6.3 percent of all drug episodes.

In the first half of 2002, 72 percent of the ED methamphetamine mentions occurred among patients who were male, 41 percent occurred among Whites, and 39 percent occurred among Hispanics. Comparable percentages of 18–25-year-olds and those age 35 and older mentioned methamphetamine during an ED drug episode (34 and 33 percent, respectively). A lower percentage of methamphetamine mentions were for patients age 26–34 (25 percent).

As for ED amphetamine mentions, 61 percent were among patients who were male. A slightly higher percentage of Whites than Hispanics mentioned methamphetamine, while a slightly higher percentage

of Hispanics than Whites mentioned amphetamines (44 vs. 38 percent). Amphetamines were most likely to be mentioned by individuals age 35 and older (35 percent).

Approximately two-thirds of ED amphetamines and methamphetamine mentions occurred during multi-drug episodes. The drug use motive for 40 percent of the patients involved in ED mentions for amphetamine was dependence, which also characterized 58 percent of methamphetamine mentions. Unexpected reaction (36.3 percent) and overdose (27.6 percent) were the most likely reported reasons for ED contact among ED amphetamine mentions. On the other hand, chronic effects and unexpected reaction were most frequently reported as reasons for ED contact among 41.9 percent and 38.6 percent of ED methamphetamine mentions, respectively.

In January–June 2002, San Francisco led the six western CEWG areas, with an estimated 24 methamphetamine mentions per 100,000 population, followed by San Diego (11), Phoenix (10), Seattle (9) and Los Angeles (8). Denver had just 4 mentions per 100,000 population (exhibit 4).

Primary methamphetamine admissions to Los Angeles County treatment and recovery programs continued to increase from the first half to the second half of 2002. The 3,692 primary methamphetamine admissions reported in July–December 2002 accounted for 16 percent of all admissions (exhibit 5). Compared with other major illicit drug admissions, primary methamphetamine admissions had the largest proportion of females (39.5 percent), Whites (43.1 percent), Asian/Pacific Islanders (3.3 percent), 18–25-year-olds (31.0 percent), and 26–35-year-olds (34.5 percent).

Although Whites continued to constitute the largest racial/ethnic group of individuals entering treatment for primary methamphetamine abuse in the second half of 2002, the percentage of primary Hispanic methamphetamine abusers has been increasing over the last few years. In 1999, 62 percent of all primary methamphetamine admissions were White, compared with 26 percent who were Hispanic. In the second half of 2002, however, the percentage of Whites had decreased to 43 percent, and the percentage of Hispanics had increased to 41 percent. The rise in the percentage of Hispanic primary methamphetamine treatment admissions coincided with and was the same magnitude as the decline in the percentage of White primary methamphetamine treatment admissions.

At one time, females had accounted for 49 percent of all primary methamphetamine admissions. This practically

equal distribution of males and females was unique to methamphetamine. With all of the other major drugs of abuse, the gender split was at least 60 percent males and 40 percent females, with most drugs having gender breakdowns closer to 70/30. But since 1999, the gender difference has widened, and in the second half of 2002, 60.5 percent of primary methamphetamine admissions were male and 39.5 percent were female.

Primary amphetamine admissions were more likely to be male (54 percent) than female (46 percent), and age 31–35 (25.5 percent). They were almost equally likely to be White (41.1 percent) or Hispanic (40.2 percent), as was the case with methamphetamine admissions. Primary methamphetamine and other amphetamine admissions tended to most frequently report secondary abuse of alcohol or marijuana.

Since 1999, smoking has become an increasingly common way for primary methamphetamine admissions to administer their drug of choice. In 1999, one-half of all primary methamphetamine admissions smoked the drug. By the second half of 2002, 64.2 percent preferred this mode of administration. On the other hand, the proportions of injectors and inhalers have been declining, from 15.2 and 29.5 percent, respectively, in 1999 to 9.4 and 22.2 percent, respectively, in the second half of 2002.

Like primary methamphetamine admissions, modes of administration of other amphetamines have shifted in recent years. More than one-half of all other amphetamine admissions in the second half of 2002 preferred to smoke the drug (58.8 percent), followed by 24.5 percent who inhaled, 10.0 percent who ingested orally, and 4.9 percent who injected. In 1999, a lower percentage smoked; higher percentages injected and used other amphetamines orally; the percentage that preferred to inhale amphetamines remained stable.

Fifteen percent of all primary methamphetamine admissions reported past-year intravenous use of one or more drugs (exhibit 7). Approximately one-fourth of the primary methamphetamine treatment admissions were homeless (24.8 percent), and 28.7 percent were referred by the court or criminal justice system. Forty-seven percent were entering treatment for the first time.

Forty-four percent had graduated from high school, and, at the time of admission, 18 percent were employed full- or part-time.

According to long-term trends calculated from CHKS data spanning over the last 5 school years (exhibit 8), the pattern of past-30-day methamphetamine use among responding secondary school students (in

grades 7, 9, and 11) was similar to usage patterns seen with other licit and illicit drugs. After increasing from 5.2 percent in 1997–1998 to a peak level of 6.1 percent in 1998–1999, use of methamphetamine decreased to a low of 4.1 percent in 2001–2002.

As for recent ADAM data collected from a sample of Pasadena adult male arrestees during the last two quarters of 2002, an average of 14.8 percent had methamphetamine-positive urine screens (exhibit 9). In the third quarter of 2002, males who tested positive for recent methamphetamine use had the highest rate of concordance between urinalysis and self-reported past-3- and past-7-day use. In the fourth quarter, males who tested positive for recent heroin use had the highest rate of concordance between the two measures. Slightly more than 9 percent of adult male arrestees reported past-30-day methamphetamine use, and 12.4 percent reported past-12-month use. Unweighted adult female program findings for the fourth quarter of 2002 showed that 14.3 percent tested positive for recent methamphetamine use. Females who tested positive for recent methamphetamine use had 100 percent concordance between urinalysis and self-reported past-3- and past-7-day use. Twenty-seven percent of adult female arrestees reported past-30-day methamphetamine use (33.3 percent), and slightly more than one-third reported past-12-month use (33.3 percent).

In 2002, 152 amphetamine arrests were made within the city of Los Angeles, exceeding the number of arrests made in 2001 by 35 percent. Amphetamine arrests continued to account for less than 1 percent of the total.

Citywide methamphetamine seizures increased 64 percent, from 273 pounds seized in 2001 to 446 pounds seized in 2002. This increase may indicate the reversal of a downward trend that began several years ago. In 1998, 2,600 pounds of methamphetamine were seized. The next 3 years were associated with increasingly diminishing quantities of the seized product, reaching a low of 264 pounds in 2001. The street value of the seized methamphetamine accounted for approximately 16 percent of the total street value of all drugs seized in the first half of 2002.

The wholesale price per pound of methamphetamine ranges from \$3,700 to \$5,000, which is the same wholesale price level that has been encountered since late 2000. The mid-level and retail prices are \$450–\$550 per ounce, \$100–\$120 per one-eighth ounce (“eightball”), and \$60 per one-sixteenth ounce (“teener”). The purity of finished methamphetamine available in the Los Angeles area remains at approximately 30–35 percent.

Local law enforcement authorities are reporting seizures of “ice,” a potent form of methamphetamine, with increasing frequency. In addition, ice continues to be produced and smuggled to Hawaii from California by Mexican National and Filipino criminal groups. A pound of ice that would sell for \$7,000–\$11,000 in Los Angeles can sell for as much as \$35,000 (wholesale) in Hawaii. The mid-level price for an ounce of ice ranges from \$600–\$800. A double case of pseudoephedrine (17,000 60-milligram tablets per case) sold for \$3,000–\$3,500 (up slightly from \$2,800–\$3,400). In addition, a 1,000-count bottle of 60-milligram tablets sells for \$200.

According to LA CLEAR, the Los Angeles HIDTA led the State in the overall number of methamphetamine laboratory seizures, accounting for 55 percent of all seizures made in California (623 of 1,136 seizures). Of the four counties in the LA HIDTA, Los Angeles County had the third highest number of seizures in 2002 (172), lagging behind Riverside County (190) and San Bernardino County (217). Orange County rounded out the HIDTA with 44 laboratory seizures. Reports from participating law enforcement agencies indicate that some of the methamphetamine laboratory activity that has historically taken place in the LA HIDTA is shifting to the Central Valley farming region. In that region of California, lab operators have a better chance of averting detection. In a recent quarterly report, LA CLEAR reported that this shift of lab operations away from the LA HIDTA might be because of successful law enforcement investigations and interdictions of precursor chemicals in Southern California.

The LA HIDTA reported the highest percentage of “superlabs” (defined by NDIC as laboratories capable of making as much as 10 pounds of finished methamphetamine in an 8-hour period) seized throughout California (68 out of 165 superlabs, or 41 percent). Furthermore, totals reported in the LA HIDTA exceeded totals reported by all States outside of California, including the “runner-up” State of Missouri, which reported 22 superlab seizures in 2002. Mexican National criminal trafficking groups are known to control the manufacture and distribution of methamphetamine to other States.

These groups have established a presence in California, as well as other States in the Pacific Northwest.

In 2002, the California Department of Toxic Substances Control conducted 232 methamphetamine lab cleanups in Los Angeles County. These cleanups were estimated to cost local taxpayers more than \$600,000, or \$2,681 per lab. The costs for the entire State of California exceeded \$4,900,000. These figures do not encompass

building and environment remediation, which both cost taxpayers even more money.

Depressants

Los Angeles ED mentions of psychotherapeutic agents, which include mentions of antidepressants, barbiturates, and benzodiazepines, showed a non-significant increase of 13 percent, from 1,803 mentions in the second half of 2001 to an estimated 2,033 mentions in the first half of 2002. In terms of the individual subgroups, nonsignificant increases were reported for benzodiazepines (from 926 to 1,034 mentions) and antidepressants (from 393 to 443 mentions). ED mentions of barbiturates, on the other hand, were nearly identical in the second half of 2001 (163 mentions) and the first half of 2002 (159 mentions). Benzodiazepine mentions consisted primarily of alprazolam (Xanax, with 128 mentions), clonazepam (Klonopin, with 122 mentions), lorazepam (with 101 mentions), and diazepam (Valium, with 90 mentions). Eighty-nine percent of all barbiturate mentions were for barbiturates NOS (not otherwise specified).

The estimated population-adjusted rates of ED mentions of antidepressants (5 per 100,000) and benzodiazepines (12 per 100,000) were lower in the Los Angeles-Long Beach metropolitan area than in the coterminous United States (12 and 19 per 100,000 population, respectively). The population-adjusted rate for mentions of barbiturates, however, was identical for both Los Angeles and the coterminous United States (2 per 100,000 population).

In the second half of 2002, treatment and recovery program admissions associated with primary barbiturate, benzodiazepine, or other sedative/hypnotic abuse continued to account for less than 1 percent of all admissions in Los Angeles County.

According to LA CLEAR, Valium retails for \$4 per tablet.

Hallucinogens

ED phencyclidine (PCP) and lysergic acid diethylamide (LSD) mentions continued to remain low in the first half of 2002. ED mentions of PCP far outweighed ED LSD mentions (485 vs. 48 mentions). It is noteworthy to mention that LSD was the only major substance of abuse to show a statistically significant change (a 59-percent decrease) from the first half of 2001 to the first half of 2002.

In the second half of 2002, primary PCP treatment admissions accounted for 1 percent of all admissions. Alcohol (24.7 percent), marijuana (19.2 per-

cent), and cocaine/crack (16.9 percent) were the secondary drugs used most frequently by primary PCP admissions. Almost all (96 percent) primary PCP admissions smoked the drug. There were no notable changes from the previous reporting period in terms of user demographics. Other hallucinogens, such as LSD, peyote, and mescaline, continued to account for approximately 0.1 percent of the total treatment admissions.

According to long-term trends calculated from CHKS data spanning over the last 5 school years (exhibit 8), the pattern of past-30-day LSD/other psychedelics use among responding secondary school students (in grades 7, 9, and 11), was similar to usage patterns seen with other licit and illicit drugs. After increasing from 3.7 percent in 1997–1998 to a peak level of 6.0 percent in 1998–1999, current use of LSD/other psychedelics decreased to a low of 3.3 percent in 2001–2002.

Regarding recent ADAM data collected from a sample of Pasadena adult male arrestees during the last two quarters of 2002, an average of 1.8 percent of males had PCP-positive urine screens (exhibit 9). Unweighted adult female program findings for the fourth quarter of 2002 showed that 7.1 percent of females tested positive for recent PCP use.

There were 165 PCP arrests within the city of Los Angeles in 2002. This represented an 11-percent increase from the number of PCP arrests made in 2001. PCP arrests accounted for less than 1 percent of all narcotics arrests made in 2002.

Citywide PCP seizures increased substantially (by 559 percent) from 2001 to 2002 (from 28 to 187 pounds). The street value of the PCP seized between January and June 2002 represented roughly 6 percent of the total street value of all drugs seized during that time period.

The wholesale price range for a gallon of PCP remains at \$6,500–\$8,000; retail prices are \$125–\$175 per ounce and \$20–\$30 per sherm cigarette. Los Angeles-based Black street gangs continue to produce, supply, and distribute PCP in the Los Angeles area.

A sheet of approximately 100 doses of LSD has a wholesale price range of \$150–\$200. Typically, a single dose sells for \$5–\$10. At the retail level, psilocybin mushrooms cost about \$20 per one-eighth ounce.

Club Drugs

Because of a paucity of indicator data relating to club drugs, it is difficult to accurately and comprehensively

describe the use and abuse patterns of club drugs in Los Angeles County. Anecdotal evidence continues to circulate about the availability of club drugs in Los Angeles County, particularly methylenedioxyamphetamine (MDMA or ecstasy) and gamma hydroxybutyrate (GHB).

ED ecstasy and GHB mentions continued to represent very small proportions of all ED mentions. In the first half of 2002, 72 ED mentions for MDMA and 62 mentions of GHB were reported to the DAWN system in the Los Angeles-Long Beach metropolitan area. Each substance accounted for less than 0.5 percent of all mentions and for between 0.6 and 0.7 percent of all ED drug episodes. Mentions of ketamine and flunitrazepam (Rohypnol) remained marginal.

MDMA mentions were equally likely to be made by male or female patients and were more likely to be reported by Whites (32 percent) than Blacks (15 percent) or Hispanics (10 percent). In addition, they were slightly more likely to represent patients age 18–25 (43 percent) than those age 26–34 (35 percent). In the first half of 2002, one-half of all MDMA mentions represented multidrug episodes, compared with 59 percent in the second half of 2001. Nearly 50 percent involved a drug use motive of psychic effects; 54 percent were visits for an unexpected reaction. Sixty-three percent of the MDMA mentions represented patients who were treated and released, and an additional 36 percent of patients were admitted to the hospital.

The general demographics of ED GHB mentions remained quite different from those of ED MDMA mentions. In the first half of 2002, 84 percent of GHB mentions represented patients who were male. Whites accounted for nearly three-quarters of the GHB mentions; Hispanics constituted an additional 16 percent. One-half of the GHB mentions occurred among individuals age 26–34, followed by 29 percent among 18–25-year-olds and 19 percent among those age 35 or older. A higher percentage of GHB mentions (69 percent) than MDMA mentions were part of multidrug episodes. Psychic effects were the most likely motive for using GHB. Forty-two percent of patients visited the emergency department because of a GHB-related overdose, and an additional 37 percent had an unexpected reaction. Most (81 percent) of the mentions involved individuals who were treated and released.

All wholesale and retail prices for club drugs remained stable since early 2002. In multiple quantities, MDMA has a wholesale price of \$12 per pill or capsule. At the retail level, ecstasy usually sells for \$25–\$40 per pill. A standard dose of ecstasy

is 60–150 milligrams, which is equivalent to 1 or 2 pills. In Los Angeles, there is something known as a “boat.” A boat contains 1,000 MDMA pills and sells for \$8,000. Rohypnol has a retail value of \$6–\$10 for a 1-milligram pill. The wholesale and retail prices of GHB range from \$65 to \$100 per 16-ounce bottle to \$5–\$20 per bottle capful. The vast majority of GHB users ingested the drug as a liquid, either in straight shots or mixed with a drink. On the streets, ketamine sells for \$60–\$100 per 10-milliliter vial or \$20 for two-tenths grams of powder.

INFECTIOUS DISEASES RELATED TO DRUG ABUSE

A cumulative total of 45,241 adult/adolescent AIDS cases were reported in Los Angeles County through December 31, 2002. Of those cases, 1,008 were reported between July 1, 2002, and December 31, 2002. Currently, approximately 17,227 Los Angeles County residents are living with advanced HIV disease. Los Angeles County cumulative cases represent approximately 35 percent of the 128,196 cumulative cases in California and 6 percent of the 816,149 cumulative cases nationwide. Of the cumulative cases reported in Los Angeles County, 48 percent were White, 29 percent were Hispanic, 20 percent were Black, 45 percent were age 30–39, and 92 percent were male.

The proportion of males exposed through injection drug use has ranged between 5 and 8 percent since 1996 (exhibit 10). The proportions for other exposure categories, such as the combination of male-to-male sexual contact and injection drug use, heterosexual contact, blood transfusion, and hemophilia/coagulation disorder have remained relatively stable since 1996, as well. In 2002, 57 percent of males diagnosed with AIDS were exposed to the disease through male-to-male sexual contact. The proportion of male cases with an “other” or “unknown” exposure category continues to rise steadily and in 2002 accounted for nearly one-third of all male cases diagnosed that year.

The modal exposure category for females diagnosed with AIDS in 1996 was heterosexual contact (50 percent). This exposure category has been associated with a lower proportion of female AIDS cases since

then; in 2002 it was associated with 31 percent of all newly diagnosed female AIDS cases. Female cases attributable to injection drug use stabilized at 16 percent in 2002. The proportion of female cases with an “other” or “unknown” exposure category continued to increase, accounting for more than 50 percent of all female cases diagnosed in 2002.

In Los Angeles County, approximately 7 percent of all AIDS cases have involved injection drug use (alone) as the primary route of exposure. Among the 3,194 cumulative cases primarily attributable to injection drug use, 74 percent occurred among males. Black males continued as the modal group of male injection drug users (IDUs) (accounting for 37 percent), followed by Whites (31 percent) and Hispanics (30 percent). For female IDU AIDS cases, Blacks continued to constitute the greatest proportion (45 percent), followed by Whites (31 percent) and Hispanics (22 percent).

An additional 6 percent of the total cumulative cases were attributable to a combination of male-to-male sexual contact and injection drug use. Fifty-three percent of the male-to-male sexual contact and injection drug use cases were White males.

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Exhibit 1. Poverty Rates in Los Angeles, California, and the Nation, by Percent: 2000

	City of Los Angeles	Los Angeles County	California	United States
Individuals	22.1	17.9	14.2	12.4
Family	18.3	14.4	10.6	9.2
Household	18.6	15.1	11.8	11.8

SOURCE: Institute for the Study of Homelessness and Poverty at the Weingart Center, March 2003

Exhibit 2. Los Angeles-Long Beach Estimated ED Mentions for Selected Drugs and Percentages of Mentions Per Drug in Total Drug Episodes: 1998–June 2002

Substance of Abuse	1998		1999		2000		2001		1H2002	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Alcohol-in-Combination	6,129	(36)	8,195	(40)	10,994	(43)	10,907	(45)	4,768	(44)
Cocaine	5,779	(34)	6,768	(33)	9,094	(36)	9,999	(41)	4,159	(38)
Heroin	2,601	(15)	2,923	(14)	3,177	(13)	2,878	(12)	1,142	(10)
Marijuana	3,422	(20)	5,472	(26)	5,846	(23)	5,729	(23)	2,665	(24)
Methamphetamine	786	(5)	910	(4)	1,375	(5)	1,517	(6)	687	(6)
Amphetamines	541	(3)	866	(4)	1,072	(4)	1,261	(5)	691	(6)
PCP	605	(4)	731	(4)	823	(3)	990	(4)	485	(4)
LSD	162	(<1)	229	(1)	217	(<1)	175	(<1)	48	(<1)
Total Drug Episodes	17,103		20,667		25,280		24,669		10,906	
Total Drug Mentions	29,805		36,945		45,015		44,670		19,933	

SOURCE: DAWN, OAS, SAMHSA

Exhibit 3. Estimated Semiannual ED Mentions in Los Angeles-Long Beach: January 1998 to June 2002

Drug	1H98	2H98	1H99	2H99	1H00	2H00	1H01	2H01	1H02
Cocaine	2,629	3,150	3,183	3,586	4,622	4,472	4,625	5,374	4,159
Heroin	1,214	1,387	1,431	1,491	1,791	1,386	1,440	1,437	1,142
Marijuana	1,343	2,079	2,517	2,955	3,219	2,627	2,685	3,044	2,665
Methamphetamine	418	368	414	496	682	693	711	806	687
Amphetamines	272	268	410	456	532	540	595	666	691

SOURCE: DAWN, OAS, SAMHSA

Exhibit 4. Population-Adjusted ED Rates Per 100,000 Population for Major Illicit Drug Mentions Among Western U.S. CEWG Sites: 1998–June 2002

Drug	1998	1999	2000	2001	1H2002
Cocaine					
Denver	73	86	83	69	47
Los Angeles	68	79	95	116	48
Phoenix	73	91	85	61	31
San Diego	41	45	41	33	15
San Francisco	115	120	125	158	71
Seattle	125	129	169	159	58
Heroin					
Denver	31	39	41	40	27
Los Angeles	30	34	37	34	13
Phoenix	43	41	40	27	12
San Diego	41	44	42	29	13
San Francisco	148	190	169	177	88
Seattle	126	127	127	90	46
Marijuana					
Denver	37	42	50	50	20
Los Angeles	41	65	67	67	31
Phoenix	36	50	51	45	26
San Diego	48	38	39	44	25
San Francisco	25	29	38	45	18
Seattle	49	41	72	74	27
Methamphetamine					
Denver	7	7	7	5	4
Los Angeles	9	11	16	17	8
Phoenix	21	16	29	21	10
San Diego	31	24	31	27	11
San Francisco	39	35	37	39	24
Seattle	15	18	27	19	9

SOURCE: DAWN, OAS, SAMHSA

Exhibit 5. Number of Semiannual Treatment Admissions in Los Angeles County by Primary Illicit Drug of Abuse: January 2000–December 2002

Primary Drug	01/00–06/00	07/00–12/00	01/01–06/01	07/01–12/01	01/02–06/02	07/02–12/02
Cocaine	4,609	4,342	4,349	4,354	4,655	4,354
Heroin	12,333	10,642	9,527	8,033	7,767	7,096
Marijuana	1,817	1,736	2,258	2,028	2,686	2,816
Methamphetamine	2,181	1,959	2,403	3,015	3,453	3,692
PCP	171	166	198	207	196	219
Total Admissions	26,849	23,719	23,697	22,430	23,695	22,934

SOURCE: California Alcohol and Drug Data System (CADDs)

Exhibit 6. Characteristics of Treatment Admissions in Los Angeles County by Primary Illicit Drug and Percent: July–December 2002

Characteristics	Cocaine	Heroin	Marijuana	Methamphet-amine	All Admissions
Gender					
Male	64.5	72.0	73.8	60.5	67.5
Female	35.5	28.0	26.2	39.5	32.5
Race/Ethnicity					
White	12.2	37.8	15.6	43.1	29.8
Black/African-American	58.0	13.7	27.3	3.7	25.1
Hispanic	22.6	42.2	47.7	41.3	36.6
Native American	<1.0	<1.0	<1.0	1.3	<1.0
Asian/Pacific Islander	1.4	1.1	2.1	3.3	1.9
Other	5.4	4.6	6.5	7.3	5.7
Age					
17 and younger	1.1	<1.0	50.6	5.3	10.0
18–25	11.2	6.9	22.9	31.0	14.5
26–35	25.7	20.0	13.8	34.5	23.2
36 and older	62.0	73.0	12.7	29.2	52.3
Route of Administration					
Oral	2.3	1.3	2.0	3.1	21.0
Smoking	86.1	6.7	96.5	64.2	42.2
Inhalation	10.2	4.0	1.1	22.2	7.0
Injection	1.0	87.6	<1.0	9.4	29.0
Unknown/other	<1.0	<1.0	<1.0	1.1	2.0
Secondary Drug	Alcohol	Crack/ Cocaine	Alcohol	Marijuana	Alcohol
Total Admissions (N)	(4,354)	(7,096)	(2,816)	(3,692)	(22,934)

SOURCE: California Alcohol and Drug Data System (CADDs)

Exhibit 7. Additional Characteristics of Treatment Admissions in Los Angeles County by Primary Illicit Drug of Abuse and Percent: July–December 2002

Characteristics	Cocaine	Heroin	Marijuana	Methamphet-amine	All Admissions
Percent Positive for Intravenous Drug Use in Past Year	4.5	89.9	1.2	15.1	32.7
Percent Homeless	34.8	11.8	6.6	24.8	20.9
Percent Employed Full- or Part-Time	13.1	24.6	13.8	17.8	18.9
Percent Graduated from High School	43.9	48.8	23.2	43.8	41.9
Percent Referred by Court/Criminal Justice System (Not Including SACPA ¹ Referrals)	26.1	4.7	38.4	28.7	19.6
Percent First Treatment Episode	35.2	13.4	67.9	47.0	37.1
Total Admissions (N)	(4,354)	(7,096)	(2,816)	(3,692)	(22,934)

¹SACPA = Substance Abuse and Crime Prevention Act of 2000 (a.k.a., Proposition 36)

SOURCE: California Alcohol and Drug Data System (CADDs)

Exhibit 8. Long-Term Trends in the Percentage of Current Substance Users Among a Sample of Los Angeles County Secondary School Students: 1997–2002

Respondents ¹ Reporting Past-30-Day Use of...	School Year				
	1997–1998	1998–1999	1999–2000	2000–2001	2001–2002
Any Alcohol	49.8	35.1	29.2	28.4	25.4
5+ Alcoholic Drinks/Occasion (a.k.a., Binge Drinking)	19.3	16.7	14.4	13.4	12.4
Cocaine (any form)	3.6	4.7	4.9	4.3	3.9
Inhalants	7.1	9.2	5.7	5.1	5.0
LSD/Other Psychedelics	3.7	6.0	5.0	4.4	3.3
Marijuana	16.7	15.6	13.2	13.0	12.0
Methamphetamine	5.2	6.1	4.6	4.3	4.1

¹All respondents include responding 7th graders (when applicable), 9th graders, 11th graders, and a small sample of non-traditional students (enrolled in continuation or alternative schooling programs).

SOURCE: California Healthy Kids Survey, Los Angeles County Sample, WestEd

Exhibit 9. City of Pasadena Arrestees Testing Positive for Recent Drug Use by Gender and Type of Drug: July–December 2002

Type of Drug (%)	Third Quarter 2002		Fourth Quarter 2002		Two-Quarter Average	
	Male ¹	Female ²	Male	Female	Male	Female
Any Drug ³	62.8	N/A	61.6	57.1	62.2	57.1
Cocaine	33.4	N/A	30.4	21.4	31.9	21.4
Marijuana	30.3	N/A	44.0	35.7	37.2	35.7
Heroin	6.4	N/A	5.2	14.3	5.8	14.3
Methamphetamine	15.1	N/A	14.4	14.3	14.8	14.3
PCP	0.0	N/A	3.6	7.1	1.8	7.1
Multiple Drugs	20.2	N/A	27.2	28.6	23.7	28.6

¹Male findings are weighted and represent probability-based sampling.

²Female findings are unweighted and not based on probability sampling.

³National Institute on Drug Abuse five primary drugs (cocaine, heroin, marijuana, methamphetamine, and PCP).

SOURCE: ADAM, NIJ

Exhibit 10. Annual Adult/Adolescent AIDS Cases by Gender, Year of Diagnosis, and Exposure Category: 1996–2002

Adult/Adolescent Exposure Category ¹	1996 Number (%)	1997 Number (%)	1998 Number (%)	1999 Number (%)	2000 Number (%)	2001 Number (%)	2002 Number (%)
Males							
Male-to-Male Sexual Contact	1,817 (74)	1,207 (66)	1,053 (64)	936 (63)	760 (63)	677 (60)	395 (57)
IDU	163 (7)	130 (7)	101 (6)	79 (5)	88 (7)	92 (8)	42 (6)
Male-to-Male Sexual Contact/IDU	145 (6)	107 (6)	92 (6)	73 (5)	68 (5)	66 (6)	29 (4)
Hemophilia or Coagulation Disorder	5 (<1)	10 (<1)	1 (<1)	2 (<1)	4 (<1)	5 (<1)	0 (0)
Heterosexual Contact	49 (2)	61 (3)	58 (4)	46 (3)	46 (4)	55 (5)	20 (3)
Transfusion Recipient	14 (<1)	7 (<1)	3 (<1)	3 (<1)	4 (<1)	2 (<1)	1 (<1)
Other/Undetermined	264 (11)	319 (17)	344 (21)	339 (23)	266 (21)	214 (19)	206 (30)
Male Subtotal	2,459	1,841	1,656	1,483	1,296	1,132	693
Females							
IDU	73 (26)	70 (27)	40 (20)	41 (20)	33 (16)	31 (18)	18 (16)
Hemophilia or Coagulation Disorder	0 (0)	0 (0)	1 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Heterosexual Contact	141 (50)	123 (47)	95 (47)	91 (45)	82 (40)	48 (29)	34 (31)
Transfusion Recipient	9 (3)	7 (3)	3 (1)	3 (1)	0 (0)	4 (2)	2 (2)
Other/Undetermined	57 (20)	64 (24)	65 (32)	68 (33)	92 (44)	85 (51)	56 (51)
Female Subtotal	280	264	204	203	207	168	110
TOTAL	2,739	2,105	1,860	1,686	1,503	1,300	803

¹Exposure categories are ordered hierarchically. Cases with multiple exposure categories are included in the category listed first.

SOURCE: Los Angeles County Department of Health Services, HIV Epidemiology, Advanced HIV Disease (AIDS) Quarterly Surveillance Summary, Issued January 15, 2003

Drug Abuse in Miami and South Florida

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ABSTRACT

A significant increase in use patterns of polydrug combinations is the key emerging substance abuse issue for South Florida. Various drug combinations are fueling rising health consequences and deaths. Abuse of medications is a critical factor in many of the polypharmacy problems. More people died from a lethal dose of a prescription drug than from an illicit street drug in Florida during 2002. Narcotic analgesics (oxycodone, hydrocodone, and methadone) as well as benzodiazepines were the medications most frequently cited in these deaths. Alprazolam (Xanax) was often involved in deaths and overdoses with alcohol, opioids, cocaine, and club drugs among young and older drug abusers. A second factor in the rise of polydrug abuse is the 'club drug' pattern of using MDMA along with other drugs simultaneously or sequentially. Cocaine indicators remained stable at a high level across the region, while deaths attributed to cocaine continued to rise in the State and in Broward County. Many of these cocaine deaths involved opioid abuse, increasingly including methadone diverted from medical pain management sources. Opiate abuse continues to diversify to include not only heroin but also other opioids. Most abusers are still White males older than 30 who also abuse benzodiazepines; however, there were increases in heroin and oxycodone deaths and ED visits among young people in the last half of 2002. Marijuana indicators continue to rise in Miami-Dade County. Marijuana joints laced with powder cocaine, called 'dirties,' are increasingly reported by youth. Ecstasy abuse continues at a relatively high level among young Whites and is spreading to other ethnic groups. Among ED cases, it is becoming increasingly difficult to distinguish between use of ecstasy and other amphetamines in indicator data. GHB hospital episodes declined, but deaths linked to it continued. Crystal methamphetamine is also becoming more prominent and problematic.

INTRODUCTION

Area Description

Located in the extreme southern portion of the Florida peninsula, Miami-Dade County has a population of

nearly 2.6 million; 56 percent are Hispanic, 21 percent are White, 21 percent are Black, and 2 percent are Asian/Pacific Islander. Miami is Dade County's largest city, with 360,000 residents. More than 100,000 immigrants arrive in Florida each year; one-half establish residency in Miami-Dade County.

Broward County, situated due north of Miami-Dade, is composed of Ft. Lauderdale, 29 other municipalities, and an unincorporated area. The county covers 1,197 square miles, including 25 miles of coastline. According to the 2000 census, the population was 1,649,925. The population is roughly 63 percent White, 21 percent Black, and 17 percent Hispanic. Broward County is the second most populated county in Florida and accounts for approximately 10 percent of Florida's population. Broward was the top growth county in Florida in the 1990s, adding 367,000 more people. Palm Beach County (population 1,154,464) is located due north of Broward County and is the third most populated county in the State. Together, the 5.4 million people of these 3 counties constitute one-third of the State's 16.3 million population.

Approximately 25 million tourists visit the area annually. The region is a hub of international transportation and the gateway to commerce between the Americas, accounting for sizable proportions of the Nation's trade: 40 percent with Central America, 37 percent with the Caribbean region, and 17 percent with South America. South Florida's airports and seaports remain among the busiest in the Nation for both cargo and international passenger traffic. These ports of entry make this region a major gateway for illicit drugs. Smuggling by cruise ship passengers is an important trend in South Florida drug trafficking and has apparently been growing since airline security increases after September 11, 2001.

Several factors impact the potential for drug abuse problems in South Florida, including the following:

- Proximity to the Caribbean and Latin America exposes South Florida to the entry and distribution of illicit foreign drugs destined for all regions of the United States. Haiti remains a major link with Colombian traffickers.

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- South Florida is a designated High Intensity Drug Trafficking Area and one of the Nation’s leading cocaine importation centers. It also became a gateway for Colombian heroin in the 1990s. Millions of methylenedioxymethamphetamine (MDMA, “ecstasy,” or “XTC”) tablets originate in the Benelux countries and often—more recently—are flown to the Caribbean before entering the United States in South Florida.
- Extensive coastline and numerous private air and sea vessels make it difficult to pinpoint drug importation routes into Florida and throughout the Caribbean region.
- Lack of a prescription monitoring system in Florida now makes the State a source for diverted medications throughout the southeastern United States.
- **Drug analyses data** were derived from reports of illicit substances analyzed from 1999 to 2002 by the Broward Sheriff’s Office (BSO) Crime Lab and the System to Retrieve Information on Drug Evidence (STRIDE).
- **Heroin price and purity data** were obtained from the Drug Enforcement Administration (DEA)’s Domestic Monitor Program (DMP).
- **Drug seizure information** was available from the U.S. Customs Service.
- **Drug sales data** were derived from the Office of National Drug Control Policy (ONDCP)’s *Pulse Check*, April 2002.
- **School survey data** were from the Florida Youth Surveys on Substance Abuse for 2000 and 2002.

Data Sources

This report describes current drug abuse trends in Miami and South Florida, using the data sources summarized below:

- **Drug-related mortality data** were provided by the Florida Department of Law Enforcement, Medical Examiners Commission, 2002 Report of Drugs Identified in Deceased Persons by Florida Medical Examiners, and the Broward County Medical Examiner Department in “Drug Deaths 1999–2002,” a review of all deaths in Broward County directly caused by or associated with drugs.
- **Emergency department (ED) drug mentions data** were derived from the Drug Abuse Warning Network (DAWN), Office of Applied Studies (OAS), Substance Abuse and Mental Health Services Administration (SAMHSA), from the second half of 1997 through the first half of 2002; percentage increases reported here for the 1997 to 2002 time periods have not been tested by OAS for statistical significance. ED data are also reported from the Broward General Medical Center (BGMC) Emergency Department Drug Abuse Case Review, a report of all drug abuse cases presenting to the ED for the six semiannual periods from 2000 to 2002.
- **Drug treatment data** were provided by the Broward Addiction Recovery Center (BARC) for 2002 and by Spectrum Programs, Inc., for 1999 through 2002.

Other information on drug use patterns was derived from ethnographic research and hotlines.

DRUG ABUSE PATTERNS AND TRENDS

Cocaine/Crack

Cocaine abuse rates in South Florida rank among the highest in the Nation, as indicated by hospital ED visits, crime lab data, and drug treatment admissions. Most cocaine abuse indicators remained stable at a high level, although deaths from cocaine have continued to rise. Many of these recent cocaine deaths also involved opioid abuse, including methadone. During 2002 across Florida, 72 percent of cocaine-related deaths involved the use of another drug, thus reflecting prevalent polydrug abuse patterns with cocaine. A large proportion of DAWN cocaine ED episodes also involved at least one other substance. Older patients continue to dominate among those seeking emergency medical care and addiction treatment for cocaine abuse.

Throughout Florida, there were 1,307 cocaine-related fatalities in 2002, an 18-percent increase compared with 2001. Miami-Dade County’s 151 cocaine-related deaths in 2002 were stable from 2001 (149 such cases) and 2000 (144). In 1999, however, there were 226 cocaine-related deaths, and in 1998 there were 246. There were 32 cocaine-induced deaths in Miami-Dade County in 2002, a 29-percent decrease from the 45 cocaine-induced deaths during 2001. Cocaine-induced deaths in Miami-Dade County totaled 30 in 2000, 43 in 1999, and 39 in 1998.

In Florida, a drug is considered to be a cause of death if it is detected in an amount considered to be a lethal dose by the local medical examiner (ME). Nonspecific, polydrug mixtures were detected in 58 percent of the 151 cocaine-related deaths during 2002 in Miami-Dade County and in 72 percent of the 1,307 such deaths statewide (exhibit 1).

In Broward County, there were 64 cocaine-caused fatalities during 2002, compared with 52 in the previous year. There were 33 deaths in which cocaine without heroin, oxycodone, or methadone was considered the cause of death. There were an additional 7 deaths in which cocaine and heroin were considered causes of death, 12 deaths with cocaine and oxycodone as causes, and 7 other deaths in which cocaine and methadone were considered causes. Additionally, there were 3 deaths in which cocaine, methadone, and oxycodone were all considered causes. Finally, there was one other death in which cocaine, oxycodone, and hydrocodone were all identified. Among cocaine decedents, there were 51 males and 13 females. Eighty-three percent were White, and 16 percent were Black (only 1 involved cocaine with opioids). Among the 64 cocaine decedents, there were no teenagers; 22 percent were in their twenties, 36 percent were in their thirties, 31 percent were in their forties, and 9 percent were in their fifties. In 2001, there was a total of 52 cocaine-caused deaths, and in all of 2000 there were 40 such deaths. It appears as though the recent increase in cocaine-related deaths may be at least partly attributable to the opioid-cocaine combinations.

In Miami-Dade County during the first half of 2002, there were 2,509 cocaine/crack ED mentions in the DAWN system (exhibit 2). These cases represent a 14.5-percent increase from the same 6-month period in 2001. Trends suggest a 55-percent increase in cocaine/crack ED mentions between the second half of 1997 and the first half of 2002. The major factor for this increase appears to be a 105-percent increase in the number of these cocaine ED mentions involving at least one drug other than cocaine, rising from 916 ED mentions in the second half of 1997 to 1,879 ED mentions in the first half of 2002 (exhibit 3). In the first half of 2002, 75 percent of DAWN cocaine ED mentions involved at least one other drug (exhibit 4). Over the same period, the number of cocaine-only ED mentions declined 10 percent, falling from 700 to 630 mentions. Sixty-one percent of cocaine ED mentions in the second half of 2002 were for patients older than 34. The sharpest rise was among those older than 54.

A daily review of all ED charts at BGMC was conducted to gauge illicit substance abuse-related ED cases in 2002. A total of 73,424 charts were reviewed, and drug abuse was identified in 3.4 percent (2,472 cases). This was an average of approximately seven drug abuse cases per day.

Cocaine was clearly the most commonly involved illicit drug, accounting for 1,321 (53 percent) of the BGMC drug abuse cases in 2002. Among these cases, males accounted for 72 percent, Whites for 54 percent, Blacks for 42 percent, and Hispanics/others for 4 percent. Eighty percent of the cocaine-using BGMC patients were age 30 or older, continuing a trend toward older cocaine ED patients. Only 3 percent were younger than 20, 16 percent were in their twenties, 37 percent were in their thirties, 32 percent were in their forties, and 10 percent were age 50 or older.

The most common reasons for visiting the BGMC ED for cocaine use were as follows:

- Depression/suicidal—34 percent
- Psychosis/schizophrenia/hallucinations—12 percent
- Chest pain/cardiac problems—10 percent
- Dependence/seeking detoxification—7 percent
- Trauma/accidents—7 percent
- Altered mental status—5 percent
- Gastrointestinal complaints—5 percent

Crack cocaine was specifically mentioned in 27 percent of the BGMC ED cases in 2002. Cocaine was used in combination with alcohol in 48 percent of these cocaine ED cases. This dangerous combination forms a cometabolite, cocaethylene, which can dramatically increase toxicity. Another combination involved cocaine and marijuana (in 26 percent of all cocaine cases).

Previously, addiction treatment profiles were compiled using data from two major treatment providers: the Broward Addiction Recovery Center and Spectrum Programs. A comparison with 2001 data is not appropriate since BARC data were not available for that period. They were available for 2002.

In 2002, cocaine abuse accounted for 41 percent of the treatment admissions sample from Spectrum and

BARC. Of the 2,488 cocaine treatment clients in 2002, 49 percent were White, 39 percent were Black, and 12 percent were Hispanic/other. Among these same clients, 61 percent were age 35 or older, 24 percent were age 26–34, 9 percent were 18–25, and 2 percent were younger than 18.

Powder cocaine and crack are still described as “widely available” throughout Florida. Cocaine remains the most commonly analyzed substance by the BSO’s Crime Lab, where it accounted for 6,298 items analyzed in 2002.

Crack cocaine sells for \$5–\$20 per one-tenth gram and is roughly 80 percent pure in South Florida. Powder cocaine sells for \$40–\$60 per gram (approximately 80 percent pure). The cocaine kilogram price range remains fairly stable at \$18,000–\$22,000, according to law enforcement officials.

The Florida Youth Substance Abuse Survey for 2002 revealed that 3.2 percent of 8th grade, 5.1 percent of 10th grade, and 7.5 percent of 12th grade Florida youth had ever used cocaine. This was all down from a 2000 survey that had 4.4, 7.8, and 8.7 percent of 8th, 10th, and 12th graders, respectively, having tried cocaine in their lifetime.

Heroin

A major opiate epidemic has settled into South Florida from Palm Beach to Miami-Dade Counties. South American heroin has been entering the area over the past decade. More recently, abuse of narcotic pain medication has fueled opioid consequences. Polydrug abuse patterns have facilitated first-time use of opioid drugs, including heroin. Older, White males continue to account for the majority of opiate addiction treatment admissions and most narcotic-related deaths. Most BGMC and many DAWN ED visits for heroin or other opioids were for withdrawal or because the patient was seeking detoxification.

Throughout Florida, there were 326 heroin-related deaths during 2002 (exhibit 1), representing a decline of only 2 cases from the 328 such deaths in 2001.

Heroin was detected in 46 decedents during 2002 in Miami-Dade County (exhibit 5). It was considered the cause of death in 36 (78 percent) of those cases. During 2001, 63 percent of the 51 heroin-related deaths were considered caused by the drug. During 2002, other drugs were detected in 37 (80 percent) of the cases. None of the 46 heroin-related fatalities was younger than 18; 9 percent were age 18–25, 28

percent were 26–34, 54 percent were 35–50, and 9 percent were older than 50.

During 2002 in Broward County, heroin was detected in 50 deaths (exhibit 5), and it was considered the cause of death in 43 of those cases. Heroin was considered to be the cause of death in 41 in 2001. Of the 2002 deaths, 8 were determined to be caused by the combination of heroin and cocaine, and 3 deaths were caused by oxycodone and heroin. Heroin alone was involved in 9 deaths, while heroin combined with alcohol and/or benzodiazepines in various combinations accounted for the remaining 23 heroin deaths. Interestingly, there was only 1 death with the methadone/heroin combination, although there were 37 methadone-induced deaths and 43 heroin-induced deaths.

Broward County heroin decedents remained predominately White—91 percent in 2002. Seventy-seven percent of the decedents were male. Both indicators were similar to the last several years. Of the 43 heroin-induced decedents in Broward County during 2002, only one was younger than 19, 26 percent were age 20–29, 14 percent were 30–39, 47 percent were 40–49, and 9 percent were in their fifties.

From 1995 to 2000, Miami-Dade County recorded the greatest number of heroin deaths of any county or medical examiner district in the State. In 2001, Miami-Dade County ranked fifth in the State for heroin deaths, behind Palm Beach County, Broward County, Hillsboro County (Tampa), and Orlando. In 2002, Broward County ranked first with 43 heroin-induced deaths, followed by Palm Beach and Miami-Dade Counties each with 36 such deaths.

In Miami-Dade County, DAWN rates of heroin ED mentions increased substantially from 314 in the second half of 1997 to 942 in the first half of 2002, (exhibit 2). Sixty percent were multidrug episodes (exhibit 4). Males accounted for 80 percent of the heroin ED mentions in the first 6 months of 2002.

Among the heroin ED mentions, patients who were White non-Hispanic accounted for 60 percent, Blacks for 26 percent, and Hispanics for 12 percent. Thirty percent of the mentions were for patients age 26–34, another third were for those age 35–44, more than one-fifth were for those older than 44, and 15 percent were for patients age 18–25. Data on episode characteristics show that dependence accounted for 96 percent of the “drug use motive” for heroin; two-thirds of the mentions cited “seeking detoxification” as the reason for the DAWN ED contact.

Based on a daily review of all ED charts at BGMC in 2002, there were 142 heroin cases (6 percent of all illicit substance abuse cases), an 11-percent decline from 2001, when there were 159 cases. The 2001 total represented a 15-percent increase from 2000, when there were 138 heroin cases.

The BGMC heroin cases in 2002 were predominantly older White males experiencing withdrawal and/or seeking detoxification. Males accounted for 75 percent of the ED patients; 80 percent were White. Of these 65 heroin patients, 3 percent were teenagers; 27 percent were in their twenties, 37 percent were in their thirties, 24 percent were in their forties, and 9 percent were age 50 or older.

Heroin was the sole drug of abuse (with or without alcohol) in 37 percent of the heroin BGMC ED cases, and cocaine was a coexposure in 39 percent; heroin was used with marijuana in 11 percent. Alcohol was involved in 44 percent of the cases. The most common reason for the patient to visit the BGMC ED was withdrawal/seeking detoxification, accounting for 48 percent of the cases. Depression accounted for 18 percent of the cases, and altered mental status was the reason for another 18 percent. Psychosis and chest pain each accounted for 3 percent of the heroin ED cases.

There were 496 primary heroin addiction treatment clients during 2002, or 8 percent of the Spectrum and BARC treatment sample reviewed. Fifty-five percent of these clients were older than 34, 30 percent were age 26–34, 14 percent were 18–25, and 1 percent were younger than 18. White non-Hispanics accounted for 70 percent of the heroin treatment clients, Hispanics for 18 percent, and Blacks for 12 percent.

During 2002, 168 heroin cases were analyzed by the BSO Crime Lab, compared with 149 such cases during 2001.

Colombian heroin is still described as widely available in South Florida. Heroin prices have risen over the past year to about \$75,000 per kilogram, up from \$65,000 a year ago. Purity at the kilogram level is estimated to range from 70 to 95 percent. According to the DMP, Miami's heroin street purity is estimated at 17–23 percent. A bag of heroin (roughly 20 percent purity) weighing about one-tenth of a gram sells for \$10 as the most common unit of street heroin.

Other Opiates

Deaths from opiates other than heroin have been tracked in Florida since 2000. Methadone-related deaths increased 56 percent statewide between 2001

and 2002, rising from 357 to 556. It was the cause of death in 55 percent of those cases. The number of hydrocodone deaths rose 32 percent from 420 in 2001 to 554 in 2002; it was the cause of death in 31 percent of those cases. The number of oxycodone deaths increased 10 percent from 537 in 2001 to 589 in 2002; it was the cause of death in 43 percent of those cases. When the above ME mentions are added to those for heroin, the opioid-related ME mentions in Florida in 2002 total 2,025. Most were polydrug episodes, including 84 percent of the methadone cases, 82 percent of the oxycodone cases, 81 percent of the heroin deaths, and 74 percent of the hydrocodone ME cases (exhibit 1).

In 2000, Florida ranked fifth in the nation behind West Virginia, Alaska, Delaware, and New Hampshire in the number of OxyContin prescriptions per 100,000 population. However, since Florida is by far the most heavily populated of these five States, Florida is the largest market for OxyContin. In July 2002, a tractor-trailer truck containing \$3 million of prescription drugs was hijacked en route to Broward County. A proposal to establish a prescription drug monitoring program in Florida to combat prescription drug abuse failed to pass the State legislature in 2002 and again in 2003.

Miami-Dade County reported 24 oxycodone-related deaths during 2002 (exhibit 5); 11 (46 percent) were oxycodone-induced deaths. Broward County recorded 91 oxycodone-related deaths, of which 56 (61 percent) were oxycodone-induced. Only six of the deaths involved oxycodone alone. A benzodiazepine was present in 75 percent of these cases and at lethal levels in 58 percent of the cases. In Palm Beach County, there were 58 oxycodone-related and 22 oxycodone-induced deaths. Another drug was present in 86 percent of the cases.

Miami-Dade County reported 26 hydrocodone-related deaths during 2002; 7 (27 percent) were hydrocodone-induced. Broward County recorded 44 hydrocodone-related deaths; 26 (59 percent) were hydrocodone-induced. In Palm Beach County, 10 (24 percent) of the 42 hydrocodone-related deaths were hydrocodone-induced.

Miami-Dade County reported 10 methadone-related deaths during 2002; 7 (70 percent) were considered methadone-induced. Broward County recorded 52 methadone-related deaths, with 40 (77 percent) considered methadone-induced. In Palm Beach County, there were 81 methadone-related deaths, with 53 (65 percent) considered methadone-induced.

The number of DAWN narcotic analgesics ED mentions in Miami-Dade County increased 127 percent between the second half of 1997 and the first half of 2002, rising from 73 mentions to 166 (exhibit 2). There was a significant increase in narcotic analgesics ED mentions between the first halves of 2001 and 2002. The number of ED mentions for narcotic analgesic combinations also increased 70 percent, from 40 to 68 between the second half of 1997 and the first half of 2002. National increases in ED mentions for these categories over the same time period parallel the Miami trend. Oxycodone ED mentions rose 3,000 percent, from 2 in the second half of 1997 to 62 in the first half of 2002. Oxycodone-in-combination with acetaminophen ED mentions increased 154 percent, rising from 11 ED mentions to 28 over the same 5-year period. Hydrocodone-in-combination with acetaminophen ED mentions also increased 107 percent, from 14 to 29 mentions over the same time. There were no methadone ED mentions in the last half of 1997, but there were 7 recorded in the first half of 1998. Methadone ED mentions then increased to 12 in the first half of 2001 and totaled 7 in the first half of 2002.

A total of 91 oxycodone overdose ED cases were treated at BGMC in 2002. Males accounted for 60 percent of the clients, and 89 percent were White. The ages of these patients ranged from 16 to 61. There was one teenager; 23 percent of the patients were in their twenties, 37 percent were in their thirties, 32 percent were in their forties, and 7 percent were age 50 or older. The brand name product, OxyContin, was specifically mentioned in 68 percent of these cases. The route of administration was unclear upon reviewing most charts.

In 37 percent of these cases, the reason for visiting the BGMC ED was dependence/withdrawal. In 22 percent of the cases, use of the drug was clearly non-medical. In 24 percent of cases, the oxycodone was being used for other psychic effects (such as excessive amounts used for pain relief). In 22 percent of cases, the oxycodone was taken in a suicidal gesture.

Twenty-two percent of the oxycodone ED patients at BGMC presented with altered mental status/central nervous system depression, and five patients visited the ED because of convulsions. Naloxone was administered to 21 percent of these ED cases. One of these patients died, 34 percent required hospital admission, and the remaining patients were treated and released from the BGMC ED. Co-ingestants in these cases included benzodiazepines (in 32 percent of the cases, and especially alprazolam, in 22 percent of the cases), marijuana (16 percent), cocaine (30

percent), other opioids such as heroin or methadone (23 percent), and hydrocodone (3 percent).

Diverted OxyContin is being sold in the same places that had traditionally sold crack cocaine per law enforcement in the ONDCP's *Pulse Check*, April 2002.

The BSO Crime Lab worked 220 oxycodone cases in 2002, compared with 175 such cases in the previous year. There were also 165 hydrocodone cases in 2002, compared with 110 in 2001.

Marijuana

Marijuana cigarettes to which powder cocaine has been added are referred to locally as "dirties." This and other polydrug abuse patterns with marijuana may be key factors in the rising consequences linked to marijuana. "Dirties" are promoted as a less severe marijuana and cocaine combination than "Geek joints," which are made with crack cocaine. "Dirties" are often used in sexual situations, as is the combination of smoking marijuana and ingesting pills of sildenafil (Viagra). It was once thought that smoking powder cocaine hydrochloride would not provide the user with the desired effects of the drug. Yet, the paper chamber of the marijuana joint allows for the dry-distillation of the powder cocaine and release of its effects when it is smoked. The name "dirties," referring to the marijuana and cocaine joint, is used in a song by a local hip-hop singer.

Cannabinoids were detected in 682 deaths statewide in Florida during 2002, a 4-percent decrease from the 707 marijuana-related deaths in 2001.

In Miami-Dade County, the number of marijuana ED mentions reported by DAWN rose 163 percent between the second half of 1997 and the first half of 2002, from 460 to 1,208 (exhibit 2) and increased significantly (31 percent) between the first halves of 2001 and 2002. A demographic profile of the Miami cases in the first half of 2002 reveals that the marijuana mentions primarily represented patients who were male (76 percent) and Black (50 percent); 38 percent represented Whites and 10 percent represented Hispanics. Nine percent of these marijuana ED mentions were for patients who were age 12–17; 29 percent were for those age 18–25, 24 percent were for those age 26–34, and 38 percent were for those age 35 and older. Other drug mentions were involved in 76 percent of the marijuana ED mentions in the first half of 2002 (exhibits 3 and 4).

At the BGMC, there were 869 marijuana ED cases in 2002, representing 35 percent of ED mentions for all drugs. In 2001, there were 832 marijuana ED mentions. Seventy-four percent of the 2002 patients were male. Whites accounted for 58 percent of marijuana ED cases, Blacks for 38 percent, and Hispanics or “others” for 4 percent. Twelve percent were teenagers, 32 percent were in their twenties, 27 percent were in their thirties, 22 percent were in their forties, and 7 percent were age 50 or older.

Marijuana was the only illicit drug (with or without alcohol) in 44 percent of the BGMC ED marijuana cases. Marijuana-in-combination with cocaine was found in 39 percent of these ED mentions. Marijuana was also found in combination with MDMA or amphetamines in 37 (4 percent) additional cases. In 15 percent of the cases, alcohol was the only documented co-ingestant with marijuana.

The most common reasons for BGMC marijuana ED visits in the second half of 2001 were as follows:

- Depression/suicidal—27 percent
- Psychiatric-related (e.g., hallucinations, anxiety, bizarre behavior, delusions)—11 percent
- Trauma—10 percent
- Chest pain—8 percent
- Altered mental status—6 percent

Marijuana is still the most popular drug among young people visiting the BGMC ED. Fifty-seven percent of all illicit substance abuse cases for the 12–25 age group involved marijuana during 2002.

During 2002, 2,504 addiction treatment clients (41 percent of the study treatment sample) cited marijuana as the primary drug of abuse. Forty-six percent of these clients were White, 38 percent were Black, and 16 percent were Hispanic or “other.” In contrast to cocaine and heroin patients, those seeking treatment for marijuana tended to be younger: 23 percent were age 17 or younger, 29 percent were 18–25, 22 percent were 26–34, and 26 percent were older than 34.

Marijuana is still described as widely available throughout Florida, with local commercial, sinsemilla, and hydroponic grades available. One-quarter ounce of sinsemilla, with an estimated tetrahydrocannabinol (THC) content of 10–18 percent, sells for \$100–\$120. Prices for a pound of marijuana have been increasing, from \$4,000 in 2001 to \$5,000 in 2003.

The 2002 Florida Youth Substance Abuse Survey reported decreases in lifetime marijuana use statewide since the 2000 Survey, with 8th grade proportions declining from 24.4 percent to 19.8 percent, those for 10th graders declining from 38.6 percent to 32.9 percent, and those for 12th graders also declining from 43.9 to 40.6 percent. Students in Miami-Dade County recorded the lowest current (past 30 days) marijuana use in the State at 6.5 percent of all 6th through 12th graders. Ten percent of Broward County students reported current marijuana use; this ranked the fifth lowest in the State among the 60 counties reporting. Statewide, 12.1 percent of students reported current marijuana use.

Gamma Hydroxybutyrate (GHB)

GHB, an anesthetic, has been a commonly abused substance in South Florida for the past 5 years. There are several compounds that are converted by the body to GHB, including gamma butyrolactone (GBL) and 1,4 butanediol (1,4 BD). Most recently, GHB abuse involves the abuse of 1,4 BD. These drugs have become popular in the techno-dance scene and at other parties. Commonly used with alcohol, they have been implicated in drug-facilitated rapes and other crimes. They have a short duration of action and are not easily detectable on routine hospital toxicology screens. GHB was declared a federally controlled Schedule I drug in March 2000.

In all of Florida, GHB-related deaths increased from 23 in 2000 to 28 in 2001 and then declined to 19 in 2002, a 32-percent decrease from the previous year. Six (32 percent) of the 2002 GHB-related deaths were considered to be caused by the drug. GHB deaths in Miami-Dade County declined from three in 2000 to one in 2001; none was reported in 2002.

There were three GHB-caused fatalities in 2002 in Broward County. The first involved a 30-year-old White male who was found unresponsive by a friend, along with two empty bottles of medication amitriptyline (an antidepressant) and gabapentin (an anti-psychotic/anticonvulsant). He was pronounced dead at the scene. On autopsy, the two medications found with the decedent at the time of his death were detected in his blood, and both were found to be at a therapeutic level. No other drugs or alcohol were detected. Since a viable cause of death could not be found, a blood GHB level was assayed, and it came back at the highest level ever measured in Broward County and quite possibly the highest ever anywhere (2,520 milligrams/liter). Given this information, the cause of death was listed as “acute drug toxicity—GHB” and the manner was ruled a suicide. There was

no further clarifying history regarding a past or recent history of GHB abuse.

In a second death, a 33-year-old White male with a history of alcoholism, drug abuse, and depression was found unresponsive by his roommate. There was again no specific history of GHB abuse, but a blood GHB level was taken as part of the autopsy. His blood GHB level was also extremely high at 1,600 milligrams/liter, and his blood was also positive for benzodiazepines. His blood alcohol level was negative. This death was considered to be caused by GHB and was also listed as a suicide. The third death involved a 21-year-old White male with a history of alcoholism but apparently no specific history of GHB abuse. He was found unresponsive and not breathing in bed by his mother, with vomitus in and around his mouth. Attempts at resuscitation by the fire rescue and the emergency department were unsuccessful. Initially, the medical examiner ruled that he had died of natural causes. However, on autopsy a blood GHB level test was done, and the GHB concentration was found to be 589 milligrams/liter. Consequently, the case was reclassified as an accidental GHB-caused drug death. No alcohol or other drugs were detected in the decedent at autopsy, and while no specific GHB abuse history was documented, he was said to be a user of multiple “health foods.”

From 1996 to 2002 in Broward County, there were a total of 14 GHB-related deaths that involved GHB in some way (2 in 1996, 2 in 1997, 3 in 1998, 1 in 1999, 3 in 2000, and 3 more in 2002). In 12 of these cases, GHB was mentioned as one of the causes of death. In one other case, the patient was admitted to a hospital for GHB intoxication, appeared to have recovered from that, and subsequently succumbed because of other reasons. In one other death, the patient was brought dead on arrival to the BGMC ED as a multiple drug overdose, which included GHB by history. However, the ME found GHB to be non-contributory.

Ten of the 12 GHB-caused fatalities involved co-ingestants, including alcohol, cocaine, marijuana, benzodiazepines, opioids, carisoprodol (Soma), sertraline (Zoloft), gabapentin, amitriptyline, and MDMA (ecstasy). Alcohol was detected in 7 of 12 cases in concentrations of 90–340 milligrams per deciliter (legally drunk in Florida is 80 milligrams per deciliter). Two fatalities involved no known or detected co-ingestants and no alcohol. These cases are important to point out because they refute the commonly espoused misperception that GHB is only fatal when taken with another central nervous system depressant. Two of the 12 fatalities were ruled suicides and, as mentioned earlier, had extremely high levels of GHB in the blood.

In Miami-Dade County, DAWN ED mentions for GHB rose from 2 in the last half of 1997 to 28 in the first half of 2000 (exhibit 2), before declining to 16 and then increasing significantly from the second half of 2001 to the first half of 2002, when there were 23 mentions.

There was a dramatic decrease in the number of GHB cases treated in 2002 at the BGMC ED. The 34 GHB or GHB analog cases in 2002 compare with 71 cases during 2001 (exhibit 6). During 2000, the BGMC ED treated 77 people with GHB or GHB precursor overdose. In most of the GHB overdose cases during 2002, the reason for the ED visit was decreased responsiveness/coma, usually lasting less than 3 hours.

The ages of the 34 GHB toxicity patients at BGMC in 2002 ranged from 19 to 41 years, with an average of 26.2 years. There were 3 teenagers (9 percent); 23 (68 percent) were in their twenties, 6 (18 percent) were in their thirties, and 2 (6 percent) were in their forties. Twenty-seven of these GHB overdose patients were men (79 percent); 29 (85 percent) were White non-Hispanic, 1 (3 percent) was Black, and 1 (3 percent) was Native American. Race/ethnicity was unknown in 2 (6 percent) of the cases.

Among the GHB BGMC patients in 2002, a urine toxicology screen was amphetamine positive in seven cases (21 percent), cocaine positive in four (12 percent), and marijuana positive in six (18 percent). A urine toxicology screen was not obtained for every case.

Alcohol was involved in 47 percent of the 34 cases at BGMC, confirmed either by history or through an alcohol level test. In the GHB cases for which a blood alcohol level was obtained, the level ranged from 0 to 474 milligrams per deciliter.

The location of the incident requiring the ED visit was a local bar or nightclub or the beach in five cases (15 percent). Forty-seven percent of the cases presented to the ED between 11 p.m. and 6 a.m. Many patients were temporarily unresponsive, and three (9 percent) required intubation and mechanical ventilation. At least 5 (15 percent) of the 16 patients vomited. Most patients were treated and released from the ED within several hours. However, five of the patients required hospital admission.

During 2002, 6 GHB, 8 GBL, and 12 butanediol cases were analyzed by the BSO Crime Lab. In 2001, there were 3 GHB, 13 GBL, and 7 butanediol cases analyzed by the BSO Crime Lab. This compares with 16 GHB-related cases or GBL cases during 2000.

Methylenedioxymethamphetamine (MDMA or Ecstasy)

MDMA, a methylated amphetamine, has become popular as a club drug and at techno-dance events, such as raves and private parties. The psychoactive, synthetic, DEA Schedule I drug has gained the reputation as a drug that can promote empathy, relaxation, and sexual feelings. The most recent measures of its abuse suggest problems may have peaked in 2001.

Ecstasy pills generally contain 75–125 milligrams of MDMA, although pills are often adulterated and may contain no MDMA. Wholesale prices are approximately \$8 per pill for 100 units, but retail prices in clubs and raves are \$10–\$50.

The major sources of the designer logo-emblazoned pills seem to be clandestine labs in Western Europe, especially the Netherlands and Belgium (and more recently Spain). There are unverified rumors of clandestine labs in South Florida attempting MDMA production, and more recently there has been evidence suggesting that Colombian drug trafficking organizations may be trying to become involved with ecstasy distribution.

There were 126 methylated amphetamine-related deaths in the State of Florida during 2002 (exhibit 1); 24 (19 percent) were considered to have been caused by the drug. Eight of these deaths were in Miami-Dade County; four of these were considered to have been caused by the drug. There were nine methylated amphetamine-related deaths in Broward County, and the drug was considered the cause of death in three of these cases. Florida recorded 147 methylated amphetamine-related deaths statewide in 2001; in 37 (25 percent) of these cases, the drug was considered the cause of death.

In Miami-Dade County, 184 MDMA ED mentions were reported by DAWN in 2001, a 75-percent increase from 2000. Yet the number of MDMA mentions declined 22.5 percent between the first and second halves of 2001 (exhibit 2). A total of 105 MDMA mentions were reported for all of 2000, a significant increase from the 2 reported in 1994.

It has become increasingly difficult to determine by chart review whether ecstasy or other types of amphetamines were involved with ED cases. This is because methamphetamine and other amphetamines have become increasingly popular. In addition, patients rarely report the exact amphetamine that was taken; therefore it is rarely documented. Although the urine

toxicology screen may be positive for amphetamines, this does not reliably distinguish between MDMA and other amphetamines. Since some of the same patient populations are using both, and in fact since many ecstasy pills may be adulterated or substituted for other amphetamines, the picture becomes even less clear.

There were 13 MDMA (ecstasy) DAWN ED mentions in the second half of 1997. That number rose steadily to 102 ED mentions in the first half of 2001 before declining in the next 2 semiannual reporting periods to 79 mentions in the first half of 2002. Eighty-six percent of these mentions in the first half of 2002 involved the use of at least one other drug (exhibit 3). Whites represented 62 percent of the MDMA ED cases, Blacks accounted for 18 percent, and Hispanics accounted for 15 percent. Patients age 12–17 accounted for 14 percent of the MDMA ED mentions, those age 18–25 accounted for 56 percent, patients age 26–34 represented 28 percent, and those age 35–44 constituted 3 percent of the total MDMA mentions.

At BGMC, ED cases involving ecstasy during 2002 can be divided into three major categories: (1) those in which ecstasy was specifically mentioned in the medical record and the patient tested positive for amphetamines (there were 7 of these cases); (2) those in which ecstasy was mentioned but the toxicology screen was either not obtained or was negative for amphetamines (15 cases); and (3) those cases in which ecstasy was not specifically mentioned but was suspected based on circumstances, and the urine toxicology screen was positive for amphetamines. It has become increasingly difficult to determine a number in the third category, given the increasing use of methamphetamine and amphetamines other than ecstasy.

There were 87 additional cases at BGMC in which some type of amphetamine was either mentioned or analyzed by toxicology screening; 83 percent were amphetamine positive.

There are several reasons to believe that more and more of these amphetamine cases involve methamphetamine or amphetamines other than ecstasy. First, with the increased airport security since September 11, 2001, there may be somewhat less ecstasy available. Second, methamphetamine and other amphetamines appear to be becoming more popular, and not just as cheaper, more readily available adulterants or substitutes.

The 22 clearly ecstasy (MDMA) cases at BGMC were mostly White non-Hispanic patients who ranged in age from 17–55. Twenty-three percent were in their teens,

64 percent were in their twenties, and there was one patient each in their thirties, forties, and fifties. Fifty percent also tested positive for marijuana; 41 percent had used cocaine, 18 percent had used alcohol, and 9 percent of these patients had also used GHB.

The reason for the visit to the BGMC ED was altered mental status/decreased responsiveness in 27 percent of the cases; 50 percent were in the ED because of anxiety, agitation, confusion, paranoia, or bizarre behavior. One patient had convulsions.

Other Stimulants

Methamphetamine abuse is an emerging drug epidemic in the “outbreak” stage across the region. Its abuse is linked to the techno-dance scene. The drug is being promoted to populations of men who have sex with other men who often combine it with sildenafil (Viagra) for high-risk sexual behavior known as “Party and Play.” Sources report the drug is being shipped by overnight delivery from California. Mexican drug trafficking organizations were also mentioned as another source of the drug locally in the first half of 2003. Law enforcement sources confirm increased local trafficking and relatively small lab production of methamphetamine.

There was a significant increase in methamphetamine cases worked by the BSO Crime Lab in 2002, with a total of 88 such cases. In 2001, there were 39 cases, and there were 30 in 2000. In addition, local law enforcement officials and ethnographers report a recent increase in crystal methamphetamine use, particularly among gay men, who refer to the drug as “Tina.”

Either d-methamphetamine or l-methamphetamine was identified in 43 percent of the 126 methylated amphetamine-related deaths in Florida in 2002 in which the specific type of methylated amphetamine was identified. The drugs were detected in 30 percent of the 147 methylated amphetamine-related deaths statewide in 2001.

Between the last half of 2001 and the first half of 2002, the number of amphetamine-related DAWN ED mentions in Miami-Dade County increased from 32 to 37, but the change was not statistically significant (exhibit 2). Over the same time period, there was a 64-percent decline in the number of methamphetamine-related ED mentions, from 14 to 5. It is still unclear how hospital staffs classify which cases are for amphetamines and which are for methamphetamine.

In 2002, there were 87 BGMC ED cases in which amphetamines of some type were either mentioned in

the history or detected in a toxicology screen, more than the total for “ecstasy” cases. This represents a 55-percent increase over the 39 cases in the previous year. Of the 87 cases in 2002, 87 percent were White and 78 percent were male. Teenagers accounted for 13 percent of the cases; 31 percent were in their twenties, another 31 percent were in their thirties, 21 percent were in their forties, and 5 percent were in their fifties. Most cases were amphetamine-positive on their toxicology screens (39, or 66 percent of those screened). In the majority of cases, the exact form of the amphetamine was not documented. However, a smokable form of methamphetamine was specifically documented in 14 cases. Marijuana was a co-intoxicant in 84 percent of the cases, cocaine in 28 percent, and GHB in 8 percent. Methylphenidate (Ritalin) has also received local and national media attention as being abused by college students either orally or crushed and used intranasally. Hotline calls and student personnel administrators at local universities confirm the suspected abuse of methylphenidate.

Lysergic Acid Diethylamide (LSD)

LSD, a synthetic hallucinogen popularized in the 1960s in the United States, is usually abused orally in small tablets (“microdots”), thin squares of gelatin (“windowpanes”), or blotter paper. It is not easily detected on most hospital urine toxicology screens. The drug became popular again in the 1990s at lower doses as a stimulant and hallucinogen.

There were 22 LSD DAWN ED mentions in Miami-Dade County during the first half of 2002 representing a 35-percent decline from the 34 ED mentions in the first half of 2001 (exhibit 2). LSD appears to be losing popularity among young people.

In 2001, the Miami-Dade School Survey found that only 1.7 percent of students in grades 7–12 reported current LSD use, down from 3.8 percent in 1995.

Benzodiazepines

For a variety of reasons, it is much more difficult to track benzodiazepine abuse than other forms of substance abuse. However, there are certainly some indicators that benzodiazepines in general and alprazolam (Xanax) in particular are a substantial problem. Benzodiazepines were second only to alcohol in their involvement in drug-related deaths throughout Florida.

There were 1,625 benzodiazepine-related deaths in Florida during 2002, representing an 18-percent increase over the 1,378 ME mentions in 2001. Of the

2002 deaths, a benzodiazepine was identified as the cause of death in 346 cases (or 21 percent).

Benzodiazepines in general and alprazolam (Xanax) in particular appear popular among opioid abusers. Benzodiazepines were involved in 39 of the 52 Broward County oxycodone-caused deaths (75 percent), and alprazolam was involved in 22 of those deaths in 2002. Among heroin-caused fatalities in 2002 in Broward County, benzodiazepines were involved in 17 of the 43 deaths (40 percent) and alprazolam in 9. Benzodiazepines were involved in 24 of the 40 (60 percent) Broward methadone-caused deaths, and in 17 of the 34 (50 percent) Broward County hydrocodone-caused deaths in 2002. In addition, benzodiazepines

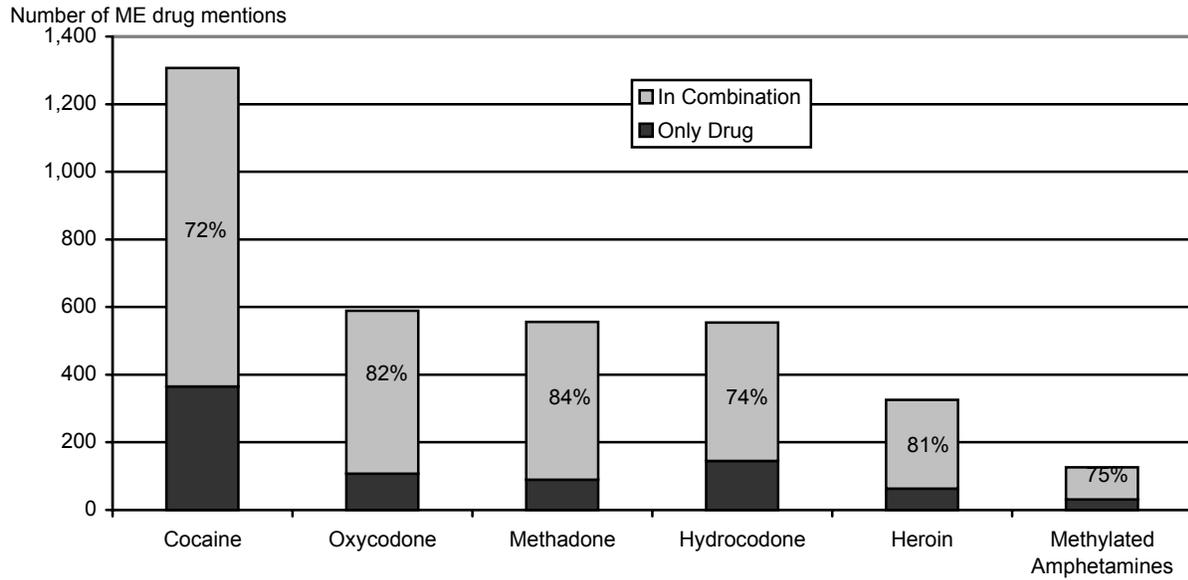
were involved in 40 of the 64 (63 percent) Broward County cocaine deaths in 2002.

In Miami-Dade County, there were 534 benzodiazepine-related DAWN ED mentions during the first half of 2002, representing a slight but insignificant decline from the preceding 6-month period but a 48-percent increase over the 361 mentions in the second half of 1997. Alprazolam accounted for 234 of these mentions in the first half of 2002, up 175 percent from the 103 mentions in the second half of 1997.

In Broward County, benzodiazepines were involved in 32 percent of the 91 oxycodone BGMC hospital ED cases during 2002; alprazolam was involved in 21 percent of the oxycodone cases.

For inquiries regarding this report, please contact: James N. Hall, Up Front Drug Information Center, 12360 SW 132nd Court, Suite 215, Miami, Fla. 33186, Phone: (786) 242-822, E-mail: <upfrontin@aol.com>.

Exhibit 1. Florida Drug-Related Deaths by Single Drug or In-Combination: 2002



SOURCE: Florida Department of Law Enforcement, Florida Medical Examiners Commission

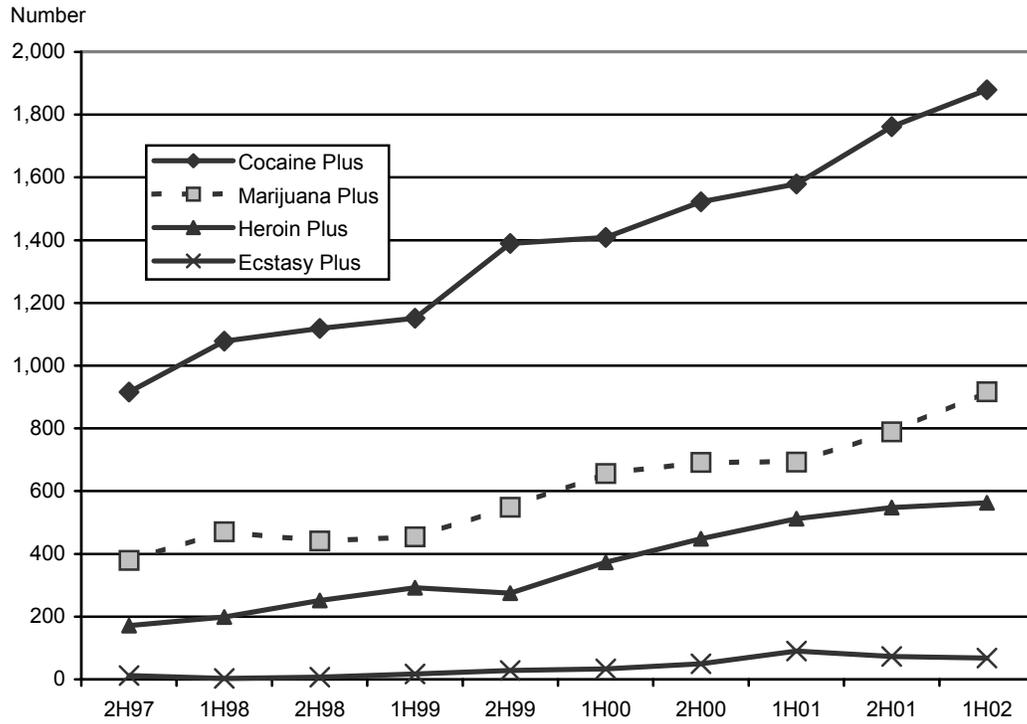
Exhibit 2. Number of ED Mentions of Selected Drugs by Half-Year in Miami-Dade County: 2H 1997–1H 2002

Drug Category	2H 1997	1H 1998	2H 1998	1H 1999	2H 1999	1H 2000	2H 2000	1H 2001	2H 2001	1H 2002
Cocaine	1,616	1,768	1,785	1,872	2,146	2,131	2,252	2,192	2,450	2,509
Heroin	314	364	403	453	464	681	771	830	837	942
Marijuana	460	561	553	574	709	855	913	920	1,011	1,208
Amphetamines	8	26	37	23	31	45	39	32	32	37
Methamphetamine	8	7	9	...	6	7	8	13	14	5
MDMA (Ecstasy)	13	3	9	26	34	43	62	102	83	79
LSD	30	24	30	24	26	24	31	34	21	22
PCP	7	7	6	3	6	–	7	2	7	2
GHB	2	2	8	7	22	28	17	17	16	23
Benzodiazepines	361	344	417	358	392	472	490	523	551	534
Narcotic Analgesics	73	56	133	78	119	115	127	132	172	166
Narcotic Analgesics Combinations	40	51	33	44	33	66	62	60	73	68

¹ Dots (...) indicate that an estimate with a relative standard error greater than 50 percent has been suppressed.

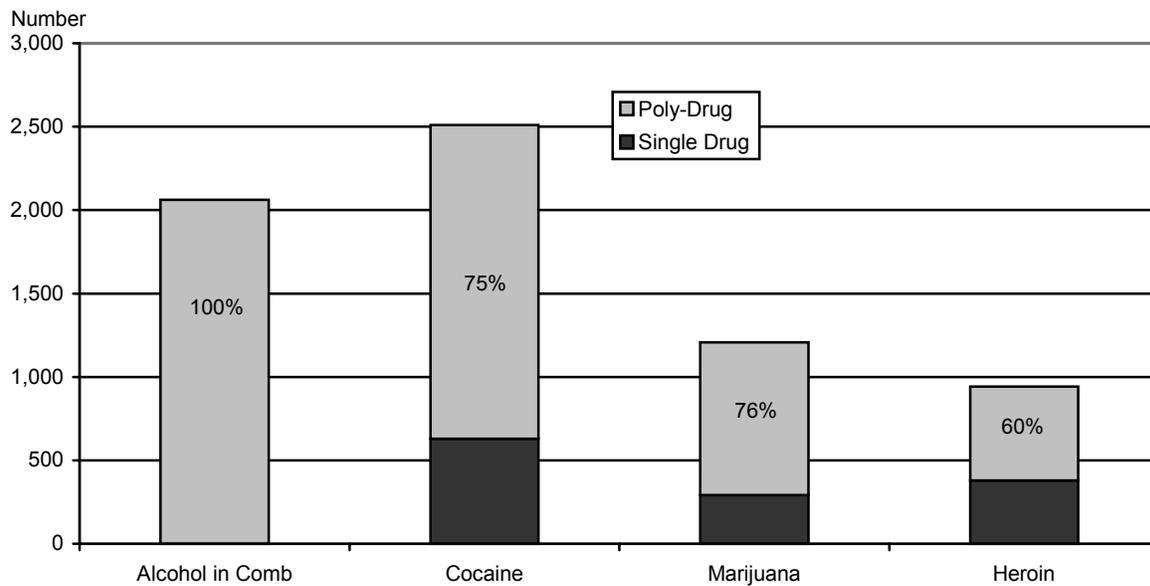
SOURCE: DAWN, OAS, SAMHSA

Exhibit 3. Number of Multidrug ED Mentions for Selected Drugs in Miami-Dade County, Florida: 2H 1997–1H 2002



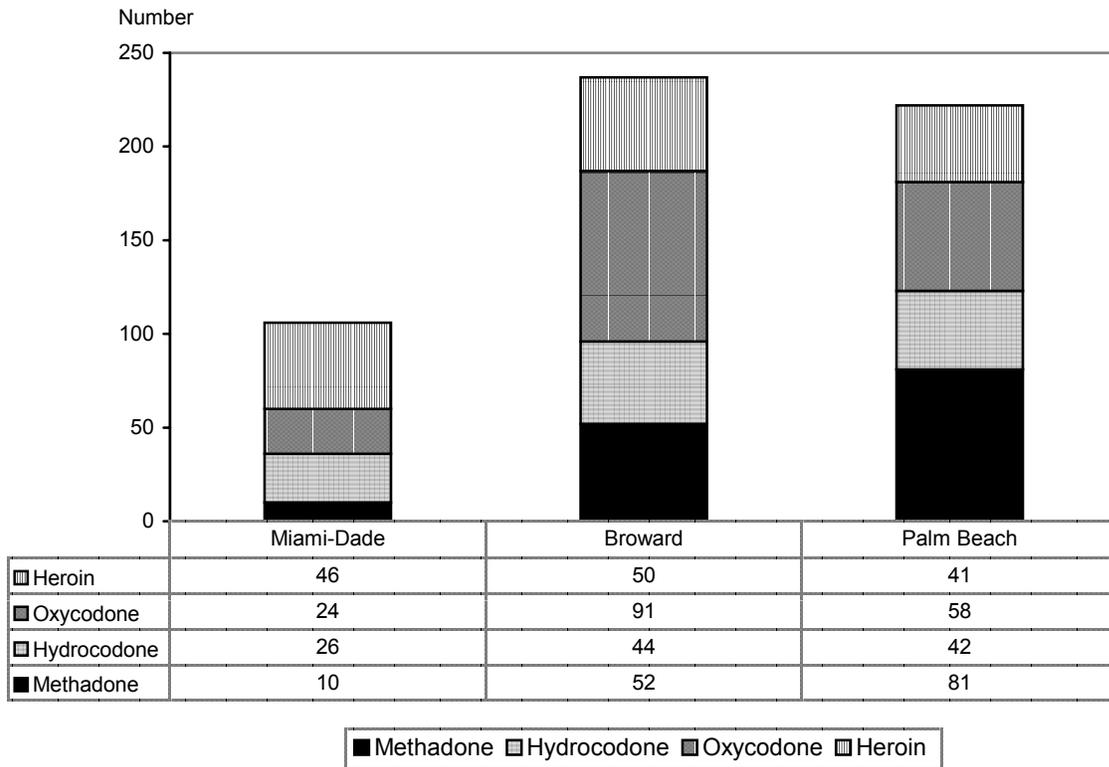
SOURCE: DAWN, OAS, SAMHSA

Exhibit 4. Percentages of Multidrug ED Mentions for Selected Drugs in Miami-Dade County: First Half 2002



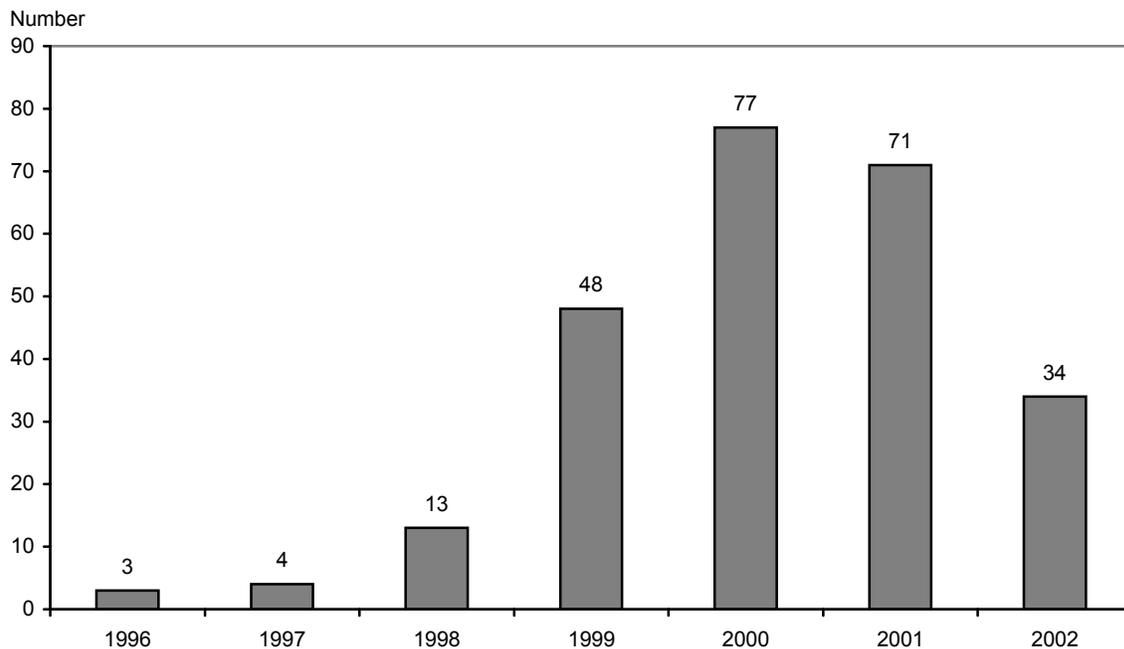
SOURCE: DAWN, OAS, SAMHSA

Exhibit 5. Number of Opioid-Related Death Mentions in Three Florida Counties: 2002



SOURCE: Florida Department of Law Enforcement, Medical Examiners Commission

Exhibit 6. Number of GHB-Related ED Visits: 1996–2002



SOURCE: Broward General Medical Center

Drug Abuse Trends in Minneapolis/St. Paul

Carol Falkowski¹

ABSTRACT

In 2002, most indicators regarding the abuse of illicit drugs in the Minneapolis/St. Paul metropolitan area continued upward trends. Hospital ED episodes involving cocaine continued to increase and outnumbered those for any other illicit drug. Yet the population-based cocaine ED rate in the Twin Cities remained among the lowest of 21 major cities included in DAWN, and cocaine-related deaths and treatment admissions declined slightly. Elevated levels of opiate-related mortality continued, evident since 2000. These were attributable, in part, to heightened availability of high-purity, low-cost heroin, intranasal use, and the growing non-medical use of prescription narcotics. At the same time, the heroin-related hospital ED rate in Minneapolis remained among the lowest among the Nation's major cities. Methamphetamine abuse gradually increased, as it has over the past few years, and consumed a growing amount of law enforcement attention, especially in nonmetropolitan areas of the State. The methamphetamine-related hospital ED rate in the Minneapolis/St. Paul metropolitan area remained among the highest in the country in 2002, although very few arrestees tested methamphetamine positive (3.9 percent). Methamphetamine-related admissions to addiction treatment programs inched up slightly, and smoking became the primary route of administration. Many law enforcement seizures of MDMA 'ecstasy' contained ingredients other than (3,4-methylenedioxy-methamphetamine), such as ketamine. The rate of marijuana use among adult male arrestees in Minneapolis was among the highest in the Nation. In Minneapolis, Oklahoma City, and Albany, 54 percent of adult male arrestees tested positive for marijuana in 2002. Marijuana sent more people to area addiction treatment programs than any other illicit drug. Roughly one-half were younger than 18. Other substances of abuse among adolescents included over-the-counter cold medications containing dextromethorphan, prescription stimulants used in the treatment of attention deficit disorders 'hyper pills,' and energy boosting dietary supplements.

INTRODUCTION

This report is produced twice annually for participation in a national drug abuse epidemiological surveillance network, the Community Epidemiology Work Group (CEWG) of the National Institute on Drug Abuse, which consists of researchers from 21 cities in the United States. It is based on the analysis of the most recent available data and information from multiple sources.

Area Description

The Minneapolis and St. Paul, Minnesota, metropolitan area (the "Twin Cities") includes Minneapolis, the capital city of St. Paul, and the surrounding counties of Hennepin, Ramsey, Anoka, Dakota, and Washington. According to the 2000 census, the five-county population is 2,482,353, one-half of the total Minnesota State population. More than one-half (56 percent) of the Ramsey County population lives in the city of St. Paul, and one-third (34.2 percent) of the Hennepin County population lives in the city of Minneapolis.

In the five-county metropolitan area, 84 percent of the population are White, while in the cities of Minneapolis and St. Paul, 65 percent are White. In Hennepin County, African-Americans constitute the largest minority group, while Asians are the largest minority group in Ramsey, Anoka, Dakota, and Washington Counties. The Twin Cities have a large (40,000 and growing) Somali refugee population, as well as a large Hmong population of individuals from Laos who settled in the area over the past two decades. St. Paul is home to more than 24,000 Hmong people, the largest Hmong population of any city in the United States.

Aside from the Twin Cities metropolitan area, the remainder of the State is less densely populated, with scattered small and mid-sized towns interspersed between rural agricultural areas, undeveloped wilderness, and lakes. The Twin Cities are located 20 miles west of the Minnesota/Wisconsin border. Most of the State's northern border with Canada is a

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wilderness area. To the west, Minnesota borders two of the Nation's most sparsely populated states, North Dakota and South Dakota. Drugs are sold and distributed within Minnesota by Mexican drug trafficking organizations, street gangs, independent entrepreneurs, and other criminal groups.

Data Sources

Sources of information for this paper are described below.

- **Mortality data** on drug abuse-related deaths are from the Hennepin County Medical Examiner (ME) and the Ramsey County ME (through March 2003). Hennepin County cases include those in which drug toxicity was the immediate cause of death, and those in which recent drug use was listed as a significant condition contributing to the death. Ramsey County cases include those in which drug toxicity was the immediate cause of death and those in which drugs were present at the time of death.
- **Hospital emergency department (ED) drug mentions data** are from the Drug Abuse Warning Network (DAWN), Office of Applied Studies (OAS), Substance Abuse and Mental Health Services Administration (SAMHSA), U.S. Public Health Service. The data include weighted estimates of all drug abuse-related ED mentions in non-Federal, short-term general hospitals in the Standard Metropolitan Statistical Area through June 2002. A single drug abuse-related ED episode can involve the "mention" of up to four drugs and alcohol-used-in-combination.
- **Treatment data** are from addiction treatment programs (residential, outpatient, extended care) in the five-county metropolitan area, as reported on the Drug and Alcohol Abuse Normative Evaluation System of the Minnesota Department of Human Services through December 2002.
- **Arrestee drug testing data** on people arrested in Hennepin County are from the Arrestee Drug Abuse Monitoring (ADAM) program, National Institute of Justice (NIJ), U.S. Department of Justice. From 1998 to April 2003, the Minneapolis ADAM program was administered by the Minneapolis Medical Research Foundation; it is currently administered by the Council on Crime and Justice. Beginning in 2000, male arrestees were selected by representative sampling; thus, data prior to 2000 are not comparable to those collected from 2000 onward. Researchers interviewed a sample of 906 arrestees in Minneapolis

in 2002. Of the 906 adult male arrestees in Minneapolis in 2002, 73.5 percent tested positive for any of those five drugs: cocaine, marijuana, heroin, methamphetamine, and phencyclidine (PCP). Close to one-half (43.8 percent) reported heavy use of any of the five drugs in the past year. ("Heavy use" was identified as 13 or more days of self-reported consumption of a drug in a 30-day period in the year before the interview.) Only 3.4 percent reported past-year injection drug use. According to a clinically based dependency screen regarding drug use in the past year, 40.1 percent were at risk for drug dependence.

- **Poison control drug-related data** are from the American Association of Poison Control Centers Toxic Exposure Surveillance System (TESS) provided by the Minnesota Poison Control System, Hennepin Regional Poison Center, Hennepin County Medical Center in Minneapolis.
- **Law enforcement data** on drug seizures and prices are from various law enforcement agencies including the U.S. Drug Enforcement Administration (DEA), the Hennepin County Sheriff, the Ramsey County Sheriff, the Washington County Sheriff, the St. Paul Police Department, the Minneapolis Police Department, and metropolitan area narcotics task forces. Crime lab data are from the St. Paul Police Department, the Minneapolis Department of Health and Family Support, and the Minnesota Bureau of Criminal Apprehension.
- **Data on the acquired immunodeficiency syndrome (AIDS)** are from the Minnesota Department of Health, 2002 AIDS Surveillance Report.
- **Data on hepatitis C** are from the Minnesota Department of Health, 2002 Hepatitis C Surveillance Report.
- **Additional information** is from law enforcement officers, addiction treatment program staff, drug abuse treatment professionals, and school-based drug abuse counselors.

DRUG ABUSE PATTERNS AND TRENDS

Cocaine/Crack

Acute medical consequences associated with cocaine abuse and addiction continued to escalate, as evidenced by hospital ED data. Cocaine-related deaths and treatment admissions, however, declined slightly. Cocaine-related treatment admissions accounted for a smaller percentage of total admissions in 2002 than in 1998.

From 2001 to 2002, cocaine-related deaths in Hennepin County fell slightly, from 37 to 34 (exhibit 1). The average age of the decedents was 37.6; 58.8 percent were White and 26 percent were women. In Ramsey County, there were 11 deaths each in 2001 and 2002. The average age of decedents was 42.8; 81.8 percent were White, and two were women. In the first quarter of 2003, there were 16 cocaine-related deaths in Hennepin and 2 in Ramsey County.

Hospital ED mentions of cocaine increased 80 percent from the first half of 1998 to the first half of 2002 (exhibit 2). The rate of cocaine-related ED mentions grew from 17 to 27 per 100,000 population during the same time periods, but in 2002 the rate remained among the lowest rates of the major cities included in DAWN (exhibit 3). The rate of cocaine-related ED mentions in CEWG areas in the first half 2002 ranged from a high of 140 per 100,000 population in Chicago to a low of 15 in San Diego.

Cocaine was reported as the primary substance problem by 12.5 percent of people admitted to addiction treatment programs in 2002, compared with 14.8 percent in 1998 (exhibit 4). As in past years, most admissions were for crack cocaine (82.7 percent); 69.1 percent were male, 52.0 percent were African-American, and 88.5 percent were age 26 and older (exhibit 5).

The presence of cocaine among arrestees in Hennepin County grew over the past 5 years (exhibit 6). In 2002, 30.8 percent of adult male arrestees in Minneapolis tested positive for cocaine, compared with 26.7 percent in 1998. Nationwide, the presence of cocaine among adult male arrestees ranged from a high of 49.4 percent in Atlanta to a low of 9.1 percent in Honolulu.

Seizures of cocaine by area law enforcement agencies showed mixed patterns. The amount of cocaine and the number of cases submitted to the State crime lab, which stem primarily from seizures by nonmetropolitan law enforcement agencies, nearly doubled from 2001 to 2002. In Hennepin County, the amount of cocaine seized grew by 40 percent, including a record-high seizure of more than 4 pounds of crack. The amount analyzed by the St. Paul crime lab was stable, and the amount seized by Ramsey County law enforcement officials declined from 2001 to 2002. Mexican criminal organizations remained involved with the transport of cocaine into Minnesota, while gangs played a major role in the street-level distribution of crack. Key members of the Gangster Disciples were sentenced in May in a case involving conspiracy with intent to distribute crack cocaine, witness tampering, and firearms.

Cocaine prices varied, but generally were \$100 per gram, \$200 per “eight-ball” (one-eighth ounce, 3.5 grams), \$700–\$800 per ounce, and \$22,000 per kilogram. A rock of crack ranged in price from \$5 to \$20.

Heroin

The marked increase in opiate-related mortality continued and was attributed in part to the increase in the availability of high-purity, low-cost heroin since 2000, the increase in intranasal use, and the rising nonmedical abuse of prescription narcotic analgesics (painkillers).

While the number of opiate-related deaths more than doubled in Hennepin County and tripled in Ramsey County since 1997 such deaths remained relatively stable from 2001 to 2002 (exhibit 1). In Hennepin County in 2002, the average age of decedents was 43.4; 79.6 percent were White and 27 percent were women. In Ramsey County, the average age was 42.5; 89 percent were White and 11 percent were women. There were 16 opiate-related deaths in 2003 through the first quarter of 2003 in Hennepin County and 5 in Ramsey County.

Hospital ED mentions of heroin more than doubled from the first half of 1998 to the first half of 2002 (exhibit 2). The rate of heroin-related ED mentions grew from 4 to 7 per 100,000 population during the same time periods, but the rate in 2002 remained among the lowest of the major DAWN cities (exhibit 7). The rate of heroin-related ED mentions in the first half of 2002 in CEWG areas ranged from a high of 112 per 100,000 population in Chicago to a low of 5 in Dallas.

Admissions to addiction treatment programs with heroin as the primary drug accounted for 3.3 percent of total admissions in 2002, compared with 2.5 percent in 1998 and 1.5 percent in 1991. Most (70.6 percent) were male, 48.9 percent were White, and 80.6 percent were age 26 and older (exhibit 5). More than one-half (53.8 percent) reported injection as the primary route of administration, and 43.0 percent reported sniffing. Smoking heroin, known as “chasing the dragon” or “foiling” in Minneapolis, was reported by 3.2 percent as the primary route of administration.

Roughly 1,400 patients were enrolled in metropolitan area methadone maintenance programs. While patients who were newly enrolled in these programs may be reflected in the treatment data, others are not, including those who have been on methadone maintenance for years, or those who are enrolled in private, for-profit programs that do not report to the Drug and Alcohol Abuse Normative Evaluation System.

Relatively few arrestees tested positive for opiates in Minneapolis; 5.1 percent of adult male arrestees in 2002, compared with 4.7 percent in 1998. The presence of opiates among adult male arrestees in 2002 ranged from a high of 26.0 percent in Chicago to none in Woodbury, Iowa (the county east of Sioux City, Iowa, which is near the Nebraska border).

Heroin prices per dosage unit or “paper” ranged from \$20 to \$50. Grams sold for \$300–\$400, and ounces for \$900–\$2,000. The amount of heroin seized by many law enforcement agencies generally increased in 2002, with some exceptions. Heroin purity levels remained high, increasing the risk of accidental overdose. Roughly 62 percent of the heroin samples analyzed at the Minneapolis lab contained over 60 percent pure heroin.

Other Opiates

Opium is routinely shipped from Asia, where it is used as a folk medicine, to members of the Southeast Asian community in the Twin Cities area. In May 2003, a 69-year-old Southeast Asian woman was charged in a criminal case involving 206 grams of opium, some of which was smuggled in the shafts of 15 umbrellas that were shipped from Laos to suburban Oakdale. In 2002, law enforcement agents at O’Hare International Airport in Chicago intercepted 90 opium-soaked tablecloths from Thailand en route to Minneapolis.

Prescription narcotic analgesics (painkillers) are growing drugs of abuse locally and nationally. In 2001, there were 953 hospital ED mentions involving the nonmedical use of narcotic analgesics/combinations, compared with 664 in 2000 and 461 in 1996. This represents a doubling since 1996 and a 43.5-percent increase from 2000 to 2001 alone. The estimated number in the first half of 2002 was 511 mentions.

Of particular concern within this category were drugs containing oxycodone—Percodan, Percocet, and the longer-acting OxyContin. Oxycodone/combinations ED mentions more than doubled from 2000 to 2001 (from 101 to 222) and increased threefold since 1997. Oxycodone accounted for 23.3 percent of the total narcotic analgesics/combinations ED mentions in 2001. Ten of the opiate-related accidental overdose deaths in Hennepin County in 2002 were attributable to oxycodone, compared with 3 in 2001. Ramsey County reported two oxycodone-related deaths in 2002.

Law enforcement cases involving oxycodone increased as well. The State crime lab handled 36 cases

involving oxycodone in 2002, compared with half as many in 2001. The St. Paul crime lab handled 20 cases in 2002, compared with only 4 in 2001.

Two deaths in Hennepin and one in Ramsey County in 2002 involved fentanyl, another narcotic analgesic. There were two fentanyl-related deaths in 2003 through the first quarter in Ramsey County and one in Hennepin County.

Hospital ED mentions of methadone more than doubled from 1998 to 2001, increasing from 55 to 122. Hennepin County reported six methadone-related deaths in 2002 and four in the first quarter of 2003. Ramsey County reported one in 2002.

Marijuana

Behind alcohol and tobacco, marijuana was the most commonly abused drug among adolescents. The most recent Minnesota Student Survey (2001) found past-year marijuana use reported by 30.3 percent of high school seniors, 19.8 percent of 9th graders, and 2.6 percent of 6th graders.

Hospital ED mentions of marijuana more than doubled from the first half of 1998 to the first half of 2002 (exhibit 2). The rate of marijuana-related ED mentions grew from 10 to 24 per 100,000 population during the same time periods, and the rate in 2002 ranked fifth lowest of the major CEWG cities included in DAWN (exhibit 8). The rate of marijuana-related ED mentions in CEWG areas in the first half of 2002 ranged from a high of 74 per 100,000 population in Philadelphia to a low of 13 in Dallas.

Marijuana sent more people into addiction treatment programs than any other illicit drug in the Twin Cities in 2002 (exhibit 4). One out of five (21.8 percent) people entering addiction treatment programs reported marijuana as the primary substance problem, compared with 8 percent in 1991. Of the 4,266 marijuana-related treatment admissions in 2002, 76 percent were younger than 25, 46 percent were younger than 18, and 30 percent were age 18–25 (exhibit 5).

In Minneapolis in 2002, 54.2 percent of adult male arrestees tested positive for marijuana, compared with 45.4 percent in 1998 (exhibit 6). The presence of marijuana among arrestee urinalyses in Minneapolis in 2002 was among the highest in the country (exhibit 9). Among ADAM sites, the percentage of adult male arrestees testing positive for marijuana in 2002 ranged from highs of 54.5 in Albany, 54.2 in Minneapolis, and 54.1 in Oklahoma City to a low of 26.1 percent in Laredo.

Marijuana cost \$3–\$5 per individual “joint” and more for “dipped” ones. Marijuana joints that are dipped in formaldehyde or embalming fluid, which is often mixed with PCP, are known as “wets,” “wet sticks,” or “water.” Joints dipped in PCP are known as “wet daddies.” Standard “commercial grade” marijuana sold for about \$250 per ounce and \$1,000 per pound. “BC Bud,” also known as “Kind Bud,” is a high potency Canadian marijuana imported from British Columbia, noted by its bright green, sparkly appearance and pronounced psychoactive effects. It sold for up to \$800 per ounce and up to \$5,000 per pound.

Stimulants

Most methamphetamine (“meth,” “crank,” or “crystal”) indicators continued gradual increases. From 2001 to 2002, deaths increased in Hennepin but not Ramsey County (exhibit 1), and treatment admissions increased slightly, as did the percentage of arrestees testing positive for methamphetamine.

Hospital ED mentions of methamphetamine increased 78 percent from the first half of 1998 to the first half of 2002 (exhibit 2). The rate of methamphetamine-related hospital ED mentions grew from 3 to 7 per 100,000 population during the same time periods, and in 2002 the Minneapolis rate was sixth highest of the reporting DAWN cities behind San Francisco (24), San Diego (11), Phoenix (10), Seattle (9), and Los Angeles (8) (exhibit 10).

Five percent of admissions to addiction treatment programs cited methamphetamine as the primary drug of abuse in 2002 (exhibit 5), compared with less than 1 percent in 1991. Thirty-four percent were women, the highest percentage within any drug category. Nearly one-half (46.1 percent) were age 25 or younger, and 11.0 percent were younger than 18. Smoking replaced sniffing as the most common route of administration (43.7 percent), followed by sniffing (33.1 percent) and injection (15.8 percent). Adolescent users described the open scabs and skin lesions caused by methamphetamine abuse as “lithium scabs.”

The presence of methamphetamine among arrestees in Minneapolis remained low, but it has gradually increased in recent years (exhibit 6). In 2002, 3.9 percent of adult male arrestees tested positive for methamphetamine, compared with 0.8 percent in 1998. Relative to other cities, Minneapolis was at the lower end of the scale for methamphetamine-positive arrestees (exhibit 11). The city with the highest rate of methamphetamine-positive arrestees was Honolulu with 44.8 percent, followed by Sacramento (33.5 percent), San Diego (31.7 percent), Phoenix (31.2), and San Jose (29.9 percent). The two ADAM cities in

neighboring Iowa had percentages 4 and 5 times higher than in Minneapolis: 20.2 percent in Des Moines and 16.4 percent in Woodbury.

Clandestine methamphetamine labs, which are typically small-scale undertakings jerry-rigged by the drug abusers themselves, continued to operate throughout the State, with 272 dismantled with the assistance of the DEA in 2002, compared with 236 in 2001. Most were outside of the metropolitan area. The volatile and toxic ingredients, makeshift conditions, and often impaired operators heighten the risk of injury to bystanders and law enforcement personnel and contribute to the environmental contamination of surrounding areas.

Seizures of methamphetamine by law enforcement increased. Cases handled by the State crime lab grew from 1,512 in 2001 to 3,645 in 2002. The amount seized in Ramsey County increased five fold from 2001 to 2002. In April 2003, the president of the Minnesota chapter of the Hell’s Angels Motorcycle Club pleaded guilty to conspiring to distribute a kilogram of methamphetamine and money laundering. Methamphetamine prices were \$90–\$100 per gram; \$200 for a “teener,” (one-sixteenth ounce); \$240–\$280 for an “eightball” (one-eighth ounce); \$600–\$800 per ounce; and up to \$10,000 per pound.

Methylenedioxymethamphetamine (MDMA) abuse gradually increased after its initial appearance in 1999. A methamphetamine with mild hallucinogenic properties, also known as “ecstasy,” “X,” or “e,” it is typically sold in pill or capsule form for \$20 and abused by teenagers and young adults. There were three MDMA-related deaths in Hennepin County in 2002 (decedents age 21, 25, and 16), one in 2001, and three in 2000. In Ramsey County, there were three MDMA-related deaths in 2000 and none since. Hospital ED mentions grew from 16 in 1999 to 65 in 2000, 77 in 2001, and 50 in the first half of 2002.

Seizures of MDMA by many law enforcement agencies declined in 2002. A substantial number of pills sold as “ecstasy” either did not contain MDMA or contained ingredients in addition to MDMA. One large case this year in western Hennepin County involved 2,700 blue pills with a design of a handshake that sold as “ecstasy,” although they actually contained MDMA, methamphetamine, and ketamine. Other pills sold as “ecstasy” contained only 3,4-methylenedioxyamphetamine (MDA), a chemical similar in effect to MDMA.

Khat, a plant that is chewed or brewed in tea for its stimulant effects in East Africa and the Middle East, remained within the Somali refugee community in the Twin Cities and Rochester, Minnesota. Its active

ingredients, cathinone and catheine, are controlled substances in the United States. On December 31, 2002, the U.S. Customs Service seized 146 kilograms of khat hidden in boxes shipped from the United Kingdom to a Minneapolis resident. In October 2002, two Somali men from Minneapolis were arrested in Kansas City while attempting to pick up packages that contained khat that were shipped from the United Kingdom to various locations in Kansas City and intended for distribution in Minneapolis.

Methylphenidate (Ritalin) is a prescription drug used in the treatment of attention deficit hyperactive disorder. Some adolescents and young adults also used it nonmedically as a drug of abuse by crushing and snorting the pills. Pills were sold for \$5 each or often simply shared with fellow middle school or high school students at no cost. They are known as “hyper pills” that increase alertness and suppress appetite.

Hallucinogens

Lysergic acid diethylamide (LSD) typically sold as saturated, tiny pieces of paper known as “blotter acid,” costs \$5–\$10 per dosage unit. LSD appeared less frequently in recent years, probably because of the increase in MDMA abuse. There were 11 ED mentions of LSD in the first half, compared with 18 in 2001, 31 in 2000, and 65 in 1999.

Some white/tan-colored powder that lab analysis identified as AMT, a molecular variant of tryptamine, was also reported as a drug of abuse at several high schools. Tryptamines are naturally occurring compounds with structures and properties similar to LSD. AMT was sold as powder that was smoked, or mixed with water and ingested, and in capsules for \$15 per pill. It was purchased as an alleged “research drug” off the Internet.

Ketamine, a veterinary anesthetic also known as “Special K,” first appeared as a drug of abuse in Minnesota in 1997. Most often found locally as a powder that is snorted or pressed into pills, ketamine induces effects that detach users from their environment, confuse thought, and impair speech and coordination. It is short-acting (less than 1 hour) and also produces hallucinations. There were seven ketamine ED mentions in the first half of 2002, compared with one in 2001 and one in 2000. Ketamine appeared in the Minneapolis crime lab as white powder, tan powder, brown powder, and greenish powder. It also appeared as a blue powder combined with MDMA, methamphetamine, and MDA.

Psilocybin mushrooms sold for up to \$200 per dried ounce. Effects range from mild visual distortion to full-blown hallucinations depending on the dose.

PCP, formerly used as a veterinary anesthetic, can be smoked, injected, or snorted. It produces extreme disorienting, dissociative effects which detach users from their tactile sensations and physical environment. Marijuana joints soaked in PCP, or formaldehyde in combination with PCP, produce effects far different than those of marijuana alone and are easily distinguished by their pungent, chemical odor. A 28-year-old male who died of a gunshot wound in Ramsey County in 2002 tested positive for tetrahydrocannabinol (THC) metabolites and PCP. In 2001, the most recent year PCP data are available from the ADAM program, 2.7 percent of Minneapolis arrestees tested positive for PCP, compared with 0.3 percent in 1998. There were 42 ED mentions of PCP in the first half of 2002, compared with 25 in 2001 and 19 in 2000.

Sedatives/Hypnotics

Flunitrazepam (Rohypnol), a long-acting pharmaceutical benzodiazepine prescribed in many countries for the treatment of sleep disorders, is known on the street as “roofies,” “roach pills,” or “rope.” Because it produces amnesia, it was originally used in drug-facilitated sexual assaults, but in recent years it has been replaced by gamma hydroxybutyrate (GHB). There was one ED mention of flunitrazepam in the first half of 2002 and in 2001.

