

**NATIONAL INSTITUTE ON DRUG ABUSE**  
**COMMUNITY EPIDEMIOLOGY WORK GROUP**



COMMUNITY EPIDEMIOLOGY WORK GROUP

**EPIDEMIOLOGIC TRENDS  
IN DRUG ABUSE**

**Volume II**  
Proceedings of the Community Epidemiology Work Group

December 2002

**NATIONAL INSTITUTES OF HEALTH**

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

The National Institute on Drug Abuse (NIDA) acknowledges the contributions made by the members of the Community Epidemiology Work Group (CEWG) who have voluntarily invested their time and resources in preparing the reports presented at the meetings. This publication was prepared by MasiMax Resources, Inc., under contract number N01-DA-1-5514 from NIDA.

This publication, Epidemiologic Trends in Drug Abuse, Volume II, contains the papers presented and data reported at the December 2002 CEWG meeting by CEWG representatives from 21 areas, and researchers from Asia, Canada, Israel, Mexico, Palestine, and South Africa. Volume II also contains an update on data from the Drug Abuse Warning Network.

All material in this volume is in the public domain and may be reproduced or copied without permission from the Institute or the authors. Citation of the source is appreciated. The U.S. Government does not endorse or favor any specific commercial product. Trade or proprietary names appearing in this publication are used only because they are considered essential in the context of the studies reported herein.

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

by mail: P.O. Box 2345, Rockville, MD 20852-2345  
by phone: (301) 468-2600  
(800) 729-6686  
by fax: (301) 468-6433

National Institute on Drug Abuse

NIH Publication No. 03-5365

Printed August 2003

## Foreword

The Community Epidemiology Work Group (CEWG) is a drug abuse surveillance network established in 1976 by the National Institute on Drug Abuse (NIDA), National Institutes of Health (NIH). It is composed of researchers from 21 sentinel areas of the United States who meet semiannually to present and discuss quantitative and qualitative data related to drug abuse. Through this program, the CEWG provides current descriptive and analytical information regarding the nature and patterns of drug abuse, emerging trends, characteristics of vulnerable populations, and social and health consequences to government officials and policymakers, community organizations, researchers and scientists, and the general public.

The 53rd meeting of the CEWG, held in Miami, Florida, on December 10-13, 2002, provided a forum for presentation and discussion of drug abuse data in Canada, Central and Southwest Asia, Egypt, Israel, Mexico, Palestine, and Southern Africa. The meeting in Miami afforded the opportunity for presentation and discussion of drug abuse-related issues of special concern to the local community. A Broward County law enforcement official described drug diversion and associated problems identified in the region. Additional local reports focused on drug problems identified in toxicology reports, the toxicology of substances abused alone and combination

in South Florida, the club drug scene, drug prevention and outreach efforts to high-risk populations, and drug abuse treatment methods and approaches currently being used in the region. In addition, members were provided an update on the Drug Abuse Warning Network.

These wide-ranging research and other presentations pointed out unique and local aspects of drug abuse and social health consequences that have confronted and continue to concern the city of Miami. They also served to capture the diversity and community-based nature of drug abuse, its emergence in the community, and its resolution by the community. They underscored, once again, the necessity of establishing effective networks of drug abuse surveillance at the local level in communities throughout the world.

The December 2002 meeting of the CEWG was chaired by Nicholas Kozel, Division of Epidemiology, Services and Prevention Research, NIDA. Shortly after the meeting, Mr. Kozel retired from the Federal Government. Mr. Kozel's role in establishing the Community Epidemiology Work Group in 1976 and his tireless leadership in fostering its development as a drug abuse surveillance system is greatly appreciated.

*Moira P. O'Brien*  
*Division of Epidemiology, Services and Prevention Research*  
*NIDA*



# Table of Contents

<b>Foreword</b> .....	iii
<b>Introduction</b> .....	1
 <b>EPIDEMIOLOGY OF DRUG ABUSE: AREA PAPERS</b>	
 <b>Atlanta: Metropolitan Atlanta Drug Use Trends</b>	
<i>Tara McDonald and Claire E. Sterk</i> .....	5
 <b>Baltimore: Drug Use in the Baltimore Metropolitan Area: Epidemiology and Trends, 1997–2001</b>	
<i>Leigh A. Henderson</i> .....	18
 <b>Boston: Patterns and Trends in Drug Abuse: Greater Boston</b>	
<i>Daniel P. Dooley</i> .....	30
 <b>Chicago: Patterns and Trends of Drug Abuse in Chicago</b>	
<i>Lawrence Ouellet, Dita Davis, Susan Bailey, and Wayne Wiebel</i> .....	42
 <b>Denver: Patterns and Trends in Drug Abuse: Denver and Colorado</b>	
<i>Bruce Mendelson</i> .....	55
 <b>Detroit: Drug Abuse Trends in Detroit/Wayne County and Michigan</b>	
<i>Richard F. Calkins</i> .....	66
 <b>Honolulu: Illicit Drug Use in Honolulu and the State of Hawaii</b>	
<i>D. William Wood</i> .....	78
 <b>Los Angeles: Patterns and Trends in Drug Abuse: Los Angeles County, California</b>	
<i>Beth Finnerty</i> .....	90
 <b>Miami: Drug Abuse in Miami and South Florida</b>	
<i>James N. Hall, Joe Spillane, and Madeline Camejo</i> .....	108
 <b>Minneapolis/St. Paul: Drug Abuse Trends in Minneapolis/St. Paul</b>	
<i>Carol L. Falkowski</i> .....	119
 <b>Newark: Drug Use Indicators in Newark and the Primary Metropolitan Statistical Area</b>	
<i>Abate Mammo</i> .....	132
 <b>New Orleans: Overview of Drug Abuse Indicators in New Orleans</b>	
<i>Gail Thornton-Collins</i> .....	145
 <b>New York City: Drug Use Trends in New York City</b>	
<i>Rozanne Marel, John Galea, Kenneth A. Robertson, and Robinson B. Smith</i> .....	149
 <b>Philadelphia: Drug Use in Philadelphia, Pennsylvania</b>	
<i>Samuel J. Cutler and Mark R. Bencivengo</i> .....	163

<b>Phoenix: Drug Abuse Trends in Phoenix and Arizona</b> <i>Ilene L. Dode</i> .....	172
<b>St. Louis: Patterns and Trends in Drug Abuse in St. Louis</b> <i>Heidi Israel Adams and Jim Topolski</i> .....	185
<b>San Diego: Indicators of Drug Abuse in San Diego County</b> <i>Michael Ann Haight</i> .....	195
<b>San Francisco: Patterns and Trends of Drug Use in the San Francisco Bay Area</b> <i>John A. Newmeyer</i> .....	203
<b>Seattle: Recent Drug Abuse Trends in the Seattle-King County Area</b> <i>Caleb Banta-Green, Ellen Silverman, Susan Kingston, Steve Freng, Michael Hanrahan, Geoff Miller, T. Ron Jackson, Kris Nyrop, Arnold F. Wrede, Mark McBride, Richard Harruff, Greg Hewett, Ann Forbes, Joe Kabel, and Hanne Thiede</i> .....	209
<b>Texas: Substance Abuse Trends in Texas—December 2002</b> <i>Jane Carlisle Maxwell</i> .....	225
<b>Washington, DC: Patterns and Trends of Drug Abuse in Washington, D.C.</b> <i>Susanna Nemes, Anna Carin Johansson, Lauren Hess, Jennifer Weil, and Alfred Pach</i> .....	258
 <b>UPDATE PRESENTATION</b>	
 <b>Drug Abuse Warning Network Update</b> <i>Judy Ball and Lori Ducharme</i> .....	273
 <b>INTERNATIONAL PAPERS</b>	
 <b>Canada: American-Canadian Differences in Illicit Drug Use Among College Students: Some Preliminary Findings</b> <i>Edward M. Adlaf, Meichun Kuo, Louis Gliksman, Andree Demers, and Henry Wechsler</i> .....	277
 <b>Canada: Drug Use and Abuse in Canada: Review of National Data and Update on the Canadian Community Epidemiology Network on Drug Use (CCENDU)</b> <i>Colleen Anne Dell</i> .....	281
 <b>Central Asia: Extent and Nature of Illicit Drug Use in Central Asia</b> <i>Kamran Niaz, Janusz Sieroslowski, Mirzakhid Sultanov, Sagat Altynbekov, Altynai Kudaikulova, Nazire Dodkhudoeva, and Oleg Mustafin</i> .....	287
 <b>Israel: Study of Juvenile Offenders in Israel</b> <i>Richard Isralowitz</i> .....	298
 <b>Mexico: Update of the Epidemiologic Surveillance System of Addictions (SISVEA) of Mexico: January–June 2002</b> <i>Roberto Tapia-Conyer, Patricia Cravioto, Pablo Kuri, Fernando Galvan, and Blanca de la Rosa</i> .....	299
 <b>Palestine: Prevalence of Risk Factors and Substance Abuse Among Adolescents Age 12–17 in the Gaza Strip, Palestine</b> <i>M. Afifi, S. Sousi, and Z. Abu Rsas</i> .....	314