GHB (“G,” “Gamma,” “Liquid E,” or “Liquid X”) is a depressant that produces drunken-like effects and sells for \$10 per capful. It is used alone and administered to people without their knowledge for the purpose of sexual assaults. In larger doses it can produce seizures, unconsciousness, and respiratory arrest. Gamma butyrolactone (GBL), known as furanone di-hydro, is a chemical cousin of GHB, and 1,4-butanediol, known as “BD,” or “1,4-BD,” is related to both GHB and GBL. The Minneapolis lab had three related cases in 2003 (through the first quarter): an orange liquid and a clear liquid that were 1,4 butanediol and 220 milliliters of clear liquid GHB in a water bottle. In 2002, two cases involved 1,4 butanediol in the form of blue liquid, clear liquid, and purple liquid.

While ED mentions of GHB increased markedly from 1999 to 2000, the rate of increase slowed in 2001. There were 67 hospital ED mentions of GHB

in 2001, compared with 93 in 2000, 35 in 1999, and 8 in 1998. Since DAWN tracked only those cases in which people knowingly ingested drugs, the extent of GHB use in drug-facilitated sexual assaults is difficult to ascertain with precision.

Other Drugs

Over-the-counter cough and cold medications continued to be abused, typically by adolescents, to achieve mood-altering effects. These drugs are often shop-lifted or simply taken from the family medicine cabinet. In particular, cough preparations containing dextromethorphan were abused, including cough syrup (Robitussin DM) and pills (Coricidin, a.k.a. “Triple C’s”). To achieve the desired effects, the pills are consumed in quantities that greatly exceed the recommended dose. In some instances, up to 20 pills were consumed simultaneously, even though product labeling stated not to exceed 8 pills in a 24-hour period.

Recipes on how to extract the active dextromethorphan and convert it into a white powder are also available on the Internet. The powder is snorted, put into capsules, or pressed into pills, which sell for \$5 each. People intoxicated by large amounts of dextromethorphan experience hallucinations and altered time perception. They may refer to the dopey, dreamy state as feeling “drippy,” or “robo-tripping,” and refer to reaching various “plateaus.” Other effects include slurred speech, sweating, uncoordinated movements, and high blood pressure. Calls to the Hennepin Regional Poison Center concerning dextromethorphan increased from 48 in 2001 to 77 in 2002. A dextromethorphan-related death of a 51-year-old woman occurred in Ramsey County in 2002.

Dimenhydrinate (Dramamine), marketed to prevent motion sickness, also surfaced as a drug of abuse among adolescents. Sometimes it is used only to reduce the nausea that can accompany ingesting large amounts of liquid cough syrup, but other times it is used as a substance of abuse itself. At extremely high doses it can produce delusional behavior. When used in combination with a depressant such as alcohol, it can produce dizziness, drowsiness, or blurred vision.

School counselors continued to report abuse of ephedra-based dietary supplements by youth. Ephedra is a botanical with stimulant properties. The ingredients listed in ephedra-containing products may include ma huang, ma huang extract, Chinese ephedra, ephedra

sinica, ephedra extract, ephedra herb powder, and ephedron. These products are sold in pill and capsule form, often at convenience stores, and promise high energy, stimulation, and mood elevation. “Yellow Jackets” and “Mini-thins” were among the most popular.

Drug counselors from four different school districts reported students scraping the corrosive build-up off of the terminals of car batteries, rolling it up in cigarette papers, and smoking it, known as “smoking lithium.” This practice resulted in a life-threatening medical emergency in at least one instance. In Hennepin County in 2002, a 38-year-old man died from intentional paint inhalation and inhalation of paint thinner fumes.

Alcohol use in the past year was reported by 67.5 percent of high school seniors, 46.8 percent of 9th graders, and 14.4 percent of 6th graders, according to the most recent Minnesota Student Survey (2001). Students drinking bottles of vanilla extract for the high alcohol content (70 proof or 35 percent alcohol by volume) was reported in several school districts. Alcohol accounted for more than one-half of all admissions to addiction treatment programs.

Of the adult male arrestees in Minneapolis in 2002, 50.8 percent reported binge drinking, and 25.6 percent reported heavy drinking in the past month. (“Binge drinking” is defined as consuming five or more drinks on one occasion in the past month, and “heavy drinking” is defined as consuming five or more drinks on five or more occasions in the past month.) According to the results of a clinically based dependency screen regarding alcohol use in the past year, 30.9 percent of adult male arrestees were at risk for alcohol dependence.

One-third (34.7 percent) of high school seniors, 18.7 percent of 9th graders, and 3.5 percent of 6th graders reported past month tobacco use, according to the 2001 Minnesota Student Survey. The majority of patients entering addiction treatment programs reported daily nicotine use. For many addicts, it is the first drug they use and the last one they quit.

INFECTIOUS DISEASES RELATED TO DRUG ABUSE

Most AIDS cases in Minnesota were in the Minneapolis/St. Paul area. Of the 1,862 people living with AIDS in Minnesota in 2002, the exposure categories were as follows: men who have sex with men (55 percent), injection drug use (8 percent), men who have sex with

men and injection drug use (5 percent), heterosexual contact (12 percent), other (2 percent), undetermined (7 percent), and no interview (10 percent).

The prevalence of hepatitis C virus (HCV), a blood-borne liver disease, remained high among injection drug abusers. An estimated 80 to 90 percent of all methadone patients may have HCV.

For inquiries concerning this report, please contact Carol L. Falkowski, Hazelden Foundation, Butler Center for Research, 15245 Pleasant Valley Road, Box 11, Center City, MN 55012-0011, Phone: 651-213-4566, Fax: 651-213-4356, E-mail: <cfalkowski@hazelden.org>.

Exhibit 1. Drug-Related Deaths in Hennepin¹ and Ramsey² Counties, Minnesota: 1997–2002

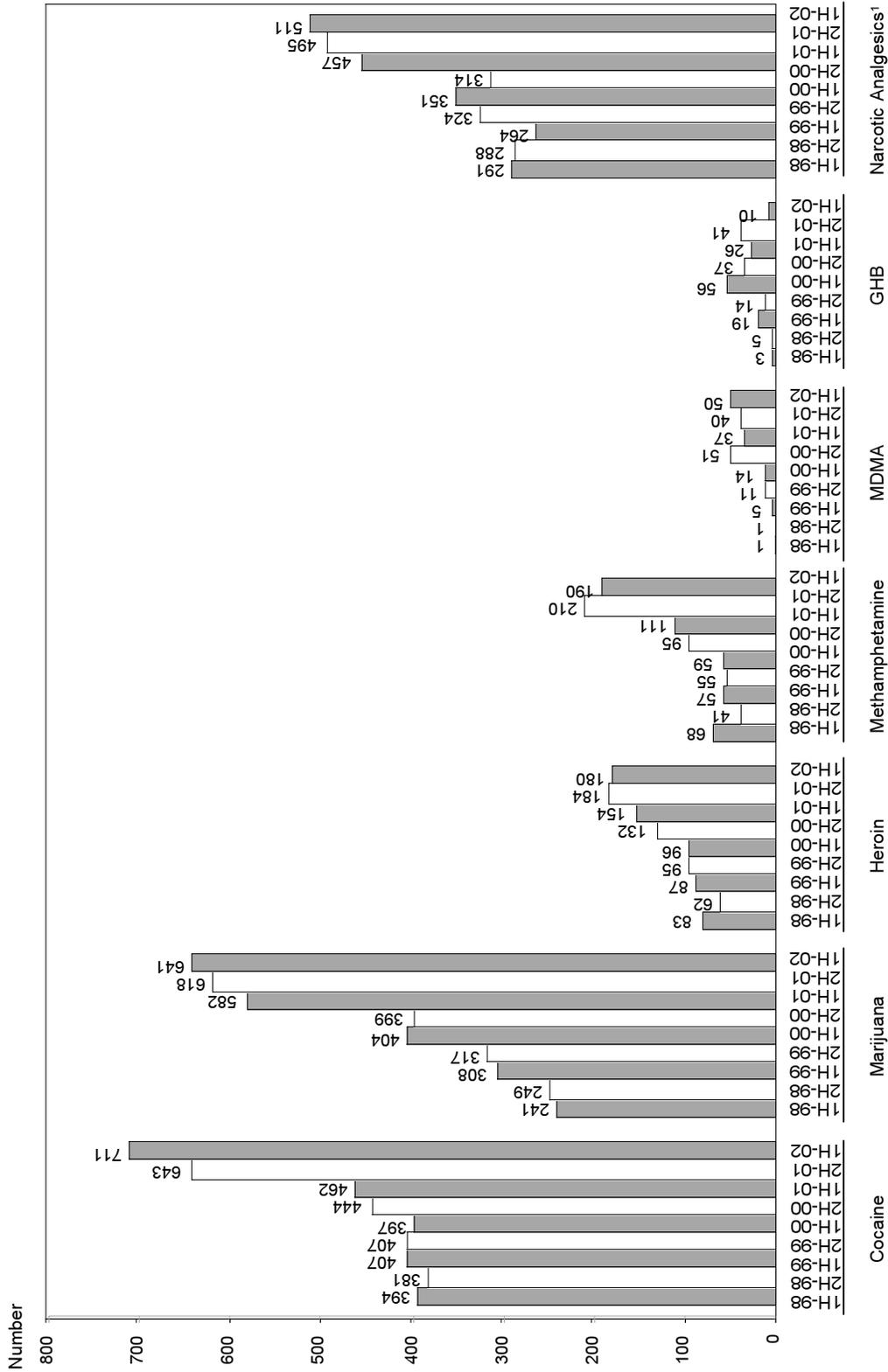
County/Drug	1997	1998	1999	2000	2001	2002
Hennepin County						
Cocaine	51	39	43	43	37	34
Opiates	27	26	27	41	58	59
Methamphetamine	2	4	2	6 (includes 3 MDMA)	8 (includes 1 MDMA)	11 (includes 3 MDMA)
Ramsey County						
Cocaine	7	5	5	17	11	11
Opiates	6	12	12	17	19	18
Methamphetamine	2	4	4	11 (includes 3 MDMA)	2	3

¹Hennepin County figures include cases in which drug toxicity was the immediate cause of death and those in which recent drug use was listed as a significant condition contributing to the death.

²Ramsey County cases include those in which drug toxicity was the immediate case of death and those in which drugs were present in the decedent at the time of death.

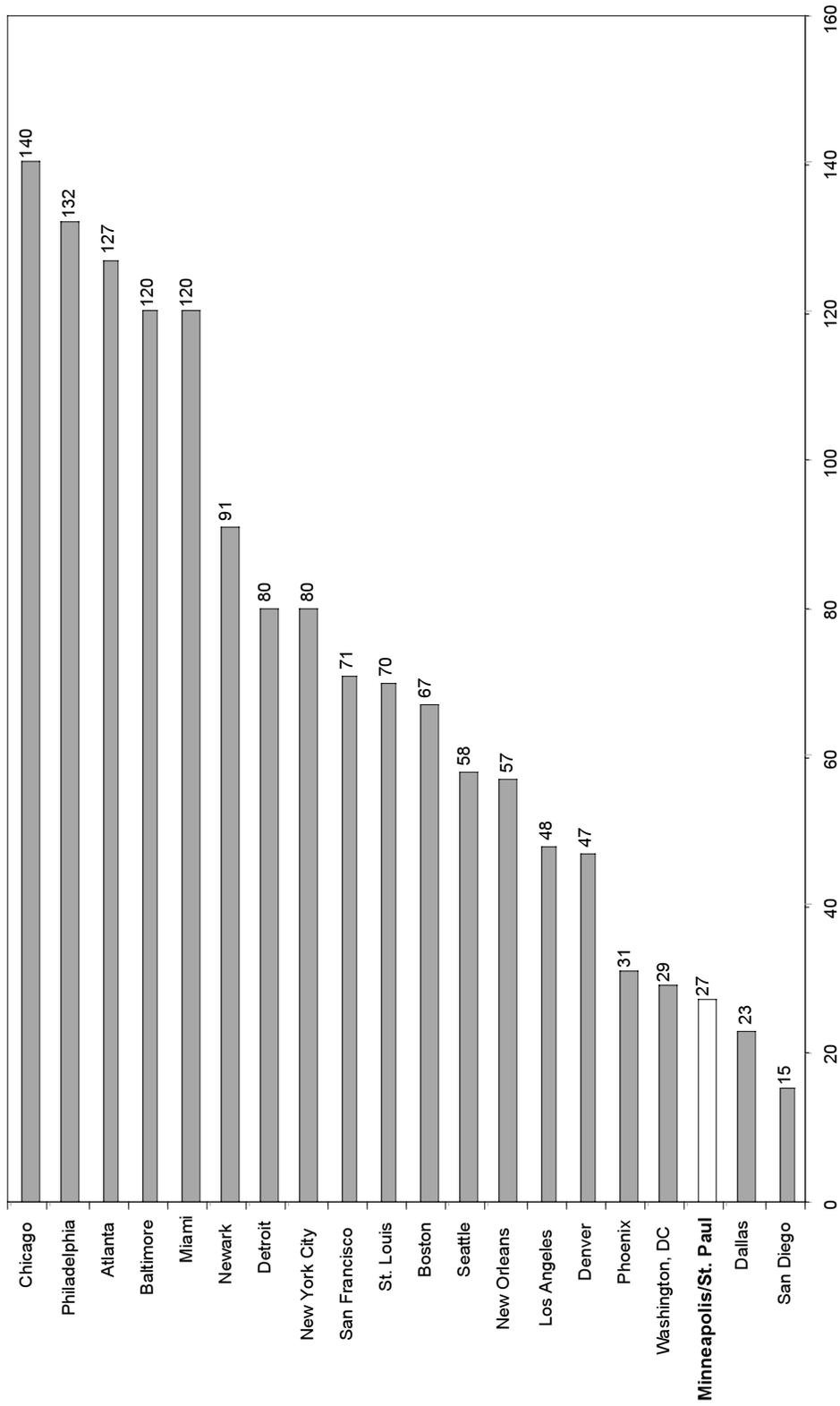
SOURCES: Hennepin County ME and Ramsey County ME

Exhibit 2. ED Mentions of Selected Drugs in Minneapolis/St. Paul by Half-Year: 1998–2002



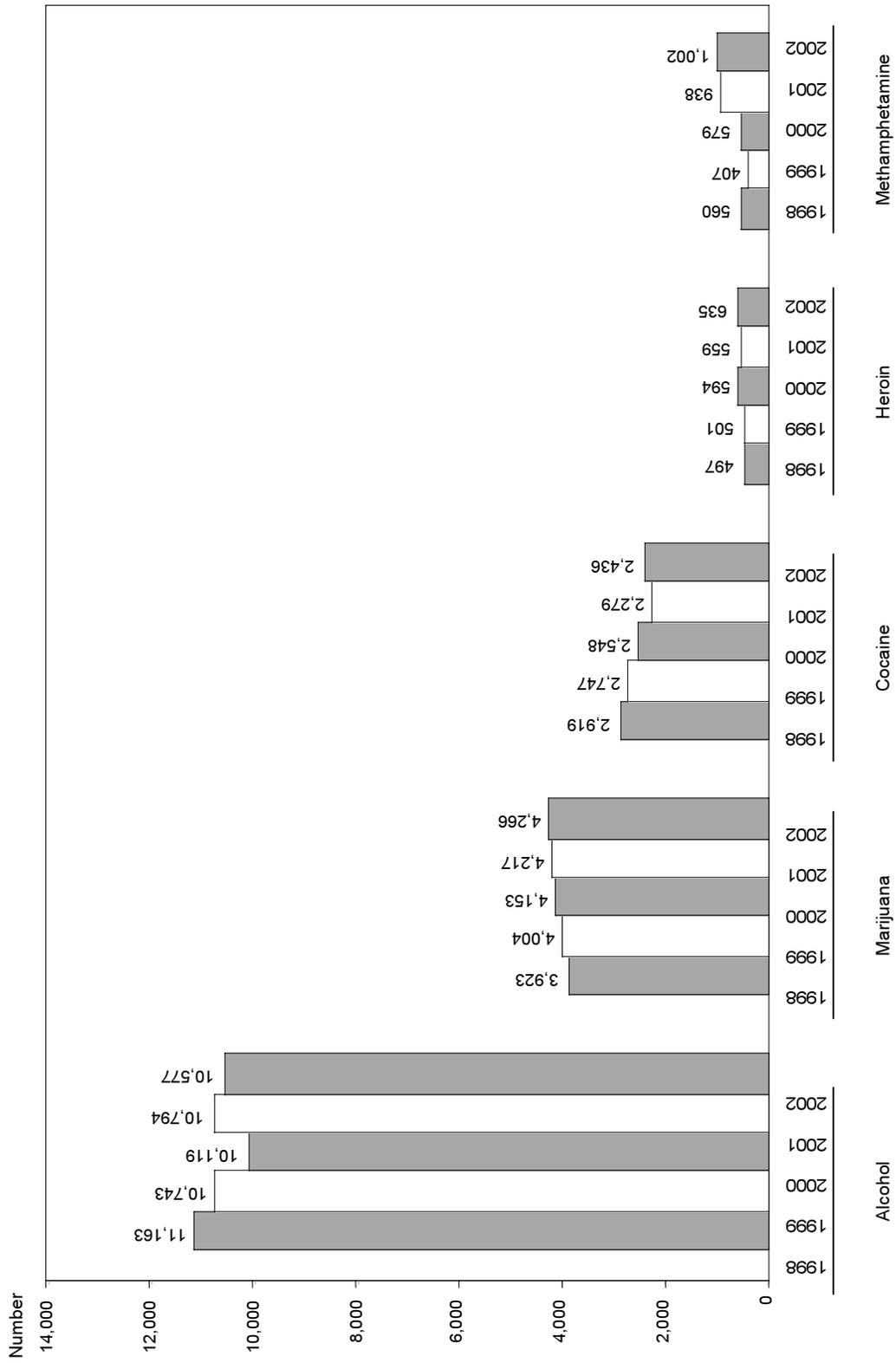
¹ Includes ED cases involving the nonmedical use of these prescription drugs.
SOURCE: DAWN, OAS, SAMHSA

Exhibit 3. Rates of Cocaine ED Mentions Per 100,000 Population in CEWG Areas: 1H 2002



SOURCE: DAWN, OAS, SAMHSA

Exhibit 4. Admissions to Addiction Treatment Programs in Minneapolis/St. Paul by Primary Drug: 1998–2002



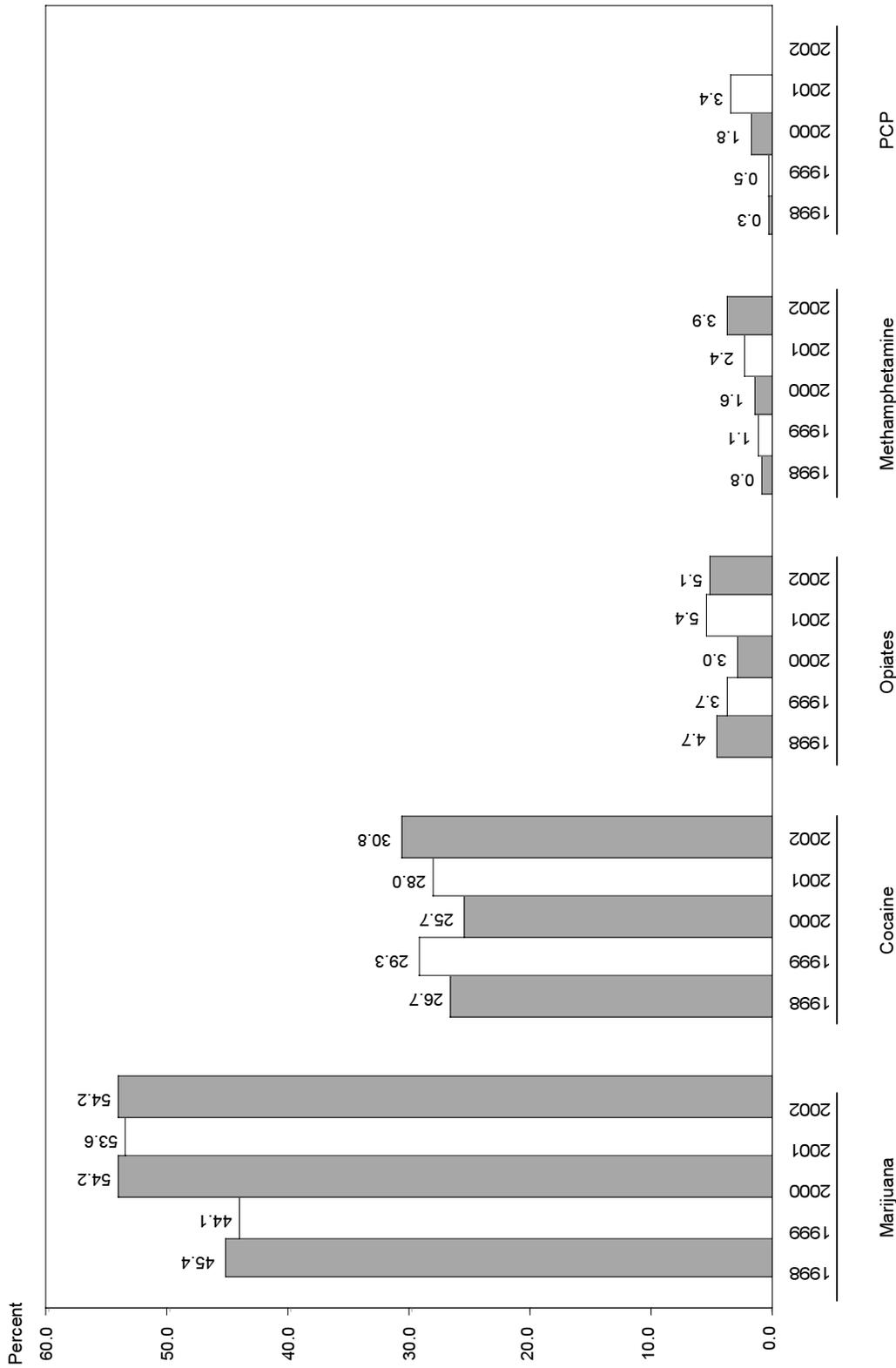
SOURCE: Drug and Alcohol Abuse Normative Evaluation System, Minnesota Department of Human Services, 2003

Exhibit 5. Characteristics of Persons Admitted to Addiction Treatment Programs in Minneapolis/St. Paul By Primary Drug and Percent: 2002

Characteristic	Alcohol	Marijuana	Cocaine	Metham- phetamine	Heroin
(Total N=19,527)	(10,577)	(4,266)	(2,436)	(1,002)	(635)
Percent	54.2	21.8	12.5	5.1	3.3
Gender					
Male	73.1	77.3	69.1	65.9	70.6
Female	26.9	22.7	30.9	34.1	29.4
Race/Ethnicity					
White	79.3	65.7	40.1	93.0	48.9
African-American	12.2	21.5	52.0	1.1	46.3
Hispanic	3.8	5.6	4.3	2.8	2.7
American Indian	3.4	3.5	2.1	1.1	1.0
Asian	0.5	1.0	0.3	1.1	0.5
Age Group					
17 and younger	4.8	46.0	2.0	11.0	0.5
18–25	16.1	30.0	9.4	35.1	18.9
26–34	19.7	13.2	27.4	29.0	29.4
35 and older	59.3	10.9	61.1	24.9	51.2
Route of Administration					
Smoking			82.7	43.7	3.2
Sniffing			15.8	33.1	43.0
Injection			1.4	15.8	53.8
Other			–	Oral 7.3	–

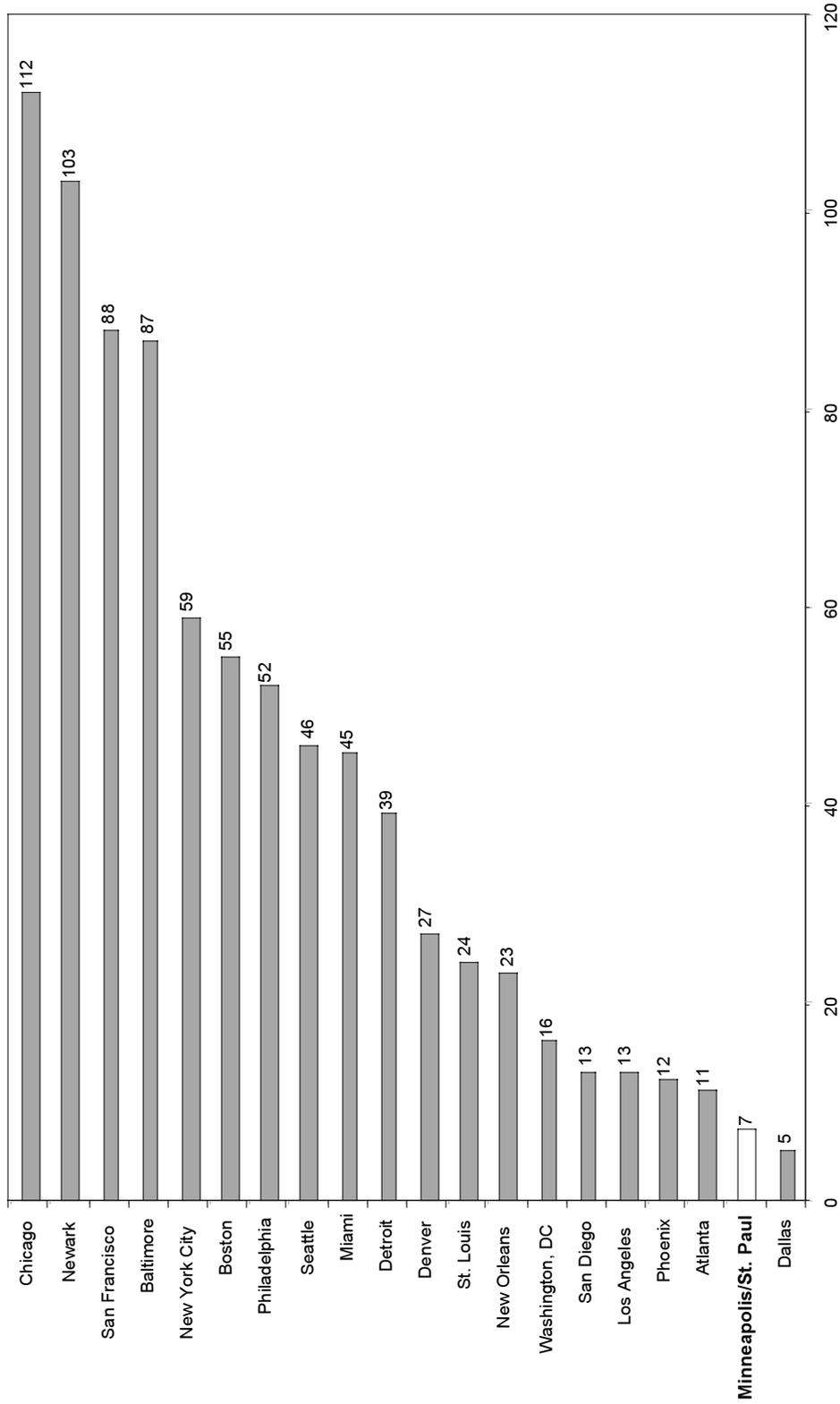
SOURCE: Minnesota Department of Human Services, Drug and Alcohol Abuse Normative Evaluation System, 2003

Exhibit 6. Percentages of Adult Male Arrestees Testing Positive for Drugs: 1998–2002



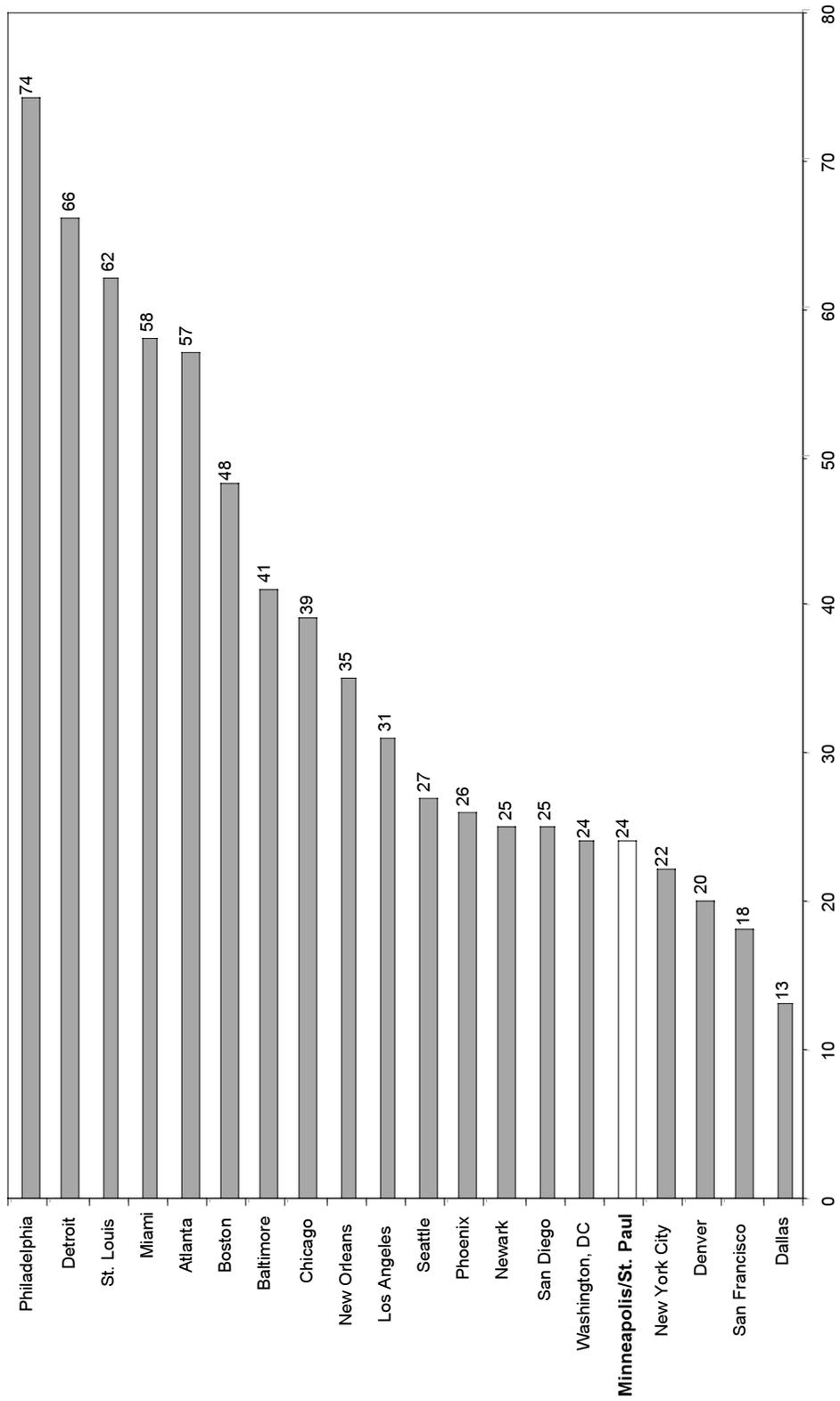
SOURCE: ADAM, NIJ

Exhibit 7. Rates of Heroin ED Mentions Per 100,000 Population in CEWG Areas: 1H 2002



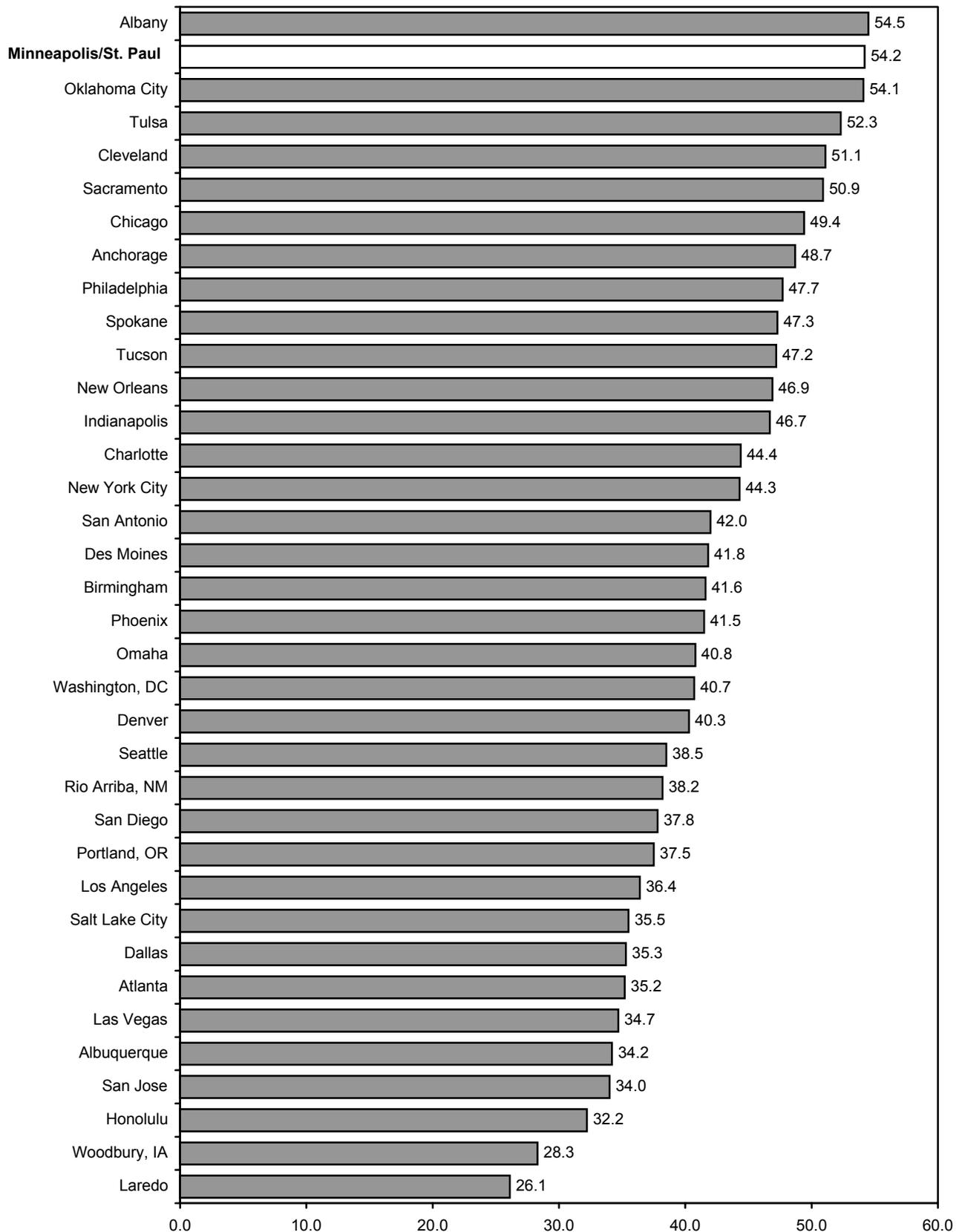
SOURCE: DAWN, OAS, SAMHSA

Exhibit 8. Rates of Marijuana ED Mentions Per 100,000 Population in CEWG Areas: 1H 2002



SOURCE: DAWN, OAS, SAMHSA

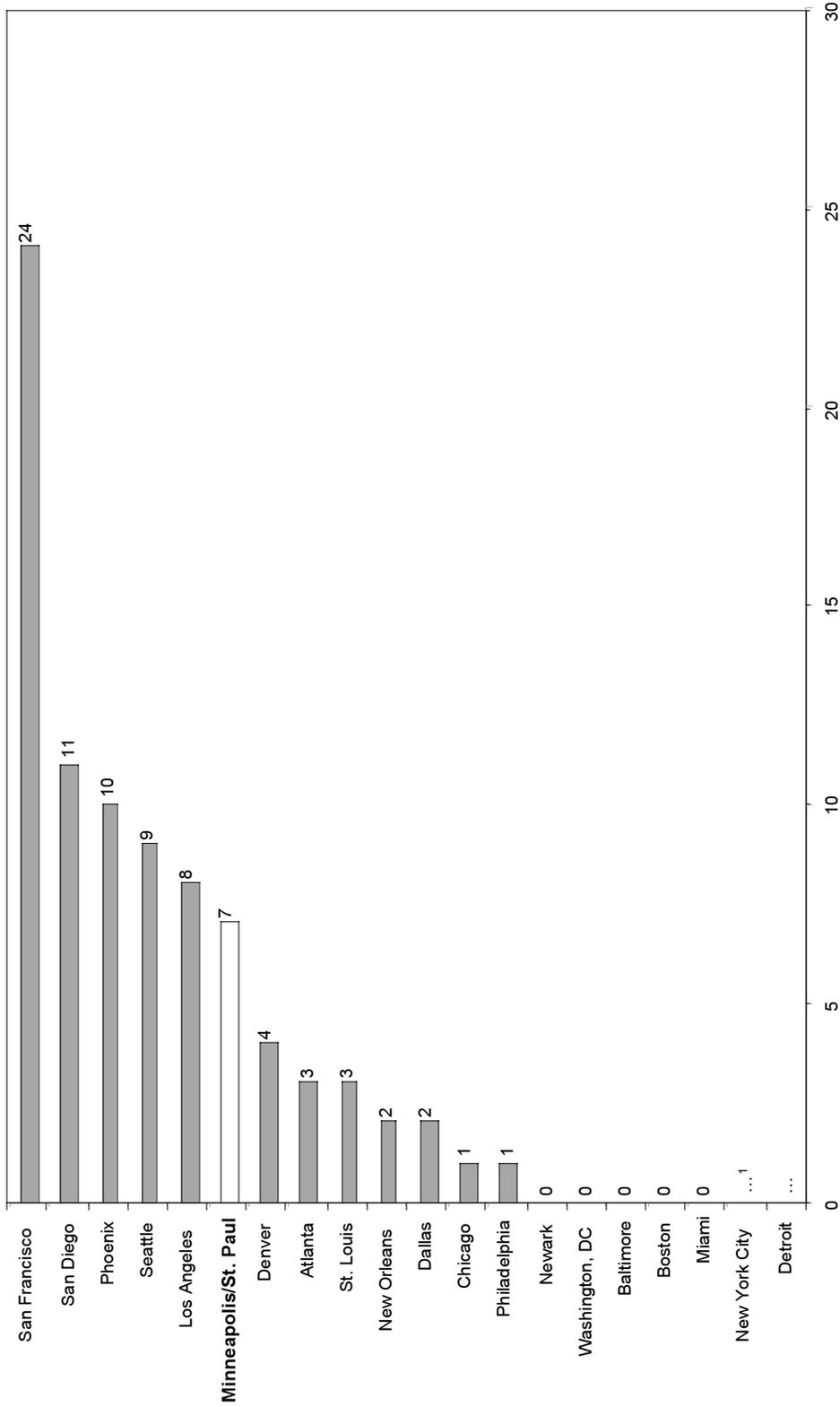
Exhibit 9. Percentages of Adult Male Arrestees Testing Positive for Marijuana Across ADAM Sites: 2002¹



¹The actual number of participating arrestees ranged from 72 in Rio Arriba, NM, to 1,853 in Maricopa County, Arizona (primary city, Phoenix).

SOURCE: ADAM, NIJ

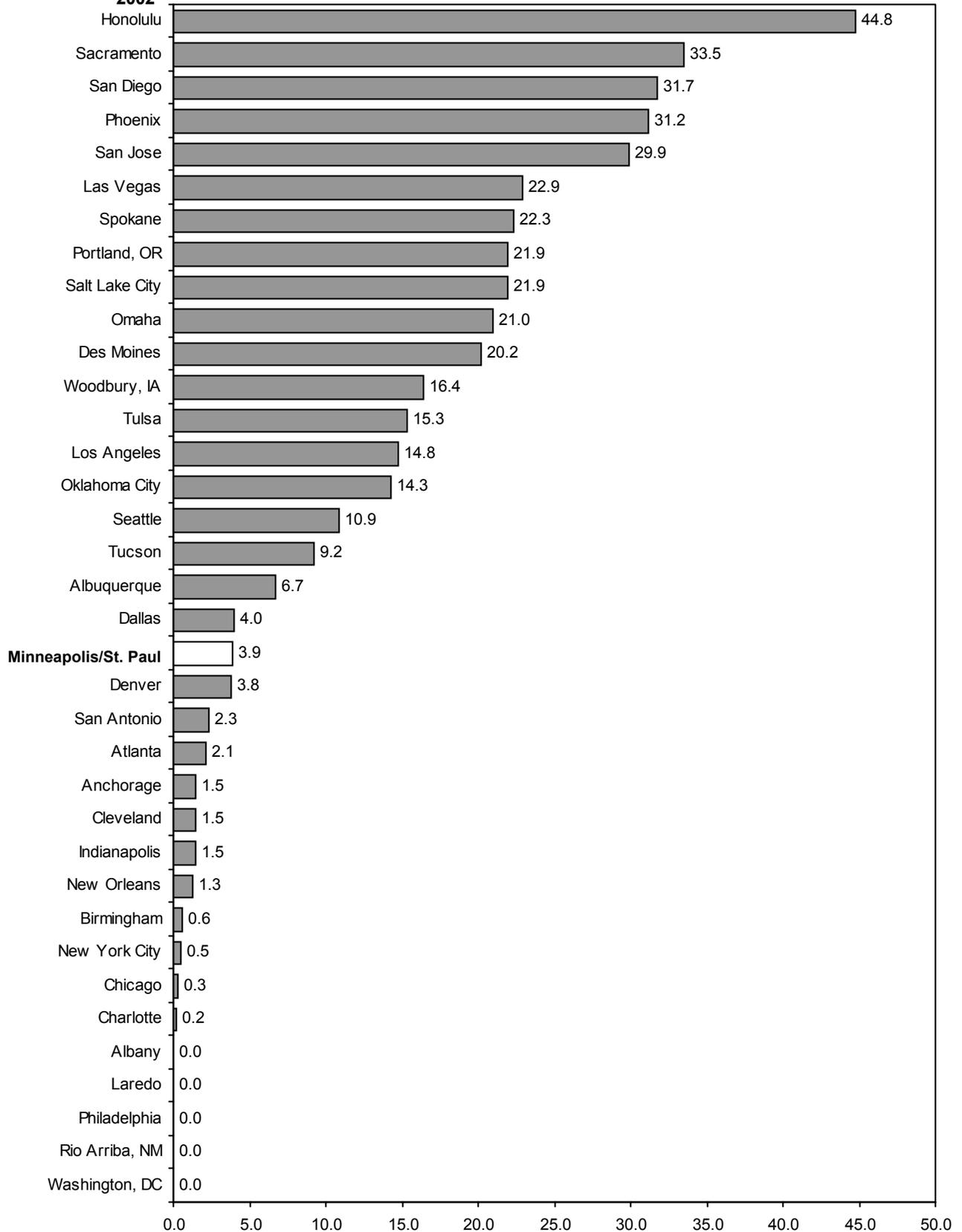
Exhibit 10. Rates of Methamphetamine ED Mentions Per 100,000 Population in CEWG Areas: 1H 2002



¹ Dots (...) indicate that an estimate with a relative standard error greater than 50 percent has been suppressed.

SOURCE: DAWN, OAS, SAMHSA

Exhibit 11. Percentages of Adult Male Arrestees Testing Positive for Methamphetamine Across ADAM Sites: 2002¹



¹ The actual number of participating arrestees ranged from 72 in Rio Arriba, NM, to 1,853 in Maricopa County, AZ (primary city, Phoenix).

SOURCE: ADAM, NIJ

Drug Abuse in the Newark Primary Metropolitan Area

Abate Mammo, Ph.D.¹

ABSTRACT

In this report, drug abuse indicators in the Newark primary metropolitan statistical area (Newark PMSA) are presented by using substance abuse treatment data, ED data, ME cases, and other information. Most primary treatment admissions (89.6 percent) in the first half of 2002 were illicit-drug related. Heroin accounted for 63.8 percent of primary treatment admissions in the Newark PMSA, compared with 7.6 percent for crack/cocaine and 7.3 percent for marijuana. Heroin use as a primary, secondary, or tertiary drug accounted for 67.3 percent in the first half of 2002, compared with 67.7 percent in 2001. Consistent with treatment data, ED heroin mentions in the Newark PMSA accounted for the largest proportion of drug mentions (36.3 percent in the first half of 2002). Although only 7.6 percent of treatment admissions in the first half of 2002 reported cocaine/crack as their primary drug of abuse, it accounted for 41.0 percent of primary, secondary, or tertiary drug treatment admissions and 32.2 percent of ED mentions in the first half of 2002. Between 2000 and 2001, heroin purity declined from 72.2 percent to 68.5 percent, while its price was stable at \$0.33 per milligram pure. Most of the heroin sold in the Newark PMSA came from South America. Despite the high purity of heroin sold in the PMSA, heroin injection among 18–25-year-old treatment admissions increased from 40.8 percent in the first half of 2001 to 50.4 percent in the first half of 2002. There were 304 drug-related deaths in 2001 in the Newark PMSA, compared with 250 in 2000. Cocaine-related deaths increased slightly, while heroin-related deaths were relatively stable from 2000 to 2001. However, the continued rise in drug-related mortality was driven by the sharp increase in narcotics analgesics and marijuana deaths.

INTRODUCTION

Area Description

The Newark primary metropolitan statistical area (Newark PMSA) consists of five counties (Essex,

Morris, Sussex, Union, Warren). In 2000, there were 2,032,989 residents in the PMSA, with 39 percent living in Essex County (which contains Newark City), 26 percent in Union County, 23 percent in Morris County, and the rest residing in the two other counties. The population of the Newark PMSA is diverse in its race distribution: 66 percent are White, 23 percent are Black, and 4 percent are Asian. Hispanics accounted for 13 percent of the PMSA population in 2000. There is also a wide variation in race/ethnic distribution the PMSA within each county. In Essex County, 45 percent of the population are White and 41 percent are Black. Union County is 65 percent White and 21 percent Black. By comparison, Morris is 87 percent White and 3 percent Black; Sussex is 96 percent White and 1 percent Black; and Warren is 95 percent White and 2 percent Black. Hispanics accounted for 15 percent in Essex, 7 percent in Morris, 3 percent in Sussex, 19 percent in Union and 4 percent in Warren Counties. The counties are also very diverse by socio-economic status. In the Newark PMSA, 5.8 percent of families with children under 18 live below the poverty level. For counties within the PMSA, the poverty status for families with children under 18 was 18 percent in Essex, 3 percent in Morris, 4 percent in Sussex, 9 percent in Union and 5 percent in Warren. The social, demographic, and economic variations suggest substantial differences in drug use behaviors of residents by county.

Data Sources

This report uses data from various sources, as indicated below.

- **Drug treatment data** were obtained from the Alcohol and Drug Abuse Data System (ADADS), a statewide, episode-based data system operated by the Division of Addiction Services of the Department of Health and Senior Services. The data include demographic information, drug use history, and detailed information on the three most abused drugs at the time of admission. ADADS has been operating since July 1, 1991, and contains more than 780,000

¹ The author is affiliated with the New Jersey Department of Health and Senior Services, Division of Addiction Services, Research and Information Systems, Trenton, New Jersey.

admission and discharge records. Treatment information obtained from ADADS includes all statistics for Newark City, the Newark PMSA, and the State. This report uses treatment data primarily from the first half of 2002. Major drug treatment admissions for the Newark PMSA are included, along with statewide data. In addition, data from the Client Oriented Data Program dating from 1985 to the first half of 1991 are used to study historical trends in heroin injection in Newark PMSA and the State.

- **Emergency department (ED) drug mentions data** were obtained from the February 2003 issue entitled “Emergency Department Trends From the Drug Abuse Warning Network, Preliminary Estimates January–June 2002.” The Office of Applied Studies (OAS) of the Substance Abuse and Mental Health Services Administration (SAMHSA) compiled the Drug Abuse Warning Network (DAWN) data. The DAWN system collected data on ED cases in the Newark PMSA (i.e., in Essex, Morris, Sussex, Union and Warren Counties).
- **Mortality data** were obtained from the SAMHSA January 2002 report entitled “Mortality Data From the Drug Abuse Warning Network 2001.” The DAWN system compiled data for counties in the Newark PMSA. Additional mortality data were obtained from the State Medical Examiner (ME) office. The DAWN system covered 60 percent of the five metropolitan statistical area (MSA) jurisdictions and 88 percent of the MSA population in 2001.
- **Heroin purity and price data** were obtained from the Intelligence Division, Office of Domestic Intelligence, Domestic Strategic Unit, Drug Enforcement Administration (DEA). The Intelligence Division of DEA collects data every quarter for the Domestic Monitor Program (DMP) from 23 U.S. metropolitan areas on the purity, retail price, and origin of heroin by purchasing it through undercover operations.
- **Human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS) data** were obtained from the statewide AIDS Registry maintained by the New Jersey Department of Health and Senior Services, Division of AIDS Prevention and Control, HIV/AIDS Surveillance Program. Data compiled as of June 30, 2002, are used in this report.

DRUG ABUSE PATTERNS AND TRENDS

General Patterns

Contrary to previous reports that focused on Newark City, drug abuse indicators for the Newark PMSA are presented here for consistency with DAWN and other CEWG reports. Since the Newark PMSA exhibits patterns of drug abuse that are usually unique from the rest of the State, and because the State is diverse in many ways, comparative indicator data are also presented for each when appropriate to exhibit drug abuse variations.

Exhibit 1 shows overall changes in selected indicators for specific drug types between the first halves of 2001 and 2002.

In the Newark PMSA, alcohol-in-combination treatment admissions accounted for 8.5 percent of all treatment admissions (exhibit 2). By comparison, ED alcohol-in-combination mentions accounted for 19.6 percent of mentions in the first half of 2002, while such ME cases accounted for 13.7 percent in 2001.

Heroin was the most prominent drug of abuse in the Newark PMSA. In the first half of 2002, primary heroin treatment admissions accounted for 63.8 percent of all treatment admissions in the Newark PMSA, compared with 63.6 percent in the first half of 2001 (exhibit 1). Statewide, primary heroin treatment admissions appear to have stabilized (46.6 percent in the first half of 2001 vs. 46 percent in the first half of 2002). Although changes between the first halves of 2001 and 2002 were not statistically significant, there was a decline in both the rate and number of heroin ED mentions during that time period. More importantly, the rate of ED heroin mentions in the Newark PMSA declined from 108 per 100,000 population in the first half of 2001 to 103 per 100,000 population in the first half of 2002. The number of heroin ED mentions also decreased, from 1,849 in the first half of 2001 to 1,792 in the first half of 2002. Consistent with treatment data and ED data, ME heroin-related mentions dropped from 179 in 2000 to 177 mentions in 2001.

Primary cocaine/crack abuse accounted for only 7.6 percent of all treatment admissions in the first half of 2002, the same as in the first half of 2001. However, ED cocaine mentions increased by 21.9 percent (from 1,304 to 1,589) from the second half of 2001 to the first half of 2002. Consistent with ED data, cocaine-related deaths increased by 8.0 percent (from 137 to 148) in the Newark PMSA between 2000 and 2001.

In the first half of 2002, primary marijuana use accounted for 7.3 percent of all treatment admissions in the Newark PMSA, up from 6.9 percent in the first half of 2001 (exhibits 2 and 3). Consistent with its primary use, marijuana as a primary, secondary, or tertiary drug also increased to 19.4 percent of treatment admissions in the first half of 2002, compared with 17.9 percent in 2001. Consistent with the increase in treatment data, ED marijuana mentions in the Newark PMSA were significantly higher (39.5 percent) higher in the first half of 2002 than in the first half of 2001 (from 309 to 431). The increase in ED marijuana mentions is consistent with the 271-percent rise in ME marijuana mentions.

Phencyclidine (PCP) and other hallucinogens were rarely reported in the Newark PMSA. Among treatment admissions, there were only four primary PCP admissions in the first half of 2001, compared with seven in the first half of 2002. PCP mentions as primary, secondary, or tertiary drug accounted for 19 mentions in the first half of 2002 and for 17 percent in the first half of 2001. There were 18 ED PCP mentions in the first half of 2001. In the first half of 2002, the estimate for PCP mentions was suppressed because of a high relative standard error (greater than 50 percent), and no mentions were reported for other hallucinogens in the DAWN data for the Newark PMSA in the first half of 2002.

Methamphetamine use was also rare among treatment admissions in the Newark PMSA, with only 6 admissions reported in the first half of 2002 and 28 primary, secondary, or tertiary admissions reported in the first half of 2002. There were no ED methamphetamine mentions in the first half of 2002.

Club drugs, such as methylenedioxymethamphetamine (MDMA or ecstasy), gamma hydroxybutyrate (GHB), and ketamine, were rarely reported by clients in the Newark PMSA. While still rare, there were 21 ED ecstasy mentions in the first half of 2002, compared with 18 in the first half of 2001. By comparison, in the first half of 2002, there were 3 primary ecstasy treatment admissions and 16 primary, secondary, or tertiary ecstasy admissions.

Overall, substance abuse treatment admissions in the Newark PMSA increased between the first half of 2001 and the first half of 2002, with most of the increase driven by alcohol-in-combination and marijuana abuse.

The Newark PMSA has the largest number of illicit drug abusers per capita compared with other parts of the State, yet needs assessment studies indicate that only a small percentage are in treatment. It was esti-

mated that there were 38,404 heroin abusers and 15,046 cocaine abusers in the Newark PMSA in 2000. However, only about 8 percent of those with primary heroin abuse and about 5 percent of those with primary cocaine abuse problems received treatment in 2000.

Statewide, the proportionate share of heroin admissions among total admissions grew marginally from 46.6 percent to 48.0 percent from the first half of 2001 to the first half of 2002. By comparison, primary crack/cocaine, marijuana, and alcohol-in-combination admissions were stable in the same time period.

The 2001 survey of middle school students suggested a substantial decrease among students in the use of alcohol, marijuana, inhalants, hallucinogens, cocaine, and heroin. The survey showed that 2.4 percent of students in grades 7 and 8 had used club drugs in their lifetime. Lifetime use of any illicit drug declined from 20.7 percent in 1999 to 15.6 percent in 2001.

In the first half of 2002, 26.9 percent of primary heroin treatment admissions in the Newark PMSA injected the drug. Heroin injection among 18–25-year-old treatment admissions continued to increase, from 41.7 percent in 2001 to 50.4 percent in the first half of 2002 (exhibit 4). Statewide, injection by 18–25-year-old clients increased from 53.4 percent in 2001 to 56.0 percent in the first half of 2002 (exhibit 5). In the first half of 2002, heroin injection by clients age 18–25 was highest among Asian/Pacific Islanders (52.0 percent), followed by Whites (47.9 percent), Hispanics (44.7 percent), and Blacks (11.8 percent).

While heroin injection continued to increase, its purity declined modestly between 2000 and 2001. Heroin purity in the Newark PMSA was 72.2 percent in 2000 and 68.5 percent in 2001—the second highest after Philadelphia among the DAWN cities.

Consistent with the high prevalence of heroin injection, 33.0 percent of the people living in the Newark PMSA with HIV/AIDS as of June 30, 2002, were exposed to the disease because of injection drug use. People living with HIV/AIDS were predominantly Black (72 percent) or Hispanic (14 percent) (exhibit 7). Statewide, injection drug users (IDUs) accounted for 34 percent of those living with HIV/AIDS (exhibit 8).

The total number of drug-related deaths in the Newark PMSA increased from 250 in 2000 to 304 in 2001. Seventy-four percent of the decedents in 2001 were male, with Blacks and Whites accounting for 48.4 and 38.5 percent of the ME drug-related deaths, respec-

tively. Most of the decedents (87.5 percent) were older than 25, with 64.5 percent being age 35 or older.

Arrests for the sale and manufacture of drugs in the Newark PMSA increased from 5,449 in 2000 to 7,008 in 2001. By comparison, arrests for drug possession and use declined from 12,716 in 2000 to 11,260 in 2001. Most of those arrested for sale and manufacture (87.1 percent) and 55.0 percent of those arrested for possession and sale in 2001 lived in Essex County, where Newark City is located. Statewide, arrest patterns were similar to patterns in the Newark PMSA.

Cocaine/Crack

Primary cocaine/crack treatment admissions in Newark accounted for 7.6 percent of treatment admissions (5.2 percent for crack cocaine and 2.4 percent for powder cocaine) in the first half of 2002 (exhibit 2). In the first half of 2001, 4.9 percent of treatment admissions were primary crack abusers and 2.7 percent were powder cocaine abusers, for a total of 7.6 percent, suggesting stability in crack/cocaine abuse in the Newark PMSA. Despite cocaine's small share as a primary drug among treatment admissions, it remained popular as a secondary drug for heroin clients in the Newark PMSA. Consistent with Newark PMSA data, cocaine as a primary drug of abuse in the State was also stable between the first half of 2001 and the first half of 2002 (10.3 and 10.6 percent, respectively). In the first half of 2002, cocaine abuse as a primary, secondary, or tertiary drug accounted for 40 percent of all drug abuse mentions in the State.

In the first half of 2002, males accounted for 65.6 percent of powder cocaine admissions and 49.4 percent of crack cocaine admissions in the Newark PMSA (exhibit 2). The majority (82.4 percent) of powder cocaine admissions in the Newark PMSA were older than 25; 61.4 percent of crack cocaine and 51.6 percent of powder cocaine admissions were at least 35 years old.

More than two-thirds (68.2 percent) of cocaine/crack admissions in the Newark PMSA smoked the drug, while 28.7 percent used it intranasally in the first half of 2002. By comparison, 2.6 percent of primary treatment admissions injected cocaine/crack in the first half of 2002.

Cocaine/crack use varied by race/ethnicity in the Newark PMSA. In the first half of 2002, 69.0 percent of crack cocaine admissions were Black, 24.1 percent were White, and 5.9 percent were Hispanic. By comparison, 40.7 percent of powder cocaine admissions were Black, 38.9 percent were White, and 18.1 percent were Hispanic.

Cocaine as a primary, secondary, or tertiary drug among treatment admissions in the Newark PMSA increased from 38.0 percent in 2001 to 41.3 percent in the first half of 2002. ED data also suggest an increase in cocaine mentions by 21.9 percent (from 1,304 in the second half of 2001 to 1,589 in the first half of 2002), with the rate of cocaine mentions per 100,000 population rising from 77 to 91 during the same period.

Cocaine-related deaths increased from 137 in 2000 to 148 in 2001. The increase in cocaine-related deaths in the Newark PMSA was consistent with the marginal increase in cocaine treatment mentions and ED cocaine mentions.

Cocaine prices have been remarkably stable over the years, selling for \$5–\$30 per bag in the Newark PMSA in the first quarter of 2001. No 2002 price data are available to report at this time.

Heroin

In the Newark PMSA, there were 5,777 primary heroin treatment admissions in the first half of 2002 (exhibit 2), compared with 5,523 in the first half of 2001, suggesting a marginal increase in the number of primary heroin admissions. The relative share of primary heroin admissions, however, was stable between the first half of 2001 (63.6 percent) and the first half of 2002 (63.5 percent).

In the first half of 2002, males accounted for 62.4 percent of heroin admissions in the Newark PMSA. There is variation by race/ethnicity in heroin admissions, with Blacks accounting for 57.0 percent, Whites for 27.1 percent, and Hispanics for 14.2 percent of heroin treatment admissions. Almost 90 percent (87.8 percent) of primary heroin admissions were older than 25, with 58.4 percent age 35 or older.

Heroin abuse as a primary, secondary, or tertiary drug accounted for 67.3 percent of admissions in the Newark PMSA. Its share appears to have stabilized between 2001 and the first half of 2002.

In the first half of 2002, 26.9 percent of treatment clients injected heroin compared with 24.6 in the first half of 2001. The increase in heroin injection between the first half of 2001 and the first half of 2002 in the Newark PMSA (exhibit 4) is also consistent with the slight statewide rise in heroin injection (exhibit 5). Heroin smoking remains very rare in the Newark PMSA, with less than 1 percent (0.9 percent) of primary treatment admissions reporting this route of administration in the first half of 2002.

Both in the Newark PMSA and in the State, the rise in heroin injection was most pronounced for 18–25-year-olds, while injection by 26–34-year-old clients has been also rising moderately (exhibits 4 and 5).

While heroin ED mentions accounted for the largest number of drug mentions reported, the drug's relative share declined to 36.3 in the first half of 2002 from 40.0 percent in the first half of 2001. Consistent with heroin treatment data and ED heroin mentions, the rate of heroin ED mentions declined from 108 per 100,000 population in the first half of 2001 to 103 per 100,000 population in the first half of 2002.

Heroin purity is still very high but fluctuating in the Newark PMSA. In 2001, heroin purity was estimated at 68.5 percent per pure milligram. In 2000, heroin was 72.2 percent pure. The price per milligram of heroin appears to have stabilized at \$0.33 both in 2000 and 2001. The Newark PMSA has the second highest heroin purity (after Philadelphia) coupled with the lowest price among the 21 DAWN cities. According to the DEA report, almost all the heroin sold in the Newark PMSA is South American.

In 2001, ME data show 177 heroin mentions in the Newark PMSA, about the same number as in 2000 (179 heroin mentions). The stable pattern in ME heroin mentions is consistent with the recent patterns in both treatment data and ED data.

Opiates Other than Heroin

There were 101 primary “other opiates or synthetics” (other opiates) treatment admissions in the first half of 2002, compared with 69 in the first half of 2001. By comparison, primary, secondary, or tertiary other opiates treatment admissions in the first half of 2002 accounted for 2.3 percent (203 mentions) in the Newark PMSA.

In the first half of 2002, there were 12 hydrocodone/combinations ED mentions and 49 oxycodone/combinations mentions in the Newark PMSA, the same totals as in the first half of 2001.

In 2001, there were 18 oxycodone mentions among Newark PMSA ME cases, up from 4 in 2000. State-wide, there were 58 oxycodone ME mentions and 11 hydrocodone ME mentions in 2001.

Marijuana

In the first half of 2002, marijuana accounted for 7.3 percent of primary treatment admissions in the New-

ark PMSA (exhibit 2), which was only marginally higher than the drug's share in the first half of 2001 (6.9 percent).

Only 8.5 percent of primary marijuana treatment admissions were age 35 or older in the first half of 2002. Most marijuana treatment admissions (73.5 percent) were younger than 26; 33.1 percent were younger than 18. A substantial proportion (48.8 percent) of primary marijuana treatment admissions in the Newark PMSA also abused alcohol as a secondary drug, and 8.5 percent abused alcohol as a tertiary drug. In the first half of 2002, 19.4 percent of clients reported using marijuana as their primary, secondary, or tertiary drug at the time of admission.

There were 18 ED marijuana mentions per 100,000 population in the first half of 2001. In the first half of 2002, ED data show that the rate of marijuana ED mentions in the Newark PMSA increased to 25 per 100,000 population, a 37.1-percent increase. Consistent with ED mentions, ME marijuana mentions more than doubled between 2000 and 2001 (14 in 2000 and 38 in 2001).

Marijuana seizures in New Jersey increased from 1,813 in 1998 to 3,299 in 1999. There were no recent seizure data available for the Newark PMSA.

Prices of marijuana were stable in the Newark PMSA. According to the DEA, marijuana sold for \$5–\$10 per bag and \$2–\$5 per joint in the first quarter of 2001. No recent price data were available for the Newark PMSA to report.

Stimulants

Ecstasy use is still rare in the Newark PMSA with only one ED mention reported in the first half of 2001 and the first half of 2002. By comparison, there were three ecstasy primary treatment admissions in the first half of 2002, compared with one in the first half of 2001. There were 16 ecstasy abuse mentions as a primary, secondary, or tertiary drug in the Newark PMSA in the first half of 2002, compared with eight in the first half of 2001.

In the first half of 2002, only six primary methamphetamine treatment admissions were reported in the Newark PMSA. Methamphetamine use as a primary, secondary, or tertiary drug was reported only 28 times in Newark PMSA. Methamphetamine use was also rare in the State, with 121 mentions reported as a primary, secondary, or tertiary drug in the first half of 2002.

Depressants

Benzodiazepines remain the fifth most commonly abused drugs in the Newark PMSA after alcohol, heroin, cocaine, and marijuana. In the first half of 2002, benzodiazepine use as a primary, secondary, or tertiary drug accounted for 2.3 percent of treatment admissions, compared with 1.6 percent in 2001. Consistent with its lower share among treatment admissions and ED mentions (0.9 percent), 2001 ME data show that benzodiazepine mentions accounted for only 0.4 percent in the Newark PMSA.

According to DAWN data for the first half of 2002, there were only six GHB ED mentions in the Newark PMSA and no ketamine ED mentions. By comparison, treatment data suggest that there was no GHB abuse as a primary, secondary, or tertiary drug by clients compared with two mentions for ketamine.

Hallucinogens

PCP abuse as a primary, secondary, or tertiary drug was reported 19 times in the first half of 2002 in the Newark PMSA. By comparison, there were only seven primary PCP treatment admissions and four other hallucinogens mentions in the first half of 2002. Estimates of PCP mentions were suppressed because of a high relative standard error (greater than 50 percent), and no mentions were reported for other hallucinogens in the DAWN data for the Newark PMSA in the first half of 2002. No hallucinogens-related deaths were reported in the Newark PMSA in 2001, and there was only one mention in 2000.

Lysergic acid diethylamide (LSD) use remains very low in the Newark PMSA, with no ED mentions reported in the first half of 2001 or the first half of 2002.

Alcohol

In the Newark PMSA, the share of alcohol-only treatment admissions declined from 11.4 percent to 10.4 percent between the first half of 2001 and the first half of 2002, while alcohol-in-combination admissions were stable (exhibit 3).

Despite its continued decline, alcohol is still a major secondary or tertiary drug of abuse among cocaine/crack, heroin, and marijuana treatment clients. For example, in the first half of 2002, 42.6 percent of crack treatment admissions, 47.5 percent of powder cocaine treatment admissions, and 48.8 percent of marijuana treatment admissions reported alcohol as a secondary drug in the Newark PMSA.

As expected, large proportions of alcohol-only treatment admissions (93.1 percent) and alcohol-in-combination admissions (78.2 percent) were older than 25 in the first half of 2002 (exhibit 2). Alcohol-in-combination ME mentions were 11 percent higher in 2001 than in 2000 (98 in 2000 vs. 109 in 2001), while alcohol's proportionate share among ME mentions declined from 15.7 percent in 2000 to 13.4 percent in 2001.

Tobacco

A large proportion of substance abusers are heavy cigarette smokers (exhibit 6). Treatment data show that the proportion of clients smoking cigarettes increased from 79.8 percent in the first half of 2001 to 80.8 percent in the first half of 2002 in the Newark PMSA. Statewide smoking status stayed high but stable at 77.3 percent between the first half of 2001 and the first half of 2002.

Like all other drugs, cigarette smoking in the Newark PMSA varies by gender, race/ethnicity, and type of drug abused. Overall, 78.1 percent of male treatment clients and 85.6 percent of female treatment clients smoked cigarettes in the first half of 2002. Among male treatment admissions, heroin admissions smoked the most (86.2 percent), followed by admissions for alcohol-in-combination (73.6 percent), crack (71.6 percent), marijuana (64.6 percent), cocaine (62.5 percent), and alcohol-only (59.1 percent). The percentages of female admissions who smoke cigarettes were 90.6 for heroin, 79.4 for alcohol-in-combination, 83.7 for crack, 73.6 for marijuana, 76.4 for cocaine, and 62.7 for alcohol-only. A higher proportion of female treatment admissions smoked cigarettes compared with their male counterparts within each drug type listed above. Proportionately more females than males also smoked cigarettes within each racial/ethnic group.

Smoking has become increasingly less popular in the general public, with only 20 percent of adults and 38 percent of high school students in 1998 smoking cigarettes in the 30 days prior to the survey date. By comparison, only 7.2 percent of students in grades 7 and 8 in 2001 smoked cigarettes in the 30 days prior to the survey, while 12.5 smoked cigarettes in 1999. However, the recent anti-smoking effort in the State did not seem to have impacted the substance abusing community in treatment.

INFECTIOUS DISEASES RELATED TO DRUG ABUSE

The drug-abusing population in the Newark PMSA (and the State) and those living with HIV/AIDS ex-

hibit similar characteristics. There were 11,592 people living with HIV/AIDS in the Newark PMSA as of June 30, 2002. Of these, 11,376 were adults/adolescents and 4,619 (39.8 percent) were females; 35.8 percent of the adult/adolescent cases were IDUs (exhibit 7). Only 1 percent were younger than 20 and 23 percent were older than 49. Over 70 percent (70.1 percent) of people with HIV/AIDS were age 30–49.

The population living with HIV/AIDS in the Newark PMSA was overwhelmingly Black (72 percent), followed by Hispanics (14 percent) and Whites (12 percent).

Statewide, the number of people living with HIV/AIDS as of June 30, 2002, was 29,767, of which 29,320 were adults; 35.9 percent were females. IDUs, including those who engage in male-to-male sex, accounted for 37.0 percent of statewide adult cases (exhibit 8).

Only 2 percent of statewide cases were younger than 20, and 20.2 percent were older than 49. The race/ethnicity distribution of people living with HIV/AIDS statewide is also skewed towards Blacks, who accounted for 56.0 percent of all cases, and Hispanics, who accounted for 20.4 percent.

A larger proportion of females (35.7 percent in Newark PMSA and 36.4 in the State) were infected through heterosexual contact than males (11.7 percent and 10.1 percent in the Newark PMSA and the State, respectively).

The continued increase in heroin injection by the young (age 25 or younger), the very high level of heroin abuse, and heroin-related deaths suggest a possible increase in the prevalence of infectious diseases. However, no data are yet available to document any rise in the prevalence of infectious diseases.

For inquiries concerning this report, please contact Abate Mammo, Ph.D., Department of Health and Senior Services, Division of Addiction Services, Research and Information Systems, 225 E. State Street, 8th Floor, East Wing, Trenton, NJ 08625, Phone: (609) 292-9354, Fax: (609) 292-1045, E-mail: <abate.mammo@doh.state.nj.us>.

Exhibit 1. Selected Indicators for Specific Drugs in the Newark PMSA: 1H 2001–1H 2002

Drug Use Mentions	Treatment Data (1H 2001–1H 2002)	ED Mentions (1H 2001–1H 2002)
Alcohol-in-Combination	Stable	Stable
Heroin	Stable	Stable
Cocaine	Stable	Increased
Marijuana	Stable	Increased
PCP	Stable	(No Data)
Methamphetamine	Stable	(No Data)
Ecstasy (MDMA)	Stable	Stable
Ketamine	(None)	(No Data)
Total	Increased	Stable
Other Trends		
Heroin purity	Decreased between 2000 and 2001	
Heroin price	Stable at \$ 0.33 per milligram pure	
Injection	Increased among 18-25 and 26-34	
Drug-related deaths	Increased (Driven mainly by cocaine, narcotic analgesics and marijuana)	

SOURCES: Division of Addiction Services, State Department of Health and Senior Services; Adapted from DAWN, OAS, SAMHSA (first-half 2002 data are preliminary); Drug Enforcement Administration, Domestic Monitor Program

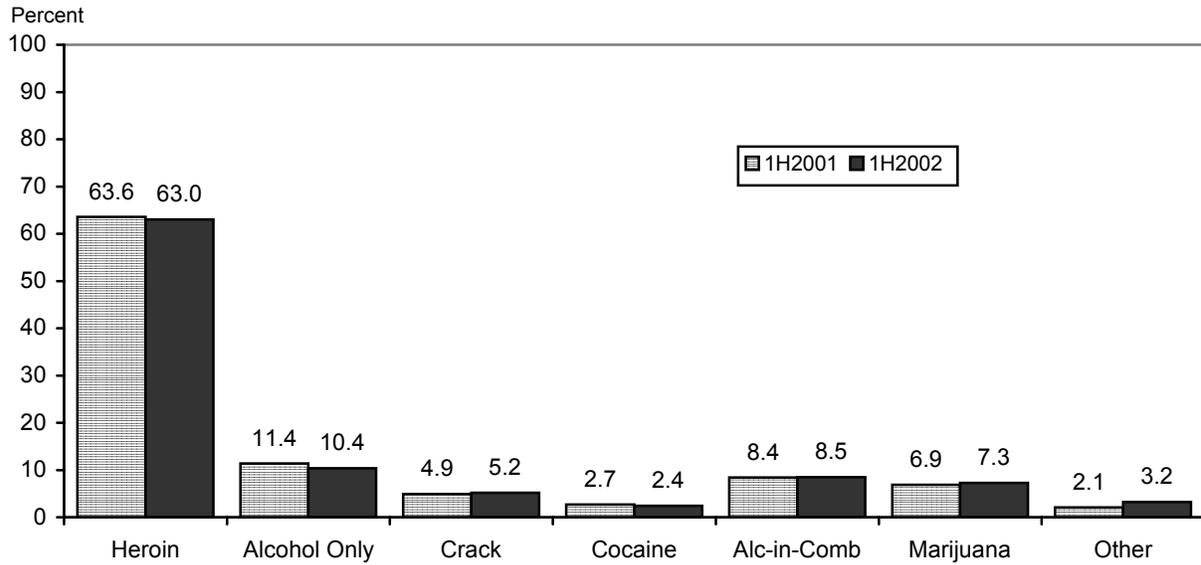
Exhibit 2. Characteristics of Primary Substance Abuse Treatment Admissions in the Newark PMSA, by Percent: January–June 2002

Demographic Characteristic (Percentage Distributions) ¹	Alcohol-Only	Alcohol-in-Combination	Crack	Cocaine	Heroin	Marijuana
Gender						
Male	75.0	73.4	49.4	65.6	62.4	78.9
Female	25.0	26.2	50.6	34.9	37.6	21.1
Race/Ethnicity						
White	65.3	51.7	24.1	38.9	27.1	30.7
Black	16.5	33.3	69.0	40.7	57.0	52.6
Hispanic	16.6	14.2	5.9	18.1	14.2	15.4
Other	1.6	0.8	1.0	2.3	2.7	1.3
Age at Admission						
17 and younger	0.4	4.2	0.8	2.7	0.6	33.7
18–25	6.3	17.5	8.4	14.9	11.6	39.8
26–34	17.6	24.8	29.3	30.8	29.4	17.9
35 and older	75.5	53.4	61.4	51.6	58.4	8.4
Route of Administration						
Smoking	–	–	100.0	–	0.9	98.6
Inhaling	–	–	–	90.1	72.0	–
Injecting	–	–	–	8.1	26.9	–
All other/multiple	100	100	–	1.8	0.2	1.4
Most Frequently Reported Secondary Drug	–	Marijuana 39.4	Alcohol 42.6	Alcohol 47.5	Cocaine/Crack 40.4	Alcohol 48.8
Most Frequently Reported Tertiary Drug	–	Marijuana 11.7	Marijuana 15.0	Alcohol 11.8	Alcohol 9.6	Alcohol 8.5
Total (N=9,073)	(944)	(770)	(474)	(221)	(5,777)	(664)
Percentage of Total	10.4	8.5	5.2	2.4	63.8	7.3

¹Percentages may not add to 100 due to rounding or missing values.

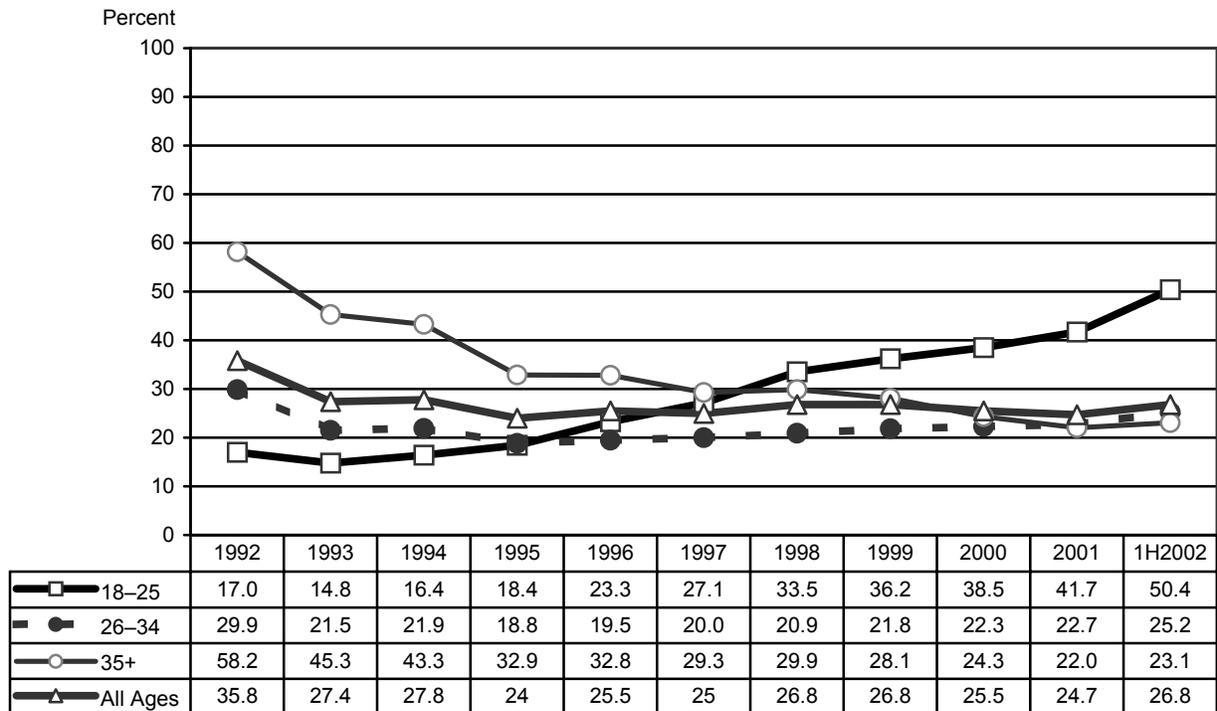
SOURCE: Alcohol and Drug Abuse Data System, Research and Information Systems, Division of Addiction Services, New Jersey Department of Health and Senior Services

Exhibit 3. Primary Treatment Admissions in the Newark PMSA, by Percent: 1H 2001 vs. 1H 2002



SOURCE: Alcohol and Drug Abuse Data System, Research and Information Systems, Division of Addiction Services, State Department of Health and Senior Services

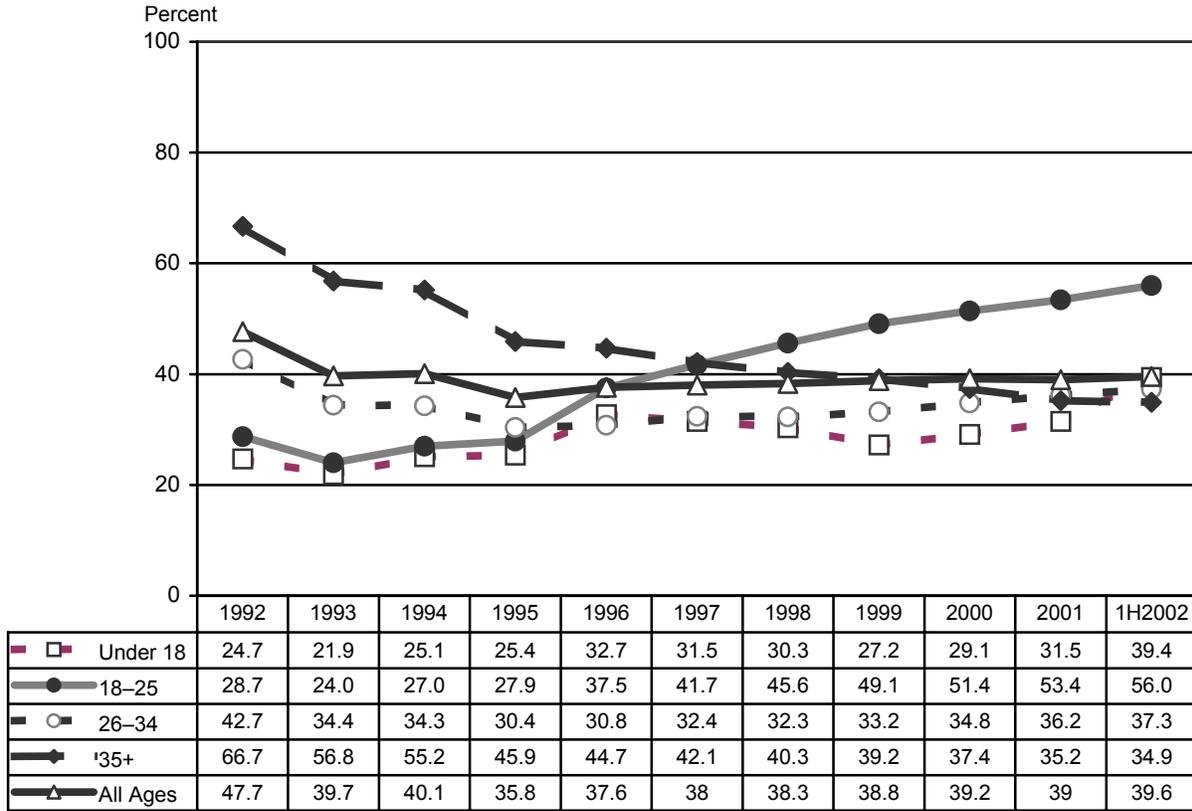
Exhibit 4. Heroin Injection Among Treatment Admissions by Age Group in the Newark PMSA, by Percent: 1992–June 2002¹



¹ 2002 data reflect partial year reporting only.

SOURCE: Client Oriented Data Program and Alcohol and Drug Abuse Data System

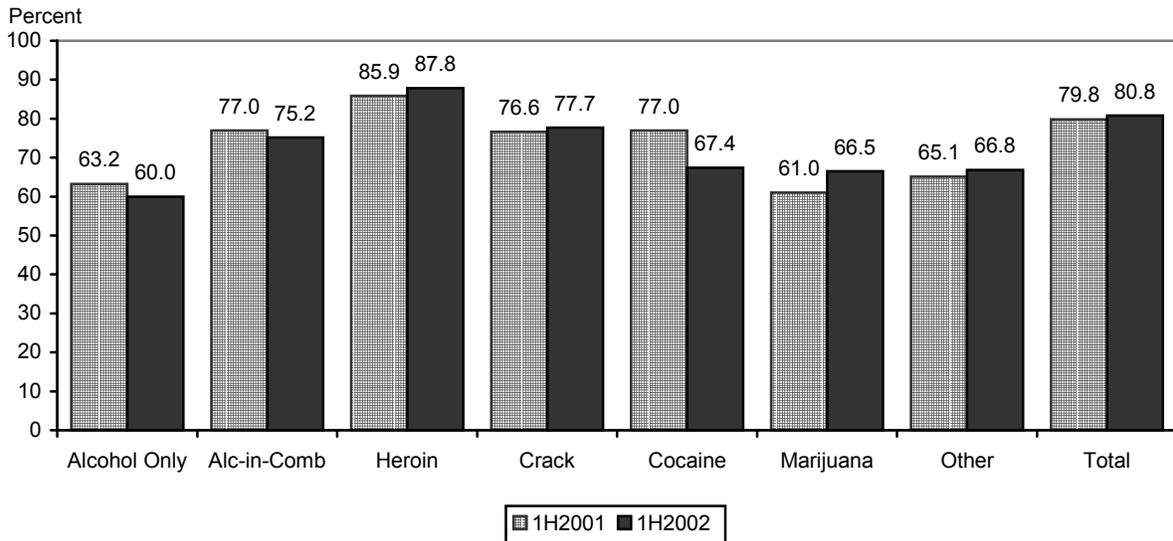
Exhibit 5. Percentages of Heroin Injectors Among Treatment Admissions by Age Group in New Jersey: 1992–June 2002¹



¹ 2002 data reflect partial-year reporting only.

SOURCE: Client Oriented Data Program and Alcohol and Drug Abuse Data System

Exhibit 6. Cigarette Smoking at Admission by Drug Type in Newark PMSA by Percent: 1H 2001 vs. 1H 2002



SOURCE: Alcohol and Drug Abuse Data System, Research and Information Systems, Division of Addiction Services, State Department of Health and Senior Services

Exhibit 7. Adult/Adolescent and Pediatric Cases Living With HIV/AIDS in the Newark PMSA by Exposure Category and Gender as of June 30, 2002

Exposure Category	Males		Females		Total	
	N	(%)	N	(%)	N	(%)
Adult/Adolescent						
Men/sex/men (MSM)	1,438	(21)	0	(0)	1,438	(12)
Injection drug user (IDU)	2,387	(34)	1,473	(32)	3,860	(33)
IDU/MSM	286	(4)	0	(0)	286	(2)
Heterosexual contact	816	(12)	1,651	(36)	2,467	(21)
Adult Other/Unknown	1,902	(27)	1,321	(29)	3,223	(28)
Pediatric Modes	144	(2)	174	(4)	318	(3)
Total	6,973	(100)	4,619	(100)	11,592	(100)
Race/Ethnicity						
White	981	(14)	385	(9)	1,366	(12)
Black	4,746	(68)	3,669	(79)	8,232	(72)
Hispanic	1,134	(16)	494	(11)	1,628	(14)
Other/Unknown	98	(1)	52	(1)	150	(1)
Total	6,882	(100)	4,494	(100)	11,376	(100)

SOURCE: New Jersey Department of Health and Senior Services, Division of AIDS Prevention and Control

Exhibit 8. Number and Percent of Adult/Adolescent and Pediatric Cases Living With HIV/AIDS in New Jersey by Exposure Category and Gender as of June 30, 2002

Exposure Category	Males		Females		Total	
	N	(%)	N	(%)	N	(%)
Adult/Adolescent						
Men/sex/men (MSM)	5,086	(27)	0	(0)	5,086	(17)
Injection drug user (IDU)	6,577	(34)	3,533	(33)	10,110	(34)
IDU/MSM	825	(4)	0	(0)	825	(3)
Heterosexual contact	1,927	(10)	3,884	(36)	5,811	(20)
Adult Other/Unknown	4,348	(23)	2,917	(27)	7,265	(24)
Pediatric Modes	330	(2)	340	(3)	670	(2)
Total	19,093	(100)	10,674	(100)	29,767	(100)
Race/Ethnicity						
White	4,707	(25)	1,841	(17)	6,548	(22)
Black	9,861	(51)	6,817	(64)	16,678	(56)
Hispanic	4,208	(22)	1,869	(18)	6,077	(20)
Other/Unknown	317	(2)	147	(1)	464	(2)
Total	19,093	(100)	10,442	(100)	29,767	(100)

SOURCE: New Jersey Department of Health and Senior Services, Division of AIDS Prevention and Control

Overview of Drug Abuse Indicators in New Orleans

Gail Thornton-Collins¹

ABSTRACT

Crack cocaine remains a problem in the New Orleans area, although the problem has diminished considerably. ED rates are stable, admissions rose slightly, and arrests rose dramatically. Heroin abuse appears to be up, despite indicators remaining stable. Narcotic analgesics appear to be the drug category showing the most increase. AIDS cases continue to increase, with the proportion of cases attributable to injection drug use totaling 23 percent as of May 2003.

INTRODUCTION

Area Description

Located in southern Louisiana, New Orleans covers 366 square miles, of which 164 are water. Jefferson Parish borders the city on the west. About one-half of the metropolitan area's 1.2 million inhabitants live in Orleans Parish, the largest of Louisiana's 64 parishes.

New Orleans is serviced by several deep-water ports located at the confluence of the Nation's two principal waterways: the Gulf Intracoastal Waterway and the Mississippi River. Barge lines and more than 100 steamship lines service the ports, with more than 4,000 ships calling annually.

New Orleans has two airports: the New Orleans International Airport, which serves all cargo airlines, and the New Orleans Lakefront Airport, which serves general aviation and corporate and private aircraft. Domestic and international trade is served directly by the Public Belt Railroad and trunk line railroads; other rail companies maintain offline offices in New Orleans.

Data Sources

Information for this report was collected from the sources described below.

- **Emergency department (ED) drug mentions data** were derived from the Drug Abuse Warning Network (DAWN), Office of Applied Studies

(OAS), Substance Abuse and Mental Health Services Administration (SAMHSA). Preliminary estimates are presented for 2001 and the first half of 2002. Rates are based on the 2000 Census, and, because of the larger denominator, percent changes for rates may differ from those for mentions.

- **Drug treatment data** were provided by the Louisiana State Office for Addictive Disorders and by not-for-profit treatment facilities for Orleans Parish for fiscal years 1992–2002 and for seven other parishes. The seven parishes selected are the largest parishes in the State of Louisiana.
- **Drug-related homicide and suicide data** were derived by the Orleans Parish Coroner's Office for 1999, 2000, 2001, and 2002.
- **Drug-related mortality data** were derived from DAWN. These medical examiner (ME) data cover two of the four jurisdictions and represent 88 percent of the metropolitan statistical area population in the participating jurisdictions. DAWN ME data are presented for 1997–2001.
- **Arrestee drug testing data** came from the Arrestee Drug Abuse Monitoring (ADAM) program, National Institute of Justice (NIJ), for 2000, 2001, and 2002.
- **Drug arrest data** were provided by the New Orleans Police Department (NOPD) for 2002.
- **Drug price, purity, and seizure information** was provided by the New Orleans Division of the Drug Enforcement Administration (DEA) for the period January–December 2002. Data for purity were derived from the DEA's Domestic Monitor Program (DMP).
- **Acquired immunodeficiency syndrome (AIDS) and human immunodeficiency virus (HIV) data** were provided by the Louisiana State Health Department and represent new and cumulative cases through May 1, 2003.

¹ The author is affiliated with the New Orleans Health Department, New Orleans, Louisiana.

DRUG ABUSE PATTERNS AND TRENDS

Cocaine/Crack

Cocaine abuse, particularly of crack, continues to be a major drug problem in New Orleans. Cocaine powder continues to be converted into crack and distributed primarily in the lower income areas of the city. The DEA reports approximately 13.05 kilograms of cocaine were seized in the fourth quarter of fiscal year (FY) 2002, compared with 71.75 kilograms in the first quarter of FY 2003. The majority of the cocaine trafficking within the New Orleans field district continues to originate from Colombia- and Mexico-based organizations, operating out of California and Texas.

While rates of DAWN cocaine ED mentions per 100,000 population in New Orleans decreased significantly from 1998 through 2000, preliminary estimates for 2001 and the first half of 2002 suggest rates have stabilized (exhibit 1). In the first half of 2002, ED mentions of cocaine totaled 661, with a rate of 57 per 100,000 population.

In the first half of 2002, the largest proportions of cocaine ED mentions were for patients who were male (63 percent), Black (59 percent), and age 35 and older (55 percent). However, the proportion of patients who were White increased significantly (39 percent) between the first halves of 2001 and 2002, as their proportion rose from 25 to 37 percent.

Sixty-five percent of the cocaine ED mentions represented patients with multidrug episodes. Nearly 17 percent of the mentions were among patients who reported overdose as their reason for contacting the emergency department, while nearly 22 percent were for patients who contacted the facility because of an unexpected reaction to the drug. Psychic effects and dependence were the most frequently reported motives for cocaine use (associated with 29 and 39 percent of the mentions, respectively).

Among treatment admissions in Orleans Parish in 2002, primary cocaine abuse accounted for 34.5 percent of the 2,795 clients for whom a primary substance was reported (exhibit 2). Excluding alcohol, cocaine accounted for 42.7 percent of the admissions.

Of the 963 primary cocaine admissions in Orleans Parish in 2002, the majority was Black, with 56.6

percent being Black males and 31.5 percent being Black females. Gender differences among Whites were small: 6.6 percent of primary cocaine admissions were White males and 5.3 percent were White females.

Treatment data on seven other Louisiana parishes show that the proportions of primary cocaine admissions in 2002 were higher in Caddo Parish (42.3 percent) and East Baton Rouge Parish (40.1 percent) than in Orleans Parish, while the proportions in Bossier and Lafayette Parishes (30.6 and 32.9 percent, respectively) were not too different from the proportion in Orleans Parish (exhibit 3). In the remaining three parishes, the proportions of primary cocaine admissions ranged from approximately 22 to 26 percent. Across all eight parishes, cocaine either ranked first (Caddo and New Orleans Parishes) or equaled or ranked second to alcohol as a primary drug of abuse.

DAWN ME data show 90 cocaine death mentions in 2001, down from 111 in 2000 but up from the totals in 1997–1999 (exhibit 4). In 2001, 19 (21 percent) of the cocaine death mentions in DAWN were for cocaine only. Another nine mentions involved alcohol and cocaine, one involved cocaine plus heroin/morphine, and one involved alcohol, cocaine, and heroin/morphine.

New Orleans ADAM data indicate that 34.8 percent of males tested positive for cocaine in 2000. This proportion increased to 37.3 percent in 2001 and continued to rise to 42.4 percent in 2002 (exhibit 5). Among female arrestees in 2002, 42 percent tested positive for cocaine.

The NOPD reported 3,649 arrests for cocaine possession in 2002, up from 2,176 in 2001 (exhibit 6). Black males accounted for the majority of these arrests in 2002 (67 percent), followed by Black females (18 percent), White males (12 percent), and White females (3 percent). Cocaine distribution arrests also increased between 2001 and 2002, by 39 percent. Similar to arrests for cocaine possession, Black males accounted for the majority of cocaine distribution arrests at 85 percent.

The price and purity of powder cocaine remained relatively stable, averaging \$80–\$150 per gram and \$800–\$1,200 per ounce. Kilogram prices, however, dropped from \$18,000–\$25,000 to \$20,000. The price of crack cocaine declined in the pound (from \$12,000

to \$8,000) and individual rock (from \$10–\$25 to \$15) quantities. The kilogram price increased from \$18,000–\$25,000 to \$20,000–\$28,000.

Heroin

Heroin indicators are relatively stable, with signs of slight decline. However, heroin in Louisiana poses a particular threat. Heroin abuse in New Orleans has risen over the past several years, and the city has been and continues to have regional markets for heroin. Most heroin-related cases conducted by State and local agencies and the DEA are in the New Orleans area. The NOPD views heroin and its abuse as significant, impacting homicides in Orleans Parish. Heroin is not only becoming more available in a purer form, it is also becoming more affordable.

Between the first halves of 2001 and 2002, preliminary estimates suggest heroin ED rates were stable, at 23 per 100,000 population (exhibit 1).

Of the 270 heroin ED mentions in the first half of 2002, 69 percent were for male patients, 61 percent for Blacks, nearly 36 percent for Whites, 42 percent for patients 35 and older, and 38 percent for those age 18–25. A sizeable minority (47 percent) were single-drug episodes. The primary motives for use were either dependence (46 percent) or psychic effects (38 percent). Major reasons for contacting the emergency department included unexpected reaction and overdose (28 and 26 percent, respectively).

In 2002, nearly 12 percent of treatment admissions in Orleans Parish were for primary heroin abuse, slightly lower than the proportion in 2001 but considerably higher than the proportions in 1992–1998 (exhibit 2). Nearly two-thirds of the primary heroin admissions in Orleans Parish were Black males. In 2002, the percentage of primary heroin admissions in Orleans Parish was more than 10 times the percentages reported in the seven other parishes shown in exhibit 3.

In 2001, the DAWN ME reported 37 mentions of heroin/morphine; 2 were single-drug deaths (exhibit 4). Such deaths in 2001 were lower than the 48 reported in 2000.

Among adult male arrestees in the ADAM program, 15.5 percent tested positive for opiates in 2000, compared with 15.6 percent in 2001, and 17.4 percent in 2002 (exhibit 5). Among female arrestees, 9 percent tested positive for opiates in 2002.

The NOPD reported 301 heroin possession arrests in 2002, up from 274 in 2001 (exhibit 6). The number

of heroin distribution arrests, however, declined dramatically by 64 percent during that same time period. Black males continued to account for the majority of heroin possession and distribution arrests, at 68 and 90 percent, respectively.

The proportion of White females, however, surpassed those for White males and Black females among heroin possession arrests in 2002, totaling 8 percent.

Preliminary DMP data for 2002 showed heroin purity at 36.18 percent. The average price per milligram pure was \$3.74. The DEA reported that the price of heroin remained stable, averaging \$300–\$600 per gram, \$4,000–\$9,000 per ounce, and \$80,000–\$100,000 per kilogram.

Other Opiates/Narcotics

Other opiate indicators remained low during the last 6 years. Other opiates represented about 1.3 percent of all treatment admissions. Hydromorphone (Dilaudid) is being replaced by OxyContin as the most popular opiate of abuse in the New Orleans area. However, hydrocodone (Vicodin), propoxyphene (Darvon), alprozalam (Xanax), oxycodone (Percodan), and hydromorphone (Dilaudid) are the most widely diverted opiates.

Preliminary DAWN data show 449 ED mentions of narcotic analgesics/combinations in the first half of 2002, and a rate of 39 per 100,000 population (exhibit 1). There was no significant change between 2001 and the first half of 2002. Hydrocodone/combinations and oxycodone/combinations accounted for more than 38 percent of the mentions (113 and 59, respectively).

Among treatment admissions in Orleans Parish in 2002, 82 (2.9 percent) were for primary abuse of “other opiates or synthetic opioids” ($n=80$) or non-prescription methadone (2). Whites predominated, with 39 percent being White males and 24 percent being White females. Whites also dominated among these other opiate admissions in other parishes. The proportions of these admissions in Bossier, Caddo, East Baton Rouge, and Ouachita Parishes were similar to that in Orleans Parish (ranging from 2.6 to 3.6 percent), while those in Lafayette and Calcasieu Parishes were considerably higher (6.7 and 7.1 percent, respectively).

Deaths involving mentions of narcotic analgesics rose sharply from 1997 to 2001. Of the 200 narcotic analgesic mentions in 2001, 5 were single-drug deaths (exhibit 4).

Marijuana

Marijuana continues as a major problem among youth in the city of New Orleans, but indicators suggest the problem is stabilizing.

The price of marijuana is decreasing in some areas of the State, due to the abundant availability of Mexican-produced marijuana. Mexican marijuana is frequently used to “bulk-up” domestic marijuana to increase profits. Reports also indicate that the production and cultivation of locally grown marijuana (both indoor and outdoor operations) is primarily a White activity.

Trend data from 1994 to 2001 show a significant increase in the rate of marijuana ED mentions over that time span. However, significant declines occurred from 1999 through 2001. Preliminary estimates, shown in exhibit 1, suggest the number and rate of marijuana ED mentions remained stable from 2001 to the first half of 2002.

Of the 406 marijuana ED mentions in the first half of 2002, 64 percent were for male patients; 48 percent were for Blacks and 46 percent for Whites. Patients represented in the marijuana mentions were more evenly divided by age in the groups 18 and older: 28 percent were age 18–35, 27 percent were 26–34, and 36 percent were age 35 and older. Nearly 74 percent of the mentions represented multi-drug episodes. The most frequently reported motives for using marijuana were psychic effects (30.0 percent) and dependence (32.5 percent). Slightly more than 41 percent of the mentions relating to reasons for contacting the ED fell in the “unknown” category. Nearly 23 percent represented patients who cited “overdose” on marijuana as the reason for contacting the ED.

The Orleans Parish treatment data showed little change in primary marijuana admissions from 1995 onward (exhibit 2). In 2002, the 834 primary marijuana admissions accounted for nearly 30 percent of all admissions. Three-quarters were Black males, and 14 percent were Black females; White males accounted for 9 percent, and White females for nearly 2 percent. The proportion of primary marijuana admissions in the Orleans Parish caseload in 2002 was considerably greater than that in six other parishes in exhibit 3, with only Ouachita Parish (at 27.3 percent) approximating Orleans Parish.

ME data for 2001 show 39 mentions of marijuana (exhibit 4), with 2 being single-drug deaths. The 2002 mentions represent a substantial decline from the numbers reported from 1998 to 2000.

ADAM data show that 47 percent of male arrestees tested marijuana positive in 2002 (exhibit 5). The proportion of females testing positive fluctuated between 2000 and 2002, totaling 28 percent, 25 percent, and 26 percent, respectively.

As shown in exhibit 6, arrests for marijuana possession increased slightly between 2001 and 2002, while those for marijuana distribution declined by 24 percent during that same time period. As with arrests for other drugs, Black males accounted for the majority of marijuana possession and distribution arrests, at 73 and 82 percent, respectively.

Marijuana prices remained stable at \$100 per gram, \$125–\$160 per ounce, \$750–\$1,000 per pound, and \$2,000 per kilogram. A joint averaged \$2, down from \$5 in 2001.

Stimulants

Stimulants such as amphetamines and methamphetamine do not appear to be major substances of abuse in New Orleans. In rural areas of the State, however, methamphetamine is a problem, with the abuse primarily among members of biker organizations.

There was a significant increase in methamphetamine ED mentions between the first halves of 2001 and 2002 (exhibit 1). The 29 mentions were about equally divided between patients by gender; 15 were Black. Most mentions represented patients in the 18–25 and 35 and older age categories (each 38 percent). The number of amphetamine ED mentions totaled 53 in the first half of 2002, with no significant change from the last half of 2001. Fifty-five percent of the amphetamine mentions were for female patients.

In Orleans Parish treatment programs in 2002, there was only one admission for primary methamphetamine abuse and five for primary amphetamine abuse. In seven other parishes, amphetamine admissions were also low, ranging from less than 1.0 to 1.5 percent in six parishes and totaling 2.6 percent in Rapides Parish. In three of the seven other parishes, primary methamphetamine admissions ranged from zero to 1.5; in Ouachita, Rapides, and Caddo Parishes, between 1.5 and 2.2 percent of all admissions were for primary abuse of methamphetamine. Proportions were higher in Bossier (3.2 percent) and Calcasieu (4.4 percent) Parishes.

No methamphetamine-related death mentions were recorded in the DAWN ME system from 1997 to 2001. Across that time period, 26 amphetamine mentions were recorded, with 3 occurring in 2001 (exhibit 4).

Prices for methamphetamine remained stable in 2002, averaging \$100–\$150 per gram, \$900–\$1,500 per ounce, and \$12,000–\$16,000 per pound.

Club Drugs

Use of club drugs continues to be reported in clubs and bars around the French Quarter area of the city. Drugs such as methylenedioxymethamphetamine (MDMA or ecstasy) and gamma hydroxybutyrate (GHB) are particularly abused near large metropolitan areas of the State where college populations are heavy. Use of drugs such as ecstasy and flunitrazepam (Rohyphnol) and similar "date rape" drugs are on the rise among youth in the city. Youth continue to be lured to these drugs because of the "hipness" and the myth that club drugs are safe. Ketamine abuse appears to have declined in the city, with little mention other than among teenagers experimenting with this drug.

Preliminary DAWN ED data suggest a significant increase in methylenedioxyamphetamine (MDMA or "ecstasy") mentions from 2001 to the first half of 2002 (exhibit 1). The 34 MDMA mentions in the first half of 2002 were equally divided among male and female patients; 88 percent were White, 53 percent were age 18–25, and 29 percent were age 26–34. Nearly 56 percent presented multidrug episodes. The motive for use was the drug's "psychic effects" in most cases (85 percent), with overdose (50 percent) and unexpected reaction (26 percent) accounting for the most frequently reported reasons for contacting the ED.

ED mentions for other drugs used in the "club scene" were few in number. There were 16 mentions of gamma hydroxybutyrate (GHB) in the first half of 2002, significantly down from the 43 in the last half of 2001. The 2 mentions of lysergic acid diethylamide (LSD) also represented a significant decrease from the 12 reported in the first half of 2001. There were no mentions of flunitrazepam (Rohyphnol), and mentions for ketamine totaled only three in the first half of 2002.

The DAWN ME data cited seven "club drug" deaths in 2001, more than double the number in 2000 (exhibit 4).

Benzodiazepines

The rate of DAWN ED mentions per 100,000 population for benzodiazepines increased from 26 in the first half of 2000 to 33 in the first half of 2002 (exhibit 1). This increase was surprising, since all other indicators are low.

Preliminary DAWN data show 383 ED mentions for benzodiazepines in the first half of 2002, an insignificant increase from the first and second halves of 2001 (352 and 420 mentions, respectively).

DAWN ME data showed 73 mentions of benzodiazepines in 2001 (exhibit 4), down slightly from the 78 reported in 2000. In the Orleans Parish 2002 treatment data, four admissions were for primary abuse of benzodiazepines, with three being female. In the seven other parishes listed in exhibit 3, the numbers of primary benzodiazepine admissions in 2002 ranged from a low of 3 in Bossier Parish to 20 in Rapides Parish.

Alcohol

Alcohol abuse is a serious problem in New Orleans, as it is in many cities and towns in the United States. Alcohol and drugs are often used together, also a common pattern across the Nation.

The preliminary DAWN ED data showed 635 alcohol-in-combination mentions in the first half of 2002, with no significant changes from 2001. The 2002 rate was 55 per 100,000 population. All mentions in the first half of 2002 were multi-drug episodes. Nearly one-third of the mentions were for patients who reported contacting the ED because of "overdose."

In Orleans Parish, primary alcohol admissions accounted for slightly more than 19 percent of all admissions (exhibit 2). Of the 539 primary alcohol admissions, 42 percent were Black males and 26 percent were White males. The 172 admissions for females were about equally divided among White and Black women. Primary alcohol admissions in seven other parishes in 2002 ranged from a low of 32 percent in Caddo Parish to a high of 41 percent in Bossier Parish (exhibit 3).

In the 2001 DAWN ME data, 78 mentions involved alcohol-in-combination with other drugs (exhibit 4).

DEATHS

The Orleans Parish Coroner's Office reported 269 homicides in 2002, up from 215 in 2001 and 165 in 1999. This increase has prompted local, State, and Federal law enforcement to develop strategies to combat this rising problem. Drug-related deaths increased to 80 percent in 2002, up from 50 percent in 2001. Also in 2002, 64 suicides were reported.

INFECTIOUS DISEASES RELATED TO DRUG ABUSE

Through May 2003, 5,092 adult cases of AIDS were reported in Louisiana versus 6,082 during the same period in 2002.

Of these, 23 percent were IDUs and 10 percent were male IDUs who had sex with other men (MSM) During the same period in 2002, IDUs represented 18 percent and IDUs MSMs remained at 10 percent.

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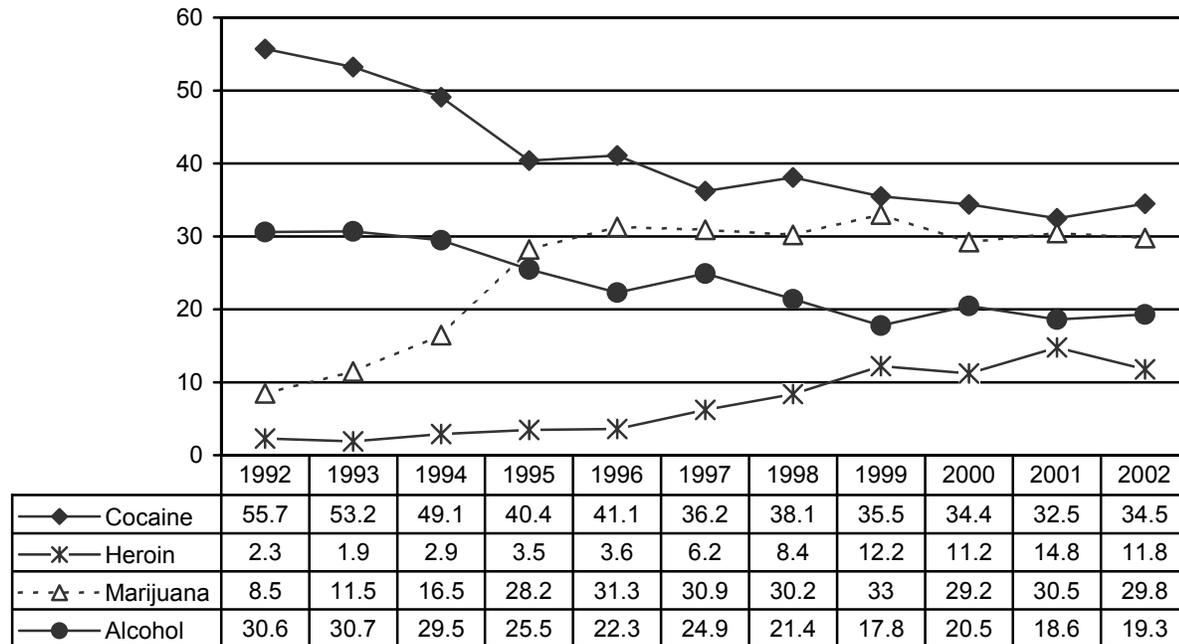
Exhibit 1. Number of ED Mentions of Selected Drugs and Rates Per 100,000 Population in New Orleans: January 2001–June 2002

Drug	Mentions			Rate		
	1H-01	2H-01	1H-02	1H-01	2H-01	1H-02
Cocaine	689	734	661	60	63	57
Heroin	262	268	270	23	23	23
Marijuana	424	391	406	37	34	35
Methamphetamine	6	... ³	29 ¹	1	...	2 ¹
Amphetamines	...	66	53	...	6	5
Narcotic Analgesics/ Combinations	435	422	449	38	36	39
MDMA	17	17	34 ^{1,2}	1	1	3 ^{1,2}
Benzodiazepines	352	420	383	31	36	33

¹ The percent change between the first half of 2001 and first half of 2002 was statistically significant.
² The percent change between the last half of 2001 and first half of 2002 was statistically significant.
³ Dots (...) indicate that an estimate with a relative standard error greater than 50 percent has been suppressed.

SOURCE: DAWN, OAS, SAMHSA

Exhibit 2. Percentages of Admissions in Orleans Parish by Drug and Year: 1992–2002



SOURCE: Louisiana State Office of Alcohol and Drug Abuse

Exhibit 3. Treatment Admissions for Selected Drugs in Seven Parishes Outside Orleans Parish by Percent: 2002

Drug	Bossier	Caddo	Calcasieu	East Baton Rouge	Lafayette	Ouachita	Rapides
Cocaine	30.6	42.3	21.8	40.1	32.9	25.9	23.6
Heroin	1.0	0.3	0.4	1.1	0.5	0.3	0.9
Marijuana	15.1	13.1	21.8	13.7	13.1	27.3	23.5
Alcohol	40.8	32.3	39.0	40.0	40.3	35.7	34.6
Other Drugs	12.5	11.9	17.0	6.0	13.2	10.8	17.4
Total (N=) ¹	628	1,780	1,126	4,723	1,023	1,114	1,328

¹ Excludes a few admissions for whom a primary drug was not reported.