**Southern Africa: Southern African Development Community Epidemiology Network on Drug Use (SENDU):  
Findings July 2001–June 2002**  
*Charles D.H. Parry and Andreas Plüddemann* ..... 317

**PARTICIPANT LIST**

**List of Participants**..... 331



## Introduction

At the 53rd meeting of the Community Epidemiology Work Group (CEWG), held in Miami, Florida, on December 10–13, 2002, representatives from 21 CEWG areas presented data on drug abuse patterns and trends in the United States. Their papers are presented in this report. Also presented are international reports from Canada, Central Asia, Israel, Mexico, Palestine, and South Africa.

### 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, 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 described below.

#### **Drug Abuse Warning Network (DAWN) Emergency Department Data**

This voluntary national data collection system, managed by the Office of Applied Studies (OAS), Substance Abuse and Mental Health Services Administration (SAMHSA), provides semiannual and annual estimates on substance use manifested in visits to hospital emergency departments (EDs) in 21 metropolitan areas, including 20 CEWG areas.

The data are gathered from a national representative sample of non-Federal hospitals in the 21 areas in 48 States and the District of Columbia that have a 24-hour ED. Alaska and Hawaii are not included in the sample. With few exceptions, the geographic area boundaries correspond to the 1983 Office of Management and Budget definitions of Metropolitan Statistical Area and Primary Metropolitan Statistical Area. Periodic minor modifications are made to the ED sample to keep it current. Analyses show that such modifications have little impact on trends across time. Various statistical procedures are used to enhance precision in the sampling frame. By the end of 2001, 458 hospitals were included in the sample.

ED data are reported for each “episode” (case or admission) that meets the criteria for “drug abuser”

that is taking one or more substances without proper medical supervision or for psychic effect, dependence, or suicide attempt or gesture. Each drug reported by a patient may be counted as a “mention.” Up to four drugs for each episode may be recorded. Some drugs are classified in a combined category, such as “cocaine/crack,” “marijuana/hashish,” and “PCP/PCP combinations.”

ED mention data are converted to rates per 100,000 population when sample sizes permit. A probability value of less than .05 is used to determine statistical significance. The 2001 DAWN estimates mark the first use of population data from the 2000 decennial census. It is important to note that the population denominator used to calculate rates per 100,000 population is considerably larger because the 2000 census data are available. (Prior periods used estimated yearly adjustments from the 1990 census.) Because of the larger denominator, there are many large decreases in the 2001 ED rates, making it important to verify rate reductions against total estimates for the same measure. It is possible to have an estimate (in mentions or episodes) increase from 2000 to 2001 and have the corresponding rate decrease because of changes in the population denominator.

Because an individual may be counted in more than one episode in a reporting period, and may mention more than one drug, the DAWN ED data cannot be used to estimate prevalence.

#### **DAWN Medical Examiner Data**

In 2000, 137 jurisdictions in 43 metropolitan areas submitted drug-related death data to DAWN, OAS, SAMHSA. The *Mortality Data from the Drug Abuse Warning Network* marked a major change in the presentation of DAWN medical examiner data and replaced the previous *DAWN Annual Medical Examiner Data* reports with a new title and design. The title change reflects the expansion of data collection on drug-related deaths to a variety of jurisdictions, including medical examiners, coroners, and other death investigation systems. Changes in format and content provide more information about metropolitan statistical areas represented in DAWN and their component jurisdictions. The method by which drugs are coded was also changed to be consistent with DAWN ED terminology.

A “drug-related death” may involve more than one drug “mention.” Excluded from the count are deaths

involving circumstances unrelated to the death, accidental ingestion, adverse reactions to prescribed drugs, and consumption to conceal substances from law enforcement. Some deaths are caused by a drug overdose; in other cases, a drug may be considered a contributory but not major cause of death.

Jurisdictions do not represent a statistical sample. Counts of drug-related deaths do not represent the entire Nation, nor do they represent any metropolitan area in which there is less than full participation in this DAWN system.

### **The Arrestee Drug Abuse Monitoring (ADAM) Program**

Managed by the National Institute of Justice (NIJ), the ADAM program is designed to gather drug use data quarterly from arrestees in 35 sites in the United States; 19 of these sites provide data relevant to the CEWG. Data are reported annually by NIJ.

Beginning in 2000, the ADAM instrument for adult arrestees was revised and the adult male sample was based on probability sampling procedures. For these reasons, the 2000 (and beyond) data are not comparable to data collected prior to 2000. In the 2001 analyses, data on adult males, collected in all 35 sites, were typically weighted. Adult female data, collected in most sites, were unweighted and based on different data collection methods. Data on juvenile arrestees, collected at selected sites, continued to be based on the Drug Use Forecasting (DUF) model.

Analyses and reporting of ADAM data focus on urinalysis results. Urinalysis confirms use of 10 drugs within a 2–3 day period prior to arrest by using the Enzyme Multiplied Immunoassay Technology (EMIT). The urinalysis tests for use of cocaine, opiates (e.g., heroin), marijuana, phencyclidine, methadone,

methaqualone (Quaalude), propoxyphene (Darvon), barbiturates (e.g., Seconal, Tuinal), benzodiazepines (e.g., Valium, Ativan), and amphetamines. Gas chromatography mass spectrometry (GC/MS) confirms use of illicit methamphetamine and amphetamines and distinguishes them from over-the-counter compounds. Self-report data on drug use are collected for particular drugs and time periods (past 30 days and past 12 months). Self-report data also cover demographic characteristics and information related to the need for utilization of substance abuse treatment.

As in other arrestee data sets, the rate and type of drug arrest may reflect changing law enforcement practices (e.g., “crack-downs” on specific population groups at a specific point in time) rather than prevalence of drug use among the sampled arrestees.

### **The Domestic Monitor Program (DMP)**

Under the jurisdiction of the Drug Enforcement Administration (DEA), the DMP reports on the sources, types, cost, and purity of retail-level heroin. The information is based on actual undercover heroin purchases made by the DEA on streets in several cities, including 20 in CEWG areas.

The heroin buys provide information on type of heroin (Asian, Mexican, Colombian, undetermined) and what diluents and adulterants are present in the drug. DMP reports indicate where the buy was made, the brand name (if any), purity level, and price per milligram pure.

By comparing DMP data over time, it is possible to assess changes in price per milligram pure and the sources of heroin purchased in an area. Price and purity for particular drugs can vary across years if there are only small numbers of buys made in a particular area.

---

Epidemiology of Drug Abuse:

Area Papers

---



# Metropolitan Atlanta Drug Use Trends

Tara McDonald<sup>1</sup> and Claire E. Sterk<sup>2</sup>

## ABSTRACT

*The Metropolitan Atlanta area drug scene remains dominated by cocaine and marijuana. Leading indicators suggest that cocaine use is on the rise again, with ethnographic reports suggesting this may be somewhat related to more recreational use among younger users, particularly of powder cocaine. Continuing a long-term trend, ethnographic data suggest that, regardless of other indicators, marijuana use is pervasive in and around Atlanta. The DEA considers it the ‘most widely abused drug’ in the State of Georgia. Indicators for marijuana have been rising, but they most likely do not capture the totality of its use. Some heroin indicators continued to increase, but use in Atlanta appears to remain well below the national rate. Heroin purity in Atlanta remained fairly high, though it dropped somewhat in samples tested by the DEA in the first quarter of 2002, to 53 percent. Among other opiates, hydrocodone combinations (e.g., Vicodin) have the highest rate of emergency department (ED) mentions, although hydromorphone (Dilaudid) continues to be mentioned frequently in ethnographic reports. Methamphetamine rates continue to rise. Much of the methamphetamine found in Georgia is imported and distributed by Mexican nationals, but there continued to be a number of lab seizures, primarily in the more rural parts of the State. The rate of methylenedioxymethamphetamine (MDMA or ecstasy) ED mentions increased in the metropolitan Atlanta area between 2000 and 2001, from 2 to 5. By comparison, the national rate is 2 per 100,000 population. Ecstasy use is being widely reported in ethnographic reports by persons of various age groups and in a number of settings that do not necessarily include clubs or parties. Atlanta remains one of the few places where indicators and ethnographic data show extensive MDMA use in the African-American community. Reported AIDS cases in Georgia and Atlanta overall have been decreasing over the past few years, but the proportion of cases directly related to injection drug use (approximately 18 percent both statewide and locally) has remained consistent. The same is true for cases among men who have sex with men and also inject drugs, which account for an additional 6*