SOURCE: Louisiana State Office of Alcohol and Drug Abuse

Exhibit 4. Number of DAWN Medical Examiner Death Mentions in New Orleans: 1997–2001

Drug Category	Year					Single-Drug Deaths, 2001
	1997	1998	1999	2000	2001	
Alcohol-in-Combination	54	63	86	73	78	–
Cocaine	66	75	82	111	90	19
Heroin/Morphine	20	29	38	48	37	2
Marijuana	28	49	58	55	39	2
Amphetamines	5	7	7	4	3	–
Club Drugs ¹	–	1	4	3	7	–
Narcotic Analgesics ²	59	69	124	118	200	5
Other Analgesics	30	13	13	9	19	–
Benzodiazepines	34	55	67	78	73	–
Antidepressants	9	6	26	11	17	1
All Other Substances ²	90	43	73	39	101	3
Total Drug Deaths	162	175	208	223	212	32
Total Drug Mentions	395	410	578	549	664	–
Total Deaths Certified	5,005	5,149	5,070	5,139	5,045	–

¹ Includes ecstasy (MDMA), ketamine, GHB, GBL, and Rohypnol.

² Not tabulated above.

SOURCE: DAWN, OAS, SAMHSA

Exhibit 5. Percentage of ADAM Adult Arrestees Testing Positive for Selected Drugs in New Orleans: 2000–2002¹

Gender/Year	Cocaine	Opiates	Marijuana
Males			
2000	34.8	15.5	46.6
2001	37.3	15.6	44.9
2002	42.4	17.4	46.9
Females			
2000	41.1	8.5	28.0
2001	38.1	7.6	25.1
2002	42.2	9.2	26.0

¹ Data for 2002 are preliminary.

SOURCE: ADAM, NIJ

Exhibit 6. Drug Arrests in Orleans Parish by Race/Ethnicity, Gender, and Offense: 2001–2002

Drug/Offense	Males						Females						Total	
	Black		White		Other		Black		White		Other			
	2001	2002	2001	2002	2001	2002	2001	2002	2001	2002	2001	2002	2001	2002
Cocaine														
Possession	1,576	2,430	202	430	0	10	335	646	63	129	0	4	2,176	3,649
Distribution	824	1,223	31	46	3	6	154	148	18	10	1	1	1,031	1,434
Heroin														
Possession	215	204	33	53	0	1	13	18	13	25	0	0	274	301
Distribution	402	177	17	3	4	0	98	13	22	3	1	0	544	196
Marijuana														
Possession	3,869	4,345	1,085	1,018	18	16	333	384	192	196	3	0	5,500	5,959
Distribution	736	808	275	51	5	2	62	107	219	13	2	0	1,299	981
Other Drugs	172	299	78	81	1	2	31	40	92	117	0	0	374	539
Drug Paraphernalia	1,053	1,340	540	636	7	11	314	447	134	204	2	2	2,050	2,640

SOURCE: NOPD

Drug Use Trends in New York City

Rozanne Marel, Ph.D., John Galea, M.A., Robinson B. Smith, M.A.¹

ABSTRACT

Drug use trends were again mixed for this reporting period. Cocaine indicators in New York City, which had declined at the end of the last decade, continued to show some signs of increasing. While ED mentions remained stable, treatment admissions increased, and the Street Studies Unit reported signs of cocaine use rebounding. Heroin trends appear to have stabilized in both ED mentions and treatment admissions. Heroin remains available at very high purity levels. Even marijuana indicators, which had been reaching new peaks, seem to have stabilized, with only slight increases in treatment admissions. Prescription drugs continue to be available on the street, and ecstasy is widely available throughout New York City. For AIDS cases in New York City, injection drug use remains the modal risk factor.

INTRODUCTION

Area Description

New York City, with 8 million people, is by far the largest city in the United States. It is situated in the southeastern corner of the State on the Atlantic coast and encompasses an area of 320 square miles. It has nearly 600 miles of waterfront and one of the world's largest harbors.

Historically, New York City has been home to a large multiracial, multiethnic population. Findings from the 2000 census show that the population diversity continues: 45 percent are White; 27 percent are Black; 27 percent are Hispanic of any race; 10 percent are Asian and Pacific Islander; and less than 1 percent are Native American, Eskimo, and Aleut. Nearly 2 million New York City residents are foreign born, and nearly 700,000 legal immigrants became New York City residents between 1990 and 1998. The Dominican Republic is currently the city's largest source of immigrants.

The city remains the economic hub of the Northeast. Its main industries include services and wholesale and retail trade. Of the more than 3.5 million people

employed in the city, 20 percent commute from surrounding areas. Overall, the unemployment rate in New York City for April 2003 was 8.1 percent, compared with 6.1 percent in New York State and 6.0 percent in the Nation. According to the Bureau of Labor Statistics, these rates are very similar to the unemployment rate for April 2001. New York City is still experiencing the economic aftereffects of the September 11, 2001, attacks on the World Trade Center.

Data Sources

This report describes current drug abuse trends in New York City from 1994 to 2002, using the data sources summarized below.

- **Emergency department (ED) drug mentions data** were derived from the Drug Abuse Warning Network (DAWN), Office of Applied Studies (OAS), Substance Abuse and Mental Health Services Administrative (SAMHSA), for 1994 through the first half of 2002. The weighted data are based on a representative sample of hospitals in New York City and Westchester, Rockland, and Putnam Counties. The 2002 data are preliminary.
- **Drug abuse-related death data** are from the DAWN mortality system. Data from 1994 through 1995 covered New York City, Long Island, and Putnam County, and included heroin/morphine and unspecified types of opiates. Beginning in 1996, DAWN covered only New York City, and the category for heroin/morphine no longer included other opiates. According to *Mortality Data From the Drug Abuse Warning Network*, 2001, incomplete data were received for the New York metropolitan area, so data for New York were not presented for 2001.
- **Treatment admissions data** were provided by the New York State Office of Alcoholism and Substance Abuse Services (OASAS) for 1994–2002 and included both State-funded and non-funded admissions. Demographic data are for 2002.

¹ The authors are affiliated with the New York State Office of Alcoholism and Substance Abuse Services, New York, New York.

- **Arrestee drug testing data** were provided by the Arrestee Drug Abuse Monitoring (ADAM) program, National Institute of Justice (NIJ), for 2002. Adult males were sampled representatively and data are weighted. Female data are unweighted.
- **Drug-related arrest data** were provided by the New York City Police Department (NYPD) for 1994 to 2001.
- **Drug price, purity, and trafficking data** were provided by the Drug Enforcement Administration (DEA) and the DEA's Domestic Monitor Program (DMP) for heroin. These data are supplemented by information from the OASAS Street Studies Unit (SSU) reports. Data on methamphetamine laboratories were provided by the New York State Police.
- **Cocaine use during pregnancy data** were provided by the New York City Department of Health for 1994–2001.
- **Acquired immunodeficiency syndrome (AIDS) data** were provided by the New York City Department of Health.

DRUG ABUSE PATTERNS AND TRENDS

Cocaine/Crack

In general, cocaine indicators, which had been declining, are beginning to show increases, and the drug still accounts for major problems in New York City (exhibit 1).

For the New York City metropolitan area, DAWN estimates for ED mentions remained relatively stable between 1994 and 1998 (from 20,145 to 19,549), but declined significantly from 1994 to 2001 to 13,898, a decrease of 31 percent. The preliminary estimate for the first half of 2002 (6,334) shows stabilization in the number of mentions. The preliminary rate of cocaine ED mentions per 100,000 population in the New York City metropolitan area for the first half of 2002 was 75. The annual rates of cocaine ED mentions decreased 34 percent between 1994 and 2001. The comparable national rate for the first half of 2002 was 36; this rate has been relatively stable.

While primary cocaine treatment admissions to State-funded and nonfunded programs in New York City declined from 17,572 in 1998 to 14,375 in 2001, they increased to 15,608 in 2002. In 2002, cocaine admissions constituted 23 percent of all New York

City's 68,869 drug and alcohol treatment admissions (excluding alcohol-only).

Exhibit 2 shows demographic characteristics of cocaine treatment admissions for 2002 by the two primary modes of use: smoking crack (representing 62 percent of cocaine admissions) and using cocaine intranasally (representing 34 percent). Those who smoke crack are more likely to be female (38 vs. 24 percent), Black (66 vs. 43 percent), readmissions to treatment (77 vs. 69 percent), and without income (40 vs. 28 percent). The two groups are similar in secondary drugs of abuse, primarily alcohol and marijuana. All admissions for primary cocaine abuse represent an aging population. The recent increase in Hispanics among treatment admissions who use cocaine intranasally stabilized to 37 percent in 2002.

ADAM urinalysis data for 2002 show drug positives remaining the highest for cocaine. Findings show cocaine positives for 49 percent of males and 39 percent of females.

The SSU finds cocaine hydrochloride (HCl) quality to be relatively stable, and buying and use continue to rebound. While powder cocaine has typically been sold from indoor locations, observers report that there has been a steady increase in the number of street peddlers offering powder cocaine. Cocaine is sold in \$10, \$20, \$30, and \$60 amounts. The most common price is the \$20 packet, which contains about 0.25 ounces.

There is a great variety of packaging methods used in the marketing of cocaine in New York City, including aluminum foil, light plastic wrap knotted at both ends, cellophane, vials, nail-sized plastic bags, folded paper, magazine pages, and balloons. Of these, the traditional method of aluminum foil continues to be the most frequently used, followed by plastic wrap and cellophane.

The use of brand names is becoming less common, since they attract attention from law enforcement and are too easy to duplicate by competitors. Currently, brand names tend to be the color of the package, e.g. "blue bag," "Perico," a Spanish slang term for cocaine, "powder," and "fishscale" are also common slang terms. "Fishscale" is reported to be purer than "regular" cocaine, and an SSU member was told that while you can cut "regular" or flake cocaine two to three times, you can cut "fishscale" three to five times.

Dominican drug gangs dominate the distribution of cocaine in New York City. Most cocaine sellers are part of an extended organization that involves some

form of command structure and a centralized control over multiple selling sites. These gangs are usually composed of family, blood relatives, and friendship ties. On the street level, sellers frequently match the predominant racial composition of the surrounding community.

The selling of cocaine involves three basic methods, with the techno-method or virtual connection method continuing to gain in popularity. A buyer makes a connection with a seller through the use of a beeper, cell phone, or the Internet; an order is made; and a meeting or delivery is scheduled. The most common location for selling cocaine is an apartment, and cocaine sellers typically work out of their own apartment or one belonging to a relative. Another common method is street selling done in connection with an apartment operation. Street sellers work outside to reduce the amount of buyer traffic in and out of an apartment. Buyers who want a \$10 or \$20 amount of cocaine obtain the product from the street vendor, while individuals interested in buying larger quantities are directed upstairs. Like most other street sellers, those who sell cocaine usually sell only one type of drug offered in one standard package size. Virtual sellers and dealers working out of apartments are able to sell other drugs. Field researchers report that some cocaine sellers are also offering club drugs. With the closing of many “Go-Go Bars,” cocaine sales in regular bars have increased. A number of dealers have moved into bars and regular restaurants with bars.

The majority of powder cocaine users are Hispanic and Black, but there is a sizable number of White users, including an influx of young white-collar professionals, who use cocaine recreationally. According to observations by field staff, buyers appear to be almost evenly split in terms of gender. Field staff also report large clusters of young buyers in the 18–25-year-old range, suggesting a new generation of users. In fact, the SSU reports seeing an increase in the number of teenagers between the ages of 16 and 18 using cocaine. According to street interviews, most cocaine HCl users report that they only “snort” the drug. However, an increasing number report that they know people who have started to inject cocaine. In one section of New York City, an SSU member was told that when teenagers cannot get cocaine, they snort “salt.” Their rationale is that they experience the initial feeling of getting something in their nostrils. No adverse effects were reported. Another method of use includes smoking cocaine with marijuana in a blunt cigar called a “Woolie.” The SSU also found that because of the high purity levels of cocaine, some crack users are purchasing cocaine HCl in order to cook their own crack. The SSU also reports that many heroin users

who buy cocaine are doing so to “speedball.” Heroin users who speedball will either snort the combination of cocaine and heroin or inject it.

Crack users report that crack continues to be highly available, despite a reduction in “open-air” markets and less aggressive selling because of concerns over security. The reduction in open-air markets is attributed to police department efforts aimed at suppressing street drug selling. Researchers found that there has been an increase in the number of crack “beat” (fake) sales. Loose rocks that look like crack and sell for \$5 are usually a beat. Several dealers are heating crack with sheet rock to stretch the amount and make more money. Crack is associated with three basic prices: \$5, \$10, and \$20. Although field researchers were unable to find any locations offering crack in \$3 bags, they did find a dealer offering two \$3 vials taped together selling for \$5. The most common price continues to be the \$10 per 0.1 gram amount. To encourage sales, some dealers are selling \$10 rocks (bags) for \$8. An SSU member was told by a dealer that \$10 bags sell faster in the daytime, while \$5 bags are dominant at night.

There are three basic packaging methods for crack: thumbnail-sized plastic bags, plastic vials, and glassine bags. Of these, the thumbnail-sized bag seems to be the most popular, followed by the plastic vial. As with powder cocaine, brand names are usually the color of the package. Old slang terms such as “rock” and in Spanish “Roca” continue to be used; “slab” is also a popular name for crack.

Street crack sellers are typically Black or Hispanic males, and Dominican drug gangs dominate the middle-level dealing operation that supplies street sellers. Crack sellers are typically older than other street sellers; most are age 26–35. Most crack sellers operate within a partnership or small localized crew (two to five people), and they tend to obtain their supply of crack “up-front” (on credit) with no money down. Many of the heavy crack selling locations around the city are found in or around public housing developments, followed by apartments, which are not homes, but specifically established selling locations to be abandoned, if necessary. Although there are still open-air street locations, fewer crack sellers are operating from the street because of law enforcement efforts. Street crack sellers tend to not sell other drugs, although they may sell marijuana, which many users smoke to reduce the “crash-effect” of prolonged use of crack. The majority of crack users are Black and Hispanic males. Crack users appear to be getting older. Field researchers report very few young users, and most buyers appear to be veteran users.

The DEA reports that prices for cocaine powder are \$22,000–\$30,000 per kilogram and \$900–\$950 per ounce. To minimize conspicuous traffic, transactions are few but prices are high. The DEA reports that crack sells for about \$1,000–\$1,500 per ounce and \$27–\$45 per gram.

DAWN figures for cocaine-involved deaths, which declined steadily from 1995 to 1999, showed a 26-percent increase in 2000 (to 492 from 394 in 1999) (exhibit 1). For the cocaine drug deaths in 2000, 40 percent involved one drug, 36 percent involved two drugs, 16 percent involved three drugs, and 8 percent involved four or more drugs. No complete DAWN mortality data were available for 2001.

The NYPD reports a decline in cocaine arrests since 1995 ($n=40,846$). The number of cocaine arrests in 2001 was 23,498, a 42-percent decrease since 1995. Of the cocaine arrests in 2001, 83 percent involved crack.

Another important indirect indicator of cocaine involvement is the number of births in New York City to women who admit using cocaine during pregnancy. This not only indicates use among women, but it underscores a serious aspect of the cocaine problem. For several years, the number of women using cocaine during pregnancy increased. In 1989, the number of births to women who used cocaine peaked at 3,168. After 1989, the number steadily declined to 438 in 2001—an 86-percent decline over 12 years (exhibit 1).

Heroin

Heroin trends, which had appeared to stabilize, are mixed for this CEWG reporting period (exhibit 3). Heroin ED mentions in the New York metropolitan area peaked in the mid-1990s, totaling 11,132 in 1996. While the number of heroin ED mentions went from 11,129 to 9,302 between 1994 and 1999, the estimate for 2000 was 11,009 mentions. These changes were not statistically significant. The preliminary estimate for the first half of 2002 is 4,635. The New York metropolitan area recorded a rate of 55 heroin mentions per 100,000 population for the first half of 2002. The estimated national rate was 17 heroin mentions per 100,000 population.

Primary heroin admissions to all treatment programs in New York City have been gradually increasing. Between 1994 and 2002, admissions increased from 18,187 to 22,514, a 24-percent increase (exhibit 3). In 2002, primary heroin admissions constituted 33 percent of New York City's 68,869 drug and alcohol treatment admissions (excluding alcohol-only).

Intranasal heroin use may have peaked in the second half of 1998, with 62 percent of heroin admissions to all New York City drug treatment programs reporting this as their primary route of administration. Since then, the proportions reporting intranasal use declined slightly, to 60 percent in 1999 to 2002. Meanwhile, heroin injection increased among heroin admissions, from 32 percent in the second half of 1998 to 37 percent in 2002.

Exhibit 4 highlights general demographic characteristics of heroin abusers admitted to all New York City treatment programs in 2002 by mode of use. In general, primary heroin admissions are overwhelmingly male (74 percent), older than 35 (67 percent), more likely to be Hispanic (54 percent) than Black (25 percent) or White (19 percent), usually readmissions to treatment (87 percent), and likely to report cocaine as a secondary drug of abuse (36 percent). Compared with heroin injectors, intranasal users are more likely to be Hispanic (57 vs. 49 percent) and first admissions to treatment (15 vs. 9 percent). In contrast, primary heroin injectors are more likely than intranasal users to be White (32 vs. 11 percent), to report cocaine as a secondary drug of abuse (43 vs. 32 percent), and to have started use before reaching age 20 (57 vs. 41 percent).

In addition to heroin admissions to traditional treatment programs, heroin admissions for detoxification or crisis services in New York City have become sizable in number. These special services are usually short-term, provided in a hospital or community-based setting, and medically supervised. In 1995, 4,503 such admissions were reported for heroin abuse; by 2002 that figure increased to 16,060.

DAWN medical examiner (ME) figures for heroin-involved deaths in the New York City metropolitan area present an inconsistent picture over the past few years, with both increases and decreases. In 2000, there were 193 heroin-involved deaths (exhibit 3). No complete DAWN mortality data were available for 2001.

ADAM urinalysis data show fewer adult arrestees testing positive for opiates than for cocaine or marijuana. In 2002, 14 percent of females tested opiate positive, as did 15 percent of males.

From 1992 to 2000, the DMP found average heroin purities to be generally above 60 percent. Findings for 2001 show an average purity of 55.96 percent, down from 62.9 percent in 2000. The associated price is \$0.94, an increase from \$0.42 per milligram pure in

2000. Kilogram prices are \$65,000–\$80,000 for South American heroin, \$65,000–\$140,000 for Southwest Asian heroin, and \$40,000–\$80,000 for Southeast Asian heroin.

According to the SSU field staff, heroin in New York City continues to be easy to obtain in all five boroughs of New York City. Crack, however, is still considered more readily available, with the number of crack street sellers and buyers continuing to exceed the number of heroin sellers and buyers. Heroin sellers tend to be less aggressive and overt. Field staff report an increasing number of heroin sellers working from street locations. Researchers also report seeing increased “nodding” behavior in public. The areas in which heroin is most readily available are primarily low-income, Hispanic and Black communities with extensive public housing developments.

Reportedly, the heroin trade is dominated by Colombians working through a distribution network controlled by Dominican gangs. Heroin distribution in New York City functions according to a three-tier system. The first tier is occupied by Colombians, the second tier by Dominican drug gangs, and the third tier by street sellers. Most heroin sellers operate from indoor locations, affording them better security and cover. The apartment is usually a location for dealing heroin, and not the seller’s living quarters. The trend of selling heroin from the street or semi-public locations, such as hallways, restaurants and cars, continues. The street sellers tend to be independent sellers working by themselves, or with a partner or small crew (two to five individuals). Although heroin is most often sold from indoor locations, other common locations are public housing developments, playgrounds, parks, restaurants, and near drug treatment centers. While heroin sellers do tend not to sell other drugs, the most common other drug they would sell would be cocaine, since some heroin users like to speedball.

While the majority of heroin users are Black and Hispanic males between 35 and 50 years old, there continue to be young new buyers observed. The SSU reports that young Russian youth in their early teens to twenties are injecting heroin. This has been seen both in the Bronx and Brooklyn. The majority of buyers report that they are sniffers and only snort, although field researchers continue to report individuals offering needles for sale at or near heroin selling locations. The price of a hypodermic needle in the street is \$2. In addition, needle exchange programs and other harm reduction efforts continue to distribute large numbers of needles.

There is no indication that Mexican or Asian heroin is available or being sold in the city. The most common form of heroin in the city appears to be a white or light beige powder. The purity is reported to be of good snortable quality. Recently, the SSU heard that heroin is being cut with medications, such as Darvon and Benadryl. One addict commented, “When I purchase heroin, I make sure it’s light in color because when it’s dark, that means that a lot of chemicals have been added.”

Heroin has far less price variation than some of the other street drugs. The predominant price is \$10 per packet, and each packet contains approximately 0.10 gram of powder. With high purity levels and availability, the SSU has reported seeing \$5 bags in many locations across the city. Although the \$5 bags in most instances contain less than the \$10 bags, they are seen as a promotion of a new “brand” or a way to increase sales. Another incentive the dealers are using is giving an extra bag when a “bundle” (10 bags) is purchased.

Of the five principal packaging methods—glassine bags, cellophane, light plastic wrap knotted at both ends, folded paper, and balloons—the glassine bag continues to be the most popular, followed by cellophane and plastic wrap. In an effort to detract law enforcement or introduce a new brand of heroin, dealers may change the color of the package or sell clear bags. Although the use of brand names is becoming less common, the following new brands were recently found by the SSU: “Murder One,” “Witch Master,” “Exxon,” “One in a Million,” “Never Die,” “Maduca,” “Fat Boy,” “Ninja Turtle,” and “Matrix.”

Much like cocaine arrests, heroin arrests reached a high of 28,083 in 1989, declined for a few years, and then peaked in 1995 ($n=38,131$) (exhibit 1). Heroin arrests increased slightly between 1999 and 2000 (from 32,949 to 33,665) but declined again in 2001 to 27,863, a decline of 27 percent since 1995.

Marijuana

In New York City, marijuana indicators, which had been increasing steadily and dramatically, appear to have stabilized (exhibit 5). The total number of marijuana ED mentions—estimated from the current sample of hospitals—went from 2,578 in 1994 to 3,501 in 2001. This change was not significant. The preliminary estimate for the first half of 2002 (1,624) suggests stability in the number of mentions. The rate

of marijuana ED mentions for the first half of 2002 for the New York City metropolitan area was 19 per 100,000 population, suggesting stability in the rates since 1994. The comparable national estimate was 22 per 100,000 population for the first half of 2002.

Primary marijuana admissions to all treatment programs have been increasing steadily over the past several years. The number increased between 1994 and 2002, from 3,824 to 14,310, the highest annual number (exhibit 1). In 1991, primary marijuana admissions represented less than 5 percent of all treatment admissions; by 2002, these admissions represented 21 percent of admissions (excluding alcohol only) to all New York City treatment programs.

Exhibit 6 shows demographic characteristics of primary marijuana admissions to all New York City treatment programs in 2002. The vast majority were male (81 percent); 36 percent were younger than 21. More than one-half (53 percent) were Black, 34 percent were Hispanic, and 10 percent were White. Alcohol was the secondary drug of abuse for 43 percent of the marijuana admissions, and most had some criminal justice status (71 percent).

According to the SSU, marijuana remains the most widely available illicit drug in New York City. It continues to be of very good quality and potency and is still the most widely used drug among teenagers. It continues to come in different colors and flavors. One of the most popular is “blueberry,” which has a purple blue tint and is treated to taste like blueberries. It is available throughout New York City and costs \$20 per bag, while regular marijuana starts at \$10. Most of the treated marijuana prices start at \$20. An SSU member was told by marijuana users that the chemicals used to tint and flavor may weaken the strength of the marijuana. Other flavors include chocolate, orange, red hair, purple haze, haze, and greens. Greens are considered the weakest strength and sell for \$5 per bag. Black is a Jamaican weed that sells for \$20 per bag. Thumb-nail-sized plastic bags, followed by glassine bags, continue to be the most popular packaging methods. Some of the brand names reported by the SSU are “Purple Haze,” “Purple,” “Blueberry,” “Pineapple Haze,” “Arizona,” “Chocolate,” “Mango Pina,” “Black,” “Greens,” “Orange,” “Red Hair,” “Canna,” “Red Rooster,” “Vanilla,” “Chronic,” “Crystal,” and “Champagne.”

The majority of marijuana sellers are adolescents and young adults who tend to reflect the ethnic makeup of their community. As mentioned earlier, the technomethod, in which a connection is made through

beeper, cell-phone, or the Internet, has gained in popularity. Marijuana sellers usually work out of their own apartments, helping to supplement their income and habit. Street selling, which is still quite common in certain communities, presents the highest risk.

While the use of marijuana cuts across all social groups, the drug seems to be most popular among adolescents and young adults. Although the majority of observed buyers were male, there were a substantial number of female buyers. Traditionally, marijuana was smoked in a joint, but this method is less common now, and many stores no longer carry rolling paper. The most popular method now involves the use of blunts, hollowed out cigars, or marijuana wrapped in cigar leaves. Very often the leaves are dipped in brandy or some other aromatic liquor, and a number of companies are marketing individually rolled cigar leaves (\$1 each), which come in various flavors including brandy, honey, cognac, vanilla, and others. One brand has added a chocolate flavored cigar, replacing the need to role a flavored leaf. One teenager told the field researcher that he felt this made the marijuana appear stronger.

Adult arrestees in the ADAM samples for 2002 were much more likely to test positive for marijuana than for opiates. Approximately 44 percent of male arrestees tested positive for marijuana, as did 31 percent of the females. For males, the number of marijuana-positives approached that for cocaine-positives.

According to the DEA, marijuana prices can range from \$200 to \$2,000 per pound wholesale and from \$1,000 to \$5,000 per pound for hydroponic marijuana.

In spite of decriminalizing possession of small amounts of marijuana, the NYPD continues to make a record number of marijuana-related arrests in New York City (exhibit 5). Cannabis-involved arrests had reached a low of 4,762 in 1991, but they increased more than 12 times in the next 9 years to 60,455 in 2000. Data for 2001 show arrests at a lower level than in 2000, but they are still the second largest yearly total (at 47,651). Approximately 98 percent of these arrests were for misdemeanors, and 33 percent of the cannabis arrests involved persons age 20 or younger. Moreover, cannabis arrests accounted for 46 percent of all drug arrests in New York City in 2001, a dramatic change from earlier years.

Stimulants

Although methamphetamine is popular in other parts of the Nation, there were relatively few arrests, ED

mentions, deaths, and treatment admissions related to the drug in New York City. For example, in 2000, only three methamphetamine deaths were reported in the five boroughs of New York City. Methamphetamine, and perhaps ketamine as well, appear to be especially on the rise among young males in the gay community. Methamphetamine is available in powder, pill, or liquid form, with pill form being the most popular. There has been a slight increase in the availability and use of methamphetamine, especially in the Bronx, where researchers were able to find “crystal meth” being sold. Researchers reported seeing more car sales than street sales, with cars bearing New York, New Jersey, and Connecticut license plates. Sellers tended to be male Hispanics in their twenties. Buyers were predominantly male, although many females in their early twenties were also observed. “Crystal meth” costs \$20 for a thumbnail-sized bag. One user told the field researcher that he “crumbles it and smokes it either in aluminum foil or a homemade smoker.” He reported feeling energized after a few puffs, and said it was like cocaine only it lasted longer. Methamphetamine is referred to as “chalk” in the Bronx and as “glass” in New Jersey. While “crystal meth” found in the Bronx is smoked, methamphetamine found in gay clubs throughout New York City is injectable.

Although the focus of this report is New York City, it should be noted that the New York State Police have found an increasing number of methamphetamine labs in areas of the State outside of New York City. For example, in 1999 the State Police reported 2 clandestine lab incidents in the State, while there were 9 in 2000, 18 in 2001, 46 in 2002, and 10 in the first 6 weeks of 2003.

Depressants

While some indicators of the nonmedical use of psychoactive prescription drugs (e.g., hospital emergencies, deaths, and treatment admissions) have not been increasing, the SSU continues to report a variety of drugs readily available on the street for \$1 or more per pill.

Alprazolam (Xanax) and clonazepam (Klonopin) ED mentions have been increasing since the mid-1990s, while diazepam (Valium) mentions have been declining. Alprazolam mentions increased 118 percent, from 323 in 1994 to 704 in 2001, and clonazepam mentions increased 167 percent from 123 in 1994 to 328 in 2001. On the other hand, diazepam mentions decreased 39 percent during the same period, from 459 in 1994 to 280 in 2001. The preliminary estimates for the first half of 2002 showed 255 alprazolam mentions, 161 clonazepam mentions, and 88 diazepam mentions,

the latter being a significant decrease of 42 percent between the first half of 2001 and the first half of 2002. There continue to be few (about 1 percent) treatment admissions with a psychoactive prescription drug as a primary drug of abuse. Although the numbers are small, hydrocodone and oxycodone combinations have shown increases. According to DAWN data, hydrocodone combinations increased from 42 in 1994 to 98 in 2001, an increase of 133 percent. Moreover, the change between 2000 and 2001 from 62 to 98 was a significant increase of 58 percent. The number of mentions for hydrocodone combinations for the first half of 2002 was 31. Oxycodone/combinations mentions also showed an increase, from 56 mentions in 2000 to 88 in 2001, an increase of 57 percent. Oxycodone mentions increased from 3 in 1999 to 38 in 2001, an increase of more than 1,000 percent. The number of oxycodone mentions for the first half of 2002 was 22. An SSU researcher was told that OxyContin is available if you “know somebody.” It sells for \$5 per pill, but it is very difficult to get individual pills. Instead, most dealers prefer to sell the whole bottle at once.

Among ME deaths reported by DAWN, the category of narcotic analgesics, which includes all legal and illegal narcotic analgesics and combinations (excluding heroin/morphine), showed a large increase in New York City from 252 in 1998 and 271 in 1999 to 590 in 2000. It should be noted, however, that in 1996 there were 511 such deaths. No complete DAWN mortality data were available for New York City for 2001.

According to the SSU, the three most popular pills on the street are amitriptyline (Elavil or “sticks”); alprazolam (Xanax or “footballs”), selling for \$5 per pill; clonidine (Catapres), selling for \$1 per pill; hydrocodone (Vicodin); and the antidepressant amitriptyline (Elavil or “sticks”), selling for \$1 per pill. Many pill sellers obtain their inventory by getting prescriptions from unscrupulous doctors. Most street pill users are either Black or Hispanic in the 35–45-year-old range, and many have a history of heroin abuse. Although most pill buyers are male, a substantial number are women who buy and use these products. Pill sellers are primarily Black or Hispanic and between the ages of 35 and 40. Although most pill sellers are male, about one-third of the pill sellers observed by field researchers were female. According to field researchers, one major difference between pill sellers and other drug sellers is that they do not really see themselves as drug dealers. Their view is that pill selling is simply another “hustle,” one of many used to generate easy money.

Hallucinogens

According to the SSU, phencyclidine (PCP) is readily available in certain areas of the city, particularly in Harlem. The number of PCP ED mentions declined significantly from 852 in 1994 to 203 in 2001, a decrease of 76 percent. The preliminary estimate for the first half of 2002 was 173 PCP mentions. Lysergic acid diethylamide (LSD) mentions also declined significantly, from 150 mentions in 1994 to 62 in 2001, a decrease of 59 percent. The preliminary estimate of 10 LSD mentions for the first half of 2002 shows a significant decrease of 67 percent between the second half of 2001 and the first half of 2002. In the past few years, PCP-involved deaths have averaged about 6 per year, except for 1995, when 16 such deaths were reported by DAWN. Between 1998 and 1999, PCP-involved deaths increased from 2 to 11.

According to observations by the SSU, PCP use is increasing across the city especially in upper Manhattan. It is packaged like marijuana and sells for \$10. Blunts laced with PCP cost \$10–\$20 in some parts of the city. Buyers and sellers are mainly Blacks and Hispanics. Users tend to be in their late teens and twenties. PCP comes in powder or liquid form, although the liquid form appears to be more popular. A PCP user reported that he and his friends used to smoke crack and marijuana, but are switching to PCP. Another user told a researcher that after using PCP, he usually stays high for 8–14 hours.

Club Drugs

The SSU continues to report the availability of methylenedioxymethamphetamine (MDMA), a stimulant with hallucinogenic properties, in many areas of the city. MDMA is often called “ecstasy” or “XTC,” although other substances are often sold as ecstasy. MDMA ED mentions increased significantly from 7 in 1994 to 200 in 2000 and 172 in 2001, an increase of 2,357 percent between 1994 and 2001. The preliminary estimate of 60 mentions for the first half of 2002 suggests a stabilization in the mentions.

The price for a single pill of ecstasy ranges from \$5 to \$30, with the higher prices for pills purchased inside a club or rave. The most common sales unit for ecstasy is the single pill or tablet. Although MDMA sellers are usually White, young, males, of middle or upper class background, this profile is beginning to expand across racial, ethnic, and social class boundaries. MDMA is popular among both males and females. Many of the users are older high school students, college students, or young working professionals. These drugs are particularly popular among suburban White youth who regularly venture into the city for entertainment and

fun. There are, however, indications that ecstasy is making greater inroads among non-White users. There are reports that some Hispanic groups are becoming involved in the distribution of ecstasy, which may suggest that more Hispanic and inner city residents are beginning to use this drug. Club drug users typically ingest multiple substances, such as alcohol, marijuana, cocaine, or other club drugs. In some parts of New York City, field researchers report that ecstasy is almost as popular as marijuana among teenagers.

Available as a club drug in New York City, the veterinary anesthetic ketamine produces effects similar to PCP and visual effects similar to LSD. On the street, the drug is called “Special K” and sells for approximately \$20 per dosage unit. It may be administered intranasally or injected. While ketamine is not currently a controlled substance under Federal law, it is listed as a controlled substance in New York State. The number of ED mentions has remained relatively stable for the last few years, numbering 24 in 2002. The SSU has heard reports that ketamine use appears to be on the rise among young gay males.

Another club drug of concern is gamma hydroxybutyrate (GHB). GHB ED mentions in New York City remained very low, totaling 16 in 1999, 31 in 2000, and 15 in 2001.

INFECTIOUS DISEASES RELATED TO DRUG ABUSE

The AIDS epidemic, with its impact on injection drug users (IDUs), has played a crucial role in shaping the New York City drug scene over the last 2 decades.

The cumulative total of 134,555 adult and pediatric AIDS cases reported in New York City through December 2002 represents a rate of more than 1,600 cases per 100,000 New Yorkers. Of New York City’s cumulative 132,537 adult AIDS cases, 55,945 (42 percent) involved heterosexual IDUs. Homosexual males accounted for 40,221 cases (30 percent).

Among heterosexual IDUs who have contracted AIDS in New York City, 74 percent are male and 26 percent are female. About 44 percent of these individuals are age 30–39. Blacks continue to be the modal group, accounting for 47 percent, followed by Hispanics (38 percent) and Whites (14 percent). Among female IDUs alone, Black women remain the majority (53 percent), followed by Hispanic women (34 percent) and White women (13 percent). Female IDUs are also younger than their male counterparts: 64 percent are age 39 or younger, compared with 51 percent of the males.

Of the 2,018 pediatric AIDS cases (children age 12 or younger at time of diagnosis), 47 percent had mothers

who injected drugs. An additional 16 percent had mothers who were sex partners of IDUs. Thus, at least 63 percent of the children with AIDS have parents who are in some way involved with injection drug use.

Overall, reports show that 81,245 New Yorkers have died of AIDS, representing 60 percent of all those who have contracted the disease.

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Exhibit 1. Semiannual Cocaine Trends for Selected Indicator Data in New York City by Number: 1994–2002

Year	Semiannual/ Annual Periods	Deaths Involving Cocaine ¹	Cocaine ED Mentions ²	Treatment Admissions: Cocaine as Primary Drug of Abuse ³	Cocaine Arrests ⁴	Births to Women Using Cocaine ⁵
1994	1H		10,084	7,794		
	2H		10,130	7,613		
	Total	755	20,145*	15,407	38,200	1,288
1995	1H		9,915	8,371		
	2H		9,808	7,836		
	Total	908	19,723	16,207	40,846	1,059
1996	1H		11,070	8,561		
	2H		10,522	8,817		
	Total	659	21,592	17,378	38,813	1,005
1997	1H		10,233	9,048		
	2H		9,969	8,401		
	Total	501	20,202	17,449	35,431	864
1998	1H		9,989	8,999		
	2H		9,560	8,573		
	Total	438	19,549	17,572	35,577	742
1999	1H		7,386	8,346		
	2H		7,413	7,567		
	Total	394	14,799	15,913	31,781	626
2000	1H		6,883	7,337		
	2H		7,367	6,722		
	Total	492	14,250	14,059	31,919	490
2001	1H		7,449	7,343		
	2H		6,450	7,032		
	Total		13,898	14,375	23,498	438
2002	1H		6,334	7,736		
	2H			7,872		
	Total			15,608		

SOURCES: ¹DAWN, OAS, SAMHSA, including New York City, Long Island, and Putnam County through 1995. Starting with 1996, the data include New York City only.

²DAWN, OAS, SAMHSA, weighted data, based on a representative sample of hospitals for New York City and Westchester, Rockland, and Putnam Counties (2002 data are preliminary).

³New York State Office of Alcoholism and Substance Abuse Services (OASAS)-funded and nonfunded treatment admissions

⁴New York City Police Department

⁵New York City Department of Health

* The total has been adjusted according to the revised data, but the half-year totals have not been revised.

Exhibit 2. Characteristics of Primary Cocaine Admissions¹ to State-Funded² and Nonfunded³ Treatment Programs in New York City by Route Of Administration: 2002

Demographic Characteristic	Percent Total (N = 15,608)	Percent Smoking Crack (n = 9,628)	Percent Using Cocaine Intranasally (n = 5,342)
Gender			
Male	68	62	76
Female	32	38	24
Age at Admission			
25 and younger	7	4	12
26–35	29	28	30
36 and older	64	68	58
(Average age)	(38.0 years)	(38.6 years)	(37.0 years)
Race/Ethnicity			
Black	57	66	43
Hispanic	28	22	37
White	13	11	18
No Source of Income ⁴	36	40	28
Some Criminal Justice Status	44	42	48
Readmissions	74	77	69
Age of First Use			
14 and younger	6	5	8
15–19	29	24	36
20–29	43	46	38
30 and older	22	25	17
Secondary Drug of Abuse			
Alcohol	43	44	43
Marijuana	20	18	23
Heroin	6	6	4

¹Figures on this table may differ somewhat from figures cited on other tables because computer runs may have been executed at different times and files are being updated continuously.

²State-funded programs receive some or all funding through the New York State Office of Alcoholism and Substance Abuse Services (OASAS).

³Nonfunded programs receive funding through sources other than OASAS.

⁴Defined as not earning income, not receiving support from family or significant others, and not receiving any public assistance.

SOURCE: New York State Office of Alcoholism and Substance Abuse Services

Exhibit 3. Semiannual Heroin Trends for Selected Indicator Data in New York City: 1994–2002

Year	Semiannual/ Annual Period	Deaths Involving Heroin ¹	Heroin/Morphine ED Mentions ²	Treatment Admissions: Heroin as Primary Drug of Abuse ³	Heroin Arrests ⁴	Average Purity of Street Heroin (%) ⁵
1994	1H		5,561	9,070		
	2H		5,624	9,117		
	Total	612	11,129*	18,187	33,206	(63.9)
1995	1H		5,288	9,286		
	2H		5,440	9,001		
	Total	751	10,728	18,287	38,131	(69.4)
1996	1H		5,654	9,161		
	2H		5,478	9,617		
	Total	192	11,132	18,778	37,901	(56.3)
1997	1H		4,900	10,276		
	2H		4,581	10,431		
	Total	272	9,481	20,707	35,325	(62.5)
1998	1H		4,613	10,793		
	2H		4,605	10,203		
	Total	230	9,218	20,996	37,483	(63.6)
1999	1H		4,153	10,690		
	2H		5,150	10,189		
	Total	174	9,302	20,879	32,949	(61.8)
2000	1H		5,378	10,944		
	2H		5,630	10,672		
	Total	193	11,009	21,616	33,665	(62.9)
2001	1H		5,428	11,324		
	2H		5,216	11,455		
	Total		10,644	22,779	27,863	(56.0)
2002	1H		4,635	11,357		
	2H			11,157		
	Total			22,514		

SOURCES: ¹DAWN, OAS, SAMHSA, including New York City, Long Island, and Putnam County through 1995. Starting with 1996, the data include New York City only. Prior to 1996, the data include heroin/morphine deaths as well as opiates not specified by type. Beginning with 1996, the data include only heroin/morphine deaths.

²DAWN, OAS, SAMHSA, weighted data, based on a representative sample of hospitals for New York City and Westchester, Rockland, and Putnam Counties (2002 data are preliminary).

³New York State Office of Alcoholism and Substance Abuse Services (OASAS)-funded and nonfunded treatment admissions

⁴New York City Police Department

⁵U.S. Drug Enforcement Administration

* The total has been adjusted according to the revised data, but the half-year totals have not been revised.

Exhibit 4. Characteristics Of Primary Heroin Admissions¹ to State-Funded² and Nonfunded³ Treatment Programs in New York City by Route Of Administration: 2002

Demographic Characteristic	Percent Total (N = 22,514)	Percent Using Heroin Intranasally (n = 13,429)	Percent Injecting Heroin (n = 8,403)
Gender			
Male	74	74	75
Female	26	26	25
Age at Admission			
25 and younger	7	6	10
26–35	25	26	25
36 and older	67	69	65
(Average age)	(39.2 years)	(39.3 years)	(39.1 years)
Race/Ethnicity			
Black	25	29	17
Hispanic	54	57	49
White	19	11	32
No Source of Income ⁴	24	25	23
Some Criminal Justice Status	34	38	26
Readmissions	87	85	91
Age of First Use			
14 and younger	13	10	16
15–19	35	31	41
20–29	35	37	32
30 and older	17	22	11
Secondary Drug of Abuse			
Alcohol	12	13	12
Marijuana	8	9	5
Cocaine	36	32	43

¹Figures on this table may differ somewhat from figures cited on other tables because computer runs may have been executed at different times and files are being updated continuously.

²State-funded programs receive some or all funding through the New York State Office of Alcoholism and Substance Abuse Services (OASAS).

³Nonfunded programs receive funding through sources other than OASAS.

⁴Defined as not earning income, not receiving support from family or significant others, and not receiving any public assistance.

SOURCE: New York State Office of Alcoholism and Substance Abuse Services

Exhibit 5. Semiannual Marijuana Trends for Selected Indicator Data in New York City by Number: 1994–2002

Year	Semiannual/ Annual Period	Marijuana ED Mentions ¹	Treatment Admissions: Marijuana as Primary Drug of Abuse ²	Cannabis Arrests ³
1994	1H	1,181	2,031	8,815
	2H	1,408	1,793	
	Total	2,578 ⁴	3,824	
1995	1H	1,516	2,171	12,357
	2H	1,460	2,159	
	Total	2,976	4,330	
1996	1H	1,723	2,845	18,991
	2H	1,848	3,185	
	Total	3,571	6,030	
1997	1H	1,939	3,794	27,531
	2H	1,900	3,657	
	Total	3,839	7,451	
1998	1H	1,986	4,554	42,030
	2H	1,696	4,473	
	Total	3,682	9,027	
1999	1H	1,799	5,119	43,122
	2H	1,692	5,100	
	Total	3,491	10,219	
2000	1H	1,856	5,664	60,455
	2H	1,688	5,487	
	Total	3,544	11,151	
2001	1H	1,904	6,677	47,651
	2H	1,598	6,593	
	Total	3,501	13,270	
2002	1H	1,624	7,512	
	2H		6,798	
	Total		14,310	

SOURCES: ¹DAWN, OAS, SAMHSA, Drug Abuse Warning Network (DAWN), weighted data, based on a representative sample of hospitals for New York City and Westchester, Rockland, and Putnam Counties (2002 data are preliminary).

²New York State Office of Alcoholism and Substance Abuse Services (OASAS)-funded and nonfunded treatment admissions.

³New York City Police Department.

⁴The total has been adjusted according to revised data, but the half-year totals have not been revised.

Exhibit 6. Characteristics of Primary Marijuana Admissions¹ to State-Funded² and Nonfunded³ Treatment Programs in New York City: 2002

Demographic Characteristic	Percent of Total (N = 14,310)
Gender	
Male	81
Female	19
Age at Admission	
20 and younger	36
21–25	26
26–35	24
36 and older	14
(Average Age)	(25.2 years)
Race/Ethnicity	
Black	53
Hispanic	34
White	10
No Source of Income ⁴	21
Some Criminal Justice Status	71
Readmissions	49
Age of First Use	
14 and younger	49
15–19	41
20–29	8
30 and older	2
Secondary Drug of Abuse	
Alcohol	43
Cocaine	11

¹Figures on this table may differ somewhat from figures cited on other tables because computer runs may have been executed at different times and files are being updated continuously.

²State-funded programs receive some or all funding through the New York State Office of Alcoholism and Substance Abuse Services (OASAS).

³Nonfunded programs receive funding through sources other than OASAS.

⁴Defined as not earning income, not receiving support from family or significant others, and not receiving any public assistance.

SOURCE: New York State Office of Alcoholism and Substance Abuse Services

Drug Use in Philadelphia, Pennsylvania

Samuel J. Cutler and Mark R. Bencivengo, M.A.¹

ABSTRACT

The preliminary estimated rate of 547 total drug abuse mentions per 100,000 population in hospital EDs in Philadelphia far exceeded the national estimate (222) in the first half of 2002. Cocaine was the most mentioned drug in Philadelphia EDs, at a rate of 132 per 100,000 population in the first half of 2002. In 2002, 79 percent of male cocaine treatment admissions and 89 percent of female cocaine treatment admissions were crack smokers. The average number of drugs detected in decedents by the medical examiner increased each half-year from the first half of 1998 through the second half of 2002, with the exception of the first half of 2002. Heroin/morphine detections in decedents exceeded cocaine detections from the second half of 1999 through the second half of 2002, with the exception of the first half of 2002. The preliminary estimated rates of marijuana and PCP ED mentions in Philadelphia were the highest among CEWG cities in the first half of 2002. Focus groups reported that buyers receive smaller amounts of marijuana for their money than in the past. PCP has been the fifth most frequently detected drug in decedents over the last 9 years. Focus group participants also reported an increased awareness of use of hydromorphone (Dilaudid), flunitrazepam (Rohypnol), and alprazolam (Xanax) than in the past.

INTRODUCTION

Area Description

Philadelphia, the largest city in the State, is located in the extreme southeastern corner of Pennsylvania. The 2000 U.S. census count of 1,517,550 Philadelphia residents represents 12.4 percent of the State's population and a 7-percent increase from the 1990 census count. The 2000 Philadelphia population was 45.0 percent White, 43.2 percent African-American, 4.5 percent Asian, 0.3 percent American Indian and Alaska Native, 4.8 percent other race, and 2.2 percent two or more races. Hispanics (of various races) accounted for an estimated 8.5 percent of the population, and persons age 18 and older accounted for 74.7 percent.

Data Sources

This report focuses primarily on the city/county of Philadelphia and includes data from the sources shown below. For the purposes of this report, fiscal year (FY) refers to a year starting July 1 and ending the following June 30.

- **Emergency department (ED) drug mentions data** were derived from the Drug Abuse Warning Network (DAWN), Office of Applied Studies (OAS), Substance Abuse and Mental Health Services Administration (SAMHSA), for the period January 1, 2001, through June 30, 2002.
- **Treatment admissions data** for programs in Philadelphia County were provided by the Pennsylvania Department of Health, Client Information System, for January 1, 1996, through December 31, 2002. Data for calendar year 2002 are preliminary and subject to revision because of the treatment reporting schedule, which results in frequent delays of more than 6 months between a treatment admission and the reporting of that event.
- **Mortality data** were provided by the Philadelphia Medical Examiner's (ME) Office. These data cover mortality cases with toxicology reports indicating the detection of drugs in decedents in Philadelphia. The time period is January 1, 1994, through December 31, 2002. (The cases include persons who died from the adverse affects of one or multiple drugs, as well as persons who exhibited some substance presence but died from other causes. The Philadelphia ME also distinguishes between persons who appeared to have a lethal reaction to what might be considered a light or moderate amount of drugs and persons whose toxicology reports showed a high level of drugs in their systems.)
- **Arrestee urinalysis data** on booked adult male arrestees were derived from Arrestee Drug Abuse Monitoring (ADAM) program reports for 2001 and 2002.

¹ The authors are affiliated with the Coordinating Office for Drug and Alcohol Abuse Programs, Philadelphia Behavioral Health System/Mental Retardation Services, Philadelphia, Pennsylvania. John H. Gossard, Richard C. Jones, and Nelson E. Martin provided assistance in preparing this paper.

- **Heroin purity and price data** were provided by the Drug Enforcement Administration (DEA), Domestic Monitor Program (DMP), through mid-2002.
- **Acquired immunodeficiency syndrome (AIDS) data** were provided by the Philadelphia Department of Public Health's AIDS Activities Coordinating Office on AIDS cases from November 1, 1981, to December 31, 2002.

In addition to these sources, this report draws on focus group discussions with former drug users currently enrolled in treatment programs, as well as outreach workers assigned to homeless populations, substance abusers, and persons with human immunodeficiency virus (HIV) infection.

DRUG ABUSE PATTERNS AND TRENDS

Preliminary DAWN ED data for 2002 show the average number of drug mentions per hospital episode remained stable, at 1.86 drugs per episode (exhibit 1). Comparing ED rates per 100,000 population among CEWG cities in the first half of 2002, Philadelphia ranked first for marijuana (74), first for phencyclidine (PCP) (12), second for cocaine (132), second for benzodiazepines (45), sixth for narcotic analgesics/ combinations (38), and seventh for heroin (52). As a subgroup within narcotic analgesics, Philadelphia ranked first among CEWG cities for ED oxycodone/combinations mentions, with 557 mentions in the first half of 2002.

The average number of drugs detected in decedents by the ME exceeded the 9-year average (1994 through 2002) of 2.27 drugs per case in each of the last 4 years as shown in exhibit 2: 1999 (2.31), 2000 (2.41), 2001 (2.81), and 2002 (2.68). The number of mortality cases with positive toxicology reports decreased 10 percent from 2001 ($n=661$) to 2002 (593). Of the 593 deaths in 2002, adverse reactions to drugs accounted for 57.7 percent, overdose for 2.5 percent, violence for 17.2 percent, and "other" causes for 22.6 percent. From 1994 through 2002, adverse reaction to drugs (as the identified cause of death) accounted for 56.6 percent, overdose for 3.3 percent, and violence for 19.7 percent; 20.2 percent were attributable to other causes.

White males accounted for the largest proportion of drug-positive decedents in 12 of the last 13 half-year periods through December 2002, accounting for 34–44 percent of all cases. Whites, as a group, constituted the plurality of death cases from 1995 through 2002, ranging from 45 to 54 percent. Males accounted for 76 percent of all deaths with positive

toxicology reports in 1999, 74 percent in 2000, 76 percent in 2001, and 77 percent in 2002. In 2002, males accounted for 76 percent of drug-positive deaths among Whites, 76 percent among African-Americans, and 82 percent among Hispanics. Among females, Whites accounted for the largest number of drug deaths from 1998 through 2002 (50 percent), followed by African-Americans (42 percent). Hispanics accounted for 7 percent and Asians for 1 percent of all female deaths.

In the 2001 ADAM study, adult male booked arrestees in Philadelphia ranked fifth highest in the 33-city panel in positive urinalysis results for multiple drugs and fourth highest with respect to the NIDA-5 drugs (cocaine, opiates, marijuana, methamphetamine, and PCP). In the 2002 ADAM study, adult males in Philadelphia tied for first in the 36-city panel in positive urinalysis results for multiple drugs (any of 10) and remained fourth highest with respect to the NIDA-5 drugs. The latter ranking is particularly remarkable considering the lack of methamphetamine cases in this city. In the 2002 ADAM measurement of heavy drug use of a NIDA-5 drug, Philadelphia males ranked third (51.2 percent within the past 30 days) among 36 cities (median=37.1 percent). (Heavy drug use was defined as 13 or more days of self-reported consumption within a 30-day period in the year before the interview.) In the measurement "at risk for dependence," Philadelphia males ranked second (48.9 percent) among 36 cities (median=38.3 percent).

The Pennsylvania Client Information System is limited to the identification of a maximum of three substances as drugs of abuse at treatment intake. The highest average number of drugs of abuse identified at admission to treatment occurred in the first half of 1999 (2.06). In the second half of 2001, the average was 1.96 drugs of abuse; in the first half of 2002 the average was 1.45 drugs of abuse; and in the second half of 2002 the average was 1.44 drugs of abuse at admission. This decline in the average number of drugs at admission may be attributable to Operation Safe Streets (OSS), which began May 1, 2002. Instead of entering treatment because of the detrimental effects of multiple drug use, some people may have been motivated to seek treatment because the drug markets were disrupted by OSS. OSS is a strategy of the Philadelphia Police Department that involves the stationing of 200–300 police officers on corners where drug sales are known to be very active. The initiative is credited with driving sales indoors, thereby reducing the volume of drug sales in open-air markets.

In autumn 2002, focus groups consisting of drug users who were new to treatment estimated that of the

regular drug-using population, 9 percent use just one drug per day, 20 percent use two, 31 percent use three, and 40 percent use four or more different drugs per day. The spring 2003 focus groups estimated that 6 percent use one drug per day, 24 percent use two, 52 percent use three, and 18 percent use four or more different drugs per day.

Cocaine/Crack

Cocaine/crack remains the major drug of abuse in Philadelphia. The estimated rates of cocaine/crack ED mentions in the Philadelphia primary metropolitan statistical area (PMSA) were 127 per 100,000 population in the first half of 2001, 125 in the second half of 2001, and 132 in the first half of 2002 (exhibit 1). The only demographic group that experienced a statistically significant rate change was the 55-and-older age group; the rate of mentions in this group increased by 45.8 percent from the first half of 2001 (rate=8) to the first half of 2002 (rate=12). Overall, rates in the first half of 2002 continued to be higher among males (181) than females (85) and, by age group, among persons age 26–29 (382).

ME data show that cocaine was present in 10 percent fewer cases in 2002 than in 2001 (exhibit 2). Despite this decrease, the presence of cocaine in total drug-positive toxicology reports remained stable between 44.6 and 47.2 percent from 1999 through 2002. Cocaine was detected in 2,632 decedents from 1994 through 2002, more than any other drug appearing in the toxicology reports.

Another drug(s) was found in 84 percent of all ME cocaine-positive cases in the second half of 2001, 84 percent in the first half of 2002, and 82 percent in the second half of 2002. Heroin/morphine was present in 37 percent of cocaine-positive toxicology reports in both the second half of 2001 and the first half of 2002. In the second half of 2002, heroin/morphine was present in 39 percent of cocaine-positive toxicology reports. Cocaine in combination with alcohol remains a significant finding in cocaine-positive toxicology reports. In 2000, 2001, and 2002, alcohol was present in 32, 25, and 29 percent of cases in which cocaine was also detected. ME toxicology unit staff view alcohol as a particularly dangerous substance when it is used in combination with other substances.

The preliminary treatment data for 2002 show that cocaine, as a primary drug, accounted for 29.3 percent of all treatment admissions, up from 25.8 percent in 2001 (exhibit 3). Cocaine treatment admissions peaked in 1991, at 63 percent.

In 2002, males accounted for 62.6 percent of primary cocaine drug treatment admissions (exhibit 4). In 2002, African-Americans accounted for 75 percent of primary cocaine treatment admissions, followed by Whites (16 percent), Hispanics (6 percent), and Asians and others (3 percent).

Since 1998, an average of 83 percent of the primary cocaine admissions reported smoking the drug, 14 percent reported intranasal use, only 2 percent reported injecting, and 1 percent reported administering the drug through other/unknown routes (exhibit 4). Since the first half of 1990, at least 80 percent of cocaine treatment admissions have reported smoking the drug. Of all male cocaine admissions in 2002, 79 percent reported smoking the drug; the comparable figure for females was 89 percent.

In the Philadelphia ADAM site in 2001 and 2002, 21.9 and 22.4 percent, respectively, of adult male arrestees reported using crack during the past 30 days. This was the fourth and fifth highest percentage among CEWG sites included in ADAM. In the same time periods, 11.4 and 10.6 percent, respectively, of the adult male arrestees reported using powder cocaine during the past 30 days. This was the sixth highest level among CEWG sites in each year.

During spring 2003 focus group sessions, two-thirds of former drug users new to formal treatment indicated that they perceived the potency of crack to have diminished since the implementation of OSS.

The predominant form of crack sold in Philadelphia is “rock,” which costs \$5. The \$5 rock ranged in size from 6 to 9 millimeters from 1996 until 2002. After the disruption in the market caused by Safe Streets, the size of the \$5 rock was reduced to 4–7 millimeters. Treys (\$3 rocks) ranged in size from 3 to 5 millimeters since 1996, but were reduced to 3 to 4 millimeters in the latter half of 2002. In early 2003, the average rock was slightly larger than 3 millimeters. Shapes of crack range from circular to bumpy-circular to pieces cut into the shape of a parallelogram. Powder cocaine is not as readily available in small (\$5) quantities, but \$10 and especially \$20 bags are quite common. Spring 2003 focus group participants estimated that about 62 percent of powder cocaine buys are for intranasal use, 19 percent are injected straight, and 19 percent are injected in a “speedball.” These estimates were very similar to the focus group responses in spring and autumn 2002.

Crack users continue to report frequent use in combination with 40-ounce bottles of malt liquor, beer, wine,

or other drugs, including alprazolam (Xanax), marijuana, or heroin. Powder cocaine, cigarettes, and methamphetamine were less frequently mentioned as drugs used with crack. The spring 2003 focus groups reported that out of the average 100 crack “buys,” 71 percent were in exchange for money, 16 percent were in exchange for sex, and 13 percent were in exchange for “anything else.” Other items reportedly exchanged for crack were mentioned as being involved in large quantity transactions—jewelry, watches, sneakers, televisions, VCRs, DVD players, other appliances, credit, guns, bicycles, play stations, and automobiles.

Heroin/Morphine

According to preliminary DMP data, the street-level purity of heroin in Philadelphia was 63.5 percent in the first half of 2002. The average purity was found to be 73 percent in 2001, the highest of all cities in the program for the prior 5 years, with an average price per milligram pure of \$.40, the fourth least expensive at that time. In calendar year 2001, the average national purity was 34 percent, and the average price per milligram pure was \$1.30.

The estimated rates of heroin ED mentions in the Philadelphia PMSA were 56 per 100,000 population in the first half of 2001, 63 in the second half of 2001, and 52 in the first half of 2002 (exhibit 1). The only demographic group that experienced a statistically significant rate change was the 35-and-older age group, whose rate decreased by 22.1 percent from the second half of 2001 (rate=47) to the first half of 2002 (rate=37). Overall in the first half of 2002, rates continued to be higher among males (rate=74) than females (rate=31) and, by age group, among persons age 26–29 (rate=203).

Heroin/morphine was detected in 2,614 decedents from 1994 through 2002, the second most commonly detected drug in decedents (exhibit 2). For the 4-year period 1999 through 2002, positive heroin/morphine toxicology reports occurred in 47 percent of all deaths with the presence of drugs.

From 2000 through 2002, heroin/morphine alone was identified in 14, 11, and 10 percent of the respective heroin/morphine toxicology reports. The combination of heroin/morphine and cocaine was detected in 20, 19, and 17 percent of all decedents, respectively, during these 3-year periods.

In 2002, primary heroin treatment admissions ranked third behind cocaine and alcohol (exhibit 3). Heroin admissions accounted for 22 percent of all admissions in 2002. During 2002, 69 percent of all heroin

treatment admissions were male (exhibit 5); 52 percent were White, 32 percent were African-American, 12 percent were Hispanic, and 4 percent were Asian/other.

As depicted in exhibit 5, the preferred routes of administration for heroin, illegal methadone, and other opiates have been relatively stable among treatment admissions. Within the “swallowed” route, the increasing numbers through 2002 reveal that users of pharmaceutically produced synthetic opiates have been entering treatment.

In 2001 and 2002, 13.2 and 15.9 percent, respectively, of adult male arrestees in the Philadelphia ADAM study tested positive for opiates. These were the second and fourth highest percentages among CEWG sites included in ADAM in the respective years.

The spring 2003 focus group participants continued to report that the \$10 bag of heroin remained the standard unit of purchase. The \$10 bag usually yields one hit; \$5 and \$20 bags reportedly remain available. Focus groups in autumn 2000 and spring 2001 indicated that new heroin users begin use in their midteens; the autumn 2001, spring 2002, and autumn 2002 groups stated that new users begin in their late teens. Spring 2003 focus group participants reported that the average age of new users is 20. All groups since autumn 2000 reported that the average heroin user injects the drug five times per day. The spring 2003 groups reported that the average heroin user injects four times per day.

The autumn 2002 focus groups estimated that 33 percent of heroin users use heroin only, 59 percent also use crack, and 8 percent use heroin and cocaine powder in speedball injections. The spring 2003 focus groups reported different proportions; they estimated that 31 percent use heroin only, 36 percent use heroin and crack, 23 percent use heroin and cocaine powder in speedball injections, and 10 percent use heroin with alprazolam, diazepam, or any barbiturate. Groups in both time periods also indicated that more than one-half of new users are female.

Narcotic Analgesics

Oxycodone

The nonmedical use of oxycodone products, including OxyContin, Percocet/Percodan, Roxicet and Tylox, continue to be reported by individuals in treatment. Preliminary rates per 100,000 population of DAWN ED mentions of narcotic analgesics/com-

binations were 35, 32, and 38, respectively, for the three half-years ending June 2002 (exhibit 1).

Oxycodone was detected in 237 decedents from 1994 through 2002, the ninth most frequently detected drug during that time period. Detections of oxycodone have been rapidly increasing since 2000 (exhibit 2). Spring and autumn 2002 and spring 2003 focus groups reported the spread of oxycodone use to all racial/ethnic groups, with an age range of mid-teens to 40, with the largest user group being people in their twenties.

Hydrocodone

Hydrocodone mentions in mortality cases have also increased. There were 16 positive toxicology ME reports for hydrocodone from 1994 through June 1996. In the subsequent 3 years, 1997 through 1999, there were 36 positive toxicology reports for hydrocodone, followed by 96 positive toxicology reports for the drug from 2000 through 2002.

Marijuana

The estimated rates of marijuana ED mentions in the Philadelphia PMSA were 64 per 100,000 population in the first half of 2001, 58 in the second half of 2001, and 74 in the first half of 2002 (exhibit 1). The only demographic groups that showed statistically significant rate changes were the 12–17-year-olds, whose rate of mentions increased by 75.8 percent from the second half of 2001 (rate per 100,000 population = 74) to the first half of 2002 (rate=131) and the 55-and-older group, whose rate of mentions increased 80 percent from the second half of 2001 (rate=3) to the first half of 2002 (rate=5). Overall in the first half of 2002, rates continued to be higher among males (96) than females (50) and, by age group, among persons age 18–19 (251).

The proportion of those citing marijuana as the primary drug of abuse upon entering treatment increased from 8.6 percent in 1996 to 16.3 percent in 2002 (exhibit 3). Among all 2002 admissions, marijuana was mentioned by an additional 40 percent as a secondary drug and by 27 percent as a tertiary drug. Among primary marijuana admissions, males accounted for 78 percent; African-Americans accounted for 56 percent, Whites for 28 percent, Hispanics for 13 percent, and Asians and others for 3 percent. Among primary marijuana treatment admissions in 2002, the average number of drugs of abuse noted upon entering treatment was 1.41.

The ADAM data on adult male arrestees for 2001 and 2002 indicated that 49.8 and 52.2 percent, respectively, reported marijuana use within the past 30 days. These were the third and second highest percentages among CEWG/ADAM sites.

The spring 2003 focus group participants reported the increasing use of blunts. These groups and outreach workers continued to report that marijuana use is widespread throughout Philadelphia.

In autumn 2001 focus group sessions, participants mentioned for the first time the availability and use of commercially marketed cigar tobacco leaves, known as “blunt wraps,” for wrapping marijuana (and other additives) into a blunt. This product is attractive to users because it is available in several different flavors and eliminates the effort of cutting off the ends of a cigar, splitting it open lengthwise, and emptying the contents. Businesses that are open late into the evening have become increasingly popular as outlets for blunt wraps. The autumn 2002 focus group participants estimated that 63 percent of marijuana users smoke blunts made from cigars, 27 percent use blunt wraps, and 10 percent use cigarette-rolling papers and smoke joints. The spring 2003 focus groups estimated that 56 percent of marijuana users smoke blunts made from cigars, 32 percent use blunt wraps, and 12 percent use cigarette-rolling papers and smoke joints.

The combination of marijuana and PCP, frequently mixed in blunts, is commonly called a “love boat” or “wet” (which is also a term for PCP). Focus groups composed of users who were new to treatment in autumn 2002 estimated that 48 percent of blunts are smoked with no other drug added to it, 37 percent of blunts are laced with PCP, and 15 percent are laced with crack (called “Turbos”). The spring 2003 focus groups reported that 67 percent of blunts are smoked with no other drug added to it, 19 percent of blunts are laced with PCP, and 14 percent are laced with crack. Blunt users commonly ingest beer, wine coolers, whiskey, alprazolam, or diazepam along with the blunt. Less commonly, blunt smokers use powder cocaine, vodka, barbiturates, clonazepam, oxycodone, cough syrup, and/or methamphetamine.

Phencyclidine (PCP)

PCP began gaining popularity as an additive to blunts in 1994. Users describe its effects as making them hallucinate and feel “invincible,” “crazy,” “numb,” or “violent.” The estimated rates of PCP ED mentions in the Philadelphia PMSA were 8 per 100,000 population in the first half of 2001, 9 in the second half of

2001, and 12 in the first half of 2002 (exhibit 1). According to DAWN data, the 40.9-percent increase in the overall rate from the first half of 2001 to the first half of 2002 was statistically significant. Demographic groups that showed statistically significant changes were females, whose rate of mentions increased by 82.8 percent from the second half of 2001 (rate=4) to the first half of 2002 (rate=8), 26–29-year-olds, whose rate of mentions increased by 113.3 percent from the first half of 2001 (rate=19) to the first half of 2002 (rate=40), and the 35-and-older group, whose rate of mentions increased by 56.3 percent from the first half of 2001 (rate=2) to the first half of 2002 (rate=3). Overall in the first half of 2002, rates continued to be higher among males (17) than females (8) and in the 18–19-year-old age group (70).

PCP was detected in 363 decedents from 1994 through 2002, the fifth most frequently detected drug during that time period (exhibit 2). In 2002, PCP was mentioned as a primary, secondary, or tertiary drug by 3.2 percent of all treatment admissions. The average number of drugs of abuse mentioned by primary PCP treatment admissions was 2.11. PCP has become easier to obtain than ever. It is more commonly available on mint leaves for use in lacing blunts or for rolling and smoking. Less commonly, PCP in liquid form is available and is used by dipping cigarettes into the liquid. This method is referred to as “sherms” or “dip sticks.”

Benzodiazepines

Benzodiazepines, particularly alprazolam (Xanax) and diazepam (Valium), continue to be used in combination with other drugs. DAWN ED rates per 100,000 population for the three half-year periods ending June 2002 were 49, 46, and 45 per 100,000 population, respectively (exhibit 1), the second highest among CEWG cities. Diazepam, having been detected by the ME in 431 decedents in the most recent 9-year period (1994–2002), ranks fourth among drugs present in mortality cases in Philadelphia (exhibit 2). While users new to treatment report that diazepam has become less popular in recent years, alprazolam use has increased.

The preliminary treatment admission reports for 2002 show benzodiazepines as primary drugs of abuse in 66 cases (exhibit 3); however, these drugs were reported as secondary drugs of abuse in 148 additional cases and as tertiary drugs of abuse in 143 more cases. Benzodiazepine abuse was reported by focus group participants as common among users of heroin, oxycodone, cocaine, marijuana, and cough syrup. Since spring 2000, all focus groups have reported

that alprazolam has overtaken diazepam as the “most popular pill” on the street.

Other Prescription Drugs

Prescription drugs are most frequently detected among decedents in combination with other drugs of the same type and/or in combination with cocaine, heroin, or alcohol. Nearly all of the ME mentions for the most frequently detected prescription drugs among decedents declined from 2001 to 2002. Other than those prescription drugs appearing in exhibit 2, only amitriptylene (Elavil), butalbital (Medigesic, Fiorinal), carisoprodol (Soma), gabapentin (Neurontin), meprobamate (Equagesic), quetiapine (Seroquel), and valproic acid (Depakene) mentions increased in this time period.

Methamphetamine/Amphetamines

Methamphetamine and amphetamines remain a relatively minor problem in Philadelphia. The DAWN ED rates per 100,000 population for methamphetamine in Philadelphia were 1 in each half-year from January 2001 through June 2002. DAWN ED amphetamine rates were 5, 4, and 3 mentions per 100,000 population in the same time periods. There were 73 deaths with the presence of methamphetamine from 1994 through 2002 and 64 deaths with the presence of amphetamine during that same 9-year period. The ADAM data on adult male arrestees for 2002 indicated that 1.2 percent of booked arrestees reported methamphetamine use within the past 30 days. This was the fifth lowest percentage among CEWG/ADAM sites.

Annual treatment admissions for methamphetamine/amphetamines as the primary drug of abuse in 1998–2002 were 31, 33, 27, 83, and 67, respectively (exhibit 3). Methamphetamine/amphetamines are rarely identified as a secondary or tertiary drug of choice among treatment admissions in Philadelphia. In the 2002 ADAM study, no adult male booked arrestees were found to be positive for methamphetamine through urinalysis. Focus group members continued to report that methamphetamine is still difficult to obtain, is not sold outdoors, and requires a connection, but that use has increased from 2001 to 2002.

Club Drugs

DAWN ED mentions for methylenedioxymethamphetamine (MDMA) numbered 85, 118, and 84 in the 3 half-year periods ending June 2002. This total of 287 mentions was the highest among CEWG cities during this time period. MDMA was present in 6 mortality cases in 1999 (the first year this drug was detected by

the ME), then in 8 cases in 2000, 14 cases in 2001, and 5 cases in 2002. Focus groups in the spring and autumn of 2000 described MDMA as highly potent and used in combination with heroin, alcohol, and/or cough syrup. Focus groups held since spring 2001 have reported that MDMA is used in combination with marijuana and lysergic acid diethylamide (LSD), which better describes use in clubs or raves. The autumn 2002 focus groups described the MDMA users as evenly split by gender and as ranging in age from teenagers to persons in their early twenties. Relatively few participants in focus groups during spring 2003 were familiar with the MDMA scene.

Hospital ED mentions of ketamine were extremely rare in the Philadelphia area. The DAWN report showed either zero mentions for recent periods or an indication that the data were suppressed because the estimate had a relative standard error of greater than 50 percent. Ketamine was first detected in decedents in Philadelphia in 1996; it was detected in four decedents in 2000, four decedents in 2001, and two decedents in 2002. Autumn 2002 focus group participants reported that ketamine is used in nightclubs and is not widely available; the drug usually sells for \$10 per tablet. Spring 2003 focus groups reported that ketamine also comes in powder form and is used intranasally, primarily by White males and White females up to age 30. Ketamine was reportedly difficult to obtain.

Gamma hydroxybutyrate (GHB) cases were mentioned in DAWN ED data only in the second half of 2001 among the 3 half-year periods ending in June 2002. Autumn 2002 focus group participants were unaware of this drug. Spring 2003 participants were only aware of its use “mostly in clubs and bars” and “predominantly by males.”

INFECTIOUS DISEASES RELATED TO DRUG ABUSE

As of December 31, 2002, Philadelphia recorded 15,600 cumulative AIDS cases among adults (exhibit 6). Among those cases, 5,698 involved injection drug users (IDUs) or needle-sharers. Another 845 were in the dual exposure category of IDUs who were also men who had sex with other men (MSM).

Cases reported in 2002 with heterosexual contact as a risk factor continued to exceed the historical average. Heterosexual contact was the identified exposure category in more than one-sixth of all AIDS cases reported through December 2002. In 2002, heterosexual contact accounted for the plurality of cases (36.5 percent) for the first time.

AIDS cases involving needle-sharing varied considerably within race/ethnicity categories. Among 53 percent of Hispanics, 39 percent of African-Americans, and 22 percent of Whites, needle-sharing was the identified exposure category.

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Exhibit 1. Rates of ED Mentions per 100,000 Population in Philadelphia for Selected Drugs by Half-Year: January 1, 2001, to June 30, 2002¹

Major Drugs of Abuse	2001 1H	2001 2H	2002 1H	% Significant Change	
				2001 2H, 2002 1H	2001 1H, 2002 1H
Total – Major Substances of Abuse	368	368	380		
Alcohol-in-Combination	101	104	103		
Cocaine	127	125	132		
Heroin	56	63	52		
Marijuana	64	58	74		
Narcotic Analgesics/Combinations	35	32	38		
PCP/Combinations	8	9	12		40.9 %
Benzodiazepines	49	46	45		
Average Number of Drug Mentions Per Episode	1.88	1.85	1.86		

¹ Estimates are preliminary.

SOURCE: DAWN, OAS, SAMHSA

Exhibit 2. Annual Mortality Cases in Philadelphia with the Presence of the Ten Most Frequently Detected Drugs by the Medical Examiner: 1994 through 2002

ME Identified Drugs	Year									
	1994	1995	1996	1997	1998	1999	2000	2001	2002	Total
Cocaine	368	336	277	304	218	238	321	300	270	2,632
Heroin/Morphine	262	318	290	336	249	236	332	316	275	2,614
Alcohol	253	254	182	214	157	179	197	185	153	1,774
Diazepam	69	3	35	58	39	67	46	56	28	431
Phencyclidine (PCP)	46	44	29	46	19	35	48	45	51	363
Propoxyphene	30	30	27	32	21	22	40	43	31	276
Methadone	23	12	26	24	10	36	36	46	55	268
Codeine	36	39	19	20	3	15	19	45	57	253
Oxycodone	4	2	1	14	29	17	49	53	68	237
Diphenhydramine	18	13	5	4	9	25	33	53	42	202
Total Deaths with the Presence of Drugs (Toxicology Reports)	617	632	565	607	534	533	680	661	593	5,422
Total Drugs Mentioned	1,310	1,245	1,121	1,282	1,039	1,232	1,637	1,857	1,589	12,312
Average Number of Drugs Per Death	2.12	1.97	1.98	2.11	1.95	2.31	2.41	2.81	2.68	2.27

SOURCE: Philadelphia Medical Examiner's Office

Exhibit 3. Treatment Admissions by Primary Drug of Abuse in Philadelphia: 1996–2002

Primary Drug	1996	1997	1998	1999	2000	2001	2002 ¹
Cocaine	4,263	2,492	1,942	2,232	2,497	2,996	3,649
Alcohol	3,468	1,648	1,477	1,943	1,826	2,366	3,425
Heroin	2,523	1,581	872	2,272	2,041	4,279	2,679
Other Opiates	41	51	48	46	73	92	187
Marijuana	1,017	592	791	862	910	1,428	2,025
PCP	183	36	32	49	43	74	188
Other Hallucinogens	22	14	9	9	7	12	12
Methamphetamine/ Amphetamines	41	27	31	33	27	83	67
Benzodiazepines	41	26	32	46	37	89	66
Other Tranquilizers	22	11	6	4	8	1	3
Barbiturates	25	8	13	8	3	8	23
Other Sedatives/Hypnotics	31	12	13	18	16	36	19
Inhalants	5	0	2	0	4	1	0
Over-the-Counter	2	4	7	24	5	2	2
Other (Not Listed)	148	53	17	1	60	154	111
Total	11,832	6,555	5,292	7,547	7,557	11,621	12,456

¹Subject to revision.

SOURCE: Pennsylvania Department of Health, Client Information System

Exhibit 4. Cocaine Treatment Admissions in Philadelphia by Route of Administration and Gender: 1998–2002

Route of Administration and Gender	1998		1999		2000		2001		2002 ¹	
	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)
Smoked										
Male	875	(45.1)	997	(44.7)	1,112	(44.5)	1,377	(46.0)	1,802	(49.4)
Female	744	(38.3)	862	(38.6)	1,002	(40.1)	1,039	(34.7)	1,212	(33.2)
Intranasal										
Male	768	(8.7)	172	(7.7)	198	(7.9)	371	(12.4)	384	(10.5)
Female	70	(3.6)	120	(5.4)	104	(4.2)	140	(4.7)	139	(3.8)
Injected										
Male	50	(2.6)	46	(2.1)	38	(1.5)	30	(1.0)	28	(0.8)
Female	12	(0.6)	13	(0.6)	12	(0.5)	14	(0.5)	8	(0.2)
Other/Unknown										
Male	10	(0.5)	11	(0.5)	16	(0.6)	18	(0.6)	71	(1.9)
Female	13	(0.7)	11	(0.5)	15	(0.6)	7	(0.2)	5	(0.1)
Total Male	1,103	(56.8)	1,226	(54.9)	1,364	(54.6)	1,796	(59.9)	2,285	(62.6)
Total Female	839	(43.2)	1,006	(45.1)	1,133	(45.4)	1,200	(40.1)	1,364	(37.4)
Total	1,942		2,232		2,497		2,996		3,649	

¹ Subject to revision.

SOURCE: Pennsylvania Department of Health, Client Information System

Exhibit 5. Heroin, Illegal Methadone, and Other Opiate Treatment Admissions in Philadelphia by Route of Administration and Gender: 1998–2002

Route of Administration and Gender	1998		1999		2000		2001		2002 ¹	
	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)
Injected										
Male	379	(41.2)	1,101	(47.5)	870	(41.2)	1,917	(43.9)	1,219	(42.5)
Female	169	(18.4)	576	(24.8)	408	(19.3)	805	(18.4)	541	(18.9)
Intranasal										
Male	227	(24.7)	316	(13.6)	411	(19.4)	733	(16.8)	564	(19.7)
Female	122	(13.3)	215	(9.3)	266	(12.6)	577	(13.2)	260	(9.1)
Swallowed										
Male	3	(0.3)	32	(1.4)	45	(2.1)	99	(2.3)	114	(4.0)
Female	2	(0.2)	19	(0.8)	42	(2.0)	55	(1.3)	66	(2.3)
Smoked										
Male	9	(1.0)	27	(1.2)	37	(1.8)	63	(1.4)	44	(1.5)
Female	3	(0.3)	14	(0.6)	11	(0.5)	40	(0.9)	17	(0.6)
Other/Unknown										
Male	4	(0.4)	12	(0.5)	13	(0.6)	49	(1.1)	32	(1.1)
Female	2	(0.2)	6	(0.3)	11	(0.5)	33	(0.8)	9	(0.3)
Total Male	622	(67.6)	1,488	(64.2)	1,376	(65.1)	2,861	(65.5)	1,973	(68.8)
Total Female	298	(32.4)	830	(35.8)	738	(34.9)	1,510	(34.5)	893	(31.2)
Total	920		2,318		2,114		4,371		2,866	

¹ Subject to revision.

SOURCE: Pennsylvania Department of Health, Client Information System

Exhibit 6. Adult AIDS Cases in Philadelphia by Exposure Category: 2002 and Cumulative Totals Through December 31, 2002

Exposure Category	January 1, 2002, to December 31, 2002		November 1, 1981, to December 31, 2002	
	Number	Percent	Number	Percent
IDU	399	(35.1)	5,698	(36.5)
MSM and IDU	30	(2.6)	845	(5.4)
MSM	292	(25.7)	6,069	(38.9)
Heterosexual Contact	415	(36.5)	2,688	(17.2)
Blood Products	0	(0.0)	89	(0.6)
No Identified Risk Factor	1	(0.1)	211	(1.4)
Total Adult Cases	1,137	(100.0)	15,600	(100.0)

SOURCE: Philadelphia Department of Public Health, AIDS Activities Coordinating Office

Drug Abuse Trends in Phoenix and Arizona

Ilene L. Dode, Ph.D.¹

ABSTRACT

Most cocaine and crack indicators for Phoenix trended downward, while treatment and prices remained stable. The proportions of male and female arrestees in Tucson who tested positive for cocaine were higher than those for the male and female arrestees in Phoenix, but significantly lower proportions tested positive for methamphetamine in Tucson. Most indicators for heroin trended downward, and prices remained stable. Brown powder heroin has become readily available at the street level. Estimates of ED mentions for oxycodone reflect a 50.5-percent increase from the first half of 2001, compared with the first half of 2002. Pain management clinics have become the focus of law enforcement investigations because of the apparent excessive prescribing of controlled substances. Marijuana ED mentions have steadily increased for the past decade. There was a slight decline in some methamphetamine indicators, but ADAM data showed progressively increasing numbers of male and female arrestees in Phoenix testing positive for methamphetamine. ADAM juvenile data showed that 13.8 percent of male detainees and 26.3 percent of female detainees tested positive for methamphetamine. Admissions to some detoxification programs have increased. ‘Ice’ is readily available at the street level. Methamphetamine prices have increased because of the availability of high-grade methamphetamine. Testing for hepatitis C was provided for 150 clients in a local methadone treatment program, and 65 percent tested positive. The Drug Treatment and Education Fund Annual Report, required by the Drug Medicalization, Prevention and Control Act of 1996, reported the average substance abuse treatment cost per probationer was \$678.87.

INTRODUCTION

Area Description

Arizona is a name that was derived from an Indian word, “Arizonac,” which described southern Arizona during the time of Spanish rule. The word comes from the Tohono O’odham “ali” and “shonak,” which

translates as “place of the small spring.” The sawtoothed peaks of the Baboquivari Mountains in southern Arizona provide a natural compass for undocumented immigrants and drug smugglers navigating through the desert into Arizona from Mexico. The toothed peaks of the Baboquivari Mountains in southern Arizona provide a natural compass for undocumented immigrants and drug smugglers navigating through the desert into Arizona from Mexico. The Tohono O’odham Nation shares a 75 mile border with Mexico that includes the Baboquivari Trail, a series of winding cow paths snaking 26 miles through the desert from the U.S.-Mexican border to the Tohono O’odham Nation’s capital in Sells. This trail has become the most deadly immigrant crossing in the United States. During fiscal year (FY) 2002, 85 of the 145 immigrant deaths recorded by the U.S. Border Patrol in Arizona occurred on the Tohono O’odham Reservation. The flood of undocumented immigrants and the surge in drug smuggling have created a financial and social crisis for the Indian nation.

The population of the State is 64 percent White, 25 percent Hispanic, 5 percent Native American, 3 percent African-American, 2 percent Asian American, and 2 percent other groups. Since 1990, the Hispanic population has increased by 88 percent statewide. Latinos now total 1.3 million, or the equivalent of the population within the city limits of Phoenix, which is located in Maricopa County. The population of Maricopa County is 3.3 million, with 72 percent White, 21 percent Hispanic, 4 percent African-American, 2 percent Asian American, and 1 percent other groups.

Data Sources

This report is based on the most recent available data obtained from the following sources:

- **Drug-induced and drug-related death data** were provided by the Maricopa County Medical Examiner (ME) Office for January 1993–December 2002.
- **Emergency department (ED) drug mentions data** were derived from reports of the Drug Abuse Warning Network (DAWN), Office of Applied Studies (OAS), Substance Abuse and Mental Health Services Administration (SAMSHA), through the first half of 2002.

¹ The author is affiliated with EMPACT Suicide Prevention Center, Phoenix, Arizona.

- **Drug treatment data** for the State overall were provided by the Arizona Department of Health Services (DHS), Division of Behavioral Health for July 2002–April 2003; treatment admissions of adults and juveniles to the Treatment and Assessment Screening Center (TASC) programs in Phoenix were derived from the Maricopa County Juvenile Probation Program’s “Client Drug Test Results Summary,” March 2003 and the Adult Deferred Prosecution Program, Cumulative Statistical Report, March 1989–March 2003; data on admissions to outpatient detoxification treatment at Terros, Inc., were provided by the program for July 2001–April 2003; and data on admissions to detoxification treatment from July 2002 to April 2003 were provided by Community Bridges—East Valley Addiction Council.
- **Arrestee drug testing and related data** were provided by the Arrestee Drug Abuse Monitoring (ADAM) program, National Institute of Justice, for 2000–2002.
- **Drug price and seizure data** were provided by the Drug Enforcement Administration (DEA) Phoenix Office (“Trends in Traffic,” second quarter, FY 2003); the Glendale Police Department (PD) Drug Enforcement Bureau, June 2002; the U.S. Customs Service; and the U.S. Border Patrol.
- **Human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS) data** were provided by the Arizona Department of Health Services (DHS), Division of Public Health Services, Bureau of Epidemiology and Disease Control, Office of HIV/AIDS, Arizona HIV/AIDS Semiannual Surveillance Report, Volume 9, Number 2, February 2003.
- **Treatment among probationers data** were derived from the Arizona Supreme Court, Administrative Office of the Courts, Adult Probation Services Division, Drug Treatment and Education Fund Annual Report, Fiscal Year 2000 (March 2003).

DRUG ABUSE PATTERNS AND TRENDS

Cocaine/Crack

Cocaine-related deaths in 2002 ($n=116$) reflect a 3-year continuing decline of 46 percent from 215 in the peak year of 1999. Cocaine/morphine deaths (54)

combined appear to have been stable for the past 4 years (exhibit 1).

The estimated rate for ED cocaine mentions peaked at 49 per 100,000 population in the second half of 1999 and gradually declined to 31 per 100,000 for the first half of 2002 (exhibit 2); the declines shown from 1999 forward were not statistically significant. Phoenix (Maricopa County) ADAM weighted data revealed a decline in adult males testing positive for cocaine from 2000 (31.9 percent) to 2001 (27.2 percent) and 2002 (27.1 percent). There was also a decline for females testing positive. In 2000, 35.2 percent of adult female arrestees tested positive for cocaine, compared with 31.6 percent and 26.2 percent for 2001 and 2002, respectively (exhibit 3). Data for females were unweighted and were not based on probability sampling.

Tucson (Pima County) ADAM data, also shown in exhibit 3, show declines in the proportion of female arrestees testing positive for cocaine, and the proportions fluctuated for male arrestees. It is notable that male and female arrestees more frequently test positive for cocaine in Tucson than in Phoenix.

Cocaine treatment admissions to the TASC Adult Deferred Prosecution Program remained nearly unchanged at 29.4 percent of cumulative treatment admissions since March 1989 (3,597 of 11,665, excluding marijuana admissions), unchanged from 4 previous reporting periods (exhibit 4). In the TASC juvenile program, 7 percent ($n=1,297$) of the 18,225 juvenile admissions were positive for cocaine during 2002 (exhibit 5). Juvenile male and female ADAM data for 2002 revealed that 12.4 percent of juvenile male detainees and 7.5 percent of juvenile female detainees tested positive for cocaine.

The Terros, Inc., outpatient detoxification program reported that only 9 percent of treatment admissions were for cocaine abuse in 2001; however, the proportion rose to 19 percent from July 2002 to April 2003 (exhibit 6). Data from the largest detoxification programs, East Valley Addiction Council and Community Bridges, revealed that 51 percent of admissions excluding alcohol were for stimulants (cocaine, amphetamine, and methamphetamine) during the first three quarters of the current fiscal year.

The Arizona DHS, Division of Behavioral Health Services, Substance Abuse Bureau, reported that 9 percent of clients admitted to treatment throughout the State during the first three quarters of FY 2003 were for cocaine abuse.

Cocaine hydrochloride is consistently available throughout the Phoenix, Tucson, and Nogales areas of Arizona according to the DEA. Wholesale cocaine is primarily sold in powder form in kilogram and half-kilogram pressed bricks wrapped in cellophane and packaging tape.

Retail cocaine has historically been sold in gram to ounce quantities. Street-level quantities of cocaine are usually sold in folded papers called “bindles,” small vials, or Ziploc baggies. Prices in Phoenix in 2003 (through March) for an “eightball” dropped to \$80–\$100 from a previous high of \$100–\$140 during 2001 (exhibit 6). An eightball sells for \$80–\$120 in Tucson. The kilogram price has remained stable in both Phoenix and Tucson, ranging from \$14,000 to \$17,000. Crack cocaine sold for \$20 per rock (one-third gram).

The DEA reported intercepting a package through the U. S. Postal Service that contained tobacco laced with cocaine; it was being mailed from Phoenix to the east coast.

Since 1995, law enforcement officers from both the United States and Mexico have found 13 tunnels in Nogales, Arizona, and Nogales, Sonora, that have been suspected of being used to smuggle both drugs and people.

Heroin/Morphine

The Maricopa County ME reported 103 morphine-related deaths for 2002, compared with 137 in 2000, a 24.8-percent decline (exhibit 1). Deaths involving the combination of heroin and cocaine appear to be relatively unchanged for the past 4 years.

Estimated rates for heroin ED mentions were 12 per 100,000 in the first half of 2002 compared with 13 per 100,000 for first half of 2001, reflecting a significant decrease (exhibit 2).

During 2002, 5.0 percent of ADAM male arrestees and 5.2 percent of female arrestees tested positive for opiates in Phoenix (Maricopa County) compared with 6.5 percent of male and 7.6 percent of female arrestees in Tucson (Pima County) (exhibit 3).

Heroin admissions to the TASC Adult Deferred Prosecution Program remained stable at 5.5 percent of the cumulative total (673 of 11,665) from March 1989 to March 2003 (exhibit 4). The East Valley Addiction Council and Community Bridges detoxifica-

tion centers admitted 1,185 (38 percent of 3,094) individuals for opiate detoxification during the first three quarters of FY 2003 (exhibit 6). Data from Terros, Inc., revealed that 48 percent of outpatient detoxification patients were admitted for heroin abuse, continuing a downward trend.

The DEA reported that both black tar and brown powder heroin were readily available in Phoenix. Brown powder can be purchased at the street level. It was reported that one purchase of brown heroin had the appearance of dirt or cocoa powder and was wrapped in plastic. The plastic had been dipped in mechanic’s grease or petroleum grease and then wrapped with duct tape. It was reported that the availability of black tar heroin declined slightly. It was also reported that black tar was smuggled into the United States from Burma.

The DEA reported the average purity of heroin as 45 percent pure. Street-level prices remained stable. Kilogram prices in Phoenix increased from \$32,000–\$40,000 in 2001 to \$42,000–\$50,000 in 2003 (through March) (exhibit 7).

Other Opiates

Deaths related to propoxyphene/other narcotics declined from 70 in 2000 to 54 in 2001 only to rise to 69 in 2002, a 28-percent increase (exhibit 1).

Estimates of ED mentions for oxycodone/combinations revealed a 50.4-percent increase from the first half of 2001 (135) to the first half of 2002 (203) (exhibit 8). Although the trends were statistically insignificant, mentions for hydrocodone/combinations decreased slightly, while those for narcotic analgesics/combinations and anxiolytics, sedatives, and hypnotics continued upward trends (exhibit 8).

The Phoenix DEA Diversion Group reported that the most commonly abused pharmaceutical controlled substances include Vicodin, Lortab, and other hydrocodone products; Percocet, OxyContin, and other oxycodone products; benzodiazepines; and codeine products. Carisoprodol (Soma) in combination with other analgesic controlled substances, tramadol (Ultram), and nalbuphine (Nubain) continue to be highly abused prescription-only substances.

The Phoenix Diversion Group reported an ongoing investigation of an OxyContin prescription drug ring in the Phoenix area. Sources have stated that a 40-milligram OxyContin tablet sold for \$20 to \$25. Per

cocet sells for \$5 per tablet, Vicodin ES for \$5 per tablet, Valium (10 milligrams) for \$4 per tablet, Lortab (10 milligrams) for \$5–\$6 per tablet, Soma for \$2 per tablet, and methadone (10 milligrams) for \$5 per tablet.

Pain management clinics have become the focus of investigation because of the apparent excessive prescribing of controlled substances. It was reported that the Arizona licensing boards are reluctant to take action against physicians who excessively prescribe controlled substances because of the medical controversy regarding pain management issues. The American Medical Association has stated that pain is undertreated.

A bill was introduced during the 2003 Arizona legislative session to control carisoprodol. The DEA and local police departments reported that significant amounts of time were devoted to Internet investigations. Some investigations involve physicians/pharmacies distributing large quantities of controlled substances over the Internet.

Marijuana

Marijuana remains readily available in quantities up to hundreds of kilograms packaged for delivery, despite large seizures by the U.S. Customs Service and the U.S. Border Patrol at the ports of entry and at remote sites along the international border. A majority of the bulk marijuana seizures along the border are “abandoned loads” that have been stashed until further transport. The size of an average load ranged between 200 and 500 pounds.

Seeding of marijuana fields generally occurs in March and April, and the crop is harvested in June through August. Most of the seized marijuana has been of poor quality and low tetrahydrocannabinol (THC) content, and contained large numbers of seeds and stalks. No sinsemilla had been identified, although highly potent “bud” marijuana was seized. The DEA described the marijuana as “very dry and almost completely brown, showing that it had been in storage for a long time before being seized.”

Sophisticated smugglers are able to compress the marijuana by hydraulic means into brick-shaped packages that are then wrapped in plastic, paper, or both to create an air-tight seal so that the freshness is maintained.

The Maricopa ME reported one death involving THC in 2002.

Estimated rates of marijuana ED mentions increased significantly between the first halves of 2001 and 2002, from 22 to 26 per 100,000 population, a 17.7-percent increase (exhibit 2). Marijuana mentions have steadily increased over the past decade. The rate in 1994 was 23 per 100,000, compared with 45 in 2001, an increase of nearly 96 percent.

The 2002 ADAM data on adult arrestees in Phoenix (Maricopa County) revealed that 41.5 percent of adult males tested positive for marijuana, compared with 33.7 percent in 2000 and 39.7 percent in 2001 (exhibit 3). There was no substantial change between 2001 and 2002 in the percentage of female arrestees testing positive for marijuana in Phoenix. The proportion of marijuana-positive female arrestees in Tucson (Pima County) increased from 28.7 percent in 2000 to 33.8 percent in 2002. The proportion of male arrestees in Tucson who tested positive for marijuana in 2002 (47.2 percent) was higher than the percentage of marijuana-positive male arrestees in Phoenix.

Marijuana was reported as the primary drug of choice by 26.7 percent of clients in the TASC Adult Deferred Prosecution Program during March 1989 through March 2003 (exhibit 4). Nearly 75 percent ($n=13,550$) of juvenile admissions to the TASC Juvenile Probation Program were for marijuana treatment (exhibit 5). The 2002 ADAM data on juveniles showed that 59.1 percent of male and 37.4 percent of female detainees tested positive for marijuana.

The price fluctuations for wholesale and retail quantities of marijuana are minimal because of the steady availability. Price depends on location in Arizona, the number of middlepersons, and the size of the purchase. Reported prices for 2003 were identical to the reported prices for 2001.

Stimulants

The ME data revealed a 51-percent increase for methamphetamine-related deaths from 2000 ($n=105$) to 2001 (159), and a 17-percent decrease (to 132) in 2002 (exhibit 1). Methamphetamine/combination deaths decreased between 2000 (48) and 2001 (35), but rose to 44 in 2002, a 25.7-percent increase.

The rate of methamphetamine ED mentions per 100,000 population remained stable between the first halves of 2001 and 2002 (exhibit 2). The rate of amphetamine ED mentions, however, nearly doubled during that same time period, from 14 to 26.

The ADAM adult arrestee data show progressively increasing proportions testing methamphetamine positive in both Phoenix (Maricopa County) and Tucson (Pima County). In 2000, 19.1 percent of males in Phoenix tested positive for methamphetamine; that proportion increased to 25.3 percent in 2001 and to 31.2 percent in 2002. Among adult female arrestees in Phoenix, 24.1 percent tested positive in 2000, while 32.2 percent tested positive in 2001 and 41.7 percent tested positive in 2002. Proportions for male and female arrestees in Tucson were substantially lower, although they increased modestly for females from 9.0 percent to 12.4 percent to 14.3 percent for the same reporting periods (exhibit 3). The proportion of male Tucson arrestees testing positive for methamphetamine increased from 6.9 percent in 2000 to 9.2 percent in 2002.

In 2002, ADAM juvenile data show that 13.8 percent of male detainees and 26.3 percent of female detainees tested positive for methamphetamine.

A statistical summary of the TASC Adult Deferred Prosecution Program revealed that 26.7 percent (3,268) of the March 1989 through March 2003 treatment admissions (11,665) were for methamphetamine abuse (exhibit 4). In 2002, 17 percent of the juvenile admissions (3,097) to the TASC program were for methamphetamine/amphetamine (exhibit 5). Thirteen percent of admissions to Terros, Inc., were for methamphetamine detoxification (exhibit 6), compared with 7 percent for the last report period. Data for the East Valley Addiction Council and Community Bridges detoxification programs show 51 percent of treatment admissions were for stimulant abuse. Fifteen percent of treatment admissions through the Arizona Department of Health Services, Division of Behavioral Health, treatment system were for methamphetamine during the first three quarters of FY 2003.

The DEA reported that a form of high-grade methamphetamine commonly referred to as “ice” now dominates street-level sales throughout Arizona. Street-level purchases of ice exceed 80 percent purity. Reportedly the majority of methamphetamine for distribution is manufactured in super labs in California and Mexico.

A law enforcement group in Tucson reported that methamphetamine-permeated greeting cards have been used to smuggle drugs into jails and prisons. Methamphetamine bundles have been described as being wrapped in silver duct tape inside Tupperware and concealed inside the tires of a vehicle. Bundles have been described as being concealed in layers of plastic and coated with automotive grease.

A total of 139 clandestine laboratories were seized during the first two quarters of FY 2003 by combined law enforcement groups. In Phoenix, it was reported that 31 children were present at clandestine lab locations during the second quarter. The DEA reported the approximate cost for cleaning up clandestine methamphetamine labs as \$743,000 for calendar year 2002.

Reported methamphetamine prices have increased because of the increase in ice. The DEA, local police departments, and county sheriffs’ offices report the following methamphetamine prices, which vary depending on location in the State. In 2001, a pound of crude brownish Mexican methamphetamine sold for \$3,500 in Phoenix. The pound price in Phoenix in 2003 (through March) was still reported as \$3,500 for the crude brownish form, while ice sold for \$7,000–\$9,000 (exhibit 7).

Other Drugs/Club Drugs

The Maricopa County ME’s Office data included one death from gamma hydroxybutyrate (GHB) and two each from methylenedioxymethamphetamine (MDMA or ecstasy) and ketamine in 2002 (exhibit 1).

Estimates for ED mentions of selected club drugs showed a significant 85-percent decrease in lysergic acid diethylamide (LSD) mentions in the first half of 2002 ($n=8$) compared with the first half of 2001 (54), and a significant 50-percent decrease for MDMA mentions for the same period (exhibit 9). Mentions for phencyclidine (PCP) increased a significant 55.6 percent in the first half of 2002 (42) compared with the second half of 2001 (27). Other club drugs continue to be readily available throughout Arizona, including GHB, ketamine, nitrous oxide (whippits), and psilocybin mushrooms.

Law enforcement agencies described ecstasy tablets that are double-sided and referred to as “double stacks.” Seizures of double stacks revealed a green spade logo. Lightning Bolt, Green Spade, White/Blue Dove, White Mitsubishi, Blue Dolphins, and Bad Boy ecstasy tablets have been reported by law enforcement. A new ecstasy tablet, “white gumdrop,” was reported as available on the street. The DEA reported that harder ecstasy pills were sometimes cut with Vicodin and B-12, and therefore, were not pure MDMA.

Reported prices for GHB were \$5–\$10 for 1 dose (1 teaspoon), \$425 for 25 pounds, and \$700 per gallon. The individual tablet price for MDMA in Phoenix in the first quarter of 2003 was \$15–\$30 (exhibit 7). Tablet prices for MDMA declined as the quantity

purchased increased. Thus, tablets cost \$7.50–\$9.00 each when 1,000 tablets (“a boat”) were purchased and \$6–\$7 each for quantities of 5,000 or more.

INFECTIOUS DISEASES RELATED TO DRUG ABUSE

Since 1981, there has been a total of 8,429 AIDS cases reported to the Arizona DHS; of these AIDS cases, 4,551 (54 percent) are known to be deceased (exhibit 10).

Ninety-one percent of the total reported AIDS cases are male, but a larger percentage of more recently reported cases are females. Six percent of cases reported prior to 1990 were female, compared with 11 percent of cases from 1990 through 2000. Fourteen percent of the total reported HIV cases are female.

Seventy-one percent of all AIDS cases have been among Whites, but recent trends show increasing numbers of AIDS and HIV cases within the non-White population. Prior to 1990, African-Americans represented 3 percent of the Arizona population but 5 percent of the reported AIDS cases. From 1990 to 2002, the percentage of African-American AIDS cases increased to 8 percent; in 2001 and 2002, the percentage increased to 14 percent of AIDS cases. For HIV only, African-Americans represent 10 percent of the total cases.

The pattern for Hispanic AIDS cases is similar. Prior to 1990, 10 percent of AIDS cases were among Hispanics, while from 1990 to 2002, the percentage rose to 18 percent. For 2001 and 2002, Hispanics accounted for 25 percent of Arizona’s population, 25 percent of the AIDS cases, and 24 percent of the HIV cases. Native Americans accounted for 4 percent of the HIV and 4 percent of the AIDS cases for the past 4 years, but constituted 5 percent of Arizona’s population.

The predominant mode of transmission of AIDS and HIV throughout Arizona has been male-to-male sexual contact, accounting for 61 percent of the AIDS cases and 50 percent of the HIV cases. Male-to-male sexual contact accounted for 66 percent of AIDS cases in 1990 and 54 percent in 2000. In 1990, 11 percent of the AIDS cases and 8 percent of HIV cases were among men who have sex with men and are also injection drug users. Heterosexual contact with an HIV-positive person or a person known to have a risk factor for HIV represents a small but increasing proportion of Arizona’s cases, particularly among females. For males and females combined, heterosexual contact accounted for 5 percent of cases in 1990 and 14 percent in 2000.

The majority of AIDS cases are diagnosed between the ages of 30 and 39 (45 percent), while HIV cases are diagnosed over the wider age ranges of 30–39 (40 percent) and 20–29 (34 percent). Arizona has consistently had a very low rate of pediatric HIV and AIDS cases.

Testing for hepatitis C was provided for 150 clients in a local methadone treatment program, and 65 percent tested positive.

DRUG TREATMENT AND EDUCATION FUND

Annual Report, Fiscal Year 2000

In November 1996, Arizona voters passed the Drug Medicalization, Prevention and Control Act. The centerpiece of the act is the diversion of certain drug offenders from prison. The act requires a court to sentence first and second time nonviolent offenders who are convicted of personal possession or use of a controlled substance to probation and drug treatment. The act created a Drug Treatment and Education Fund (DTEF), which receives revenue from a tax on liquors, to provide the education and treatment services required by the act. It also mandates that the Administrative Office of the Courts prepare a report “...that details the cost savings realized from the diversion of persons from prison to probation.”

The FY 2000 report was based on the third year of data collection. The report highlights included the following:

- In FY 2000, 5,397 probationers participated in substance use treatment funded by DTEF.
- Of those 5,397 probationers, 1,652 were mandatorily sentenced to probation pursuant to the act, and 3,745 were probationers in need of substance use treatment.
- A total of \$3,663,883.75 was expended by adult probation departments throughout the State to provide treatment services to the 5,397 probationers.
- As of the end of FY 2000, 4,027 of the 5,397 probationers ended treatment, and of these, 54 percent complied with the treatment requirements.
- Standard outpatient treatment was the most frequently used treatment intervention (65 percent).

- The average substance abuse treatment cost per probationer who entered treatment during FY 2000 was \$678.87.
- As a result of this Act, the most realistic prison cost avoidance was estimated to be \$9,994,572 during FY 2000.

For inquiries concerning this report, please contact Ilene L. Dode, Ph.D., EMPACT Suicide Prevention Center, Inc., 1232 East Broadway, Suite 120, Tempe, Arizona 85282, Phone: 480-784-1514, Fax: 480-967-3528, E-mail: <idode@aol.com>.

Exhibit 1. Annual Number¹ of Drug-Related and Drug-Induced Deaths in Phoenix, by Drug: 1993–2002

Drug	1993	1994 ²	1995 ³	1996	1997	1998	1999	2000 ⁴	2001	2002 ⁵
Cocaine	27	22	35	16	21	87	215	167	136	116
Morphine	50	52	73	77	48	90	106	137	103	103
Cocaine/Morphine Combinations	12	14	27	24	35	65	55	54	52	54
Methadone/Combinations	6	8	7	11	14	26	43	37	20	41
Methamphetamine	20	26	50	7	15	51	75	105	159	132
Methamphetamine/Combinations	4	3	1	10	20	30	43	48	35	44
Propoxyphene/Other Narcotics	3	1	2	4	8	20	57	70	54	69
Barbiturates/Benzodiazepines/ Other	0	0	4	15	55	52	41	77	25	50
Totals for Year	122	126	199	164	216	421	635	695	584	609

¹ Peak years are shown in boldface type.

² Data do not include April, but do include one propoxyphene/morphine death.

³ Data do not include September.

⁴ Data include one death each from PCP, isobutane, and nitrous oxide.

⁵ Data include one death involving GHB and THC and two each involving MDMA and ketamine.

SOURCE: Maricopa County Medical Examiner's Office, May 2003

Exhibit 2. Rate¹ of ED Drug Mentions Per 100,000 Population by Selected Drug: 2H 1997–1H 2002

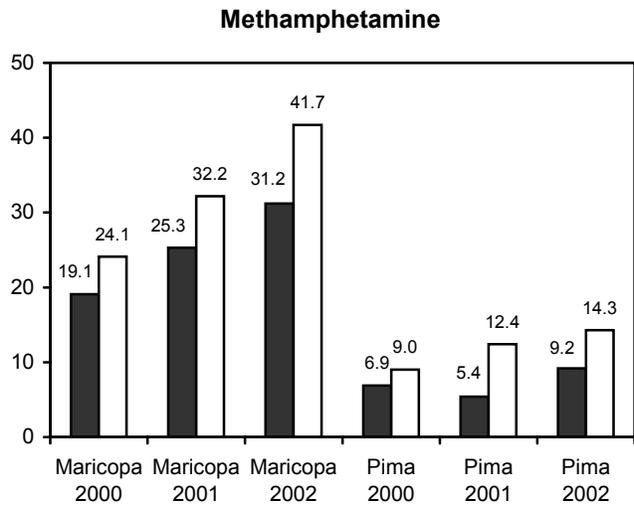
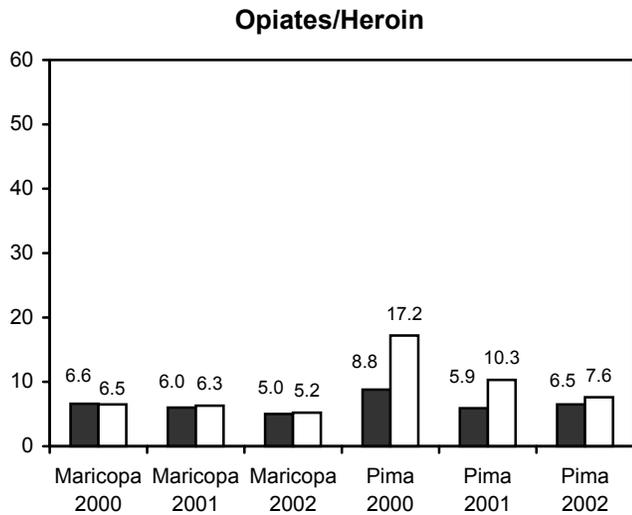
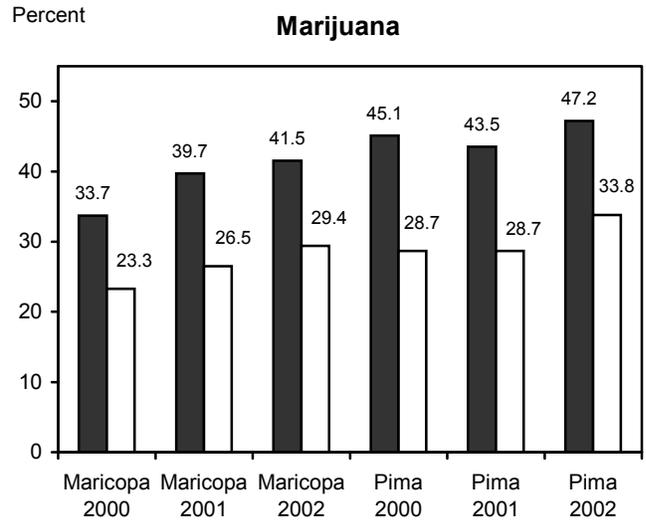
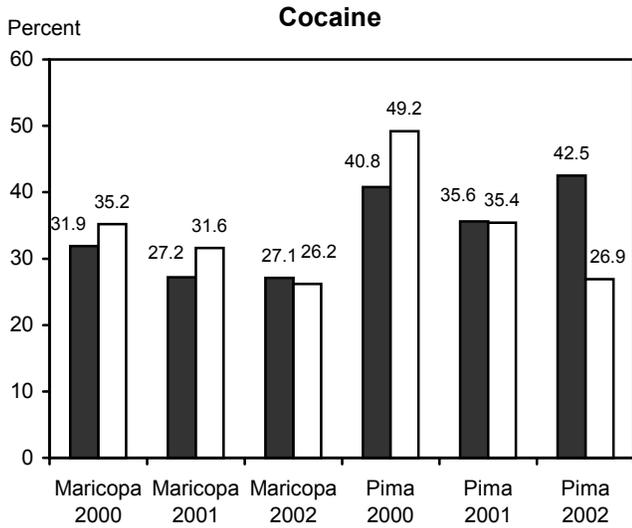
Drug	1997	1998		1999		2000		2001		2002
	2H	1H	2H	1H	2H	1H	2H	1H	2H	1H
Cocaine	33	37	36	42	49	41	44	30	31	31
Heroin	20	23	20	19	22	20	20	13	14	12
Marijuana	19	19	17	27	23	22	29	22	23	26
Methamphetamine	17	14	7	7	9	13	16	9	12	10
Amphetamine	12	11	7	12	13	14	17	14	17	26

¹ Peak periods are shown in boldface type.

SOURCE: DAWN, OAS, SAMHSA

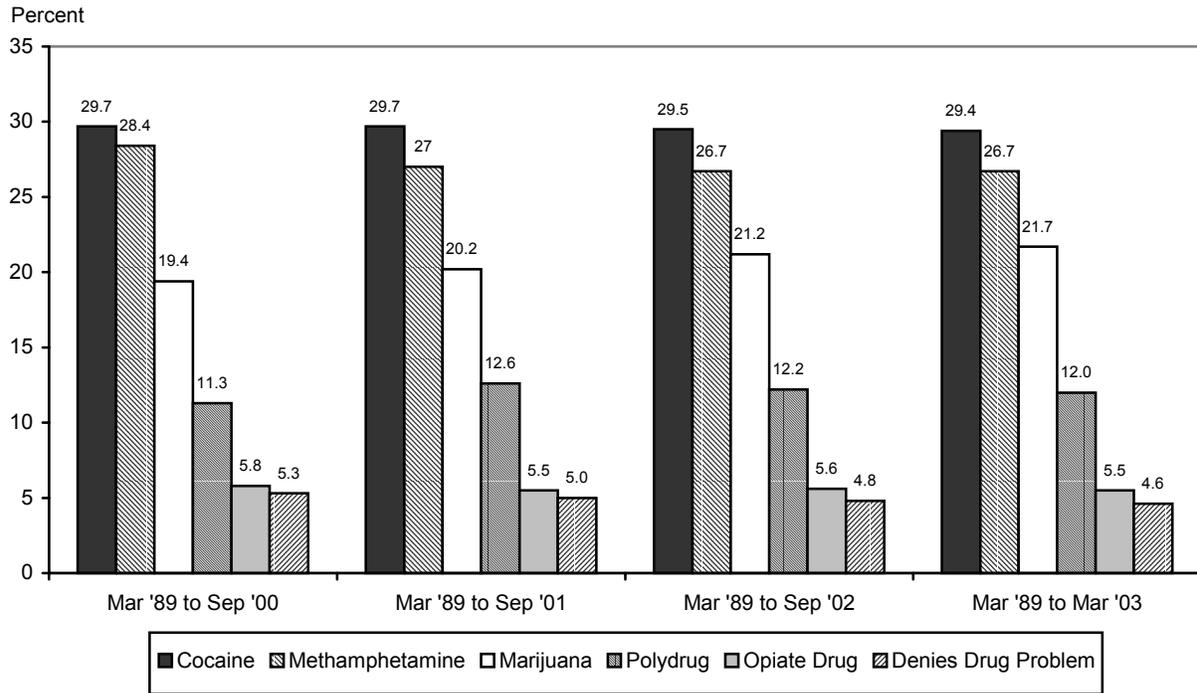
Exhibit 3. Percentages of Arrestees in Maricopa and Pima Counties Testing Positive for Cocaine, Opiates, Marijuana, and Methamphetamine: 2000–2002

■ Males
□ Females



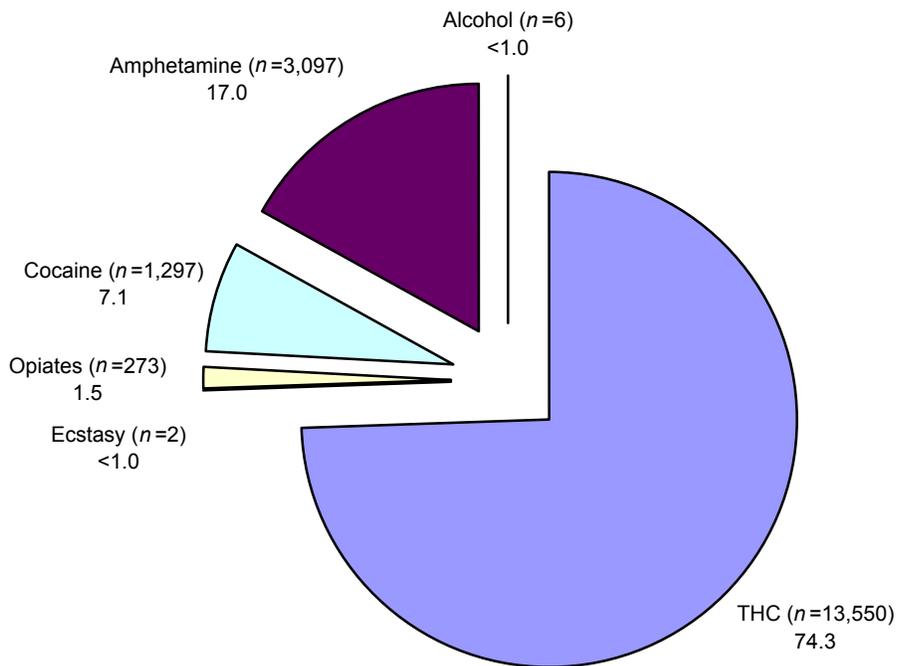
SOURCE: ADAM, NIJ

Exhibit 4. Percentages of Adult Deferred Prosecution Program Admissions in Phoenix by Selected Drugs: March 1989–March 2003



SOURCE: Adult Treatment and Assessment Screening Center (TASC)—Deferred Prosecution Program

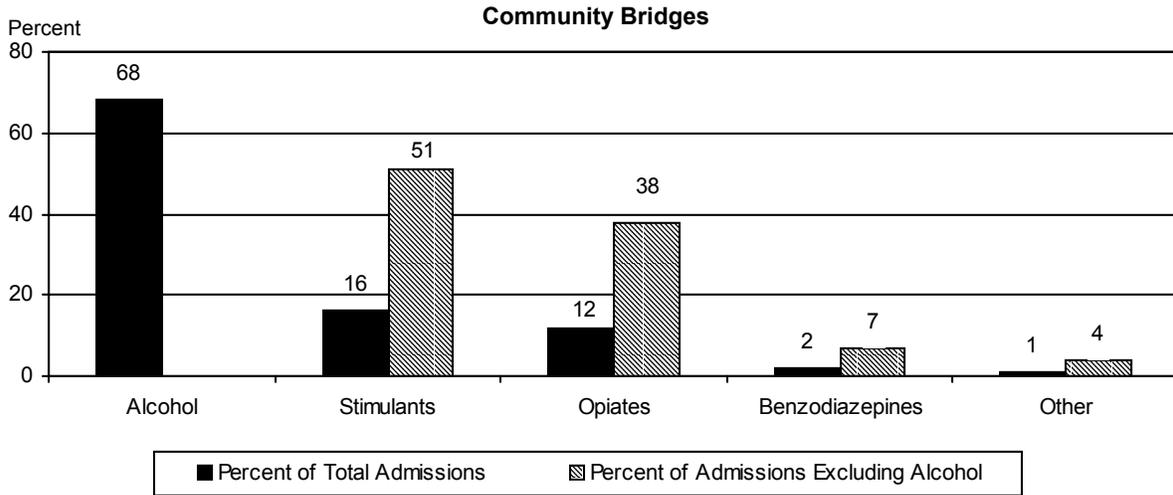
Exhibit 5. Percentages of TASC Juvenile Clients in Phoenix, by Primary Drug: 2002



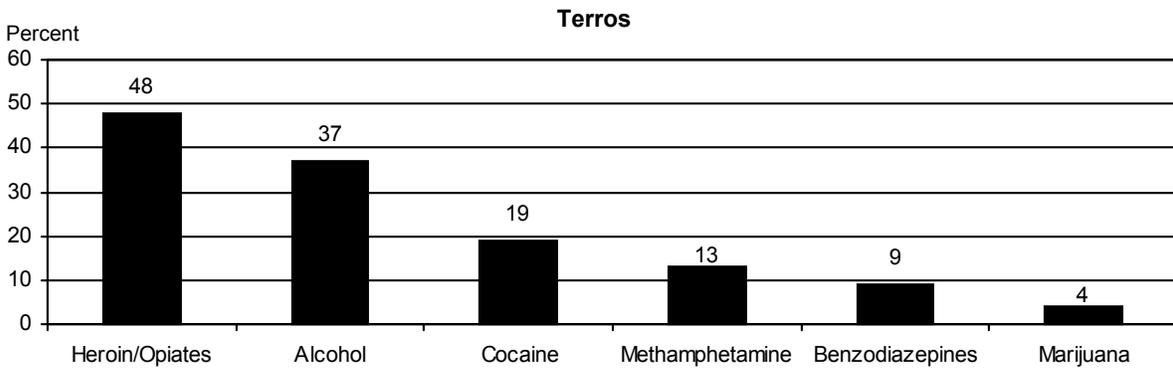
N=18,225

SOURCE: Treatment and Assessment Screening Center (TASC), Maricopa County Juvenile Probation

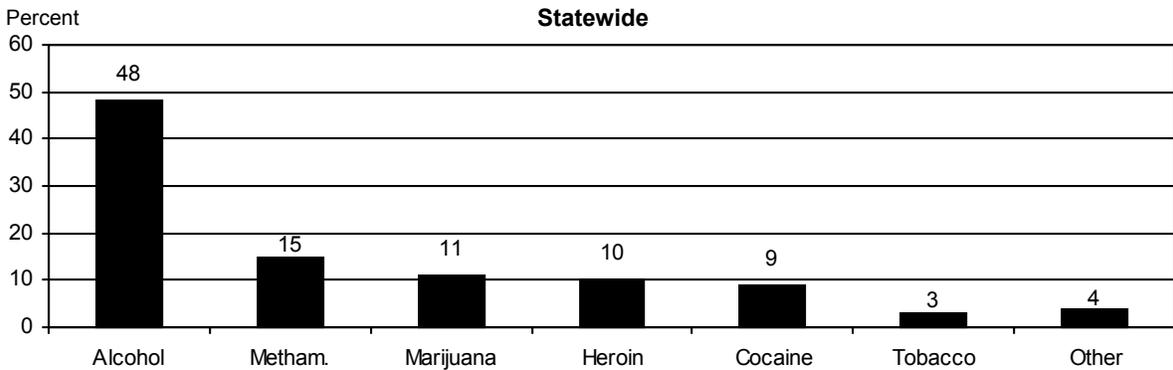
Exhibit 6. Percentages of Treatment Admissions in Two Phoenix Programs and Statewide by Primary Drug: July 1, 2002–April 30, 2003



SOURCE: Community Bridges and East Valley Addiction Council



SOURCE: Terros, Inc.



SOURCE: Arizona Department of Health Services, Division of Behavioral Health Services, Substance Abuse Bureau

Exhibit 7. Drug Prices in Phoenix and Tucson: 2001, 2003¹

Drug	2001		2003	
	Phoenix	Tucson	Phoenix	Tucson
Cocaine				
Rock (one-third gram crack)	N/A	N/A	\$20	\$20
Eightball	\$100–\$140	\$80–\$130	\$80–\$100	\$80–\$120
Ounce	\$500–\$600	\$500–\$650	\$600–\$800	\$500–\$600
Ounce crack	N/A	N/A	\$400–\$450	N/A
Kilogram	\$15,000–\$17,000	\$15,000–\$18,000	\$14,000–\$17,000	\$15,000–\$17,000
Heroin				
A “20” “BB” (80–100 milligrams)	\$20	\$20–\$25	\$20	\$20–\$25
A “paper” (one-quarter gram)	\$20–\$30	\$20–\$25	\$20	\$20–\$25
Gram	\$70–\$100	\$60–\$110	\$80	\$60–\$110
Ounce (“piece,” 28 grams)	\$1,100–\$1,500	\$1,075–\$1,300	\$950–\$1,000	\$1,075–\$1,300
Kilogram	\$32,000–\$40,000	N/A	\$42,000–\$50,000	\$43,000
Marijuana				
Ounce	\$75–\$150	\$65–\$105	\$75–\$150	\$65–\$105
Pound	\$500–\$750	\$400–\$600	\$500–\$750	\$400–\$600
Methamphetamine				
One-half teener	N/A	N/A	\$40	\$80–\$135
One-fourth ounce	\$125	\$275	\$250 (ice)	\$120–\$300
Ounce	\$300–\$600	\$500–\$900	\$700–\$800 (ice) \$300–\$500	\$650–\$1,000
Pound	\$3,500–\$12,000 (higher price for ice)	\$3,800–\$6,000	\$7,000–\$9,000 (ice) \$3,500	\$13,000 (ice)
MDMA				
One tablet (wholesale)	\$5.50–\$10.50		N/A	
One tablet (retail)	\$15–\$30		\$15–\$30	
Roll (25–100 tablets)	N/A		\$10–\$15 each	
Boat (1,000 tablets)	N/A		\$7.50–\$9.00 each	
5,000 or more tablets	N/A		\$6.00–\$7.00 each	

¹ January–March 2003.

SOURCES: DEA Phoenix Division Offices, U.S. Customs, Arizona Department of Public Services, Phoenix Police Department, and Maricopa County Sheriff Department

Exhibit 8. Number¹ of ED Mentions of Psychotherapeutic Drug Types in Phoenix: 2H 1997–1H 2002

Drug Type	2H 1997	1H 1998	2H 1998	1H 1999	2H 1999	1H 2000	2H 2000	1H 2001	2H 2001	1H 2002
Hydrocodone/combinations	54	59	85	93	98	117	123	184	183	163
Oxycodone/combinations	39	47	56	80	92	110	115	135	188	203
Narcotic analgesics/combinations	356	372	470	728	701	655	666	859	961	994
Anxiolytics, sedatives, and hypnotics	707	743	828	845	816	819	848	1,013	1,064	1,097

¹ Peak time periods are shown in boldface type.

SOURCE: DAWN, OAS, SAMHSA

Exhibit 9. Number¹ of ED Mentions of Club Drugs in Phoenix: 2H 1997–1H 2002

Drug Type	2H 1997	1H 1998	2H 1998	1H 1999	2H 1999	1H 2000	2H 2000	1H 2001	2H 2001	1H 2002
MDMA (ecstasy)	5	1	1	7	13	45	31	58	38	29
LSD	30	40	59	97	60	58	78	54	8	8
PCP	23	28	19	18	21	27	20	34	27	42
Misc. hallucinogens	7	2	1	33	38	40	13	17	8	12
GHB	1	2	0	5	12	11	5	11	8	12

¹ Peak time periods are shown in boldface type.

SOURCE: DAWN, OAS, SAMHSA

Exhibit 10. Number of Reported Arizona AIDS and HIV Infection Cases and Percent of AIDS Case Fatality Rates, by Year of Diagnosis: January 1980–December 2002

Time Period	AIDS			HIV Infection	
	Number of...		Percent	Number of...	
	Cases	Deaths	Case Fatality	Cases	Additional Positive Anonymous Tests ¹
1980	0	0	0		
1981	1	1	100		
1982	5	5	100		
1983	10	9	90		
1984	31	29	94		
1985	101	97	96	67	
1986	171	164	96	112	
1987	317	288	91	400	
1988	370	324	88	452	
1989	478	421	88	333	376
1990	542	464	86	350	407
1991	564	488	87	291	444
1992	719	544	76	264	371
1993	688	439	64	262	352
1994	648	363	56	237	273
1995	689	329	48	294	259
1996	558	178	32	336	368
1997	520	120	23	330	304
1998	510	118	23	308	289
1999	424	70	17	329	351
2000	399	39	10	388	327
2001	394	42	11	401	327
2002	290	19	7	304	328
Total	8,429	4,551	54	5,458	4,776

¹ On March 15, 1989, the option to receive HIV testing anonymously became available.

SOURCE: Arizona Department of Health Services, Division of Public Health Services, Bureau of Epidemiology and Disease Control, Office of HIV/STD Services

Patterns and Trends in Drug Abuse in St. Louis

Heidi Israel Adams, Ph.D., R.N., L.C.S.W.,¹ and Jim Topolski, Ph.D.²

ABSTRACT

Urban heroin and cocaine indicators were mixed, while methamphetamine is increasingly prominent in St. Louis indicators. St. Louis City and St. Louis County law enforcement personnel are concerned about methamphetamine use, and methamphetamine labs in rural areas continue to be a problem. New prevention efforts have been initiated for both methamphetamine and club drugs such as MDMA. Indicator data concerning club drug use/abuse are sparse. Marijuana indicators have been trending up in St. Louis for some time. Primary marijuana treatment admissions more than doubled between 1997 and 2002. PCP and LSD were both noted in ED mentions data. In the St. Louis area, 6,359 cases of HIV and AIDS have been identified through December 2002.

INTRODUCTION

Area Description

The St. Louis metropolitan statistical area (MSA) includes approximately 3 million people living in the city of St. Louis; St. Louis County; the surrounding rural Missouri counties of Franklin, Jefferson, Lincoln, St. Charles, and Warren; in Illinois, East St. Louis; and St. Clair County. St. Louis's population has continued to decrease to approximately 350,000, many of whom are indigent and minorities. Although violent crime has generally decreased, it remains high in drug-trafficking areas. St. Louis County, which surrounds St. Louis City, has more than 1 million residents, many of whom fled the inner city. The county is a mix of established affluent neighborhoods and middle and lower class housing areas on the north and south sides of the city. The most rapidly expanding population areas are in St. Charles and Jefferson Counties, which have a mixture of classes, and both small towns and farming areas. The living conditions and cultural differences have resulted in differing drug use patterns throughout the MSA.

Much of the information included in this report is specific to St. Louis City and County and not to the total MSA. Anecdotal information and some treatment data are provided for the rural area and for the State. Limited data are also available for other parts

of Missouri and offer a contrast to the St. Louis drug use picture.

Data Sources

The sources used in this report are indicated below:

- **Emergency department (ED) drug mentions data** were provided by the Drug Abuse Warning Network (DAWN), Office of Applied Studies (OAS), Substance Abuse and Mental Health Services Administration (SAMHSA), for 1994 through the first half 2002.
- **Drug treatment data** were derived from the Treatment Episode Data Set (TEDS) database. Private treatment programs in St. Louis County provided anecdotal information.
- **Heroin price and purity information** was provided by the Drug Enforcement Administration (DEA), including heroin data from the Domestic Monitor Program (DMP).
- **Drug-related mortality data** were provided by the St. Louis City/County Medical Examiner's Office.
- **Intelligence data** were provided by the Missouri Highway Patrol and the DEA.
- **Human immunodeficiency virus (HIV), acquired immunodeficiency syndrome (AIDS), and sexually transmitted disease (STD) data** were derived from the HIV Vaccine Trials Unit at St. Louis University and the St. Louis Metropolitan Health Department and AIDS Program.

Linda Cottler, Ph.D., of Washington University, who has multiple behavioural research grants, provided additional data.

DRUG ABUSE PATTERNS AND TRENDS

Cocaine indicators were stable in St. Louis. While methamphetamine has become a prominent drug of abuse in other cities and in the rural areas of Missouri, cocaine has retained its dominance in the

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St. Louis urban area. Possible reasons for this situation are that methamphetamine is used primarily by Whites, while cocaine is used primarily by African-Americans. Also, St. Louis City drug dealers are primarily African-American, and city traffickers deal cocaine and heroin. Few methamphetamine labs have been identified in the more populated St. Louis area. Consequently, methamphetamine is not as regularly available in St. Louis City, but it is more readily available outside the city.

Heroin of reasonable purity has continued to be available, but it is also quite expensive compared with other cities. This midwestern city is a destination market, with small entrepreneurial groups marketing heroin.

Marijuana continues to be a very popular drug of abuse among younger adults, and increases in treatment admissions may be a reflection of a high number of court referrals.

Drug education and prevention activities have continued at the community level through programs such as Drug Abuse Resistance Education (DARE) and collaborative arrangements between communities and the police. The National Council on Alcoholism and Drug Abuse (NCADA) and other local education programs target drug use prevention in the area. These groups are particularly active in the surrounding counties of St. Louis. The poor city economy continues to foster drug abuse and distribution. Gangs continue to be involved in drug trade and related violence, with large numbers of African-American and Asian youth and young adults involved in these groups. Interdiction programs include Operation Jetway and Operation Pipeline.

Cocaine/Crack

According to DAWN, the rate of cocaine ED mentions per 100,000 population was 102 in 1994 and stabilized at a rate of 98 in 2001. In the first half of 2002, the rate was 70 per 100,000 population, with an estimated 1,624 mentions (exhibit 1).

The St. Louis City/County medical examiner (ME) reported that cocaine-related deaths trended downward from 128 in 1994 to 93 in 1996 to 58 in 2002 (exhibit 1). Many of the recent deaths involved alcohol and other drugs.

Cocaine treatment admissions and related law enforcement activity have stabilized or decreased over the past few years. Cocaine no longer drives the efforts of St. Louis law enforcement and treatment

programs. The DEA's emphasis has shifted from cocaine to methamphetamine, club drugs, and heroin. Law enforcement sources, the DEA, and street informants continued to report high quality, wide availability, and low prices for cocaine. Cocaine is used and most available in the urban areas. Powder cocaine grams sold for \$100–\$125; purity averaged 77 percent (exhibit 2). Crack prices dropped to \$100–\$250 per gram and \$20 per rock on the street corner. An eightball costs about \$300. All cocaine in St. Louis is initially in the powder form and is converted to crack for distribution. Cocaine was readily available on the street corner in rocks or grams. The price of a gram in Kansas City was stable at \$250. The “rock” price is the same in smaller cities outside St. Louis, but the gram price is higher.

The continued use of cocaine has potentially severe long-term consequences by contributing to the spread of STDs through multiple partners. The STD rate in St. Louis has decreased, but drug and alcohol use continue to contribute to unsafe sex and multiple partners.

Most cocaine users smoke crack cocaine, although some use powder cocaine. Only injection drug users (IDUs) who combine cocaine and heroin (“speedball”) use cocaine intravenously. Younger users tend to smoke cocaine. Polydrug use is also evident in the treatment data. The reported use of marijuana, heroin, and methamphetamine in addition to cocaine suggests this trend will likely continue.

Cocaine use varies by area, and the drug is primarily used in urban areas in the form of crack.

Heroin

Heroin consistently appears in all indicators. Heroin ED mentions rose steadily from 1994 through the first half of 2002, when there were 567 mentions. ED mentions for the groups age 18–25 and 26–34 increased in the recent reporting periods and accounted for 57 percent of the ED mentions in the first half of 2002. The increase in heroin mentions among all age groups, while not significant, indicates the wide availability of this drug in the MSA. The three top reasons for seeking medical intervention for heroin use were overdose, withdrawal, and unexpected reaction.

Heroin-related deaths reported by the St. Louis City/County ME have leveled off in recent years. In 2000, there were 47 heroin-related deaths, compared with 35 in 2002 (exhibit 1). More heroin deaths occurred in St. Louis County than in the inner city;

these deaths are interpreted to support the idea that heroin use is increasing in the suburbs. Statewide heroin deaths caused by overdose alone were not much higher, because heroin purity is higher in the St. Louis area than in other cities in Missouri. DMP data show a peak of 24.0 percent purity in 1998 and a drop to 13.8 percent for most samples in 2002.

While heroin treatment admissions increased dramatically between 1996 and 2000, admissions leveled off in 2001 and 2002, when they accounted for approximately 12 and 11 percent of illicit drug admissions, respectively (exhibit 1). Limited slots for admissions to State-funded methadone or modified medical detoxification programs exist in Missouri, which may influence these data. When queried, private treatment programs stated that 25 percent of their admission screens were for heroin abuse, but admission depended on “ability to pay.” Thus, many heroin abusers in need of treatment were referred to State-supported programs or “private pay” methadone programs. Rapid detoxification, using naltrexone (Depade, ReVia), is still a treatment option at private hospitals, but it is expensive. In 2002, about 36 percent of heroin admissions were younger than 25. Among heroin admissions, intravenous use was the primary method of administration for more than 70 percent. The increased availability of consistent, higher purity heroin has led to a wider acceptance of the drug in social circles. One of the reasons for its acceptance is that it does not have to be injected to get the desired effects. When the purity decreases significantly, many users will have to snort or inject heroin to get high.

A steady supply of Mexican heroin remains available. The DEA’s DMP purchased equal quantities of heroin on both the north and south sides of the city. In the last 6 months, samples of Southwest Asian (SWA) heroin were purchased. The purity was 28 percent for this SWA heroin. Historically, heroin purity has fluctuated by area and over time. In the past 2 years, purchase purities ranged from 4 to 70 percent, with an average of 15 percent (exhibit 2). Availability of other heroin besides that originating from Mexico is uncertain.

Most heroin is purchased in aluminum foil. In addition, it is sold in bundles (one-tenth-gram packages of heroin in plastic wrap and aluminum foil known as “bindles”) for \$40 (exhibit 2). The number-5 gel capsule is also available. Most available heroin is dark brown or black tar and of consistent quality and availability. Mexican heroin is generally the only type available, except for the small amount of SWA noted previously.

Heroin cost \$3.98 per milligram in the most recent DMP analysis (exhibit 2), making heroin in St. Louis some of the most expensive in the country. The city is an end-user market and is dependent on transportation of the heroin from points of entry into the Midwest. The wholesale price remains at \$250–\$600 per gram. On street corners, heroin sells for \$250 per gram. Most business is handled by cellular phone, which has decreased the seller’s need to have a regular location, thus reducing the risk of being arrested. In St. Louis and other smaller urban areas, small distribution networks sell heroin.

Kansas City’s heroin supply differs from that of St. Louis. Most heroin in Kansas City is black tar and is consistently of poor quality (less than 10 percent pure). The gram price for this poorer quality heroin is about the same as the gram price for higher purity heroin in St. Louis. The supply was consistent during the last 6 months, and a \$10 bag of heroin was available. Heroin has also become available in the smaller, more rural cities of Springfield and Joplin, each of which has a small IDU population using heroin and methamphetamine.

Other Opiates/Narcotics

OxyContin (a long-lasting, time-release version of oxycodone) abuse remains a concern for treatment providers and for law enforcement. Prescription practices are closely monitored for abuse and isolated deaths have been reported, but no consistent reports are available on the magnitude of this problem. OxyContin costs \$40 for an 80-milligram tablet on the street (exhibit 2). Other opiates continue to represent less than 1 percent of all treatment admissions. Oxycodone, methadone, and morphine ED mentions have remained stable.

The use of hydromorphone (Dilaudid) remains common among a small population of White chronic addicts. The drug costs \$30–75 per 4-milligram pill. Abuse of oxycodone (Percocet and Percodan) by prescription is growing in popularity.

Codeine and methadone have been ranked among the frequently seen drugs in the ME data.

Marijuana

Marijuana ED mentions remained high at 1,425 for the first half of 2002 (exhibit 1). St. Louis ranks eighth in ED visits among the 21 CEWG cities.

Treatment admissions more than doubled from 1997 (1,573 admissions) to 2001 (3,210 admissions) and appear to be holding stable for 2002. Marijuana, viewed by young adults as acceptable to use, is often combined with alcohol. The younger-than-26 age group accounted for 66 percent of primary marijuana treatment admissions (exhibit 1).

Because of the heroin, cocaine, and methamphetamine abuse problems, and the recent “club drug” scare in St. Louis, law enforcement officials have focused less attention on marijuana abuse. Limited resources require establishing enforcement priorities. Often, probation requires participation in treatment for younger users who do not identify themselves as drug dependent. As a potential gateway drug to more serious drug abuse, marijuana is being seriously targeted in local prevention efforts and in the educational system. In focus groups with African-American adults from various social groups, more than one-half identified regular use of marijuana, but they did not identify this use as problematic. This ethnographic information supports the cultural acceptance of marijuana use.

Marijuana is available from Mexico or domestic indoor growing operations. Indoor production makes it possible to produce marijuana throughout the year. In addition to the Highway Patrol Pipeline program, which monitors the transportation of all types of drugs on interstate highways, Operations Green Merchant and Cash Crop identify and eradicate crops. Much of the marijuana grown in Missouri is shipped out of the State.

Stimulants

Methamphetamine, along with alcohol, remains a primary drug of abuse in both the outlying rural areas and statewide (because most of Missouri, outside of St. Louis and Kansas City, is rural). The number of ED methamphetamine mentions in St. Louis increased 56 percent in the late 1990s and was 59 for the first half of 2002 (exhibit 1). A majority of the mentions in 2001 and nearly 75 percent of those in the first half of 2002 involved patients who were male. Whites were responsible for the overwhelming majority of methamphetamine mentions in both time periods.

Methamphetamine is identified as a huge problem in rural communities, unlike in the inner city. This disparity may be explained by the pattern of use of this drug in Missouri.

Methamphetamine (“crystal” or “speed”) was found at very low levels in city indicators in 1995, but reported use increased in the last 4 years. In rural

areas, methamphetamine appears regularly in the treatment data. Methamphetamine has been identified as a problem in all parts of the State. The urban, street-level distributors in St. Louis deal in cocaine, so methamphetamine use is not as widespread in the St. Louis area. This could indicate differences in dealing networks and access to locally produced drugs (“mom and pop” local production versus the Mexican methamphetamine distribution). Cocaine and methamphetamine use are split along racial lines in the State. While the number of methamphetamine treatment admissions remained relatively low in St. Louis (177 for 2000 and 456 in 2002), in rural treatment programs methamphetamine was the drug of choice after alcohol.

In 2001, methamphetamine was detected in three ME cases in the St. Louis metropolitan area. No information on methamphetamine deaths in 2002 was available.

The Midwest Field Division of the DEA decreased its cleanup of clandestine methamphetamine labs after training of local enforcement groups. The intensity of these law enforcement efforts is based on the availability of funds for local police departments to clean up box labs under Community Oriented Policing Service (COPS) funding. Thefts of anhydrous ammonia are being monitored in rural areas. In 2002, the Missouri Highway Patrol reported that 2,743 seizures of methamphetamine labs, dumpsites, and locations of inactive labs occurred in Missouri, ranking it ahead of California, Washington, and Kansas.

Purity of locally produced methamphetamine fluctuated between 70 and 90 percent, while methamphetamine from Mexico was only 20 to 30 percent pure (exhibit 2). In the new methamphetamine scene, Hispanic traffickers, rather than the old network of motorcycle gangs, are the predominant distributors, with shipments from super labs in the southwest being trucked in via the interstate highway system. Methamphetamine shipments have been seized in the interstate Highway Patrol Pipeline program, with purity ranging from 20 to 30 percent. Methamphetamine sells for \$700–\$1,300 per ounce in St. Louis and for as little as \$50–\$100 per gram in some areas. This network is in contrast to the local “mom and pop” labs that produce personal quantities for family and friends. These local labs tend to use the Nazi method of production, with an output of 60 percent of the quantity of the starting products. Purity of the drug and percent of finished product depends on the experience and attentiveness of the “cooker.”

Use of methamphetamine and its derivatives has become more widespread among high school and college students, who do not consider these drugs as dangerous as others. Because methamphetamine is so inexpensive and easy to produce, it is likely that its use will continue to spread.

Depressants

DAWN ED data reflect few depressant mentions in the first half of 2002; rates are not significantly different from those in prior years.

Private treatment programs often provide treatment for antidepressant, benzodiazepine, and alcohol abusers. Day hospital programs and 3-day detoxification have become the treatments of choice for individuals who abuse these substances. Since many of the private treatment admissions are polysubstance abusers, particular drug problems are not clearly identified.

Hallucinogens

Over the years, lysergic acid diethylamide (LSD) has sporadically reappeared in local high schools and rural areas. Blotters sell for \$2–\$7 per 35-microgram dose (exhibit 2). Much of this LSD is imported from the Pacific coast. DAWN data show a steady increase of LSD ED mentions from 1997 (19) to 2000 (74), but a drop to 52 mentions in 2001. A significant decrease occurred between the first half of 2001 and the first half of 2002, from 37 to 15 mentions, respectively.

Phencyclidine (PCP) has been available in limited quantities in the inner city and has generally been used as a dip on marijuana joints. While PCP is not seen in quantity, it remains in most indicator data, including ED mentions, police exhibits, and as a secondary drug in ME data. Most of the users of this drug in the inner city are African-American. PCP ED mentions remained relatively low at 110 for 2001 and 53 for the first half of 2002.

Club Drugs

DAWN ED data show few mentions of methylenedioxymethamphetamine (MDMA) (55 in 2001 and 21 in the first half of 2002). In the first half of 2002, there was one mention of ketamine and three mentions of gamma hydroxybutyrate (GHB). In the city, use of methylenedioxyamphetamine (MDA) has been reported. MDMA is readily available at raves and other dance parties and sells for \$20–\$30 per tablet (exhibit 2). The rave scene has become quite popular in St. Louis. Most ecstasy users are young

adults. While reported use of MDMA or “X” in high school students is frequent, only the DAWN ED indicator quantifies use in this age group. In the first half of 2002, 15 of the 21 MDMA ED mentions were for patients age 12–25.

Toxicology reports showing high levels of ecstasy are rare. Most of the reports about high levels of MDMA abuse are anecdotal or are part of a polydrug user’s history. Public treatment programs report no admissions for MDMA. The private treatment programs that were queried report MDMA as part of a polydrug abuser’s history in less than 10 percent of their treatment admissions.

A local researcher reports that hepatitis C is at high levels among a cohort of known MDMA users. This hepatitis rate may be related to the polydrug use history of these participants.

Dr. Linda Cottler has conducted key informant interviews with several high school and college students to gather data on club drugs in St. Louis. Dr. Cottler’s research group is investigating use further and is conducting focus group interviews with users and professionals to gather data and validate the diagnosis for ecstasy abuse.

GHB remains under scrutiny because its use with alcohol produces an unpredictable reaction in users. No recent deaths have been reported from this “date-rape” drug. GHB is often sold in nightclubs for \$5 per capful or \$40 per ounce. GHB education efforts are directed towards ED personnel, who often see the users initially. Ketamine (“Special K”), a veterinary anesthetic, is known for its hallucinogenic effects. Use of ketamine has been acknowledged anecdotally.

INFECTIOUS DISEASES RELATED TO DRUG ABUSE

HIV/AIDS seropositivity among IDUs remained low in St. Louis. However, it increased among sexual partners of individuals practicing high-risk modes of exposure. The largest increase was found among young African-American females, who were infected through heterosexual contact, and young African-American males. As a result, increased specialized minority prevention efforts have been initiated.

Of the total 2,201 HIV-positive cases identified through 2002, nearly 7 percent were IDUs, and nearly 4 percent involved men who have sex with men (MSM) and are also IDUs (exhibit 3).

Cumulative AIDS cases totaled 4,158 through 2002 (exhibit 4). Of these cases, 2 percent were IDUs and 2 percent were MSM/IDUs. The number of infected

African-Americans was increasing disproportionately among both males and females.

Other infectious diseases, as well as HIV, are the focus of special projects in St. Louis, as described in the next section.

SPECIAL PROJECTS AND RELATED HEALTH ISSUES

STD Rate/Hepatitis C

St. Louis had a syphilis epidemic in 1993 and 1994. In 2000, St. Louis ranked eighth in the Nation for syphilis cases. In 2002, the city still ranked in the top 20 cities for syphilis cases, and the CDC has funded prevention programs in the community. HIV and syphilis/gonorrhea rates are high in neighborhoods known to have an elevated incidence of drug abuse, underscoring the concept of assortative mixing in cohorts. This may limit the cross spread of these illnesses within a neighborhood or zip code. Hepatitis C is a concern in these populations, but inconsistent reporting has made estimation of the problem and tracking of hepatitis C cases difficult. St. Louis ranks third for gonorrhea, with cases remaining at approximately 1,000 per year, and second for chlamydia. Risk-reduction activities have traditionally had limited effects on the recidivism rates with STD cases, leading to the evaluation of harm-reduction models. Recent research has focused on effective

short-term interventions as the method for risk reduction delivery. The increase in heterosexual transmission is a concern for public health officials. Further research is needed on ways to effect sustained behavior change.

HIV Research

Saint Louis University has continued research on HIV prevention vaccines. Most of the prevention vaccine trials have been Phase I trials in low-risk individuals. A completed Phase III trial showed poor laboratory assay results and made progression with the current vaccine unfeasible. New concepts in vaccines and delivery mechanisms are currently being investigated.

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Exhibit 1. Combined Indicators for Cocaine, Heroin, Marijuana, and Methamphetamine in St. Louis: 1996–2002

Indicator	Cocaine	Heroin	Marijuana	Methamphetamine
Deaths (Number)				
1996	93	51	NA ¹	9
1997	43	67	NA	11
1998	47	56	NA	9
1999	51	44	NA	4
2000	66	47	NA	9
2001	75	36	NA	3
2002	58	35	NA	–
DAWN ED Data				
Number of mentions (1H 2001)	1,434	561	1,112	56
Number of mentions (1H 2002)	1,624	567	1,425	59
Rate per 100,000 pop. (1H 2002)	70	24	62	3
Percent change 1H 2001/1H2002	NS ²	NS	NS	NS
Gender of mentions (%) (1H2002)				
Male	63.9	64.9	60.5	66.1
Female	35.2	35.1	38.5	33.9
Age (%) (1H2002)				
12–17	1.1	1.4	7.6	8.5
18–34	38.1	57.1	51.9	61.0
35 and older	60.7	41.6	40.4	30.5
Race				
White	37.6	57.3	54.8	74.6
African-American	57.8	38.4	40.5	13.6
Hispanic	0.4	...	0.5	1.7
Other/unknown	3.3	3.4	3.0	10.1
Route of Administration (%) (Last update–2000)				
Smoking	62.3	6.4	NA	18.8
Intranasal	25.9	22.2		15.6
Injection	7.0	71.5		46.9
Unknown/other	4.8	–		18.8
Treatment Admissions Data (Percent)				
Illicit drug admissions (2001)	36.5	12.4	27.7	7.5
Illicit drug admissions (2002)	33.6	10.8	29.6	4.2
Gender (2002)				
Male	54.7	62.5	74.0	54.2
Female	45.3	37.5	26.0	45.8
Age (2002)				
12–17	0.3	0.8	25.5	4.4
18–25	6.3	34.9	40.1	32.6
26–34	27.3	25.6	20.3	36.5
35 and older	66.1	38.6	14.1	26.5
Race/Ethnicity (2002)				
White	25.8	40.1	41.1	98.9
African-American	73.0	59.0	57.9	0.2
Hispanic	1.2	0.9	1.0	0.0
Route of Administration (2002)				
Smoking	90.1	3.7	95.4	41.2
Intranasal	5.4	38.6	0.3	20.8
Injecting	1.3	52.6	0.1	30.0
Oral	NA	NA	NA	5.4

¹ NA=Not applicable.

² Not significant.

³ Dots (...) indicate an estimate with a relative standard error greater than 50 percent has been suppressed.

SOURCES: ME's Office; DAWN, OAS, SAMHSA; TEDS

Exhibit 2. Other Indicators for Cocaine, Heroin, Marijuana, Methamphetamine, and Other Drugs in St. Louis: 1996–2002

Indicator	Cocaine	Heroin	Marijuana	Methamphetamine and Other Drugs
Multisubstance Combinations	Older users combine with heroin, alcohol	Older users combine with cocaine, alcohol	Joints dipped in PCP; marijuana commonly used with other substances	Methamphetamine commonly used with marijuana
Market Data (2002)	Powder \$100–\$125 per gram \$300 per eightball 77% pure	\$10 per cap \$40 per bundle \$250–\$600 per gram \$3.98 per milligram pure 13–23% pure Mostly Mexican heroin SWA sparse	Sinsemilla \$500–\$1,200 per pound 20% tetrahydrocannabinol (THC)	Methamphetamine \$50–\$100 per gram Mexican: 20–30% pure Local: 70–90% pure
	Crack \$20 per rock \$100–\$250 per gram 50–90% pure		Imported \$2,000–\$4,000 per pound	LSD blotters \$2–\$7 per 35 microgram
				OxyContin \$40–\$80 per milligram
				MDMA \$20–\$30 per tablet
GHB \$5 per capful \$40 per ounce				
Qualitative Data	Readily available, urban choice	Younger users, one-third younger than 25	Readily available, two-thirds of patients in treatment younger than 25	Club drug gaining presence, rural/suburban users of amphetamines
Other Data of Note	NR ¹	SWA heroin noted	NR	Meth lab seizures plateaued

¹ NR=Not reported.

SOURCE: DEA, client ethnographic information

Exhibit 3. HIV-Positive Test Results in the St. Louis Metropolitan Area by Exposure Category, Gender, Race/Ethnicity, and Age: Year-to-Date and Cumulative Totals Reported Through December 2002

Category	HIV-Positive Test Results			
	January 2002–December 2002		Cumulative Through December 2002	
	Number	(Percent)	Number	(Percent)
Exposure Category				
Men/sex/men (MSM)	38	(26.0)	1,310	(59.5)
Injection drug user (IDU)	6	(4.0)	143	(6.5)
IDU and MSM	2	(1.0)	78	(3.5)
Hemophilia	0	(0.0)	11	(1.0)
Heterosexual	43	(29.0)	363	(16.5)
Blood transfusion	1	(1.0)	5	(0.0)
Perinatal	3	(2.0)	21	(1.0)
Unknown	53	(36.0)	270	(12.3)
Total	146		2,201	
Gender and Race/Ethnicity				
Male				
White	49	(33.6)	816	(38.0)
African-American	53	(36.3)	946	(43.0)
Hispanic	5	(4.0)	24	(1.0)
Other	13	(8.9)	19	(1.0)
Unknown	-	(0)	15	(1.0)
Female				
White	7	(4.8)	73	(3.0)
African-American	17	(11.6)	299	(13.0)
Hispanic	0	(0.0)	4	(0.0)
Other	2	(1.0)	5	(0.0)
Age				
12 and younger	2	(1.0)	19	(1.0)
13–19	9	(8.0)	120	(6.0)
20–29	44	(30.1)	742	(33.7)
30–39	53	(36.3)	798	(36.3)
40–49	28	(19.1)	311	(14.1)
50 and older	10	(14.0)	83	(3.7)
Unknown	-	(0)	128	(5.2)
Total	146		2,201	

SOURCE: St. Louis Metropolitan AIDS Program

Exhibit 4. AIDS Cases in the St. Louis Metropolitan Area by Exposure Category, Gender, Race/Ethnicity, and Age: Year-to-Date and Cumulative Totals Reported Through December 2002

Category	AIDS Cases			
	January 2002–December 2002		Cumulative Through December 2002	
	Number	(Percent)	Number	(Percent)
Exposure category				
Men/sex/men (MSM)	60	(38.0)	1,058	(25.3)
Injection drug user (IDU)	0	(7.0)	87	(2.0)
IDU/MSM	0	(2.0)	73	(2.0)
Hemophilia	1	(0.0)	30	(1.0)
Heterosexual	43	(16.0)	197	(4.7)
Blood transfusion	0	(0.0)	20	(1.0)
Perinatal	0	(0.0)	0	(0.0)
Unknown	42	(37.0)	2,693	(64.0)
Gender and Race/Ethnicity				
Male				
White	57	(39.0)	1,984	(47.7)
African-American	72	(49.3)	1,531	(36.8)
Hispanic	3	(<1.0)	39	(1.0)
Other	0	(0.0)	12	(<1.0)
Unknown	0	(0.0)	184	(4.4)
Female				
White	6	(1.0)	95	(2.2)
African-American	17	(11.0)	306	(7.3)
Hispanic	0	(0.0)	4	(<1.0)
Other	1	(<1.0)	3	(<1.0)
Age				
12 and younger	0	(0.0)	17	(<1.0)
13–19	4	(2.6)	28	(<1.0)
20–29	20	(13.6)	623	(14.9)
30–39	67	(45.8)	1,320	(31.7)
40–49	39	(26.7)	567	(13.6)
50 and older	16	(11.3)	200	(4.8)
Unknown	0	(0.0)	1,403	(33.7)
Total	146		4,158	

SOURCE: St. Louis Metropolitan AIDS Program

Indicators of Drug Abuse in San Diego County

Michael Ann Haight, M.A.¹

ABSTRACT

Cocaine's presence among ME and ED mentions declined from 2000 to 2001 and declined among primary treatment admissions between 2001 and 2002. Cocaine-positive screens among arrestees in the ADAM study were stable for adult males and juveniles but rose more than 4 percentage points for adult women. Heroin indicators, in general, continued to decline. From 2000 to 2001, both ME and ED mentions for heroin decreased, as did positive tests among all ADAM populations between 2001 and 2002. Only treatment admissions increased, rising from 1,493 in 2001 to 1,636 in 2002, or by 10 percent. Most indicators for marijuana continued to increase, although the rate of increase slowed. From 2000 to 2001, marijuana ED mentions increased 16 percent. From 2001 to 2002, marijuana treatment admissions rose 13 percent, while the proportion of positive screens among ADAM adult males and females also increased. Marijuana-positive screens among juveniles, however, declined. The primary stimulant in San Diego County continued to be methamphetamine, as it has been for at least the past decade. With the exception of treatment admissions, which increased 23 percent, methamphetamine indicators declined or were stable. Methamphetamine's presence among ME cases decreased 16 percent, while ED mentions did not change significantly. Amphetamine's presence among ME and ED mentions, conversely, appeared to be increasing. Within ME mentions, amphetamine increased 14 percent, and ED mentions for amphetamine, at 942, were higher than those for methamphetamine, and represented a 147-percent increase from 1994. This phenomenon of increasing amphetamine reports will be a focus of the Methamphetamine Strike Force's Information and Education Team (formerly Research Team) in the upcoming year.

INTRODUCTION

Area Description

San Diego County is located in the southwestern corner of California and is bordered by the Pacific Ocean to the west, Mexico to the south, desert to the east, and by a mountain range and major military base to the north. San Diego County has large rural areas that are ideal for growing marijuana and manufacturing methamphetamine. Geographic conditions, such as the many

miles of border shared with Mexico as well as miles of rugged coastline, enable smuggling activities.

The estimated county population in 2002 was 2.9 million inhabitants. Whites, at 60 percent, constitute the majority population, with Hispanics accounting for 25 percent, African-Americans for 6 percent, and Asian and other minority groups for 10 percent. The median age is 30.9, and the population overall is aging. Whites, with a median age of 38.1 years, are the oldest group. Hispanics are the youngest group, with a median age of 25.3, with African-Americans following closely at 27.3 years.

Data Sources

This report presents available data from 1997 through 2002, unless otherwise noted. Data compiled for this report are from the following sources:

- **Drug-involved death data** are from medical examiners (MEs) included in the Substance Abuse and Mental Health Services Administration (SAMHSA) report, *Mortality Data from the Drug Abuse Warning Network (DAWN), 2001*, and represent 1997–2001 data in this report.
- **Emergency department (ED) drug mentions data** are from SAMHSA's Office of Applied Studies (OAS) and are based on the *Emergency Department Trends From the DAWN, Final Estimates, 1994–2001*, with data derived for 1997–2001. Preliminary estimates for the first half of 2002 are also presented.
- **Treatment admissions data** are provided by the San Diego County Alcohol and Drug Data System (SDCADDS), 1997–2002. The system is an admission-based data set; individuals can account for multiple admissions. Local methadone programs under private administration are not included, deflating total opiate admissions.
- **Arrestee drug testing data** are from the Arrestee Drug Abuse Monitoring (ADAM) program, Criminal Justice Research Unit, San Diego Association of Governments (SANDAG), 1997–2002.

¹ The author is affiliated with The Silver Gate Group, San Diego, California.

- **Price and purity data** were provided by the Narcotics Information Network, April 2003.
- **Border seizures data** are from the California Border Alliance Group, *Narcotics Threat Assessment FY 2004*, April 1, 2003.
- **Acquired immunodeficiency syndrome (AIDS) data** were derived from the San Diego County Health and Human Services Agency, “Definitive and Presumptive AIDS Cases Surveillance Survey,” May 31, 2003.

DRUG ABUSE PATTERNS AND TRENDS

Cocaine/Crack

Most cocaine indicators decreased from 2001 to 2002 (from 2000 to 2001 for ME and ED data). Cocaine’s presence in drug-involved deaths in San Diego decreased 52 percent, while cocaine-related ED mentions and treatment admissions declined by 19 and 3 percent, respectively (exhibit 1). The proportion of cocaine-positive females in the ADAM program, however, increased by 4 percent between 2001 and 2002. The proportion of juveniles in the ADAM study who tested positive for cocaine was virtually unchanged.

In 2001, cocaine was detected in 40 of the 312 drug-involved deaths, compared with 84 in 2000 (a 52-percent decrease) and 108 in 1997 (a 63-percent decrease). Cocaine was detected in 13 percent of the total 2001 deaths and in 26 percent of 1997 deaths. Descriptive data for the decedents were not published in the DAWN report.

The number of ED mentions for cocaine decreased 19 percent from 2000 to 2001 (the last full year for which final numbers are available), falling from 1,002 mentions in 2000 to 812 in 2001. Combined with other indicators, the ED data show that cocaine’s presence in San Diego has been decreasing steadily since 1999. In 2001, San Diego County had fewer cocaine mentions per 100,000 population than any other DAWN site. Demographics reported for cocaine mentions showed that, in 2001, males accounted for the majority of cocaine episodes (62 percent). Whites, at 52 percent, accounted for a majority of cocaine mentions, but were underrepresented relative to population figures. African-Americans, conversely, were overrepresented (27 percent). More than one-half of the cocaine mentions occurred within the population age 35 and older. In terms of the characteristics associated with the episode itself, cocaine was involved in a multiple drug episode 72 percent of the time, and the reason for contact was chronic effects for 43 percent of the cocaine visitors. The motive for use was dependence

for 43 percent in 2001. In each of the years represented in this report (1997–2001), a plurality of cocaine users reported dependence as the drug use motive.

In 2002, there were 1,426 primary cocaine admissions to county-funded treatment programs, a 3-percent decrease from 2001. The numbers for 2002 represented 8 percent of total admissions, the lowest during the period under discussion. From 1997, when there were 1,266 cocaine admissions, to 2002, cocaine admissions increased 13 percent. The majority of 2002 cocaine admissions were male (63 percent) and African-American (61 percent), an overrepresentation. All other racial/ethnic categories were underrepresented. The average age was 38.3. More than 80 percent reported that smoking was the primary route of administration, while the mean years of use reported were 14.2.

Cocaine-positive screens among adult males in the ADAM program were unchanged from 2001 to 2002, when nearly 13 percent tested positive for cocaine. Of these, 10.6 percent reported past-year use of crack, compared with 10.5 percent reporting past-year use of powder cocaine. When asked the number of days in the past 30 that they had used crack or powder cocaine, the distinction was greater: users reported using crack on 5.8 days, compared with 2.3 days for powder cocaine. More adult females were positive for cocaine than their male counterparts. The proportion of positive cocaine tests among adult females increased from 17 percent in 2001 to 21 percent in 2002. Asked about the number of days that they had used cocaine in the past 30, females also reported more crack use than powder, using an average of 8.6 days, compared with 3.8 days for powder cocaine. Juveniles’ positive tests for cocaine were virtually unchanged, with 1 percent positive in 2001 and 2 percent in 2002.

Cocaine’s price and availability have been quite stable over the past few years for small amounts. Rock cocaine could be purchased for \$10 for one-tenth of a gram; a full gram cost \$40–\$80 and one-eighth of an ounce cost \$120–\$130. Purity levels for crack at the gram and ounce quantities ranged from 68 to 71 percent. For powder cocaine, the range is wider at the ounce level—from 54 to 90 percent pure.

Cocaine seizures at the southwest border increased 11 percent from 2001 to 2002, rising from 20,118 kilograms in 2001 to 22,320 in 2002. From 1997 to 2002, cocaine seizures increased 28 percent along the entire southwest border. Cocaine seizures within San Diego and Imperial Counties, however, decreased 22 percent from 2001 to 2002, marking the second consecutive year that seizures within these counties fell (exhibit 2). In 2002, 2,875 kilograms were seized at the two California counties, compared with 3,709 in 2001.

The 2002 cocaine seizures represented 13 percent of total southwest border activity.

The spring 2003 expert focus group had little to say about cocaine, reporting that both crack and powder cocaine were readily available, but there was little additional information to report. A representative from the San Diego City School District reported that students were reporting some use of crack cocaine. He admitted that these anecdotal reports were difficult to support with hard data. Were these reports true, it would be alarming to educators, parents, and substance abuse prevention and treatment workers, who have felt secure with the very low levels of self-reported cocaine use in city schools. The educator's report needs to be followed up.

Heroin

All heroin indicators decreased from 2001 to 2002 (2000 to 2001 for ED mentions) except for treatment admissions, which increased by nearly 10 percent (exhibit 3).

The presence of heroin/morphine (referred to hereafter as heroin) in drug-involved deaths decreased 23 percent from 2000 to 2001, when heroin was involved in 111 of the 312 deaths—the lowest level in a 6-year period. From 1997 to 2001, heroin's presence decreased by 33 percent. Despite the decrease, heroin was present in more 2001 drug-involved deaths in San Diego than any other drug except narcotic analgesics, which represents a combination of multiple drugs.

From 2000 to 2001, when there were 733 heroin mentions, heroin's presence in ED mentions decreased 29 percent. In 2001, the majority of ED heroin mentions were among White (60 percent) males (69 percent) who were 35 or older (63 percent). Interestingly, approximately three-quarters (76 percent) of these mentions involved only heroin (single drug), which makes this drug very different from cocaine, marijuana, methamphetamine, and amphetamine, all of which are much more often involved in multiple drug episodes. When asked about the motive for using heroin, 80 percent of the people in the 2001 episodes replied that dependence was the motive, and 54 percent reported that chronic effects were the reason for contacting the ED.

Primary heroin treatment admissions rose from 1,493 in 2001 to 1,636 in 2002, a 10-percent increase. Over the entire time period, from 1997 to 2002, heroin admissions increased 22 percent. More than two-thirds of these admissions (69 percent) were male, and 50 percent were White. Hispanics, at 38 percent, continued to be overrepresented in this population. San Diego

heroin users continued to be an injecting population, with 87 percent reporting that means of use. The mean age was 35.7, and the mean years of use was 15.9.

There were decreases in the proportions of adult male, adult female, and juvenile arrestees in the 2002 ADAM study who were heroin positive. Nearly 6 percent of adult males tested positive for heroin in 2002, compared with 8 percent in 2001 and 1997. The same proportion of adult females (6 percent) was positive for heroin in 2002, representing a 3-percent decrease from 2001 and a 6-percent decrease from the 1997 data. Of those adult males who tested positive for heroin, 5 percent reported past-month use; they reported using heroin an average of 9 days in the past 30 days. Among the 6 percent of San Diego females who were positive for heroin, 4 percent reported use in the past 30 days; they reported using an average of 13 days within the past month. Few San Diego juvenile arrestees test positive for heroin in any time period, and 2002 was no exception: no juvenile boys or girls were positive for heroin in 2002.

Black tar heroin, widely available, continued to be the prevalent form of heroin used in San Diego County. Prices decreased somewhat from 2002 to 2003. In 2003, an ounce of black tar could be purchased for \$600–\$1,200, compared with \$800–\$1,500 in 2002. Purity levels ranged from as low as 14 to 70 percent. Baggies of 0.2 to 0.5 grams ranged from \$5 to \$15, and a gram cost \$60 in 2003.

Heroin seizures at the combined San Diego and Imperial Counties border decreased 76 percent from 2001 to 2002, when only 50.2 kilograms were seized (exhibit 2), accounting for 20.6 percent of all heroin seized along the Southwest border. The 2002 seizures were the lowest of any in this 6-year period for the combined counties. However, heroin seizures also decreased by 35 percent across the Southwest border, with a total of 244.2 kilograms seized, compared with 377.7 kilograms in 2001.

Experts in the focus group had little to say about heroin, other than to comment that San Diego is a conduit for moving heroin up the coast. A large amount of heroin travels through the county, but not much stays there.

Marijuana

Most marijuana indicators continued to increase in 2003, and marijuana is currently the big growth industry among illicit drugs (exhibit 4).

The ME does not routinely test for marijuana and, when tests are run, the numbers are so low that no trend line can be developed. In 2001, marijuana was present in 5

of the 312 cases, compared with none in 2000 and 2 in 1997. Marijuana's pervasive presence in other indicators of drug abuse suggests that if more regular marijuana testing was done on decedents, marijuana would frequently be detected.

ED mentions of marijuana increased from 955 in 2000 to 1,107 in 2001, a 16-percent increase. As a percent of total mentions, marijuana has ranged from 8 to 11 percent of mentions. Marijuana accounted for 9 percent of all San Diego ED mentions in 2001 and for 11 percent of first-half 2002 mentions, the highest for any time period. The typical visitor to the ED for marijuana in the first half of 2002 was a White (60 percent) male (70 percent) in the 35-and-older age group (36 percent). This portrait is very similar to 2001 demographics. Characteristics of the drug episode showed that in all time periods, marijuana was usually only one of multiple drugs involved in the episode, with the percent ranging from 72 to 81 percent. In 2001, the primary motive for use was psychic effects for a plurality of marijuana users, while the reason for contact was unexpected reaction.

From 2001 to 2002, primary marijuana admissions increased from 3,143 to 3,547, a 13-percent increase. From 1997 to 2002, primary marijuana admissions increased 332 percent. The 2002 numbers represented 20 percent of total admissions. A typical marijuana admission was a White (40 percent) or Hispanic (35 percent) male (79 percent). Whites were underrepresented in the marijuana treatment population, while both African-Americans (18 percent) and Hispanics were overrepresented. The mean age in 2002 was 21, and the average years of use prior to admission was 7.4.

Within the 2002 ADAM arrestee population, marijuana continued to be the most frequently detected drug among adult male and juvenile arrestees. For adult females, marijuana is detected more frequently than any drug other than methamphetamine. In 2002, 33 percent of San Diego adult female arrestees tested positive for marijuana. Forty percent reported marijuana use in the past month. In addition, these women reported using marijuana an average of 7.2 days during that same time period. A slightly larger proportion of adult males were positive: 38 percent. Of these, 42 percent reported past-month use of marijuana, for an average of 8.9 days. For the juveniles, marijuana is the most frequently detected drug for every time period included in this report. Fifty percent of juvenile boys and 31 percent of juvenile girls tested positive for marijuana in 2002.

Marijuana was readily available in the county in 2002. Baggies could be purchased for \$5 (0.5–1 gram) and \$10 (1–3 grams). An ounce could be purchased for \$60–\$100, and a pound of Mexican marijuana cost

\$300–\$500. Sinsemilla was also available for those who could pay the price: a pound of “Buds” sold for \$3,000–\$5,000. The tetrahydrocannabinol (THC) content was not reported in the April 2003 update.

Seizures of marijuana at the San Diego/Imperial County borders decreased 43 percent from 2001 to 2002, when 119,173 kilograms were seized (exhibit 2). This was the smallest amount seized in a 6-year period. There was speculation by local experts that the reason for decrease in border seizures was related to undetected tunnels. A tunnel discovered in Tecate in December was believed to be used to smuggle drugs. In February 2003, a U.S. Customs Service dog detected 10 tons of marijuana in a truck trailer at the Otay Mesa Port of Entry (POE). It was the largest seizure of marijuana at any southwest border POE. On March 5, 2003, another 7 tons were seized at the Tecate POE.

Experts in the May focus group agreed that marijuana is widely available, widely used, and is very potent. The educator sitting with the focus group reported that students will no longer tolerate cheap marijuana. The students want chronic, a potent form of marijuana, relatively free of seeds and stems.

Stimulants

Methamphetamine continued to be the favored stimulant in San Diego in 2002, and there were indications that amphetamine use was increasing in the area. For that reason, amphetamines are being split out as a separate category for this report for ME and ED data. They can be separated in the treatment data as well, but that analysis was not conducted because the numbers are very low within the treatment population. For methamphetamine, most indicators declined, with the one notable exception being treatment admissions, which continued to climb (exhibit 5).

Methamphetamine was present in 94 of the 312 drug-involved deaths reported to DAWN in 2001, a 16 percent decrease from the 2000 number. From 1997 to 2001, there was an 18-percent decrease in methamphetamine's presence in drug deaths reviewed by the ME. Amphetamine-related deaths, conversely, increased 14 percent from 2000 to 2001, although there was a 3-percent decrease over the entire time period from 1997 to 2001.

Methamphetamine-related ED mentions fell from 747 in 2000 to 673 in 2001, but the decrease was not statistically significant. Amphetamine ED mentions increased, though not significantly, from 2000 to 2001, when there were 942 such mentions. When the 2001 demographic data are considered, there are some differences between the two groups. A typical

methamphetamine ED user was male (73 percent), White (66 percent), and age 35 or older (44 percent). The typical amphetamine user was also male (63 percent), but less so, also White (72 percent), but more so, and age 35 or older (47 percent), not too different. Episode characteristics also differed among the two stimulant user groups. From 1997 to 2001, methamphetamine was more apt to be involved in a single drug episode (ranging from 50 to 54 percent), and amphetamine was more often involved in multiple drug episodes (ranging from 58 to 70 percent). At least 50 percent of methamphetamine users in the ED reported dependence as the drug use motive for all time periods except two, when dependence was reported for only 42 and 46 percent of methamphetamine ED mentions. For amphetamine users, there was also a tendency to report dependence as the motive for using, but the percentages were not as high, and the percent of unknowns was much higher. When asked about reason for contacting the ED, methamphetamine users reported unexpected reaction in four of the six time periods, and chronic effects in the other two periods. The amphetamine user reported chronic effects in all but one time period, but the proportions reporting were lower.

Primary methamphetamine admissions to treatment increased for the third consecutive year. In 2002 there were 7,027 methamphetamine admissions to treatment, a 23-percent increase from the 2001 numbers and an 81-percent increase from 1997. Methamphetamine admissions accounted for 39 percent of total admissions, surpassing alcohol and marijuana. The methamphetamine user in treatment tended to be a White (59 percent) male (58 percent) who smoked the drug (63 percent). The methamphetamine user's average age was 32.6, and he/she had used an average of 12.5 years before entering the current treatment episode. For this report, amphetamine admissions were folded into the methamphetamine admissions data. For the next report, these two populations will be separated for additional analysis.

Thirty-seven percent of adult females in the ADAM 2002 study were positive for methamphetamine, higher than for any other single drug. This finding is consistent over the entire time period (1997–2002), although positive rates have been falling since 1997, when 44 percent tested positive. Of those women positive for methamphetamine in 2002, 30 percent reported past-month use for an average of nearly 11 days. In 2002, 32 percent of adult males screened positive for methamphetamine. Of those, 30 percent reported past-month use for an average of 7.9 days. For San Diego juveniles, methamphetamine is the drug most often detected other than marijuana, which is consistently the primary drug for juveniles. Nine

percent of juvenile boys and 10 percent of juvenile girls were positive for methamphetamine in 2002.

Methamphetamine continued to be widely available, according to the April 2003 price and purity report, although prices at the pound level increased, ranging from \$6,000 to \$10,000 for regular methamphetamine and from \$9,000 to \$11,000 for the ice/glass form. In 2002, a gram sold for \$50–\$75 and an ounce for \$500–\$1,100. Purity at the gram and ounce levels was erratic, ranging from 10 to 90 percent. Pound quantities of high-grade methamphetamine ranged from 83 to 99 percent pure.

Border seizures of methamphetamine also decreased from 2001 to 2002 (exhibit 2). In 2002, 457.6 kilograms of methamphetamine were seized at the San Diego/Imperial County borders, a 27-percent decrease from 2001 numbers. In spite of that, these seizures accounted for 37.4 percent of all methamphetamine seizures at the Southwest Border. There have also been reports of methamphetamine coming across the border “disguised” as ecstasy tablets, imprinted with the “handshake” logo. Adolescents buy what they believe is ecstasy, but they are in reality consuming methamphetamine.

Experts in the May focus group reported that large labs are rarely found in San Diego County. There are many more mini or box labs found. These labs produce 2 ounces or less, using hotplates to cook methamphetamine for oneself and friends for weekend use. The small labs produce methamphetamine of lesser purity, but the labs are also less volatile. San Diego's bigger problem is the importation of methamphetamine from other counties and from Mexico. Some more creative cooks are turning “peanut butter meth” (brown methamphetamine often thought to be poor quality) into ice, by using acetone to pull out impurities and then adding methylsulfonylmethane to make “pretty dope”; this is sold as ice to the naïve, and sells for approximately \$10,000 a pound. There has also been a resurgence in motorcycle gangs cooking and selling methamphetamine. Law enforcement officials staged a major raid on an El Cajon chapter of the Hell's Angels, arresting members and confiscating materials from the clubhouse. They also reported that, while Native Americans may not use or produce methamphetamine, the reservations are being used by others to manufacture the product.

Alcohol and Other Drugs

Alcohol

Indicators for alcohol were mixed in 2002. Alcohol's presence in ME data (only alcohol combined with other

drugs was used) decreased from 2000 to 2001 and from 1997 to 2001. ED mentions of alcohol combinations increased insignificantly from 2000 to 2001 but decreased from 1997 to 2001. Within the treatment system, total primary alcohol admissions decreased 1 percent from 2001 to 2002. Treatment admissions for alcohol combinations, however, increased 6 percent for the same time period, reflecting the tendency toward a polydrug-using population utilizing treatment.

Other Drugs

Media focus on club drugs, such as gamma hydroxybutyrate (GHB) and methylenedioxymethamphetamine (MDMA), diminished somewhat in the last half of 2001 and early 2002. Indicators of use remained very low. However, club drug presence in ME deaths reported to DAWN increased from none in 1997 to five in 1999, and fell to three in 2000. There was a sharp rise in 2001 to 9 such deaths. Within the ED, mentions for all club drugs have risen slightly over time, but the numbers are still quite small. There continued to be anecdotal reports of ecstasy use by students and GHB use in

nightclubs, but there are no hard data to support bringing additional resources to address these drugs.

INFECTIOUS DISEASES RELATED TO DRUG ABUSE

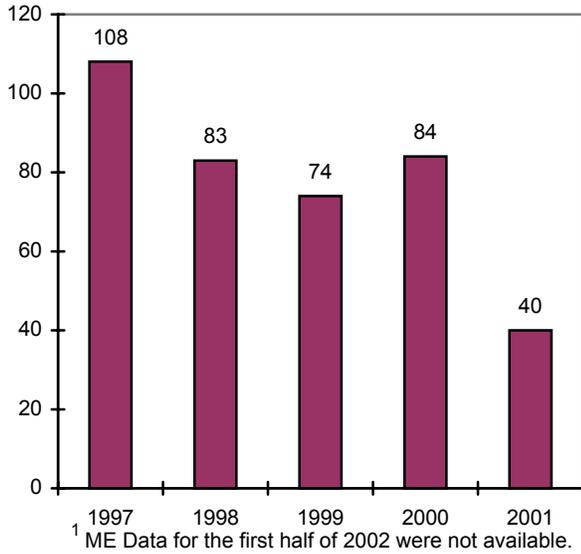
Through May 31, 2003, there were 11,787 adult/adolescent and pediatric AIDS cases reported in San Diego County. Of the adult/adolescent cases, 65 percent were White, 12 percent were African-American, 21 percent were Hispanic, and 3 percent were other racial/ethnic categories. Females represent a relatively small proportion (7 percent) of the adult/adolescent cases.

The transmission mode for 75 percent of the adult/adolescent cases was men having sex with men. Injection drug use accounted for 9 percent, and the dual risk category of men having sex with men and injection drug use accounted for another 9 percent. Heterosexual contact accounted for 5 percent, and other transmission modes for the final 2 percent. For the pediatric cases, 82 percent had a mother with or at risk for HIV infection. Thirteen percent had received blood, components, or tissue, and the remaining 5 percent had hemophilia.

For inquiries concerning this report, please contact Michael Ann Haight, Silver Gate Group (for the County of San Diego, Alcohol and Drug Services), Phone: (619) 920-6311, E-mail: michaelhaight@cox.net.

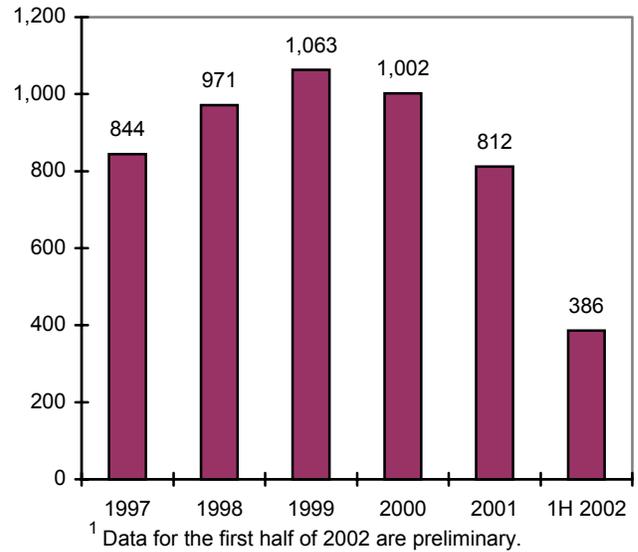
Exhibit 1. Cocaine Indicators in San Diego County: 1997–2002

Drug-Related Deaths¹



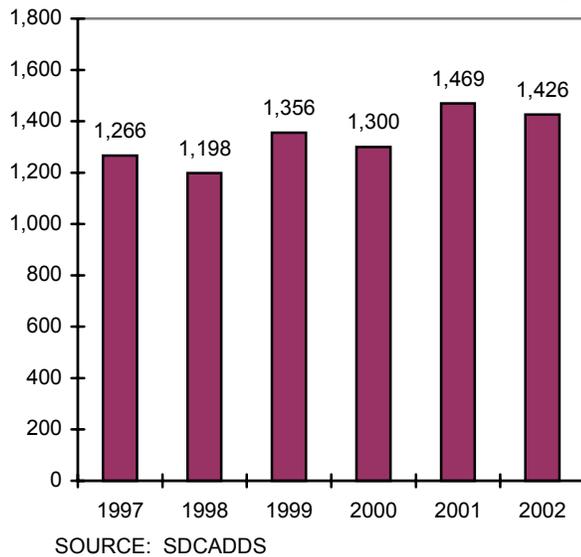
SOURCE: DAWN, OAS, SAMHSA

Emergency Department Mentions¹ (Number)



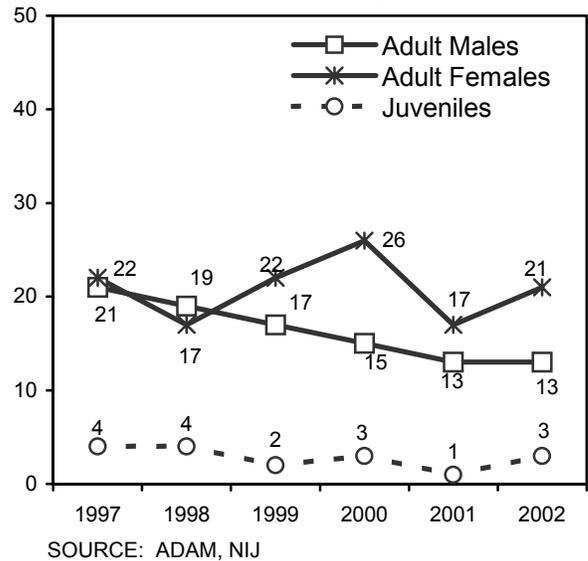
SOURCE: DAWN, OAS, SAMHSA

Admissions to County-Funded Treatment Programs



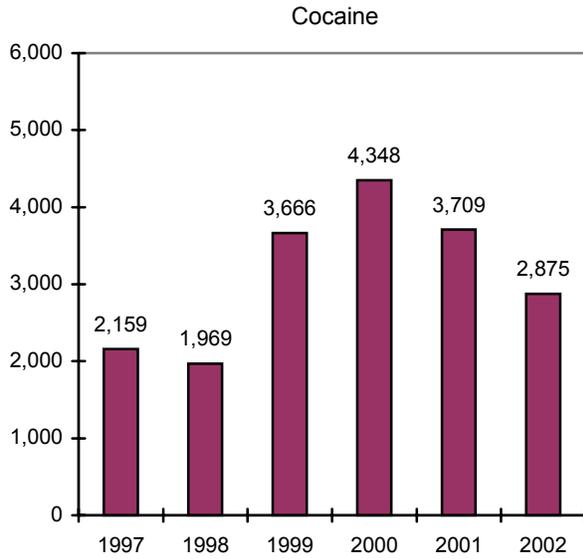
SOURCE: SDCADDS

Percent of Arrestees Testing Cocaine Positive

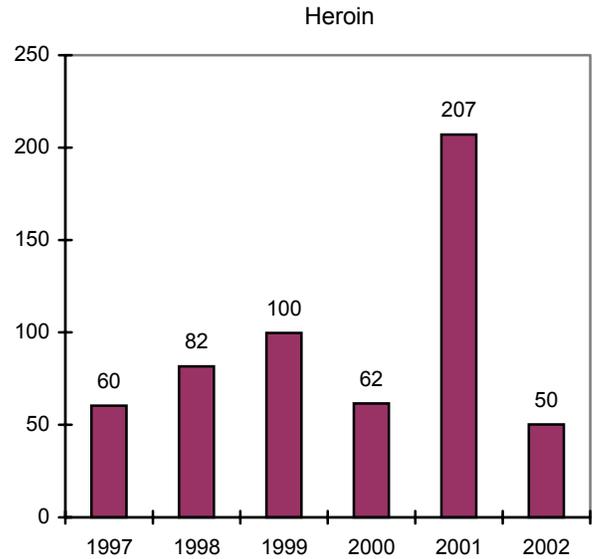


SOURCE: ADAM, NIJ

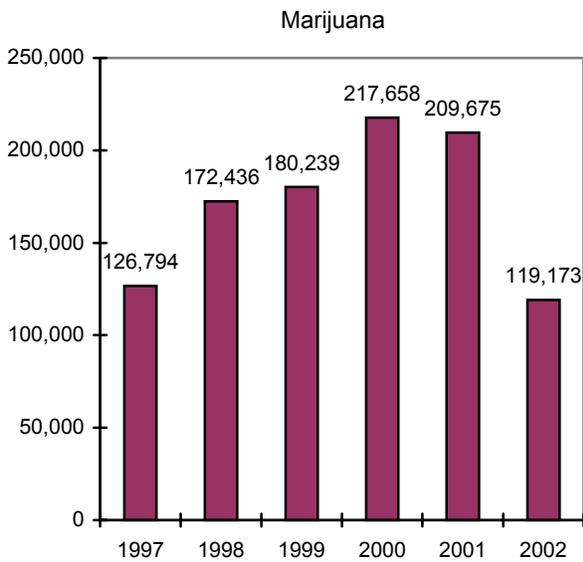
Exhibit 2. Seizures at the San Diego and Imperial County Borders (in Kilograms): 1997–2002



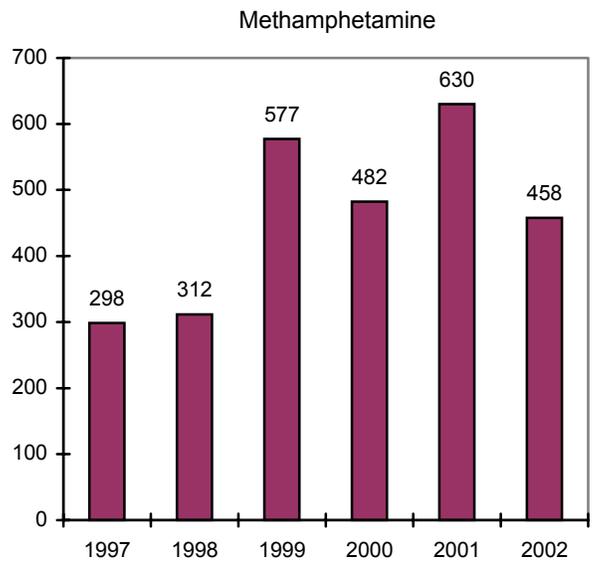
SOURCE: Narcotic Threat Assessment, California Border Alliance Group, April 2003



SOURCE: Narcotic Threat Assessment, California Border Alliance Group, April 2003

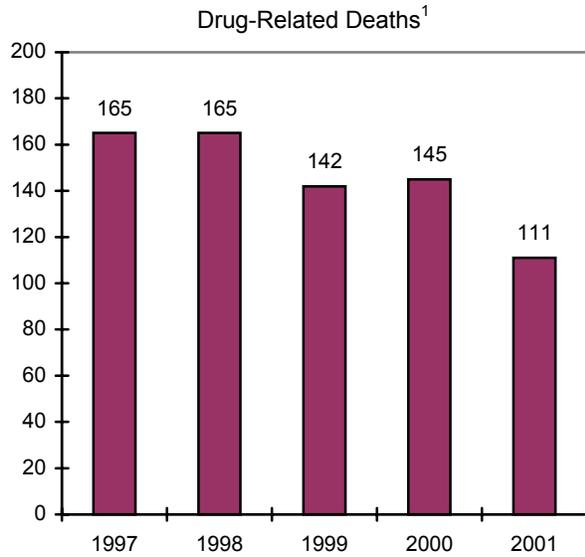


SOURCE: Narcotic Threat Assessment, California Border Alliance Group, April 2003



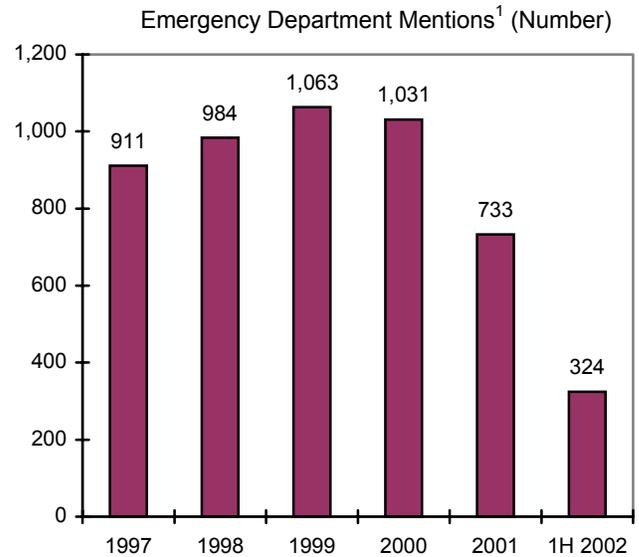
SOURCE: Narcotic Threat Assessment, California Border Alliance Group, April 2003

Exhibit 3. Heroin Indicators for San Diego County: 1997–2002



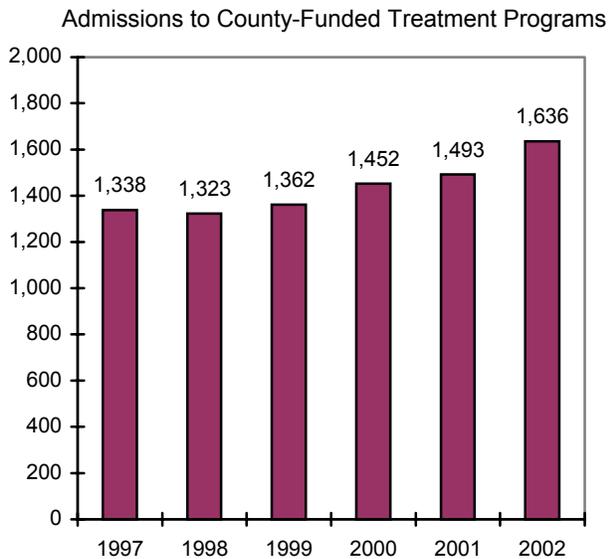
¹ ME data for the first half of 2002 were not available.

SOURCE: DAWN, OAS, SAMHSA

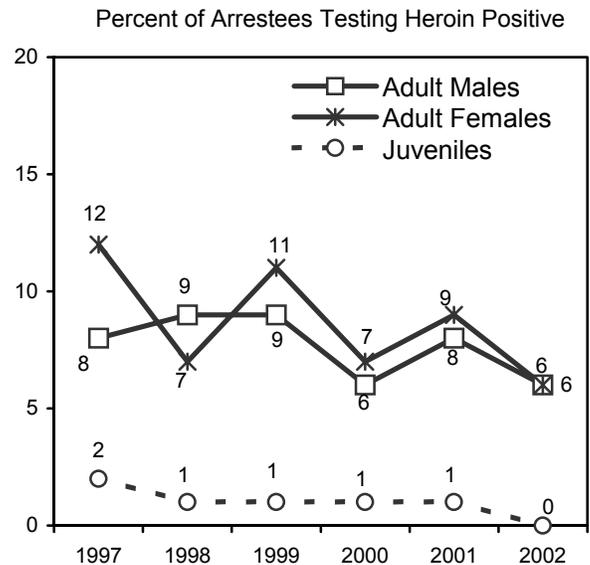


¹ Data for the first half of 2002 are preliminary.

SOURCE: DAWN, OAS, SAMHSA

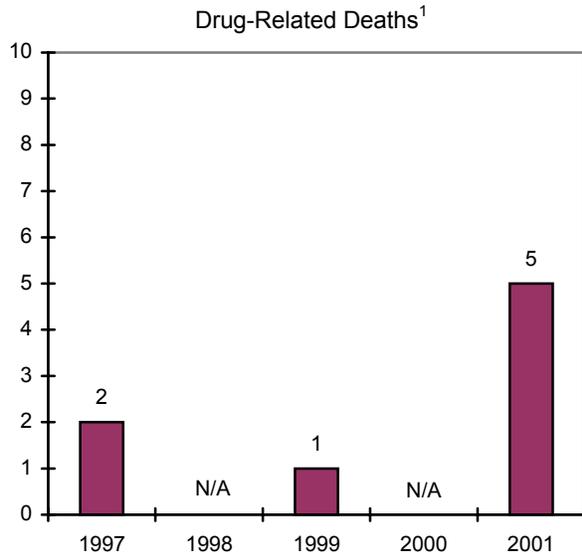


SOURCE: SDCADDs



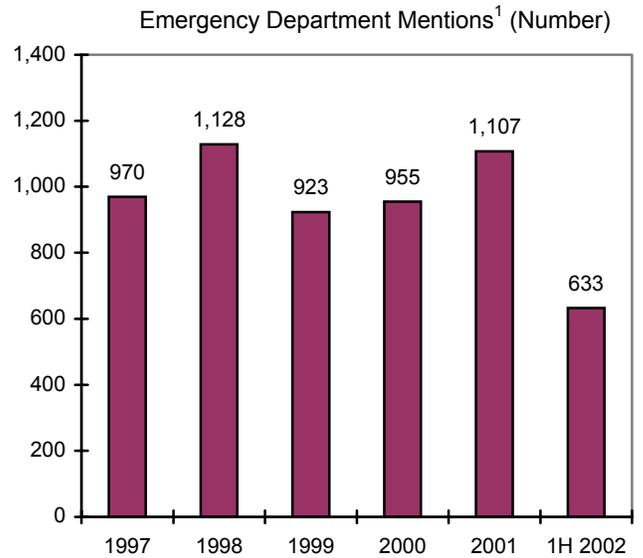
SOURCE: ADAM, NIJ

Exhibit 4. Marijuana Indicators for San Diego County: 1997–2002



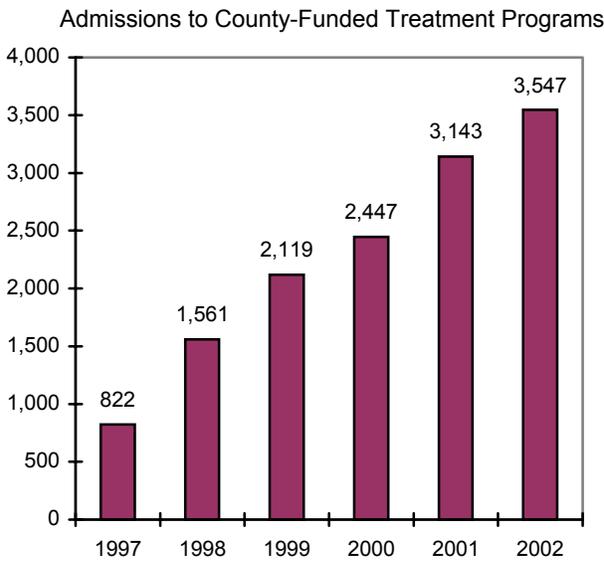
¹ ME data for the first half of 2002 were not available.

SOURCE: DAWN, OAS, SAMHSA

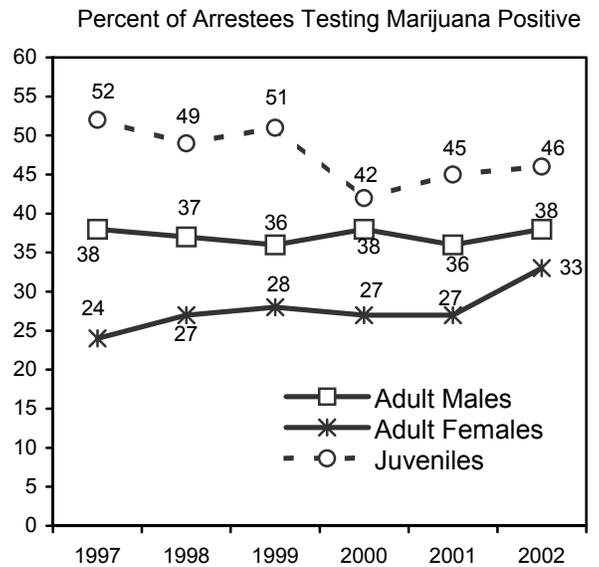


¹ Data for the first half of 2002 are preliminary.

SOURCE: DAWN, OAS, SAMHSA



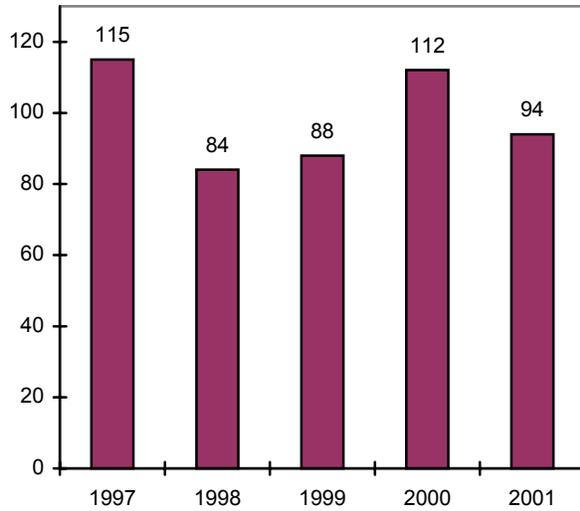
SOURCE: SDCADDS



SOURCE: ADAM, NIJ

Exhibit 5. Methamphetamine Indicators for San Diego County: 1997–2002

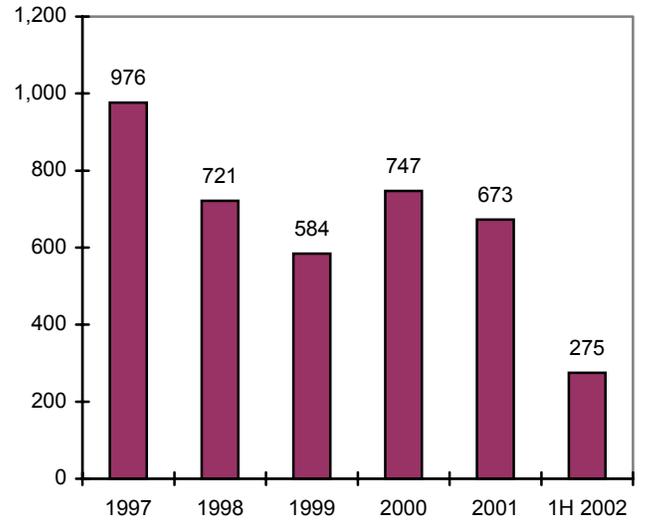
Drug-Related Deaths¹



¹ ME data for the first half of 2002 were not available.

SOURCE: DAWN, OAS, SAMHSA

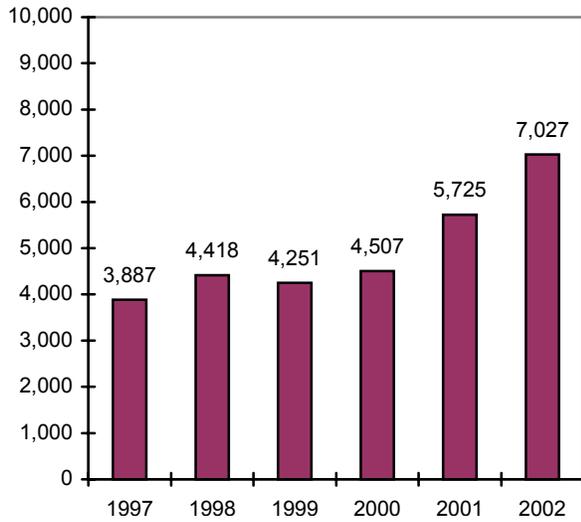
Emergency Department Mentions¹ (Number)



¹ Data for the first half of 2002 are preliminary.

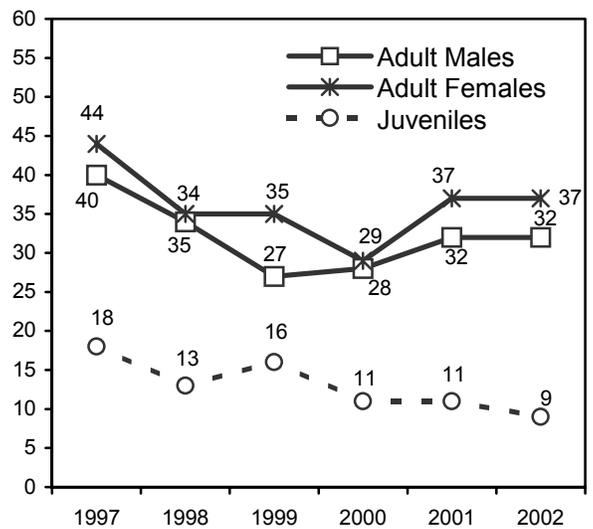
SOURCE: DAWN, OAS, SAMHSA

Admissions to County-Funded Treatment Programs



SOURCE: SDCADDS

Percent of Arrestees Testing Methamphetamine Positive



SOURCE: ADAM, NIJ

Patterns and Trends of Drug Use in the San Francisco Bay Area

John A. Newmeyer, Ph.D.¹

ABSTRACT

In June 2003, the author conducted a comprehensive review of indicators of use of illicit substances in the San Francisco Bay area. Cocaine use prevalence—after a brief upsurge during 2000-2001—appears to have resumed the declining pattern which characterized the late 1990s. The shift away from smoking crack and toward snorting cocaine powder continues. Indicators mostly point to a continued decline in heroin use prevalence from the 1999 peak. The average age of users continues to increase. Marijuana use indicators increased until about 2001 and have since declined somewhat. Methamphetamine treatment admissions and ED mentions are up slightly, but ME mentions are down. Usage continues to be widespread, and risky injection practices among gay/bisexual men continue to be a major factor for HIV incidence. HIV incidence for heterosexual IDUs, however, has declined to a very low level. Indicators of use of club drugs leveled off after steep rises.

INTRODUCTION

Area Description

The San Francisco Bay area consists of the following counties: San Francisco, San Mateo, Alameda, Contra Costa, and Marin. The population was 4,180,000 as of July 2002. The population is among the most multicultural of any urban region of the United States, with a particularly large, varied, and long-established Asian American representation (19 percent of the total). The Hispanic population—one resident in five—represents a wide cross-section of persons of Latin American origin. Blacks account for some 11 percent of bay area residents. San Francisco County has long been a mecca for gays: gay men constitute more than 15 percent of the adult male population.

The bay area experienced its initial growth during the California gold rush. In the succeeding century and a half, it expanded greatly as a center for shipping, manufacturing, finance, and tourism. In recent years, Pacific Basin trade and high technology such as software and biotechnology development have led to further expansion and to a highly diversified economy.

Since 1994, there has been a steep rise in the costs of rental housing in the bay area, especially in San Francisco, Marin, and San Mateo Counties. This has caused significant out-migration of lower income people, which may be exerting downward pressure on local drug-use prevalence. However, partly as a result of reverses in high-technology industries, San Francisco County suffered an increase in its unemployment rate from 2 to 6 percent in the last 2 years. This rise in unemployment has not, thus far, been reflected in consistent changes in substance use prevalence.

Data Sources

The sources of data for the drug abuse indicators are described below:

- **Emergency department (ED) drug mentions data** were obtained from the Drug Abuse Warning Network (DAWN), Office of Applied Studies (OAS), Substance Abuse and Mental Health Services Administration (SAMHSA), for three counties of the San Francisco Bay area (San Francisco, Marin, and San Mateo) from 1997 through the first half of 2002.
- **Treatment admissions data** were available for all five bay area counties for calendar years 1999 to 2002. These data were compiled by the California Department of Alcohol and Drug Programs (DADP).
- **Medical Examiner (ME) data** on drug mentions in decedents in three counties (San Francisco, Marin, and San Mateo) were provided by the DAWN mortality system for 2001, along with comparable data for 1996–2001. The DAWN system covered 100 percent of the metropolitan statistical area (MSA) jurisdiction and 100 percent of the MSA population in 2001.
- **Reports of arrests for drug-law violations and counts of reported burglaries** were provided by the San Francisco Police Department (SFPD) for 2001, 2002, and the first 3 months of 2003.

¹ The author is affiliated with Haight-Ashbury Free Clinics, Inc., San Francisco, California.

- **Arrestee drug testing data** are from the Arrestee Drug Abuse Monitoring (ADAM) program, National Institute of Justice, for San Jose and Sacramento for 2002 for adult males.
- **Price and purity data** came from the Drug Enforcement Administration (DEA), Domestic Monitor Program (DMP), and referenced heroin “buys,” mostly made in San Francisco County. Data for 2001 were compared with those for 1994–2000. Data on trafficking in heroin and other drugs were available from the National Drug Intelligence Center’s report, “National Drug Threat Assessment 2003.”
- **Ethnographic information** was obtained through interviews with treatment program staff and outreach workers in June 2003. Their observations were compared with those they made in May and November 2002 and pertained mostly to San Francisco County.
- **The Party and Play Study data** were derived from a study conducted in autumn 2000 and winter 2001 by the San Francisco Department of Public Health (SFPDH), Acquired Immuno-deficiency Syndrome (AIDS) Office. The sample consisted of 356 gay/bisexual men at “late night” venues.
- **AIDS surveillance data** were provided by the SFPDH and covered the period through March 31, 2003.
- **Hepatitis B data** for San Francisco County were available for 1996 through 2002 and for the first 16 weeks of 2003. Hepatitis C virus prevalence estimates were provided by the SFPDH.

DRUG ABUSE PATTERNS AND TRENDS

Cocaine and Crack

ED mentions for cocaine declined from 1997 to 1998, but rose steadily through 2001 (exhibit 1). The rate of cocaine/crack ED mentions for the first half of 2002 was 71 per 100,000 population, 10 percent below the 2001 rate but still above the rate for 1998. In 2002 as compared to 1998, the ED mentions represented a higher proportion of persons age 35 and older, a higher proportion of Whites, and a lower proportion of Blacks.

In the five-county bay area, the overall number of admissions for drug treatment, other than alcohol, declined steadily between 1999 and 2002 (exhibit 2).

However, the proportion of cocaine/crack among these admissions held steady at 24 percent.

According to DAWN data, ME death mentions involving cocaine in three bay area counties fluctuated within a narrow range, with no particular trend, between 1996 and 2000 (exhibit 3). This was followed by a drop in 2001 to 29 percent below the 1996–2000 average. Males accounted for 81 percent of the cocaine-related death mentions in 2000; the median age was just over 40.

Cocaine-positive tests among arrestees in San Jose, a nearby metropolis which is an ADAM site, may give some indication of cocaine use prevalence in San Francisco. During 2002, 13 percent of adult male arrestees in San Jose tested positive for cocaine. This was the fourth-lowest figure for cocaine among all 36 ADAM sites. The median cocaine-positive proportion for those sites was 30.4 percent. In Sacramento in 2002, nearly 21 percent of adult male arrestees tested cocaine positive, still below the median for all sites.

According to the DEA, local prices for powder cocaine were \$16,000–\$21,000 per kilogram, \$450–\$800 per ounce, and around \$60 per gram. Crack prices were around \$500 per ounce and ranged from \$20 to \$50 per “rock.”

Cocaine use prevalence—after a brief upsurge during 2000–2001—appears to have resumed the declining pattern which characterized the late 1990s. The shift away from smoking crack and toward snorting powder continues.

Heroin

ED mentions of heroin reached a peak in 1999 and then dropped insignificantly in 2000, remaining at that level in 2001 and the first half of 2002 (exhibit 1). In 2002 as compared to 1998, the ED heroin mentions represented a higher proportion of persons older than 35, a higher proportion of Whites, and a lower proportion of Blacks.

The number of treatment admissions for primary heroin problems in the five-county bay area fell substantially between 1999 and 2002 (exhibit 2). As a proportion of all primary drug admissions excluding alcohol, heroin constituted 64 percent in 1994, 55 percent in 1999, and only 40 percent in 2002.

In the three-county bay area reporting to DAWN, ME death mentions involving heroin/morphine in 2001 were at their lowest level in 6 years (exhibit 3). The count for 2001 was one-third lower than the average

for 1996–2000. Males accounted for 87 percent of the heroin-related death mentions in 2000. The median age of the decedents was 40.

In the ADAM program in 2002, 3.4 percent of adult male arrestees in San Jose and 6.2 percent of those in Sacramento tested opiate positive; the median across the 36 ADAM sites was 5.9.

Arrests for heroin-related offenses were 6,136 in 2002, 16 percent higher than in 2001 and 3 percent higher than in 2000. However, the rate of arrests during the first 3 months of 2003 was one-quarter lower than during a similar period of 2002.

Because many heroin users support their habits through property crimes, reported burglaries may be a good indicator of use. The number of such reports in San Francisco fell by 49 percent between 1993 and 1999 (11,164 to 5,704). After that low point, the count rose to 6,706 in 2001, then fell back to 6,052 in 2002. During the first 4 months of 2003, the rate was 2 percent lower than during a similar period of 2002. These changes may reflect the price of heroin more than the prevalence of users: it is noteworthy that reported burglaries and the local price of heroin are both barely one-quarter of what they were 20 years ago.

The DEA's DMP tested heroin street buys in the San Francisco area during the first half of 2001. Of the 15 buys, 14 were of Mexican origin. The 2001 samples averaged 10 percent pure and \$0.43 per pure milligram (exhibit 4). Local samples of heroin were thus generally "Mexican" and were cheaper and less pure than in most recent years.

Prices of Mexican black tar heroin ranged from \$16,000–\$30,000 per kilogram to \$450–\$850 per ounce in the second half of 2002. Gram prices were around \$60.

In a "late night" sample of gay/bisexual men sampled by the Party and Play Study, 14 percent reported injecting heroin in the prior 3 months, and 8 percent reported noninjection use of that drug.

The indicators mostly point to a continued decline in heroin use prevalence from the 1999 peak. The average age of users continues to increase.

Other Opiates

ME death mentions in the overall "narcotic analgesics" category fluctuated within a narrow range in 1996–2000, but then dropped in 2001 to a level 29 percent below the 1996–2000 average (exhibit 3).

Oxycodone ED mentions rose steeply and continuously from 1999 through the first half of 2002 (exhibit 1), and increased 110 percent between the first halves of 2001 and 2002. Ethnographic observers concur that use of this drug is on the rise.

Marijuana

Marijuana ED mentions increased nearly 54 percent between 1999 and 2001 and 17 percent from 2000 to 2001. However, the number of mentions declined significantly between the first halves of 2001 and 2002 (exhibit 1). In 2002 as compared to 1998, marijuana ED mentions were more often female, more often 35 and older, more often White, and less often Hispanic.

Arrests for marijuana-related offenses in San Francisco County numbered 1,736 in 2000, then fell to a lower level during the next 2 years: 1,364 in 2001 and 1,420 in 2002. During the first 3 months of 2003, the arrest rate was about the same as in 2001 and 2002.

Among adult male arrestees in ADAM in 2002, 34.0 percent of those in San Jose and 50.9 percent of those in Sacramento tested positive for marijuana. The median across the 36 sites was 41.5 percent.

In the second half of 2002, California-produced sinsemilla marijuana sold for \$5,000–\$6,000 per pound, while Mexico-produced marijuana sold for \$380–\$1,400 per pound.

The indicators suggest that marijuana use prevalence had increased until about 2001 and since then has declined somewhat.

Stimulants

Ethnographic observers note that the "speed" scene in San Francisco remained active in early 2003, but less than during the peak years of activity around 1997. Gay men no longer predominate the user population.

Methamphetamine/speed ED mentions dropped sharply from 1997 to 1998, remained roughly the same through 2001, then increased 38 percent between the first halves of 2001 and 2002 (exhibit 1). About three-quarters of the ED mentions in 2002 were male, 41 percent were White, and 43 percent were age 35 and older.

Treatment admissions for primary speed problems in the five-county bay area increased somewhat between 2000 and 2002 (exhibit 2). The proportion of primary speed users among all nonalcohol drug

admissions rose from 13 percent in 1999 to 20 percent in 2002.

In the three-county bay area, ME death mentions involving methamphetamine rose from 44 in 1996 to 58 in 1999, then fell back to 32 in 2001 (exhibit 3). Of the methamphetamine-related death mentions in 2000, males accounted for 93 percent, and the median age was 40.

Two nearby metropolises that are ADAM sites may give some indication of the methamphetamine situation in San Francisco. In Sacramento and San Jose, respectively, 33.5 percent and 29.9 percent of male adult arrestees tested positive for methamphetamine in 2002. These were two of the three highest figures for methamphetamine-positive findings among male adults in all the 36 ADAM sites. Methamphetamine-positive results among males were 20 percent or higher in only 11 sites, most in Pacific or Mountain States. The median was 5.3 across all sites.

In California, pounds of methamphetamine sell in the \$3,600–\$21,000 range, depending upon “grade.” Ounces of “crystal” sell for \$1,000–\$1,200 per ounce. The DEA San Francisco Field Division reports that Mexican criminal groups control the local wholesale and midlevel distribution. Wholesale quantities of methamphetamine are distributed from San Francisco to other markets in the Nation.

Gay/bisexual men in the Party and Play Study sample reported a high rate of methamphetamine abuse. Fully 64 percent of these men cited noninjection use in the prior 3 months, while 33 percent cited injection use. Fifteen percent of the men reported “having used a needle after someone else” during the prior 3 months. This is a high rate of HIV-risky parenteral behavior, albeit among a “fast lane” subset of homosexually active men.

Methamphetamine indicators are mixed, with treatment admissions and ED mentions pointing slightly upward, and ME mentions pointing downward. Usage continues to be widespread, and risky injection practices among gay/bisexual men continue to be a major factor for HIV incidence.

Depressants

ED mentions of benzodiazepines averaged about 55 per month during 1997–2000, then increased significantly from 1999 to 2001, only to decrease nearly 20 percent between the first halves of 2001 and 2002 (exhibit 1). Mentions came closer to the 1997–2000 rates per 100,000 population during the

first half of 2002. ME mentions fluctuated in a narrow range, without a particular trend, during the 1998–2001 period (exhibit 3).

Hallucinogens

Lysergic acid diethylamide (LSD) ED mentions increased significantly from 1999 to 2001, then nearly vanished in the first half of 2002. Phenylcyclidine (PCP) mentions rose significantly between 1999 and 2001, but in the first half of 2002 fell significantly back to their 1999 level (exhibit 1).

Club Drugs

Ethnographic observers concur that methylenedioxy-methamphetamine (MDMA or “X”) is widely available, with street prices as low as \$7 per “tab.” The annual count of ED mentions for this drug quadrupled in 3 years, from 38 in 1999 to 152 in 2001 (exhibit 1). However, the rate per 100,000 population in the first half of 2002 declined 13 percent from that in the first half of 2001. In 1998, more than three-quarters of the MDMA ED mentions were younger than 26; in 2002, barely one-half were. Two other club drugs, gamma hydroxybutyrate (GHB) and ketamine, reached peak counts in 2000 but remained more or less level in 2001 and the first half of 2002 (exhibit 1). Males accounted for about five-sixths of GHB mentions in 2002; the median age was about 30. Among the Party and Play sample, 36 percent reported MDMA use in the prior 3 months, while 18 percent reported GHB use and 17 percent ketamine use. The actual number of club drug mentions remains small, though, compared with mentions for cocaine or methamphetamine.

INFECTIOUS DISEASES RELATED TO DRUG ABUSE

AIDS

San Francisco County had a cumulative total of 28,513 AIDS cases through March 31, 2003, an increase of 531 (1.9 percent) from the total reported through March 31, 2002. Of these cases, 1,987 (7.0 percent) were heterosexual injection drug users (IDUs), and increase of 69 (3.6 percent) in a year. Another 3,613 AIDS cases (12.7 percent) were men who had sex with other men (MSM) and also injected drugs; this number increased by 109 or 3.1 percent in a year. The rate of case reporting has lately been decelerating among MSM/IDUs. AIDS data among transgender San Franciscans have been collected only since 1996, but the cumulative total of cases—288—is a surprisingly large proportion of an overall transgender population estimated at 3,000.

Among San Franciscans diagnosed in 2000 through 2003, heterosexual IDUs accounted for 15 percent, up from 10 percent among those diagnosed in 1994–1996 and 14 percent of those diagnosed in 1997–1999. However, the overall case numbers in 2000–2003 were far lower than those of the late 1980s and early 1990s. As a result, the percentage of heterosexual IDUs among the cumulative AIDS caseload will probably not increase significantly from the current level of 7 percent.

The demography of the cumulative heterosexual IDU caseload with AIDS has changed very little in the past 12 years. This caseload is 69 percent male, 51 percent Black, 35 percent White, 11 percent Hispanic, and 2 percent Asian/Pacific Islander. By contrast, the gay/bisexual IDU caseload is 72 percent White, 16 percent Black, 9 percent Hispanic, and 2 percent Asian/Pacific Islander.

The heterosexual IDU demography is like that of heroin users except for over-representation of Blacks, while the gay male IDU demography is similar to that for male speed users.

Semiannual surveys by the Urban Health Study (UHS) point to a decline in the HIV-positive prevalence of heterosexual IDUs not in treatment. Prevalence figures were generally in the 9–10 percent range between 1997 and 2002 for San Francisco IDUs. Prevalence of IDUs in Richmond (Contra Costa County) ranged between 20 and 25 percent in the early 1990s, then between 15 and 18 percent in 1997–1999; prevalence was only 10 percent in 2001. Prevalence in West Oakland samples (Alameda County) ranged around 15 or 16 percent in the middle

1990s, then ranged around 10 percent in 1997–1999; prevalence was only 6 percent in 2001. UHS surveys of heterosexual IDUs in San Francisco indicate that HIV incidence in that population has been close to zero from 1998 through 2001.

Several studies conducted in San Francisco during 2001 confirm a correlation between the use of “party” drugs (speed, Viagra, amyl nitrites) and increased risky sexual activity.

By means of a consensus of experts, the county of San Francisco estimated that there would be 220 new HIV infections among IDUs during 2001. This amounts to a low HIV annual incidence among heterosexuals (0.6 percent for men, 1.1 percent for women), a high incidence among MSMs (4.6 percent), and an extremely high incidence among transsexuals (13.2 percent).

Hepatitis B

From 1996 through 2001, reported cases of hepatitis B in San Francisco County rarely deviated from a pace of about one per week. The pace dropped significantly during 2002 and 2003, to about one case every 10 days.

Hepatitis C

The prevalence of hepatitis C virus (HCV) is alarmingly high among IDUs in San Francisco. The SFDPH estimates that HCV infection is at least 72 percent, and perhaps as high as 86 percent, among the county’s overall IDU population of about 18,700.

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Exhibit 1. Number of ED Mentions in San Francisco for Selected Drugs: 1997–1H 2002

Drug Mentioned	1997	1998	1999	2000	2001	1H 2002 ¹
Cocaine	1,979	1,842	1,935	2,054	2,482	1,121
Heroin	2,719	2,360	3,050	2,756	2,790	1,398
Marijuana	388	391	469	627	704	280
Methamphetamine	1,012	616	554	591	611	378
PCP/Combinations	122	67	62	70	76	29
Oxycodone/Combinations	20	26	18	31	55	42
LSD	73	43	55	67	46	6
MDMA	35	38	47	107	152	76
GHB	83	102	138	151	158	74
Ketamine	1	2	4	14	11	6
Benzodiazepines	727	619	665	664	825	321
Total Mentions	13,491	12,525	12,702	12,171	13,743	6,548

¹ Data for the first half of 2002 are preliminary.

SOURCE: DAWN, OAS, SAMHSA

Exhibit 2. Admissions to Drug Treatment Programs in the San Francisco Bay Area by Primary Drug of Abuse: 1999–2002

Drug	1999	2000	2001	2002
Cocaine	8,727	7,718	7,428	6,703
Heroin	19,763	17,416	14,673	11,341
Amphetamine	4,595	4,469	5,073	5,584
All Drugs (Excluding Alcohol)	36,069	32,034	30,920	28,039

SOURCE: California Department of Alcohol and Drug Programs (DADP)

Exhibit 3. Medical Examiner Drug Mentions in Three Counties (Including San Francisco): 1996–2001

Drug	1996	1997	1998	1999	2000	2001
Cocaine	155	127	158	158	146	106
Heroin/Morphine	212	159	164	192	148	117
Methamphetamine	44	49	45	58	45	32
Narcotic Analgesics	175	156	185	198	164	124
Benzodiazepines	66	71	62	50	55	56

SOURCE: DAWN, OAS, SAMHSA

Exhibit 4. Price and Purity of Heroin Samples, 1994–2001

Year	Price Per Milligram Pure	Purity (Percent)
1994	\$0.95	29
1995	\$0.83	35
1996	\$0.83	24
1997	\$0.63	26
1998	\$0.33	26
1999	\$0.47	20
2000	\$0.71	16
2001	\$0.43	10

SOURCE: DEA

Recent Drug Abuse Trends in the Seattle-King County Area

Caleb Banta-Green,¹ Susan Kingston,² Michael Hanrahan,³ Geoff Miller,⁴ T. Ron Jackson,⁵ Ann Forbes,⁶ Arnold F. Wrede,⁷ Steve Freng,⁸ Richard Harruff,⁹ Greg Hewett,⁹ Kris Nyrop,¹⁰ Mark McBride¹¹

ABSTRACT

Cocaine-related deaths increased to previous high levels in 2002, following a brief decline in 2001, while the number of cocaine ED mentions declined for the first time in several years. The number of heroin-related deaths also increased, following sharp declines observed from mid-2000 through 2001, but ED mentions remained at new lower levels. Overall, drug-related deaths involving ‘other opiates’ were at their highest levels, with the first substantial decline in ED mentions seen in more than 3 years. Marijuana use was widespread, with recent declines in ED mentions and a leveling off in treatment admissions. Indicators of methamphetamine use were mixed, with an increase in deaths (though still low relative to other drugs); flat levels for treatment admissions, arrestee drug screens and ED mentions; and declines in manufacturing labs and dump sites. MDMA ED mentions continued a steady decline, but they were still well above historical levels. PCP abuse shows recent declines, but it is also well above prior levels. LSD continues its long steady decline in ED mentions, while GHB mentions remained at a low level. Combined, the ED mentions for ‘club drugs’ accounted for only about 5 percent of ED mentions. Indicators of depressant use remained fairly steady, with relatively high levels of ED mentions and a continued gradual increase in death mentions. HIV infections continued to be relatively low overall but were elevated among certain populations of drug users, including those who are non-IDU methamphetamine users and users of amyl nitrate. Significantly higher rates of HIV infection continued to be found among gay and bisexual male methamphetamine IDUs. Hepatitis B and C continued to have high incidence rates and prevalence levels among IDUs.