*percent. Injection-related AIDS cases again accounted for a greater percentage of female than male cases both statewide and in the metropolitan Atlanta area: 22.1 percent vs. 21.2 percent and 30.8 percent vs. 22.1 percent, respectively.*

## INTRODUCTION

### Area Description

The city of Atlanta constitutes a very small area within the larger Atlanta metropolitan area. The city covers 131 square miles and had an estimated population of 416,474 in 2002 (U.S. Bureau of the Census). The Atlanta metropolitan area includes 2,584 square miles and has an estimated population of 4,112,198.

The 20 counties that make up the metropolitan area vary in geographic size, population size and growth, ethnic composition, and socioeconomic status. Fulton and DeKalb Counties, which include the city of Atlanta, have the largest total and minority populations. The total population in Fulton was 816,006 in 2000, of which 49.1 percent were White, 45.2 percent were African-American, 5.9 percent were Hispanic, and 3.5 percent were Asian. DeKalb County had a total population of 665,865; 55.3 percent were African-American, 37.0 percent were White, 7.9 percent were Hispanic, and 4.6 percent were Asian. In Clayton County, located just south of Atlanta, the total population was 236,517; the majority were African-American (52.7 percent), followed by Whites (39.2 percent), Hispanics (7.5 percent), and Asians (5.2 percent). The Hispanic population more than doubled in these three counties during the past 10 years. The African-American population increased by 180.9 percent in Clayton County, 56.7 percent in DeKalb County, and 12.2 percent in Fulton County between 1990 and 2000. Gwinnett County, which has the fourth largest population in the metropolitan area (588,448), is located northeast of the city. The population in this county is 74.3 percent White, 13.9 percent African-American, 10.9 percent Hispanic, and 7.9 percent Asian. The Asian population has increased dramatically (1990–2000) in Gwinnett (318.5 per-

<sup>1</sup> Tara McDonald is affiliated with the Department of Sociology at Georgia State University, Atlanta, Georgia.

<sup>2</sup> Claire E. Sterk is affiliated with the Rollins School of Public Health at Emory University, Atlanta, Georgia.

cent), Fulton (201.3 percent), Clayton (114.4 percent), and Cobb (139.3 percent) Counties. The majority of residents in the city of Atlanta are African-American (61.4 percent), followed by Whites (32.6 percent), Hispanics (4.5 percent), and Asians (1.9 percent).

### Data Sources

Principal data sources for this report are described below.

- **Drug abuse treatment program data** were provided by the Georgia Department of Human Resources (DHR). The data included the primary drugs of abuse among the approximately 4,331 clients admitted to Atlanta's public drug treatment programs between July 1, 2001, and December 31, 2001. Data for the nonmetropolitan Atlanta counties of Georgia were also reported ( $n=8,147$ ).
- **Emergency department (ED) drug mentions data** were derived from the Drug Abuse Warning Network (DAWN), Office of Applied Studies, Substance Abuse and Mental Health Services Administration (SAMHSA). Data are presented on estimates of drug mentions among individuals admitted to participating metropolitan Atlanta emergency departments between January 1994 and December 2001.
- **Heroin price, purity, and source data** were obtained from the Drug Enforcement Administration (DEA), Domestic Monitor Program (DMP). The data are preliminary for 2002.
- **Atlanta High Intensity Drug Trafficking Area (HIDTA) 2003 Drug Threat Assessment data** about the price and purity of drugs distributed in the metropolitan area, as well as information on trafficking trends, were provided by the Atlanta HIDTA Task Force, part of a coordinated effort of drug-related Federal, State, and local law enforcement agencies.
- **Ethnographic 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. The information represents AIDS cases in Georgia and an eight-county Atlanta metropolitan area from January 1981 through the third quarter of 2002 (September 30).