INTRODUCTION

Area Description

Located on Puget Sound in western Washington, King County spans 2,130 square miles, of which the city of Seattle occupies 84 square miles. The combined ports of Seattle and nearby Tacoma make Puget Sound the second largest combined loading center in the United States. Seattle-Tacoma International Airport, located in King County, is the largest airport in the Pacific Northwest. The Interstate 5 corridor runs from Tijuana, Mexico, in the south, passes through King County, and continues northward to Canada. Interstate 90’s western terminus is in Seattle; it runs east over the Cascade Mountain range, through Spokane, and across Idaho and Montana.

According to the 2000 census, the population of King County is 1,737,034, an increase of 15.2 percent since 1990. King County’s population is the 12th largest in the United States. Of Washington’s 5.9 million residents, 29 percent live in King County. The city of Seattle’s population is 563,374; the suburban population of King County is growing at a faster rate than Seattle itself.

The county’s population is 75.7 percent White, 10.8 percent Asian/Pacific Islander, 5.5 percent Hispanic, 5.4 percent African-American, 0.9 percent Native American or Alaska Native, 0.5 percent Native Hawaiian and Other Pacific Islander, and 2.6 percent “some other race.” Those reporting two or more races constitute 4.1 percent of the population. Income statistics show that 8.0 percent of adults and 12.3 percent of children in the county live below the Federal poverty level, lower than the State averages of 10.2 percent and 15.2 percent, respectively.

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⁷ Division of Alcohol and Substance Abuse, Washington State Department of Social and Health Services

⁸ Northwest High Intensity Drug Trafficking Area

⁹ Medical Examiner’s Office, Public Health – Seattle & King County

¹⁰ Street Outreach Services

¹¹ U.S. Customs Service

Data Sources

- **Emergency department (ED) drug mentions data** were derived from the Drug Abuse Warning Network (DAWN), Office of Applied Studies (OAS), Substance Abuse and Mental Health Services Administration (SAMHSA), for 1994 through June 2002. A drug “mention” indicates that the patient identified the substance as something he or she had recently taken; it may or may not have been the reason for the ED visit. Available data are for King and neighboring Snohomish Counties combined.
- **Treatment admissions data** were extracted from the Washington State Department of Social and Health Services’ Treatment and Assessment Report Generation Tool (TARGET). TARGET is the department’s statewide alcohol/drug treatment activity database system and report-generating software. Data were compiled for King County from January 1, 1992, through December 31, 2002. Alcohol-only and privately funded treatment admissions are excluded, as are admissions to detoxification and transitional housing. Additional data are available from the Washington State Outcomes Project, Opiate Study Sample.
- **Drug-related mortality data** were provided by the King County Medical Examiner (ME). Information about drug-caused deaths in King County is presented by half-year from January 1, 1994, through December 31, 2002. The data include deaths directly caused by licit or illicit drug overdose and exclude deaths caused by poisons. Therefore, totals may differ slightly from drug death reports published by the King County ME’s office, which include fatal poisonings. Testing is not done for marijuana. Because more than one drug is often identified per individual drug overdose death, the total number of drugs identified exceeds the number of actual deaths.
- **Arrestee drug testing data** were obtained from the Arrestee Drug Abuse Monitoring (ADAM) program. As part of the National Institute of Justice’s (NIJ’s) ADAM program, King County’s urinalysis results for 2000 to 2002 are included in the narratives for cocaine, heroin, marijuana, phencyclidine, and stimulants (methamphetamine). All data are for adult male arrestees only.
- **Illegal drug price, purity, production, trafficking, distribution, and availability data** were provided by four sources. Heroin price and

purity data for the United States and Seattle are from the Drug Enforcement Administration’s (DEA) Domestic Monitor Program (DMP). Data presented are from the first half of 2001, the most current data available. Qualitative data for the first half of 2002 were provided by local DEA intelligence staff. DEA Diversion Control provided data on prescription drug sales to hospitals and pharmacies in 2001. Data from the U.S. Customs Service relating to the seizures for all illegal drugs are included for January 1, 2001, to December 3, 2002. The majority of customs seizures are at the Blaine, Washington, border crossing, where Interstate 5 crosses the northern border of the State and into Canada near Vancouver. This is the third busiest Canadian border crossing for passengers and the fourth busiest for commercial traffic nationally. Other relevant data are from the Northwest High Intensity Drug Trafficking Area (NW HIDTA). Pursuant to its designation by the Office of National Drug Control Policy, the NW HIDTA produces a Threat Assessment for the region on an annual basis. Data for 1998 through 2002 are from all Federal, State, and local law enforcement agencies and narcotics task forces in the region, and the Western States Information System (WSIN). The most comprehensive and current source of methamphetamine production data is now the Washington State Department of Ecology (DOE), which is mandated to respond to and document all “Methamphetamine Incidents,” including operating labs, dump sites, and other sites associated with the manufacture of methamphetamine.

- **Data on infectious diseases related to drug use**, including the human immunodeficiency virus (HIV), acquired immunodeficiency syndrome (AIDS), and hepatitis, were provided by three sources. The Sexually Transmitted Disease (STD) Clinic, Public Health – Seattle & King County (PHSKC) provided data on clients’ drug use, health status, and health behaviors for October 2001 to September 2002. The Epidemiology Research Unit, PHSKC, provided findings from two longitudinal cohort studies of Seattle-area drug injectors. Funded by the National Institute on Drug Abuse (NIDA) and conducted by PHSKC, the studies began in 1994 and continued through 2002. Another source is “HIV/AIDS Epidemiology Report.” Data on HIV and AIDS cases (including exposure related to injection drug use) in Seattle-King County, other Washington counties, Washington State (July 1999 through June 2002), and the United States (January 1999 through December 2001) are provided

by PHSKC, the Washington State Department of Health, and the Federal Centers for Disease Control and Prevention (CDC). HIV cases were reported to PHSKC or the Washington Department of Health between September 1999 (when HIV reporting was first implemented in Washington State) and October 2002.

- **Washington State Alcohol/Drug Help Line (ADHL)** provides confidential 24-hour telephone-based treatment referral and assistance for Washington State. Data are presented for January 2001 to December 2002 for calls originating within King County. Data presented are for drugs mentioned. A caller may refer to multiple drugs; therefore, there are more drug mentions than there are calls. The data exclude information on alcohol and nicotine, which account for more than one-half of the calls.
- **Key informant interview data** are obtained from discussions with treatment center staff, street outreach workers, and drug users.

DRUG ABUSE PATTERNS AND TRENDS

Cocaine/Crack

Cocaine mentions in emergency departments showed their first substantial decline in 3 years. An estimated 1,256 mentions were reported in the first half of 2002 (exhibit 1), a 24-percent decline from the first half of 2001. Cocaine is the most common illegal drug mentioned in emergency departments in Seattle and is second only to alcohol-in-combination among all substances identified.

The number and proportion of treatment admissions for a primary cocaine problem increased slightly in the second half of 2002 to 519 admissions, representing 10 percent of treatment admissions as defined in Data Sources. Cocaine ranks second to marijuana among illegal drugs treated in King County (exhibit 2). Overall cocaine admissions are down over the past 10 years. The age of those being admitted for treatment declined steadily from 1992 to 1999 and remained steady through 2002. Smoking remains the primary route of administration, while injecting decreased as sniffing returned to popularity.

There were 79 deaths involving cocaine in 2002, a substantial increase from the 49 in 2001, but still below the high of 89 in 2000 (exhibit 3). Deaths involving cocaine have fluctuated in number since 1994, with a general upward trend. Of the 30 deaths involving cocaine from July to December 2002, 3

involved cocaine only and the remaining 27 involved multiple drugs, including 11 alcohol-in-combination, 16 heroin/opiates, and 9 prescription opiates.

The number of cocaine seizures by the U.S. Customs Service remained fairly steady from 2001 to 2002, ranging from 19 to 13 per half-year period. At the same time, the amount seized has fluctuated in each of those semi-annual periods, from 5,378 pounds, down to 153 pounds, down further to 37 pounds, and finally back up to 109 pounds in the second half of 2002.

In Seattle, as noted earlier, ADAM data are only available for adult male arrestees. Data for 2002 show that for arrestees tested, 38 percent had positive cocaine urines. This represents an increase from 2000 and 2001 (each 31 percent).

The NW HIDTA reported that the street prices of cocaine were \$45–\$100 per gram, \$450–\$800 per ounce, and \$14,000–\$28,000 per kilogram. Intelligence reports indicate that powder cocaine is increasingly more available in King County and other areas of the State.

Cocaine continues to be the second most common illegal drug mentioned by all callers to the ADHL. It is the most common drug cited by adults—24 percent for 2001 and 2002. For teenagers, cocaine was the third most common drug mentioned, with 69 calls, representing 10 percent of all calls in 2002, similar to 2001.

Heroin

Heroin-related ED visits were level from July 2000 through June 2002 and were lower than the levels reported from 1996 through 1999. In the first half of 2002, there were an estimated 996 mentions of heroin in the ED, ranking heroin below cocaine among illegal drugs (exhibit 1).

Heroin treatment admissions declined fairly steadily from the first half of 2000 through 2002. Based on 1-day censuses conducted during the autumn of 2001 and 2002, there was an eight percent increase in the number of clients in opiate-substitution treatment, from 2,422 to 2,598. The highest number of treatment admissions for heroin as the primary drug of choice occurred in the second half of 1999 ($n=961$). In the second half of 2002, there were only 393 primary heroin treatment admissions (exhibit 2). During the same period, the proportion of heroin admissions among all treatment admissions decreased from 16 percent to 8 percent. The high level of treatment admissions in recent years was related

primarily to the utilization of public funding that had been under-expended in treatment modalities other than opiate substitution treatment.

Deaths involving heroin/opiates increased to 87 in 2002, up from 61 in 2001 (exhibit 3). Current levels, however, are well below the peak seen from 1995 to 2000, when there were between 102 and 143 deaths involving heroin/opiates each year. In the second half of 2002, heroin/opiates was identified in 39 deaths. Of these deaths, 6 involved heroin/opiates only, 16 involved cocaine, 14 involved alcohol, and 5 involved other opiates. A total of 12 depressants were identified in 9 deaths also involving heroin; diazepam was the most common depressant, identified in 8 of the deaths. Exhibit 4 depicts the rates of heroin-involved deaths per 100,000 population in Seattle-King County from 1989 to 2002. As shown, rates have fluctuated, totaling 5 per 100,000 in 2002.

The primary form of heroin on the streets is Mexican black tar. China white, a common form in Vancouver, British Columbia, and on the east coast of the United States, is virtually nonexistent in the local area according to regional HIDTA and DEA information.

Opiates have been identified in 10 percent of adult male arrestees for each of the years from 2000 to 2002.

Calls to the ADHL in 2002 for heroin represented 12 percent of all drug-related calls, statistically unchanged from 11 percent in 2001. Teens were less likely to call about heroin. Only 2 percent of calls by teens were related to heroin.

Data for heroin seizures by the U.S. Customs Service show only two seizures in the second half of 2002; one was a 16-kilogram seizure and another was a seizure of only 38 grams. There were no seizures in the first half of 2002. In 2001, seizures of heroin by customs officials were infrequent, and the total volume was small compared to the level of use, with 12 seizures totaling 7 pounds. The major trafficking route is believed to involve the interstate highway system from the southwestern United States, once the product has crossed the Mexican border. It is believed there is not much heroin trafficking across the Washington-Canadian border in either direction.

The DEA reports that declining heroin purity was first noted in 2000, and purity has remained at lower levels. The average purity of 14 samples collected by the DMP in Seattle was 10.3 percent during January–

June 2001; this is similar to the 12.7 percent purity for the 23 samples collected during all of 2000. All samples for which a country of origin could be determined were found to be Mexican.

Data for King County from the Northwest HIDTA for 2002 showed the following prices for Mexican black tar heroin: \$25–\$100 per gram, \$450–\$900 per ounce, \$6,000–\$10,000 per pound, and \$11,500–\$20,000 per kilogram.

Other Opiates/Narcotics

For the purposes of this report, “other opiates/narcotics” include codeine, dihydro-codeine, fentanyl, hydrocodone, methadone, oxycodone, propoxyphene, and the narcotic analgesics/combinations reported in the DAWN ED data.

After 3 years of dramatic increases in narcotic analgesics/combinations ED mentions, overall levels have declined. A 30-percent decrease to 831 mentions was reported from the first half of 2001 to the first half of 2002. Narcotics “not otherwise specified” made up the largest proportion of these substances, accounting for 259 mentions from January to June 2002, a 57-percent decrease from the comparable time-frame in 2001. Methadone (Dolophine) is the most common narcotic specifically identified, with 160 mentions in the first half of 2002, a significant decline from 305 in the second half of 2001. Mentions for oxycodone (OxyContin and Percodan) did not change from the second half of 2001 to the first half of 2002. This follows a period of continuous increases from January 1999 to December 2001.

Data on the form of methadone seen in the ED from 2000 and 2001 show that tablets were the most common form identified, 73 percent and 68 percent, respectively, followed by liquid at 26 percent and 22 percent. The majority of tablet methadone available locally is from physician prescriptions for pain, while the majority of the available liquid methadone is from opiate substitution treatment clinics.

Available treatment data for prescription opiates are limited to patients seen in opiate substitution treatment clinics from 1998 to 2001 throughout all of Washington State. These data are for private and publicly funded treatment and include persons who mentioned prescription opiates as their primary, secondary, or tertiary drug of choice. Overall, treatment admissions remained steady, with 17 percent of those entering opiate substitution treatment

mentioning prescription opiates in 1998 and 15 percent in 2001. Data for those admitted to treatment for methadone not prescribed to them point to small, decreasing numbers—from 29 people in 1998 to 15 in 2001.

Deaths involving other opiates reached their highest level in at least the past 9 years, with a total of 78 mentions of other opiates in 2002, up from 55 in 2001 and 29 in 1997 (exhibit 3). Oxycodone and methadone were the two most commonly identified drugs in deaths related to other opiate use during the last several years, constituting 75 percent of other opiates identified from 1999 to 2002. Oxycodone death mentions leveled off in 2002 after 5 years of steady increases, with 20 mentions in 2002, up from 1 in 1997. Methadone increased significantly to 37 mentions in 2002, up from 24 in 2001. What constitutes a methadone-related death is unclear, however, particularly among methadone-tolerant individuals. Issues of tolerance, potentiation with other drugs, and overlapping therapeutic and lethal dose levels complicate assigning causation in prescription opiate-involved fatalities.

DEA data on sales of prescription opiates to hospitals and pharmacies reveal a 157 percent increase in methadone and a 201 percent increase in oxycodone from 1997 to 2001. At the same time, sales of fentanyl increased 79 percent, and those for hydrocodone (Vicodin and Percocet) increased 47 percent. Sales of codeine decreased 23 percent, and those for meperidine (Demerol) decreased 18 percent during this timeframe. Note that these data for methadone only include prescriptions for pain written by physicians; they do not include methadone provided in opiate substitution treatment clinics.

Data from the opiate study sample of the Washington State Outcomes Project point to substantial prescription opiate use with an average of 5 years of use at the time of treatment entry, compared with 10 years for heroin. A substantial minority, 43 percent, reported at least 6 months of regular use of prescription opiates during their lifetime.

Marijuana

Marijuana continues to be one of the most widely used illicit substances in the area. ADAM data show that 38.5 percent of arrestees tested positive for the drug during 2002, an increase from 35.1 percent in 2001. Marijuana remains the most commonly identified drug among arrestees in King County.

DAWN ED data indicate that marijuana remains the fourth most common substance mentioned (exhibit

1). Approximately 80 percent of the marijuana mentions represented patients who were also using other drugs at the time of the ED visit. This ratio has remained relatively constant over the last 7 years, with a decrease in the first half of 2001 (67 percent), followed by an increase (75 percent) during the second half of 2001. The surge in the number of marijuana mentions has been evident since the first half of 2000 and was maintained through 2001. A 33-percent decline occurred from the first half of 2001 to the first half of 2002, when there were an estimated 579 marijuana mentions.

The proportion of treatment admissions for marijuana was steady from the second half of 2000 through 2002, at 13–14 percent. This is down from the period from January 1998 through June 2000, when marijuana constituted 15–16 percent of admissions. Marijuana continued as the second most common primary reason for drug treatment in the second half of 2002, well below alcohol-in-combination (exhibit 2).

Marijuana continues to be the drug most commonly cited among those who called the ADHL, representing one-quarter of the calls. A substantial difference between adults and teens is evident: approximately two-and-one-half times the proportion of teen calls (50 percent) as adult calls (20 percent) concerned marijuana during calendar year 2002. The total number of calls to the ADHL, including those for marijuana, decreased in the second half of 2002 from the first half of 2002.

HIDTA data collected from King County law enforcement show the following prices for marijuana: \$10 per gram, \$250–\$300 per ounce, and \$2,300–\$4,000 per pound. Price depends on the quality and a variety of other factors, but “BC Bud” from British Columbia, Canada, remains the most common and most expensive of the marijuana varieties available in King County. Cultivation seizures reported to HIDTA for Washington State totaled 317 in 2000 and 401 in 2001.

The U.S. Customs Service reports a large increase in seizures of marijuana, principally at the U.S.-Canada border crossing at Blaine, where Interstate 5 crosses into Canada near Vancouver. Between the first and second halves of 2001, there was a slight increase in the number of marijuana seizures, from 268 to 301, and more than a doubling in the number of pounds of marijuana seized—from 3,342 to 7,519 pounds. This trend in increased marijuana seizures continued, with 408 during the first half of 2002 (totaling 9,811 pounds), but declined in the last half of 2002 to 388 seizures totaling 4,127 pounds. Even with the additional diligence of U.S. Customs at the Canadian

border, “Marijuana produced in Washington, Canada and Mexico is available throughout the state,” according to the Northwest HIDTA Threat Assessment (2003).

Stimulants

DAWN ED mentions for amphetamines in Seattle-King County increased from 1998 to 2001, but decreased significantly in the first half of 2002. Methamphetamine mentions peaked at 305 in the first half of 2000 and declined to 186 in the first half of 2002 (exhibit 1). Overall, amphetamines and methamphetamine are mentioned in the ED less frequently than cocaine, heroin, and marijuana. The form and source of amphetamines, prescription or street drug, are unknown.

The number of King County treatment admissions for primary amphetamine and methamphetamine (they are combined in the treatment reporting system) abuse remained stable from January 2000 through December 2002. Treatment admissions constituted 5 to 7 percent of all admissions during this time-frame, up from 2 percent in 1993. They totaled 348 in the second half of 2002 (exhibit 2), and continued to be surpassed by admissions for primary alcohol, cocaine, heroin, and marijuana abuse. During 2001, the rate of methamphetamine treatment admissions per capita was three times lower in King County than throughout the rest of the State.

The proportion of calls to the ADHL that originated in King County regarding methamphetamine decreased from 17 percent in 2001 to 14 percent in 2002, with nearly identical proportions for youth and adults. Methamphetamine was the third most common illegal drug mentioned by both teenaged and adult callers.

The percentage of male arrestees in the Seattle-King County ADAM program who tested positive for methamphetamine remained steady at 11 percent in 2002. This compares to 11 percent in 2001 and 9 percent in 2000.

Methamphetamine was specifically identified in 14 deaths in 2002, a return to the previous high seen in 1999. Nine of these deaths were in the second half of 2002, with three deaths involving methamphetamine only. Other deaths involving methamphetamine included one with gamma hydroxybutyrate (GHB) as the only other drug, one with methylenedioxymethamphetamine (MDMA) as the only other drug, two with cocaine and other drugs, one with methadone, and one with an other opiate. This raises the question as to what is considered a “club drug.”

From a real world perspective, a “club drug” is any drug used in a club context. Context is not included in medical examiner data, however, and the appearance of methamphetamine in combination with GHB in one death and in another case with MDMA keeps this question open.

Local street prices of methamphetamine in Seattle-King County were \$20–\$100 per gram, \$350–\$1,200 per ounce, and \$5,000–\$15,000 per pound.

The most comprehensive and current source for information on methamphetamine manufacturing is the Washington State Department of Ecology, which is mandated to respond to and document all “methamphetamine incidents,” including operating labs, dump sites, and other sites associated with the manufacture of methamphetamine. Statewide data from DOE for 2002 show the first decline to 1,693 incidents, compared with 1,886 in 2001, 1,277 in 2000, and 789 in 1999. It is important to note that this measurement does not account for the amount of methamphetamine manufactured, a more difficult indicator to measure.

Similar to statewide trends, the number of methamphetamine incidents reported in King County decreased in 2002. DOE reported a total of 241 incidents in 2002, compared with 271 in 2001, 231 in 2000, and 107 in 1999, suggesting a return to the level reported in King County during 2000 and sustaining King County’s ranking as second in the State for the number of activities associated with methamphetamine manufacturing. The rate of incidents per capita in King County was one-half the State average in 2002. Statewide, most of the areas with decreased methamphetamine incidents in 2002 are the major population centers, while those experiencing increasing methamphetamine incidents tend to be more rural.

Informants report increasing use of “ice” and “glass,” converted forms of methamphetamine that have higher purity. Anecdotal reports supported by treatment data dating back to 1994 suggest that users are increasingly smoking methamphetamine as opposed to using it in other ways.

Methamphetamine seizures by the U.S. Customs Service at the border continue to be infrequent, with 17 seizures (totaling 8 pounds) in 2002 compared to 18 seizures (totaling 3 pounds) in 2001.

Depressants

Barbiturates, benzodiazepines, and other sedative/depressant drugs in this analysis include alprazolam

(Xanax), butalbital (Fioricet), chlordiazepoxide (Librium), cyclobenzaprine (Flexeril), diazepam (Valium), hydroxyzine pamoate (Vistaril), lorazepam (Ativan), meprobamate (Equanil), oxazepam (Serax), phenobarbital, promethazine (Phenergan), secobarbital (Seconal), temazepam (Restoril), triazolam (Halcion), and zolpidem (Ambien).

ED mentions for depressants—anxiolytics, sedatives and hypnotics—show a short-term decline of 32 percent to 594 mentions in the first half of 2002 compared with 871 in the first half of 2001. This level is a return to that last reported in 1999. Over longer periods of time, ED mentions for these drugs tended to fluctuate. Depressants rank below cocaine, heroin, and narcotic analgesics/combinations, and are similar to marijuana in terms of the number of mentions (exhibit 1). The majority of mentions were for benzodiazepines (74 percent).

Deaths involving depressants increased slightly in 2002 to a total of 55 mentions, up from 48 in 2001 (exhibit 3). In the second half of 2002, there were 22 deaths in which depressants were identified, with a total of 29 depressants identified among these decedents. Of the decedents, 16 (73 percent) had taken diazepam (Valium). Other types of drugs identified included cocaine in 6 cases, heroin in 8, alcohol in 8, and other opiates in 10. Depressant-related deaths have varied over time, with a gradual trend upward over the past 8 years.

The ADHL reported data on adult calls related to benzodiazepines, barbiturates, and tranquilizers, which, combined, represented 1 percent of drugs mentioned by callers in 2002.

Hallucinogens and Club Drugs

Hallucinogens include lysergic acid diethylamide (LSD), mescaline, peyote, psilocybin (mushrooms), phencyclidine (PCP), and inhalants. “Club drugs” is a general term used for drugs that are popular at nightclubs and raves, including the hallucinogens, MDMA (ecstasy), GHB, gamma butyrolactone (GBL), ketamine, and nitrous oxide.

ED mentions of MDMA continued to decline steadily. During the first half of 2002, mentions ($n=38$) decreased from the previous 6 months and 41 percent from the same period in 2001. Overall, ED mentions for MDMA decreased 47 percent from the peak in the last half of 2000 ($n=72$), the culmination of a 2-year growth period. In a similar trend, GHB mentions ($n=18$) during this period also decreased from their 2000 high point and declined 31 percent

between the first halves of 2001 and 2002. There was only one mention of ketamine in 2001 and only one additional mention through June 2002.

Following a sharp spike in the second half of 2001, PCP mentions returned to a level more typical of the prior 2 years, with 59 mentions in the first half of 2002. Regardless of short-term fluctuations, PCP mentions still remain two to three times higher than the number reported before 2000.

DAWN ED data also indicate a continuing trend in decreasing LSD mentions; only 13 were reported during the first half of 2002, representing a 70-percent decrease since first half 2001. LSD mentions have been declining steadily over the past few years. During this period, as they have historically, ED mentions for all of the drugs combined in these categories constituted 3–4 percent of all DAWN ED illegal drug mentions.

During the second half of 2002, the King County Medical Examiner reported one MDMA-related death, the first involving MDMA in more than a year and the sixth since 1999. Two deaths related to GHB were reported in the last half of 2002, for an annual total of three. These were the first GHB-related deaths in King County, and each involved Caucasian men in their late twenties. Previously reported incidents of GHB and other club drug-related overdoses (non-fatal) among gay and bisexual men in sex clubs have decreased dramatically after a series of prevention, early detection, and medical response trainings were sponsored by Public Health for venue staff.

ADAM data for drugs in this category are limited to PCP. During 2002, 2 percent of male arrestees in Seattle tested positive for PCP; most were younger than 30. This is the same percentage reported for 2001 and is statistically unchanged from 1 percent in 2000.

Calls to the ADHL regarding club drugs (LSD, ecstasy, PCP, hallucinogens and inhalants) dropped 50 percent from 339 in 2001 to 172 in 2002; 60 percent concerned MDMA. Overall, these calls constituted 3 percent of calls concerning illegal drugs in 2002.

Other information concerning patterns of use remains anecdotal. Prices for ecstasy, GHB, PCP, and LSD remained stable from the past year (e.g., a 150–250-milligram tablet of MDMA sells for \$20–\$30), and ecstasy quality remains inconsistent. Among gay and bisexual men, the blended use of ecstasy, GHB, and amyl nitrite (“poppers”), especially in combination

with recreational, non-prescription use of Viagra, continues as a significant trend in dance and sex venues.

In the last half of 2002, the U.S. Customs Service made 10 seizures of MDMA totaling 83 pounds, including 1 75-pound seizure. This mirrors activity in the first half of 2002, during which 11 seizures totaling 132 pounds (including a single seizure of 110 pounds) were reported. This is the first year that data on MDMA seizures are available.

INFECTIOUS DISEASES RELATED TO DRUG ABUSE

PHSKC estimates there are 15,000–18,000 drug injectors who reside in King County. With the exception of men who have sex with men (MSM) and who are injection drug users (IDUs), the rate of HIV infection among injectors has remained low and stable over the past 14 years. Various sero-surveys conducted in methadone treatment centers, correctional facilities, and through street and community-targeted sampling strategies over this period yield an HIV prevalence estimate of 1–2 percent among King County's non-MSM/IDU population. Infection rates appear to be 2–3 times higher among African-American and Hispanic IDUs than Whites. Among American Indian and Alaska Native IDUs, the rate is 5–6 times higher than for Whites. IDUs who are homeless or unstably housed are about twice as likely to be HIV-positive as are IDUs who are permanently housed. Similarly, out-of-treatment IDUs appear to be twice as likely to be HIV-positive as IDUs who are enrolled in treatment. Recent data from a CDC-funded HIV Incidence Study (HIVIS, 1996–2001) suggest that the rate of new infections among non-MSM/IDUs in King County is less than 0.5 percent per year.

Among methamphetamine-injecting MSM, PHSKC data indicate that up to 47 percent are HIV-positive. Fourteen percent of MSM/IDUs who primarily inject drugs other than methamphetamine are HIV-positive. Prevalence of HIV among non-amphetamine injecting MSM/IDUs is comparable to the rate observed among MSM in general in King County. HIVIS data indicate that 2.5 percent (95 percent, confidence interval: 1.1–4.5) of non-infected MSM/IDUs become infected each

year. This is the highest incidence rate of all at-risk populations in King County, accounting for an estimated 20–80 new infections a year.

A high proportion of injection drug users in King County show evidence of exposure to blood-borne viruses other than HIV. Epidemiologic studies conducted among more than 4,000 IDUs by PHSKC's HIV/AIDS Epidemiology Program since 1994 reveal that 85 percent of King County IDUs may be infected with hepatitis C (HCV) and 70 percent show markers of prior infection with hepatitis B (HBV). Incidence studies indicate that 20 percent of non-infected Seattle-area IDUs acquire HCV each year and 10 percent of IDUs who have not had hepatitis B acquire HBV.

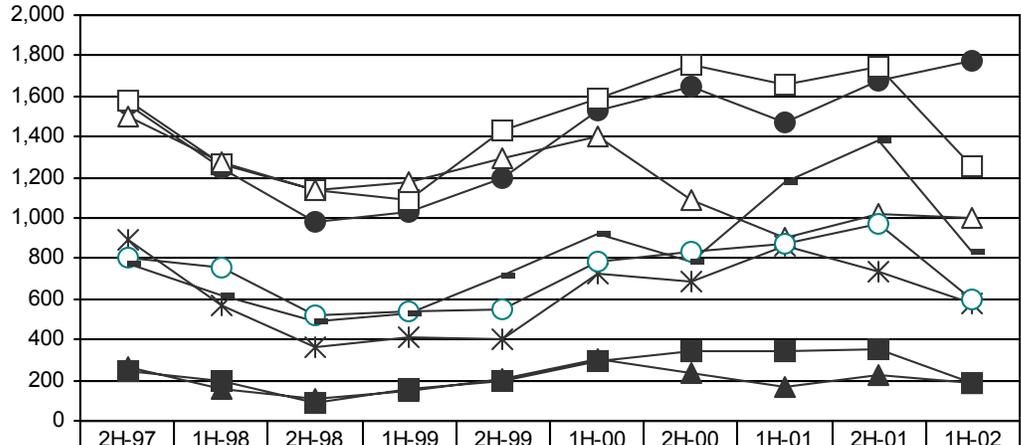
In addition to injection drug use, recent studies conducted by Public Health—Seattle & King County's STD Clinic indicate that non-injection use of methamphetamine, as well as inhalation of poppers (amyl nitrate), may be significant risk factors for HIV acquisition and transmission among men who have sex with men. Among 1,547 MSM who were tested from October 2000 through February 2003, those who reported nitrate use were nearly twice as likely to be HIV-infected, while MSM who reported non-injection use of methamphetamine in the last year were 1.5 times more likely to be infected. These findings, though not as dramatic as the known association between HIV infection and injection drug use among MSM, are reason for concern and action. Previously reported STD Clinic data showed that use of methamphetamine and ecstasy among local MSM was significantly associated with increased number of sex partners and contracting gonorrhea. Together, these data suggest a need for further study of the role drug use is playing in the sexual transmission of HIV among MSM in the Seattle area, and for HIV prevention interventions that specifically target MSM who use drugs by means other than injection.

More detailed information on HIV/AIDS in King County and other counties in the State is presented in exhibit 5.

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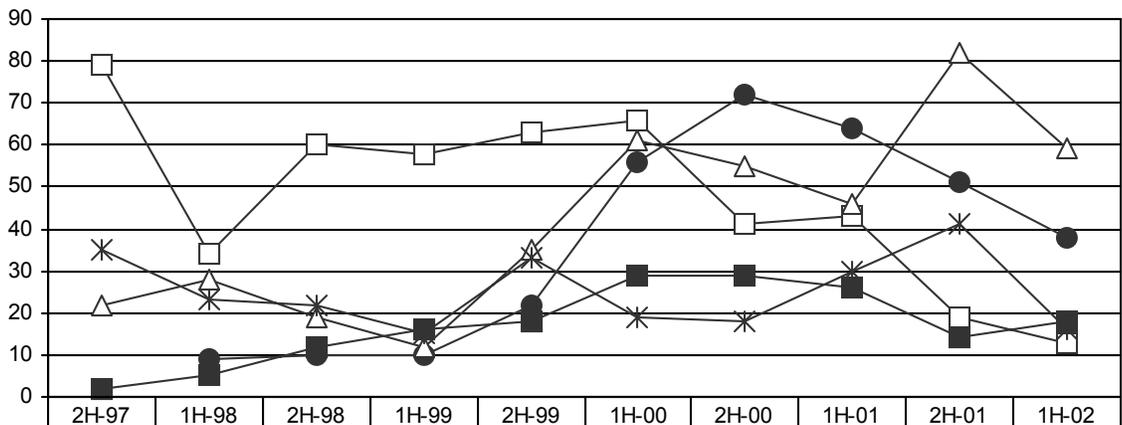
Exhibit 1. Estimated DAWN ED Mentions for Selected Drugs in the Seattle Area: July 1997–June 2002

ED Mentions for Selected Drugs: King and Snohomish Counties



	2H-97	1H-98	2H-98	1H-99	2H-99	1H-00	2H-00	1H-01	2H-01	1H-02
—●— Alcohol-in-combination	1,563	1,242	979	1,031	1,197	1,526	1,646	1,469	1,677	1,773
—□— Cocaine	1,583	1,261	1,139	1,089	1,430	1,584	1,754	1,660	1,750	1,256
—△— Heroin	1,496	1,279	1,142	1,180	1,290	1,403	1,087	903	1,024	996
—*— Marijuana	888	569	366	409	398	723	691	858	738	579
—■— Amphetamines	246	199	93	154	192	291	348	345	354	191
—▲— Methamphetamine	267	160	106	150	203	305	235	166	228	186
—○— Depressants	807	756	520	540	552	781	830	871	974	594
—■— Narcotic analgesics/combinations	777	613	491	527	711	919	780	1,179	1,381	831

ED Mentions for "Club Drugs" and Hallucinogens: King and Snohomish Counties



	2H-97	1H-98	2H-98	1H-99	2H-99	1H-00	2H-00	1H-01	2H-01	1H-02
—●— MDMA (ecstasy)	... ¹	9	10	10	22	56	72	64	51	38
—□— LSD	79	34	60	58	63	66	41	43	19	13
—△— PCP	22	28	19	12	35	61	55	46	82	59
—*— Misc. hallucinogens	35	23	22	15	33	19	18	30	41	16
—■— GHB	2	5	12	16	18	29	29	26	14	18

¹ Dots (...) indicate that an estimate with a relative standard error greater than 50 percent has been suppressed.

SOURCE: DAWN, OAS, SAMHSA

Exhibit 2. Demographic Characteristics of Alcohol/Drug Treatment Admissions¹ in Seattle-King County, by Drug and Percent: July–December 2002

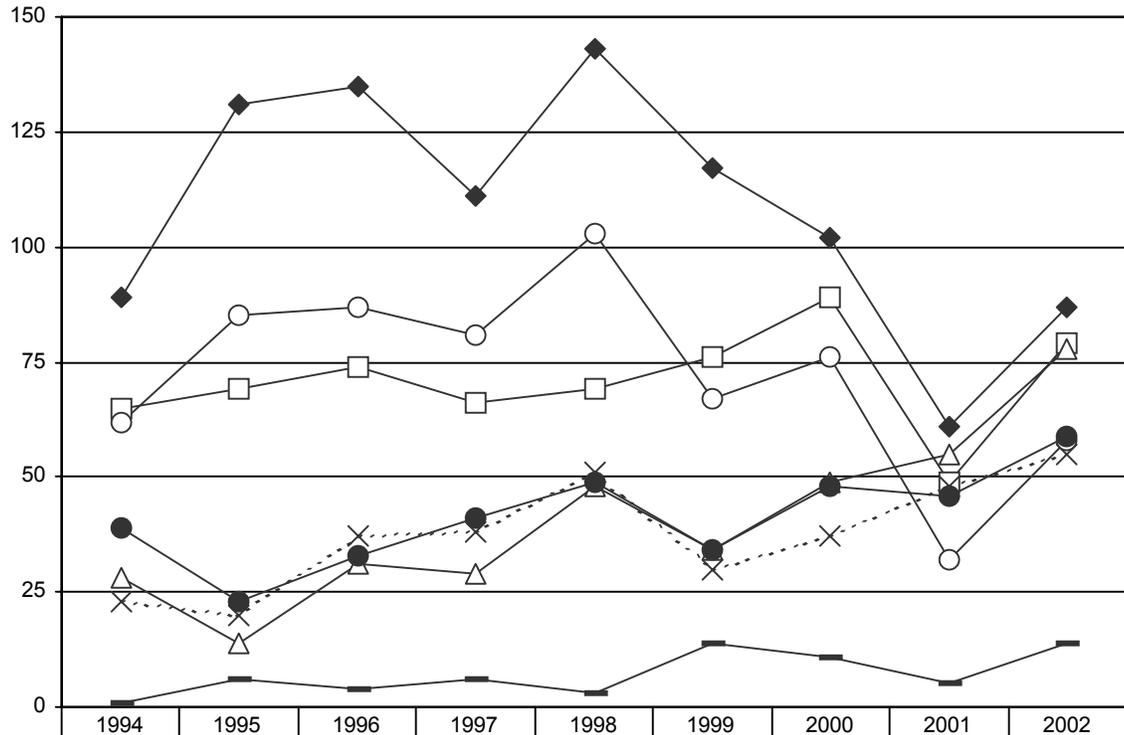
Demographic Characteristic	Alcohol-in-Combination		Cocaine		Heroin		Marijuana		Methamphetamine	
Admissions ²	1,303		519		393		745		348	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>N</i>	%	<i>n</i>	%
Gender										
Male	949	72.8	309	59.5	240	61.1	545	73.2	193	55.5
Female	354	27.2	210	40.5	153	38.9	200	26.9	155	44.5
Race/Ethnicity										
White	672	51.6	156	30.1	255	64.9	331	44.4	309	88.8
African-American	253	19.4	287	55.3	68	17.3	252	33.8	4	1.2
Hispanic	137	10.5	19	3.7	28	7.1	66	8.9	16	4.6
Asian-American	88	6.8	19	3.7	10	2.5	56	7.5	6	1.7
Native American	127	9.8	22	4.2	17	4.3	34	4.6	10	2.9
Age Group										
17 and younger	92	7.1	9	1.7	3	0.8	370	49.7	42	12.1
18–25	158	12.1	51	9.8	33	8.4	207	27.8	80	23.0
26–34	280	21.5	119	22.9	94	23.9	99	13.3	123	35.3
35 and older	773	59.3	340	65.5	263	66.9	69	9.3	103	29.6
Route of Administration										
Smoking			87	16.8	18	4.6	2	0.3	54	15.5
Intravenous			38	7.3	353	89.8	0	0.0	102	29.3
Other/Multiple			7	1.4	1	0.3	6	0.8	14	4.0

¹ Total admissions (N=5,179) includes an unduplicated count of admissions to all modalities of service and for all public funding excluding private facilities.

² Excludes alcohol only and privately funded treatment admissions, and admissions to detoxification and transitional housing.

SOURCE: Washington State TARGET data system—Structured Ad Hoc Reporting System.

Exhibit 3. Drugs Identified in Drug-Caused Deaths in Seattle-King County by Number: January 1994–July 2002¹



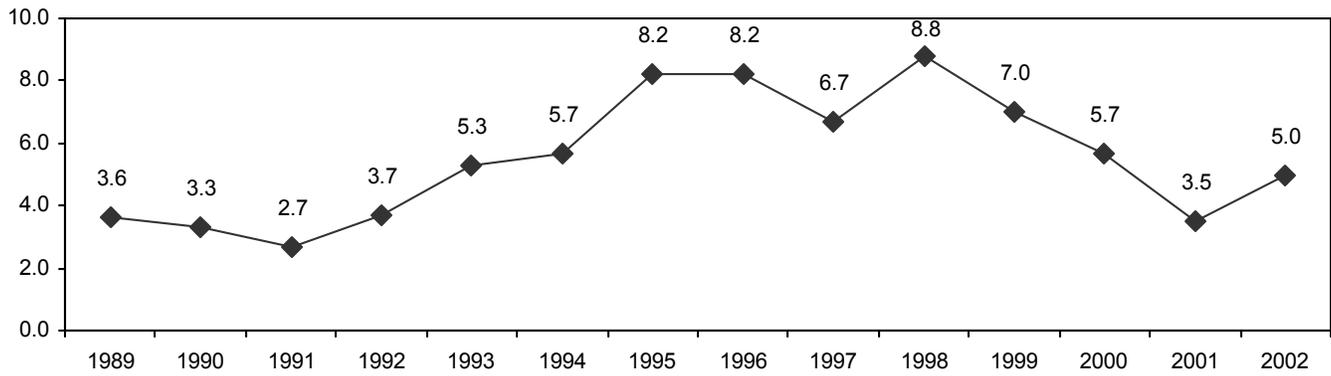
	1994	1995	1996	1997	1998	1999	2000	2001	2002
◆ Heroin/Opiates	89	131	135	111	143	117	102	61	87
□ Cocaine	65	69	74	66	69	76	89	49	79
△ Other Opiates	28	14	31	29	48	34	49	55	78
· · · X · · · Depressants	23	20	37	38	51	30	37	48	55
○ Alcohol	62	85	87	81	103	67	76	32	58
● Antidepressants	39	23	33	41	49	34	48	46	59
■ Amphetamines ²	1	6	4	6	3	14	11	5	14
Total Deaths	158	183	218	179	222	205	219	153	195

¹ More than one drug is often identified per individual drug overdose death; table excludes poison-related deaths.

² The amphetamines identification category includes methamphetamine but does not include MDMA.

SOURCE: Medical Examiner, Public Health—Seattle and King County

Exhibit 4. Rate¹ of Heroin-Involved Deaths Per 100,000 Population in Seattle-King County: 1989–2002



¹ Note that rates from 2000 onward are calculated using the 2000 census population; prior years are calculated using the 1990 census, except for 1989.

SOURCE: Medical Examiner, Public Health—Seattle and King County

Exhibit 5. Demographic Characteristics of Persons With HIV Diagnoses, Including AIDS, in Seattle-King County, Other Washington Counties, Washington State, and the United States: Through June 30, 2002, Data Reported as of October 31, 2002

Totals/Characteristic	King County ² HIV Including AIDS		Other WA Counties HIV Including AIDS		Washington State HIV Including AIDS		United States ¹ AIDS Only	
Cumulative diagnoses of HIV, including AIDS	8,689		4,624		13,313		816,149	
Cumulative HIV or AIDS deaths	3,796		1,952		5,748		467,910	
Number currently living with HIV, including AIDS	4,893		2,672		7,565		348,239	
Case Demographics	King County ² HIV Including AIDS 01/2000–12/2002		Other WA Counties ² HIV Including AIDS 01/2000–12/2002		Washington State ² HIV Including AIDS 01/2000–12/2002		United States ¹ AIDS Only 01/1999–12/2001	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>N</i>	%
Gender								
Male	867	88	447	80	1,314	85	92,041	74
Female	118	12	114	20	232	15	31,601	26
Age Group								
12 and younger	2	0	1	0	3	0	–	–
13–19	11	1	10	2	21	1	–	–
20–29	206	21	103	18	309	20	–	–
30–39	463	47	234	42	697	45	–	–
40–49	231	23	146	26	377	24	–	–
50–59	60	6	46	8	106	7	–	–
60 and older	12	1	21	4	33	2	–	–
Race/Ethnicity								
White	616	63	368	66	984	64	36,363	29
Black	224	23	79	14	303	20	60,980	49
Hispanic	101	10	71	13	172	11	24,456	20
Asian	30	3	15	3	45	3	1,197	1
Native American	9	1	17	3	26	2	537	0
Unknown	5	1	11	2	16	1	109	0
Exposure Category								
Male-male sex (MSM)	613	62	251	45	864	56	48,835	39
Injection drug user (IDU)	71	7	99	18	170	11	33,534	27
MSM/IDU	70	7	31	6	101	7	5,789	5
Heterosexual contact	119	12	83	15	202	13	33,027	27
Hemophilia	2	0	0	0	2	0	481	0
Transfusion	4	0	1	0	5	0	1,029	1
Mother at risk/has AIDS	2	0	1	0	3	0	400	0
Undetermined/other	104	11	95	17	199	13	547	0
Total HIV Cases Diagnosed in Last 3 Years	985		561		1,546		123,642	

¹ United States HIV data are not currently available in a format consistent with the Washington data. In addition, the AIDS data do not include age distributions by year of diagnosis. The most current available national AIDS data are through December 2001.

The U.S. data do not show specific incidence estimates for hemophilia or transfusion cases for 2000 and 2001; these numbers were interpolated from earlier incidence data. The U.S. data do not show specific incidence estimates for subdivisions of pediatric cases; therefore, the pediatric cases were redistributed by sex and race, and assumed to be perinatal.

² These cases were diagnosed with HIV infection between January 2000 and December 2002, and reported to Public Health – Seattle and King County or the Washington Department of Health as of December 31, 2002.

SOURCES: PHSKC, WA State Department of Health, Centers for Disease Control and Prevention

Substance Abuse Trends in Texas

Jane Carlisle Maxwell, Ph.D.¹

ABSTRACT

Twenty-nine percent of TCADA treatment clients report a primary problem with cocaine. Cocaine remains a problem on the border, as documented in school survey and ADAM data. Poison control center calls and overdose deaths related to cocaine are increasing, and use of crack cocaine, which is at an endemic level, continues to move beyond African-American users to Anglo and Hispanic users. Alcohol is the primary drug of abuse in Texas in terms of dependence, deaths, treatment admissions, and arrests. Use among Texas secondary school students between 2000 and 2002 was stable. Heroin addicts entering treatment are primarily injectors, and they are most likely to be Hispanic or Anglo males. Statewide poison control center calls about heroin and ED mentions of heroin in Dallas have declined. Heroin from Mexico is available and cheap. Hydrocodone is a much larger problem in Texas than is oxycodone or methadone. Codeine cough syrup continues to be abused, and its use is spreading. Seventy-eight percent of youths entering treatment report marijuana as their primary drug. Dallas ED mentions of marijuana have declined. The 2002 school survey found that use by 7th and 8th graders continues to decline, but use among older grades has increased since 2000. Methamphetamine and amphetamine are widely available and are problems, particularly in the northern part of the State. Alprazolam (Xanax) remains popular with heroin addicts, but indicators are mixed. Club drug users differ in sociodemographic characteristics, just as the properties of these drugs differ. Ecstasy treatment admissions continue to rise, and the 2002 Texas secondary school survey showed that lifetime use rose from 4.5 percent in 2000 to 8.6 percent in 2002. GHB, GBL, and similar precursor drugs remain a problem, particularly in the Dallas/Fort Worth Metroplex area, with high rates of ED mentions and forensic laboratory identifications. Although indicators are down, Rohypnol remains a problem along the border. Ketamine also continues to be a problem, although the number of cases reported is lower than for other 'club drugs.' Use of marijuana joints dipped in embalming fluid that can contain PCP ("fry") continues, with cases seen in the poison control centers, EDs, and treatment. DXM continues to be a problem with adolescents. The proportions of

AIDS cases among females and persons of color are increasing, and in the first quarter of 2003, the proportion of cases related to the heterosexual mode of transmission exceeded the proportion of cases involving injection drug use. Paralleling this trend, the proportion of needle users entering treatment continues to decrease.

INTRODUCTION

Area Description

The population of Texas in 2003 is 21,828,569, with 51 percent Anglo, 12 percent African-American, 34 percent Hispanic, and 3 percent "other." Illicit drugs continue to enter from Mexico through cities such as El Paso, Laredo, McAllen, and Brownsville, as well as smaller towns along the border. Drugs then move northward for distribution through Dallas/Fort Worth and Houston. In addition, drugs move eastward from San Diego through Lubbock and from El Paso to Amarillo and Dallas/Fort Worth. A major problem is that Mexican pharmacies sell many controlled substances to citizens who can legally bring up to 50 dosage units into the United States. Private and express mail companies are used to traffic narcotics and smuggle money. Seaports are used to import heroin and cocaine via commercial cargo vessels, and the international airports in Houston and Dallas/Fort Worth are major ports for the distribution of drugs in and out of the State.

Data Sources

Substance Abuse Trends in Texas is an ongoing series that is published every 6 months as a report to the Community Epidemiology Work Group meetings sponsored by the National Institute on Drug Abuse (NIDA). To compare June 2003 data with earlier periods, please refer to previous editions that are available in hard copy from the Texas Commission on Alcohol and Drug Abuse (TCADA) or on the TCADA Web page at <<http://www.tcada.state.tx.us/research/subabussetrends.html>> and at the Web page of the Gulf Coast Addiction Technology Transfer Center at <<http://www.utattc.net>>.

Data for this presentation were obtained from a number of different sources. In some instances, the exhibits are taken directly from graphs and tables

¹ The author is affiliated with the Gulf Coast Addiction Technology Transfer Center, the Center for Social Work Research, the University of Texas at Austin.

provided by the agencies, and these sources are noted on the exhibits. In other instances, the raw data were provided by the agencies and all analyses were done by the author.

- **Treatment data** are from TCADA's Client Oriented Data Acquisition Process (CODAP), which provided data on clients at admission to treatment in TCADA-funded facilities from first quarter 1983 through December 31, 2002. Only partial data have been available for Dallas County since July 1999. For most drugs, the characteristics of clients entering with a primary problem with the drug are discussed, but in the case of emerging club drugs, information is provided on any client with a primary, secondary, or tertiary problem with that drug. All analyses were done by the author.
- **Emergency department (ED) drug mentions data** from the Dallas-area EDs through the first half of 2002 were derived from the Drug Abuse Warning Network (DAWN), Office of Applied Studies (OAS), Substance Abuse and Mental Health Services Administration (SAMHSA). The 2002 data are provisional.
- **Overdose death data** statewide through 2001 came from death certificates from the Bureau of Vital Statistics of the Texas Department of Health (TDH). All analyses were done by the author. Drug-involved death data for the Dallas and San Antonio metropolitan areas came from medical examiner (ME) data collected by DAWN, OAS, SAMHSA, 2001.
- **Data on drug use among arrestees** are from the Arrestee Drug Abuse Monitoring (ADAM) program, National Institute of Justice (NIJ), through 2002 for Dallas, Laredo, and San Antonio. The 2002 data are provisional. Note that data prior to 2000 are not comparable to data from 2000 onward because of changes in sampling and other procedures.
- **Arrest data** are from the Texas Department of Public Safety, Uniform Crime Report, with analysis by TCADA's Research Department.
- **Price, purity, trafficking, distribution, and supply information** was provided by first quarter 2003 reports on trends in trafficking from the Dallas, El Paso, and Houston Field Divisions of the Drug Enforcement Administration (DEA). All analyses were done by the author.
- **Data on drugs identified by laboratory tests** are from the National Forensic Laboratory Infor-

mation System (NFLIS); data were submitted to NFLIS by all Texas Department of Public Safety (DPS) laboratories in 1998 through 2002.

- **Poison control center data** were reported by TDH and are from the Texas Poison Control Centers for 1998, 1999, 2000, 2001, and 2002.
- **Student substance use data** came from TCADA's *Texas School Survey of Substance Abuse: Grades 7–12, 2002* and *Texas School Survey of Substance Abuse: Grades 4–6, 2002*.
- **Adult substance use data** came from TCADA's *2000 Texas Survey of Substance Use Among Adults*.
- **Acquired immunodeficiency syndrome (AIDS) data** were provided by TDH and represent annual and year-to-date AIDS data for the period ending March 31, 2003.
- **Reports by users data** represent drug trends for January–March 2003, and were reported to TCADA by human immunodeficiency virus (HIV) street outreach workers and to the author as part of a study funded by NIDA Grant R21 DA014744.

DRUG ABUSE PATTERNS AND TRENDS

Cocaine/Crack

The TCADA *Texas School Survey of Substance Abuse: Grades 7–12 2002* found that 7.2 percent of students in nonborder counties had ever used powder cocaine and 2.5 percent had used cocaine in the past month. In comparison, students in schools on the Texas border reported higher levels of powder cocaine use: 13.3 percent lifetime and 6.0 percent past-month use. Use of crack was lower, with nonborder students reporting 2.7 percent lifetime and 0.6 percent past-month use; border students reported 4.0 percent lifetime and 1.5 percent past-month use. Percentages by grade level are shown in exhibit 1.

TCADA's *2000 Texas Survey of Substance Use Among Adults* reported 12.0 percent of Texas adults had ever used powder cocaine and 1.0 percent had used it in the past month, up from 10.0 percent lifetime and 0.4 percent past-month use in 1996. The increase in past-year use (1.4 percent to 1.9 percent) was statistically significant. The levels of crack cocaine use did not change between 1996 and 2000 (2.0 percent lifetime and 0.1 percent past month).

Texas Poison Control Centers reported 497 cases of misuse or abuse of cocaine in 1998, 498 in 1999, 874 in 2000, 1,024 in 2002, and 1,195 in 2002.

Exhibit 2 shows that the rate of cocaine ED mentions per 100,000 population in Dallas continues to decrease from the peak period in 1998. The decreases in rates between the first half of 2001 and the first half of 2002 were statistically significant.

Cocaine (crack and powder) accounted for 28.8 percent of all adult admissions to TCADA-funded treatment programs in 2002. Crack cocaine was the primary illicit drug abused by clients admitted to publicly funded treatment programs in Texas, at 21.1 percent of all admissions.

Abusers of powder cocaine constituted 7.7 percent of all adult admissions to treatment. Among cocaine treatment admissions, inhalers are the youngest and most likely to be Hispanic and involved in the criminal justice (CJ) or legal system. Cocaine injectors are older than inhalers but younger than crack smokers and are more likely to be Anglo (exhibit 3). The period from first consistent or regular use of a drug to date of admission to treatment (“lag”) varied among the groups shown in exhibit 3. Powder cocaine inhalers averaged 9 years between first regular use and entrance to treatment, while injectors averaged 13 years of use before they entered treatment.

Between 1987 and 2002, the percentage of treatment admissions for powder cocaine who were Hispanic increased from 23 percent to 45 percent, while the proportions dropped for Anglos (from 48 to 44 percent) and for African-Americans (from 28 to 10 percent). Exhibit 4 shows this increase by Anglos and Hispanics in the use of powder cocaine; it also shows that the proportion of crack cocaine admissions who were African-American dropped from 75 percent in 1993 to 52 percent in 2002. During the same time period, the proportion of Anglo admissions for crack increased from 20 percent in 1993 to 33 percent in 2002, and the percentage of Hispanic admissions increased from 5 percent to 13 percent in the same time period.

Some 4.7 percent of all adolescent treatment admissions in 2002 were for powder cocaine, and 1.1 percent were for crack cocaine. Of the powder cocaine users, 60 percent were Hispanic, 33 percent were Anglo, and 4 percent were African-American. Among crack users, 33 percent were Hispanic, 52 percent were Anglo, and 13 percent were African-American. The average age of both groups was 15.8 years. Eighty percent of the powder users and 74 percent of the crack users were involved in the juvenile justice system.

The number of deaths statewide in which cocaine was mentioned increased to a high of 491 in 2001 (exhibit 5). The average age of the decedents increased to 38.7 years in 2001. Of the 2001 decedents, 42 percent were Anglo, 28 percent were Hispanic, and 28 percent were African-American. Seventy-six percent were male.

The DAWN medical examiner system reported that the number of deaths in the Dallas metropolitan area involving a mention of cocaine increased from 134 in 1996 to 185 in 2001, while in San Antonio, the number of deaths with a mention of cocaine increased from 63 in 1996 to 130 in 2001.

The proportion of arrestees testing positive for cocaine decreased from the peak periods in the early 1990s. The high percentage of male and female arrestees in Laredo testing positive for cocaine shows the extent of the cocaine problem on the border (exhibit 6).

Exhibit 7 shows the proportion of substances identified by the DPS labs that were cocaine. In 2002, cocaine accounted for 34 percent of all items examined by the labs.

In the first half of 2003, powder cocaine was reported by the DEA as readily available, except in Laredo and Eagle Pass, where availability has decreased. Cocaine is also available in rural areas and in small towns. In Dallas, “one and one” packages of heroin and cocaine have returned. They were commonly sold on the streets through the mid-1990s, then were rarely seen until recently. “One and one” packages encourage the use of speedballs.

The DEA reports that crack cocaine is readily available except in Laredo, where availability and use is minimal. Since the penalties for crack are more severe, powder cocaine is usually transported to the area of the sale and then converted to crack. In Midland, crack is not only prevalent in the lower-income African-American communities, but it is also seen in lower economic Anglo areas. In the Dallas area, it is popular in predominately African-American and Hispanic neighborhoods in South Dallas and Oak Cliff, and it is the most visible drug seen in the Tyler area.

A rock of crack costs between \$10 and \$100, with \$10–\$20 being the most common price. An ounce of crack cocaine costs \$325–\$600 in Houston, \$750–\$1,100 in Dallas, \$550–\$750 in Tyler, \$500–\$800 in Beaumont, \$650–\$850 in Amarillo and Lubbock, \$400–\$650 in San Antonio, \$830 in El Paso, \$600–\$850 in McAllen, \$700–\$750 in Fort Worth, and \$550 in East Austin.

A gram of powder cocaine costs \$50–\$80 in Dallas, \$50–\$60 in El Paso, \$70–\$90 in Midland, \$60–\$100 in Houston, and \$100 in Alpine, Amarillo, and Lubbock. An ounce ranges between \$400 and \$1,200. An ounce costs \$400–\$500 in Laredo, \$450–\$800 in Houston, \$650–\$1,000 in Dallas, \$600 in Alpine, \$500–\$550 in McAllen, \$400–\$600 in San Antonio, \$650–\$850 in Amarillo and Lubbock, \$700–\$1,000 in Tyler, and \$750 in Fort Worth. The price for a kilogram ranges between \$11,000 and \$23,000 and is cheaper at the border (exhibit 8).

In Austin, street outreach workers report that new dealers are surfacing, there is a surge of younger sex industry workers trading sex for crack cocaine, and oral sex is sold for \$5. People are reported to be breaking out in rashes on their faces and arms after smoking crack, but the reason is unknown. A dark brown crack is also being seen, but no information is available as to what it is cut with. Many injecting crack users are unaware that acetic acid is milder on the veins than using lemon juice or vinegar when preparing crack for injecting. There is an increase in injection of crack, and most overdoses in Austin this spring were from injecting crack. Some addicts are lacing marijuana with crack, rolling it up, and smoking it, while others are smoking crack in cigarettes rather than using crack pipes. There is a reported increase in crack use by people age 14–25, including Hispanics.

Alcohol

Alcohol is the primary drug of abuse in Texas. The 1998 secondary school survey found that 72 percent had ever drunk alcohol and 38 percent had drunk in the last month; in 2002, 71 percent had ever used alcohol, as had 35 percent in the last month.

Heavy consumption of alcohol or binge drinking, which is defined as drinking five or more drinks at one time, is of concern, especially when done by young people. About 17 percent of all secondary students said that when they drank, they usually drank five or more beers at one time, and 14 percent reported binge drinking of wine coolers and liquor. Secondary students less frequently binged on wine, with only 6 percent of them doing so. Binge drinking increased with grade level. Among seniors, 29 percent binged on beer and 19 percent on liquor. The percentage of students who normally drank five or more beers has decreased since 1988; the percentage of binge drinking of wine or wine coolers has fallen from its peak in 1994, but is still higher than in 1988

(exhibit 9). The percentage of binge drinking of hard liquor has remained relatively stable since 1994.

Among students in grades 4–6 in 2002, 25 percent had ever drunk alcohol and 16 percent had drunk in the past school year.

The 2000 Texas adult survey found that 66 percent of Texas adults reported having drunk alcohol in the past year. In 1996, 65 percent reported past-year drinking. In 2000, 17 percent reported binge drinking, and 6 percent reported heavy drinking in the past month. Some 15.7 percent of all adults reported problems with alcohol use in the past year in 2000; 16.8 percent reported past-year problems in 1996. In comparison, 5.2 percent of adults in 2000 and 4.1 percent of adults in 1996 reported past-year problems with the use of drugs.

The rate of mentions per 100,000 population of alcohol-in-combination with other drugs in Dallas EDs peaked in 1998 (exhibit 2).

In 2002, 35 percent of adult clients admitted to publicly funded programs had a primary problem with alcohol. They were the oldest of the clients (average age of 38); 57 percent were Anglo, 23 percent were Hispanic, and 18 percent were African-American; 71 percent were male.

Among adolescents, alcohol accounted for 8 percent of all treatment admissions. Some 66 percent were male; 47 percent were Hispanic, 42 percent were Anglo, and 9 percent were African-American. Eighty-eight percent were involved with the juvenile justice or legal systems.

Far more persons die as an indirect result of alcohol than from a direct result of alcohol or drugs or an indirect result of drugs (exhibit 10). Direct deaths are those in which the substance (alcohol or drugs) caused the death, while indirect deaths are those in which the actual cause of death was for another reason, such as a car wreck or a violent crime, but alcohol or drugs were involved.

The DAWN medical examiner system reported that 38 percent of the drug-involved deaths in the Dallas metropolitan area and 44 percent of the deaths in the San Antonio metropolitan area in 2001 also involved alcohol.

More Texans are arrested for public intoxication (PI) than for any other substance abuse offense, although the arrest rate for PI per 100,000 population is decreasing (exhibit 11). The rates for the other substance abuse offenses, such as driving while intoxi-

cated (DWI) and liquor law violations (LLV) were fairly level.

Heroin

The proportion of Texas secondary students reporting lifetime use of heroin dropped from 2.4 percent in 1998 to 1.6 percent in 2000 to 1.7 percent in 2002, and past-month use dropped from 0.7 percent in 1998 to 0.5 percent in 2000 and 2002.

The 2000 Texas adult survey found that 1.2 percent of adults reported lifetime use of heroin, and 0.1 percent reported past-month use.

Calls to Texas Poison Control Centers involving confirmed exposures to heroin rose from 181 in 1998, to 218 in 1999, and to 295 in 2000, but they dropped to 241 in 2001 and 221 in 2002.

The rate of ED mentions of heroin per 100,000 population has dropped since the peaks in 1997 and 1998 (exhibit 2). The decrease in the rate of mentions between the first half of 2001 and the first half of 2002 was statistically significant.

Heroin ranks third after alcohol and cocaine as the primary drug for which adult clients are admitted to treatment. It accounted for 12 percent of admissions in 2002, compared with 9 percent in 1993. The characteristics of these addicts vary depending on the route of administration, as exhibit 12 shows.

Most heroin addicts entering treatment inject heroin. While the number of individuals who inhale heroin is small, it is significant to note that the lag period from first use and seeking treatment is 10 years, rather than 15 years for injectors. This shorter lag period means that contrary to street rumors that “sniffing or inhaling is not addictive,” inhalers can become addicted and will either enter treatment sooner while still inhaling, or else shift to injecting, increase their risk of hepatitis C and HIV infection, become more impaired, and enter treatment later.

Exhibit 13 shows that the proportion of heroin clients who are Hispanic is increasing.

Only 0.6 percent (28 youths) of all adolescents admitted to TCADA-funded treatment programs reported a primary problem of heroin. Of these youths, 79 percent were Hispanic.

The number of deaths with a mention of heroin or narcotics statewide decreased from a high of 374 in 1998 to 339 in 2001 (exhibit 14). Of the 2001 decedents, 54 percent were Anglo, 36 percent were Hispanic, and 8 percent were African-American; 81

percent were male, and the average age was 39.1 years.

The DAWN ME reporting system, which collects more detailed reports from medical examiners in the Dallas and San Antonio areas, reported that the number of deaths with a mention of heroin or morphine in the Dallas area increased from 66 in 1996 to 76 in 2001. In the San Antonio area, the number of deaths with a mention of heroin/morphine increased from 51 in 1996 to 88 in 2001.

The results for arrestees testing positive for opiates between 1991 and 2001 have remained mixed (exhibit 6).

Exhibit 7 shows that proportion of items identified as heroin by DPS labs has remained consistent at 1 to 2 percent over the years.

According to DEA, heroin from Mexico remains available. The Mexican States of Guerrero, Oaxaca, and Michoacan are the primary sources. White South American heroin is seen in McAllen, but is passing through for the east coast and is not being used in McAllen. DEA intelligence has indicated that this white heroin is coming into Dallas not only for transshipment but also for consumption among local users, and Colombian heroin traffickers are reportedly interested in expanding their operations in the Dallas area. Interviews with addicts in treatment in Dallas, Fort Worth, Austin, San Antonio, and Houston by this CEWG correspondent could not confirm an increase in the availability and use of white heroin; most of the addicts who had ever used white heroin reported using it when traveling on the east or west coast. However, addicts did report that white heroin was available around the university area in Austin.

The predominant form of heroin in Texas is black tar, which has a dark gummy, oily texture that can be diluted with water and injected. The cost of an ounce of black tar heroin is up slightly (exhibit 15). Depending on the location, black tar heroin sells on the street for \$10–\$20 per capsule, \$100–\$250 per gram, \$800–\$4,800 per ounce, and \$35,000–\$50,000 per kilogram. In the Dallas area, heroin costs \$10–\$20 per cap, \$800–\$2,000 per ounce, and \$35,000–\$50,000 per kilogram. In Fort Worth, an ounce costs \$1,200–\$1,900, and a kilogram sells for \$50,000. In El Paso, heroin costs \$100 per gram and \$1,000–\$1,500 per ounce. In Alpine, heroin costs \$125 per gram, and \$2,100–\$2,200 per ounce; in Midland an ounce costs between \$2,300 and \$4,800; and in Lubbock it costs \$250 per gram and \$3,500–\$4,500 per ounce. In Houston, an ounce costs \$1,000–\$2,500; in Laredo an ounce costs \$1,200–\$1,400; in McAllen an ounce costs \$1,200–\$1,500; in San

Antonio, an ounce costs \$1,800–\$3,100; and in Austin an ounce costs \$2,200–\$2,500.

Mexican brown heroin, which is black tar that has been cut with lactose or another substance and then turned into a powder to inject or snort, costs \$10 per cap, \$110–\$300 per gram, and \$800–\$3,000 per ounce. In Fort Worth, it is packaged in a gel capsule and referred to as “a pill,” with 10–15 pills in a gram. In Houston, it costs \$1,000–\$1,200 per ounce, in San Antonio it costs \$700–\$900 per ounce, and in Austin it costs \$1,300–\$1,500 per ounce.

Colombian heroin sells for \$2,000 per ounce and \$60,000–\$70,000 per kilogram in Dallas and \$62,000 in Houston. Southwest Asian heroin costs \$70,000 per kilogram in Dallas.

The Domestic Monitor Program of the DEA is a heroin purchase program that provides data on the purity, price, and origin of retail-level heroin available in the major metropolitan areas of the Nation. As exhibit 16 shows, over time, the purity and price varies, although it is purer and cheaper in El Paso than farther from the border. The DMP also shows that heroin from sources other than Mexico was reported in 2001. Of the street “buys” in Dallas, 32 were Mexican, 5 were Southeast Asian, and 1 was unknown. In El Paso, 15 were Mexican and 1 was unknown. In Houston, 38 were Mexican, 1 was South American, and 1 was unknown.

The author has been involved in interviewing heroin addicts in treatment in methadone programs in Austin, Dallas, Fort Worth, Houston, and San Antonio. This study of the differences in heroin inhalers and injectors is funded by NIDA grant DA014744. As noted in exhibit 12, heroin addicts who inhale or snort heroin enter treatment earlier. Preliminary field notes indicate that reasons addicts give for snorting heroin include being afraid of needles or of overdosing, having seen the effects of injecting (“they lose everything”), knowing the reputation of injectors as “junkies” and their low social status, or the fact their habits have not grown to the point they need to inject.

Some injectors never heard or thought about snorting heroin; they were only exposed to people who injected. Others reported that injecting is a “much better high,” or that injecting was “more economical.” Others reported that they injected because black tar, which is not an inhalable, was the only type of heroin available, while others injected because snorting hurt their noses and sinuses.

Some addicts started as snorters and then shifted to injecting, while others continued to use both routes of administration depending on whether or not needles

were available, their friends were snorting or injecting, they had lost their veins, or they had to prove they had no needle tracks to their probation or parole officers or to their spouses. In addition, there were older addicts who had started as inhalers, shifted to injecting, then went through treatment and had ceased heroin use. However, they had relapsed and were snorting heroin but were worried about the possibility of shifting to needles and came into treatment the last time as snorters.

Because of the oily, gummy consistency of black tar heroin, special steps must be taken to convert the heroin into brown powder so that it can be snorted. In addition, since brown powder has been “cut,” novice users and users who want to maintain smaller habits prefer brown heroin. Cuts that can be used include dormin, mannite, lactose, Benadryl, Nytol, baby laxative, vitamin B, and coffee creamer. The tar heroin can be frozen, the “cut” added, and then pulverized in a coffee grinder or with mortar and pestle. It can also be dried out on a plate over the stove, on a dollar bill over a lighter, or under a heat lamp and then pulverized.

Addicts who do not have the time or equipment to turn tar into powder or do not have a sharp needle can mix the tar with water and squirt it into their nose with a syringe barrel (with or without the needle) or Visine bottle. They can also pour it into their nose with a teaspoon or medicine dropper or inhale the liquid with a straw. This is known variously as “shebang,” “waterloo,” “agua de chango,” or “monkey water.” Injectors also report preparing heroin this way and then using this method when they are in situations where they cannot inject.

In Austin, heroin is sold in grams and balloons, and black tar heroin is usually cut with lactose to produce brown heroin. A gram quantity of black tar heroin, which would be about the size of a marble, is packaged in black plastic or in a finger cot. A gram of tar costs \$250 and would average 12–16 shots. Small colored water balloons are used to package a single dose or shot. While an ounce of tar would be about three-fourths the size of a golf ball, an ounce of brown heroin would be a little bigger than a golf ball since it has been cut and powdered. There would be about 1.5 times as many shots from a gram of brown heroin. Ounces of heroin are packaged as balloons or in small zip lock bags in Austin.

AIDS outreach workers in Austin report that in the first quarter of 2003, reports on the quality of heroin ranged from very good (60 percent pure) to low quality and that many of their clients are reluctant to believe that there is a high risk of transmission of hepatitis C from sharing water when injecting with others. In the second quarter of 2003, some heroin

was reportedly being cut with vitamin C or ascorbic acid. Some addicts believed that if one does cocaine and heroin combined for several weeks, there is less withdrawal from heroin. The type and quality of heroin varies around town, with some neighborhoods having tar and others having brown powder. Six balloons of powder sell for \$60, while seven balloons of the stronger tar can sell for \$100.

In Dallas, heroin is sold as grams, in pills, or in “papers,” which are pieces of tin foil. It is usually cut with dornin and sold as a cap. In Fort Worth, heroin is sold as grams, “pills,” and “turds.” It is cut with mannite. The AIDS outreach workers report that injecting heroin is occurring among younger adults, who are prone to multiple occurrences of relapse. In Houston, heroin is sold in grams and is cut with lactose. Inhaling or snorting heroin is not as common in Houston. In San Antonio, heroin is sold as “dimes,” “balloons,” “spoons,” or in grams, and it is usually cut with lactose. In San Antonio, users reported a number of different ways to turn black tar into brown powder heroin. AIDS outreach workers report users continue to speedball, that is, inject cocaine and heroin together.

In the Lower Rio Grande Valley, outreach workers reported seeing an increase of young persons age 16–21 injecting heroin. For several years, there has been an increase in cocaine use among young persons in this area. However, outreach workers are now reporting increases in heroin injection. This trend is happening in the smaller Valley communities such as Donna, Weslaco, and Mercedes, as opposed to the larger Valley cities such as McAllen and Brownsville.

Other Opiates

In this paper, “other opiates” excludes heroin but includes opiates/narcotics such as methadone, codeine, hydrocodone (Vicodin, Tussionex), oxycodone (OxyContin, Percodan, Percocet-5, Tylox), d-propoxyphene (Darvon), hydromorphone (Dilaudid), morphine, meperidine (Demerol), and opium.

The 2000 Texas adult survey found that in 2000, lifetime use of other opiates was 4.4 percent and past-month use was 0.5 percent; in comparison, in 1996, lifetime use was 3.0 percent and past-month use was 0.2 percent. Some 2.3 percent of Texas adults in 2000 reported ever having used codeine and 0.7 percent used in the past year; lifetime use of hydrocodone was 0.7 percent and past-year use was 0.4 percent.

Hydrocodone is a larger problem in Texas than is oxycodone. The poison control centers reported there were 192 cases of abuse or misuse of hydrocodone in 1998, 264 in 1999, 286 in 2000, 339 in 2001, and 429 in 2002. In comparison, there were 12 calls about

misuse or abuse of oxycodone reported in 1998, 26 in 1999, 22 in 2000, 56 in 2001, and 68 in 2002. There were also 16 cases involving misuse or abuse of methadone in 1998, 19 in 1999, 32 in 2000, 28 in 2001, and 54 in 2002.

Dallas area ED mentions of drugs containing methadone, codeine, hydrocodone, and oxycodone either alone or in combination with other substances have varied over the years. None of the changes between the first half of 2001 and the first half of 2002 were statistically significant (exhibit 17). Compared to the national rates, the rates for Dallas are lower, except for hydrocodone. The rate of codeine and codeine/combinations mentions was 1.0 per 100,000 population in the coterminous United States (“nationally”) and 0.6 per 100,000 in Dallas. The rate for hydrocodone and hydrocodone combinations was 4.7 nationally and 4.8 in Dallas. The rate for oxycodone and oxycodone combinations was 4.3 per 100,000 population nationally and 0.5 in Dallas. The rate for methadone mentions was 2.2 nationally and 0.5 in Dallas.

Some 4.2 percent of all adults who entered treatment during 2002 used opiates other than heroin. Of these, 61 used illegal methadone and 1,762 used other opiates. Those who reported a primary problem with illicit methadone were equally likely to be male or female (50 percent each), age 36, Anglo (80 percent) or Hispanic (18 percent). Twelve percent were homeless, 13 percent were employed, 41 percent were referred by the criminal justice system, and 41 percent had never been in treatment before. Of those with problems with other opiates, 57 percent were female; the average age was 36, 83 percent were Anglo; 32 percent had never been in treatment, 9 percent were homeless, 14 percent were employed, and 29 percent were referred by the criminal justice system.

Statewide, there were 8 deaths with a mention of oxycodone in 1999, 20 in 2000, and 40 in 2001. There were 25 deaths involving hydrocodone in 1999, 52 in 2000, and 107 in 2001. There were also 36 deaths involving methadone in 1999, 62 in 2000, and 93 in 2001. There were nine deaths in 2001 involving fentanyl.

The DAWN medical examiner system reported that there were 36 deaths in the Dallas area with a mention of hydrocodone and 21 in the San Antonio area in 2001. There were also 35 deaths in San Antonio with a mention of methadone in 2001.

In the Dallas-Fort Worth DEA Field Division, Dilaudid sells for \$20–\$80 per tablet, Soma sells for \$4 per tablet, and hydrocodone sells for \$4–\$10 per tablet. OxyContin sells for \$15–\$30 per tablet. Methadone sells for \$10 per 10-milligram tablet and

promethazine with codeine sells for \$200–\$300 per pint in Dallas and \$40 for a 2-ounce bottle in Tyler. In Houston, promethazine or Phenergan with codeine sells for \$100–\$125 for 8 ounces, and hydrocodone sells for \$3–\$5 per pill. In San Antonio, hydrocodone sells for \$3 per pill. In Austin, Vicodin sells for \$2–\$3 a pill and a 10-milligram methadone pill sells for \$1–\$5. OxyContin costs \$3 for 5 milligrams and \$5 for 20 milligrams.

DPS labs reported examining 479 hydrocodone exhibits in 1999, 629 in 2000, 771 in 2001, and 747 in 2002. In comparison, the number of exhibits involving oxycodone was 36 in 1999, 72 in 2000, 115 in 2001, and 106 in 2002. The number of exhibits involving methadone increased from 1 in 1998, 19 in 1999, and 22 in 2000, to 49 in 2002.

“Lean” (codeine cough syrup) is reported as becoming more popular among youth and young adults in the suburban areas of Fort Worth. In Austin, “Lean” or “Drank” is called a “nighttime drug” by some younger adults. They like to use it at night for nodding or going into what they call “slightly sleep.” They cut the syrup to be mild or strong as desired with orange or strawberry soda water. There are also some reports of older adults now using “Lean.” It is usually sold in baby bottles and measured out in ounces; it is readily available. Texas rappers are singing about Lean and older adolescents and younger adults (age 16–25) are using it. One pint costs \$200–\$250, but it can sometimes cost as much as \$350. People sometimes mix about 6 to 8 ounces in a 3-liter bottle of soft drink. A very small bottle of Robitussin or Lean is sold on the street for \$20–\$60. It is usually cut or mixed with Karo syrup and put in soda water to drink. T-shirts that advertise Lean are sold in Austin, and drinking Lean has spread from the African-American community to Hispanics and Anglos.

A “cold shake” is when a tablet of Dilaudid is crushed, put into a syringe with cold water, and then shaken to dissolve the particles prior to injecting.

Marijuana

The number of students in grades 4–6 who had ever used marijuana dropped from 2.8 percent in 2000 to 2.6 percent in 2002, and use in the school year dropped from 2.1 percent to 1.7 percent. Among secondary students, 32 percent of Texas secondary students had ever tried marijuana and 14 percent had used in the past month, levels identical to 2000. While use by students in 7th and 8th grades continued to drop, use by students in grades 9 and 10 increased from 2000; use by students in grades 11 and 12 remained stable (exhibit 18).

In comparison, 37 percent of adults reported lifetime and 4 percent reported past-month marijuana use in 2000, compared with 34 percent lifetime and 3 percent past-month use in 1996. Prevalence was much higher among younger adults. Thirteen percent of those age 18–24 in 2000 reported past-month use, compared with 6 percent of those age 25–34 and 2 percent of those 35 and older. The increase in past-year use between 1996 and 2000 (6 to 7 percent) was statistically significant.

The Texas Poison Control Centers reported 130 cases involving misuse or abuse of marijuana in 1998, 172 in 1999, 360 in 2000, 358 in 2001, and 412 in 2002.

Mentions of marijuana per 100,000 population among ED patients in Dallas have declined since the peak levels in 1998 (exhibit 2). The rate in Dallas, 13.4 per 100,000 population, is lower than the national rate of 21.8.

Marijuana was the primary problem for 10 percent of adult admissions to treatment programs in 2002. The average age of adult marijuana clients continues to increase: it was 24 in 1985 and 27 in 2002.

Seventy-eight percent of all adolescent admissions in 2002 had a primary problem with marijuana, compared with 35 percent in 1987. In 2002, 47 percent of these adolescents were Hispanic, 30 percent were Anglo, and 21 percent were African-American (in 1987, 7 percent were African-American). Eighty-three percent had legal problems or had been referred from the juvenile justice system, and these clients did not appear to be as impaired as those who did not have legal problems. The juvenile justice clients reported using marijuana on 8.1 days in the month prior to admission, compared with 14.5 days for the nonjustice referrals. The same differences were reported for the number of days in the past month that the second problem drug was used (3.8 vs. 6.0 days) and the number of days a third problem drug was used (2.7 vs. 4.2 days). The Addiction Severity Index scores were lower for justice referrals, as well. The percent of justice clients reporting sickness or physical problems in the month prior to admission was 13 percent, versus 21 percent for nonjustice clients, and for employment problems, the proportions were 33 and 48 percent, respectively. Thirty-three percent of justice clients reported family problems, compared with 43 percent for nonjustice clients, while the proportions reporting social problems with peers were 26 and 28 percent, respectively. Nineteen percent of justice clients reported emotional problems, compared with 27 percent of nonjustice clients, and substance abuse problems were reported by 30 percent and 34 percent, respectively.

The DAWN medical examiner system reported 65 deaths in the Dallas metropolitan area in 2001 in which marijuana was one of the substances mentioned. In comparison, there were six in the San Antonio area.

The percentages of arrestees testing positive for marijuana remains varied (exhibit 6). It has dropped from its peak levels in Dallas and Laredo, but remains high in San Antonio.

Cannabis was identified in 35 percent of all the exhibits analyzed by DPS laboratories in 1999 and 2000, but dropped to 31 percent in 2001 and 28 percent in 2002 (exhibit 7).

The Houston Field Division reports marijuana is routinely moved in multithousand-pound quantities, with an increase in the amount found in trailers or false compartments at the border. Marijuana in the Houston Division is reported readily available, and the availability in McAllen has increased greatly. The El Paso Field Division also reports marijuana is readily available and is packaged in kilogram increments, wrapped with cellophane, and then sealed with tan or brown tape. The Dallas Field Division reports a noticeable increase in the availability of large amounts of marijuana. Significant amounts of marijuana are grown in Oklahoma and along the Texas-Oklahoma border, but most of the marijuana in Texas is imported from Mexico. Mexican sinsemilla, which is usually in the pressed brick form, is the most common type seen. DEA's Potency Monitoring Project Quarterly report for November 9, 2002–February 8, 2003, states that the potency of marijuana in the seven Southern States (including Texas) had the lowest tetrahydrocannabinol (THC) level in the Nation, at 4.39 percent, compared with the highest level, 10.32 percent, in the northeast region and 6.19 percent nationally.

Sinsemilla sells for \$750–\$1,200 per pound in the Dallas-Fort Worth area and \$600 per pound in Houston. The average price for a pound of commercial grade marijuana is \$200–\$250 in Laredo, \$125–\$250 in McAllen, \$400–\$700 in San Antonio, \$300–\$500 in Houston, \$500 in El Paso, \$500–\$700 in the Alpine area, \$500–\$600 in Midland, \$400–\$600 in the Dallas and Fort Worth areas, \$500–\$600 in Lubbock, and \$500–\$650 in Tyler. Locally grown indoor marijuana sells for \$6,000 per pound in Dallas, and hydroponic marijuana grown in Matamoros sells for \$120 for one-quarter pound in McAllen. Exhibit 19 shows the range of prices across the State since 1992.

In Austin, people are dipping cigars in cognac brandy. The effect is reported to be like a “downward” high, and people have trouble keeping their eyes open after smoking a dipped cigar.

Exhibit 20 plots the trends in lifetime use of marijuana as reported in the secondary school surveys, the proportion of adolescent admissions to treatment for a primary problem of marijuana, the proportion of adolescent drug arrests for marijuana, and adolescent ED mentions in Dallas. As this exhibit shows, all indicators have risen since 1992, although the rate of ED mentions among adolescents in Dallas has declined since 2000.

Stimulants

Uppers in this paper include stimulants such as amphetamines, methamphetamines, speed, over-the-counter medicines containing ephedrine, and prescription drugs such as Ritalin (methylphenidate) when taken for nonmedical reasons.

The 2002 secondary school survey reported the lifetime use of uppers was 8.1 percent in 1998, 6.7 percent in 2000, and 7.3 percent in 2002. Past-month use was 3.1 percent in 1998, 2.7 percent in 2000, and 3.3 percent in 2002.

Among Texas adults in 2000, 12 percent reported lifetime use and 1 percent reported past-month use of uppers in 2000. In comparison, in 1996, lifetime use was 10 percent and past-month use was 1 percent. The difference in past-year use from 1996 to 2000 (1.1 to 1.9 percent) was statistically significant.

There were 220 calls to Texas Poison Control Centers involving abuse or misuse of amphetamines or methamphetamines in 1998, compared with 282 in 1999, 393 in 2000, 451 in 2001, and 392 in 2002.

Exhibit 17 shows the number of mentions of methamphetamines and amphetamines in Dallas emergency departments. The rate of ED mentions for amphetamines in Dallas in the first half of 2002 was higher than the national rate (5.2 per 100,000 population in Dallas versus 3.9 nationally), while the rate for methamphetamines was lower, at 1.7 per 100,000 population in Dallas and 2.6 across the coterminous United States.

Methamphetamines and amphetamines accounted for 8 percent of adult admissions in 2002; this is an increase from 5 percent in 2000. There were 1,672 admissions in 1998 and 3,183 in 2002. The average client admitted for a primary problem with stimulants is aging. In 1985, the average age was 26; in 2002, it was 31. The proportion of Anglo clients rose from 80 percent in 1985 to 92 percent in 2002, while the proportion of Hispanics dropped from 11 percent to 6 percent and the proportion of African-Americans dropped from 9 percent to 1 percent. Unlike the other drug categories, more than one-half of these clients entering treatment were women (54 percent). Most

stimulant users were injectors, with differences seen among the clients based on route of administration (exhibit 21). Only 3 percent of adolescent admissions were for stimulants.

Methamphetamine and amphetamine injectors are more likely to have been in treatment before (54 percent readmissions) than smokers (39 percent readmissions), oral users (50 percent readmissions), or inhalers (45 percent readmissions).

Statewide, there were 17 deaths in which amphetamines or methamphetamine were mentioned in 1997, 20 in 1998, 21 in 1999, 39 in 2000, and 51 in 2001. Of the 2001 decedents, 82 percent were male. The average age was 36.2; 76 percent were Anglo, 18 percent were Hispanic, and 6 percent were African-American.

The DAWN medical examiner system reported 37 deaths with a mention of methamphetamine and 4 with a mention of amphetamines in the Dallas metropolitan area in 2001. In San Antonio, there were 18 deaths with a mention of methamphetamine and 11 with a mention of amphetamines.

Given the high rate of seizures that proved to be methamphetamine or amphetamines when tested by the DPS labs, the low percentage of arrestees testing positive for amphetamines in ADAM is puzzling (exhibit 6).

Local labs are using the “Nazi method,” which includes ephedrine or pseudoephedrine, lithium, and anhydrous ammonia, or the “cold method,” which uses ephedrine, red phosphorus, and iodine crystals. The “Nazi method” is the most common method used in North Texas. Before these methods became common, most illicit labs used the “P2P method,” which is based on 1-phenyl-2-propanone. The most commonly diverted chemicals are 60-milligram pseudoephedrine tablets such as Xtreme Relief, Mini-Thins, Zolzina, Two-Way, and Ephedrine Release.

Methamphetamine and amphetamine together accounted for between 13 and 20 percent of all items examined by DPS laboratories statewide between 1998 and 2002 (exhibit 7), and the numbers continue to increase. In 2002, 19.6 percent were methamphetamine and 0.61 percent were amphetamines.

Notice that while the Dallas ED mentions in exhibit 17 are more likely to be for patients reporting amphetamines, the DPS laboratory report for the Dallas area shows that 33 percent of the exhibits were methamphetamine and 0.89 percent were amphetamines. There is no explanation for these differences.

Stimulants are more of a problem in the northern half of the State, as exhibit 22 shows. In Amarillo in the Texas Panhandle, 47 percent of all the drug items examined by the DPS laboratory were either methamphetamine or amphetamines, while in McAllen and Laredo, less than 1 percent were these substances. Labs in the northern part of the State are also more likely to report analyzing substances that turned out to be ammonia or pseudoephedrine, which are chemicals used in the manufacture of methamphetamine.

According to the DEA, methamphetamine is readily available in all areas of the El Paso field Division, except in Alpine. Methamphetamine is “cooked” in Midland, Odessa, and Monahans, and mobile laboratories are encountered in the east and northeast sections of El Paso. The Houston Field Division reports that multipound quantities of Mexican methamphetamine and smaller quantities of locally produced versions are available, and the drug is commonly encountered at clubs and raves. Dealers are reported to be providing free samples in efforts to build consumer bases, and in the Austin and Houston areas, “ice” is becoming more prevalent, with an increase in trafficking of ice by Mexican dealers. Most of the methamphetamine encountered in the Houston Division is produced in Mexico, although it is also locally produced in small batches by motorcycle gangs and independent cooks in home labs. Small labs have also been found in East Texas, Corpus Christi, and Austin; most are small mobile pseudoephedrine labs producing small amounts for local distribution. The Dallas Field Division also reports high availability, with multipound quantities of Mexican methamphetamine and smaller amounts produced by local cooks. Availability is increasing in the Lubbock and Amarillo areas because there are more clandestine labs. Blister packs of cold tablets are the predominant supply source for pseudoephedrine, although the 240-milligram tablets are also seen. Red phosphorus can be purchased at gun shows, and there are reports of increasing use of lithium metal/anhydrous ammonia (“Nazi” method) in the manufacturing process. Precursor chemicals are difficult to obtain in Texas, and lab operators travel to Oklahoma or Louisiana to obtain needed supplies.

The price for a pound of methamphetamine is \$10,600 in El Paso, \$8,000–\$10,000 in Midland, \$6,000–\$11,000 in the Houston area, \$4,500–\$5,500 in Laredo, \$5,000–\$8,000 in Fort Worth, \$6,000–\$7,000 in Tyler, and \$8,000–\$9,000 in Lubbock. In Dallas, a pound of domestic methamphetamine sells for \$4,500–\$10,000, an ounce sells for \$700–\$1,100, and a gram costs \$70–\$100. A pound of Mexican methamphetamine sells for \$5,800–\$9,000 and an ounce of this product sells for \$400 in Dallas. Ice sells for \$19,000 per pound in Houston. In Austin,

“glass” methamphetamine is plentiful and very pure. A quarter gram costs \$20 and 2 ounces cost \$1,500.

In Amarillo, street outreach workers report that more African-Americans are beginning to inject methamphetamine, while in Tarrant County, particularly in the mid-cities area, there is an increase in ice use. Users are requesting detoxification, but there are reportedly no programs available to provide this service.

Depressants

This “downer” category includes three groups of drugs: barbiturates, such as phenobarbital and secobarbital (Seconal); nonbarbiturate sedatives, such as methaqualone, over-the-counter sleeping aids, and chloral hydrate; and tranquilizers and benzodiazepines, such as diazepam (Valium), alprazolam (Xanax), flunitrazepam (Rohypnol), clonazepam (Klonopin or Rivotril), flurazepam (Dalmane), lorazepam (Ativan), and chlordiazepoxide (Librium and Librax). Rohypnol is discussed separately in the Club Drugs section of this report.

The 2002 secondary school survey reported lifetime use of downers increased from 5.8 percent in 2000 to 7.1 percent in 2002. Past-year use increased from 2.6 percent in 2000 to 3.4 percent in 2002.

The 2000 adult survey reported lifetime use of downers at 6.9 percent and past-month use at 0.6 percent; in 1996, lifetime use was 6.2 percent and past-month use was 0.3 percent. The difference in past-year use between 1996 and 2000 (1 to 1.8 percent) was statistically significant.

The numbers of ED mentions of alprazolam (Xanax), diazepam (Valium), and Klonopin (clonazepam) in Dallas are depicted in exhibit 23. The decreases in mentions for all three drugs between the first halves of 2001 and 2002 were statistically significant. The rate of mentions of alprazolam is higher nationally than in Dallas (5.2 vs. 4.3 per 100,000), as it is for clonazepam (3.1 vs. 2.5) and diazepam (2.1 vs. 1.2).

About 1.2 percent of the adults entering treatment in 2002 (545 clients) had a primary problem with barbiturates, sedatives, or tranquilizers. Only 37 percent were male; 81 percent were Anglo, 8 percent were African-American, and 9 percent were Hispanic. Forty-two percent were involved in the criminal justice or legal systems, and 20 percent were employed.

There were 60 deaths in the Dallas metropolitan area in 2001 that involved benzodiazepines and 36 of these involved diazepam, according to the DAWN medical examiner reporting system. In the San Antonio area,

there were 88 deaths with a mention of a benzodiazepine.

Alprazolam, clonazepam, and diazepam are among the 10 most commonly identified substances according to DPS lab reports, although none of them accounts for more than 2 percent of all items examined in a year. The proportion of alprazolam exhibits is increasing (exhibit 24).

Both the Houston and Dallas DEA Field Divisions report alprazolam (Xanax) to be one of the most commonly abused diverted drugs. Xanax sells for \$3–\$10 per tablet and diazepam (Valium) sells for \$1–\$10 per tablet. In Austin, street outreach workers report a 2-milligram tablet of Klonopin costs \$2–\$3. Valium 10- or 20-milligram pills can be purchased for \$1–\$2, and the blue, 1-milligram football-shaped Xanax pills cost \$2 per pill. The 2-milligram “white bars” or “handle bars” Xanax pills are scored and can be broken into 4 small pieces. They sell for \$4–\$5 per pill, are very popular, and are readily available. In Houston, there appears to be an increase in the use of Xanax (“Xandies”) on the streets. In Dallas, Xanax and Soma are used to heighten and prolong the effects of heroin.

Club Drugs and Hallucinogens

Exhibit 17 shows the number of ED mentions of different club drugs in Dallas. The changes in both the number and rate of mentions between the first halves of 2001 and 2002 were statistically significant for ketamine, lysergic acid diethylamide (LSD), and phencyclidine (PCP).

Exhibit 25 shows the demographic characteristics of patients entering Dallas emergency departments for mentions of club drugs in 2001. Because the numbers for some drugs were so low in the preliminary data for first half of 2002, the full-year 2001 numbers are shown. Based on this exhibit, users of ketamine and PCP were the most likely to be male, users of PCP were most likely to be African-American, users of LSD were the youngest, and users of GHB were the oldest.

Exhibit 26 shows the demographic characteristics of youths and adults entering TCADA treatment programs statewide with a problem with a club drug. The row “Primary Drug” in exhibit 26 shows the percentage of clients who cited a primary problem with the club drug shown at the top of the column. The rows under the heading “Other Primary Drug” show the percentage of clients who had a primary problem with another drug, such as marijuana, but who had a secondary or tertiary problem with the club drug shown across the top of the column.

Note that the treatment data uses a broader category, “Hallucinogens,” which includes LSD, dimethyl-tryptamine (DMT), 4-Methyl-2, 5-dimethoxyamphetamine (“Serenity, Tranquility, and Peace,” or STP), mescaline, psilocybin, and peyote.

Based on exhibit 26, Rohypnol, hallucinogens, and PCP clients are the most likely to be male, GHB clients are the most likely to be Anglo, PCP clients are the most likely to be African-American, Rohypnol clients are the youngest, and gamma hydroxybutyrate (GHB) clients are the oldest. While users of GHB and PCP are the most likely to have primary problems with these specific club drugs, users of Rohypnol and hallucinogens are more likely to have a primary problem with marijuana.

Exhibit 27 depicts the percentages of exhibits identified by DPS laboratories that contained various club drugs. Notice the decrease in the percentage of cases involving LSD and the later dominance of cases involving methylenedioxymethamphetamine (MDMA or ecstasy) and methylenedioxyamphetamine (MDA).

Ecstasy (MDMA)

The 2002 secondary school survey reported that lifetime ecstasy use was 8.6 percent, up from 4.5 percent in 2000. Past-month use in 2002 was reported by 3.1 percent, compared with 1.9 percent in 2000.

The 2000 adult survey reported that 3.1 percent had ever used ecstasy and 1.0 percent had used in the past year.

Texas poison control centers reported 24 calls involving misuse or abuse of ecstasy in 1998, 45 in 1999, 116 in 2000, 155 in 2001, and 172 in 2002.

The rate of ED mentions of ecstasy per 100,000 population in Dallas in the first half of 2002 was 1.1; the national rate was 0.9. Exhibit 17 shows the number of ED mentions of ecstasy. Notice that there was a larger racial/ethnic diversity among ecstasy mentions than was seen with other club drugs (exhibit 25).

Adult and adolescent admissions for a primary, secondary, or tertiary problem with ecstasy increased from 63 in 1998 to 114 in 1999 to 199 in 2000 to 349 in 2001 and 521 in 2002. Exhibit 26 shows that in comparison to users of other club drugs, those who used ecstasy were more likely to be young, and racially diverse, and were also likely to report marijuana as their primary problem drug.

In 1999, there were two deaths that involved ecstasy in Texas. There was one death in 2000 and five in 2001. Of those in 2001, the average age was 24.6; 80 percent were Anglo; 60 percent were male.

Exhibit 27 depicts the increases in “club drug” substances identified by DPS labs. The labs identified MDMA as the substance in 107 exhibits in 1999, 387 in 2000, 814 in 2001, and 503 in 2002. MDA was identified in 31 exhibits in 1999, 27 in 2000, 48 in 2001, and 90 in 2002.

According to the Houston DEA Field Division, ecstasy coming through Mexico is being sold in the McAllen District by brand names such as Motorola (62-milligram dose), Rolls Royce and White (87-milligram dose), Mitsubishi (100-milligram dose), Blue or Sky (110-milligram dose), and Medusa (119-milligram dose). It is readily available in Juarez, across from El Paso, and the Dallas Field Division reports increases in use by African-American teenagers and young adults. Single dosage units of ecstasy sell for \$7.50–\$20 in Dallas, \$12–\$23 in Tyler, \$16–\$20 in El Paso, \$8–\$30 in Houston, \$7–\$30 in McAllen, \$8–\$11 in Austin, \$20 in Laredo, and \$15–\$25 in San Antonio. Multithousand tablet quantities are increasing in availability, with a wholesale price of \$5–\$6 per pill.

GHB, Gamma Butyrolactone (GBL), 1-4 Butanediol (1,4 BD)

The 2000 Texas adult survey reported that 0.4 percent had ever used GHB and 0.1 percent had used in the past year.

The number of cases of misuse or abuse of GHB reported to Texas poison control centers was 110 in 1998, 153 in 1999, 108 in 2000, 113 in 2001, and 100 in 2002.

Exhibit 17 shows that the ED mentions of GHB in the Dallas area peaked in 2000. In the first half of 2002, the rate of mentions per 100,000 population for GHB was 1.8, compared with the national average of 0.8 per 100,000 population. Patients mentioning GHB were more likely to be Anglo and older than patients mentioning other club drugs (exhibit 25).

Adult and adolescent clients with a primary, secondary, or tertiary problem with GHB, GBL, or 1,4 butanediol are seen in treatment. In 1998, two were admitted, compared with 17 in 1999, 12 in 2000, 19 in 2001, and 35 in 2002. Clients who used GHB tended to be the oldest of all the club drug users and the most likely to be Anglo. GHB users were more likely to have used the so-called “hard-core” drugs: 54 percent had a history of injection drug use, 20 percent had a problem with amphetamines or methamphetamine, and 17 percent had a primary problem with crack cocaine, all of which are stimulant drugs. GHB may have been used by these clients to come down from stimulant binges. It may

also have been used to potentiate the effects of heroin, since 9 percent had a primary problem with heroin.

Deaths involving GHB totaled three in 1999, five in 2000, and three in 2001. In 1998, there were 18 items identified by DPS labs as being GHB, in 1999 there were 112 GHB, 4 GBL, and 4 1,4 BD (exhibit 27). In 2000, 45 were GHB, 7 were GBL, and 4 were 1, 4 BD. In 2001, 34 were GHB, 7 were GBL, and 19 were 1,4 BD. In 2002, 81 were GHB, 6 were GBL, and 4 were 1,4 BD. In 2002, 95 percent of the GHB items were identified in the DPS lab in the Dallas area, which shows use of GHB is centered in this area of the State.

In Dallas, GHB trafficking is reportedly on the rise, and the price of a gallon of GHB has dropped. In the third quarter of 2002, a gallon sold for \$1,600 there; it now sells for \$100–\$200 per gallon. A dose of GHB costs \$20 in Dallas, \$5–\$10 in Lubbock, and \$5–\$10 in Houston; a gallon costs \$725–\$1,000 in Houston.

Ketamine

The 2000 adult survey reported that 0.3 percent had ever used ketamine and 0.1 percent had used it in the last year.

Eight cases of misuse or abuse of ketamine were reported to Texas Poison Control Centers in 1998, 7 in 1999, 15 in 2000, 14 in 2001, and 10 in 2002.

In Dallas in the first half of 2002, the rate of ED mentions of ketamine per 100,000 population was 0.2, above the national average of 0.1. There were five mentions in the first half of 2002 (exhibit 17). Almost all mentions in 2001 were for patients who were male, and they were among the youngest patients (exhibit 25).

One client was admitted to TCADA treatment programs in 2002 with a secondary or tertiary problem with ketamine. The client was a 17-year-old Anglo female with a primary problem with powder cocaine.

There were also two deaths in 1999 that involved use of ketamine, none in 2000, and one in 2001.

There were 25 substances identified as ketamine by DPS labs in 1999, 29 in 2000, 119 in 2001, and 78 in 2002 (exhibit 27).

Ketamine is reportedly less available in the Houston area, and it sells for \$2,200–\$2,500 per liter in Fort Worth.

LSD

The Texas secondary school survey shows that use of hallucinogens (defined as including LSD and PCP) is continuing to decrease. Lifetime use peaked at 7.4 percent in 1996 and had dropped to 4.5 percent by 2002. Past-month use dropped from 2.5 percent in 1996 to 1.2 percent in 2002.

The 2000 adult survey reported that 8.8 percent of Texas adults had ever used LSD, and 0.9 percent had used it in the past year.

Texas Poison Control Centers reported 64 mentions of abuse or misuse of LSD in 1998, 101 in 1999, 82 in 2000, 43 in 2001, and 9 in 2002. There were also 98 cases of intentional misuse or abuse of hallucinogenic mushrooms reported in 1998, 73 in 1999, 110 in 2000, 94 in 2001, and 151 in 2002.

There were four mentions of LSD in the Dallas DAWN emergency departments in the first half of 2002 (exhibit 17). The rate of mentions per 100,000 population in Dallas in the first half of 2002 was 0.1, which was below the national average of 0.2. The decline in the rate in Dallas between the first halves of 2001 and 2002 was statistically significant. In 2001, LSD patients were the youngest and the most likely to be Anglo among the drug categories shown in exhibit 25.

In 2002, 436 adults and youths with a primary, secondary, or tertiary problem with hallucinogens entered treatment, compared with 486 in 2001 and 636 in 2000. These clients were racially diverse, likely to have criminal justice problems, and users of marijuana in addition to hallucinogens (exhibit 26).

There were two deaths in 1999 that involved LSD, but there were no deaths with a mention of LSD reported in 2000 or 2001.

DPS labs identified 69 substances as LSD in 1998, 406 in 1999, 234 in 2000, 122 in 2001, and 10 in 2002 (exhibit 27).

A dosage unit of LSD sells for \$1–\$10 in Dallas, \$5–\$10 in Tyler, \$6–\$10 in Fort Worth, and \$7 in Lubbock. In McAllen, LSD sells for \$8 per dose, and an ounce sells for \$450. Its availability is reportedly stable in the Houston area.

PCP

The 2000 Texas adult survey reported that 0.9 percent of adults had ever used PCP or “Angel Dust,” and 0.1 percent had used it in the past year.

The number of Texas Poison Control Centers cases in which substances reported as “fry,” “amp,” or “PCP” were misused or abused increased from 103 in 1998 to 169 in 1999, 175 in 2000, 198 in 2001, and 237 in 2002. There were 23 cases involving misuse or abuse of formaldehyde or formalin in 1998, 20 in 1999, 26 in 2000, 11 in 2001, and 26 in 2002.

The rate of ED mentions of PCP in Dallas was 2.4 per 100,000 population in the first half of 2002, above the national rate of 1.3. The 58-percent change between the first half of 2001 and the first half of 2002 was statistically significant, and as exhibit 17 shows, the number of mentions of PCP in Dallas is increasing. In 2001, PCP mentions were for patients who were predominately male, African-American, and older (exhibit 25).

Adolescent and adult admissions to treatment with a primary, secondary, or tertiary problem with PCP are increasing. There were 164 such admissions in 1998, 243 in 1999, 250 in 2000, 245 in 2001, and 321 in 2002. Of these clients in 2002, 78 percent were African-American, 72 percent were male, 50 percent were involved in the criminal justice system (exhibit 26), 27 percent were employed, and 21 percent were homeless. While 45 percent reported a primary problem with PCP, another 29 percent reported a primary problem with marijuana, which demonstrates the link between these two drugs and the use of “fry,” which is a marijuana joint or cigar dipped in embalming fluid that can contain PCP.

There were three deaths in 1999, three in 2000, and five in 2001 in Texas that involved PCP. In 2001, all were African-American males, and the average age was 23.6.

PCP use in past years was most likely to be found among Dallas and Houston male arrestees; however, data for Houston is not currently being reported, and Dallas began reporting again in 2002 (exhibit 6).

DPS labs identified 10 substances as PCP in 1998, 84 in 1999, 104 in 2000, 163 in 2001, and 95 in 2002 (exhibit 27).

The DEA reports that PCP sells for \$25 per cigarette and \$10 per piece of “sherm stick” in Dallas. It costs \$3,800 per pint bottle and \$26,000–\$28,000 per gallon in the Dallas-Fort Worth area. Its availability in the Houston area is reported as stable.

According to the street outreach workers in Houston, use of “Water,” which is a cigarette or marijuana joint dipped in embalming fluid, is growing, and PCP use by teenagers in Fort Bend County has been reported.

Another PCP combination being reported is “Red Devil Dust,” which is a combination of PCP, opium, and crystal methamphetamine.

Because of the tendency of some users to strip off their clothes while under its influence, PCP has a nickname of “buck naked.”

Rohypnol

Rohypnol use in Texas first began along the Texas-Mexico border and then spread northward. As shown in exhibit 28, the 2002 secondary school survey found that students from the border area were about three times more likely to report Rohypnol use than those living elsewhere in the State (10.9 vs. 3.8 percent lifetime, and 4.4 vs. 1.3 percent current).

The 2000 Texas adult survey found that 0.8 percent reported lifetime use and 0.1 percent reported past-year use of Rohypnol.

The number of confirmed exposures to Rohypnol reported to the Texas Poison Control Centers peaked at 101 in 1998, and dropped to 74 in 1999, 88 in 2000, 65 in 2001, and 73 in 2002.

In the first half of 2002, the rate of ED mentions for Rohypnol in Dallas was 0.1 per 100,000 population, above the national rate of 0.0. As exhibit 17 shows, the number of mentions of Rohypnol has decreased since the peak in 1997. Not only is the number of cases of Rohypnol shown in exhibit 17 low, but the fact that most Rohypnol use occurs closer to the Mexican border would limit the generalizability of any conclusions that could be drawn from DAWN about Rohypnol users statewide.

In 1998, 247 youths and adults were admitted into treatment with a primary, secondary, or tertiary problem with Rohypnol. There were 364 such admissions in 1999, 324 in 2000, 397 in 2001, and 368 in 2002. Clients abusing Rohypnol were the youngest of the club drug patients and they were predominately Hispanic, which would reflect the use of this drug along the border (exhibit 26). Some 69 percent were involved with the criminal justice or legal system. While 15 percent of these clients said that Rohypnol was their primary problem drug, 49 percent reported a problem with marijuana.

DPS lab exhibits for Rohypnol numbered 43 in 1988, 56 in 1999, 32 in 2000, 35 in 2001, and 22 in 2002. The decline in the proportion of Rohypnol seizures parallels the declines seen in other indicators, as shown in exhibit 27.

Although Roche is reported to no longer be making the 2-milligram Rohypnol tablet, which was a favorite with abusers, generic versions are reportedly still produced, and the blue dye added to the Rohypnol tablet to alert potential victims is not in the generic version. Unfortunately, the dye is not proving effective: people intent on committing sexual assault are now serving blue tropical drinks and blue punches into which Rohypnol can be slipped.

Rohypnol is readily available in Juarez for \$1–\$2 per pill and it is an increasing problem among teenagers in El Paso, according to the DEA. Its availability is reported as stable in Houston.

Dextromethorphan (DXM)

School personnel in Texas have been reporting problems with the abuse of DXM, especially the use of Robitussin-DM, Tussin, and Coricidin HBP Cough and Cold Tablets. These substances can be purchased over the counter and if taken in large quantities, can produce hallucinogenic effects. Coricidin HBP pills are known as “Triple C’s” or “Skittles.”

Poison control centers reported the number of abuse and misuse cases involving DXM increased from 93 in 1998 to 188 in 1999 to 263 in 2000 to 366 in 2001 and to 429 in 2002. The number of cases involving abuse or misuse of Coricidin HBP increased from 2 in 1998 to 4 in 1999 to 145 in 2000 to 236 in 2001 to 266 in 2002.

DPS labs examined two substances in 1998 which were dextromethorphan, 13 in 1999, 36 in 2000, 17 in 2001, and 39 in 2002.

Outreach workers in the Houston area report an emerging trend in the use of Coricidin HBP Cough and Cold pills (“Triple Cs”) by adolescents, with some recent admissions to treatment for abuse of these pills.

Inhalants

The 2002 elementary school survey found that 9.3 percent of students in grades 4–6 had ever used inhalants, and 6.5 percent had used in the school year. The 2002 secondary school survey found that 18 percent had ever used inhalants and 6.8 percent had used in the past month. Some 18.5 percent of secondary school males had ever used inhalants, compared with 17.4 percent of females. Some 20.7 percent of Hispanics, 17.9 percent of Anglos, and 11.8 percent of African-American students had ever used inhalants.

Inhalant use exhibits a peculiar age pattern not observed with any other substance. The prevalence of lifetime and past-month inhalant use was higher in the lower grades and lower in the upper grades (exhibit 29). This decrease in inhalant use as students age may be partially related to the fact that inhalant users drop out of school early and hence are not in school in later grades to respond to school-based surveys.

Texas Poison Control Centers reported 12 cases of misuse or abuse of Freon or other refrigerant gases by inhaling in 2002; the average age of these cases was 21. There were three cases of misuse of whiteout. Products used with automobiles are also misused, with 17 cases of intentional inhaling of gasoline (average age of 16) and 42 cases of intentional inhaling of carburetor cleaner, starter or transmission fluid, and similar products (average age of 22). There were 31 cases of intentional inhaling of paint (average age 24), 21 cases of intentional inhaling of aerosols such as compressed air or air freshener (average age 15), and 4 cases of intentional abuse of nitrous oxide (average age 31.3).

Exhibit 17 shows the types of inhalants that are reported in the Dallas emergency departments. The 2002 data are preliminary and may change as additional reports are received.

Inhalant abusers accounted for 1.6 percent of the admissions to adolescent treatment programs in 2002. The youths entering treatment tended to be male (80 percent) and Hispanic (71 percent). The overrepresentation of Hispanic youths is related to the fact that TCADA has developed and funded programs that were targeted specifically to this group. Only 0.2 percent ($n=64$) of adult admissions were for a primary problem with inhalants. The average age of adult clients was 29; 64 percent were male and 70 percent were Hispanic.

In 2000, there were 12 deaths involving misuse of inhalants and 15 in 2001 (exhibit 30). Six deaths involved Freon and two involved nitrous oxide. The average age of the decedents was 38.4; 93 percent were male; 73 percent were Anglo, and 13 percent were Hispanic or African-American, respectively.

INFECTIOUS DISEASES RELATED TO DRUG ABUSE

The proportion of adult and adolescent AIDS cases related to injection drug use has increased from 16 percent in 1987 to 27 percent in 2002. In 1987, 4 percent of the cases were among injection drug users (IDUs), and 12 percent were among men who have sex with men (MSM) and are also IDUs. In 2002, of

the cases in which mode of exposure is known, 20 percent of the cases were among IDUs, and 7 percent were among MSM/IDUs (exhibit 31). The proportion of cases resulting from heterosexual contact rose from 1 percent in 1987 to 20 percent in 2002.

For the first quarter of 2003, the percentage of cases involving heterosexual exposures was greater than the percentage of cases attributed to injecting drug use.

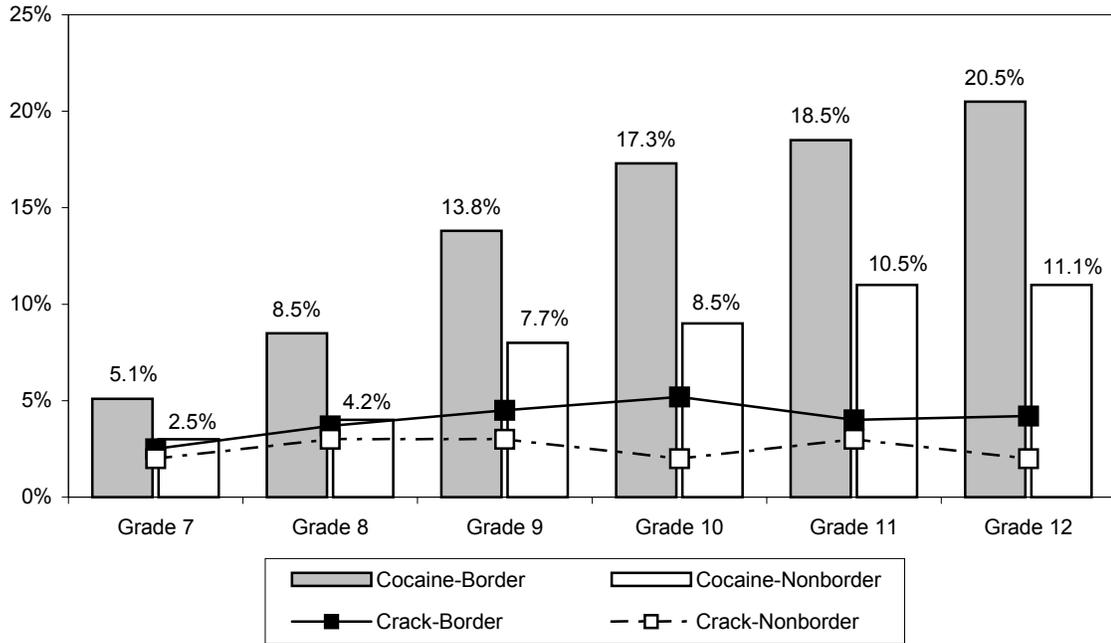
In 1987, 3 percent of the AIDS cases were females older than 12; in 2002, 21.5 percent were female. In 1987, 12 percent of the adult and adolescent cases

were African-American; in 2002, 40 percent were African-American. As exhibit 32 shows, the proportion of Anglo males has dropped, while the proportion of African-Americans and Hispanics has increased.

The proportion of adult needle users entering TCADA-funded treatment programs decreased from 32 percent in 1988 to 22 percent in 2002. Heroin injectors are most likely to be older, and nearly two-thirds are people of color, while injectors of stimulants and cocaine are far more likely to be Anglo (exhibit 33).

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Exhibit 1. Percentages of Texas Border and Nonborder Secondary Students Who Had Ever Used Powder Cocaine and Crack, by Grade: 2002



SOURCE: TCADA

Exhibit 2. Rates of ED Mentions Per 100,000 Population for Selected Drugs in Dallas: July 1996–June 2002

Drug	2H-96	1H-97	2H-97	1H-98	2H-98	1H-99	2H-99	1H-00	2H-00	1H-01	2H-01	1H-02
Cocaine	29.3	34.0	39.6	51.9	54.1	41.2	44.4	44.6	42.7	31.3	25.7	23.0
Alcohol-in-Combination	26.2	31.0	34.7	40.2	42.8	35.9	32.0	37.0	37.8	30.4	27.2	22.9
Heroin	7.3	10.4	10.6	10.7	9.8	8.2	9.2	10.6	8.5	8.2	6.1	5.2
Marijuana	10.8	18.1	19.9	31.2	30.7	25.0	22.6	27.1	22.0	18.5	15.3	13.4

SOURCE: DAWN, OAS, SAMHSA

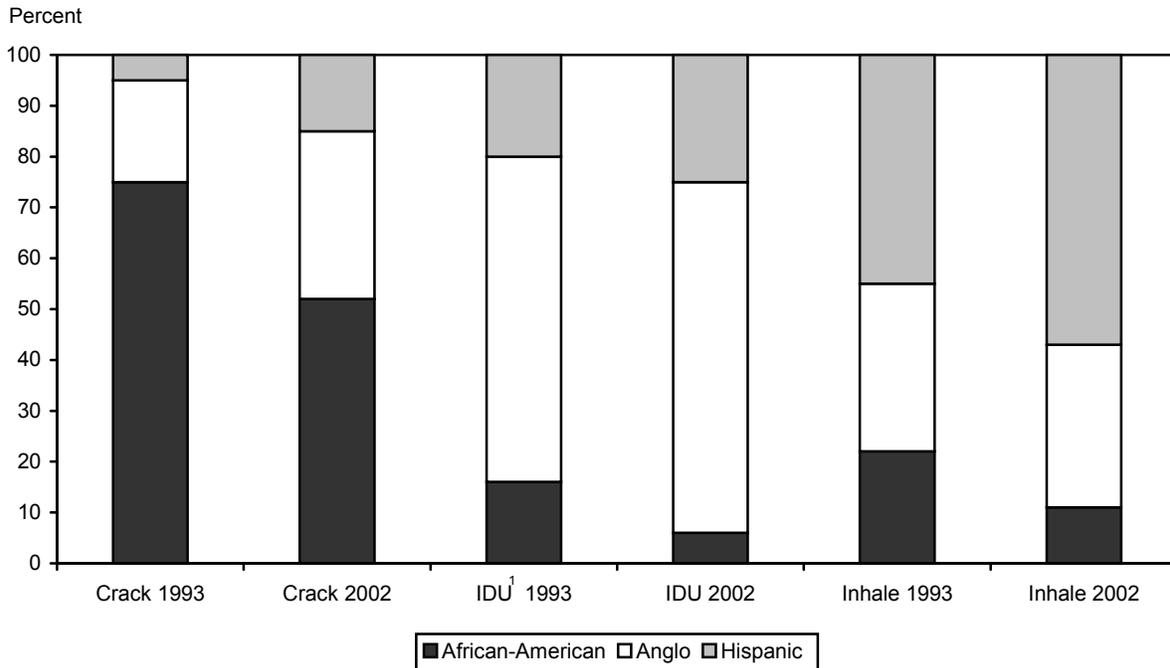
Exhibit 3. Characteristics of Adult Clients Admitted to TCADA-Funded Treatment with a Primary Cocaine Problem, by Route of Administration: 2002

Characteristic	Crack Cocaine Smoke	Powder Cocaine Inject	Powder Cocaine Inhale	Cocaine All Users ¹
Total Admissions (N)	(8,604)	(1,066)	(2,076)	(12,264)
% of All Cocaine Admissions	70	8	16	100
Lag—1st Use to Treatment (Years)	11	13	9	11
Average Age	37	34	31	35
Male (%)	57	66	62	58
African-American (%)	52	5	11	39
Anglo (%)	33	68	32	36
Hispanic (%)	13	25	55	24
Criminal Justice Involved (%)	34	40	51	39
Employed (%)	13	16	29	18
Homeless (%)	19	15	6	16

¹ Total includes clients with “other” routes of administration.

SOURCE: TCADA; analysis by Jane Maxwell

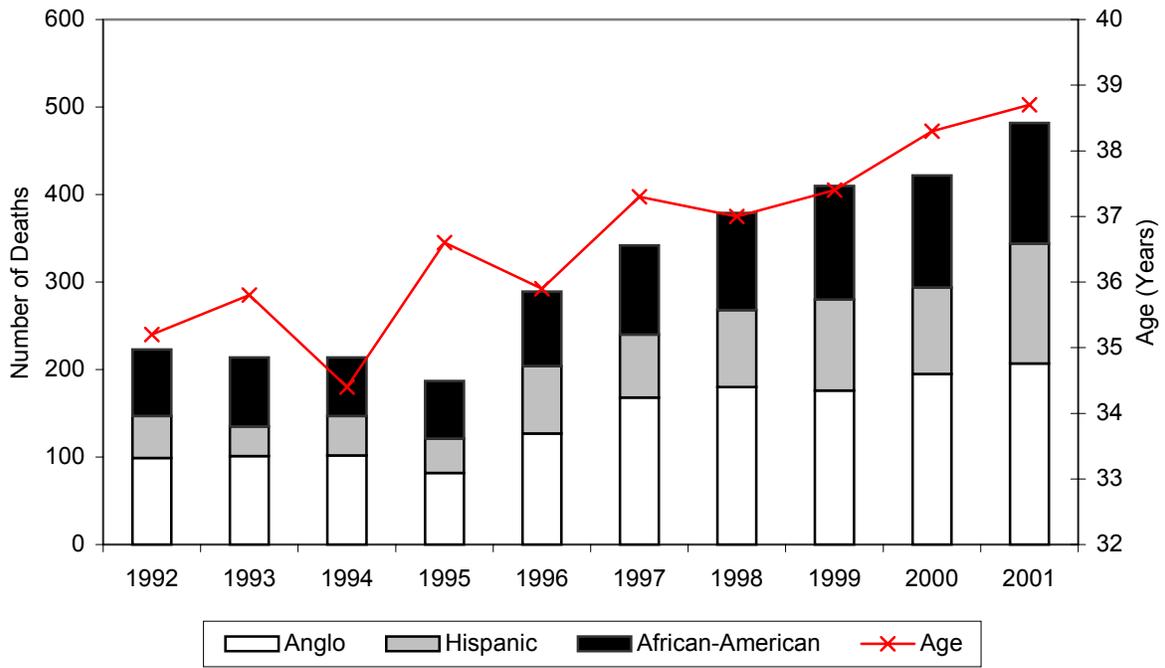
Exhibit 4. Routes of Cocaine Administration by Race/Ethnicity of Treatment Admissions and Percent: 1993 and 2002



¹ IDU=Injection drug use.

SOURCE: TCADA; analysis by Jane Maxwell

Exhibit 5. Age and Race/Ethnicity of Persons Dying with a Mention of Cocaine: 1992–2001



SOURCE: Bureau of Vital Statistics, TDH; analysis by Jane Maxwell

Exhibit 6. Percentages of Arrestees Testing Positive for Selected Drugs, by Site and Gender: 1991–2002¹

Drug/Gender/Site	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Cocaine												
Males												
Dallas	43	41	45	35	31	32	32	29	34	28	30	31
Houston	56	41	41	28	40	39	39	36	36	32	NR ²	NR
Laredo	NR	NR	NR	NR	NR	NR	NR	37	42	45	35	36
San Antonio	29	31	31	31	24	28	26	27	23	20	30	33
Females												
Dallas	46	48	43	46	44	36	34	30	40	24	NR	NR
Houston	51	44	43	36	32	34	29	37	23	32	NR	NR
Laredo	NR	NR	NR	NR	NR	NR	NR	33	21	22	27	NR
San Antonio	24	25	24	23	23	23	18	20	19	NR	NR	NR
Opiates												
Males												
Dallas	4	4	5	3	5	5	4	2	5	3	5	6
Houston	3	3	2	3	5	8	10	8	6	7	NR	NR
Laredo	NR	NR	NR	NR	NR	NR	NR	11	11	10	11	7
San Antonio	15	14	14	13	10	10	10	10	10	10	9	11
Females												
Dallas	9	9	11	8	5	10	4	5	7	5	NR	NR
Houston	4	4	5	6	3	4	5	7	7	3	NR	NR
Laredo	NR	NR	NR	NR	NR	NR	NR	0	2	7	10	NR
San Antonio	20	13	15	14	13	13	9	9	10	NR	NR	NR
Marijuana												
Males												
Dallas	19	28	27	33	39	43	44	43	39	36	33	35
Houston	17	24	24	23	30	28	23	36	38	36	NR	NR
Laredo	NR	NR	NR	NR	NR	NR	NR	39	33	29	26	28
San Antonio	19	28	32	30	34	38	34	41	36	41	41	42
Females												
Dallas	11	24	20	23	23	26	27	24	27	21	NR	NR
Houston	8	12	15	13	20	24	17	20	23	27	NR	NR
Laredo	NR	NR	NR	NR	NR	NR	NR	13	9	17	14	NR
San Antonio	8	16	17	15	16	18	17	18	16	NR	NR	NR
Amphetamines³												
Males												
Dallas	1	1	4	2	2	1	4	3	3	2	2	4
San Antonio	1	0	0	0	1	1	2	0	0	0	3	2
Females												
Dallas	3	3	6	4	4	2	4	4	4	3	NR	NR
Houston	0	0	1	0	1	1	2	0	0	2	NR	NR
San Antonio	2	1	2	0	3	2	4	2	2	NR	NR	NR
PCP												
Males												
Dallas	0	3	3	5	8	4	3	4	5	4	2	5
Houston	0	0	1	3	4	3	3	6	7	5	NR	NR
Females												
Dallas	0	0	1	2	2	1	1	0	1	2	NR	NR
Houston	0	0	0	1	2	1	1	2	1	2	NR	NR

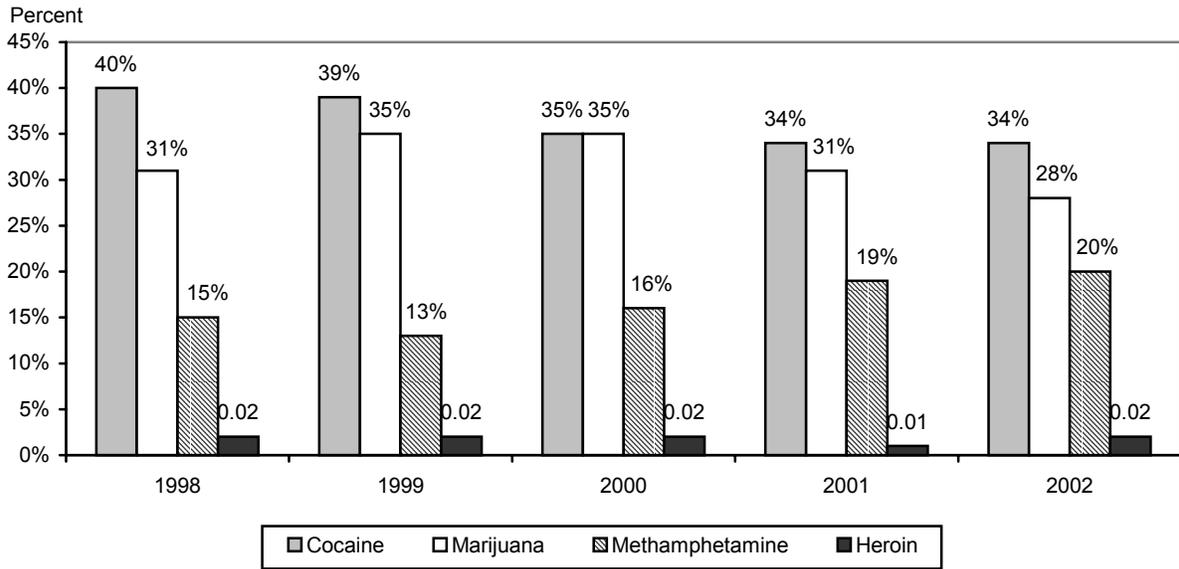
¹ Data from 2000–2002 are not comparable by gender or to prior-year data.

² NR=Not reported

³ Sites not represented in the amphetamines and LSD categories were either not reported for some years or were zero.

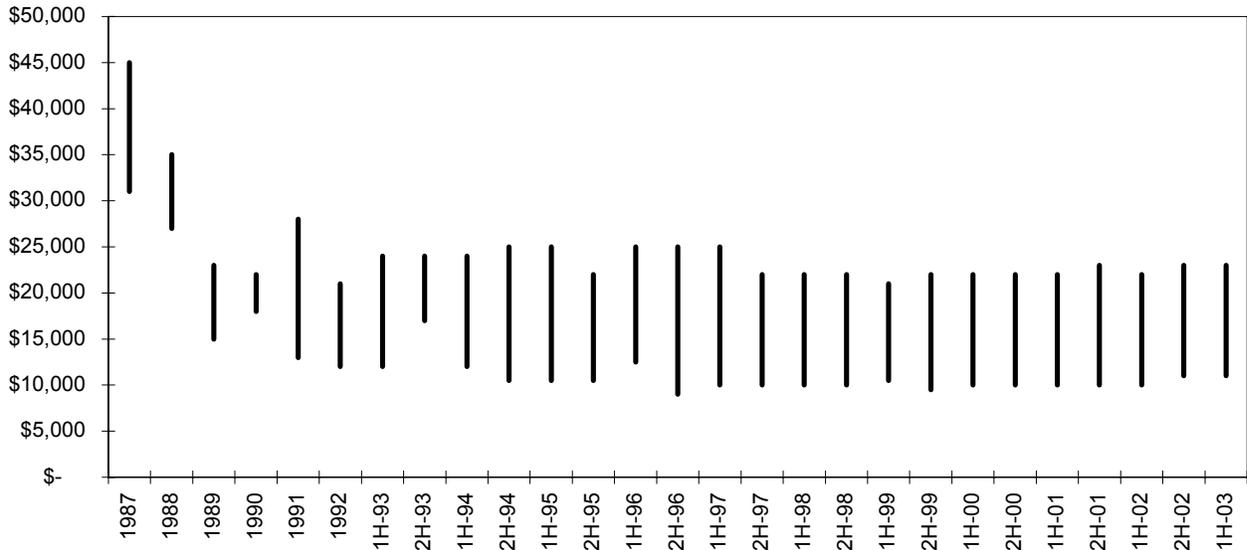
SOURCE: ADAM, NIJ

Exhibit 7. Substances Identified by DPS Labs, by Percent: 1998–2002



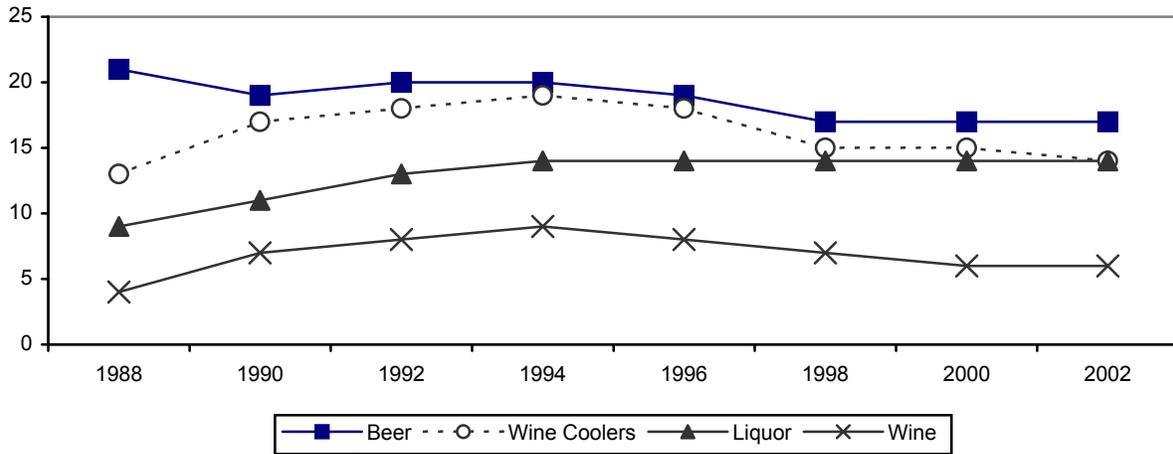
SOURCE: NFLIS

Exhibit 8. Price Ranges for a Kilogram of Cocaine in Texas: 1987–June 2003



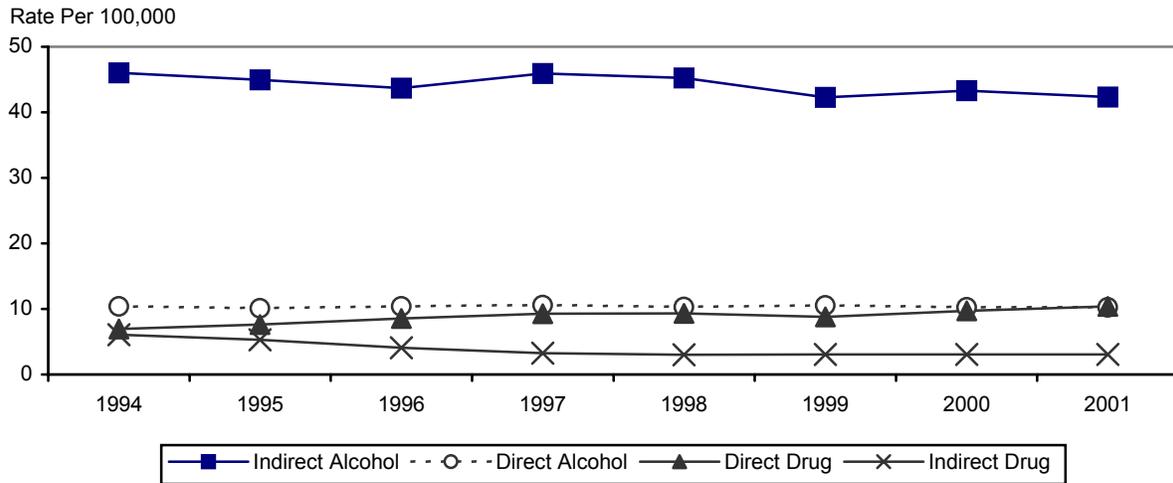
SOURCE: DEA

Exhibit 9. Percentages of Texas Secondary Students Who Reported Normally Consuming Five or More Drinks at One Time, by Specific Alcoholic Beverage: 1988–2002



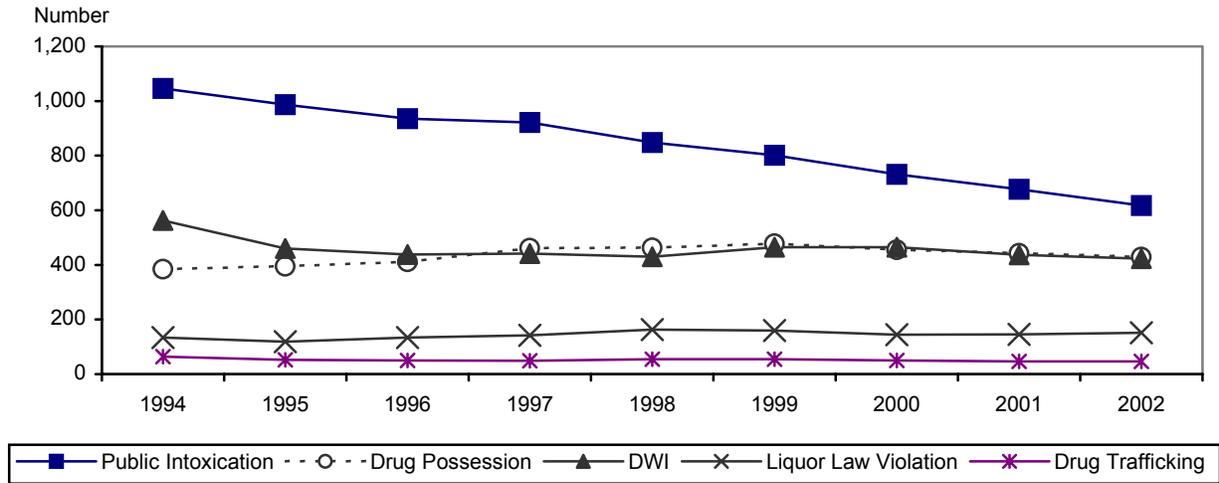
SOURCE: TCADA

Exhibit 10. Rates of Direct and Indirect Alcohol and Drug Deaths Per 100,000 Population: 1994–2001



SOURCE: TCADA

Exhibit 11. Rates of Substance Abuse Arrests Per 100,000 Population: 1994–2002



SOURCE: TCADA

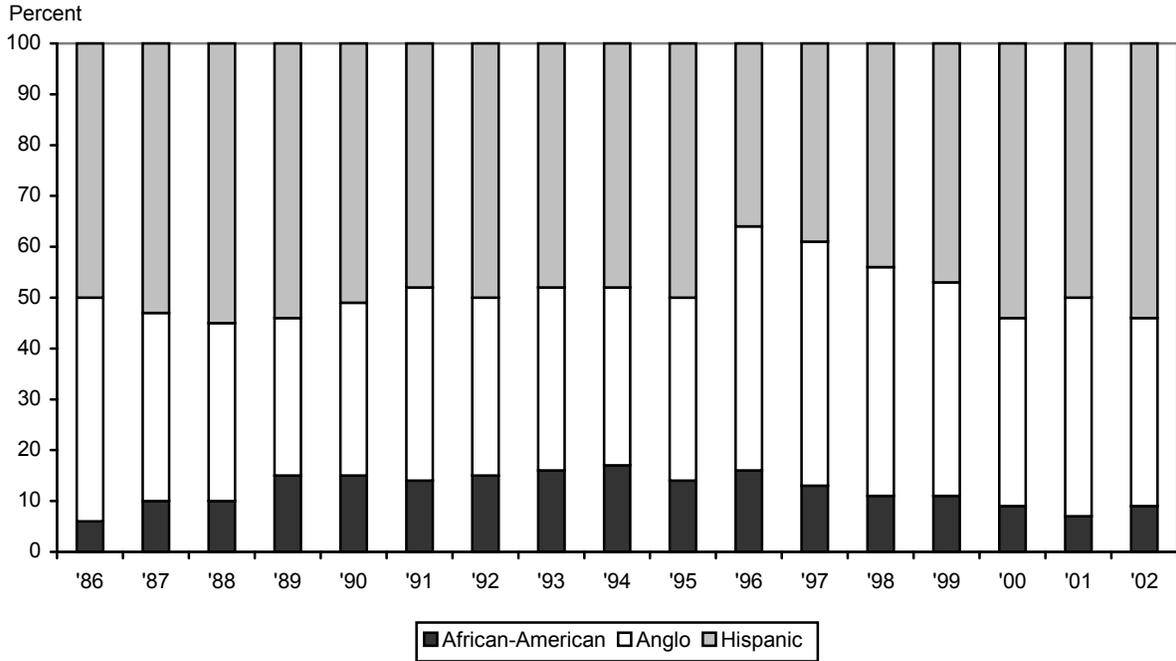
Exhibit 12. Characteristics of Adult Clients Admitted to TCADA-Funded Treatment with a Primary Heroin Problem, by Route of Administration: 2002

Characteristic	Inject	Inhale	All Users ¹
Total Admissions (N)	(4,626)	(313)	(5,127)
% of Heroin Admissions	90	6	100
Lag—1st Use to Treatment (Years)	15	10	15
Average Age	37	32	36
Male (%)	71	67	70
African-American (%)	6	47	9
Anglo (%)	36	20	36
Hispanic (%)	56	31	54
Criminal Justice Involved (%)	33	36	33
Employed (%)	12	17	13
Homeless (%)	14	11	14

¹ Total includes clients with other routes of administration.

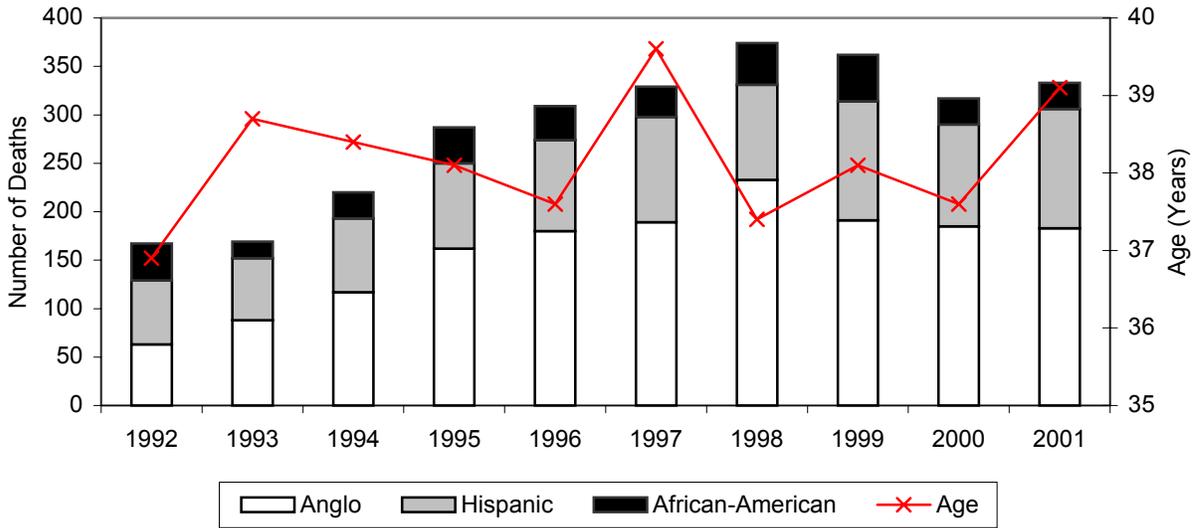
SOURCE: TCADA; analysis by Jane Maxwell

Exhibit 13. Heroin Admissions to Treatment by Race/Ethnicity: 1986–2002



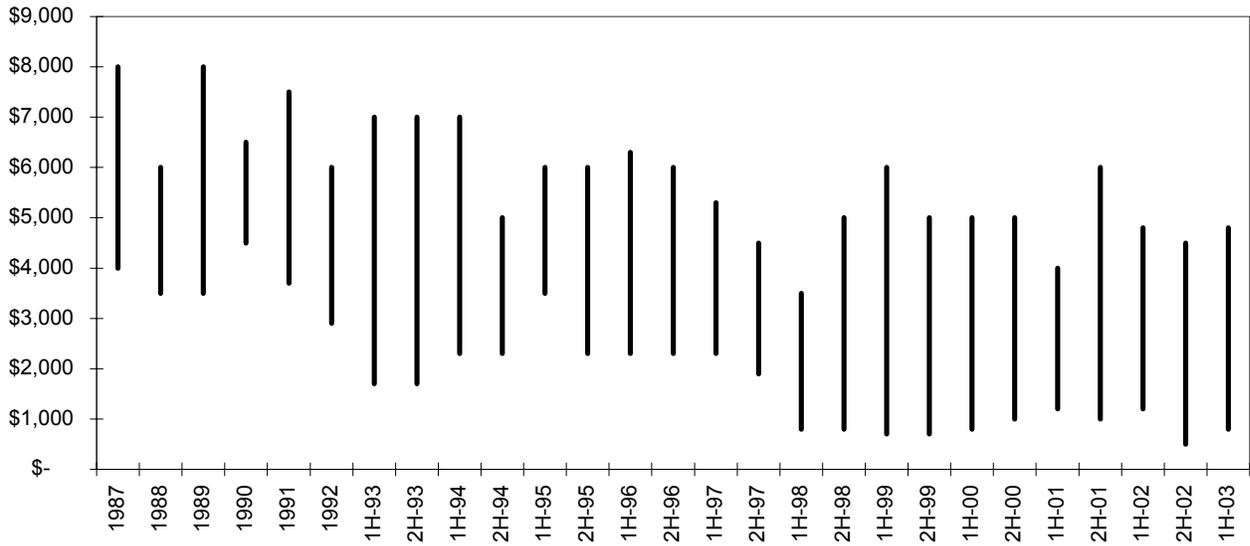
SOURCE: TCADA; analysis by Jane Maxwell

Exhibit 14. Age and Race/Ethnicity of Persons Dying with a Mention of Heroin: 1992–2001



SOURCE: Bureau of Vital Statistics, TDH; analysis by Jane Maxwell

Exhibit 15. Price Ranges for an Ounce of Mexican Black Tar Heroin in Texas: 1987–June 2003



SOURCE: DEA

Exhibit 16. Price and Purity of Heroin Purchased in Dallas, El Paso, and Houston: 1995–2001

City	1995	1996	1997	1998	1999	2000	2001
Dallas							
Purity (%)	6.8	3.5	7.0	11.8	14.0	16.0	13.4
Price/Milligram Pure	\$2.34	\$6.66	\$4.16	\$1.06	\$1.01	\$0.69	\$1.36
Houston							
Purity (%)	16.0	26.1	16.3	34.8	17.4	18.2	11.3
Price/Milligram Pure	\$1.36	\$2.15	\$2.20	\$2.43	\$1.24	\$1.14	\$1.51
El Paso ¹							
Purity (%)					56.7	50.8	41.8
Price Milligram/Pure					\$0.49	\$0.34	\$0.44

¹ El Paso began reporting in mid-1999.

SOURCE: Domestic Monitor Program, DEA

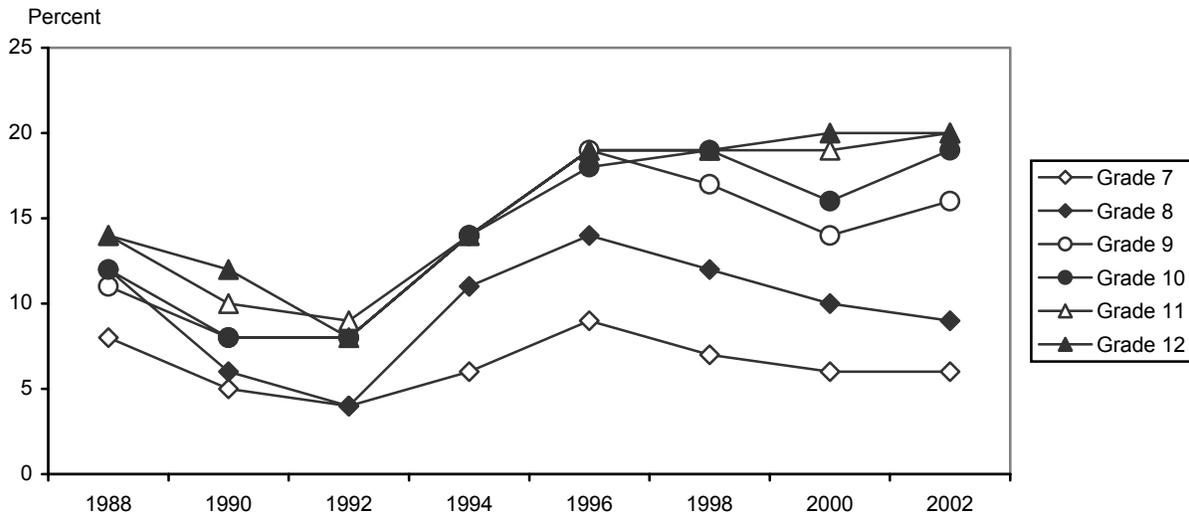
Exhibit 17. Numbers of DAWN ED Mentions for Selected Drugs in Dallas: July 1997–June 2002

Drug	2H-97	1H-98	2H-98	1H-99	2H-99	1H-00	2H-00	1H-01	2H-01	1H-02
Other Narcotics										
Codeine/combinations	33	41	28	27	32	16	28	17	10	18
Hydrocodone/combinations	160	130	146	125	120	146	158	186	189	151
Methadone	... ¹	19	20	14	7	...	13	30	37	17
Oxycodone/combinations	...	5	8	...	1	23	...	8	34	17
Stimulants										
Amphetamines	182	163	173	138	169	185	166	187	191	164
Methamphetamine	82	118	67	58	42	75	60	56	55	54
Club Drugs										
GHB	51	75	86	61	95	81	87	75	53	57
Ketamine	...	0	0	1	2	6	4	6	5	5
LSD	15	40	53	57	48	42	23	38	5	4
Ecstasy	9	6	9	7	18	29	41	37	40	34
PCP	15	27	34	52	43	55	65	46	50	74
Rohypnol	2	7	0	2	3	2	2	...	...	...
Inhalants										
Volatile agents	23	19	12	19	19	19	8	18	...	2
Nitrite inhalants	0	0	0	0	0	0	0	0	0	0
Chloro-fluorohydrocarbons	0	...	1	0	0	0	1	...	0	0
General anesthetics	0	0	1	0	0	...	0	0	0	0

¹ Dots (...) indicate that an estimate with a relative standard error greater than 50 percent has been suppressed.

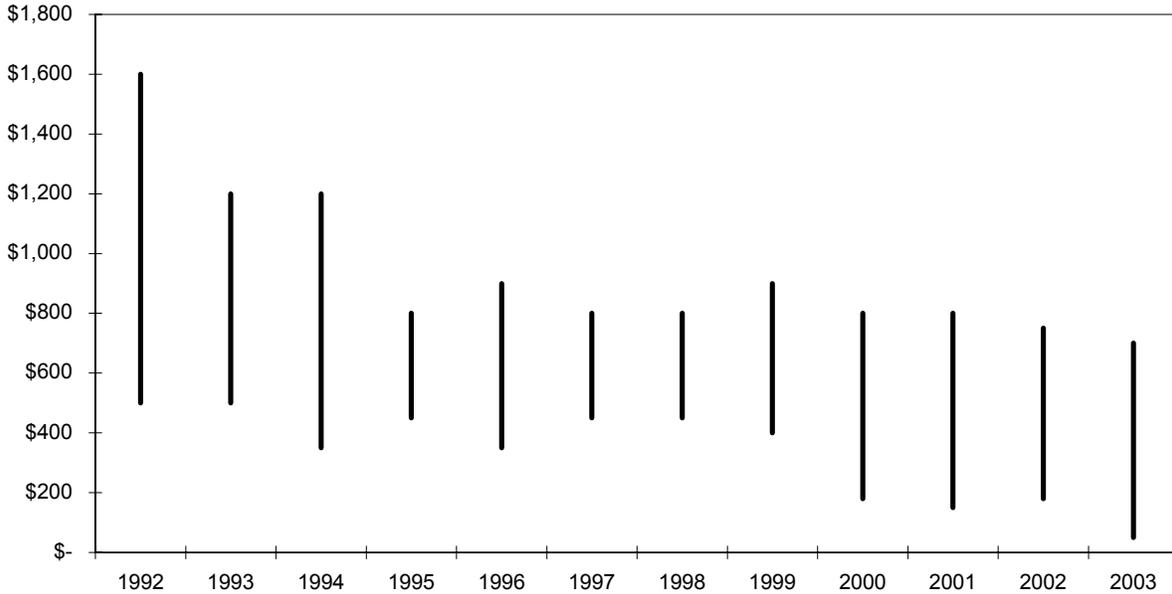
SOURCE: DAWN, OAS, SAMHSA

Exhibit 18. Percentages of Texas Secondary Students Who Had Used Marijuana in the Past Month, by Grade: 1988–2002



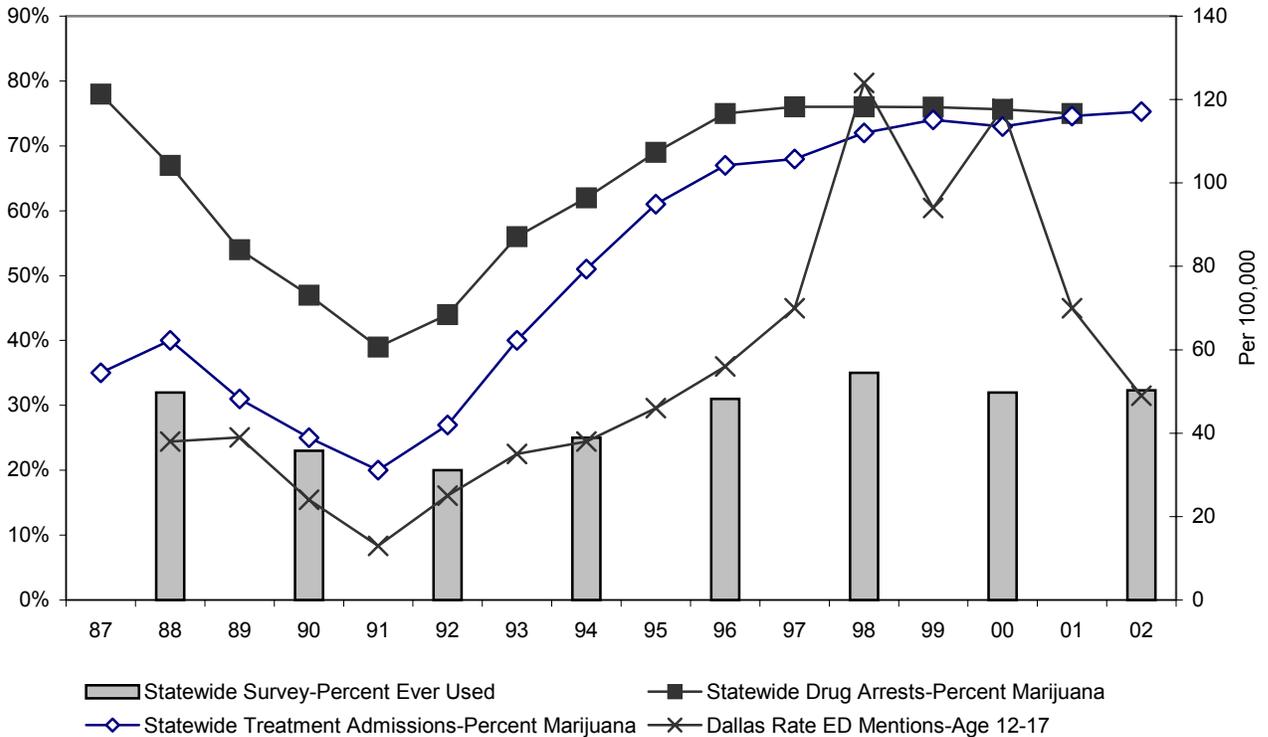
SOURCE: TCADA

Exhibit 19. Price Ranges for a Pound of Commercial Grade Marijuana in Texas: 1992–2003



SOURCE: DEA

Exhibit 20. Adolescent Indicators of Marijuana Use: 1987–2002



SOURCES: TCADA, UCR, and DAWN, OAS, SAMHSA

Exhibit 21. Characteristics of Adult Clients Admitted to TCADA-Funded Treatment with a Primary Amphetamine or Methamphetamine Problem, by Route of Administration: 2002

Characteristic	Smoke	Inject	Inhale	Oral	All
Total Admissions (N)	(753)	(1,769)	(385)	(233)	(3,183)
% of All Stimulant Admissions	24	56	12	7	100
Lag—1st Use to Treatment (Years)	9	13	10	11	11
Average Age	29	31	30	32	31
Male (%)	47	46	53	37	46
African-American (%)	1	1	1	3	1
Anglo (%)	90	95	87	88	92
Hispanic (%)	7	4	9	8	6
Criminal Justice Involved (%)	47	49	52	43	48
Employed (%)	25	15	29	20	19
Homeless (%)	7	11	6	10	9

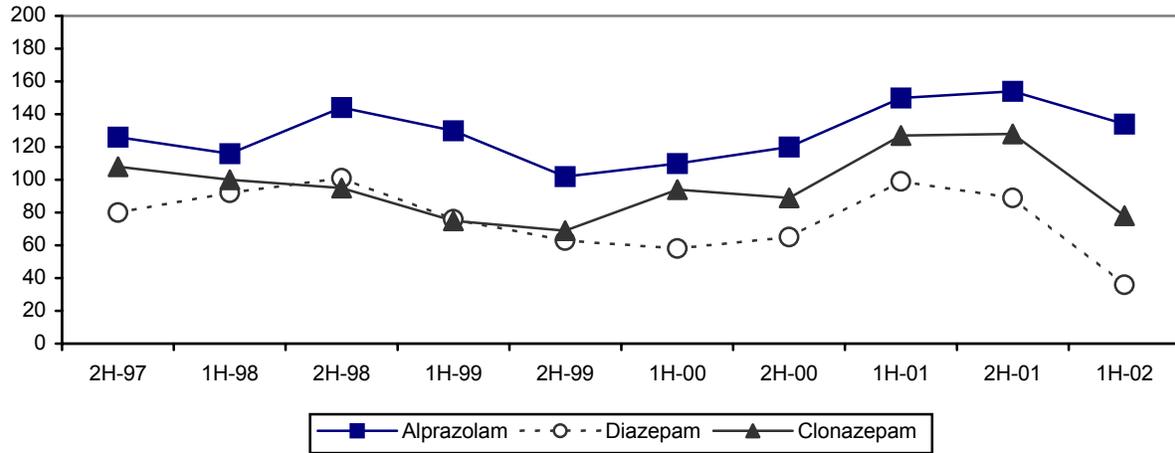
SOURCE: TCADA; analysis by Jane Maxwell

Exhibit 22. Percentages of Items Analyzed by DPS Laboratories That Were Methamphetamine or Amphetamines, by Area: 2002

Area	Percent
El Paso	5.39
Hidalgo (McAllen)	0.42
Webb (Laredo)	0.83
El Paso (El Paso)	3.74
Nueces (Corpus Christi)	9.03
Harris (Houston)	7.21
Travis (Austin)	19.06
McLennan (Waco)	20.69
Smith (Tyler)	23.62
Dallas (Dallas)	34.27
Midland (Odessa)	14.54
Taylor (Abilene)	46.30
Lubbock (Lubbock)	25.00
Potter (Amarillo)	46.66

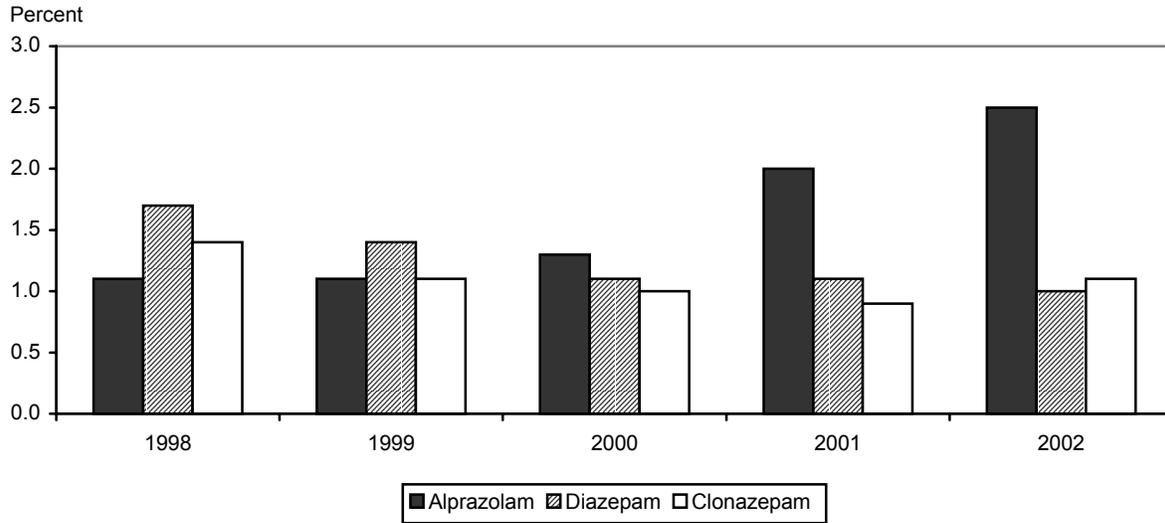
SOURCE: NFLIS

Exhibit 23. Numbers of DAWN ED Mentions of Selected Benzodiazepines in Dallas: July 1997–June 2002



SOURCE: DAWN, OAS, SAMHSA

Exhibit 24. Percentages of Benzodiazepines Identified by DPS Labs: 1998–2002



SOURCE: NFLIS

Exhibit 25. Characteristics of Patients Entering EDs in Dallas With Mentions of Club Drugs, by Percent: 2001

Characteristic	GHB	LSD	MDMA	PCP	Ketamine	Rohypnol
Number (N)	(128)	(43)	(77)	(96)	(11)	(8)
Male	66	79	62	86	91	13
Anglo	77	79	60	9	64	100
Hispanic	9	... ¹	9	...	18	0
African-American	0	0	13	80	0	0
Age 12–17	2	33	25	8	27	13
Age 18–25	56	63	55	57	45	...
Age 26–34	35	2	14	30	18	...
Age 35 and older	7	2	6	2	9	...

¹ Dots (...) indicate that an estimate with a relative standard error greater than 50 percent has been suppressed.

SOURCE: DAWN, OAS, SAMHSA

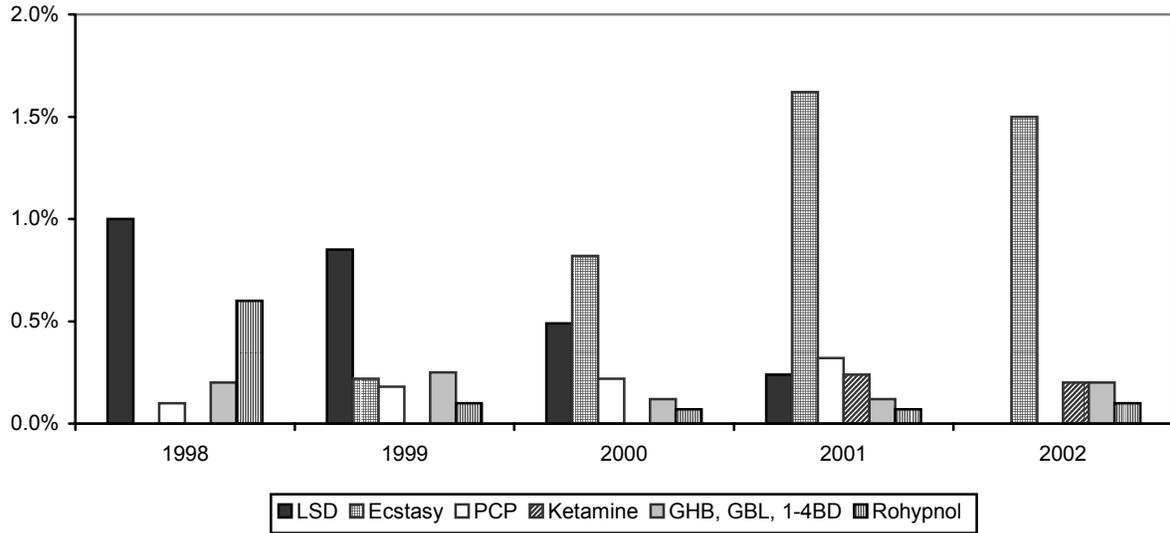
Exhibit 26. Characteristics of Youths and Adults Entering TCADA Treatment Programs with a Primary, Secondary, or Tertiary Problem with Club Drugs, by Percent: 2002¹

Characteristic	GHB	Hallucinogens	Ecstasy	PCP	Rohypnol
Number (N)	(35)	(436)	(521)	(321)	(368)
Male	54	73	64	72	74
Anglo	91	58	61	12	2
Hispanic	9	24	23	10	94
African-American	0	16	14	78	2
Average Age	31.0	22.1	20.7	23.2	18.0
Criminal Justice Problem	60	68	57	50	69
History of Needle Use	54	27	20	6	15
Primary Drug=Club Drug	34	20	24	45	15
Other Primary Drug					
Marijuana	6	41	33	29	49
Alcohol	0	11	10	9	7
Methamphetamine/Amphetamine	20	10	11	1	3
Powder Cocaine	6	6	11	3	13
Crack Cocaine	17	7	5	9	6
Heroin	9	2	1	0	8

¹ Excludes one ketamine admission.

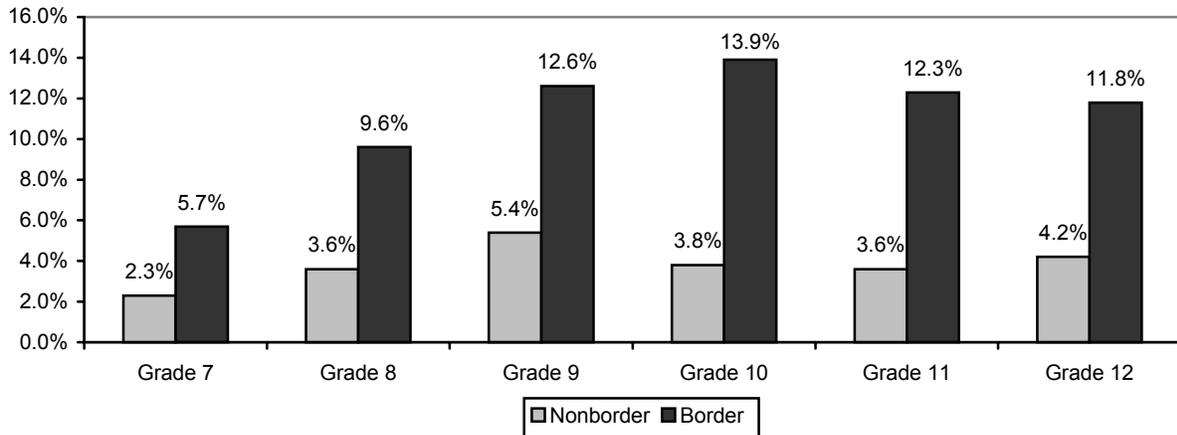
SOURCE: TCADA; analysis by Jane Maxwell

Exhibit 27. Percentages of Club Drugs Identified by DPS Labs: 1998–2002



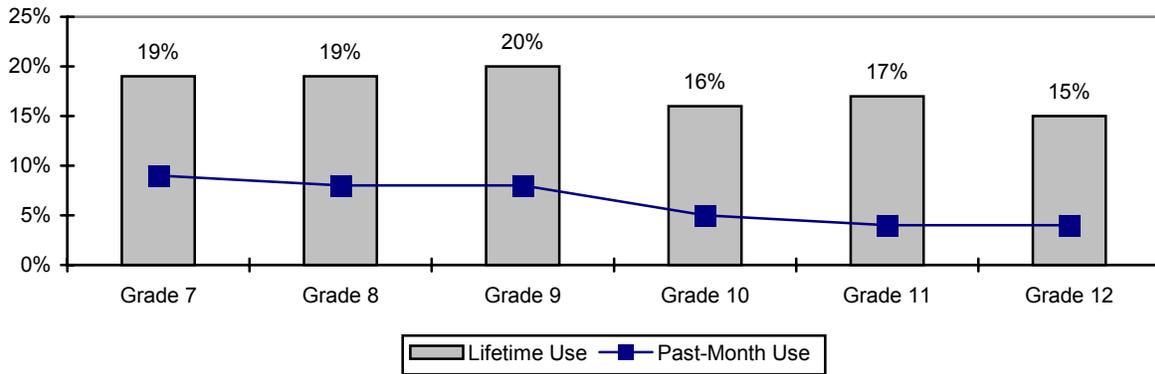
SOURCE: NFLIS

Exhibit 28. Percentages of Texas Border and Nonborder Secondary Students Who Had Ever Used Rohypnol by Grade: 2002



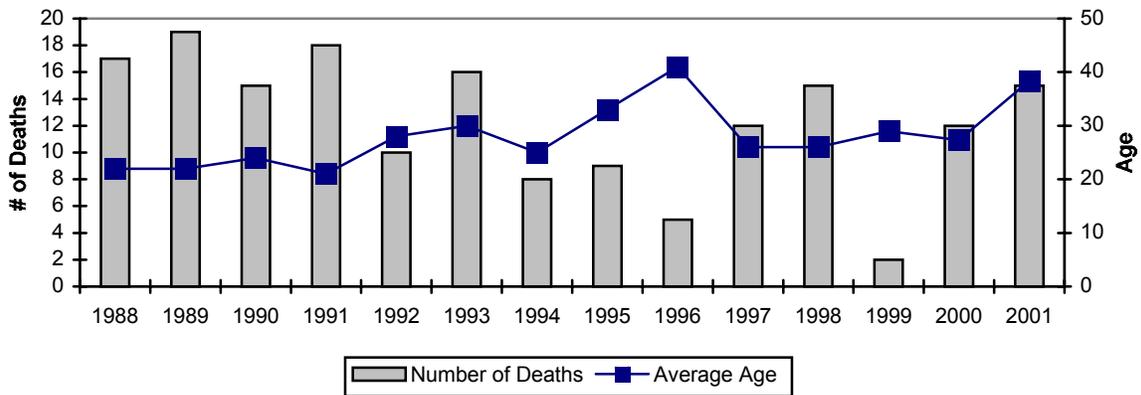
SOURCE: TCADA

Exhibit 29. Percentages of Texas Secondary Students Who Had Used Inhalants Ever or in the Past Month, by Grade: 2002



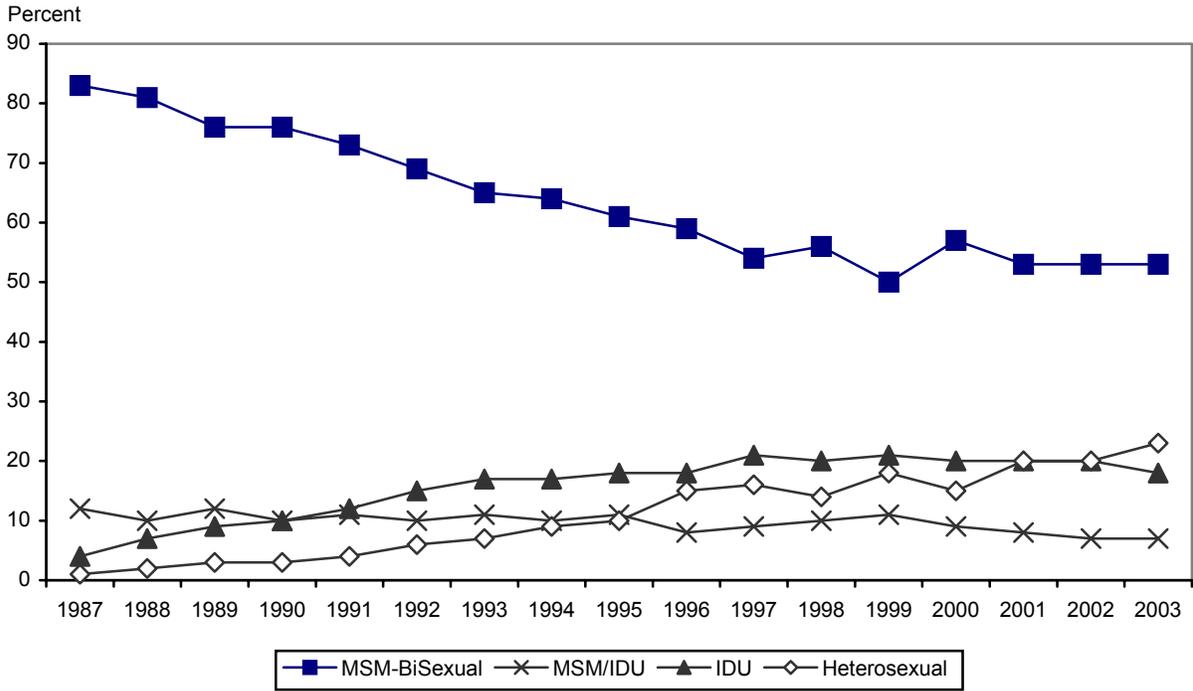
SOURCE: TCADA

Exhibit 30. Texas Deaths with a Mention of Inhalants: 1988–2001



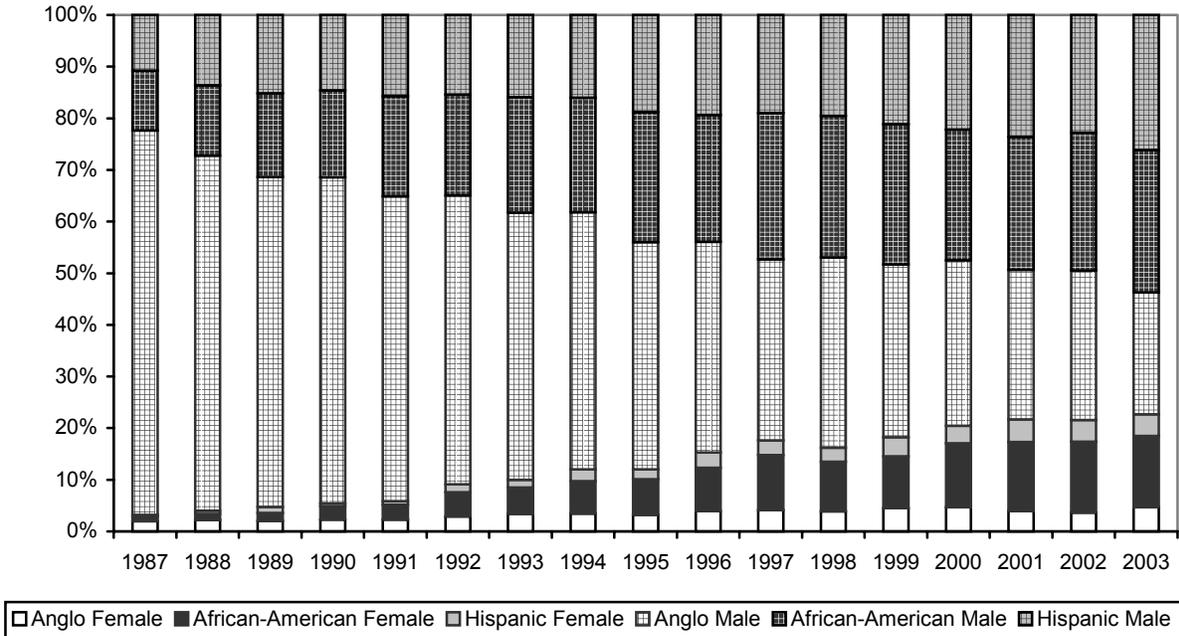
SOURCE: Bureau of Vital Statistics, DPH; analysis by Jane Maxwell

Exhibit 31. Percent of AIDS Cases in Texas, by Route of Transmission: 1987–March 2003 (Cases with Risk Not Reported Excluded)



SOURCE: TDH

Exhibit 32. Male and Female AIDS Cases, by Race/Ethnicity and Percent: 1987–March 2003



SOURCE: TDH

Exhibit 33. Characteristics of Adult Needle Users Admitted to TCADA-Funded Treatment: 2002

Characteristic	Heroin	Cocaine	Stimulants
Total Admissions (<i>N</i>)	(4,645)	(1,062)	(1,771)
% of All Needle Admissions	59	14	23
Lag—First Use to Treatment (Years)	15	13	13
Average Age	37	34	31
Male (%)	71	66	46
African-American (%)	6	5	1
Anglo (%)	36	68	95
Hispanic (%)	56	25	4
Criminal Justice Involved (%)	33	40	49
Employed (%)	12	16	48
Homeless (%)	14	15	11

SOURCE: TCADA; analysis by Jane Maxwell

Patterns and Trends of Drug Abuse in Washington, D.C.

Eric Wish, Ph.D., Erin Artigiani, M.A., Thomas Gray, M.A., and Sarah Boonstoppel, B.A.¹

ABSTRACT

Cocaine/crack, marijuana, and heroin continued to be the main illicit drug problems in Washington, DC, in the first half of 2003, while the use and availability of PCP increased. Although cocaine/crack ED mentions and related deaths declined, cocaine remained the most serious drug threat in the District. Heroin treatment admissions were steady, but HIDTA reported that the number of estimated heroin abusers in the District continued to increase, with estimates ranging between 14,000 and 18,000. Marijuana is an ongoing problem in the area; more adult male arrestees in the ADAM program tested positive for marijuana than for cocaine, PCP, or opiates. PCP abuse is a growing problem in the District, with ED mentions, PCP-related arrests, treatment admissions, and PCP-positive arrestees all increasing according to indicators. About one-third of people living with AIDS in the District have a history of injection drug use.

INTRODUCTION

Area Description

The Nation's Capital is home to approximately 571,822 people residing in eight wards that remain largely distinguishable by race and economic status (U.S. Bureau of the Census, 2001 update). A majority of the District's wealthy White residents live in the northwest part of the city, while many of the poor African-American residents live in the northeast and southeast. There are slightly more females than males, and the majority of the District's population continues to be African-American (60 percent). Nearly one-third of the population is White (31 percent), and the remainder is primarily Hispanic and/or Asian (U.S. Bureau of the Census, 2000 Census). The population of the District is slightly older than the general U.S. population. One in five residents are younger than 18 and just over 12 percent are age 65 and older. More than one-third (39.1 percent) of adults age 25 or older have at least a bachelor's degree.

Data from the 2000 census reveal several key demographic changes since 1990. The total population decreased by 5.7 percent during the 1990s, from 606,900 to 572,059 in 2000. The number of African-Americans decreased by 14.1 percent, while the number of Asians grew by 38.6 percent, and the number of Hispanic residents grew by 37.4 percent. The White population also grew by a much more modest 2 percent during this time period. (Pach et al. 2002).

Despite a nationwide economic recession, wealth distributions in the District became more polarized during 2002. Buoyed by the draw of potential income from service employment, government spending, and an established technology industry, measures of wealth such as median household income (\$40,127 in the District in 1999) increased in the D.C. metropolitan region. The percentage of persons living in poverty also increased in many localities in and around Washington (Pach et al. 2002). One in five residents were living in poverty in 1999 (U.S. Census Bureau).

Mostly fueled by decreasing incidents of theft, overall index crimes declined by 3.2 percent between 2000 and 2001 in the District. While the aggregate of index crimes declined, the number of homicides increased 14.6 percent. During the first 6 months of 2002, there were 107 homicides in the District—24 percent more than during the first 6 months of 2001.

The diagnosis of acquired immunodeficiency syndrome (AIDS) cases increased rapidly from 1982 to 1993, when they peaked at 1,341 cases. The number of cases has decreased 61 percent since 1993. There were 529 diagnosed cases in 2001, the last year for which data are available. The number of male cases decreased steadily during this time, but the number of female cases increased, from 17.2 percent of all cases in 1993 to 33.1 percent of all cases in 2001. Almost one-half of the diagnoses occurred among 30–39-year-olds. More cases among African-Americans were related to intravenous drug use than among any other race. Over three-quarters (79 percent) of people living with AIDS are African-American. About one-third of people living with AIDS have a history of injection drug use (4 percent of men who have sex with men and 29 percent of heterosexuals).

¹The authors are affiliated with the Center for Substance Abuse Research, College Park, Maryland. Some background material was taken from prior CEWG reports.

Alcohol abuse costs the District approximately \$700 million per year; illicit drug use costs the District \$500 million per year. Nearly 1 in 10 residents (approximately 60,000) are addicted to illegal drugs and/or alcohol. At least one-half (26,000–42,000) of these individuals have co-occurring substance abuse and mental health disorders. The D.C. Household Survey indicates that first-time drug use occurs at a younger age in the District than in the Nation. (Citywide Comprehensive Substance Abuse Strategy for the District of Columbia, 2003).

The major drug problems in the District continue to be cocaine/crack, marijuana, and heroin. The use and availability of phencyclidine (PCP) appears to have increased over the past 6 months. The use of club drugs such as methylenedioxymethamphetamine (MDMA) appears to be leveling off.

Information from the Department of Justice's National Drug Intelligence Center (NDIC) suggests that the District has a wide variety of drug transportation options, including an extensive highway system, three major airports, and rail and bus systems. While both NDIC and ethnographic information suggest that traffickers extensively utilize all of these options, Washington appears to be a secondary drug distribution center, with most drugs intended for distribution in DC being distributed first to larger cities such as New York and Miami (Pach et al. 2002). The street-level dealing in DC was recently described as less organized and more free flowing than the organized networks in these larger cities. Information from the NDIC suggests that Colombian drug trafficking organizations continue to play a major role in supplying opiates and cocaine to DC criminal groups of Colombian and Dominican descent.

Data Sources

A number of sources were used to obtain comprehensive information regarding the drug use trends and patterns in Washington, DC. Data for this report were obtained from the sources shown below. In addition, interviews were conducted with a sample of substance abuse professionals in the fields of criminal justice, public health, and recovery.

- **Emergency department (ED) drug mentions data** were derived for 2001 and the first half of 2002 from the Drug Abuse Warning Network (DAWN), Office of Applied Studies (OAS), Substance Abuse and Mental Health Services Administration (SAMHSA). The rates of ED mentions are based on the 2000 census for the first time in 2001.

- **Drug-related death data** were derived from DAWN, OAS, SAMHSA, and annual medical examiner (ME) data for 1997–2001.
- **Drug treatment data** for 2000–2002 were obtained from the Treatment Episode Data Set (TEDS), OAS, SAMHSA.
- **Arrest, crime, and law enforcement action data** were derived from the Metropolitan Police Department (MPD) crime statistics and press releases pertaining to law enforcement action through June 2001, <www.mpdc.dc.gov>, and from the MPD Central Crime Analysis Unit's tables on Arrests by Sex for Adults and Juveniles through 2001.
- **Arrestee urinalysis data** were derived from the 2002 Arrestee Drug Abuse Monitoring (ADAM) program, National Institute of Justice (NIJ), in Washington, DC. The data on adult male arrestees are weighted; data on the small sample of female arrestees are not weighted and should not be compared to the male data. Additional data were obtained from the District of Columbia Pretrial Services Agency.
- **Drug prices and trafficking trends data** were obtained from the Drug Enforcement Administration (DEA), Washington Field Division, and the DEA's Domestic Monitor Program (DMP) "Quarterly Trends in the Traffic," Washington Division, Fiscal Year (FY) 2001; "Quarterly Price List," Fourth Quarter Fiscal Year 2001; drug seizure data through August 2001; and DMP data through the first quarter of 2002. NDIC agents, DEA agents, and District narcotics officers also provided information. Additional trafficking data were derived from the Washington-Baltimore High Intensity Drug Trafficking Area (HIDTA) "District of Columbia Threat Assessment" released in June 2003 and available at <<http://www.whitehousedrugpolicy.gov>>. Other trafficking data were derived from NDIC, "District of Columbia Drug Threat Assessment," May 2003, at <<http://usdoj.gov/ndic/pubs>>.
- **General information on drug use** was derived from the Office of National Drug Control Policy (ONDCP) reports "Pulse Check: Trends in Drug Abuse Mid-Year 2001," and "Washington, D.C., Profile of Drug Indicators," <<http://www.whitehousedrugpolicy.gov>>; the District of Columbia, Department of Health, Addiction Prevention and Recovery Administration (APRA) report "A 2000 Household Survey on Substance Abuse: Summary of Findings," September 2001; and the Center for

Substance Abuse Research, University of Maryland, Drug Early Warning System County Snapshots, available at www.dewssonline.org.

- **Census data** for the District of Columbia were derived from the “Council of the District of Columbia; Subcommittee on Labor, Voting Rights and Redistricting; Testimony of the Office of Planning/State Data Center on Bill 14-137, The Ward Redistricting Amendment Act of 2002,” <<http://www.planning.dc.gov/documents/census2002.shtm>>.
- **Ethnographic research** provided qualitative data on price, purity, and social aspects of drug use through interviews with law enforcement officers, treatment providers, and recovery advocates.
- **Media reports** used included those from the *Washington Post*, <<http://www.washingtonpost.com>>, the *Baltimore Sun*, <www.sunspot.net>, and press releases from the District of Columbia Mayor’s Office News Web site <<http://dc.gov/mayor/index.shtm>>.

DRUG ABUSE PATTERNS AND TRENDS

Cocaine/Crack

Cocaine, particularly in the form of crack, remains the most serious drug threat in the District, accounting for more ED episodes, admissions to publicly funded drug treatment, and drug-related deaths than any other drug. It is most often sold at open air markets in the poorer parts of the city and is decreasing in price. The DEA reported that powder cocaine sold for \$17,500–\$35,000 per kilogram and \$30–\$80 per gram in the fourth quarter of FY 2002. Crack sells for slightly more: \$80–\$100 per gram. Cocaine is smuggled into the District from New York, Miami, or Philadelphia and then processed into crack by the local trafficking organizations.

Preliminary DAWN data show a rate of 29 cocaine ED mentions per 100,000 population in the first half of 2002, down insignificantly from the first and second halves of 2001 (exhibit 1). Of the 1,229 cocaine ED mentions in the first half of 2002, nearly 61 percent were male, and an equal percentage were Black; nearly 28 percent were White. Sixty-one percent were age 35 or older, 23 percent were age 26–34, and 14 percent were between the ages of 18 and 25. Nearly three-

quarters (72 percent) represented multidrug episodes. Nearly 37 percent of the mentions were for patients who reported dependence as a motive for using cocaine, with the remaining citing psychic effects (17 percent) and “suicide” (15 percent) as motives for drug use. Reasons for contacting the ED were primarily unexpected reaction (35 percent), overdose (17 percent), and seeking detoxification (nearly 17 percent).

Cocaine-related deaths totaled 42 in 2001, with 18 being single-drug deaths (exhibit 2). The 42 cocaine-involved deaths in 2001 represented a decrease from 2000, when the total was 54, and an even greater decrease from 1998 and 1999, when these deaths totaled 63 and 64, respectively.

In 2002, cocaine accounted for 34 percent of treatment admissions reported to TEDS, with 21 percent being primary crack admissions (exhibit 3). Primary admissions for non-smoked cocaine (referred to as “powder” here) increased by nearly 5 percentage points from 2001, while those for crack decreased by approximately 4 percentage points. Treatment admissions in 2002 with powder cocaine and crack cocaine as the primary drugs of abuse were more likely to be female than admissions for other drugs (35.4 and 38.9 percent, respectively) (exhibit 4). More than 90 percent of both cocaine admissions groups were Black, and more than one-half were age 36–45.

In the ADAM program in 2002, 27.5 percent of the more than 255 male adult arrestees tested positive for cocaine (exhibit 5). A larger proportion of the small female sample ($n=54$) tested cocaine positive (38.5 percent). Reports from the D.C. Pretrial Services Agency indicate that the percentage of adult arrestees testing positive for cocaine has remained about the same since 2000 (exhibit 6). In 2002, 35 percent of adult arrestees tested positive for cocaine. For the first 3 months of 2003, 34 percent of adult arrestees were cocaine positive.

Heroin

Heroin is one of the three leading drug problems in the District, along with cocaine and marijuana. The MPD describes crack as a weekend drug, but heroin as having a more steady ongoing market. The number of heroin abusers in the District continues to increase, with estimates of 14,000–18,000 abusers according to HIDTA. Most heroin is from South America, although

Southern Asian and Mexican heroin are still distributed by various groups. Long-term heroin injectors continue to purchase low-quality heroin, while predominately younger and more suburban users from Maryland and Virginia tend to snort the more high-quality heroin.

Preliminary DAWN data show significant decreases in the rate of heroin ED mentions in the first half of 2002 (exhibit 1), with a rate of 16 per 100,000 population.

Of the 673 heroin ED mentions in the first half of 2002, more than 65 percent were male, 59 percent were Black, and nearly one-third were White. Nearly 73 percent were age 35 or older. Dependence was cited as the motive for using heroin by 61 percent of patients represented in the mentions. Reasons for contacting the ED included overdose (23 percent), withdrawal (22 percent), and seeking detoxification (18 percent).

Of the 15 heroin-involved deaths in 2001, 4 were single-drug deaths (exhibit 2). The number of deaths in 2001 was substantially lower than in 1997–2000; deaths peaked during that time period at 53 in 1998.

In 2002, heroin accounted for 38.1 percent of treatment admissions, showing little change from 2000 and 2001 (exhibit 3). Of the 2,104 primary heroin admissions in 2002, 70 percent were male and 96 percent were Black (exhibit 4). The majority were age 36–45 (48 percent) and 46–55 (37 percent).

The 2002 ADAM data show that 9.5 percent of adult male arrestees tested opiate positive (exhibit 5). Nearly 18 percent of the women tested positive for opiates. As with cocaine, reports from the D.C. Pretrial Services Agency indicate that the percentage of adult arrestees testing positive for opiates has remained about the same since 2000 (exhibit 6). In 2002, 10.5 percent of adult arrestees tested positive for cocaine, with a similar percentage, 10.4, in the first 3 months of 2003.

Other Opiates/Narcotics

The preliminary rate of mentions of narcotic analgesics/combinations in the first half of 2002 (11 per 100,000 population) remained relatively stable from the first and second halves of 2001 (exhibit 1), as did the number of mentions (478 in the first half of 2002). Of the narcotic analgesics ED mentions, oxycodone/combinations accounted for 135 (28 percent) of the 2002 mentions, and methadone for 75 (16 percent). Hydrocodone/combinations totaled only 45 in the first half of 2002, a decline of nearly 29 percent from the 63 reported in the first half of 2001.

Six deaths involving narcotic analgesics were reported in 2001, down substantially from the 15–22 reported in the prior 3 years (exhibit 2).

Other opiates accounted for only 0.3 percent of the treatment admissions in 2002, down from 0.4 percent in 2001 (exhibit 3).

NDIC reports that the diversion of pharmaceuticals was occurring at an increasing rate in 2002. Both the DEA and the MPD have units investigating the diversion of prescription narcotics, such as methadone and OxyContin (a time-release form of oxycodone). Prescription medications like these are available at street markets and are also obtained through doctor shopping by organized groups, prescription fraud, and improper prescribing practices. According to the MPD, OxyContin available at street markets in northeast DC sells for less than pills sold in the surrounding suburbs (\$0.50 per milligram vs. \$1 per milligram). Twelve deaths involving oxycodone and 15 involving methadone were reported in the District in 2001.

Marijuana

Marijuana is an ongoing problem in the District as it is in many other jurisdictions. Commercial-grade and high-grade marijuana are available for wide ranging but relatively stable prices. Most of the marijuana is transported into the District via package delivery services by Mexican and Jamaican trafficking organizations, according to the most recent NDIC and HIDTA threat assessments. Marijuana is most often smoked in blunts or joints, which can be combined with rocks of cocaine or dipped in liquid PCP. Popular types of marijuana in the District and Maryland suburbs include “chronic,” “kind bud,” “purple haze,” “blueberry,” and “orange tulip.” All of these types are reputed to have high levels of THC.

Preliminary DAWN estimates for the first half of 2002 show a rate of 24 marijuana ED mentions per 100,000 population in the District, with no significant change from 2001 (exhibit 1). Of the 1,029 marijuana ED mentions in the first half of 2002, 65 percent represented patients who were male; nearly 53 percent were for Blacks and 36 percent were for Whites. Thirty-four percent of the marijuana ED mentions represented patients age 18–25, 22 percent represented patients age 26–34, and 26 percent represented those age 35 and older. Nearly 18 percent of the marijuana ED mentions were for patients age 12–17. Seventy-two percent were multidrug episodes. Psychic effects was the most frequently cited reason for using the drug (30 percent), while unexpected reaction accounted for 49 percent of the reasons given for contacting the ED.

Marijuana was involved in one death in the District in 2001 and one in 2000 (exhibit 2).

Primary admissions for marijuana abuse accounted for 4.7 percent of the 2002 treatment admissions, compared with 6.4 percent in 2001 and 8.0 percent in 2000 (exhibit 3). Three-quarters of the 262 primary marijuana admissions in 2002 were male, and nearly 85 percent were Black (exhibit 4). The majority of these admissions were age 18–25 (45 percent) and age 26–35 (28 percent).

In 2002, 40.7 percent of the adult male arrestees in ADAM tested marijuana positive, as did one-third of the female arrestees (exhibit 5). The D.C. Pretrial Services Agency does not test adult arrestees for marijuana.

PCP

Among the CEWG areas, Washington, DC, is one of the few with a growing PCP problem, including an increase in DAWN ED mentions. According to the MPD, the number of adult arrests related to PCP increased 65 percent between 2001 and 2002 (from 142 to 234). According to the Washington/Baltimore HIDTA, PCP is rapidly becoming the drug of choice at raves and nightclubs, sometimes used in combination with marijuana and/or MDMA (ecstasy).

Recent interviews with criminal justice, treatment, and recovery experts indicate an increase in the use and availability of PCP in the past 6 months. The level of use, however, is still well behind that of crack and marijuana. PCP is sold both on the street and in and around raves. It is often sold in the same areas as crack and heroin and other drugs. Current street slang for PCP, according to the DEA, is “water.” Although there doesn’t seem to be agreement on who’s using PCP (some said older, long-time users, others said teens and young adults looking to experiment), there was agreement on how it is sold and used. PCP is most often sold in liquid form for use in “dippers” (cigarettes dipped in liquid PCP) or “boat” (marijuana mixed with PCP).

Liquid PCP is often stored and sold in colored glass lemon juice or vanilla extract bottles to protect the ether it is dissolved in from the sun. In June 2003, liquid PCP in a paint remover tin being shipped in an overnight mail pack was seized by the MPD. According to the DEA Washington Division and the MPD, PCP sold for \$350–\$800 per ounce during the last quarter of FY 2002. Leafy vegetable matter to use with PCP is sold in \$20, \$30, and \$40 bags. One ounce of PCP can treat 4.5 ounces of vegetable matter for a net profit of \$5,000 to \$6,000. Another profitable way of selling liquid PCP is

“Dippers,” which sell for \$20–\$25 each. The MPD reports prices as high as \$35 per dip.

PCP in pill form has been sold as ecstasy according to the MPD. HIDTA also reports evidence of “double stack” pills in which at least one side of the pill contains PCP. The MPD also reports that MDMA pills have been dissolved in liquid PCP for use in dippers. It is believed by some users that MDMA will enhance the effects of PCP.

HIDTA and NDIC report that Blacks and lower-to-middle class Whites, often PCP abusers, are the primary transporters and wholesale distributors of PCP. Crews and local independents of various ethnic backgrounds are the primary retail-level distributors of PCP. While most PCP is transported to the District from southern California, the recent seizure of precursor chemicals and PCP at a clandestine laboratory in Baltimore indicates the drug has been produced in the region. No clandestine labs have been identified to date in the District.

Preliminary rates of PCP ED mentions in the Washington metropolitan area increased nearly 100 percent between the first halves of 2001 and 2002, with a rate of 10 per 100,000 population in 2002 (exhibit 1). Of the 437 PCP mentions in the first half of 2002, 70 percent were for patients who were male and 79 percent were for those who were Black. One-half were for patients age 18–25, nearly 23 percent were for those age 26–34, and 20 percent were for those age 35 and older. Twenty-six (6 percent) represented patients age 12–17. Sixty-two percent were multidrug episodes. In nearly 40 percent of the mentions, patients cited psychic effects as the reason for using the drug, while dependence and suicide represented 18 and 11 percent of the motives, respectively. The most frequently cited reasons for contacting the ED were unexpected reaction to the drug (38 percent), overdose (19 percent), and “other” (19 percent). There were 11 PCP-related deaths in the metropolitan area in 2001—3 in the District and 8 in Prince George’s County, Maryland.

The National Poison Control Center reports an increase in reported PCP exposures in the District from 4 in 2000 to 38 in 2002. Although the numbers remain low, the volume is now at a level last seen in 1988. As of June 12, there were 11 reported exposures in 2003.

In 2002, PCP accounted for 3.7 percent of treatment admissions, an increase from 2001 (1.8 percent) and 2000 (0.7 percent) (exhibit 3). Of the 205 primary PCP admissions in 2002, more than three-quarters were male, and nearly all were Black (exhibit 4). Most were age 18–25 (60.5 percent) or 26–35 (28.8 percent).

The 2002 ADAM data indicate that approximately 10 percent of adult arrestees tested PCP positive (exhibit 5). Data from the D.C. Pretrial Services Agency show the rise in PCP use from the low single digits in the late 1990s to current levels in the mid-teens (exhibit 6). Most recent estimates show 14.2 percent of adult arrestees screened for illicit drugs in 2002 tested positive for PCP, up dramatically from 2 percent in 1998. For the first 3 months of 2003, 13.8 percent tested PCP positive. A similar increase in PCP positives is apparent among juvenile arrestees. Trend data from 1987 to the present indicate that PCP in the juvenile arrestee population has mirrored that of the adult arrestee population (exhibit 7), with spikes in the late 1980s, mid-1990s, and again in the current decade.

In the past year, there have been many media reports on PCP in the Washington, DC, area that trace the increase in PCP use. While PCP was most often mentioned in the crime reports of local newspapers with little fanfare, by the end of 2002 the media began to focus on PCP and its connection to violence and homicides in the metropolitan area. Articles published in the *Washington Post* and the *Washington Times* between summer 2002 and winter 2003 document the changing perception of PCP, from a relatively low threat that may contribute to violent behavior to a “skyrocketing” threat that (in combination with other factors) caused an apparent increase in the District’s homicide rate last year. These articles also documented a large seizure of PCP in Baltimore, as well as several bizarre or violent incidents in which the perpetrator allegedly used PCP.

The DEA offered two possible explanations for the increase in the use and availability of PCP in the District and neighboring counties:

- Use cycles—Younger users see older users “get messed up” by PCP and stay away from it, but the word of mouth about PCP has faded.
- Dealing cycles—During the last upsurge in PCP use in the late 1980s and early 1990s, a number of dealers were arrested in DC. They have now served their “10 years” and are back on the street. The DEA is investigating to see if any of them have gotten back into the business.

Other Drugs

Abuse of stimulants, such as amphetamines and methamphetamine, does not appear to be a major problem in the District. ED rates for these drugs in the first half of 2002 were either zero (amphetamines) or not estimated because of standard error

(methamphetamine). No deaths involving amphetamines or methamphetamine were reported from 1997 to 2001, and no adult arrestees in the ADAM program tested methamphetamine positive. NDIC reports that only limited amounts of methamphetamine are available in the District.

Abuse of club drugs, such as MDMA, gamma hydroxybutyrate (GHB), and ketamine, is also relatively low in the District. MDMA is the most readily available and frequently abused “club drug,” selling for \$18–\$25 per tablet in the fourth quarter of 2002, according to the DEA Washington Division. The Washington/Baltimore HIDTA estimated a slightly lower range for the cost per dosage unit: \$10–\$20. MDMA is most frequently used and distributed by teens and young adults at raves and nightclubs. Recent reports from the MPD, however, indicate that it is also sold on the street mixed into liquid PCP. MDMA is typically driven to the District from New York, Philadelphia, Orlando, and Miami by Dominican and Asian trafficking organizations. The MPD reports that area college students have produced MDMA on campus, but that use appears to be leveling off.

The use and availability of GHB and its analogs is relatively low and generally confined to high school and college students who get it from local independent dealers and sell it at raves and dance parties. In the first half of 2002, there were an estimated 24 ED mentions of MDMA but no mentions of GHB or ketamine. No deaths involving club drugs were reported in the DAWN mortality data from 1997 to 2001.

Mentions of benzodiazepines are reported in the DAWN ED and mortality reports. In the first half of 2002, the estimated rate of benzodiazepine ED mentions in the District was 11 per 100,000 (exhibit 1), with a total of 457 mentions. One death in 2001 was attributed solely to benzodiazepines (exhibit 2); however, in the 1997–2000 time period, mentions of benzodiazepines in the mortality data ranged between 10 and 13.

Alcohol abuse is a serious problem in the District, as in most areas of the Nation. Preliminary DAWN data for the first half of 2002 show 1,565 ED mentions of alcohol-in-combination with other drugs and a rate of 37 mentions per 100,000 population. DAWN mortality data show a decrease in mentions of deaths involving alcohol-in-combination with other drugs—from 29 in 1997 to 17 in 2001, with a peak of 44 in 1998 (exhibit 2). In 2002, primary alcohol admissions accounted for nearly 19 percent of all treatment admissions, with slight declines from 2000 and 2001 (exhibit 3). In the 2002 ADAM data, 18.7 percent of the male arrestees reported heavy drinking in the 30 days prior to arrest,

and 31.1 percent reported binge drinking in the past-30-day period. Nearly one-fifth were diagnosed as being at risk for alcohol dependence. Among female arrestees, 12.2 percent reported heavy drinking in the

past 30 days, and 36.0 percent admitted to binge drinking. One-quarter of the women were considered to be at risk for alcohol dependence.

For inquiries concerning this report, please contact Eric Wish, Ph.D., Director, Center for Substance Abuse Research, University of Maryland, 4321 Hartwick Road, Suite 501, College Park, MD 20740, Phone: 301-403-8329, Fax: 301-403-8342, E-mail: <ewish@cesar.umd.edu>.

Exhibit 1. Preliminary Rates of DAWN ED Mentions per 100,000 Population for Selected Drugs in Washington, DC: January 2001–June 2002

Drug	Jan–Jun 2001	Jul–Dec 2001	Jan–Jun 2002	Percent Change ¹	
				2H 2001, 1H 2002	1H 2001, 1H 2002
Cocaine	35	35	29		
Heroin	25	21	16	-22.1	-35.4
Narcotic Analgesics/Combinations	13	14	11		
Marijuana	26	25	24		
PCP	5	7	10		99.8
Benzodiazepines	10	11	11		

¹ These columns represent statistically significant (p<0.05) increases and decreases between estimates for the time periods noted.

SOURCE: DAWN, OAS, SAMHSA

Exhibit 2. Drug-Related Deaths in Washington, DC: 1997–2001

Drug	1997	1998	1999	2000	2001	Single-Drug Deaths, 2001
Alcohol-in-Combination	29	44	37	26	17	–
Cocaine	33	63	64	54	42	18
Heroin/Morphine	41	53	41	36	15	4
Marijuana	–	–	–	1	1	–
Amphetamines	–	–	–	1	–	–
Methamphetamine	–	1	–	1	–	–
Club Drugs ¹	–	–	–	–	–	–
Hallucinogens ²	1	–	2	1	3	1
Inhalants	–	–	–	–	–	–
Narcotic Analgesics ³	6	22	15	20	6	–
Other Analgesics	2	3	3	2	1	–
Benzodiazepines	13	13	11	10	1	1
Antidepressants	4	14	11	4	1	–
All Other ³	7	30	18	10	1	–
Total Drug Deaths	79	145	121	100	53	24
Total Drug Mentions	136	243	202	166	88	–
Total Deaths Certified	1,414	1,607	1,763	1,751	1,582	–

¹ Includes ecstasy (MDMA), ketamine, GHB-GBL, and Rohypnol.

² Includes PCP, LSD, and miscellaneous hallucinogens.

³ Not tabulated above.

SOURCES: DAWN, OAS, SAMHSA

Exhibit 3. Treatment Admissions in Washington, DC, by Percent: 2000–2002

Drug	2000	2001	2002	Percentage Point Change 2001–2002
Total Admissions (N)	(6,025)	(5,755)	(5,517)	
Powder Cocaine	7.4	8.2	13.0	4.8
Crack Cocaine	27.0	25.2	21.0	-4.2
Heroin	35.2	37.9	38.1	0.2
Other Opiates	0.2	0.4	0.3	-0.1
Marijuana	8.0	6.4	4.7	-1.7
PCP	0.7	1.8	3.7	1.9
Alcohol	21.1	19.3	18.7	-0.6
Other Drugs	0.4	0.8	0.5	-0.3

SOURCE: TEDS, SAMHSA

Exhibit 4. Demographic Characteristics of Treatment Admissions in Washington, DC, by Selected Drugs and Percent: 2002¹

Drug	Powder Cocaine	Crack Cocaine	Heroin	Marijuana	PCP
(N=)	(717)	(1,160)	(2,104)	(262)	(205)
Gender					
Male	64.6	61.1	70.4	75.2	75.6
Female	35.4	38.9	29.6	24.8	24.4
Race/Ethnicity					
Black	93.7	96.6	96.4	84.7	99.5
White	2.1	1.5	1.9	3.4	0.0
Other ²	4.2	1.9	1.7	11.9	0.5
Age Group					
17 and younger	0.4	0.3	0.0	9.2	0.5
18–25	3.7	3.0	1.8	45.0	60.5
26–35	22.4	25.2	9.1	27.9	28.8
36–45	51.8	54.2	47.8	14.9	8.3
46–55	18.8	15.2	37.1	1.9	1.0
56 and older	2.6	2.1	4.0	1.2	1.0

¹ Columns less than 100 percent exclude “unknown.”

² Primarily Hispanic or Latino.

SOURCE: TEDS, SAMHSA

Exhibit 5. Percentages of Adult Arrestees in Washington, DC, Testing Positive for Four Drugs: 2002–2003

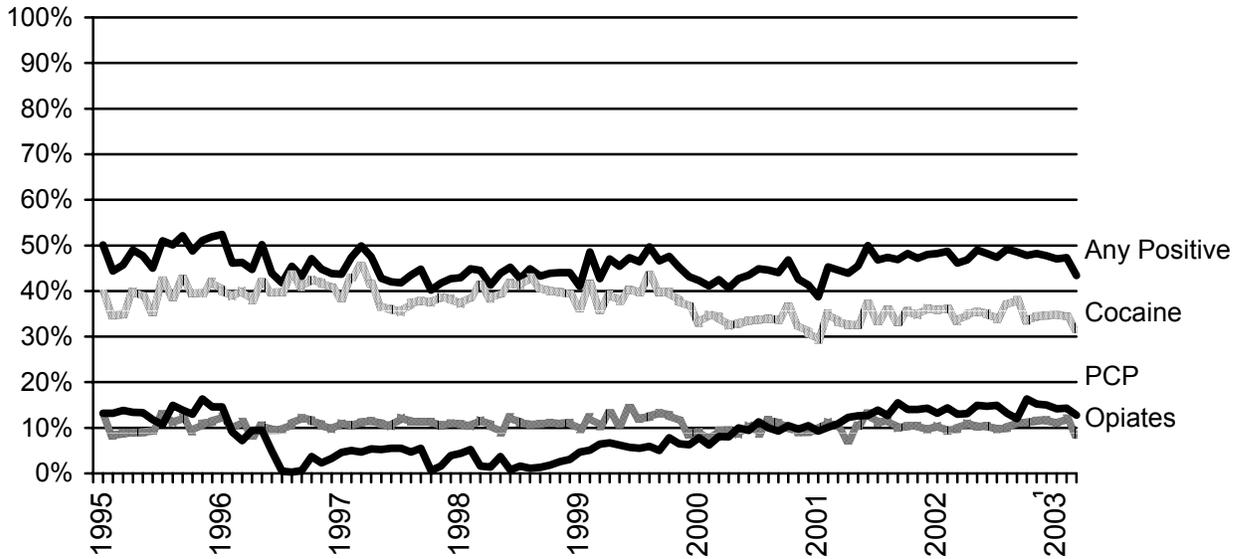
Drug	ADAM Males 2002 ¹	ADAM Females 2002 ¹	DC Pretrial 2002	DC Pretrial 2003 ²
(N=)	(255)	(54)	(17,952)	(4,056)
Marijuana	40.7	33.3	Not Tested	Not Tested
Cocaine	27.5	38.5	35.2	33.7
PCP	10.3	10.2	14.2	13.8
Opiates	9.5	17.9	10.5	10.4

¹ Male ADAM data are weighted, while female data are unweighted.

² January–March 2003.

SOURCE: ADAM, NIJ

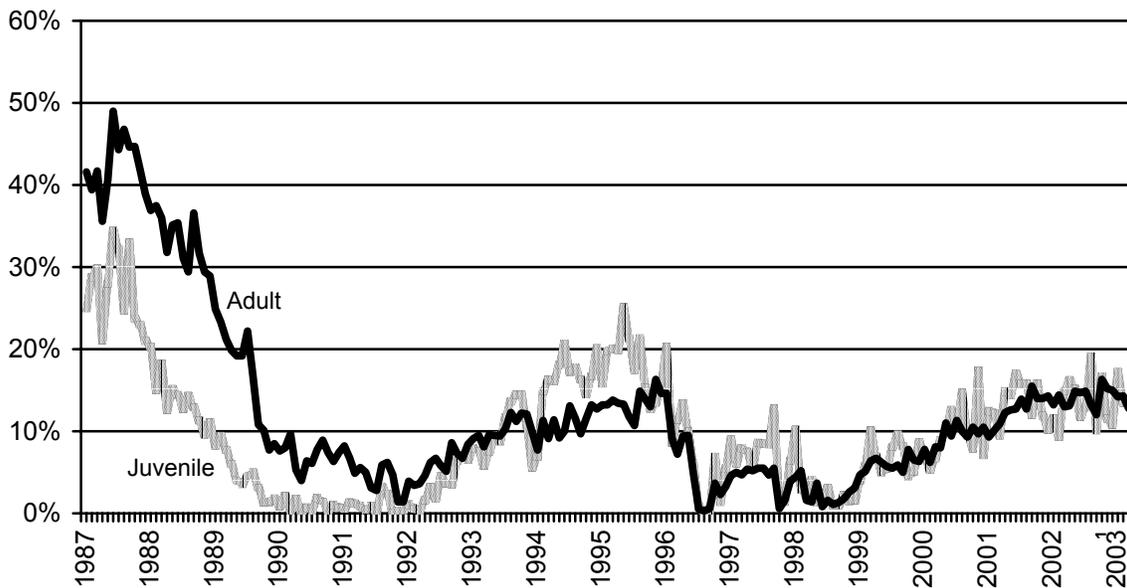
Exhibit 6. Percentage of Washington, DC, Adult Arrestees Testing Positive for Any Drug, Cocaine, PCP, and Opiates: Monthly 1995–2003



¹ 2003 data through March.

SOURCE: Adapted by CESAR from data from the District of Columbia Pretrial Services Agency.

Exhibit 7. Percentage of Washington, DC, Adult and Juvenile Arrestees Testing Positive for PCP: Monthly 1987–2003



¹ 2003 data through March.

SOURCE: Adapted by CESAR from data from the District of Columbia Pretrial Services Agency.

Special Presentations:

Panel on Methadone-Associated Mortality

Methadone-Associated Mortality

Alan Trachtenberg, M.D., M.P.H.¹

BACKGROUND

Dr. Trachtenberg began his presentation by providing some background information about his office—the Division of Pharmacologic Therapies (DPT), Center for Substance Abuse Treatment (CSAT), Substance Abuse and Mental Health Services Administration (SAMHSA). DPT is responsible for the regulation of the opioid treatment system, a responsibility assumed from the Federal Food and Drug Administration (FDA) in 2001.

Currently, there are more than 200,000 patients being treated in opioid treatment programs (OTPs), formerly called methadone maintenance programs. In addition to methadone, levo-alpha-acetylmethadyl (LAAM) and buprenorphine are being dispensed and administered in opioid treatment programs.

The DPT is also responsible for administering the Drug Addiction Treatment Act of 2000, which allows physicians to prescribe approved Schedule III, IV, and V “narcotics” (which at this time include only buprenorphine products) for the treatment of opioid addiction.

Efforts are underway to provide medical examiners with the capability to test for buprenorphine. The National Institute on Drug Abuse (NIDA) has funded two Small Business Innovative Research (SBIR) grants to develop immunologic tests for buprenorphine. The goal is to have this testing capability in the field within the next 2 years.

METHADONE: EFFECTS, TREATMENT, AND MORTALITY

Methadone Effects and Treatment

If used appropriately, methadone can be an excellent drug for treating chronic pain. One of the two methadone isomers is an NMDA receptor antagonist which decreases the development of tolerance for opioids, the main mechanism for methadone's effectiveness in the treatment of heroin addiction. Methadone has a number of important analgesic properties. However, it is essential that the prescriber understand the drug's kinetics.

Physician education is very important in prescribing methadone. A physician can go to the medical guides/charts to look up “equianalgesic” dosages and be easily misled, because the current dose equivalents charts are for acute doses. Because of the accumulation of methadone and the differential tolerance from other opioids, the dose equivalent charts can be off by a factor of 10.

It is difficult to determine what constitutes a fatal methadone level. Opioid tolerance differs, based on dosage, how long it has been used, a person's other health conditions, natural diseases, and various circumstances that can increase or decrease susceptibility, respiratory depression, and death by opioid intoxication. Other factors are associated with cardiac arrhythmias. There are also many comedications, including antipsychotics, which have been associated with QT prolongations and ventricular arrhythmia that can degenerate and lead to fatal arrhythmia. Finally, although methadone has been increasingly identified in deaths, it is generally not clear how the drug contributed to the deaths, since other substances were also likely to be present.

Methadone-Related Mortality

Recently, there have been a number of newspaper stories on increases in methadone deaths. The Centers for Disease Control and Prevention (CDC) has been tracking these occurrences in some States through its Epidemic Intelligence Service (EIS). What is new regarding methadone-associated deaths is the fact that there are more being reported from rural areas. Many of these deaths seem to be associated with 5–10-milligram tablets primarily used to treat pain.

More physicians may be prescribing methadone because it is a long-acting medication and it is less costly than other pain medications. However, they may be prescribing it inappropriately, since it differs from other long-acting opioid analgesics. For example, OxyContin is long-acting because it is marketed in the controlled-release tablet. Methadone is long-lasting because of its slow metabolism and kinetics. The dose that it takes to fully relieve pain for 4–6 hours may not be appropriate to initially prescribe for use four times a day. If a patient is not otherwise

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opioid-tolerant, that dosage can accumulate in the patient's body in the first few days of use and reach a fatal level. So, in prescribing methadone, it is essential for the physician to be knowledgeable about kinetics and their inter-individual variability, which is especially great with methadone.

In the past 2–3 years, there have been “outbreaks” in the popular press of methadone-associated deaths being reported from rural, or at least non-inner-city areas, such as Florida, Maine, New Mexico, North Carolina, Nevada, and Virginia. There were suggestions that methadone was being used as a substitute for other prescription analgesics for several possible reasons. Negative press about the diversion of OxyContin may have made physicians more reluctant to prescribe that popular drug for pain. Methadone is also much less expensive than controlled release opiate products such as OxyContin.

One non-inner-city “outbreak” of drug-associated deaths in North Carolina, analyzed for the period from 1997 to 2001, was reviewed by the CDC's EIS in coordination with the State's injury epidemiology program. (All poisonings are considered injuries, as they are pathology resulting from external agents). During that period, there were 2,410 drug-poisoning-related deaths. Fifty-five percent were classified as unintentional overdoses. In a recently updated analysis of this data, the number of deaths associated with methadone increased fivefold from 1997 through 2001, with a total of 198 cases during the 5 years. The source of methadone was documented in one-half of the cases, and private-physician-prescribed methadone was implicated in three-quarters of those, with the remainder obtained illicitly (e.g., prescribed to a relative/friend, obtained at a party, or “street purchase”). Only 4 percent of decedents were participants in an OTP at time of death, and those programs were considered an unlikely source of the methadone involved in any fatalities. During the time period examined, there had been a fourfold increase in methadone sold through retail outlets (pharmacies or hospitals) in the State, while the amount distributed via OTPs increased only 2.6-fold.

Seventy-one percent of the deaths were attributed to a single drug (rather than multiple drugs in a given decedent); the drugs included cocaine, heroin, oxycodone, hydrocodone, morphine, and methadone. In reviewing the medical examiner reports and death scene investigation information, it was determined that more than 20 percent of the deaths involved methadone tablets prescribed for pain, slightly less than 20 percent involved illicit methadone tablets, and only one death was associated with liquid

methadone (the only form of methadone being used by OTPs in North Carolina).

In the United States, retail (pharmacy) distribution of methadone increased by a factor of 4 from 1997 to 2000, rising from 397 to 1,600 kilograms (exhibit 1). From 1997 to 2001, the retail distribution of methadone increased from approximately 31 to 168 kilograms in Maine, from 25 to 103 kilograms in North Carolina, and from 3 to nearly 20 kilograms in Maine. Most pharmacy methadone is in tablet form, while most of the methadone dispensed by methadone maintenance clinics is in liquid form.

Methadone treatment regulations were completely rewritten in 2001. One of the many changes included allowing more take-home privileges for patients who had been successfully maintained with abstinence from illicit drugs for several years. OTP rule changes do not seem to have much to do with the increases in methadone-associated deaths, primarily because States and programs have been slow to implement the changes allowed under the new regulations, and a miniscule number of patients have yet been able to benefit from the extended take-homes now allowed later in treatment.

Toxicologists reported that many decedents found with methadone were apparently first-time users who had not built up a tolerance to the drug. Generally, more than one drug was identified in these cases. Toxicologists and medical examiners also report that overdose deaths are more common among drug-naïve and younger users.

The SAMHSA/CSAT/DPT reviewed the FDA MedWatch reports from 1970 through 2002. MedWatch is a passive surveillance system based on voluntary reporting. In the MedWatch data, there were many deaths associated with methadone in the mid-1970s (101 in 1974, 197 in 1975, 82 in 1976, and 106 in 1977) (exhibit 2). After declining to only a few deaths per year being reported, there was another upsurge in methadone-associated death reports in 1982 (73), 1983 (91), and 1984 (89), followed by a steep decline from 1987 to 1999. In 2000, reports of deaths increased to 19; they surged to 61 and 123 in 2001 and 2002, respectively.

There is clearly a need for improved and active surveillance, as well as a need for consensus on case definitions of the different causative or bystander roles that opioids may play in drug-induced and drug-related deaths. The new *International Classification of Disease, 10th Edition* (ICD-10) codes now (for the first time) include codes related to methadone-specific causes of death. This will facilitate the utility of

death certificate data to specify when methadone is the opioid involved in a death. However, death certificate data will still not be anywhere nearly as reliable as direct review of autopsy and toxicology reports, until standardized case definitions are being used to translate the results of those reports into the codes placed on the death certificates.

PREVALENCE OF OPIOID PAIN RELIEVERS

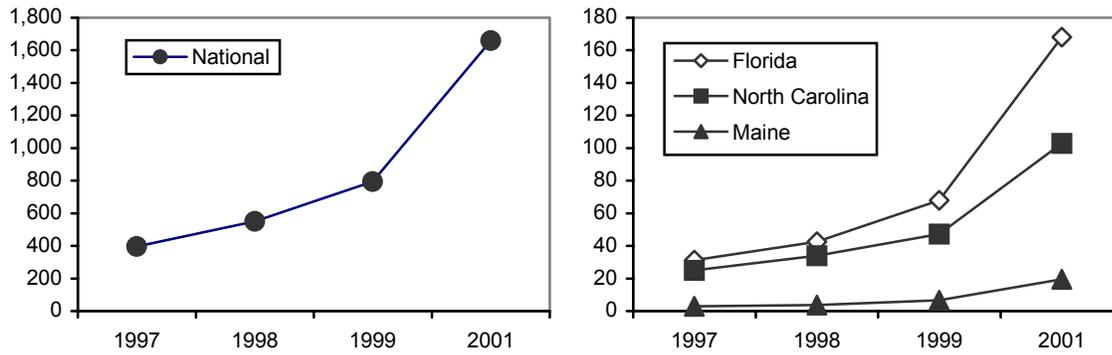
Data from the National Household Survey on Drug Abuse (NHSDA) show that, from 1990 to 2000, there was a sharp increase in the estimated numbers of persons age 12 and older who used opioid pain relievers nonmedically. These drugs are used nonmedically (abused) more than other psychotropic drugs such as tranquilizers, stimulants, and sedatives.

In 2000, it was estimated that 6,466,000 Americans age 12 or older had used pain relievers nonmedically in the past year, compared with 2,731,000 for stimulants and 611,000 for sedatives. Estimates were higher for pain relievers than for past-year use of illicit drugs such as powder cocaine (3,328,000), lysergic acid diethylamide (1,749,000), crack cocaine (721,000), and heroin (308,000).

The estimated numbers of first-time users of pain relievers for non-medical purposes increased dramatically from 1965 to 1999 (exhibit 3), according to the NHSDA. The survey shows that there were 1,469,000 new non-medical users in 1999, compared with 942,000 in 1995 and 576,000 in 1990. The mean age of these first users of pain relievers in 1999 was 19.5.