### DRUG ABUSE PATTERNS AND TRENDS

#### Cocaine and Crack

Following an upward trend since 1997, the estimated rate per 100,000 population of ED cocaine mentions rose again significantly between 2000 and 2001, from 221 to 244 (exhibit 1). The national rate also increased, and, continuing a long-term trend, the rate of cocaine mentions in Atlanta were more than three times the national rate (exhibit 2). Mentions remained higher among men than women, with a male-to-female ratio of 2:1. Based on ED mentions, Atlanta's cocaine users are generally an older population and are aging. The rate per 100,000 population among 18–25-year-olds fell significantly from 2000 ( $n=178$ ) to 2001 (158), while it increased significantly among those age 35 and older, from 269 to 313. Mentions among those age 26–34 increased from 345 to 386. African-Americans continued to account for the largest percentage of total ED cocaine mentions at 71 percent, down slightly from 73 percent in 2000, with Whites representing 17 percent, down from 21 percent. It is important to note that the percentage reported as unknown grew substantially from 4 percent to 12 percent in the same time period.

Among publicly funded treatment admissions in the metropolitan Atlanta area in the second half of 2001, the proportion of cocaine admissions continued to decline (exhibit 3). Cocaine accounted for 53 percent of total admissions in the second half of 2001, down from 57 percent in the first half of the year. African-Americans remained the largest population among cocaine admissions (77 percent), down only slightly from 78 percent (exhibit 4). Admissions among Whites held steady at 21 percent, and Hispanics represented 1 percent. Cocaine was one of the few drugs for which treatment admissions were somewhat evenly split by gender, with a male-to-female ratio of 1.5:1, consistent with the first half of 2001 (exhibit 5). Traditionally, those in publicly funded treatment in Atlanta and the rest of Georgia have been an older population across all drugs, and that trend continued. Those age 35 and older accounted for the majority of cocaine admissions, at 79 percent, down from 82 percent. Interestingly, they are most closely followed by those younger than 17, who represented just over 7 percent of cocaine admissions. Those age 18–25

and 26–34 each accounted for approximately 5 percent of cocaine admissions.

Smoking remained the preferred route of administration among cocaine admissions in metropolitan Atlanta in the second half of 2001 at 62 percent, with those reporting oral as their preferred route (which may overlap with smoking) accounting for 22 percent. Inhalation as a preferred route rose from 8 to 9 percent, with injection continuing to be uncommon among treatment admissions (1 percent) (exhibit 6). Most cocaine users in treatment reported that they did not have a secondary drug of choice (55 percent). Of those reporting a secondary drug, alcohol was most common (29 percent), followed by marijuana (12 percent). As a secondary drug of choice, cocaine was mentioned by 20 percent of other drug admissions.

Cocaine treatment admissions in nonmetropolitan Atlanta experienced a considerable shift in the racial composition, with African-Americans still in the majority (57 percent) (exhibit 7). The proportion of Whites rose to 42 percent. The difference between male and female cocaine admissions was smaller than that in metropolitan Atlanta at 1.3:1. Smoking remained the preferred route of administration (68 percent), followed by oral (12 percent) and inhalation (12 percent) (exhibit 8). The proportion who reported injection as the primary route of administration was higher in nonmetropolitan counties: 2 percent.

According to the DEA, cocaine has historically been and remains “readily available at both the wholesale and retail levels” in the southeast, with Atlanta serving as the main transshipment and local distribution center, primarily for Mexican-based drug trafficking. The southwest U.S. border and southern Florida continued to be the main source areas for cocaine seized in Georgia. In 2001, more than 965 kilograms were seized in total.

## Heroin

The rate per 100,000 population of heroin ED mentions in Atlanta continued to rise over the past few years, from 15 in 1999, to 17 in 2000, and to 23 in 2001 (exhibit 1). The rate of heroin mentions in Atlanta remained lower than the national rate, but it increased significantly between 2000 and 2001, while the national rate declined (exhibit 9). The highest proportion of heroin mentions in 2001 occurred among African-Americans (53 percent), followed by Whites (32 percent), both reflecting decreases since 2000 (55 percent and 34 percent, respectively). Hispanics accounted for just under 2 percent. The ratio of male-to-female mentions was rather high at 3.6:1. Much like cocaine, heroin users tended to be an older

population. Rates continued to rise among those age 26–34, from 24 in 2000 to 38 in 2001, as well as among those 35 and older, from 18 to 28 during the same time period (exhibit 10). The rate of mentions among those age 18–25 fell from 26 to 18 between 2000 and 2001.