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Exhibit 1. Retail (Pharmacy) Distribution of Methadone, by Kilogram: 1997–2001



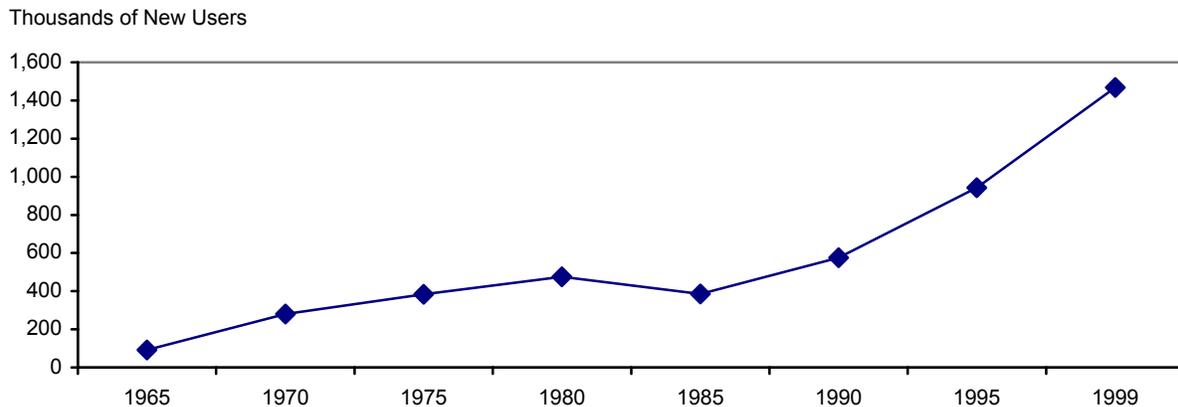
SOURCE: DEA Automation of Reports and Consolidated Orders System (ARCOS-2)

Exhibit 2. Numbers of Methadone-Associated Deaths Reported to FDA MedWatch, by Year: 1970–2002

Year	Number	Year	Number	Year	Number	Year	Number
1970	2	1980	1	1990	2	2000	19
1971	2	1981	2	1991	2	2001	61
1972	6	1982	73	1992	1	2002	123
1973	30	1983	91	1993	4		
1974	101	1984	89	1994	3		
1975	197	1985	20	1995	1		
1976	82	1986	2	1996	10		
1977	106	1987	2	1997	7		
1978	45	1988	2	1998	14		
1979	0	1989	4	1999	10		

SOURCE: Food and Drug Administration

Exhibit 3. Annual Numbers (in Thousands) of New, Non-Medical Users: 1965–1999



SOURCE: National Household Survey on Drug Abuse, SAMHSA

Methadone-Related Deaths in Eight Metropolitan Areas: 1997–2001

Elizabeth H. Crane, Ph.D., M.P.H.¹

Methadone is a narcotic (opioid) analgesic used to treat chronic pain and opiate addiction. Recent accounts of a surge in deaths involving methadone have renewed concerns about the safety of methadone and potential for its abuse. While the Drug Abuse Warning Network (DAWN) medical examiner (ME) data cannot be used to generate national estimates for the total number of drug abuse-related deaths that involved methadone, it is possible to examine these deaths on a metropolitan-level basis.² In this paper, trends in deaths involving methadone in eight metropolitan areas that participate in DAWN are examined. To put these deaths into context, estimates of methadone-related emergency department (ED) visits will also be discussed.

To compare drug abuse-related deaths and emergency department visits within a single metropolitan area, the following three criteria must be met:

- The same geographic area (i.e., counties) is covered by the ME and ED components.
- All the medical examiner jurisdictions participated in DAWN and submitted data each year from 1997 to 2001.³
- DAWN generated ED estimates for the metropolitan area from 1997 to 2001.

Eight metropolitan areas—Baltimore, Boston, Los Angeles, Miami, Phoenix, San Diego, San Francisco and Seattle—fulfilled these criteria (exhibit 1), and are discussed in this paper.

METHADONE-RELATED DEATHS IN EIGHT METROPOLITAN AREAS: 1997–2001

For each of the eight metropolitan areas, drug abuse-related mortality data for 1997 to 2001 were reviewed to identify deaths in which methadone was involved. Suicide accounted for only a small proportion of deaths in each metropolitan area. The deaths were then separated for analysis, based on

whether drugs other than methadone were involved. The methadone-related deaths were also analyzed to identify other drugs reported. Trends in methadone-related ED visits were generated for each metropolitan area, and rates of methadone-related deaths and ED visits were calculated for each metropolitan area.

Trends

In each of the eight metropolitan areas, total drug abuse-related deaths involving methadone increased from 1997 to 2001, but, in many cases, the increase was small (exhibit 2). However, when methadone-only deaths are separated from methadone polydrug deaths, a different picture emerges (exhibit 3). There were few methadone-only deaths, and this trend was fairly stable in all eight metropolitan areas. Seattle showed the greatest increase (from 1 in 1997 to 10 in 2001).

Most drug abuse-related deaths involve more than one drug, and this held true for the methadone-related deaths also. In each metropolitan area, methadone-only deaths were outnumbered by deaths in which other drugs were reported with methadone. In several metropolitan areas, the number of methadone polydrug deaths dipped in 1999 (Baltimore, Boston, Miami, San Francisco, Seattle) only to rebound in subsequent years.

Drug Combinations in Methadone-Related Deaths

The drugs most frequently mentioned in non-suicide methadone-related deaths were from the following categories:

- Alcohol
- Illicit drugs (cocaine, heroin/morphine,⁴ etc.)
- Narcotic analgesics
- Antidepressants
- Benzodiazepines
- Other psychotherapeutic drugs

¹ The author is affiliated with the Drug Abuse Warning Network, OAS, SAMHSA.

² For more information about the DAWN system, see Appendix A at the conclusion of this paper.

³ Los Angeles is the sole exception. Because Los Angeles County did not submit mortality data for 2001, only the years 1997 to 2000 will be described.

⁴ Because heroin metabolizes to morphine, and not all participating medical examiners/coroners are able to test for the heroin metabolite, DAWN groups heroin and morphine together in the mortality data.

Specific examples of combinations with methadone included the following:

- Cocaine, heroin/morphine
- Alcohol, cocaine
- Diphenhydramine, heroin/morphine
- Alcohol, chlorpheniramine, heroin/morphine
- Benzotropine, fluoxetine, promethazine
- Cocaine, narcotic analgesics-NOS⁵
- Benzodiazepines-NOS
- Clonazepam
- Alcohol, codeine, heroin/morphine

None of these combinations accounted for more than a handful of deaths, indicating that the polydrug deaths were not the result of a single lethal combination.

METHADONE IN THE ED VISITS

While DAWN cannot provide a national measure of drug abuse-related deaths, as noted earlier, national estimates of drug abuse-related ED visits can be generated. These provide insights into another consequence of drug abuse. From 1994 to 2001, the total number of ED visits involving methadone increased 230 percent. More recently, from 1999 to 2001, total methadone-related ED visits nearly doubled. Exhibit 4 shows the national trends for methadone-only, methadone polydrug, and total methadone-related ED visits. Both methadone-only and methadone polydrug cases showed an upward trend from 1999 to 2001, but the total methadone polydrug cases increased more sharply.

This increase in methadone ED mentions was reflected in most, but not all, of the eight metropolitan areas. To get a better sense of the role of methadone in ED visits, trends of methadone-only ED visits can be compared with trends in ED visits where methadone was reported with other drugs (exhibit 5). These trends can then be compared to the mortality trends to provide insights into the relationship between methadone-related ED visits and deaths, as in the discussion that follows.

Baltimore: Methadone-only deaths and ED visits appeared to be stable from 1997 to 2001. There was an increase in the total number of methadone-related ED visits in Baltimore from 1994 to 2001, which appeared to be driven by the methadone polydrug visits. This increase was paralleled by an increase in methadone polydrug deaths.

Boston: Methadone-only deaths were stable; methadone polydrug deaths totaled 7 in 1997 and dipped to

zero in 1999 and 2000, but rose to 10 in 2001. Total methadone-related ED visits in Boston were stable from 1994 to 2001; this was reflected in the trends for single-drug and polydrug visits. The polydrug trend line appears to have dipped in intervening years, however.

Los Angeles: Methadone-only deaths were rare in Los Angeles, but methadone polydrug deaths increased from 23 in 1997 to 74 in 1999, then dropped to 44 in 2000. ED visits involving methadone increased from 1994 to 2001, including an increase in recent years, and reached 228 in 2001. The methadone-only and polydrug ED visits appear to have a parallel increase from 2000 to 2001. It is not possible to ascertain if this was reflected in methadone deaths because 2001 data were not available for Los Angeles.

Miami: Methadone figures for Miami were low. There were no methadone-only deaths in Miami from 1997 to 2001, and methadone polydrug deaths peaked at five in 2001. Total ED visits with methadone increased from 1994 to 2001 and from 1999 to 2001; in 2000, there were 13 polydrug ED visits.

Phoenix: Methadone-only deaths were rare in Phoenix, but methadone polydrug deaths rose from 16 in 1997 to 39 in 2001, peaking at 44 in 2000. Total methadone-related ED visits increased more than 1,000 percent from 1994 to 2001. Furthermore, the trends for methadone-only and methadone polydrug ED visits were nearly identical. In 2001, there were an estimated 135 methadone-only ED visits and 157 methadone polydrug visits.

San Diego: The methadone-associated deaths were stable in San Diego, with 3 or fewer methadone-only deaths per year, and polydrug deaths ranging from 7 to 12. As in Phoenix, however, the trends for methadone-only ED visits and methadone polydrug visits were very similar and actually converged in 1998. In 2001, there were 92 methadone-only ED visits and 75 methadone polydrug visits.

San Francisco: There were very few methadone-only deaths, and no clear trend for methadone polydrug deaths. Total methadone-related ED visits in San Francisco increased from 1994 to 2001, and also from 2000 to 2001. The increase appears to have been driven by methadone-only ED visits.

Seattle: Methadone-related deaths in Seattle increased from 1997 to 2001. There was one methadone-only death in 1997 and 10 in 2001. Methadone polydrug deaths increased from 15 to 27 during that time period. The change in ED visits was more dramatic, with visits increasing 400 percent from 1994

⁵ NOS=Not otherwise specified.

to 2001, including an increase from 1999 to 2001. The increase appears to be driven primarily by the methadone polydrug ED visits, which rose from 100 in 1994 to 414 in 2001.

In the western States, there is evidence of an increase in methadone-related ED visits, which appears to be driven by polydrug visits. However, this was not accompanied by an equivalent increase in methadone-related deaths.

Through the use of rates, it is possible to compare metropolitan areas with different population sizes. In the 8 metropolitan areas, methadone-related death rates ranged from 0.2 per 100,000 population in Miami to 2.3 in Baltimore (exhibit 6). The variability in methadone-related ED visits is much greater, from 1 per 100,000 population in Miami to 28 per 100,000 in Seattle. Some of this variability may be a reflection of health system differences that affect the data submitted to DAWN, not population differences.

The relationship between the methadone-related death and ED rates within metropolitan areas also varied. The greatest disparity was Seattle, with a death rate of 1.7 per 100,000 and an ED visit rate of 28.0; Miami had the smallest disparity, with 0.2 per 100,000 for deaths and 1.0 per 100,000 for ED visits. These findings suggest that methadone-related ED visits are not necessarily good predictors of methadone-related deaths and vice versa.

Characteristics of Methadone-Related ED Visits

Nationally, the most frequent underlying motive for methadone-related ED visits was dependence (64 percent). Drug-taking for psychic effects accounted for 14 percent of ED visits; although small, this is an increase since 1994. Only a small proportion of the visits were suicide-related.

About 30 percent of methadone-related ED visits in the Nation in 2001 were because of an overdose. For the majority of the eight metropolitan areas, most visits were for reasons other than overdose or seeking detox (exhibit 7). Otherwise, there was no consistent pattern across all eight metropolitan areas.

Abuse of Narcotic Analgesics

In addition to its role in treating opiate addiction, methadone is also used as an analgesic. Therefore, it is useful to look at methadone within the context of abuse of opiate analgesics. While DAWN addresses the morbidity and mortality associated with drug

abuse, it cannot provide insight into the prevalence of drug abuse in the general population. The National Survey on Drug Use and Health (NSDUH, formerly the National Household Survey on Drug Abuse) provides national estimates of the prevalence and incidence of drug abuse, gathered from face-to-face interviews with a representative sample of residents over age 12. NSDUH collects data on the nonmedical use of prescription pain relievers, which primarily consists of opiate analgesics. Estimates from 2001 indicated that approximately 3 million Americans had abused prescription pain killers in the previous month; slightly less than 10 million abused these drugs in the past year, and, in 2001, more than 20 million Americans had ever abused prescription pain relievers (exhibit 8). All of these indicators increased from 2000 to 2001.

The incidence of prescription pain reliever abuse has been increasing since the mid-1980s. By asking respondents when they first used prescription pain relievers for a nonmedical reason, NSDUH researchers were able to calculate annual incidence rates retrospectively. In 1989, approximately one-half a million people first started abusing prescription pain medications (exhibit 9). By 2000, this had increased to 2 million new users each year.

ED visits related to narcotic analgesic abuse have also been rising. Methadone-related ED visits more than doubled from 1994 to 2001 (exhibit 10). Morphine-related visits also doubled, but they were fewer in number. In 1994, oxycodone mentions were comparable to methadone, but increased 350 percent from 1994 to 2001. Since 1994, the most frequently mentioned opiate analgesic in ED visits has been hydrocodone; in 2001, there were approximately twice as many mentions of hydrocodone as methadone. Nearly one-third of the opiate analgesics were recorded as “NOS” in the ED chart without the specific drug name; therefore, it is not possible to determine which drug or drugs is driving that increase. The trends in narcotic analgesic ED visits are not uniform, however. Mentions of meperidine and propoxyphene decreased slightly from 1994 to 2001, while mentions of codeine decreased substantially during that period (exhibit 11).

These DAWN trends show that while methadone is appearing more frequently in ED visits, it is within the context of an overall increase in opiate analgesics-related ED visits. Methadone mentions continue to be outnumbered by oxycodone and hydrocodone, and oxycodone mentions have increased more sharply.

CONSIDERATIONS AND DATA LIMITATIONS

- DAWN data are only as complete and accurate as the ED charts and death investigation records from which they are drawn.
- When more than one drug is involved in a death, assigning causation to a single drug is problematic; the death could have been caused by one drug or the interaction of drugs. Therefore, not all the drugs mentioned in the death necessarily contributed to the death. This applies to ED visits as well.
- Because only one motive is assigned to each death/ED visit, it is possible that some of the drugs were incidental to the drug abuse, for example, a prescription drug taken as directed, or a pain reliever taken for a headache. It is important to keep this information in mind when interpreting the data on methadone-related deaths and ED visits.
- Information about the source of drugs is not available. Therefore, it is not possible to know where and how the methadone was obtained.
- DAWN mortality data are not nationally representative and the findings in this paper should not be extrapolated to other metropolitan areas or the Nation.

CONCLUSIONS

While concerns have been increasing about the safety of methadone, in the eight metropolitan areas reviewed in this report few deaths could be attributed to methadone alone. Nearly all of the deaths involved other drugs. In metropolitan areas where methadone-related deaths increased, this was primarily caused by the methadone polydrug deaths.

At the national level, there was a substantial increase in total ED mentions of methadone from 1994 to

2001. This trend was reflected in a number of the metropolitan areas, but appeared to be driven primarily by methadone polydrug ED visits. In Los Angeles, Phoenix, San Diego, and Seattle, methadone-only ED visits increased parallel to methadone-polydrug visits, although they were fewer. Only in San Francisco, in 2001, did the estimates for methadone-only and methadone polydrug visits converge. However, for these eight metropolitan areas, increases in ED mentions of methadone were not necessarily associated with an increase in methadone-related deaths.

In addition to its role in treating opiate addiction, methadone is a potent opioid analgesic. By viewing methadone within this context, it becomes apparent that the increase in ED mentions of methadone occurs within an overall increase in ED mentions of opiate analgesics, as well as the growing prevalence and incidence of abuse of these drugs.

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Exhibit 1. Metropolitan Areas Where Same Geographic Area Participated in DAWN ED and ME Components: 1997–2001

<p>Baltimore Anne Arundel County Baltimore City Baltimore County Carroll County Harford County Howard County Queen Anne’s County</p> <p>Boston Essex County Middlesex County Norfolk County Plymouth County Suffolk County</p> <p>Los Angeles¹ Los Angeles County</p>	<p>Miami Miami-Dade County</p> <p>Phoenix Maricopa County</p> <p>San Diego San Diego County</p> <p>San Francisco Marin County San Francisco County San Mateo County</p> <p>Seattle King County Snohomish County</p>
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¹ Did not submit data for 2001.

SOURCE: DAWN, OAS, SAMHSA

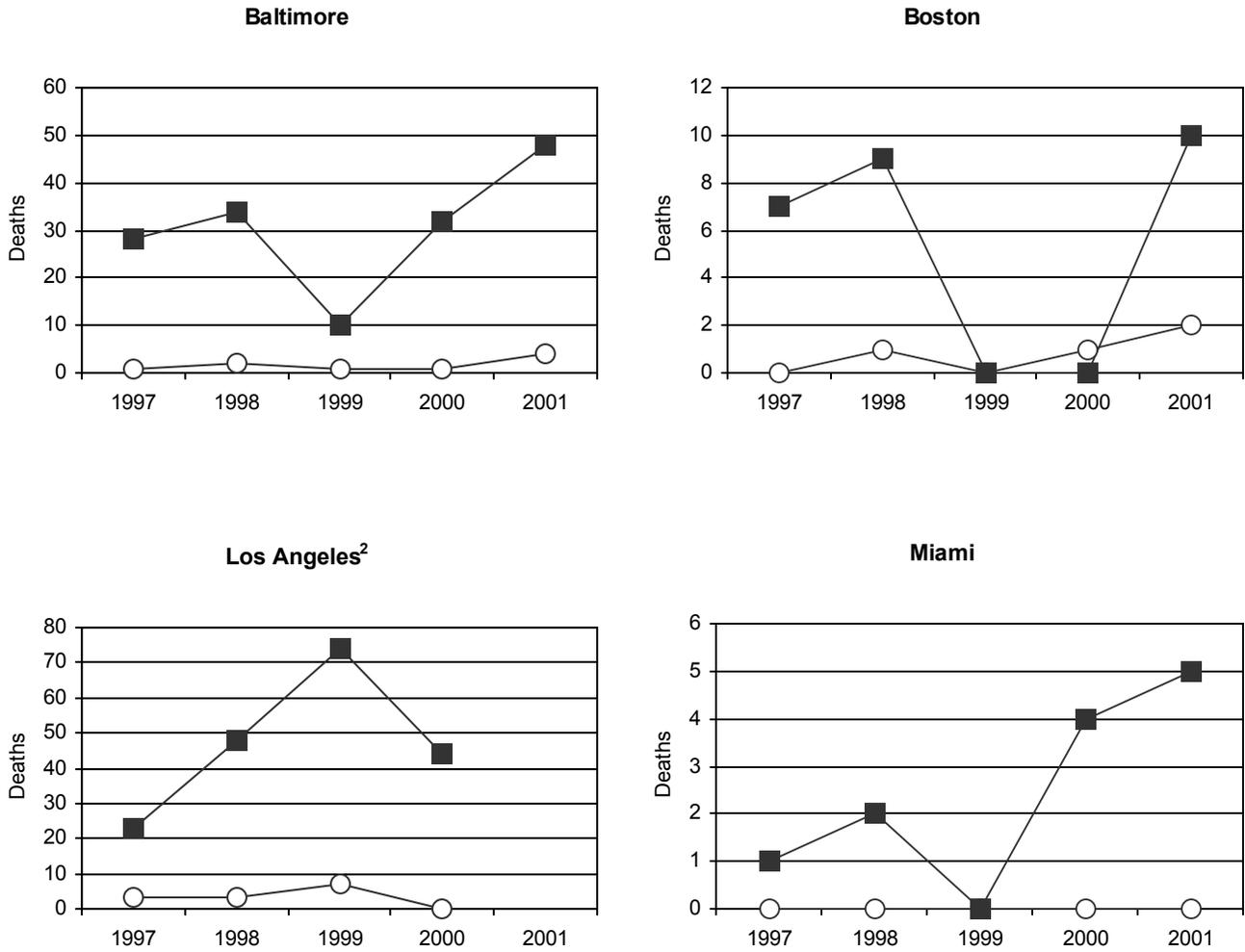
Exhibit 2. Trends in Methadone-Related Deaths, by Metropolitan Area: 1997–2001

Metropolitan area	1997	1998	1999	2000	2001
Baltimore	29	36	11	33	52
Boston	7	10	-	1	12
Los Angeles	26	51	81	44	n.a.
Miami	1	2	-	4	5
Phoenix	16	29	44	47	40
San Diego	11	8	15	11	13
San Francisco	21	32	19	38	32
Seattle	16	25	11	33	37

SOURCE: DAWN mortality data, OAS, SAMHSA

Exhibit 3. Methadone-Only and Methadone Polydrug Deaths, by Metropolitan Area and Year: 1997–2001¹

—○— Methadone-only
 —■— Methadone and any other drug

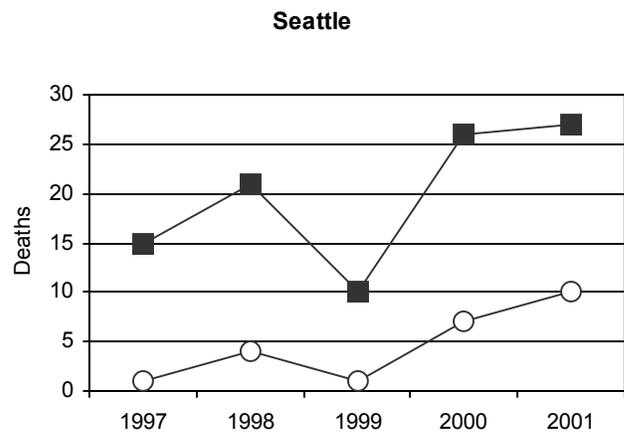
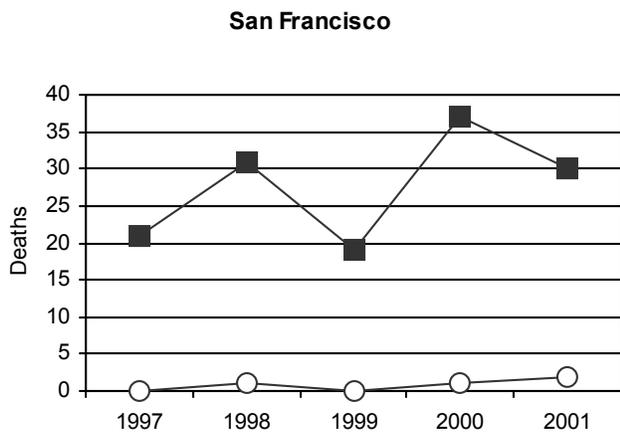
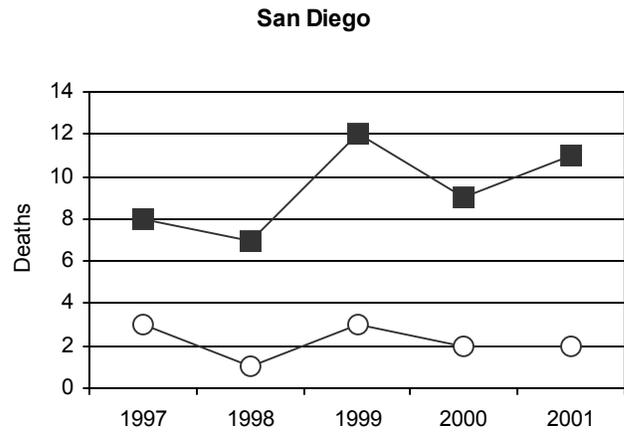
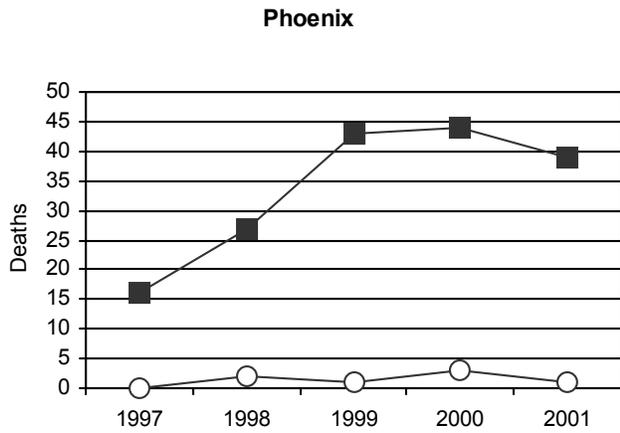


¹ Note that graphs use different scales.

² Data for 2001 were not available.

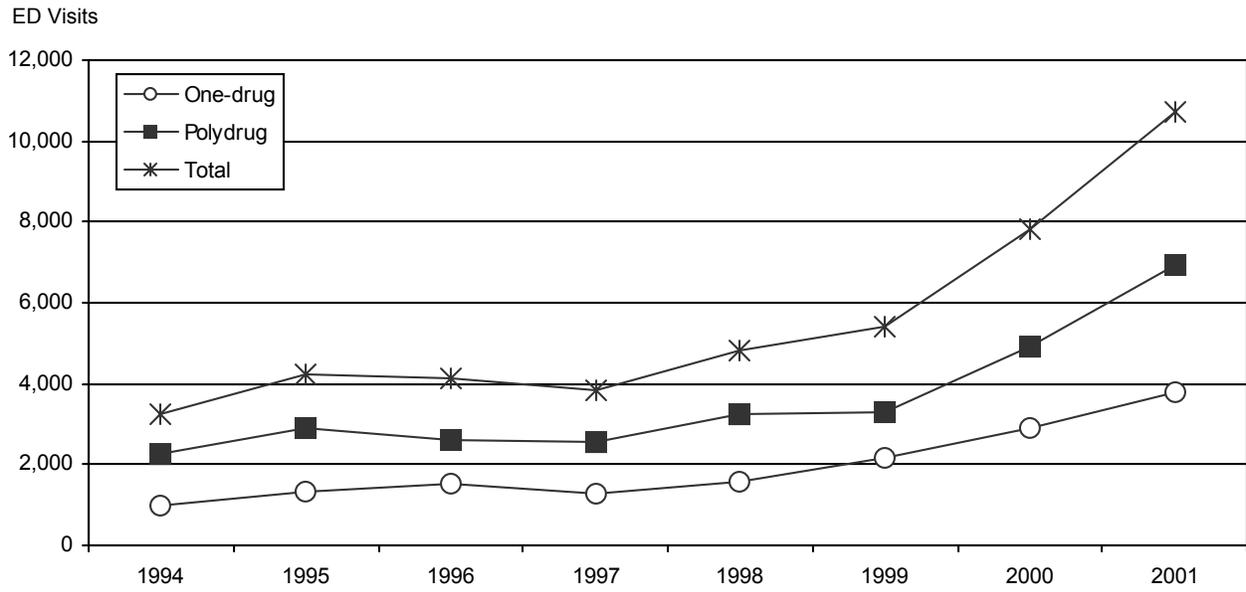
Exhibit 3. (Continued)

—○— Methadone-only
 —■— Methadone and any other drug



SOURCE: DAWN mortality data, OAS, SAMHSA

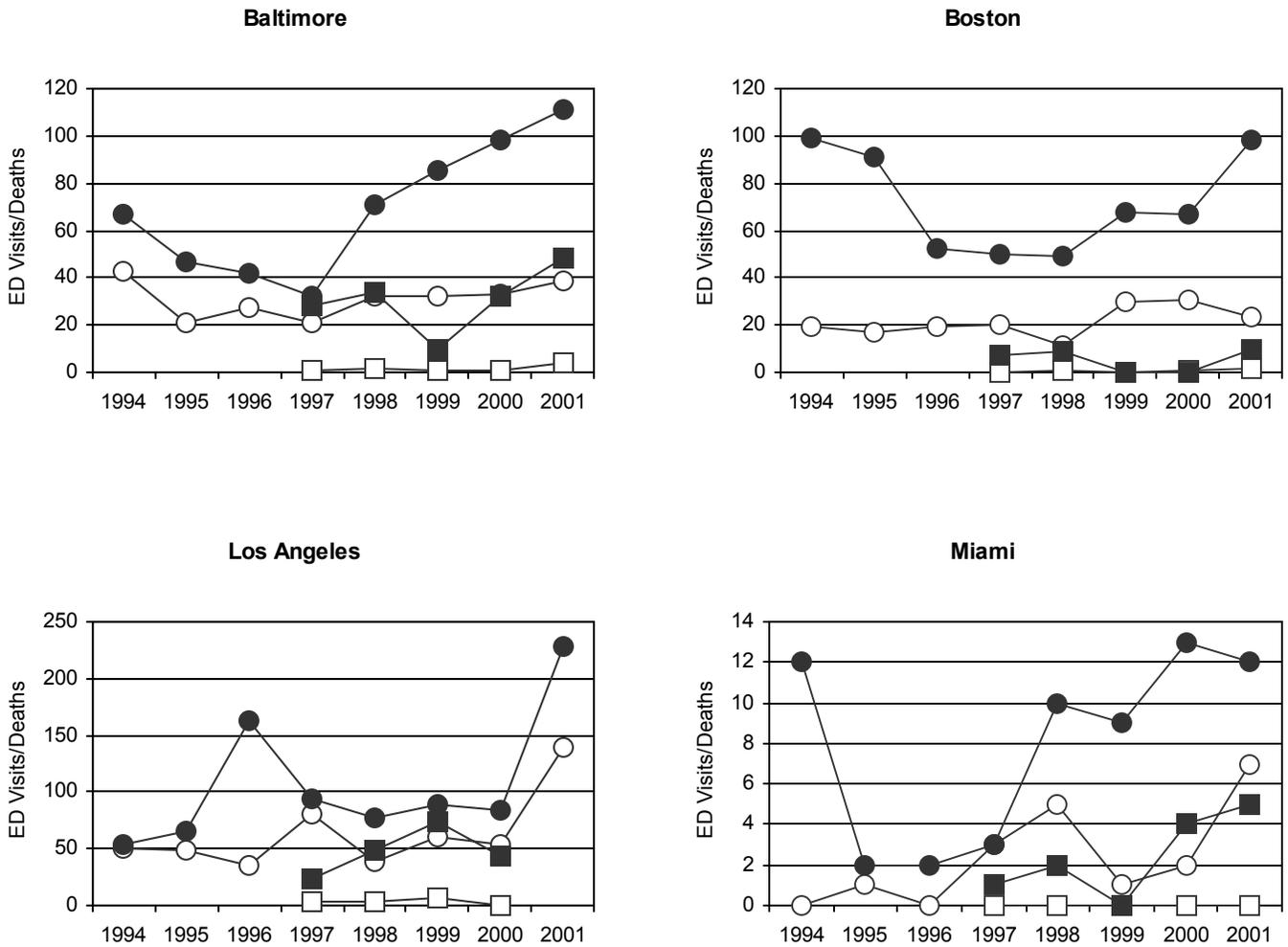
Exhibit 4. Methadone-Related ED Visits in the United States, by Year: 1994–2001



SOURCE: DAWN ED data, OAS, SAMHSA

Exhibit 5. Methadone ED and ME Trends, by Metropolitan Area and Year: 1994–2001¹

- One-drug ED visit
- Polydrug ED visit
- One-drug death
- Polydrug death

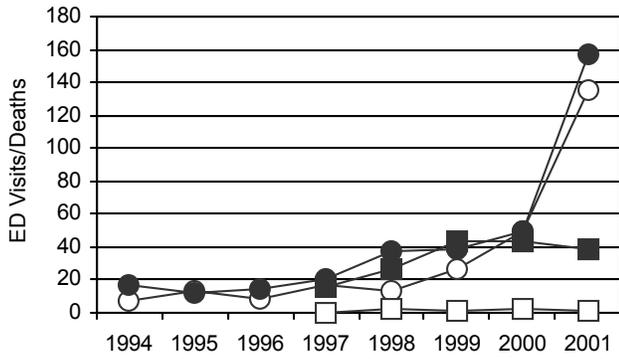


¹ Note that graphs use different scales.

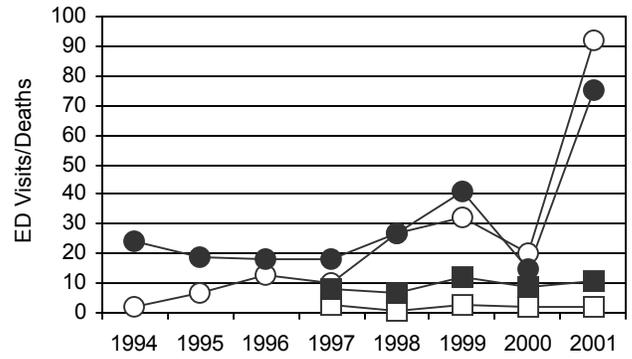
Exhibit 5. (Continued)

- One-drug ED visit
- Polydrug ED visit
- One-drug death
- Polydrug death

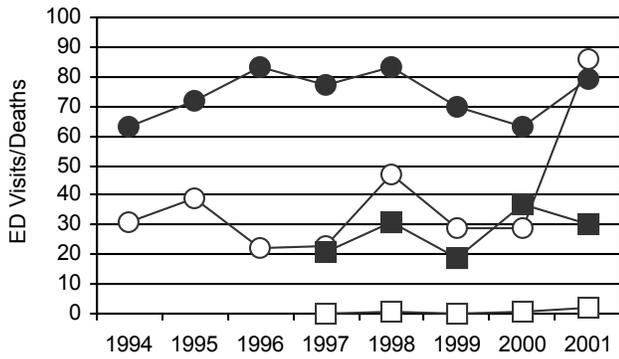
Phoenix



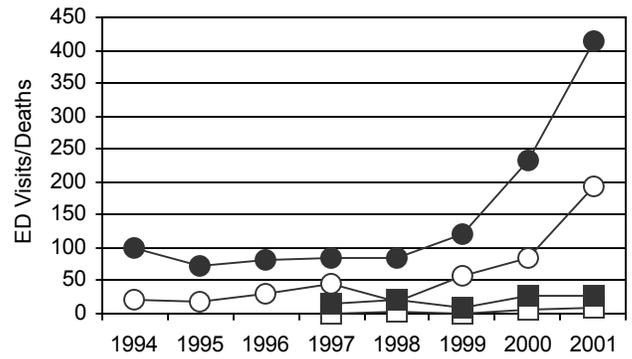
San Diego



San Francisco

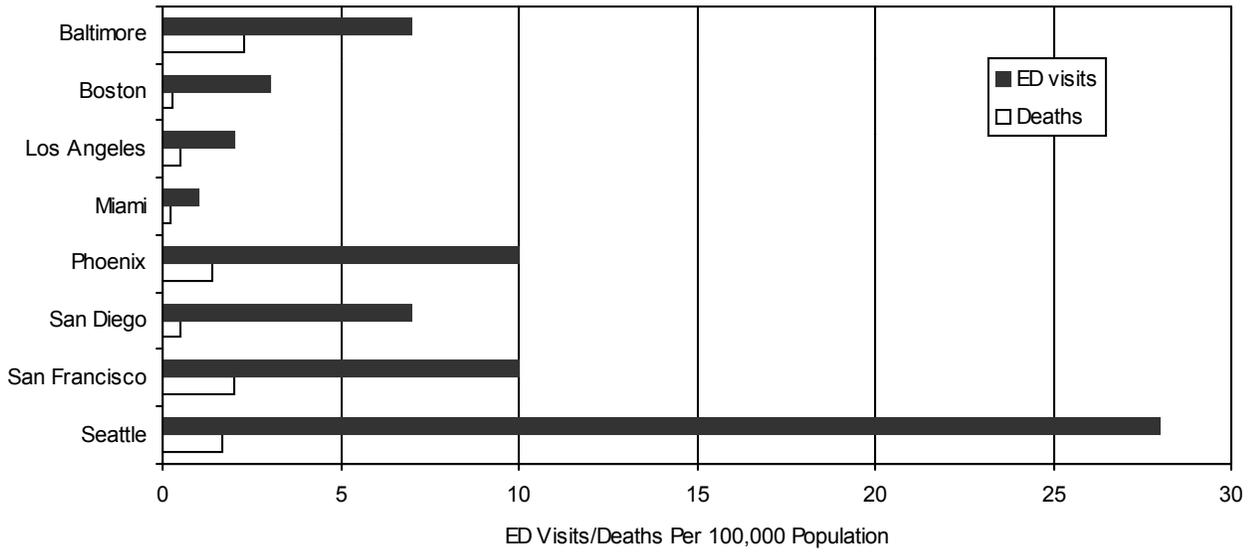


Seattle



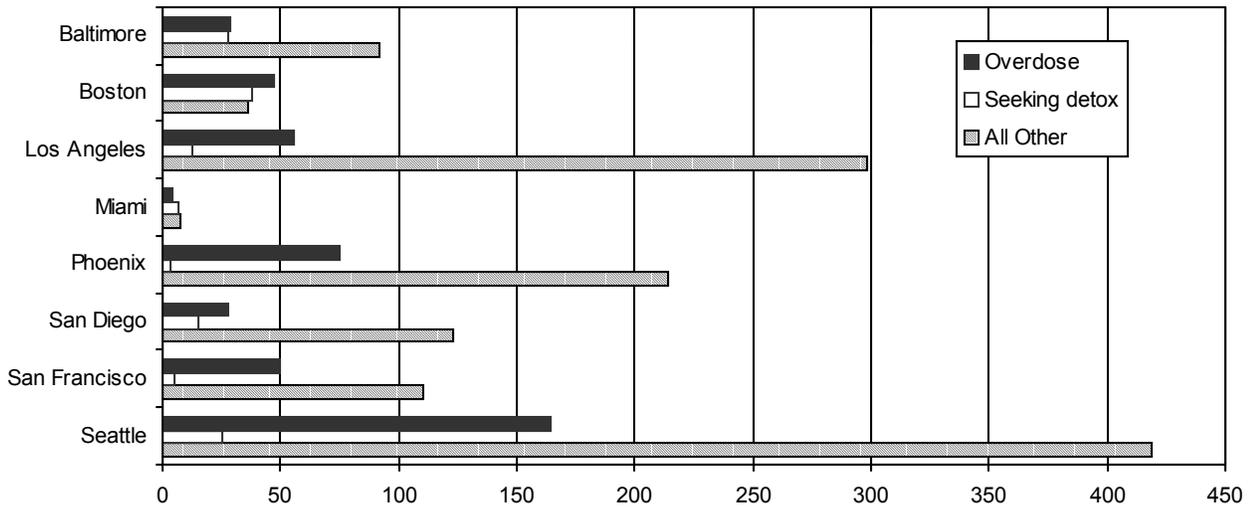
SOURCE: DAWN ED and mortality data, OAS, SAMHSA

Exhibit 6. Rates for Methadone-Related ED Visits and Deaths: 2001 (2000 for Los Angeles)



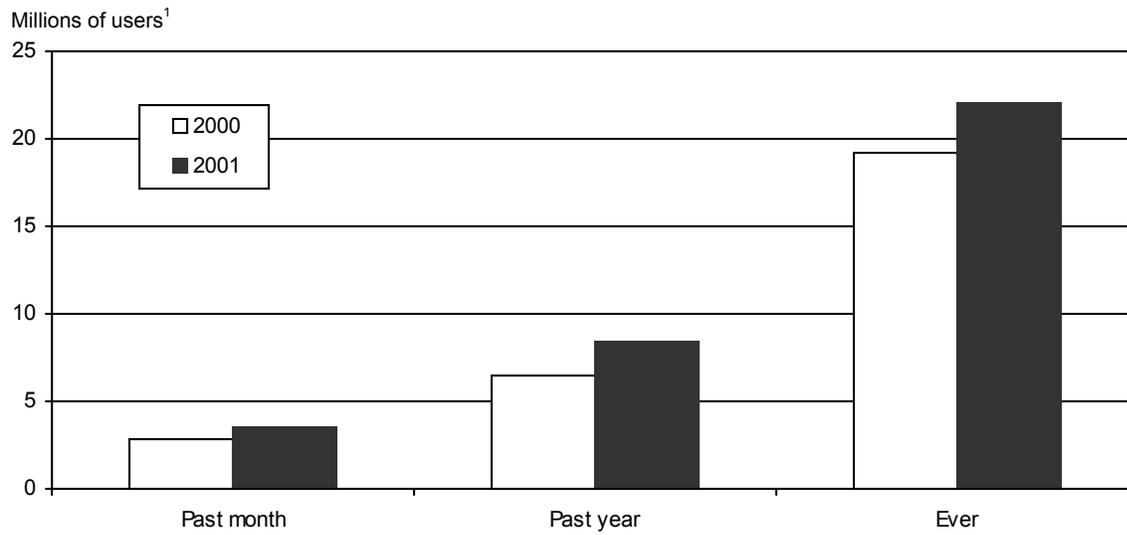
SOURCE: DAWN ED and mortality data, OAS, SAMHSA

Exhibit 7. Reason for Methadone-Related ED Visit: 2001 (2000 for Los Angeles)



SOURCE: DAWN ED, OAS, SAMHSA

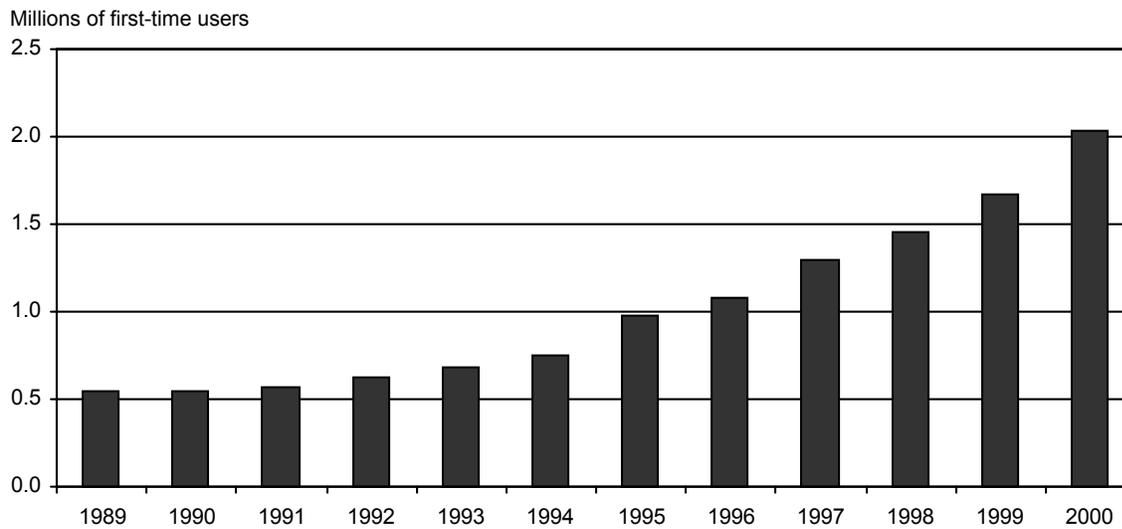
Exhibit 8. Prevalence of Prescription Pain Reliever Abuse in the U.S.: 2000–2001



¹ Ages 12 and older.

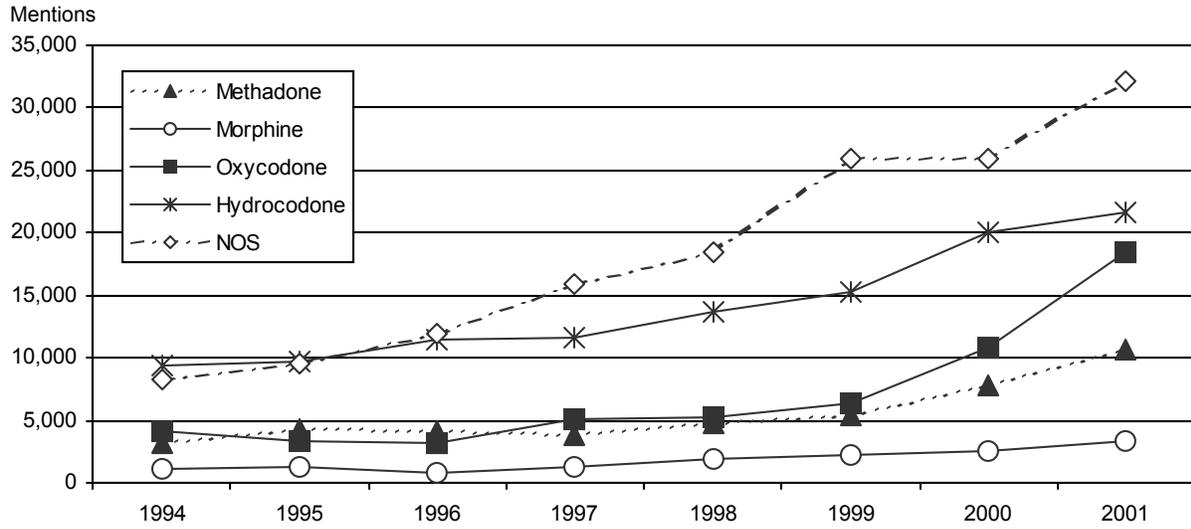
SOURCE: National Household Survey on Drug Abuse, 2001

Exhibit 9. Incidence of Pain Reliever Abuse in the U.S.: 1989–2000



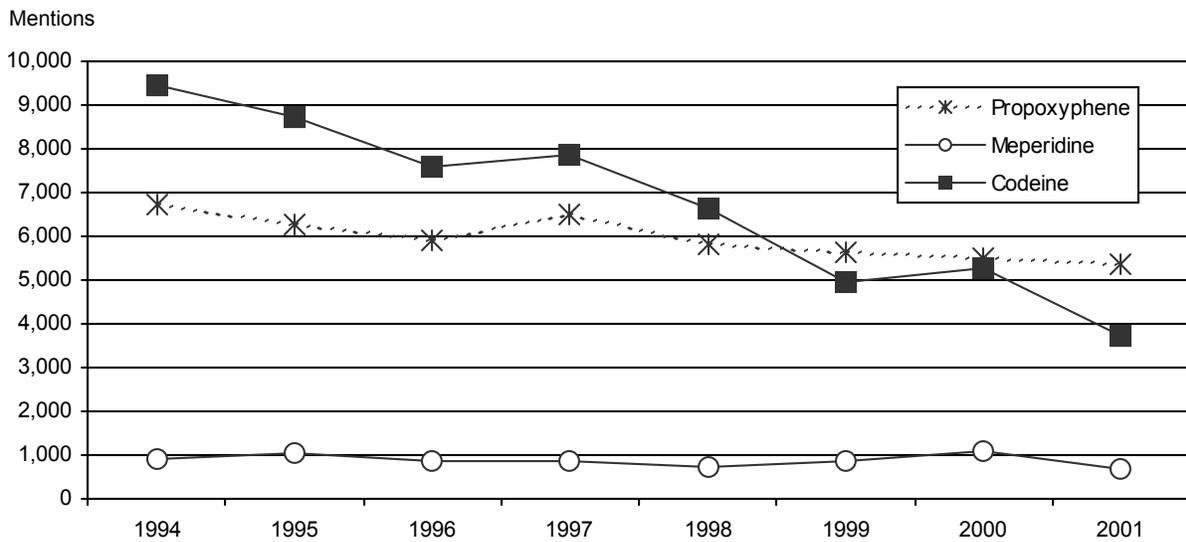
SOURCE: National Household Survey on Drug Abuse, 2001

Exhibit 10. Increasing Opioid Analgesic ED Trends: 1994–2001



SOURCE: DAWN ED, OAS, SAMHSA

Exhibit 11. Stable or Decreasing Opioid Analgesic ED Trends: 1994–2000



SOURCE: DAWN ED, OAS, SAMHSA

Appendix I

The Drug Abuse Warning Network is a public health surveillance system that measures drug-related morbidity and mortality. During the period described in this paper, DAWN only collected data on drug abuse-related ED visits and deaths. Specifically, the ED visit or death was induced by or related to the use of an illegal drug(s) or the nonmedical use of a legal drug for patients/decedents age 6 to 97 years.

DAWN can provide important information on the following:

- Where new drug problems are emerging
- The abuse potential of prescription and over-the-counter (OTC) drugs
- Where public health resources are needed
- Variations within and across communities

DAWN is administered by the Office of Applied Studies at the Substance Abuse and Mental Health Services Administration. For the ED component, DAWN collects data from a nationally representative sample of hospitals and from 21 oversampled metropolitan areas. From these data, DAWN can produce estimates of the number of drug abuse-related ED visits for the Nation and the 21 metropolitan areas, the number of times individual drugs were reported from these visits, and information about the patient demographics and characteristics of the visit.

DAWN's medical examiner/coroner component collects data on drug abuse-related deaths from 42 met-

ropolitan areas in the United States. DAWN does not produce a national estimate of drug abuse-related deaths, because it does not have a statistical sample of medical examiner jurisdictions. For this reason, mortality data are reported at the metropolitan level. Within each metropolitan area, medical examiners from its jurisdiction (usually counties) report directly to DAWN. Therefore, the data for a given metropolitan area may or may not include all the drug abuse-related deaths, depending on whether all medical examiner jurisdictions participate in DAWN.

DAWN collects information about the circumstances of the death (motive of drug abuse, manner/cause of death, disposition) and demographic information about the decedent. Data are collected on illicit drugs, inhalants, and prescription and OTC drugs, and dietary supplements that were used for non-medical reasons.

For each death related to drug abuse, DAWN collects information on up to six drugs and alcohol. Data on multiple drugs are collected because most drug abuse-related deaths usually involve more than one drug. When more than one drug is involved in a death, assigning causation to a single drug is problematic; the death could have been caused by one drug, or the interaction of drugs. Therefore, not all drugs mentioned in the death necessarily contributed to the death. Because only one motive is assigned to each death, it is also possible that some of the drugs were incidental to the drug abuse, for example, a prescription drug taken as directed, or a pain reliever taken for a headache. It is important to keep this information in mind when interpreting the data on methadone-related deaths.

Data Sources on Methadone

Jane C. Maxwell, Ph.D.¹

OVERVIEW

Dr. Maxwell presented information on and findings from various data sources on methadone. Data reported from the Texas Department of Health (DOH) focused on methadone-related mortality and calls to the Texas Poison Control Center Network. National-level data sources on methadone included the National Forensic Laboratory Information System (NFLIS) and Automation of Reports and Consolidated Orders System (ARCOS-2).

Texas Data Sources

Methadone-Related Mortality. Two types of DOH data were examined: (1) deaths of clients in methadone treatment programs, and (2) Texas death certificates.

DOH data on deaths of persons in methadone treatment programs from 1994 to 2002 showed an increase in deaths among methadone treatment clients from 36 in 1994 to 113 in 2002. Such clients, of course, are in poor physical condition, with a high incidence of liver disease and heart problems that may cause their demise. Overdose deaths among methadone clients over this same time period actually decreased, from 23 percent of the methadone client deaths in 1994 to 7 percent in 2002. Death certificate data from DOH (Bureau of Vital Statistics) for 1994–2001 show an increase in the numbers of deaths with a mention of methadone, from 12 in 1994 to 96 in 2001. Both sources of data have limitations. While methadone programs must report a client's death, not all submit autopsy information. Death certificate data in Texas, as in some other States, are not always credible because they are completed by justices of peace who have no medical training.

DOH data from the Texas Poison Control Center Network (1998–2002) show that the penetration rate of abuse or misuse methadone cases peaked in 1999 at approximately 59 per 100,000 population, dropping to around 40 in 2000 and remaining relatively stable through 2002.

National Data Sets

NFLIS. A review of the number of items reported to NFLIS nationwide between 1999 and 2000 shows a large increase in items, in part because of the increase in the number of laboratories participating in the system. Looking at only 2001 and 2002, the increase in the number of items analyzed nationwide was only 14 percent. However, the number of methadone items increased dramatically, 122 percent, from 2001 to 2002. The most interesting aspect of this change was in the type of methadone examined. The number of solid-tablet methadone pills increased 133 percent from 2001 to 2002, while the liquid form items increased only 11 percent. The latter is the form typically dispensed by methadone treatment programs; the 40-milligram diskette is dispensed only for take-home use and is more expensive than the liquid form. The 5- and 10-milligram tablets are often prescribed for pain by physicians because they are cheaper than OxyContin and other pain pills. Methadone is the preferred pain medication for Medicaid clients. There has been a lot of discussion about doctors not understanding the half-life of methadone pills and following the normal prescription routine for other narcotic drugs.

ARCOS (a Drug Enforcement Administration system) has compared drug distribution of selected opioid drugs from 1998 to 2002 by State. The distribution of methadone, oxycodone, and hydrocodone to pharmacies, drug stores, hospitals, and narcotics treatment programs (NTPs) increased nationwide from 1998 to 2002 (in terms of grams per 100,000 population). An analysis of the methadone for 2002 by State shows differences by form of methadone and by inclusion and exclusion of NTPs. The States (including the District of Columbia) that rank in the top five in each analysis are shown below, with States ranked from highest to lowest in each category.

¹ The author is affiliated with the Gulf Coast Addiction Technology Transfer Center, University of Texas at Austin.

	Including NTPs	Excluding NTPs
• All Forms	District of Columbia (DC), Rhode Island, New York, Maine, Maryland	Arkansas, Nevada, Oregon, Maine, New Hampshire
• Liquid Form	DC, Maryland, Massachusetts, Delaware, Maine	Massachusetts, DC, Washington, Oregon, California
• 40-Milligram Diskette	New York, Maine, Louisiana, New Hampshire, Tennessee	New Hampshire, Louisiana, Arkansas, Maine, Connecticut
• 5–10 Milligram Tablets	Arkansas, Nevada, Oregon, Maine, Alabama	Arkansas, Nevada, Oregon, Maine, Alabama

Note that the States ranking in the top five for the liquid form of methadone tend to be States with substantial numbers of methadone maintenance treatment programs, while those in the 10-milligram

tablet category are the same and are rural states. Basically, the problem is with the 5–10 milligram tablets prescribed for pain.

Prescription Opioid Use: Pain Management and Drug Abuse in King County and Washington State

Caleb Banta-Green,¹ Joseph Merrill,² T. Ron Jackson,³ Michael Hanrahan⁴

INTRODUCTION

Prescription opioids provide relief to many people suffering from moderate to severe pain. Guidelines for management of pain were released in 1996 by the Washington State Medical Quality Assurance Commission. These guidelines clearly state that the undertreatment of pain has negative impacts on the public and the Commission provides physicians with specific advice for the appropriate use of opioids in the treatment of medical conditions involving substantial pain.

Two prescription opioids used to control pain, methadone and buprenorphine, are also used to treat addiction to illicit or prescription opioids. While crucial to the appropriate treatment of pain, prescription opioids can be also be misused and result in harmful effects.

Disentangling legitimate from illegitimate uses of these medications is complex. Recent data from several diverse sources for the Seattle-King County area and Washington State are presented in this paper. When examined together, these data highlight trends and potential consequences of local prescription opioid use. The generic and common brand names of various opioids referred to in this paper are presented in exhibit 1.

Methods

To determine whether national trends documenting increased prescription opioid use were reflected locally, eight data sources were examined. Three data sources are available publicly: (1) emergency department (ED) data from the Drug Abuse Warning Network (DAWN), Substance Abuse and Mental Health Services Administration (SAMHSA); (2) King County medical examiner data from annual reports and public data provided directly to the authors; and (3) Drug Enforcement Administration (DEA) data on prescription opioid medication sales to hospitals and pharmacies. DEA data are unavailable for most drugs for the year 2000. The DEA

Automation of Reports and Consolidated Orders System (ARCOS-2) data presented in this paper are for Zip Code areas 980 and 981, which roughly correspond to King County boundaries. The population in the two Zip Code areas totaled 1,969,348 in 2000, compared with 1,737,034 in King County. Other sources obtained by the authors include Washington State data from the National Household Survey on Drug Abuse, SAMHSA; Washington State Poison Center data; and Medical Assistance Administration (MAA) data on prescription medication use and drug addiction treatment. Opioid treatment program waiting list totals were provided by Public Health - Seattle & King County. Data were organized to allow interpretation and comparison of general trends across data sources. Statistical analyses were not conducted.

FINDINGS

Trends in Opioid Medication Prescriptions and Use

Survey data indicate a significant increase in nonmedical use of prescription pain medications, with an estimated 79,000 people in Washington State beginning such drug use in 2000, compared with an estimated 30,000 people in 1999 (SAMHSA 2003a) (exhibit 2).

Sales of several prescription opioids have increased significantly. The overall volume of prescription opioids distributed to hospitals and pharmacies in the King County area increased 35 percent from 427,401 grams in 1997 to 576,487 grams in 2001 (DEA 2002a). Oxycodone (201 percent) and methadone (157 percent) prescriptions increased the most.

Opioid prescriptions increased among clients of the Washington State MAA. From 2000 to 2002, the number of clients receiving prescriptions for hydrocodone increased 28 percent; those for methadone increased 60 percent, and those for oxycodone increased 43 percent (exhibit 3). Hydrocodone was the most commonly prescribed, followed by oxycodone

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and methadone. These data represent prescriptions for pain management only and do not include methadone administered for opioid treatment. Approximately 7 percent of King County's population were eligible to receive medical services from MAA in 2003. Prescription data for the general population were not available.

Trends in Emergency Department Visits, Deaths, and Poisonings

Medical complications of drug use are complex to interpret, as many episodes involve the use of multiple drugs. The role of any single drug in a polydrug-use episode can be difficult to determine. Data may represent a person who has misused or abused a drug, but they could also represent a person using the drug as prescribed who had used other drugs inappropriately, whether purposefully or not.

ED mentions in King and Snohomish Counties combined for all prescription opioids increased 114 percent from 1997 to 2002 (SAMHSA 2003b). Oxycodone and methadone appear to represent the majority of this increase. Data for 2002 indicate that methadone mentions declined for the first time since 1998, while oxycodone mentions continued to increase (exhibit 4). Approximately two-thirds of ED patients who mentioned prescription opioids also mentioned using other drugs or medications, making it difficult to determine the role of any single drug.

The form of methadone identified in ED visits in King and Snohomish Counties was most often tablet: 73 percent and 68 percent in 2000 and 2001, respectively. The majority of tablet methadone available is from prescriptions for pain.

Deaths in King County in which prescription opioids were identified increased 179 percent from 1997 to 2002, from 28 to 78 (exhibit 5). The number of deaths in which oxycodone was identified increased from 1 to 20, while those in which methadone was identified increased from 14 to 37. Almost all (94 percent) deaths involving prescription opioids also involved other drugs.

Calls to the poison center for prescription opioids increased 11 percent from 1997 to 2001 in Washington State. Oxycodone and codeine were the drugs most commonly mentioned. Calls related to codeine decreased from 355 to 269 (or by 24 percent); those related to oxycodone increased from 228 to 372 calls (63 percent), and those related to methadone increased from 39 to 56 calls (44 percent) (Bobbink 2002).

Trends in Opioid Addiction Treatment

Treatment for opioid addiction is often provided by specially licensed Opioid Treatment Programs (OTPs). These programs combine addiction counseling and other services with regular doses of a synthetic opioid to maintain or gradually wean the addicted patient from heroin and/or prescription opioids.

Capacity at the OTPs in King County increased from 1,900 treatment slots in 1999 to 3,020 in 2000; this capacity was maintained through 2002. A majority of these treatment slots are for private pay clients. In general, publicly funded treatment spaces are full, while privately funded spaces are available. Treatment admissions to OTP in King County increased from 976 clients in 1999 to 1,579 in 2002 (TARGET 2003). Waiting lists for OTP in King County more than tripled from 198 to 663 people from 1997 to 2002 (Hanrahan 2003).

Prescription opioid use among those entering OTP in King County increased from 34 (3.5 percent) to 142 (9 percent) clients from 1999 to 2002 (exhibit 6). The most common primary drug of abuse reported by clients in OTP was heroin, followed by alcohol, "other opioids," and cocaine.

DISCUSSION

Prescription and survey data point to dramatic increases in prescription opioid use in King County and Washington in recent years. The increases in prescription opioid mentions in emergency departments and in drug-involved deaths appear to be related to increases in prescriptions of these drugs. Methadone and oxycodone are the prescription opioids responsible for the largest proportion of these increases. Hydrocodone is a widely prescribed opioid, yet it has comparatively low numbers of mentions in the ED reports. This may be because most formulations combine hydrocodone with other medications, such as acetaminophen. It is unknown which prescription opioid medications are responsible for the reported increases in prescription drug abuse and treatment admissions. All opioids can be physically dangerous. Buprenorphine, a recently approved medication for use in opioid treatment, will be important to monitor in the future.

Oxycodone

In December 1995, a new single-drug (including no acetaminophen or aspirin) formulation of oxycodone that packaged high doses of the drug with a time-

release mechanism became available (DEA 2002). Drug abusers quickly learned how to defeat the time-release mechanism, thereby subjecting themselves to high doses of short-acting oxycodone. In the following years in King County, the numbers of deaths in which oxycodone was identified increased from 1 to 20, while ED mentions tripled, far outpacing the increased rate of oxycodone prescribing.

Methadone

Methadone can be dangerous if misused because it lasts for a relatively long time in the body. The increase in the identification of methadone in deaths (164 percent) in King County paralleled the increase in methadone sales to hospitals and pharmacies (157 percent) from 1997 to 2001. While Opioid Treatment Programs are a potential source of methadone, the majority of methadone in OTPs is consumed in front of staff, with only a minority of clients receiving take-home doses. Take-home doses are sometimes not taken by clients and are instead sold, traded, or given to others. To minimize such abuse, clients in OTP regularly undergo urinalysis to determine if they are taking their methadone and to determine if they are taking illegal drugs. Persons prescribed methadone for pain outside the OTP system do not undergo regular drug screening.

Even with the recent increase in methadone use for addiction treatment due to increased treatment capacity, the overall change in the amount of methadone administered in OTPs is small in comparison to the rate of increase of prescriptions and the number of people receiving prescriptions for pain. Many more people receive prescriptions for methadone for treatment of pain than receive treatment for opioid dependence in OTPs, both in King County and throughout Washington. Therefore, it appears that the increase in ED mentions and mortalities is likely driven by methadone prescribed for pain.

Buprenorphine

In October 2002, buprenorphine was approved in the United States for use in opioid addiction treatment (Center for Substance Abuse Treatment 2003). Physicians outside OTPs can prescribe buprenorphine after receiving 8 hours of training and registering with the Federal Government. It is hoped that buprenorphine will increase addiction treatment capacity in Washington State, especially in counties without OTPs. When used as directed, and not in combination with other drugs, it appears that the risk of overdose is lower with buprenorphine than with methadone.

However, overdose deaths are certainly possible with buprenorphine, and have been reported, when buprenorphine is combined with antipsychotic drugs (Klintz 2002), tranquilizers, and depressants such as diazepam (e.g. Valium) (Reynaud et al. 1998) and alcohol. Buprenorphine has not been reported in most data sources cited in this paper, but should be included in future monitoring of trends in opioid use and consequences.

SUMMARY

Maintaining the balance between providing adequate pain management and preventing misuse of prescription opioids is delicate work. The dramatic increase in prescription opioid use, legal and illegal, has had some negative effects that are measurable in terms of morbidity and mortality. Less easy to measure are the positive effects—the improvement in quality of life for the many Washingtonians suffering from pain. As pain management practice improves, and as the tools for treating opioid addiction expand, careful attention must be paid to minimize the types of negative consequences evident in recent years.

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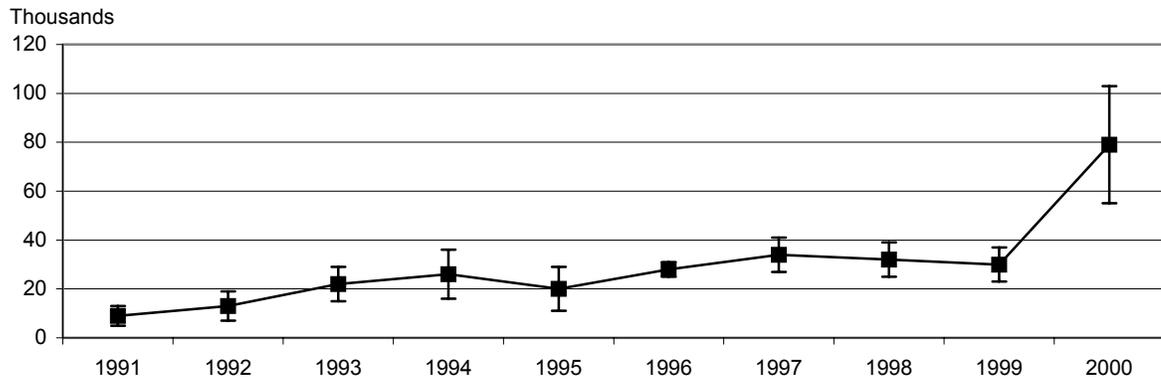
Treatment and Assessment Report Generation Tool (TARGET), administered by the Washington State Department of Social and Health Services, Division of Alcohol and Substance Abuse. These data include private and public pay clients and exclude Veterans Affairs Medical Center patients. Secure Web-based data run conducted August 10, 2003.

For inquiries concerning this report, please contact Caleb Banta-Green, Alcohol and Drug Abuse Institute, University of Washington, 1107 NE 45th Street, Suite 120, Seattle, WA 98105-4631, Phone: 206-685-3919, Fax: 206-543-5473, E-mail: <calebbg@u.washington.edu>.

Exhibit 1. Generic and Brand Names of Common Opioid Medications

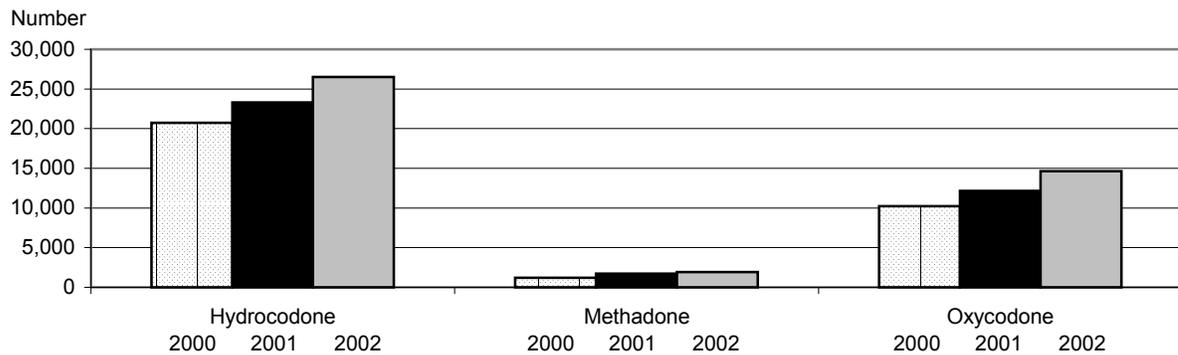
Generic Name	Common Brand Names
Buprenorphine	Buprenex, Subutex, Suboxone
Hydrocodone	Vicodin, Vicoprofen
Hydromorphone	Dilaudid
Meperidine	Demerol
Methadone	Dolophine
Oxycodone	OxyContin, Percocet, Percodan
Propoxyphene	Darvon

Exhibit 2. Estimated Numbers of Persons Who First Used Prescription Pain Relievers Nonmedically in Washington State: 1991–2000



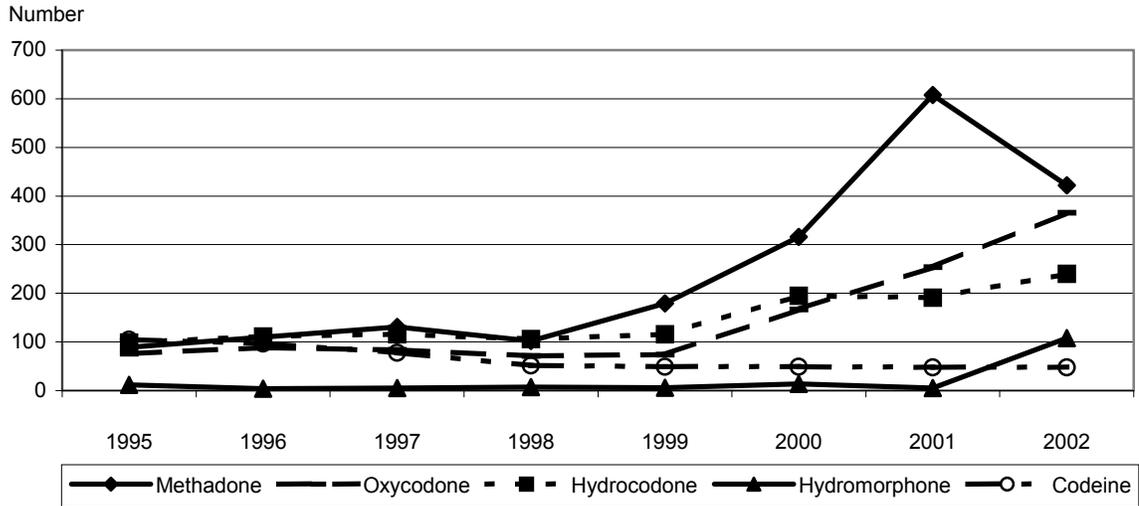
SOURCE: National Household Survey on Drug Abuse, OAS, SAMHSA

Exhibit 3. Number of King County Clients Receiving Prescriptions from Washington Medical Assistance Administration: 2000–2002



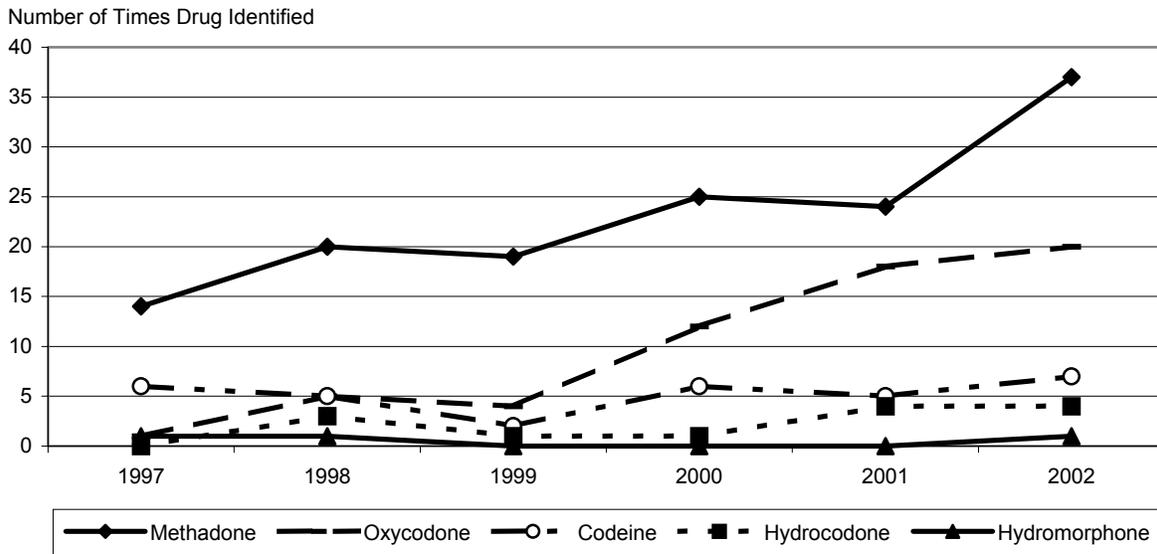
SOURCE: Nicole Nguyen of the Washington State Medical Assistance Administration. Data provided via e-mail June 19, 2003.

Exhibit 4. Estimated Number of ED Mentions for Selected Opioids in King and Snohomish Counties: 1995–2002



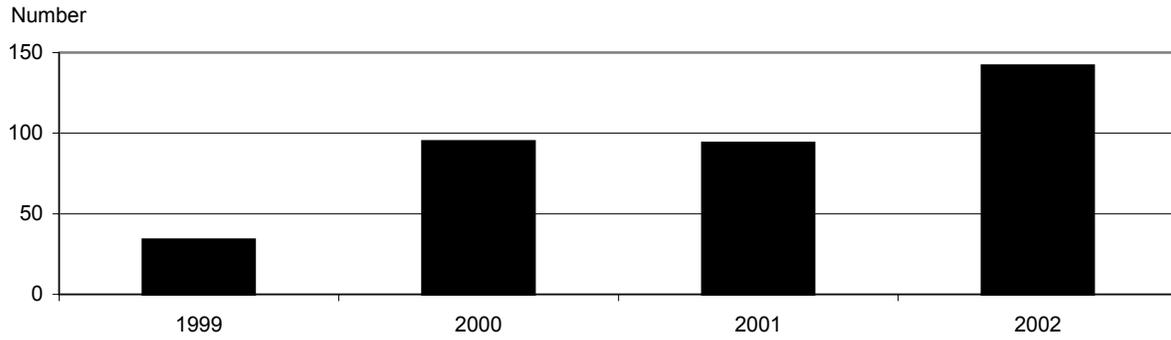
SOURCE: DAWN, OAS, SAMHSA

Exhibit 5: Death Mentions Involving Select Opioids in King County: 1997–2002



SOURCE: King County Medical Examiner, Public Health—Seattle and King County; data provided May 9, 2003

Exhibit 6. Number of Admissions to Opioid Treatment Programs for “Other Opioids” in King County: 1999–2002



SOURCE: TARGET, Washington State Division of Alcohol and Substance Abuse

Special Presentations:

Methamphetamine Abuse in Missouri

DEA Data: Drug Abuse Patterns and Trends in Missouri

*Christopher Heilig*¹

The St. Louis Drug Enforcement Administration, which is part of the St. Louis Division, covers six States in the Midwest: Missouri, Iowa, Kansas, Nebraska, South Dakota, and the southern judicial district of Illinois (about the southern one-third of the State). Within Missouri, there are five DEA offices: St. Louis, Kansas City, Jefferson City, Springfield, and Cape Girardo. The Kansas City Office covers part of Kansas.

From a Federal law enforcement perspective, there are three major types of drug problems in the State of Missouri. One is drug abuse in urban areas (primarily St. Louis and Kansas City), where the primary types of drugs available are crack cocaine and heroin. In rural areas, the primary problems are the production and use of methamphetamine, the clandestine labs used to make methamphetamine, and marijuana. The third type of problem is drug trafficking on major highways. Federal, State, and local law enforcement officials are constantly dealing with the movement of drug supplies on the U.S. and interstate highways in the State.

Cocaine

Cocaine is the most prevalent drug problem in St. Louis, Kansas City, and the areas surrounding these cities. Crack cocaine is brought into the area in powder form, converted to crack, and sold in the depressed inner city areas by independent dealers and street gangs. Information from intelligence sources indicates a recent approach used by drug traffickers in Mexico. They are actively recruiting couriers to bring cocaine into Missouri and other parts of the Midwest. This has been confirmed by increases in the amounts of cocaine and other drugs being transported into the Midwest on the interstate highways, for example, coming up on I-44 from the southwest section of Missouri towards St. Louis, I-70 crossing the State, I-64 crossing part of the State, and I-55 and I-35 running north and south.

Heroin

Like cocaine, heroin is a major concern in the inner cities of St. Louis and Kansas City. St. Louis has had a long-standing problem with heroin, and there has

been little change in recent years. The DEA's Domestic Monitor Program (DMP) is an ongoing effort used to assess heroin price, purity, and type. Nationwide, every quarter, agents go to areas in major metropolitan areas to make heroin "buys" at the retail level. The heroin is analyzed to determine what it is cut with and to identify the likely sources (e.g., South America, Mexico, Southeast and Southwest Asia). The DMP program has been operational in St. Louis since 1980. Exhibit 1 shows the average purity of heroin in St. Louis from 1995 to 2002. Except for a 3-year period (1997–1999) when there was a spike in the quality of heroin, the purity has remained rather constant, with Mexican black tar at 10–15 percent purity. Although most of the heroin in St. Louis is Mexican black tar or Mexican brown, there have been some new findings in the past several months. Some informants were reporting that white heroin was available in St. Louis. Agents making buys asked if they could purchase white heroin. In the last quarter, they obtained five samples of white heroin. Two of the samples consisted of heroin from Southwest Asia, both at purity levels of about 20 percent. The other three samples were white heroin from South America (Colombia), two at about 18 percent pure and one at 24 percent pure. It was very unusual to find any white heroin in St. Louis, so these may be isolated cases or the beginning of a new type of heroin available on the market. This is something the DEA will be focusing on in the future.

Marijuana

Marijuana abuse has been a constant problem throughout the State. Although marijuana abuse is recognized as a serious problem in Missouri, most law enforcement resources have been focused on cocaine, heroin, and methamphetamine. It is a case of limited resources, especially with the problems associated with methamphetamine production and use. To law enforcement agencies, drugs such as cocaine, heroin, and methamphetamine are of greater concern because of the impact these drugs have on society at all levels. Investigators are now reporting more marijuana being transported on the interstate highways into Missouri and other States in the Midwest. Recently, there was a referendum in Columbia, Missouri, to legalize marijuana for

¹The author is a Strategic Intelligence Analyst, St. Louis Drug Enforcement Administration facility in St. Louis.

medicinal purposes. It was defeated by a 58-42 margin by the voters in Columbia, however, the area in which the University of Missouri is located.

There is growing concern, nationwide, about the increased availability of high-purity "BC Bud" marijuana from British Columbia. Some shipments have gone through the Midwest, but there are, as yet, no indications of widespread use or seizures of the drug in the State.

Other Drugs

Other drugs of concern to law enforcement agencies in Missouri include methylenedioxyamphetamine (MDMA or ecstasy), gamma hydroxybutyrate (GHB), and ketamine, the so-called club drugs. One of the problems is that these drugs are trafficked by small independent dealers, usually in clubs and around campuses. Similar to what is happening in other geographic areas, MDMA is being sold at high schools and colleges, and at local dance clubs. Federal law enforcement agencies must continue to focus on large-scale drug trafficking organizations. It is, therefore, difficult to devote the attention needed to drugs like MDMA being trafficked by small-scale dealers.

Similarly, GHB is sold at raves and dance clubs. In October 2002, the DEA "took down" a major international GHB trafficking organization. People were selling GHB and its precursor over the Internet and shipping it nationwide. Through Operation Webslinger, a number of people were arrested, including two ringleaders in St. Louis.

Phencyclidine (PCP) is another drug frequently identified in the Midwest, especially in Kansas City. West coast street gangs have been shipping it to the Midwest, where it is sold in cities. The drug problem has been growing in Kansas City, but it is not a big problem in St. Louis. There is, however, some evidence that PCP is coming into the St. Louis area.

The DEA is also focusing on the diversion of legal prescription drugs for illegal purposes. A section of the St. Louis DEA office and other offices have been devoting time to this problem. As in other parts of the country, OxyContin abuse is a growing problem in Missouri. The primary source of diversion is the improper prescribing practices of physicians. Some

physicians are improperly or over-prescribing drugs such as OxyContin, Percocet, Demerol, and Xanax. Drug abusers often get supplies of these drugs by going to numerous physicians. Some physicians are upset about the close scrutiny being paid to prescription practices.

Special Law Enforcement Initiatives

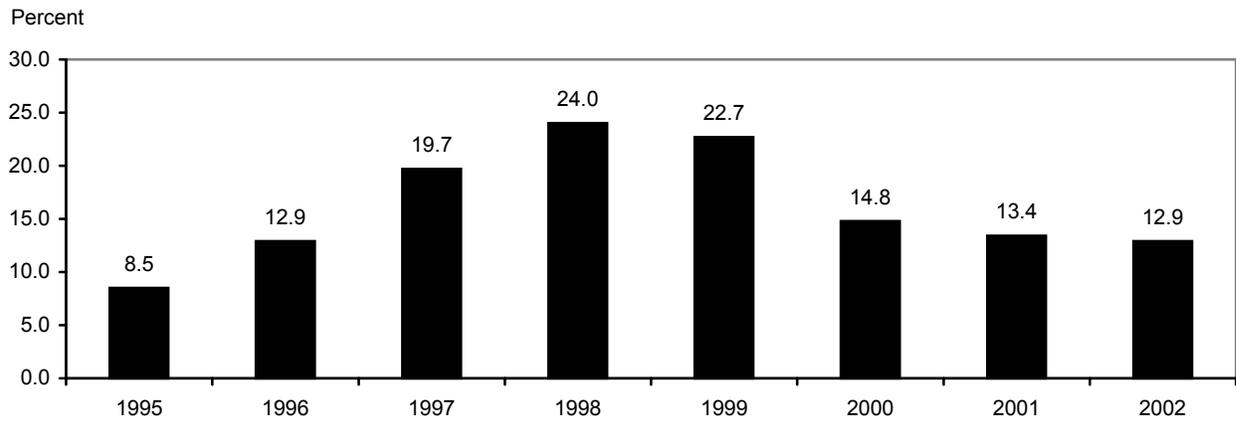
The St. Louis DEA Division initiated special drug programs that have had an impact on the drug scene. In November 2001, the St. Louis DEA and Metropolitan Police Department established the Homicide Initiative to address the growing problem of drug-related homicides in St. Louis. DEA agents, DEA Intelligence Analysts, local police officers, and resources from the city of St. Louis began investigating and addressing the problem of drug-related homicides. It is estimated that 70 percent of the suspects in homicides in the St. Louis area have drug histories. The success of this operation is demonstrated by the 26-percent decrease in homicides in St. Louis from 2001 to 2002.

Two interdiction programs, Operations Pipeline and Jetway, are being conducted throughout the Midwest. The DEA is providing assistance to local law enforcement officials in focusing attention on the highways, terminals, and airports. During the first 6 months of the 2003 fiscal year, the DEA provided assistance in 39 highway "stops" to seize drugs within the State. Overall, there were 80 such stops reported. These stops included tractor-trailers, SUVs, vans, pickup trucks, and passenger cars. The stops have resulted in the seizures of large amounts of drugs moving eastward and currency moving westward.

The Jetworks program is focused on airports and train stations, trying to identify people bringing drugs or money into and through the area. Airports have been greatly affected by the September 11, 2001, terrorist attacks. Security has been tightened, so many drug traffickers are avoiding the airports. Traffickers do not want to risk going through the high security at airports. Consequently, there has been an increase in other ways of transporting drugs, including Amtrak, buses, and other modes of ground transportation. The wars in Afghanistan and Iraq have also had an impact on the trafficking of drugs and the money associated with drug dealing.

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Exhibit 1. St. Louis Retail-Level Heroin Purity: 1995–2000



SOURCE: Domestic Monitor Program

Missouri Indicator Data: Toxicology Tests for Criminal Cases in Rural Counties

*Pamela Johnson*¹

INTRODUCTION

The Southeast Missouri (SEMO) Regional Crime Laboratory was established in 1969, primarily in response to the increase in drug violations. The location of a lab in the region offered drug identification in a more timely fashion, as the time to transport cases was reduced and the availability of an analyst for court testimony was increased. After experiencing the benefit of this arrangement, the lab grew and expanded services as time and funding allowed. The SEMO Crime Lab now serves 16 core counties, with some cases being submitted periodically from an additional 5 counties. The laboratory is still a “full service” facility that offers most of the standard forensic analysis, with the exception of handwriting. Currently, none of the laboratories in the State offers this service, as these examiners can earn more money in the private sector. The service area is home to approximately 500,000 people in a mostly rural setting. The lab staff consists of five analysts, including the director and one secretary. The lab has routinely worked more than 3,000 cases each year since 1996. In that timeframe, it is interesting that the number of homicides, sexual assaults, burglaries, and other crimes has remained about the same each year, while the number of drug cases has continued to increase.

Background

Missouri has always had a connection with methamphetamine. It is a well-established fact that the major interstate highways running through the State have made it a major drug trafficking corridor. Prior to 1996, most of the methamphetamine encountered was brought into the area by organized units, such as motorcycle gangs and over-the-road truckers. There were some clandestine drug labs located in the State prior to 1996, but they were larger production labs operated by a more organized crime unit. The last of those taken down in the Southeast Region prior to 1996 was the lab run by the Pharaohs motorcycle gang in 1995. In that same year at the Clandestine Laboratory Investigating Chemist Technical Seminar held in Colorado, a presentation was made on the methods of producing methamphetamine. The red phosphorus/iodine method was the focus. At the end

of the talk, however, the presenter displayed a formula and made the off-hand comment that it was another method that could be used to manufacture methamphetamine. The author and another chemist from the State of Missouri looked at each other and said this method will be seen in Missouri. Less than 1 year later, the State began to see the sodium/ammonia labs; these quickly shifted to lithium labs. Lithium became the catalyst of choice for two reasons. First, lithium is less reactive with the atmosphere and storage under kerosene is preferred, but not required. Second, lithium can be readily obtained from photo batteries, whereas sodium metal was usually obtained through theft from industry or purchase from chemical supply houses.

In 1990, Missouri’s law enforcement community established Regional Drug Task Forces. These Task Force officers quickly adapted to the recognition of clandestine lab activity and learned how to safely take them down. The efforts of the Drug Task Forces are the primary reason Missouri’s clandestine lab incidents are as high as they are. The efforts of the Drug Task Forces demonstrated a problem, which in turn led to the establishment of the Midwest High Intensity Drug Trafficking Area (HIDTA). The additional funding for the HIDTA allowed law enforcement to step up their activities. Another reason Missouri’s clandestine laboratory numbers are so high is that most of the labs taken down are not large production labs. They are primarily small operations with the users being the producers. Many of the labs encountered consist of a group of individuals who pooled their resources to obtain the chemicals to produce the drug; they may sell a portion of their product to earn money to make more drugs.

Another method to fight methamphetamine labs is locally based. In the Southeast Region, local stores have been given a great deal of information on what activities to watch for that would indicate whether individuals are involved in methamphetamine production. These retailers have been good partners in observing the individuals and providing information to the Drug Task Forces. Neighborhood watch groups and other civic organizations have also been educated and provided with hotlines to call in tips on suspicious activity. Consequently, the large

¹ The author is a Criminologist at the Southeast Missouri (SEMO) Regional Crime Lab in Cape Girardeau, Missouri.

number of clandestine drug labs seized in the State of Missouri is also the result of community effort.

A simple look at the number of cases can sometimes be deceiving. The number of cases and types of cases worked are strictly dependent upon the focus of the area law enforcement. If law enforcement decides to work on cocaine, then the lab's cocaine cases increase. The advent of the methamphetamine labs has been the focus for several years, which accounts for the large methamphetamine caseload the crime laboratories experienced. When the Drug Task Force officers first encountered the clandestine labs, they collected specimens from everything. As the officers have become more experienced, the number of specimens sent to the laboratory has decreased. The officers evaluate what they are seeing and often will send a single sample or two to the lab, which may not necessarily be flagged as a clandestine lab by the crime lab. This is demonstrated by the fact that the overall number of methamphetamine cases submitted to the laboratory is staying about the same. Another demographic that is not presented in the slides is that the methamphetamine labs are being seen primarily among the Caucasian community, while the cocaine cases are encountered primarily in the African American communities. The methamphetamine labs are not class dependent, as those in the Southeast Region have occurred in rural shacks, middle class neighborhoods, and upscale homes.

In 2002 Missouri reported 2,788 clandestine lab incidents (includes labs, dumpsites, and chemical/glass/equipment). This total was higher than the number of incidents reported by any other State in the Nation (exhibit 1). The total number of lab incidents reported in the United States in 2002 was 15,679. The SEMO Regional Crime Lab showed a decrease in methamphetamine submissions in 2002 (exhibits 2 and 3). One of the reasons for the decrease is that officers were better trained and, as a result, could testify in court on dumpsites and small labs without turning in items for chemical analysis.

CHEMISTRY

Two primary methods for the production of methamphetamine in clandestine drug laboratories are being seen: the red phosphorus/iodine method and the lithium/ammonia method. Both methods require ephedrine or pseudoephedrine as a primary precursor. Either chemical can be reduced to methamphetamine. These chemicals can be purchased in pure form from chemical supply companies, but those sources are regulated and watched by the DEA. They can be extracted from other products, such as ephedra-containing compounds or commercial medications.

Because of the popular common use of pseudoephedrine as an over-the-counter treatment of allergy/hay fever symptoms, controlling the public's access to pseudoephedrine is practically impossible. The extraction is usually done with alcohol or water to break down the tablets, leaving the insoluble tableting material behind and the desired drug in solution. For best results, a recovery of the purest compounds occurs after the solution is filtered and the solvent is evaporated. The recovered crystalline material is then processed for conversion to methamphetamine.

Red Phosphorus/Iodine Method

For the red phosphorus/iodine method, the pseudoephedrine is put into a reaction vessel to which the red phosphorus and iodine are added. Water is then added, which facilitates the formation of hydroiodic acid (HI). The method could be run just as well using hydroiodic acid from the start, but there is no readily available source of HI, and it is a chemical watched by DEA. Once the reaction is complete, the mixture is processed to recover the methamphetamine and salt it out as methamphetamine hydrochloride, which is soluble in water and is the preferred form for drug use. This reaction has yields of 40–50 percent. It is the method of choice in the large-scale production labs found in California. This method may produce poisonous gases if not done properly, and several deaths reported in California labs were attributed to the red phosphorus/iodine method.

Lithium/Ammonia Method

The second method addressed is the one known as the lithium/ammonia method. Originally, the clandestine labs in the Southeast Missouri Region were using sodium metal and anhydrous ammonia to convert the ephedrine or pseudoephedrine to methamphetamine. The sodium metal was being stolen from a local plant that used sodium as a catalyst in their aluminum processing plant. Anhydrous ammonia was readily available and easy to steal from local farmers and co-ops, since the Southeast Missouri Region is a very rural agricultural area. Once the region became aware of why these items were being stolen, better monitoring systems were put on the sodium. The individuals producing methamphetamine illegally were quick to discover that they could use lithium stripped out of photo batteries in place of the sodium. Those running illegal labs soon found out that the lithium was not as reactive as sodium and worked just as well. This method does not appear to produce the poisonous gases encountered in the red phosphorus iodine method, and there have not been any deaths reported from inhaling the reaction process.

Deaths have been primarily the result of fires or from exploding containers of anhydrous ammonia. The lithium/ammonia method is popular because it is easily started and stopped, it requires no heat, and can be done in stages. Like the first method, this one works best if the ephedrine/pseudoephedrine is extracted from the tablets and then reacted with the lithium and ammonia. It has been demonstrated that this method can produce 90 percent conversion to methamphetamine. On the average, 40 to 50 percent can be converted by a cook, but less than 40 percent is not uncommon. If ephedrine and pseudoephedrine are not extracted from the tableting material, the yields are likely to be in the less than 40 percent group. In this method, the cooks generally try to force the reaction by adding excess lithium and/or ammonia, which causes an overreduction of the product. These overreduced compounds have been seen in the urine specimens of some drug abusers who are tested. There have, as yet, been no studies conducted on the physiological effects of the overreduced products on human subjects. Once the reaction is complete, the mixture is processed to recover the methamphetamine and salt it out as methamphetamine hydrochloride, just as in the red phosphorus/iodine method.

There are many methods for producing methamphetamine, and all of them can be found on Internet Web sites. Occasionally, the government may shut a site down, but another seems to take its place. In fact,

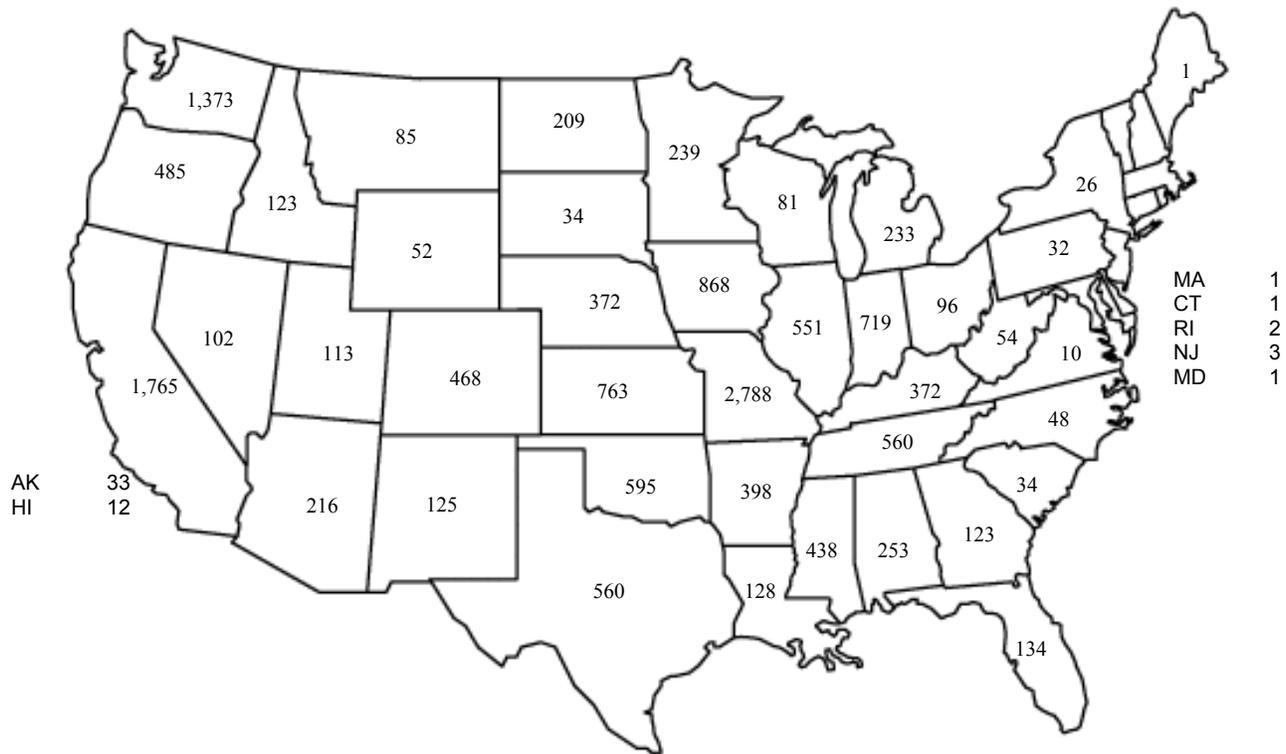
once a closer watch was put on the anhydrous ammonia tanks, the individuals involved in clandestine drug production found a way to produce their own anhydrous ammonia.

TOXICOLOGY

Exhibit 4 shows the number of drug cases handled by the crime lab between April 1, 2002, and March 31, 2003, by county. Some 2,174 cases were reported in Southeast Missouri in this timeframe. The counties with the highest number of cases were Cape (495), Scott (438), and Butler (387). Marijuana represents about one-third (33 percent) of the crime lab's toxicology cases (exhibit 5), followed by benzodiazepines (especially alprazolam) at 25 percent and amphetamines at 18 percent. Opiates, primarily hydrocodone, represent 13 percent of the cases. Cocaine represents 7 percent of the cases. Cocaine is seen primarily in the crack form (also known as cocaine base) and is generally seen in the African-American communities in the Southeast Missouri Region. It is interesting to note that 24 percent of the cases involve multiple drugs, and most common combinations involved marijuana, benzodiazepines, and amphetamines. It is also interesting that in Southeast Missouri, homicides, burglaries, and sexual assaults have remained relatively constant over a 10-year period. Drug cases, however, have continued to increase and are the primary contributor to increased caseloads and case backlogs for the crime laboratory.

For inquiries concerning this report, please contact Pamela Johnson, Southeast Missouri State University, Regional Crime Lab, 1 University Plaza, MS 5200, Cape Girardeau, MO 63701, Phone: 573-290-5130, Fax: 573-290-5133, E-mail: <pmjohnson@semo.edu>.

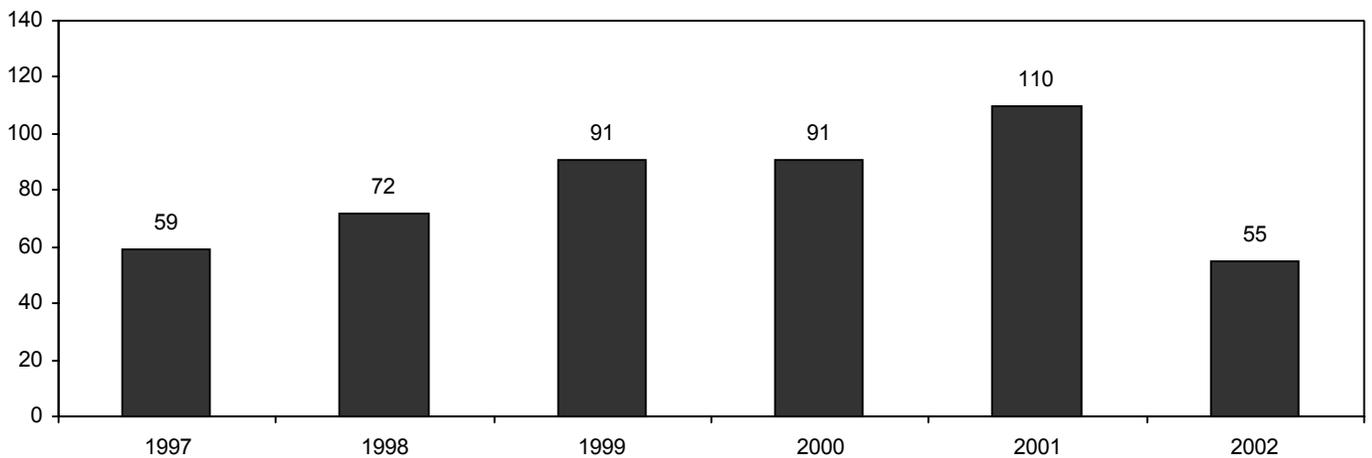
Exhibit 1. Total¹ of All Clandestine Laboratory Incidents, Including Labs, Dumpsites, Chemicals/Glass/ Equipment: January–December 2002



¹Total=15,679 incidents; 47 States reporting. Totals are based on data reported in EPIC and entered into the CLSS as of April 17, 2003.

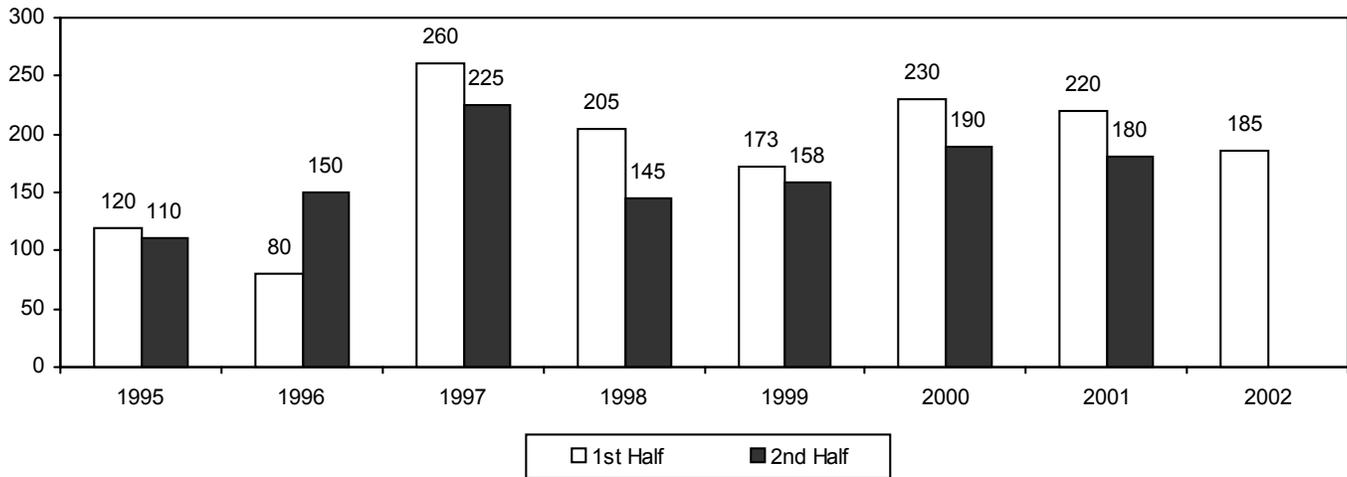
SOURCE: National Clandestine Laboratory Database

Exhibit 2. Number of Cases Identified as Clandestine Laboratories in Missouri: 1997–2002



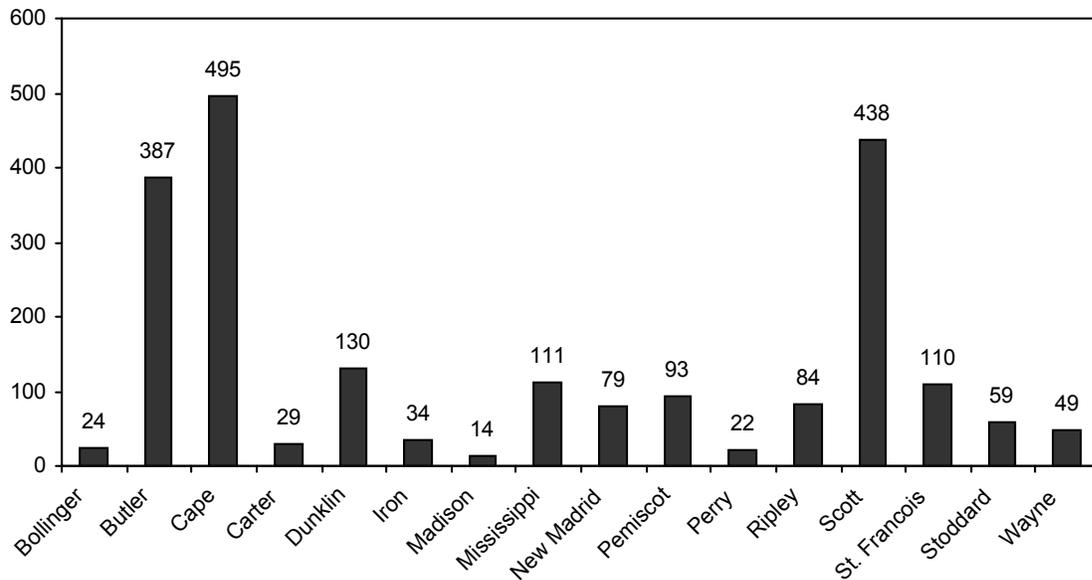
SOURCE: SEMO Regional Crime Lab Case Database

Exhibit 3. Number of Methamphetamine Submissions in Missouri by Half-Year: 1995–June 2002



SOURCE: SEMO Regional Crime Lab Case Database

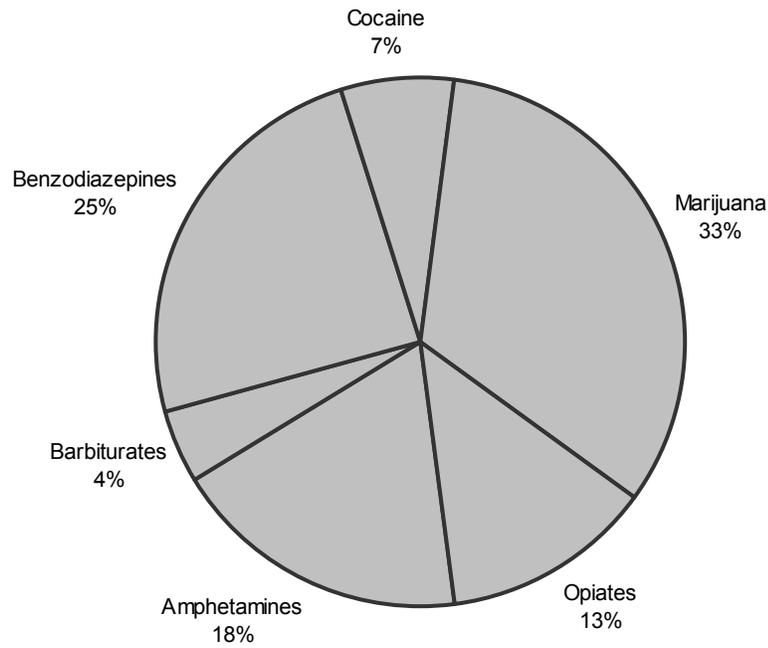
Exhibit 4. Number¹ of Drug Cases in Southeast Missouri, by County: April 1, 2002–March 31, 2003



¹ There were 2,174 cases during the specified time period.

SOURCE: SEMO Regional Crime Lab Case Database

Exhibit 5. Drug Distribution Toxicology Cases in Missouri by Percent¹: April 1, 2002–March 31, 2003



¹ 24 percent of cases have multiple drugs. Most common combinations include amphetamines, benzodiazepines, and marijuana.

SOURCE: SEMO Regional Crime Lab Case Database

Methamphetamine Lab Statistics and Trends

Captain Ron Replogle¹

Investigators with the Missouri State Highway Patrol (MSHP) work many different types of criminal cases, from theft to homicides. MSHP has 39 narcotics investigators and supervises 9 of the 26 drug task forces (multiagency) in the State. The task forces provide MSHP with access to approximately another 45 narcotics investigators. Recent drug abuse trends have changed how narcotics investigators work. Prior to the increase in methamphetamine-related problems in the mid-1990s, MSHP investigators did a lot of undercover work, (e.g., making drug buys and focusing attention on a variety of drugs). Currently, about 75 percent of the narcotic investigators workload is devoted to methamphetamine production and abuse. The cleanup requirements associated with the clandestine labs used to make methamphetamine are labor intensive, requiring many man hours previously devoted to other problems. Three years ago, the narcotics staff was increased when five investigators were added. There are still a few officers who work undercover, though most officers are assigned to work on the methamphetamine problem.

The methamphetamine problem has been increasing since the early 1990s. However, the MSHP did not have a clear understanding of its magnitude until 2001, when Missouri passed a mandatory crime reporting law that requires all law enforcement agencies in the State to report not only major crimes, but also seizures of clandestine methamphetamine labs. All law enforcement agencies now report that data to the Highway Patrol. A MSHP analyst records the information and reports it to the DEA El Paso Information Center (EPIC), which reports on a national level. As a result, law enforcement agencies throughout the country have a much better understanding of the problem. The MSHP began collecting methamphetamine lab data for law enforcement agencies in Missouri in 2001. It has been an educational process, particularly for the smaller police departments in rural areas. Law enforcement personnel were able to understand and appreciate the importance of reporting these data. A considerable amount of Federal money comes into the State to help address the problem. The hazards associated with the seizure of clandestine methamphetamine labs for law enforcement officers include the following:

There are problems in arresting people involved in producing and/or using methamphetamine. Users tend to be very paranoid and can be delusional.

- Investigators enter hazardous chemical environments. There have been numerous explosions in labs because of the chemicals involved in producing the drug. These types of problems were not previously confronted by law enforcement agents until they started to seize the methamphetamine labs.
- It is difficult to collect and preserve evidence. Other types of drugs are seized and sent to laboratories for analysis.
- Property is damaged because of the hazardous waste.

The Nazi method is used in 75 percent of the clandestine labs in Missouri. It makes use of anhydrous ammonia and many thefts of this chemical have been reported in agricultural areas across the State. In the eastern and southeastern parts of the State, some lab cooks manufacture their own anhydrous ammonia, which is a very dangerous process. It was believed that methamphetamine lab production could be controlled by preventing people from stealing anhydrous ammonia, but this was not the case. Recently, there has been a resurgence of the P2P (phenyl-2-propanone) method in labs in the State.

In 1993, the MSHP reported only 12 methamphetamine lab incidents, which may include a dumpsite in which the material has been discarded, glassware, or chemical seizures. The "cooks," or amateur chemists, generally came from outside the State. These were people with some chemical background who came into the area, "cooked" for a few days, and then left the area. The labs in 1993 were larger than the labs identified in recent years. In those early days, it was not as difficult for law enforcement officers because they only had to respond to isolated incidents. But, as shown in exhibit 1, the numbers of lab seizures began to spike upward in the mid-1990s. Lab seizures increased from 66 in 1995 to 121 in 1996. In 2002, MSHP investigators seized 794 methamphetamine labs.

¹Captain Replogle is the Director, Division of Drug and Crime Control, Missouri State Highway Patrol.

In 1996, it was decided to depict the locations of the seizures on a map so that assessments could be made, locations could be targeted, and trends could be observed. It was a regional problem. Only one or two labs were identified in counties in the northeastern part of the State. In 1997, the MSHP seized 319 labs. It was still seen as a regional problem, and the abuse of the drug had not spread to St. Louis. The increases in seized labs continued in 1998 ($N=483$) and 1999 (615). There was a slight decline in lab seizures in 2000 (589), but it was increasingly becoming recognized as a statewide problem. In 2001, the MPH made 669 lab seizures, and 794 were recorded in 2002.

In 2001, a statewide map was produced showing the location of methamphetamine incidents by county (exhibit 2). There were 2,130 methamphetamine lab incidents reported across the State, more than in any other State including California (where the labs tend to be larger). The "superlabs" in California are capable of producing large quantities of the drug. Drug traffickers have been transporting the drugs from these labs to other areas in the country. In Missouri, labs tend to be small, with small amounts of methamphetamine produced, but they are still problematic. The people cooking the methamphetamine may be producing it for themselves and, maybe, for a few friends. They are not dealing and transporting it to other areas as they are doing in California. The labs that are seized need to be cleaned up. People are getting arrested and going to jail, but they come out quickly and start cooking again. In the boothill area, one man was arrested seven times for producing methamphetamine. Law enforcement officials are arresting people and they are being sent to jail, but this has not been curtailing the production problem. Law enforcement must look to the CEWG and researchers to help document the problem. Attention must also be focused on the "demand" side to determine how to prevent people from using methamphetamine and to help get people off this drug. The problem is too big for the manpower available in Missouri. Legislation (companion bill in the House and Senate) has been passed limiting the availability of pseudoephedrine. An old law that went into effect 3 years ago allowed for three packs or 9 grams of pseudoephedrine to be purchased. This year, it has been reduced to two packs or 6 grams. Single ingredient pseudoephedrine or ephedrine has to be either behind a counter or within 10 feet and in visual sight of store clerks. The legislation also increased the penalties associated with methamphetamine production. If a child is present in a methamphetamine lab, the penalty has been increased to a Class A felony. The new law also tightened up on the availability of other

chemicals used to produce methamphetamine. All of these new laws went into effect on August 28, 2003.

Lab incidents were reported in all but six counties in the State in 2001. In 2002, Missouri once again reported more lab incidents (2,743) than any other State (exhibit 3). In comparison, there were 1,682 lab incidents in California and 1,471 in Washington. Nationally, lab incidents increased from 12,000 in 2001 to 14,957 in 2002.

As shown in exhibit 4, Missouri and its eight bordering States accounted for 46 percent of the total methamphetamine lab incidents reported in the United States. Through the first 5 months of 2003, 1,338 lab incidents were reported in Missouri. Projected over the year, there would be a 29-percent increase, a higher percentage increase than reported in the 2001–2002 period. It is still not likely that the peak has been reached.

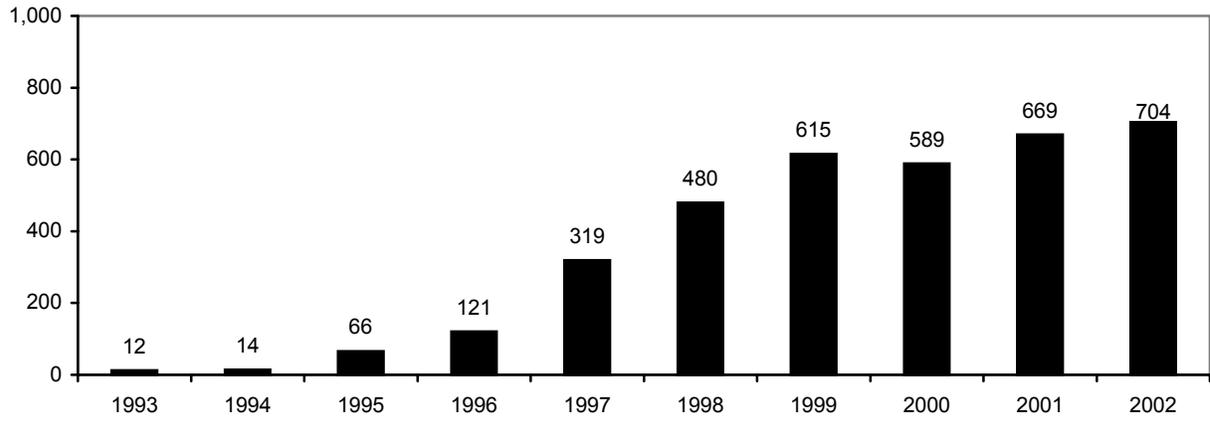
Drug-Endangered Children

Exhibit 5 shows the numbers of documented cases of children, nationally, who were reportedly exposed to methamphetamine labs. Like adults, children can be exposed in a variety of ways. Chemicals or other items may be left within a child's reach. The child may touch chemicals or put them on his/her body or mouth. Indoor and outdoor play areas may be saturated with the chemicals. Chemicals may be on tables, carpets, and toys and even in the dirt in outdoor play areas. Chemicals are dumped down drains in sinks and tubs where children bathe and many household items may be contaminated.

The National Guard, through its counter drug program, has helped to educate and train DEA narcotic agents and other law enforcement officials on the dangers children are exposed to in methamphetamine lab environments. Missouri does not lead the Nation in cases of endangered children, but it is not far behind. In California, 427 children were exposed to methamphetamine labs in 2002, followed by Missouri with 277. Efforts are being made to educate law enforcement agents to the seriousness of this problem and the charges that can be made for this crime. Child endangerment charges need to be documented. In California, officers enter the methamphetamine labs with a camera strapped to their legs at child's eye level to show exactly what the child is exposed to and what chemicals are within reach. It is important to document evidence in these cases when they are brought to court.

For inquiries concerning this report, please contact Captain Ron Replogle, Missouri State Highway Patrol-DDCC, P.O. Box 568, Jefferson City, Missouri 65102, Phone: 573-526-6122, Fax: 573-526-5577, E-mail: <replor@mshp.state.mo.us>.

Exhibit 1. Methamphetamine Labs Seized by the Highway Patrol in Missouri: 1993–2002



SOURCE: Missouri State Highway Patrol

Special Drug Courts: Female Drug Abusers and Dually Diagnosed Mental Health Arrestees in St. Louis

*Judge James Sullivan*¹

Background

The St. Louis Municipal Female Drug Court was conceived in late 1999 after “get tough” measures with the sex trade workers packed the Medium Security Institution and St. Louis County Justice Center. While these non-violent defendants commit seemingly victimless crimes, the sex trade adversely affected neighborhoods with public sex acts, harassment of residents, and drugs. The police complained the department had been reduced to “taxi cab” status and that females returned to the street as quickly as officers wrote their police reports. The courts observed that those arrested for prostitution and demonstration (which does not require an undercover officer to be involved in the exchange) would appear in court after their arrest on a bench warrant that was issued because the defendants refused to show up in court for initial appearance.

The Female Drug Court (FDC) and Coordinated Services

The FDC, which began operation in January 2002, maintains a specialized docket for female municipal ordinance arrestees, age 17 and older, who commit crimes under the influence of drugs or to support their drug dependence. Violations are primarily prostitution and/or demonstration.

At the earliest opportunity, the Department of Probation and Parole (DPP) conducts a “needs assessment” to obtain the following types of information on the arrestee: socioeconomic background; current living conditions; educational level; employment history; drug history (self-reported); and mental and physical health history. A criminal background check is also conducted.

Staffing is conducted prior to each docket; team representatives are the judge, probation and parole staff, social service program staff, and the defense counsel. The teams make recommendations on each arrestee’s treatment needs. The team also discusses the arrestee’s progress in relation to previous court orders, possible sanctions for non-compliance, and appropriate rewards for exemplary progress.

The team seeks an opportunity to convene at a very early stage to try to avoid repeat behaviors. In December 2000, it was found that 9.6 percent of those charged with prostitution in the city court had a previous diagnosis for a mental health problem. As a result, a Mental Health Court (MHC) was established in January 2001, 1 of the first of 10 in the Nation. Dependents with mental health diagnoses were transferred from FDC to MHC for more appropriate supervision and resource coordination. Participants in MHC need 30 days of medication before a drug treatment program will accept them.

FDC also secures drug treatment from the Drug and Alcohol Recovery Treatment (DART) program and Archway. The needs assessment form was modified to collect information on any insurance, public or private, the women may have that will defray costs for drug rehabilitation, health care, and required social services costs. The Division of Family Services provides services for children of the arrestees whenever appropriate. Also, the MHC has solicited community-based mental health service organizations and public sector mental health departments for assistance. Training has been provided to FDC and MHC personnel by the National Alliance for the Mentally III.

The FDC is supported financially by Federal Block Grant funds, and authorization for expenditures is provided by the Neighborhood Stabilization Office. Funding has provided for a computer system, a probation officer, deputy marshal, and an as yet unfilled position of research coordinator. However, funding, staff, and office space are sparse. The DPP staff complain that, because of FDC and MHC, each probation officer has a caseload of more than 400 persons.

The FDC Caseload and Outcomes

Caseload. During the first year of operation, 100 individuals were on the DPP caseload. In 2001, the number increased to 420. In 2002, 334 individuals appeared in FDC. The reduction from 2001 to 2002 is related to the creation of the MHC and to graduation

¹The author is a part-time judge for the St. Louis Municipal Female Drug Court and a part-time criminal defense attorney.

from FDC. A statistical analysis of FDC is underway at the University of Missouri at St. Louis.

Information on a random sample of 50 FDC cases has been analyzed. Sixty-four percent are Black, only 40 percent have a high school education or some college, 80 percent are single, and 80 percent have children (exhibit 1).

Crack cocaine is clearly the drug of choice among FDC cases. Among the 50 cases randomly sampled, 24 percent reported crack as their only choice of drugs, and 70 percent mentioned crack as their first, second, or third drug of choice (exhibit 2). More than one-half (52 percent) of the women cited alcohol as their first, second, or third drug choice, 24 percent mentioned marijuana, 16 percent heroin, and 8 percent powder cocaine.

Although exact statistics are not yet available, it is known that FDC cases over time are similar in characteristics and drug choices to those represented in the random sample. Good quality crack is of relatively high purity, easily accessible, and sells for \$20 per “rock.” Alcohol is also easily accessible. Drug use helps many women cope. It is also known that a number of women are positive for the human immunodeficiency virus and that approximately one-third test positive for hepatitis C. Their income is typically low—\$15–\$20 for different sexual acts. Many do not have other job skills. Some have parental rights.

Outcomes. Despite being a resource-impooverished effort and needing to address many needs of women, the FDC and MHC have accomplished a great deal and impacted positively on the lives of women and the community at large.

Prior to the inception of FDC, nearly all women charged with prostitution and/or demonstration failed to appear on their scheduled court date. A recent estimate indicates that 60 percent now appear on schedule. All staff participants recognize the valuable service FDC provides participants, and consequently, the community. Participants recognize FDC’s desire to create positive change in their lives. Family members routinely reveal a participant’s compliance or non-compliance with court orders. Participants recognize their need for drug treatment and express their desire for treatment. Staff are aware that many defendants profess a desire to change and then violate the court order. Arraignment sanctions come into play in cases where participants waste bed space and precious resources.

FDC continues to assist these women, to work with the MHC and other agencies and organizations to access needed services, and will soon employ a research coordinator whose responsibility will include scheduling appointments with service providers, securing required service agencies, and developing cooperative agreements with agencies.

For inquiries concerning this report, please contact Judge James Sullivan, Department of Public Safety, Division of Corrections, Parole and Probation Office, 1430 Olive, Room 108, St. Louis, MO 63104, Phone: 314-622-3261, Fax: 314-588-7731, E-mail: <james_sullivan@osca.state.mo.us>.

Exhibit 1. Characteristics of a Random Sample¹ of Female Drug Court Clients

Characteristic	Number	Percent
Race/Ethnicity		
Black	32	64
White	18	36
Age Group		
5–9 years	8	16
10–12 years	22	44
High school diploma/GED ²	17	34
Some college/unknown	3	6
Marital Status		
Single	40	80
Married	5	10
Separated/divorced	5	10
Number of Children		
None	10	20
1	13	26
2	9	18
3	6	12
4	5	10
5	3	6
6–7	4	8

¹50 cases randomly sampled from 350 cases.

²Eight women received a General Educational Development degree.

SOURCE: DPP

Exhibit 2. Drug of Choice Among a Random Sample of Female Drug Court Clients

Drugs Mentioned	Number	Percent
Crack cocaine	12	24
Crack and alcohol/beer	10	20
Crack and marijuana	4	8
Crack and powder cocaine	2	4
Crack, alcohol, and marijuana	3	6
Crack, alcohol, and heroin	2	4
Alcohol	4	8
Alcohol and crack	1	2
Alcohol and marijuana	1	2
Heroin	2	4
Heroin and alcohol	2	4
Heroin and crack	1	2
Marijuana	2	4
Marijuana and alcohol	1	2
Marijuana, alcohol, and heroin	1	2
Powder cocaine	1	2
Powder cocaine and alcohol	1	2
First, second, or third choice:		
Crack	35	70
Alcohol	26	52
Marijuana	12	24
Heroin	8	16
Powder cocaine	4	8

SOURCE: DPP

Rural/Urban Differences in Methamphetamine Treatment in Missouri

Jim Topolski, Ph.D.¹

The goals of the presentation were to discuss the following:

- Rural factors associated with methamphetamine abuse
- Rural and urban methamphetamine treatment admissions
- Policy considerations
- Research questions

Rural Factors Associated with Methamphetamine Abuse

Many factors are associated with the use of drugs like methamphetamine in rural areas. Some are related to the dynamics in rural communities, some to rural values, and others to the services that exist in rural areas.

Understanding Rurality. To understand rural communities, it is important to understand the concept of distance and space. Geographic isolation and distances between people and resources make life simpler in some ways but more complicated in others. To some extent, geographic isolation served to protect rural youth from some of the drug problems that emerged in urban areas from the 1960s to the 1980s. During those earlier decades, rural youth were more likely to be influenced by relatives and religious leaders. Today, drug abuse varies by rural community. Some communities have a low prevalence of major drug problems, while others do not. Is this related to economics? To leadership? Or to a host of other changes that have occurred in society? The concept of “community viability” needs to be considered in conducting research in rural communities.

Rural areas have undergone dramatic economic change, especially change associated with agriculture. The move from the family farms to corporate farms has had a major impact on rural communities by increasing the out-migration, creating more instability, and eroding traditional values. In recent decades, other factors have increased the susceptibility and vulnera-

bility of rural populations to drug abuse problems. Increasingly, rural citizens have been exposed to other cultures and values through television, motion pictures, music, and, to some extent, magazines and newspapers. Improved highways and the increased availability of automobiles have made it easier for rural citizens to travel to other areas. Increased mobility has also made it easier for drug distributors to target rural areas as potential markets. Much of the marijuana currently available in the United States is cultivated and produced in rural areas, and it is the most readily available and commonly used illicit drug in rural as well as urban areas. Also, in many States, the rural landscape may be dotted with “mom and pop” methamphetamine laboratories, as is the case in Missouri.

In 2002, 2,780 methamphetamine clandestine laboratory incidents were reported in Missouri, more than any other State in the Nation. Most of these laboratories were located in rural areas. Forty-six percent of the total lab incidents reported in the United States were located in Missouri and its eight contiguous States.

Rural Values. Self-reliance is, perhaps, the cornerstone of rural values. It is a positive attribute that allowed people to fend for themselves and to perceive themselves as strong. One negative outcome of this self-perception is the reluctance of rural people to seek help from others, especially help for treating substance abuse. The stigma associated with substance abuse and psychiatric problems is a strong barrier to treatment, one that must be overcome. One associated problem is “confidentiality.” Despite the geographic distances between rural communities, people often know one another. In addition to the issue of confidentiality, rural individuals tend to be conservative in their religious, political, and social ideologies. Such a value system is part of what made rural America great; however, this mindset can also act as a barrier to seeking treatment. In addition, there is a lack of knowledge about the availability of services.

Rural Services. Where services do exist in rural Missouri, they are seldom coordinated; different professional disciplines rarely work together. For

¹ The author is affiliated with the Missouri Institute of Mental Health, St. Louis, Missouri.

example, substance abuse services are not well coordinated with the psychiatric system, the law enforcement agencies, or the health care system. There is also a shortage of professionals in rural areas, especially medical doctors and psychiatrists, and a shortage of training opportunities. In certain rural areas in Missouri, health services lag in terms of knowledge of best practices. When a rural citizen does find and get accepted into a service system, there is almost always a problem with transportation to the service and often a problem with accessible childcare for parents who are being treated.

Rural Versus Urban Methamphetamine Treatment Admissions

With regard to substance abuse treatment, data were reported from the State's Treatment Episode Data Set (TEDS) for calendar year 2002, with a focus on differences in the characteristics of rural and urban primary methamphetamine treatment admissions in the State. These data are shown by rate per 100,000 population in exhibit 1.

As shown in exhibit 1, rates of methamphetamine admissions were higher for males than females in rural areas, but they are similar in urban areas. However, the rate of rural admissions is much higher than that for urban admissions. In both rural and urban areas, Whites predominate among methamphetamine admissions, with the rate being higher in rural areas (119.0 vs. 46.5 in urban areas). The rate for methamphetamine admissions age 35 and older for the rural group is more than twice that of the urban group (37.0 vs. 15.7), as it is for other age groups. The rate for court referrals among rural admissions (68.0) is considerably higher than that for urban admissions (19.3). This is probably because of the history of greater abuse of methamphetamine in rural areas. Among these admissions in 2002, the rate for rural admissions that had no prior treatment admissions was 41.0 per 100,000, compared with only 18.7 for the urban group.

The pattern of route of drug administration is similar for both the rural and urban methamphetamine admissions. Interestingly, the rate for injection use among those rural admissions (48.0 per 100,000) is more than double that for the urban group (20.2 per 100,000). A similar pattern appears for all other routes of administration, as shown in exhibit 1.

Marijuana and alcohol are clearly the most used secondary drugs, with the rate of marijuana being double or greater than that for alcohol in both the rural and urban methamphetamine admissions in 2002.

When looking at the national TEDS data base, maintained by the Office of Applied Studies, Substance Abuse and Mental Health Services Administration, it was determined that 93 percent of stimulant admissions in Missouri in 2002 were for methamphetamine. The national data also show that most persons admitted for methamphetamine abuse in the State were unmarried (single, divorced, separated), not highly educated, and more likely than other admission groups to be unemployed. This held for both rural and urban areas.

A study conducted in Joplin, Missouri, showed that many treatment admissions reported other problems, including depression and a history of sexual abuse or domestic violence (Topolski et al. 2000). Most persons admitted for treatment of methamphetamine abuse do not have health insurance.

Policy Considerations

Considerable attention has been focused on drug abuse in St. Louis, partly because there are more sources of data/information in this city. There is clearly a need for more drug abuse surveillance in rural areas. Time and effort must be invested in identifying sources of data/information in other areas of the State, particularly rural areas. There is a need to know how drug abuse patterns differ by region and the reasons for these differences. The high rates of intravenous drug use suggest that policies addressing the human immunodeficiency virus (HIV), acquired immunodeficiency syndrome (AIDS), and hepatitis C prevention and outreach services are important. A coordinated effort is required that includes linkages with the local criminal justice system agencies (including court referral sources and regional crime labs), treatment agencies that provide services to drug-abusing populations, and universities conducting relevant research.

Research Questions

Many questions need to be addressed. There is a need to identify the different types of people who use methamphetamine and why, how, and where they use it. What types of networks have been established? Are these hidden populations? There is a need to learn more about the smaller methamphetamine distributors and networks in rural areas. It will be important to include people who know the rural culture in the research. Much can be learned from methamphetamine abusers who are admitted to treatment and from individuals arrested for making, selling, and using the drug. Persons using methamphetamine who have yet to enter the correc-

tions or treatment systems would be of special interest to researchers. Generally, it is important to study how the changing demographics of rural America lead to more drug use. Specifically for methamphetamine, the changing demographics of its users (e.g., more Hispanics and Asian Americans) require more study. It is important to remember that America's rural areas are as diverse as its urban areas. The rural methamphetamine problem suggests

that the environmental issues of drug access and markets may be key areas of interest to researchers.

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For inquiries concerning this report, please contact Jim Topolski, Ph.D., University of Missouri, 5400 Arsenal Street, St. Louis, Missouri 63139, Phone: 314-644-8574, Fax: 314-644-7934, E-mail: <topolski@mimh.edu>.

Exhibit 1. Characteristics of Rural and Urban Primary Methamphetamine Treatment Admissions in Missouri, by Rate per 100,000 Population: 2002

Characteristic	Rural	Urban
Gender		
Male	72.0	24.8
Female	49.0	23.4
Race/Ethnicity		
White	119.0	46.5
Black	1.0	0.4
Hispanic	1.1	0.4
Other	1.0	1.2
Age Group		
17 and younger	3.0	1.1
18–25	40.0	14.2
26–34	40.0	17.2
35 and older	37.0	15.7
Referral Source		
Self	41.0	19.4
Court	68.0	19.3
Health provider	5.0	3.4
Prior Admissions		
None	41.0	18.7
1	27.0	11.2
2	20.0	6.6
3	12.0	3.7
4	6.0	2.4
5 or more	15.0	5.6
Route of Administration		
Injection	48.0	20.2
Smoking	40.0	15.9
Sniffing	26.0	9.2
Oral	5.0	2.4
Other	1.0	0.4
Secondary Drugs		
Marijuana	52.0	18.0
Alcohol	22.0	9.0
Cocaine	7.0	4.0
Other	6.0	4.0

SOURCE: TEDS

Substance Abusers Treated by the Family Counseling Center in Southeast Missouri

Myra Callahan and Ravdeep Khanuja, M.D.¹

Overview

In 2002, The Family Counseling Center (FCC) served more than 4,238 clients in a 23-county area located in the mostly rural southeast section of Missouri. FCC offices and facilities are located in nine of the counties. Many of the counties served by FCC have relatively high percentages of residents living below the poverty level. For example, 30.4 percent of the residents of Pemiscot County and 24.5 percent of the residents in Dunklin County fall below the poverty level, compared with 11.7 percent of the State population.

FCC Services

In 1976, FCC began as a substance abuse treatment agency. Shortly thereafter, the federally funded mental health center serving a three-county area closed. At that time, the agency received funding to provide psychiatric services to clients of the area. FCC has continued to make progress in leading and treating people in different segments of the communities served. In a rural area, this has been a huge challenge. Transportation and daycare are being provided in some areas of the agency programming. These services have made it possible to increase the number of females admitted to treatment. Efforts are currently underway to increase services to the elderly.

FCC provides three primary types of programs: mental health, substance abuse, and co-occurring (mental health and substance abuse). Psychiatric services are provided to adults primarily through a Medicaid match program called Comprehensive Psychiatric Rehabilitation Center (CPRC) and to adolescents and children through CPRC for youth. Primary substance abuse recovery services include detoxification residential and intensive outpatient. Comprehensive Substance Abuse Treatment And Rehabilitation (CSTAR) treatment includes residential, outpatient, community support, transitional housing, childcare, education, and transportation these services are individually based on client need. The co-occurring program integrates services and staff from both mental health and substance abuse in a single facility utilizing staff that is trained in both fields.

In 2002, data were collected from 1,278 adult and 478 adolescent clients entering substance abuse treatment programs. Information from this effort is presented in the following sections.

FCC Client Demographics

Of the 4,238 clients served by FCC in 2002, there were 80 more females (2,123) than males (2,115). Approximately 85 percent of the clients were White, 14 percent were African-American, and 1 percent represented other ethnic groups.

FCC services are directed to people in almost all age groups. In 2002, 22.8 percent of the clients were in the 18–29-year-old age category, 20.9 percent were age 30–39, 19.8 percent were age 40–49, 17.8 percent were 13–17, 8.2 percent were 5–12, 7.5 percent were 50–59, and 2.9 percent were age 60 and older.

Referrals

Referrals to FCC in 2002 were from a variety of sources. One-third of the patients were self-referrals; 24 percent were referred by law enforcement agencies and the courts, 19 percent by behavioral health facilities, 10 percent by family and/or friends, 7 percent by health care facilities, 4 percent by social services, 1 percent by schools, and 1 percent by the clergy.

Diagnoses

Of the 4,238 clients treated in FCC facilities in 2002, 52 percent received a mental health (only) diagnosis, 30 percent received a substance abuse (only) diagnosis, and 18 percent received a diagnosis for a co-occurring disorder. Those with a mental health diagnosis were treated by mental health professionals. Those with a substance abuse problem were treated by substance abuse treatment professionals, and those with a co-occurring disorder were treated by a multidisciplinary team that coordinated appropriate mental health and substance abuse services, access to other mainstream services, and the client's aftercare.

¹ The author is affiliated with The Family Counseling Center, Kennett, Missouri.

In the sections that follow, data are presented on adult and adolescent clients treated for substance abuse problems.

Primary Drug Problem Among Adult Clients. Of the 1,278 adults (age 18 and older) treated in 2002, 34.2 percent were admitted for a primary problem with alcohol (exhibit 1). Nearly 26 percent were treated for marijuana abuse, slightly more than 19 percent for methamphetamine abuse, and nearly 16 percent for cocaine/crack abuse.

Of the 330 adults treated for marijuana abuse, 57.6 percent used the drug weekly or daily. Among the 245 primary methamphetamine abusers, 98.0 percent were White and 55.5 percent were female. Data on route of administration of methamphetamine shows that 29 percent injected the drug, approximately 46 percent smoked it, 19 percent inhaled, and more than 5 percent used it orally.

Sixty-one percent ($N=716$) of all adult clients in 2002 used two more drugs, primarily marijuana (33.5 percent), alcohol (31.1 percent), and methamphetamine (16.9 percent). Among the other secondary drugs used by the 716 adults were benzodiazepines (4.2 percent), cocaine/crack (3.1 percent), opiates other than heroin (1.3 percent), and heroin (0.7 percent).

Primary Drug Problems Among Adolescent Clients. Of the 478 adolescent clients served at FCC facilities in 2002, nearly 75 percent were treated for primary marijuana abuse and 20 percent for alcohol abuse (exhibit 2).

Among the 358 adolescent clients treated for marijuana abuse, approximately 56 percent used the drug weekly or daily.

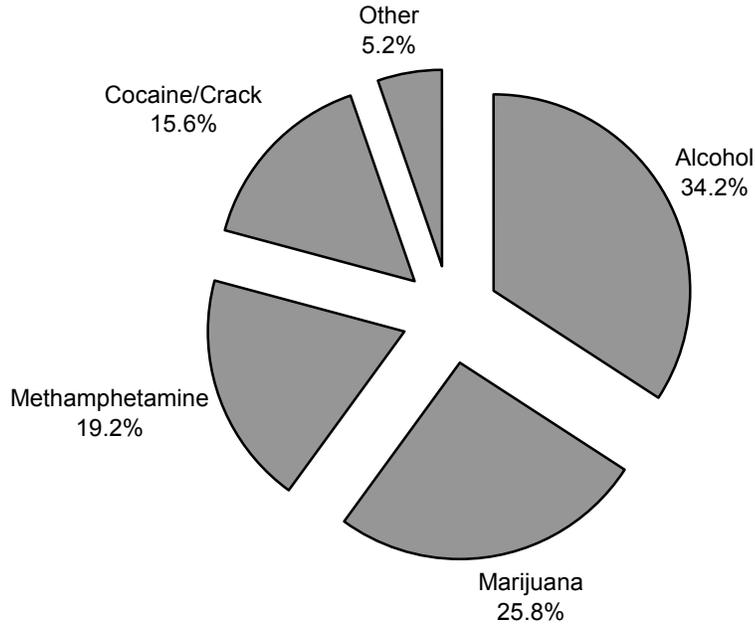
Eighty-two percent of the adolescent clients in 2002 were polydrug abusers. Nearly 63 percent used alcohol, 21 percent used marijuana, and 6 percent used benzodiazepines. Less frequently used secondary or tertiary drugs were cocaine/crack (1.3 percent), sedatives (1.3 percent), and inhalants (1.0 percent).

The Bootheel Task Force on Methamphetamine

Across two counties, the legal system has focused attention on methamphetamine. In 2002, there were 235 new cases opened. Twenty-two methamphetamine labs were seized, and 15 clandestine lab dumpsites were located. Chemical seizures occurred at 14 clandestine labs. Also, 94 persons were arrested for the manufacture, attempt to manufacture, or possession or sale of methamphetamine.

For inquiries concerning this report, please contact Myra Callahan, Executive Director, Family Counseling, Inc., 925 Highway VV, P.O. Box 71, Kennett, Missouri 63857, Phone: 573-888-6715, Fax: 573-888-9365, E-mail: <myra@familycounselingcenter.org>.

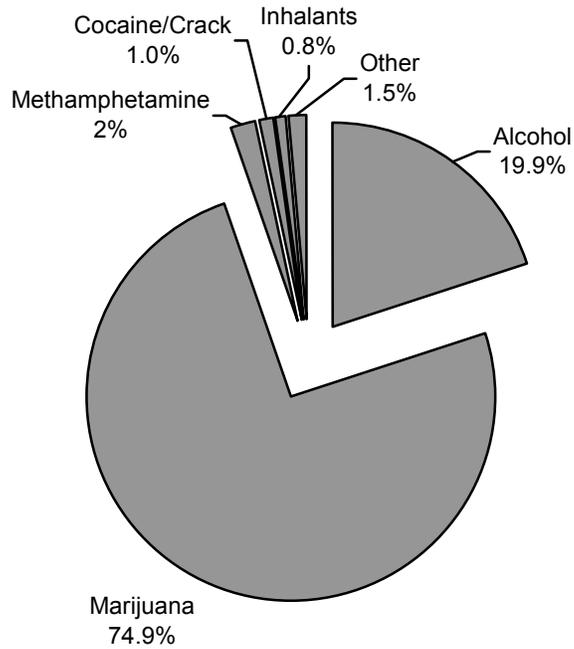
Exhibit 1. Primary Drugs of Abuse Among Adult FCC Clients, by Percent: 2002



N=1,278 adults

SOURCE: FCC

Exhibit 2. Primary Drugs of Abuse Among Adolescent FCC Clients, by Percent: 2002



N=478

SOURCE: FCC

The Club Drug Study: St. Louis, Miami, and Sydney, Australia—(CD-SLAM)

Linda B. Cottler, Ph.D., and Lee Hoffer, Ph.D.¹

Currently, Dr. Cottler and her team are conducting a multisite reliability and validity study of “club drug,” “pub drug,” or “party drug” use.² Surveillance data from around the world show alarming increases in the rates of club drug use among young adults. However, the current state of knowledge about abuse and dependence relevant to this use is severely limited. For example, one study in 1992 found that only 2 percent of respondents reportedly felt dependent on methylenedioxymethamphetamine (MDMA, often called ecstasy); however, 47 percent felt “addiction” to the drug was possible. Additionally, no criteria exist for measuring dependence on or abuse of MDMA, Rohypnol, gamma hydroxybutyrate (GHB), or ketamine. Such information is essential to a relevant public health response.

In 1997, Topp and colleagues at the National Drug and Alcohol Research Center in Sydney, Australia, reported that problems from MDMA existed and that reliability and validity data on the symptoms related to use of this drug were needed. They found that 64 percent of the respondents met criteria for dependence, and 21 percent met criteria for abuse. The most prevalent criteria reported were withdrawal, tolerance, and unsuccessful efforts to quit. Using data from a NIDA-funded reliability and validity study, Cottler and colleagues (2001) reported that MDMA users did experience dependence (43 percent) and abuse (34 percent). The most prevalent criteria reported by users were withdrawal, physically hazardous use of MDMA, and continuance of use despite harm associated with its use. Additionally, the team found that the age of MDMA drug use initiation for those in treatment preceded the use of **any** drug in a general population sample. Specifically, MDMA use was begun at age 14.5 among the treated group, while the first use of any other drug did not occur until 16.08 among the general population group, with onset of MDMA use occurring at age 19.13 in the general population sample.

The results of this new study will provide an unmatched effort to describe the nature and extent of self-reported dependence on MDMA and the other party drugs; to expand the Substance Abuse Module

(SAM) interview and to examine its psychometric properties; to understand reasons for unreliability in identifying abuse and dependence on club drugs; to develop and test a Risk Behavior Assessment (RBA) specifically related to club drugs; and to conduct qualitative research on the unique contextual factors facing users through focus groups. This study is being conducted in St. Louis, Miami, and Sydney, Australia.

In preparation for this study, focus groups were conducted at each site to uncover the patterns of drug use, concurrent drug use, age of onset of use, the effects of MDMA, medications used to reduce the effects of MDMA such as 5HTP, motivation for using, rave cultures, harm reduction strategies, and withdrawal symptoms experienced. Additionally, the cultural factors associated with use in each city were explored. Five groups were conducted in St. Louis, four groups in Miami, and two in Sydney. Some of the responses included the following:

- The low is as low as the high. (32-year-old female)
- On ketamine, if you get into a K-hole, you spin, get tunnel vision, and can lose days at a time. Of course, it may have been because I mixed K with acid. (29-year-old male)
- I have made a conscious effort not to drive when I am on X, but sometimes parties get busted and then people need to drive. (30-year-old male)
- A lot of people used drugs years ago to expand their minds; we use X to numb our minds. (33-year-old male)
- Self-experience is the best way for knowledge. (25-year-old male)
- People use X intravenously. They crush it up and put the powder into a spoon, mix it with water, and put it up. There are filters that are dangerous, cause you don’t know what else is in it, but that’s what your liver’s for. (33-year-old male)

¹ The authors are affiliated with Washington University School of Medicine, St. Louis, Missouri.

² The study was funded by the National Institute on Drug Abuse in response to a Request for Application (DA-01-101) entitled “Responding to Club Drugs and Other Emerging and Current Drug Abuse Trends.”

- I can use drugs professionally. I'm a professional drug user in that I have used drugs since I was 16, and I've used quite a few. (24-year-old female)
- I think that from everyone I've known who has done X, and myself, I've never known it to be addictive. (24-year-old female)
- I felt it on Suicide Tuesday—the day after the day I was recovering. It was awful. (multiple users)

After the focus groups, the CD-SLAM study (St. Louis, Australia, and Miami) began. The target sample size is 450 recent ecstasy and other club drug users, age 15–35. The respondents are recruited via flyers, newspapers, and respondent-driven sampling methods. The specific aims of the club-drug study are as follow:

- 1) Describe the nature and extent of self-reported dependence on and abuse of four specific types of club or party drugs, hereafter referred to as “club drugs” (specifically ecstasy, GHB, Rohypnol, and ketamine). This will be accomplished by determining whether “cookie cutter” diagnostic criteria used for other illicit drugs (such as those described in DSM³, ICD-10⁴, and the Edwards-Gross Dependence Syndrome) are generalizable to individual club drugs, and to what extent users report the hallmark symptoms of dependence and abuse, such as tolerance, withdrawal, craving, loss of control, and social consequences.
- 2) Expand the SAM to assess abuse of and dependence on specific club drugs and determine the psychometric properties (reliability and validity) of these disorders.
- 3) Understand the reasons for inconsistent answers and misunderstood questions, using Cognitive Interview Methodology to debrief respondents on the meaning of questions and the Discrepancy Interview Protocol (Cottler et al. 1994) to assess reasons for discrepancies between the test and retest interview.
- 4) Develop and test psychometric properties of a Risk Behavior Assessment to facilitate the collection of risk factor data relevant to club drug use, abuse, and dependence. Components will include, among others, use of over-the-counter booster drugs, spiritual factors, concomitant high-risk sexual behaviors, parental monitoring, and perceptions of harm.

- 5) Conduct qualitative research in each site on the unique contextual factors that relate to club drug use to help inform the revisions to the SAM and the RBA. Focus group topics include perceptions about club drug addiction, acquisition and use, profiles of users, the settings where club drugs are used, physiological and psychological effects of club drugs, reasons for club drug use, and dealer and user networks.
- 6) Disseminate the aggregate findings to each local community, to the larger scientific community, and specifically to local Drug Enforcement Administration (DEA) agents and Community Epidemiology Work Group (CEWG) representatives.

Since November 1, 2002, CD-SLAM has tested and retested 175 club drug users from the St. Louis area, 112 people from Miami, and 54 from Sydney. Currently, these data are being prepared for analyses. In addition to the epidemiologic study, 18 open-ended interviews have been conducted with local club drug users as part of qualitative substudy of club drug use conducted by Dr. Lee Hoffer with funds from his NIDA post-doctoral fellowship. While the formal data analysis from the project will be available for Missouri's next State Epidemiology Work Group report, some preliminary findings of note are presented below:

- Minors are hard to recruit at all sites.
- Cultural context must be considered in all phases, from the assessment development, to the recruitment, to the analyses.
- Booty-bumping (anal administration) or royal flush (anal administration using a turkey baster) is common in Sydney.
- Users report gay and bisexual behaviors, even though these populations have not been targeted for recruitment.
- Respondents are testing positive for chlamydia and gonorrhea.
- Vitamin supplements and chemicals thought to affect brain pharmacology are frequently reported as legal enhancements to MDMA.
- While initial trends nationwide may be showing a decrease in club drug use, club drug use in specified targeted populations remains popular among young adults age 18–25.

³ *Diagnostic and Statistical Manual of Mental Disorders*, Third and Fourth Revisions, American Psychiatric Association.

⁴ *International Classification of Disease, Tenth Revision*.

- Club drugs, in particular ecstasy, remain easily accessible in many venues, such as dance clubs and bars, as well as music concerts, festivals, raves, and house parties.
- Evidence indicates there are “withdrawal” symptoms from habitual ecstasy use, although clearly identifying withdrawal symptoms is challenging because of the contexts in which the drug is used.
- Perception of harm from MDMA is low. For example, club drug users do not believe club drugs are as harmful as “hard” drugs, such as cocaine, methamphetamines, or heroin. Few users believe they can overdose on club drugs.
- Even though many club drug users are informed about the effects of the drugs they are taking, it is unclear what the source of this information is, whether it is reliable, or if they learn about club drugs before or after taking the drugs.

The field lacks a tool that can assess the abuse and dependence potential of these drugs. Such an assess-

ment will enable researchers around the globe to compare findings. This study is attempting to do just that. When more data are available, they will be reported to the CEWG.

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Special Presentations:

ADAM and NFLIS

Update on ADAM

*Diana Noone*¹

OVERVIEW OF THE ADAM PROGRAM

The Arrestee Drug Abuse Monitoring Program serves the following purposes:

- As an **information system** that include interview and drug testing of jail inmates.
- As a **monitoring system** to assess trends and prevalence.
- As a **research platform** that permits longitudinal evaluations, and aids in program planning, and enforcement, treatment, and prevention strategies.
- As a **policy tool** to help policymakers make informed decisions about drugs and crime.

ADAM SITES

Currently, there are 35 ADAM site. There have been changes, including changes in CEWG sites. Other changes are in the implementation stage. In Texas, the Laredo site has been lost but Dallas is now in the program and efforts are being reactivated in Houston. In Florida, data collection may begin this year in Miami and a site is expected to be operational for the first time in Tampa. Boston may be part of the program in the third quarter of 2003.

THE ADAM PROTOCOL

Sampling. Each site works with the ADAM contractor, National Opinion Research Corporation Council (NORC), in sampling arrestees. Probability sampling is used to select adult make arrestees at each site. Data collection on juvenile arrestees has ceased; however, through other funding, Phoenix, San Antonio, and San Diego continued juvenile data collection using the same protocol.

Data Collection. Data collection is managed by professionally-trained interviewers and site staff. Data have been collected quarterly but ADAM is converting to a trimester system in 2004. Most sites will not be collecting in the last quarter of 2003 because of this change.

A core standard interview is administered. There is also voluntary, anonymous, and confidential interviews and drug testing. Alcohol testing was implemented for the first time in 2003, an effort still in the early stages. A drug-testing specialist, Natalie Lu, is attempting to determine the viability of alcohol testing, given the sampling plan. Currently, samples are drawn from a “stock and flow” system. Because alcohol does not stay in the system very long, most arrestees would need to be sampled from the flow, that is, arrestees who are just coming into the jails. This needs further exploration. Also, a pilot test involving ecstasy is underway at seven sites; depending on what the results yield, this testing may be added at all sites.

Special Topic Areas and Addenda. Several addenda to ADAM are in process:

- An addenda on the human immunodeficiency virus (HIV) and other sexually transmitted diseases (STDs)
- A firearms addenda, which is funded in four sites
- A dual diagnosis addenda
- A domestic violence addenda
- An addenda on children of arrestees
- An addenda on alcohol and tobacco use

Some of the addenda reflect funding for community-based research. An effort in San Jose, California, is examining the effects of alcohol and drug use and criminal justice involvement on the family. In Cleveland, Ohio, funding has been provided to screen for co-occurring mental health and substance abuse disorders in adult arrestees.

OTHER RECENT EFFORTS

Three ADAM sites are CSAT-funded affiliate sites. These are Ria Arriba, New Mexico; Tulsa, Oklahoma; and Woodbury County, Iowa. A fourth one in Indiana is expected to be operational next year.

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Also, many ADAM sites noted that they were provided monies to collect data but needed additional funds to analyze the data. Seven sites have been funded to conduct secondary analyses to compare self-reported drug use to urinalysis results, assess drug market and treatment experiences of arrestees, and examine polydrug use and the emergence of club drug use in the arrestee population. A major initiative, called the “local coordinating councils”, is designed to disseminate the ADAM data to the local public, policymakers, researchers, and others to identify and create a local research agenda, and to support and conduct research and evaluation to enhance

communities’ understanding of drugs and crime. The addenda and the secondary analysis efforts were based on what local coordinating councils wanted.

PUBLICATIONS

Recently released publications can be downloaded from <www.adam.nij.net>. Also, there is a drug and crime agenda that Henry Brownstein and others have worked on, it is scheduled to be available on the ADAM Web site in July 2003 and will be disseminated at NIJ’s July Research and Evaluation Conference in Washington, D.C.

For inquiries concerning this report, please contact Diana Noone, National Institute of Justice, 810 Seventh Street, NW, Washington, D.C., 20531, Phone: 202-616-4786, Fax: 202-514-8200, E-mail: <nooned@ojp.usdoj.gov>.

National Forensic Laboratory Information System (NFLIS)

Liquan Wong¹ and Valley Rachal²

Overview of NFLIS

The National Forensic Laboratory Information System (NFLIS) is a program developed and managed by the Drug Enforcement Administration (DEA), Division of Diversion Control, Drug and Chemical Evaluation Section. This Section of the DEA is responsible for reviewing and recommending the regulatory scheduling of drugs. While the NFLIS program is relatively new, it has origins dating back to the mid-1980s. However, funding for the program was not obtained until late 1997. Since 1997, NFLIS has grown rapidly, emerging as a fully operational information system in early 2000. The NFLIS database is now being used for Federal regulatory and enforcement purposes. State and local agencies are also using NFLIS data to inform a variety of policy and operational initiatives related to drug abuse and drug control issues.

Objectives

The primary purpose of NFLIS is to provide the DEA with data that can inform and support scheduling efforts, including scheduling new drugs and changing the schedules of currently controlled substances. More specifically, NFLIS helps the drug control community achieve its mission by:

- Providing chemically verified data that supports
 - drug policy and scheduling decisions
 - drug control enforcement resource allocations
- Documenting national, regional, and local patterns of drugs seized by law enforcement
- Identifying emerging drug problems geographically and over time
- Supplementing other drug data sources including DEA's System to Retrieve Information from Drug Evidence II (STRIDE), the Drug Abuse Warning Network (DAWN), the Arrestee Drug Abuse Monitoring program (ADAM), the National Survey on Drug Abuse and Health (NSDUH), and the Monitoring the Future Survey

- Providing State and local laboratories with the ability to access and analyze their own laboratory, as well as regional and national data

The System

As of August 2003, 197 of the Nation's approximately 300 State and local laboratories were participating in NFLIS; 170 were reporting regularly. NFLIS labs handle over 60 percent of the Nation's estimated 1.2 million annual State and local drug cases. Plans are under way to enroll all additional State and local laboratories, as well as to incorporate Federal laboratories into the system.

NFLIS systematically collects drug analysis results from the laboratories participating in the system. The key features of NFLIS are as follows:

- The database consists of case and item/exhibit-level information.
- The program is voluntary, but a moderate level of assistance is provided to the laboratories needing assistance to join NFLIS.
- The laboratories report data in a convenient format that is designed to minimize the burden on the labs to report the data.
- The Interactive Data Site (IDS) permits remote data analysis.
- Results are published in annual, semiannual, and special topic reports; special analyses are conducted on an ad hoc basis.

The raw data are available by remote dial-up access. Specific lab/lab system case-level information can be accessed by jurisdiction, county, region, or State. At this point, data are accessible only to participating labs, project staff, DEA, and other Federal agencies. Plans are under way, however, to expand accessibility so the data will be available on the Web with requirement of a user ID and password. It is expected that the expanded access will be operational during fall 2003.

¹ The author is affiliated with the Drug Enforcement Administration and is the Federal Program Officer for NFLIS.

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Selected Data—2002

National and regional estimates for the 25 most commonly analyzed drugs by State and local laboratories are shown in exhibit 1. The top four drugs—cannabis (35.2 percent), cocaine (31.4 percent), methamphetamine (11.8 percent), and heroin (6.3 percent)—accounted for about 85 percent of all drugs analyzed by State and local labs during 2002. Regionally, cannabis represented the largest proportion of drugs analyzed in the Midwest, approximately 48 percent. Comparable percentages were found in other regions: the West (23.4 percent), the Northeast (33.2 percent), and the South (34.2 percent). Nationally, about 72 percent of all cannabis drug items analyzed were in either the South or Midwest regions. About one-half of all cocaine items came from the South region. The West accounted for about 12 percent and the Midwest for about 21 percent of all the cocaine items for the Nation. Methamphetamine was most prevalent in the West, accounting for more than 64 percent of all methamphetamine items analyzed nationally. While the South reported 20 percent, followed by the Midwest (15 percent), of the methamphetamine items nationally, the Northeast accounted for less than 1 percent. The Northeast and South reported the largest number of heroin items, 35 and 32 percent, respectively.

The most frequently identified drug combinations in 2002 involved cocaine/heroin (17 percent) and cannabis/cocaine (10 percent).

NFLIS Advantages and Limitations

Among NFLIS advantages are the following:

- Scientifically verified data
- A platform for special studies (e.g., location analyses)
- Detailed information on drug characteristics
- Connection to drug seizure incidents
- A complement to other data systems
- A facilitator of information exchange and collaboration

Limitations of NFLIS include the differences among lab policies and procedures regarding receipt and analysis of cases, thus how well the analyzed drugs represent the total seized drugs could be affected. Also, Federal data are not yet included. The data are also affected by local law enforcement priorities, which often reflect the most important community issues. For example, law enforcement agencies in the West often focus on methamphetamine, while different drugs are emphasized in other areas.

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Exhibit 1. National Estimates for the 25 Most Frequently Identified Drugs: 2002

Drug	National		West		Midwest		Northeast		South	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Cannabis/ THC	633,321	35.22	83,593	23.36	209,136	47.99	91,662	33.17	248,930	34.19
Cocaine	564,949	31.42	65,662	18.35	116,348	26.70	104,122	37.68	278,817	38.30
Methamphetamine	211,916	11.79	136,686	38.20	31,366	7.20	550	0.20	43,314	5.95
Heroin	113,000	6.28	14,124	3.95	22,846	5.24	39,834	14.41	36,195	4.97
Non-controlled, non-narcotic drug	21,715	1.21	8,861	2.48	4,401	1.01	4,470	1.62	3,983	0.55
Alprazolam	20,124	1.12	–	–	3,847	0.88	2,432	0.88	12,622	1.73
MDMA	18,382	1.02	3,837	1.07	2,065	0.47	3,520	1.27	8,959	1.23
Oxycodone	17,619	0.98	1,146	0.32	3,385	0.78	4,055	1.47	9,033	1.24
Hydrocodone	16,869	0.94	1,931	0.54	2,813	0.65	1,571	0.57	10,554	1.45
Pseudoephedrine	12,058	0.67	4,357	1.22	4,487	1.03	–	–	3,198	0.44
Diazepam	9,629	0.54	1,211	0.34	1,709	0.39	1,090	0.39	5,619	0.77
Clonazepam	6,366	0.35	580	0.16	1,224	0.28	1,965	0.71	2,597	0.36
Phencyclidine (PCP)	5,559	0.31	1,921	0.54	778	0.18	1,885	0.68	976	0.13
Acetaminophen	4,473	0.25	–	–	1,589	0.36	100	0.04	1,301	0.18
Amphetamine	3,921	0.22	1,038	0.29	795	0.18	430	0.16	1,658	0.23
Methadone	3,867	0.22	400	0.11	679	0.16	1,259	0.46	1,530	0.21
Codeine	3,603	0.20	542	0.15	983	0.23	437	0.16	1,640	0.23
Psilocin	3,005	0.17	1,219	0.34	670	0.15	207	0.07	909	0.12
Ketamine	2,950	0.16	481	0.13	477	0.11	1,193	0.43	799	0.11
Carisoprodol	2,946	0.16	686	0.19	477	0.11	153	0.06	1,630	0.22
Propoxyphene	2,495	0.14	170	0.05	753	0.17	213	0.08	1,359	0.19
Morphine	2,424	0.13	458	0.13	665	0.15	317	0.11	985	0.14
Methylphenidate	1,845	0.10	219	0.06	543	0.12	366	0.13	717	0.10
Lorazepam	1,767	0.10	228	0.06	559	0.13	273	0.10	708	0.10
Butalbital	1,750	0.10	–	–	1,385	0.32	111	0.04	232	0.03
<i>Top 25 Total</i>	1,686,553	93.80	332,079	92.81	413,980	94.98	262,229	94.88	678,265	93.16
<i>All Other Analyzed Items</i>	111,493	6.20	25,726	7.19	21,847	5.01	14,140	5.12	49,780	6.84
<i>Total Analyzed Items</i>	1,798,045		357,806		435,827		276,369		728,044	

SOURCE: NFLIS Database

Special Presentations:

International Reports

The Most Recent Canadian Substance Use and Abuse Data and Update on the Canadian Community Epidemiology Network on Drug Use (CCENDU)

Colleen Anne Dell, Ph.D.¹

ABSTRACT

Chaired by the Canadian Centre on Substance Abuse, Canada's national addictions agency, the CCENDU is a multilevel collaborative drug surveillance project. CCENDU collects, analyzes, and disseminates quantitative and qualitative information on drug abuse. Two data sources, the 1994–1995 National Population Health Survey and the 1994–1995 National Longitudinal Survey of Children and Youth, similarly reported that between 17 and 25 percent of women drank at some point during their pregnancy, and between 7 and 9 percent drank alcohol throughout their pregnancy. According to the 1998–1999 National Longitudinal Study of Children and Youth, it appears that the prevalence of alcohol use during pregnancy has decreased since the 1994–1995 surveys. In 1998–1999, it was reported that 14.4 percent of women drank at some point during their pregnancy and 4.9 percent drank throughout their entire pregnancy. This is in contrast to the United States, where reports show an increase in drinking among pregnant women over the past several years.

INTRODUCTION

Description of the CCENDU

The Canadian Community Epidemiology Network on Drug Use (CCENDU) was established in response to a 1995 feasibility study that identified the need for a Canada-wide surveillance system on substance use. Spearheaded by the Canadian Centre on Substance Abuse (CCSA) and guided by a steering committee, CCENDU is a collaborative project involving Federal, provincial, and community agencies, with intersecting interests in drug use, the health and legal consequences of use, treatment, and law enforcement. The strategic vision of CCENDU is a partnership to monitor emerging drug trends and associated factors.

Twelve urban centers currently participate in CCENDU to varying degrees, and additional sites are

under development. Despite ongoing funding concerns, site reports will be released in autumn 2003 for Vancouver, Edmonton, Regina, Winnipeg, Toronto, Ottawa, and Fredericton. (The reports will be available at <<http://www.ccsa.ca>>.) The objective of this report is twofold: to provide an update on the CCENDU network and to provide the most current national data not reported on at the December 2002 CEWG meeting. The report concludes with recommendations for the network to improve its monitoring capabilities.

Network Update

Several advancements in the CCENDU network have taken place since the December 2002 CEWG meeting. CCENDU has continued to establish its national framework. This includes the completion and forthcoming release of its national report, continued provision of the most recent available data to local sites, inquiries into additional data sources (e.g., correctional facilities, vintners, home-brewing), expansion of CCENDU's Web site for posting the most recent data in a timely manner (at national, provincial and local levels) and providing Web site links to released data sources, and continued communication with the well-established Community Epidemiology Work Group in the United States.

CCENDU has also progressed in its joint project with the Health, Education and Enforcement in Partnership (HEP) network: Establishing a Proactive Model for Identifying and Developing Community Specific Responses to Substance Abuse. Information on this project is available at <<http://www.ccsa.ca/ncpc/htm>>. This project has been funded for \$200,000 per year for the next 3 years. The vision of the project is "a venue to establish, strengthen and maintain collaboration at the local level within the substance abuse field by establishing a proactive model for identifying and developing community specific responses." Existing CCENDU sites will be expanded, and new ones will be established. The specific goals of the joint project are as follows:

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- To develop an innovative and sustainable means of addressing a root cause of crime and substance abuse at the community level by establishing a model for identifying, developing, and implementing community-specific responses
- To establish community partnerships in the crime and substance abuse fields that build on existing local, national, and international governmental and nongovernmental collaborations rooted in the CCENDU and HEP networks, which are locally driven and action oriented
- To document and evaluate the established community response model so it may be applied to other communities across Canada, both within and outside the realm of substance abuse

A coordinator for the project (Mona Wynn) was hired; the first five sites have been identified; supporting materials are currently being developed for the sites, including a tool kit and a companion Web site; and preliminary research into the development of a model for community responses to substance abuse has taken place. Interviews were held with 40 CCENDU and HEP network members, and the findings will be released in August 2003.

Data Sources

Each CCENDU site collects, collates, and interprets data and information in eight major drug use categories (alcohol, cocaine, cannabis, heroin, sedative-hypnotics and tranquilizers, hallucinogens other than cannabis, stimulants other than cocaine, and licit drugs) and in six indicator areas (prevalence; enforcement; treatment; morbidity; mortality; and the human immunodeficiency virus [HIV], acquired immunodeficiency syndrome [AIDS], and hepatitis C, which includes injection drug use and needle exchange information). The numbers presented in this report vary slightly from those presented in the previous CCENDU report (December 2002), because of a revision of the definition of drug use. National data, including survey data, are accessed and disaggregated in the six indicator areas to the local sites when possible.

- **National survey data** were provided by various sources. Nationally, the past quarter century in Canada has been characterized by inconsistent survey data collection on substance use and abuse. Although national data collection has been sporadic, there are several substance-use specific and related national surveys that can be

utilized. These include the 2002 Road Safety Monitor Survey (EKOS Research); 2000–2001 Canadian Community Health Survey (Statistics Canada); 1998–1999 National Longitudinal Survey of Children and Youth (Statistics Canada); and the 1994–1995, 1996–1997, and 1998–1999 National Population Health Surveys (Statistics Canada). The accuracy of statistical analysis is affected by the size of sampling variation. When taking the sampling variation or error into account, some statistical estimates may not be statistically significant. Therefore, caution should be exercised in interpretation of comparative differences calculated with sample survey data in this report.

- Other national data sources were also used to compile this report. These key sources include prevalence sources (national surveys; 2002 National Health Expenditure Database, Canadian Institute for Health Information); treatment sources (Data-base of Addiction Treatment Services, CCSA; National Native Alcohol and Drug Abuse Program and the National Youth Solvent Abuse Program Treatment Centres Directory, First Nations and Inuit Health Branch; 1998–2002 Kids Help Phone); law enforcement sources (1994/95–2000/01 Adult Criminal Court Survey, Statistics Canada;) morbidity data (2000–2001 Hospital Morbidity Database, Canadian Institute for Health Information) (these have been updated since the December 2002 CCENDU CEWG report); mortality sources (1999 Vital Statistics Database, Health Canada), and HIV/AIDS and hepatitis C sources (Health Canada Surveillance Reports).

NATIONAL DRUG ABUSE TRENDS

This section draws on Canadian surveys, data sources, and select research reports that outline prevalence, treatment, law enforcement, morbidity, mortality, and HIV/AIDS/hepatitis C and associated factors related to substance use. When useful, comparisons are made between females and males. To provide consistency with other published reports, the data are weighted. Although this report focuses almost exclusively on national data sources, whenever possible, the data have been disaggregated to the local and/or provincial levels and distributed to the sites for inclusion in their reports. These reports can be accessed at the CCSA Web site: <<http://www.ccsa.ca/ccendu/index.htm>>.

Prevalence

Alcohol

According to the National Population Health Survey, from 1994–1995 to 1998–1999, there was an increase in females and males who reported drinking in the past year: the proportions were 71.5 and 74.0 percent for females, respectively, and 79.8 and 82.2 percent for males, respectively. Similarly, according to the 1998–1999 National Longitudinal Survey of Children and Youth, 77.5 percent of respondents who identified themselves as the person most knowledgeable about the household child (93.5 percent were female) reported having consumed alcohol in the past year. It was also reported that 82.9 percent of the respondents' spouses drank alcohol within the past year. The more recent 2000–2001 Canadian Community Health Survey reported that among current drinkers age 15 and older, 29.0 percent of males and 11.4 percent of females drank 5 or more drinks on 1 occasion 12 or more times in the past year.

According to the 1994–1995 National Population Health Survey and the 1994–1995 National Longitudinal Survey of Children and Youth, it was similarly reported that between 17 and 25 percent of women drank at some point during their pregnancy, and between 7 percent and 9 percent drank alcohol throughout their pregnancy. For those who did drink, 94 percent reported consuming less than two drinks on the days they drank, 3 percent had between three and four drinks, and less than 3 percent drank five or more drinks on each occasion. According to the 1998–1999 National Longitudinal Survey of Children and Youth, it appears that the prevalence of alcohol use during pregnancy has decreased since the 1994–1995 survey. In 1998–1999, it was reported that 14.4 percent of women drank at some point during their pregnancy and 4.9 percent drank throughout their entire pregnancy. This contrasts with the trend in the United States, which shows increased drinking over the past several years among pregnant women.

Illicit Drugs

The 1998–1999 National Longitudinal Survey of Children and Youth asked youth age 14–15 how many of their friends had tried marijuana: 8.0 percent stated all their friends had tried marijuana, 15.3 percent reported most of their friends had tried it, 30.8 percent said a few of their friends had, and 46 percent reported that none of their friends had tried marijuana. There was minor variation by sex. The survey also asked 12- and 13-year-olds the number of friends they had who had tried cannabis products: 0.8

percent stated all their friends had tried cannabis products, 3.0 percent said most of their friends had tried them, 23.2 percent reported a few of their friends had, and 73.0 percent said none of their friends had tried cannabis products. Again, there was minor variation by sex. The considerably lower numbers for 12- and 13-year-olds may be explained in part by the different wording of the question.

The 2002 Road Safety Monitor, a survey of Canadian drivers designed to acquire information on road safety issues and driving practices, revealed that over the past 12 months, 17.7 percent of respondents admitted to driving within 2 hours of taking some type of drug that was potentially impairing. This translates into 3.7 million Canadians driving at least once in the past year after taking a potentially impairing drug. Driving while taking illegal drugs was the least common (0.9 percent), followed by driving while taking marijuana (1.5 percent), prescription medication (2.2 percent), and over-the-counter drugs (15.9 percent).

Licit Drugs

Similar to concerns raised in various CEWG site reports, there is an increasing need to collect data on licit drugs. Analysis of the 1998–1999 National Population Health Survey found that the percentage of females age 15 and older reporting past-month use of selected non-prescription and prescription drugs increased from 1996–1997 to 1998–1999 in all categories (tranquillizers, antidepressants, sleeping pills, and opioid analgesics), with the exception of diet pills, which remained constant (0.7 percent). The most substantial increase was in the use of antidepressants: 4.7 percent of females reported use in 1996–1997, compared with 5.9 percent in 1998–1999 (exhibit 1). Unlike females, from 1996–1997 to 1998–1999, males reported an increase in only one category of licit drug use—opioid analgesics (from 4.1 percent in 1996–1997 to 4.2 percent in 1998–1999). Like that for females, the proportion of males using diet pills was stable (2.5 percent).

Although not a direct measure of prevalence, figures on health care expenditures for licit prescription and nonprescription drugs can offer some insight into use patterns. Health expenditure data are available from 1975 to 2002. During this time period, the expenditure for prescribed drugs increased from \$770.6 million to \$14.6 billion (current dollar value and adjusted for inflation). The expenditure for nonprescribed drugs increased from \$305.6 million in 1975 to \$3.6 billion in 2002 (current dollar value and adjusted for inflation). Further, in 1975, drugs accounted for 8.8 percent of all health expenditures,

while they accounted for 15.4 percent in 2000 and were forecasted to account for 16.2 percent in 2002.

Enforcement

Alcohol

According to the Adult Criminal Court Survey data by case, in 2000–2001, 5.3 adult females per 10,000 adult female population in Canada were processed through the court system for the alcohol-specific crime category of impaired driving. This represents a decrease from 7.0 in 1994–95. (Note that when a “case” involves more than one legal charge, information for the most recent serious offense is recorded. All charges in a case are ranked according to an “offence severity scale.”) Comparatively, there was a considerable decrease in adult males processed through the court system for impaired driving in Canada: 66.3 per 10,000 adult male population in 1994–1995, compared with 39.5 in 2000–2001.

Illicit Drugs

According to the Adult Criminal Court Survey illicit drug-related data by case, in 2000–2001, 3.3 adult females per 10,000 adult female population in Canada were processed through the court system for trafficking (including trafficking/importing drugs, heroin, cocaine, cannabis, restricted drugs, and other drugs) and possession (including possession of drugs, heroin, cocaine, cannabis, restricted drugs, and other drugs). This is a decrease from the rate of 4.3 in 1994–1995. In comparison, the rate of drug-related offenses of trafficking and possession for males was substantially higher, with 21.2 males per 10,000 male population processed through the court system in 2000–2001. This, too, represents a decrease from 1994–1995 (25.1 males per 10,000 male population).

Treatment

As of February 2003, the CCSA Database of Addiction Treatment Services in Canada identified 1,102 addiction treatment programs, which is estimated to represent approximately 85 percent of all addiction treatment programs offered in Canada. The most common type of treatment service available was outpatient ($n=618$); the least common was medium-term residential (1–3 months) (30). Data for the types of addiction treated showed that the greatest number of services were provided for alcohol (980) and the lowest number were provided for hallucinogens (543).

According to the National Native Alcohol and Drug Abuse Program and the National Youth Solvent

Abuse Program Treatment Centres Directory, as of February 2003, a total of 57 treatment centres were identified, 9 of which were for solvent abuse. Of these, approximately four were designated as outpatient only. In total, there were approximately 803 beds, 108 of which were for solvent abuse.

In 2002, the overall call volume to Kids Help Phone from youth concerning substance abuse issues, and for which indepth counseling was required, was 3,195, or 4.4 percent of the total volume of calls requiring indepth counseling. This is a steady decrease since 1998. The substance abuse-specific issues that youth called about and for which they required indepth counseling concerned primarily drugs (59 percent), followed by alcohol (23 percent); cigarettes (10 percent); alcohol and drugs combined (5 percent); drugs, alcohol, and cigarettes combined (2 percent); drugs and cigarettes (1 percent); and alcohol and cigarettes combined (1 percent). This breakdown is relatively stable from 1998.

Morbidity

Morbidity is defined as the burden of disease related to alcohol and other drug-related injuries (illicit and licit) based on diagnosis at the time of hospital separation. Drawing on data tabulated from the 2000–2001 Hospital Morbidity Database, it is estimated that 56,161 live and dead hospital separations in Canada for individuals age 15 and older were attributable to alcohol and drug use as the most responsible diagnosis (the most serious reason for the hospital separation). More hospital separations (both live and dead) were for males (51.8 percent [$n=29,096$]) than females (48.2 percent [$n=27,065$]). (The ICD-9 classifications used in this report were identified based on commonality of codes used among CCENDU site coordinators and local experts.)

Illicit drug use is defined as the nonmedical and nonscientific use of drugs that are listed in Schedules I, II, III, and IV controlled by the Controlled Drugs and Substances Act (e.g., cocaine), as well as drugs that are without doubt reportedly used for a purpose other than that for which they were medically intended (categorized as poisoning and select neonatal in the International Classification of Diseases, Injuries, and Causes of Death, 9th revision). In 2001, suicide (attempted) and self-inflicted poisoning (by solid or liquid method) accounted for the highest number of most responsible diagnosis live separations for females (11,339) and males (5,826). Suicide (attempted) and self-inflicted poisoning by solid or liquid method also represented the leading cause of most responsible diagnosis among dead

hospital separations for both females (41) and males (65).

Licit/illicit drug use is defined as the use of drugs for which it is not possible to determine (e.g., accidental poisonings) whether the purpose of use was medically or scientifically intended. It is estimated that in 2001, 1,843 female and 1,393 male live hospital separations were attributable to accidental poisoning by drugs, medicaments, and biologicals as the most responsible diagnosis. Examining dead separations by most responsible diagnosis, the highest number was again attributed to accidental poisoning by drugs, medicaments, and biologicals (38 males and 34 females).

Mortality

According to the 1999 Statistics Canada Causes of Death Shelf Tables, 4,502 deaths were attributable to alcohol and illicit and licit drug-related mortality. This is a decrease from 1998 (4,576). More specifically, among females age 15 and older, there was an increase in both licit/illicit drug deaths (from 231 in 1998 to 253 in 1999) and illicit drug deaths (from 241 in 1998 to 250 in 1999). Among males, there was a decrease in licit/illicit drug deaths (from 617 in 1998 to 593 in 1999) and an increase in illicit drug deaths (from 256 in 1998 to 267 in 1999).

Regarding illicit drug use, in 1999 the leading causes of death for females were suicide and self-inflicted poisoning by solid or liquid method (249), followed by cocaine abuse (1). There was little change from 1998, when 240 deaths were attributable to suicide and self-inflicted poisoning by solid or liquid method and 1 was related to cocaine abuse. For males, the leading causes were similar to those for females, that is, suicide and self-inflicted poisoning by solid or liquid method (262) and cocaine abuse (5). There was some change since 1998, when 245 illicit drug deaths among males were attributable to suicide and self-inflicted poisoning by solid or liquid method, 10 to cocaine abuse, and 1 to cocaine-type drug dependence.

Examining licit/illicit drug use, the majority of deaths among females in 1999 were a consequence of accidental poisoning by drugs, medicaments, and biologicals (234), followed by other, mixed, or unspecified drug abuse (13) and unspecified drug

dependence (3). In 1998, the majority of licit/illicit drug deaths were also accidental poisonings by drugs, medicaments, and biologicals (1,213); other, mixed, or unspecified drug abuse (15); and unspecified drug dependence (3). As with females, the leading cause of licit/illicit drug death among males was accidental poisoning by drugs, medicaments, and biologicals (562), followed by other, mixed, or unspecified drug abuse (25); unspecified drug dependence (4); morphine-type drug dependence (1); and amphetamine nondependent (1). In 1998, the causes among males were also accidental poisonings by drugs, medicaments, and biologicals (586), followed by other, mixed, or unspecified drug abuse (22); unspecified drug dependence (5); morphine-type drug dependence (2); barbiturates and tranquilizers (1); and morphine nondependent (1).

INFECTIOUS DISEASES RELATED TO DRUG USE

HIV/AIDS

According to 2002 Health Canada Laboratory Centre for Disease Control data, cumulative through December 31, 2001, there were a total of 1,219 positive HIV cases in which injection drug use was identified as the risk factor among women and 2,768 such cases among men. (The figure for females from the December 2002 CEWG report, 1,123, has been updated.) For both females and males, there has been a decrease over time in the absolute numbers of HIV cases related to injection drug use. However, an examination of all risk factors for HIV shows that injection drug use is high for both females and males. From 1985 to 2001, injection drug use accounted for an average of 41.5 percent of all female HIV cases and 23.0 percent of all male HIV cases.

Hepatitis C

Data from the Enhanced Hepatitis Strain Surveillance System, Health Canada, and from published studies have shown that injection drug use and the sharing of needles is the primary mode of hepatitis C transmission in Canada and it accounts for approximately 70 percent of all new infections (LCDC 1999).

FUTURE ACTIVITIES

General recommendations have been made for CCENDU to improve its monitoring capabilities, including the following:

- **Prevalence**—Support conducting a national incidence/prevalence survey
- **Treatment**—Collect data from self-help groups and other forms of intervention
- **Enforcement**—Augment current data with qualitative data collection
- **Mortality**—Gain greater and affordable access to national systems for collecting and reporting information on hospitalizations
- **Morbidity**—Address standardization of data collection among the local CCENDU sites

- **HIV, AIDS, and Hepatitis C**—Expand data collection and further accounting for injection drug use

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Exhibit 1. Use of Licit Drugs Among Persons Age 15 and Older in Canada, by Gender and Survey Year: 1994–1999

Drug	1994–1995	1996–1997	1998–1999
Tranquillizers			
Females	3.4	3.4	3.5
Males	1.8	2.0	1.9
Diet Pills			
Females	0.3	0.7	0.7
Males	0.1	0.3	0.1
Antidepressants			
Females	3.8	4.7	5.9
Males	3.1	2.5	2.5
Opioid Analgesics			
Females	4.9 ¹	5.4 ¹	5.8 ²
Males	3.6 ¹	4.1 ¹	4.2
Sleeping Pills			
Females	3.6	4.0	4.8
Males	1.9	2.9	2.7

¹ Codeine, Demerol, or morphine

² Codeine only

SOURCE: NPHS

Update of the Epidemiologic Surveillance System of Addictions (SISVEA) in Mexico: 2002

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ABSTRACT

This update of Mexico's Epidemiologic Surveillance System of Addictions covers information from treatment centers, juvenile detention centers, and medical examiners reported for the year 2002. Among 18,070 patients treated in government treatment centers (GTCs) and 31,819 patients treated in nongovernment treatment centers (NGCs), alcohol and marijuana were the most frequently reported drugs of first use. Cocaine ranked first at GTCs and second at NGCs as the primary drug of abuse. In both GTCs and NGCs, a majority of patients used multiple drugs. Among juvenile arrestees, the most frequently used drugs were marijuana (37.5 percent), cocaine (21.2 percent), and inhalants (16.1 percent). Alcohol was involved in more than 81 percent of drug-related deaths.

INTRODUCTION

The Epidemiologic Surveillance System of Addictions of Mexico (SISVEA), created in 1990, is the outcome of collaboration among different government and nongovernment agencies. It has provided periodic and timely information on tobacco, alcohol, medical, and illegal drug use. SISVEA information allows staff to identify risk groups, new drugs, changes in consumption patterns, and risk factors associated with the use and abuse of alcohol, tobacco, marijuana, cocaine, heroin, and other drugs.

SISVEA began 13 years ago with only eight cities (mainly at the northern border of Mexico). Currently, SISVEA gathers information from 53 cities; 38 percent are located along the northern border, and the rest are in metropolitan and recreational areas in other parts of Mexico. The SISVEA system has evolved and now collects information on five indicators from different sources. This report provides an update of SISVEA activities during 2002.

DATA SOURCES

The sources of data used to construct different indicators are described below:

- **Treatment data** cover the characteristics and consumption patterns related to the first drug of use and primary drug of use. The data are collected from government treatment centers (GTCs, the Centers of Juvenile Integration) and nongovernment treatment centers (NGCs) in the participating SISVEA cities.
- **Drug consumption data** are gathered for the general population and specific target groups, such as juvenile arrestees.
- **Medical examiners (ME) data** cover drug-related deaths, including accidental or violent deaths (homicides or suicides) in cases where drug abuse may be the direct cause of death or a contributing factor.

DRUG ABUSE PATTERNS AND TRENDS

Marijuana

According to GTCs, marijuana users during 2002 were mostly male (91.6 percent); 30.2 percent were age 15–19, 90.4 percent had only an elementary school education, 60.2 percent were single, and 50.8 percent were members of a middle-low socioeconomic group (exhibit 1). The age of onset for 92.0 percent of marijuana users was between 10 and 19 years of age; 64.5 percent reported daily use.

Among GTC patients, marijuana ranked second as both the drug of first use (13.5 percent) and as a primary drug (18.2 percent) (exhibit 2).

Based on data gathered from GTCs in 2002 on the natural history of marijuana use among patients, 11.2 percent used only marijuana (i.e., were “monodrug users”) at treatment entry; 88.8 percent used a second drug, mainly alcohol (29.8 percent) or cocaine (22.5 percent) (exhibit 3). Of the multiple drug users, 82.8 percent had advanced to a third drug, usually cocaine (24.6 percent), alcohol (20.2 percent), tobacco (15.0 percent), or inhalants (12.4 percent).

According to data gathered from nongovernment treatment centers, most marijuana patients were male

(95.1 percent); 24.3 percent were age 35 and older, 41.8 percent had a middle school education, and 55.2 percent were single (exhibit 4). The most common age of onset for marijuana use among these patients was between 10 and 14 (49.5 percent), and 80.9 percent reported daily use.

Among NGC patients in 2002, 28.9 percent reported marijuana as the first drug of use; as a primary drug, marijuana ranked fourth (10.4 percent) (exhibit 5).

Natural history data on marijuana consumption reported by patients at NGCs in 2002 show that 12.5 percent were monousers at entry into treatment; 87.5 percent had progressed to a second drug, which in order of importance were cocaine (23.1 percent) and alcohol (15.8 percent) (exhibit 3). Of this group, 77.5 percent were already using a third drug, mainly heroin (24.4 percent), cocaine (23.4 percent), or crystal methamphetamine (11.4 percent).

Information from the Juvenile Detention Centers shows that 37.4 percent of the 8,700 juveniles arrested during 2002 used marijuana (exhibit 6). Most were male (96.0 percent); 57.6 percent had an elementary school education, 37.7 percent were subemployed, 39.2 percent had a tattoo, and 31.0 percent were gang members. Of these marijuana users, 36.4 percent of the offenses were committed under intoxication, and one-half of the offenses were robberies.

Medical examiner data indicated that 8.3 percent of the 1,415 drug-related deaths reported were associated with marijuana; this decedent group was primarily male (96.6 percent); 20.3 percent were age 40 and older, 19.5 percent were age 30–34, and 17.8 percent were 25–29 (exhibit 7). The most frequent cause of death in these cases was from a firearm (21.2 percent), followed by intoxication (19.5 percent). A majority of the deaths associated with marijuana occurred on the street (62.6 percent); 26.1 percent occurred at home.

Inhalants

Inhalant users attending GTCs were mostly male (87.7 percent) and younger than 19 (58.7 percent). Most had an elementary school education (95.7 percent), 75.1 percent were single, and 50.9 percent were from a middle-low socioeconomic group (exhibit 1). A majority (65.1 percent) began using inhalants between the ages of 10 and 14 (65.1 percent); 49.3 percent used an inhalant daily, and 34.9 percent used once a week.

Among GTC patients in 2002, inhalants ranked as the third most frequently reported drug of onset (9.1 percent) and fourth as the primary drug of abuse (10.8 percent) (exhibit 2).

The 2002 GTC data on the natural history of inhalant use show that 22.1 percent of this group were monodrug users upon entry to treatment; 77.9 percent were using a second drug, mainly marijuana (36.3 percent), alcohol (21.2 percent), and tobacco (16.4 percent) (exhibit 8). Of these multiple drug users, 81.5 percent used a third drug, mainly marijuana (23.5 percent), alcohol (21.0 percent), cocaine (17.4 percent), or tobacco (14.6 percent).

NGCs reported that of the 3,624 patients who used inhalants, most were male (93.7 percent); 27.3 percent were age 15–19, 57.7 percent had an elementary school education, and 70.0 percent were single (exhibit 4). More than one-half (55.5 percent) began using inhalants between the ages of 10 and 14, and 86.1 percent reported daily use.

Among NGC patients in 2002, inhalants ranked third (11.4 percent) as drug of onset and fifth (7.6 percent) as a primary drug (exhibit 5).

Natural history data on NGC inhalant users show that 64.6 percent of these patients had progressed to use of a second drug, mainly marijuana (51.8 percent), alcohol (16.8 percent), or tranquilizers (6.5 percent). Of these multiple drug users, 76.0 percent used a third drug, usually cocaine (23.6 percent), marijuana (17.6 percent), heroin (14.5 percent), or tranquilizers (12.8 percent) (exhibit 8).

According to Juvenile Detention Centers, 16.1 percent of young offenders in 2002 used inhalants (exhibit 6). Most were male (94.3 percent), had an elementary school education (66.8 percent), and were subemployed (42.4 percent). Some 43.7 percent of the inhalant users had tattoos, and 37.0 percent belonged to a gang. Slightly more than 40 percent committed the offense while intoxicated; robbery was the most common offense (49.1 percent).

Alcohol

According to GTCs, 5,835 (32.3 percent) of the 18,070 patients in treatment during 2002 were abusing alcohol. Of these, 86.2 percent were male; 5.6 percent were age 5–14 and 26.5 percent were age 15–19 (exhibit 1). Most (84.2 percent) had an elementary school education, 56.2 percent were single, and more than one-half (53.6 percent) were

members of a middle-low socioeconomic group. Nearly one-half (47.6 percent) began using alcohol between the ages of 15 and 19; 51.8 percent reported weekly use and 26.0 percent reported drinking 1–3 times per month.

Among GTC patients in 2002, alcohol ranked first as the most commonly reported drug of first use (32.4 percent), but third (14.7 percent) as a primary drug (exhibit 2).

Among GTC patients for whom alcohol was the drug of first use, 92.2 percent had progressed to a second drug at the time of treatment entry, primarily tobacco (47.7 percent), marijuana (21.8 percent), or cocaine (17.9 percent). Of this multiple drug-using group, 75.8 percent reported using a third drug, usually marijuana (31.7 percent), cocaine (29.8 percent), or inhalants (10.5 percent) (exhibit 9).

In 2002, most of the 8,508 NGC patients who abused alcohol were male (93.4 percent) (exhibit 4); 40.8 percent were age 35 or older and 33.9 percent had only an elementary school education. Some 44.4 percent were single and 45.5 percent started using alcohol between the ages of 15 and 19; 48.2 percent reported daily use and 38.9 percent used alcohol once a week.

Alcohol ranked second as the drug of first use (26.7 percent) among NGC patients in 2002 and third as the primary drug of use (16.3 percent) (exhibit 5).

Natural history of alcohol abuse data provided by NGCs show that 25.7 percent of these patients in 2002 were monodrug users; the remaining 74.3 percent had progressed to a second drug, typically marijuana (37.5 percent), cocaine (23.3 percent), or tobacco (17.3 percent). Two-thirds had progressed to a third drug, usually cocaine (32.0 percent), marijuana (20.2 percent), or crystal methamphetamine (10.5 percent) (exhibit 9).

Among juvenile arrestees in 2002, 14.1 percent reported alcohol use (exhibit 6). Most were male (92.7 percent); 47.4 percent had an elementary school education, 34.2 percent were employed, 27.5 percent had tattoos, and 24.4 percent were gang members. More than one-third of these juveniles (38.5 percent) committed the offense while intoxicated, and robbery (45.1 percent) was the most common offense.

According to MEs, alcohol was associated with 81.3 percent of the drug-related deaths in 2002. Most decedents were male (94.0 percent) and 41.2 percent were 40 or older (exhibit 7). The main causes of death were asphyxia (17.7 percent), traffic accidents

(16.8 percent), and being “run over” (12.3 percent). The most common places where these deaths occurred were on the street (36.3 percent) or at home (29.7 percent).

Cocaine

GTCs reported that cocaine-abusing patients in 2002 were mostly male (87.5 percent); 33.0 percent were age 15–19, 89.2 percent had an elementary school education, 59.7 percent were single, and 24.1 percent were married (exhibit 1). More than one-half (51.4 percent) were members of a middle-low socioeconomic group, 45.3 percent initiated cocaine use between the ages of 15 and 19, and 44.4 percent used cocaine once a week. Daily use was reported by 40.2 percent.

Among GTC patients, cocaine ranked fourth as the first drug of use (6.4 percent) and first as the primary drug (32.2 percent) (exhibit 2).

GTC natural history data on patients whose first drug of use was cocaine show that 38.0 percent were monodrug users upon entry to treatment; the others were using a second drug, usually alcohol (31.7 percent), marijuana (24.8 percent), or tobacco (16.8 percent). Of these multiple drug users, 61.1 percent used a third drug and changed or combined it with alcohol (27.8 percent), tobacco (26.2 percent), or marijuana (16.6 percent) (exhibit 10).

Among the 1,873 cocaine abusers who attended NGCs in 2002, 88.1 percent were male, 24.1 percent were age 20–24; 42.3 percent had a middle school education, and 50.9 percent were single (exhibit 4). Some 40.2 percent started using cocaine between the ages 15 and 19; 63.2 percent reported daily use and 29.2 percent reported weekly use of cocaine.

Among NGC patients, cocaine ranked fourth as the drug of onset (5.9 percent) and second as current drug (19.2 percent) (exhibit 5).

Natural history data on cocaine abuse reported by NGCs in 2002 show that 38.0 percent of patients were monodrug users at treatment entry; 62.0 percent used a second drug, usually marijuana (25.1 percent), heroin (19.3 percent), alcohol (18.5 percent), or crystal methamphetamine (17.0 percent). Of these multiple drug users, 44.5 percent used a third drug, mainly marijuana (18.2 percent), crystal methamphetamine (15.5 percent), or alcohol (13.2 percent) (exhibit 10).

Juvenile Detention Centers reported cocaine use among 21.2 percent of the young arrestees (exhibit

6). Most were male (95.2 percent). More than one-half (58.7 percent) had an elementary school education, and 38.6 percent were subemployed. Some 38.0 percent had tattoos, and only 29.0 percent were gang members. Slightly more than one-third of the juvenile infractors committed the offense under intoxication; robbery was the most common offense (49.8 percent).

Heroin

According to the GTCs, most of the 29 heroin-abusing patients in 2002 were male (82.8 percent); 48.2 percent were age 30 and older, 93.1 percent had an elementary school education, 41.4 percent were single, 20.7 percent were married, and 57.1 percent came from a middle low and 39.3 from a low socioeconomic group (exhibit 1). The age of onset for 62.1 percent of heroin users occurred between 15 and 19 years of age; 90.9 percent reported daily use.

Of the patients attending treatment at GTCs during 2002, only 0.2 percent reported heroin as drug of onset; as the primary drug heroin ranked in fifth place (2.9 percent).

According to data on 1,084 heroin-abusing patients gathered from NGCs, most were male (91.9 percent); 40.4 percent were age 35 and older, 44.2 percent had only an elementary school education, and 48.4 percent were single (exhibit 4). The most common age of first use of heroin was between 15 and 19 (35.1 percent), and 94.7 percent reported daily use.

Since 1994, heroin as drug of onset among NGC patients has been increasing and totaled 3.4 percent in 2002. As the primary drug, heroin patients ranked first at NGCs (26.3 percent) and, compared with 2001, increased significantly.

Information from the Juvenile Detention Centers shows that 0.9 percent of the juveniles arrested

during 2002 used heroin (exhibit 6). Most were male (92.7 percent), 64.7 percent had an elementary school education, 38.0 percent were subemployed, 40.0 percent had tattoos, and 40.0 percent were gang members. Some 61.0 percent of the offenses were committed under intoxication; robbery was the most common offense (59.8 percent).

CONCLUSIONS

The 2002 SISVEA efforts have led to the following conclusions:

- The system needs to be strengthened and expanded to include the rest of Mexico.
- The types of drug mentions varied across the different information sources:
 - Marijuana and alcohol use increased among arrestees in Juvenile Detention Centers in 2002.
 - Alcohol accounted for a majority of the drug-related deaths reported by coroners.
- Among GTCs in 2002, there were decreases in the proportions of patients reporting marijuana and inhalants as drugs of onset, while alcohol as a first drug of use continued to increase. The most prevalent current drug among GTC patients in 2002 was cocaine, although the proportion decreased from the previous year.

At NGCs in 2002, the proportions of patients reporting cocaine as the drug of onset decreased slightly; however, as the current primary drug, cocaine ranked second among patients seeking treatment. Heroin as the drug of first use among NGC patients was stable; as the current primary drug of abuse, the proportion of heroin-abusing patients decreased slightly but ranked first as the primary drug.

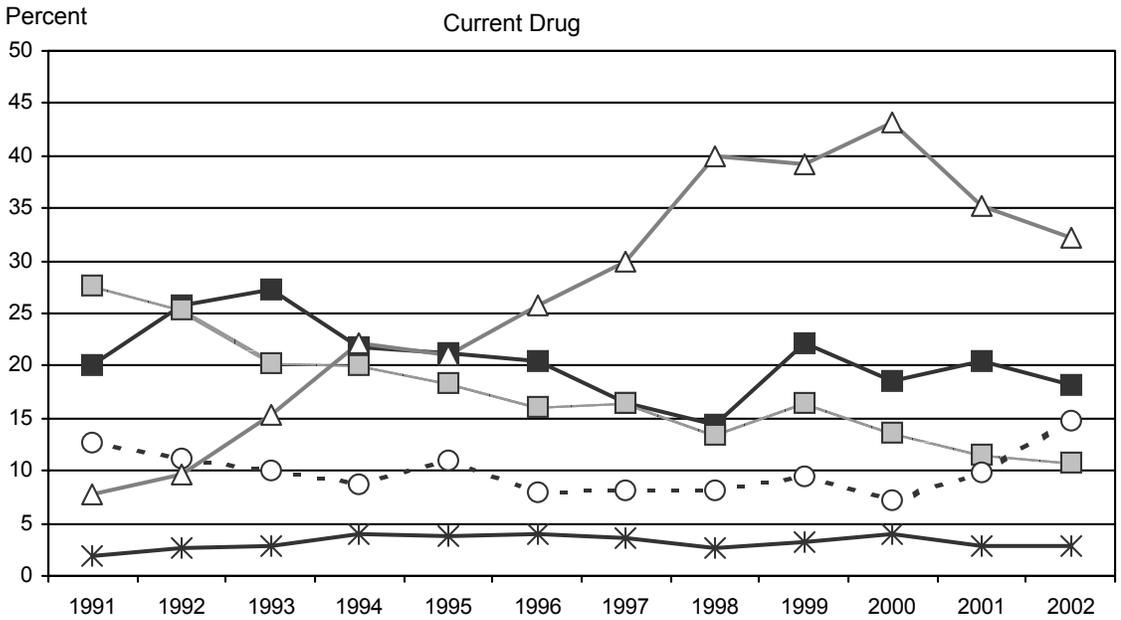
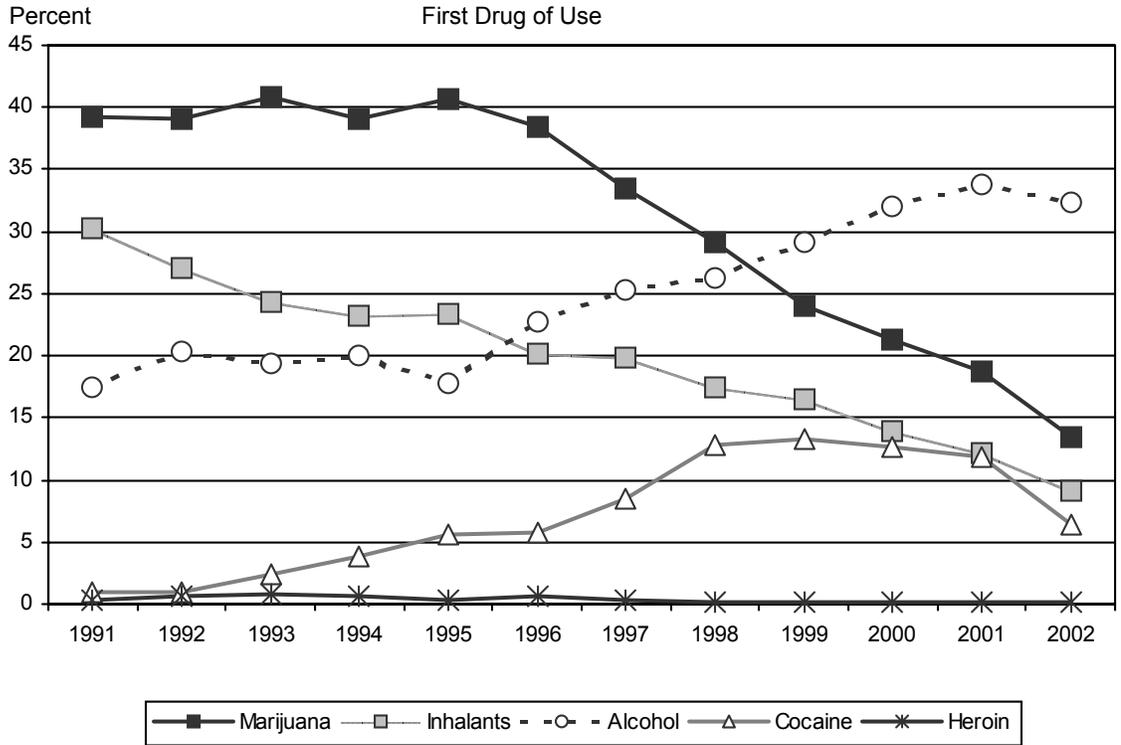
For inquiries concerning this report, please contact Roberto Tapia-Conyer, Ministry of Health of Mexico, Cerro de Macuiltepec #83, Col. Campestre Churubusco, 04200, Delegacion Coyoacan, D.F., Mexico City, Mexico 04200, Phone: 525-55-53-71-45, Fax: 525-55-53-72-92, E-mail: <rtapia@mail.ssa.gob.mx>.

Exhibit 1. Demographic Characteristics of GTC Patients in Mexico by First Drug of Use and Percent: January–June 2002

Characteristic	Total (N=18,070)	Marijuana (n=2,435)	Inhalants (n=1,636)	Alcohol (n=5,835)	Cocaine (n=1,160)	Heroin (n=29)
Gender						
Male	85.6	91.6	87.7	86.2	87.5	82.8
Female	14.4	8.4	12.3	13.8	12.5	17.2
Age						
5–14	8.3	6.6	22.4	5.6	6.0	0.0
15–19	29.8	30.2	36.3	26.5	33.0	20.7
20–24	20.8	21.7	16.8	21.4	26.9	13.8
25–29	15.9	15.3	12.3	18.7	17.9	17.2
30–34	10.7	12.2	6.4	12.4	9.2	24.1
35 and older	14.5	14.0	5.8	15.4	6.9	24.1
Schooling						
Elementary	86.6	90.4	95.7	84.2	89.2	93.1
Middle	13.1	9.4	4.0	15.6	10.2	6.9
High	0.3	0.2	0.3	0.2	0.6	0.0
College	0.0	0.0	0.0	0.0	0.0	0.0
Marital Status						
Single	60.2	60.2	75.1	56.2	59.7	41.4
Married	23.1	21.2	11.0	26.6	24.1	20.7
Divorced	1.8	2.0	0.7	1.9	1.7	3.4
Widowed	0.3	0.2	0.1	0.2	0.2	0.0
Living together	4.5	4.7	3.7	5.3	3.0	10.3
Other	10.1	11.6	9.3	9.8	11.3	24.1
Socioeconomic Level						
High, middle-high	14.0	12.2	8.2	15.4	9.7	0.0
Middle-low	53.3	50.8	50.9	53.6	51.4	57.1
Low	24.5	28.8	36.6	22.9	27.7	39.3
Middle	8.1	8.2	4.3	8.1	11.3	3.6
Age of Onset						
Younger than 10	4.4	2.5	6.8	4.4	0.5	0.0
10–14	47.8	46.4	65.1	41.0	24.1	20.7
15–19	40.8	45.6	26.4	47.6	45.3	62.1
20–24	4.5	4.1	1.1	5.1	16.1	0.0
25–29	1.5	1.1	0.4	1.3	8.5	6.9
30–34	0.6	0.2	0.0	0.4	3.3	3.4
35 and older	0.4	0.1	0.1	0.2	2.2	6.9
Frequency of Use						
Daily	54.2	64.5	49.3	19.5	40.2	90.9
Once per week	30.8	24.4	34.9	51.8	44.4	4.5
1–3 times per month	13.8	10.2	14.0	26.0	13.9	4.5
1–11 times per year	1.0	1.0	1.8	2.7	1.5	0.0

SOURCE: SISVEA—Government treatment centers

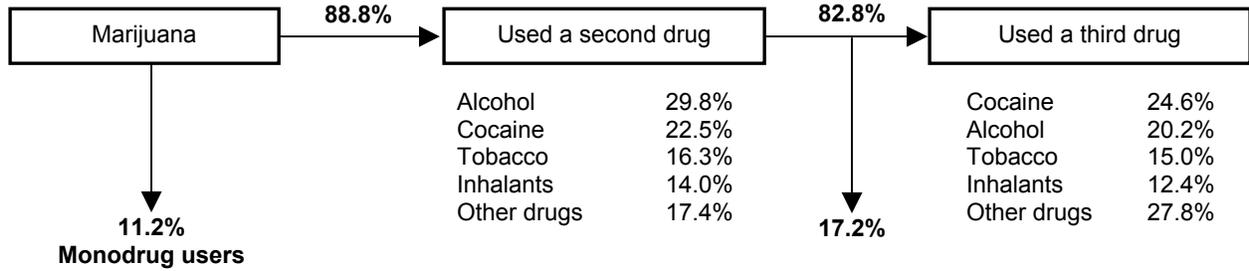
Exhibit 2. Comparison Between Drug of First Use and Current Drug of Use Among GTC Patients in Mexico by Percent: 1991–June 2002



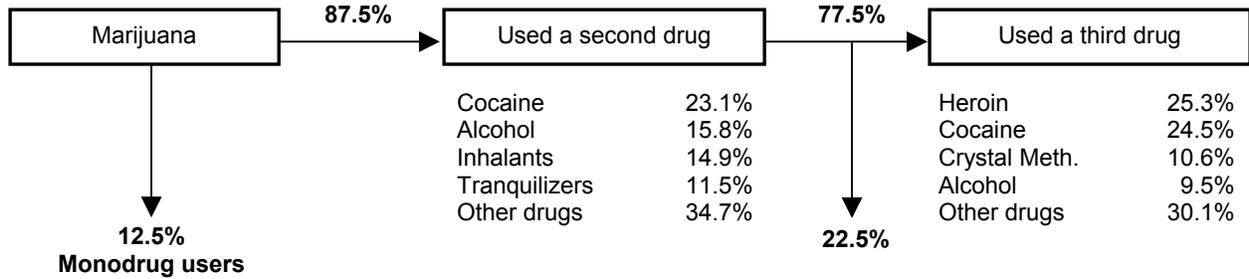
SOURCE: SISVEA—Government treatment centers

Exhibit 3. Natural History of Marijuana Use Among Treatment Patients in Mexico: January–June 2002

Government Treatment Centers



Nongovernment Treatment Centers



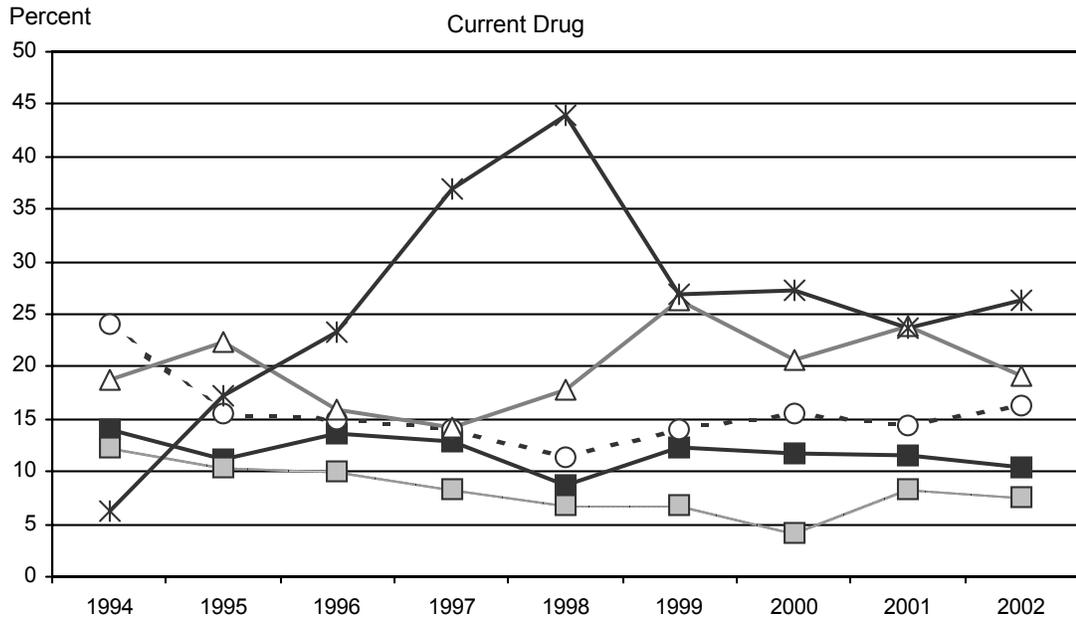
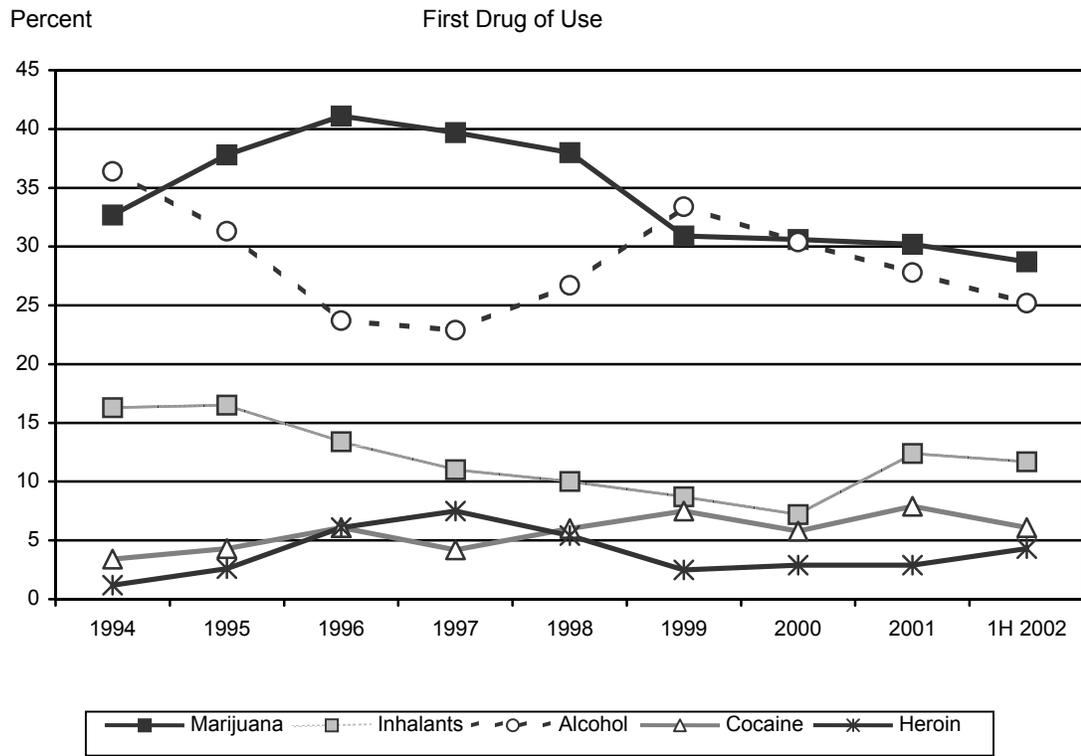
SOURCE: SISVEA—Government and nongovernment treatment centers

Exhibit 4. Demographic Characteristics of NGC Patients in Mexico by First Drug of Use and Percent: January–June 2002

Characteristic	Total (N=13,488)	Marijuana (n=3,877)	Inhalants (n=1,580)	Alcohol (n=3,395)	Cocaine (n=831)	Heroin (n=585)
Gender						
Male	92.5	95.1	93.7	93.4	88.1	91.9
Female	7.5	4.9	6.3	6.6	11.9	8.1
Age						
5–14	1.9	1.2	6.0	1.0	1.1	0.2
15–19	14.7	14.0	27.3	9.4	17.8	3.6
20–24	20.7	22.9	24.8	15.8	24.1	16.6
25–29	19.0	19.9	17.5	17.3	23.1	21.0
30–34	15.9	17.7	11.1	15.6	16.7	18.2
35 and older	27.8	24.3	13.3	40.8	17.2	40.4
Schooling						
Elementary	38.4	38.3	57.7	33.9	27.9	44.2
Middle	37.5	41.8	28.2	32.9	42.3	37.4
High	16.3	15.0	5.7	20.7	23.0	12.8
College	3.5	1.8	0.3	7.3	4.1	1.3
No formal education	3.8	2.8	8.0	4.5	2.1	3.8
Other	0.4	0.3	0.1	0.7	0.6	0.4
Marital Status						
Single	53.0	55.2	70.0	44.4	50.9	48.4
Married	22.1	18.4	12.1	29.7	28.5	24.5
Divorced	4.3	3.9	2.2	6.2	3.1	6.0
Widowed	0.9	0.8	0.7	1.5	0.4	0.8
Living together	12.8	14.3	10.3	10.6	11.7	13.8
Other	6.9	7.4	4.7	7.6	5.4	6.4
Age of Onset						
Younger than 10	5.5	4.8	10.3	4.5	0.6	1.0
10–14	43.5	49.5	55.5	38.0	20.7	12.4
15–19	37.8	37.3	30.6	45.5	40.2	35.1
20–24	7.0	5.2	2.3	7.7	18.1	21.0
25–29	3.3	2.3	0.7	2.5	10.4	15.9
30–34	1.4	0.5	0.2	0.8	5.7	7.6
35 and older	1.4	0.4	0.3	1.0	4.3	6.9
Frequency of Use						
Daily	73.2	80.9	86.1	48.2	63.2	94.7
Once a week	20.2	13.9	10.0	38.9	29.2	4.7
1–3 times per month	5.3	.4	2.8	10.9	5.9	0.5
1–11 times per year	1.3	1.2	1.1	2.0	1.6	0.1

SOURCE: Nongovernment treatment centers

Exhibit 5. Comparison Between First Drug of Use and Current Drug of Use Among NGC Patients in Mexico by Percent: 1994–June 2002



SOURCE: SISVEA—Nongovernment treatment centers

Exhibit 6. Social Characteristics and Types of Offenses Committed by Juvenile Drug-Using Arrestees in Mexico by Percent: 2002

Total (N=8,700)	Marijuana (n=3,261)		Inhalants (n=1,404)		Alcohol (n=1,225)		Cocaine (n=1,845)		Heroin (n=82)		
Male 92.2	Male 96.0		Male 94.3		Male 92.7		Male 95.2		Male 92.7		
Elementary school 50.4	Elementary school 57.6		Elementary school 66.8		Elementary school 47.4		Elementary school 58.7		Elementary school 64.7		
Employed 27.8	Subemployed 37.7		Subemployed 42.4		Employed 34.2		Subemployed 38.6		Subemployed 38.0		
Tattoo 24.1	Tattoo 39.2		Tattoo 43.7		Tattoo 27.5		Tattoo 38.0		Tattoo 40.0		
Belong to a gang 19.4	Belong to a gang 31.0		Belong to a gang 37.0		Belong to a gang 24.4		Belong to a gang 29.0		Belong to a gang 40.0		
Offense under intoxication 21.1	Offense under intoxication 36.4		Offense under intoxication 40.2		Offense under intoxication 38.5		Offense under intoxication 33.6		Offense under intoxication 61.0		
Frequent Offenses											
Robbery 46.7	Robbery 50.0	Robbery 49.1	Robbery 49.8	Robbery 49.8	Robbery 59.8	Against health 13.0	Against health 23.4	Against health 21.9	Against health 12.2	Against health 25.2	Against health 14.6
Damages 9.1	Drugs/ consumption 8.8	Drugs/ consumption 13.3	Damages 9.2	Damages 9.2	Injuries 12.2	Injuries 7.1	Drugs/ consumption 8.8	Drugs/ consumption 13.3	Against health 6.9	Drugs/ consumption 7.4	Injuries 12.2
Other 24.1	Arms bearing 5.7	Arms bearing 5.9	Other 26.6	Arms bearing 6.9	Violation 4.9	Other 8.5	Arms bearing 5.7	Arms bearing 5.9	Other 10.7	Arms bearing 6.9	Other 8.5

SOURCE: SISVEA—Juvenile Detention Centers

Exhibit 7. Types of Death Under Intoxication of Selected Drugs¹ in Mexico by Percent: January–June 2002

Characteristic	Total (N=567)	Alcohol (n=443)	Marijuana (n=61)	Opioid ² (n=42)
Gender				
Male	92.6	94.0	96.6	89.5
Female	7.4	6.0	3.4	10.5
Age				
10–14	0.8	0.8	1.7	0.0
15–19	7.0	5.7	13.6	4.7
20–24	14.4	14.5	15.3	14.0
25–29	14.1	13.7	17.8	18.6
30–34	12.4	11.4	19.5	25.6
35–39	12.9	12.8	11.9	18.6
40 and older	38.3	41.2	20.3	18.6
Cause of Death				
Run over	10.8	12.3	5.1	1.2
Traffic accident	14.6	16.8	5.1	0.0
Fall	4.3	5.2	0.8	0.0
Electrocuted	0.2	0.2	0.8	0.0
Burned	0.4	0.4	0.0	0.0
Beaten	4.8	5.2	5.9	2.3
Asphyxia	16.9	17.7	12.7	3.5
Crushed	0.1	0.1	0.0	0.0
Firearm	10.4	8.8	21.2	4.7
Steel knife	5.3	5.7	13.6	1.2
Intoxicated	10.3	5.0	19.5	83.7
Other	22.0	22.6	15.3	3.5
Place of Death				
Traffic	18.8	21.6	5.2	3.5
Home	29.0	29.7	26.1	20.9
Street	38.4	36.3	62.6	62.8
Public baths	2.2	1.1	0.0	0.0
Recreational areas	2.2	2.6	0.9	0.0
At work	0.7	0.8	0.9	0.0
Service areas	3.4	3.0	1.7	0.0
Other	5.4	4.9	2.6	12.8

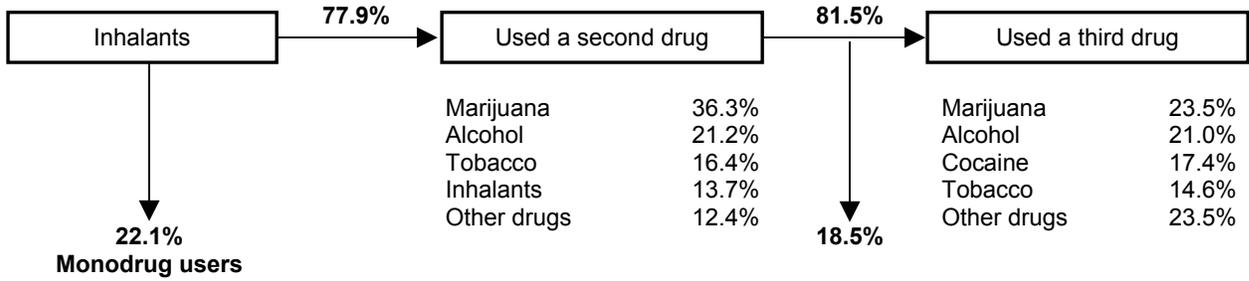
¹ Deaths from all causes totaled 3,869.

² Includes opium, morphine, and heroin.

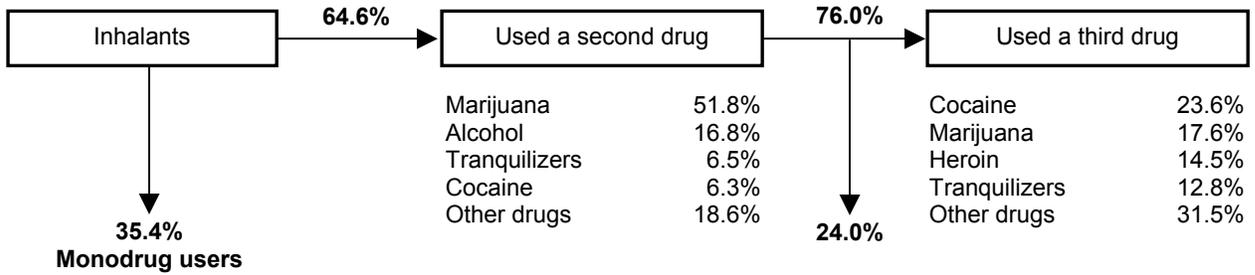
SOURCE: Medical examiners

Exhibit 8. Natural History of Inhalant Use Among Treatment Patients in Mexico: January–June 2002

Government Treatment Centers



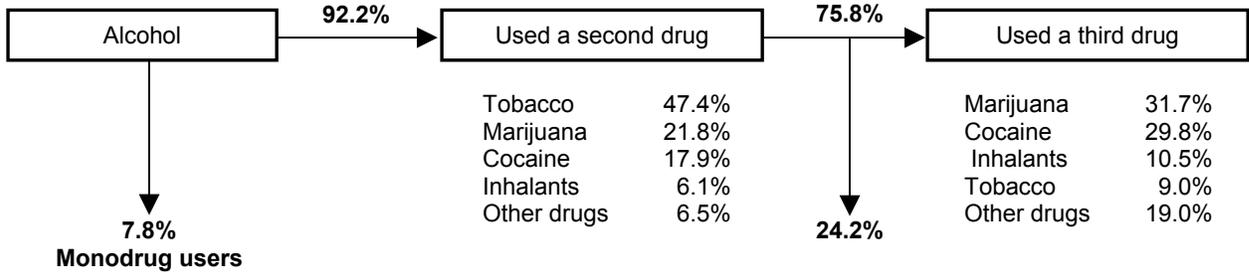
Nongovernment Treatment Centers



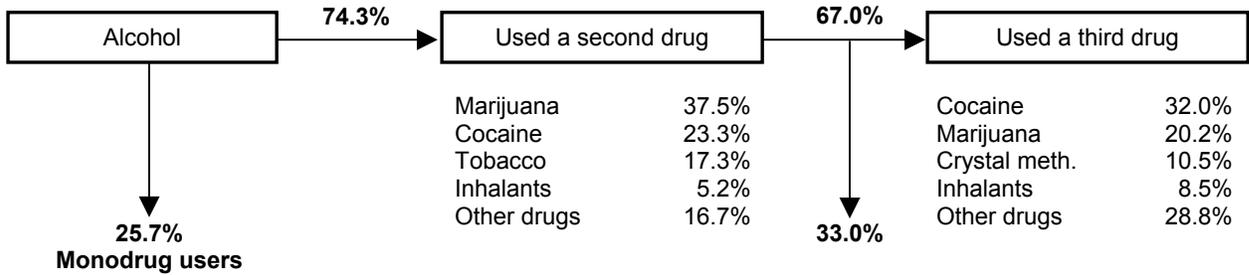
SOURCE: SISVEA—Government and nongovernment treatment centers

Exhibit 9. Natural History of Alcohol Use Among Treatment Patients in Mexico: January–June 2002

Government Treatment Centers



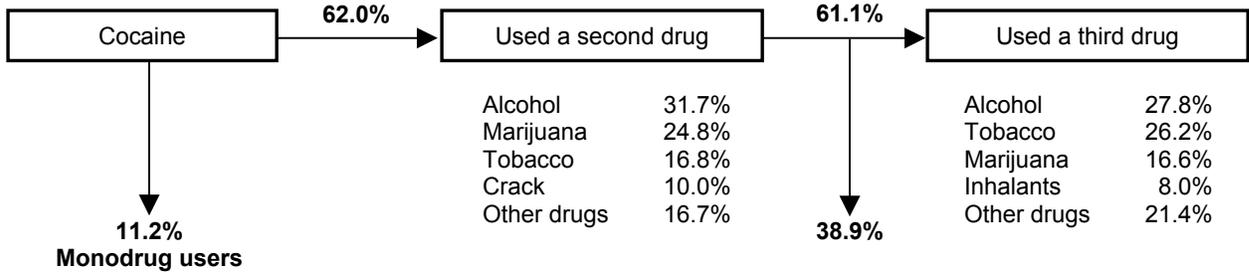
Nongovernment Treatment Centers



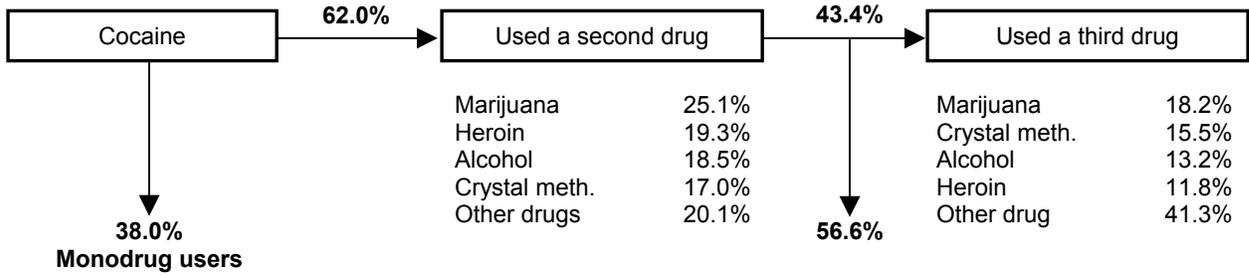
SOURCE: SISVEA—Government and nongovernment treatment centers

Exhibit 10. Natural History of Cocaine Use Among Treatment Patients in Mexico: January–June 2002

Government Treatment Centers



Nongovernment Treatment Centers



SOURCE: SISVEA—Government and nongovernment treatment centers

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