Similar to ED mentions, the proportion of heroin treatment admissions was much smaller than those for cocaine, accounting for 7 percent of total admissions in metropolitan Atlanta in the second half of 2001 (exhibit 3). This is consistent with the first half of the year. Unlike cocaine admissions, the proportions of African-American and White admissions were similar, at 49 percent and 47 percent, respectively (exhibit 4). While Hispanics accounted for a very small percentage of total admissions in Atlanta (1.5 percent), they accounted for almost 3 percent of heroin admissions. Male heroin admissions outnumbered female admissions, with a ratio of 2:1 (exhibit 5).

The preferred route of administration for heroin treatment admissions remained injection, which rose from 57 percent in the first half of 2001 to 61 percent in the second half (exhibit 6). Those age 35 and older continued to account for the highest percentage of heroin admissions, increasing from 76 to 80 percent. Admissions for all other age categories declined. The majority of those entering publicly funded treatment with heroin as their primary drug of choice reported having no secondary drug (48 percent). Of those reporting a secondary drug, cocaine was the most frequently mentioned (32 percent), followed by alcohol (10 percent). Other opiates and benzodiazepines overall accounted for a very small portion of secondary and tertiary drug choices, but among heroin users together they represented 5 percent of secondary drugs and nearly 3 percent of tertiary drugs. Very few treatment admissions for other drugs reported heroin as a secondary or a tertiary drug of choice.

The demographics of nonmetropolitan Atlanta heroin treatment admissions was fairly different from that of Atlanta admissions. Heroin admissions accounted for a smaller percentage of total admissions (2 percent), and Whites accounted for 81 percent of admissions (exhibit 8). African-Americans accounted for 12 percent, followed by Hispanics at 7 percent, their highest representation across all drugs. The heroin treatment population in nonmetropolitan counties remained older, with those age 35 and older constituting the majority (84 percent), followed distantly by those younger than 17 and those age 18–25, each at 7 percent, and those age 26–34 at 2 percent. Injection as a

primary route of administration accounted for 69 percent of nonmetropolitan heroin admissions (exhibit 9).

### Other Opiates/Narcotics

As a whole, the rate of narcotic analgesics/combinations ED mentions per 100,000 population decreased in Atlanta, from 37 in 1999 and 2000 to 30 in 2001. Within this group of central nervous system agents, acetaminophen-hydrocodone (e.g., Vicodin, Lortab) had the highest rate of mentions per 100,000 population: 5. Methadone's rate of mentions has increased over the years, but it remained steady at 4, as did oxycodone mentions. Acetaminophen-oxycodone (e.g., Percocet) dropped from a rate of 2 mentions in 2000 to 1 in 2001. Morphine historically has had a rate of 1 mention per 100,000 population, and that continued in 2001.

While other opiates are not a primary drug of choice category for publicly funded treatment data in Georgia, some data are captured for secondary and tertiary drug choices. Other opiates accounted for less than 1 percent of the total of both secondary and tertiary choices in metropolitan Atlanta in the second half of 2001. Among primary heroin admissions, other opiates accounted for 2.8 percent of secondary drugs and 1.3 percent of tertiary drugs. In nonmetropolitan counties, other opiates accounted for almost 2 percent of secondary and just over 1 percent of tertiary drug choices in the second half of 2001. While other opiates remained more popular among heroin users, at 4.1 and 3.3 percent, methamphetamine users often identify other opiates as a secondary (3.7 percent) and tertiary (2.5 percent) choice.

### Marijuana

Like all other major drugs, the rate of marijuana ED mentions in metropolitan Atlanta per 100,000 population increased from 86 in 2000 to 96 in 2001, but not significantly (exhibit 1). African-Americans represented the largest percentage of total mentions at 56 percent, followed by Whites at 28 percent and Hispanics at less than 1 percent. The ratio of male-to-female mentions remained constant from 2000 to 2001, at 2.3:1. Unlike mentions for cocaine and heroin, marijuana mentions were highest among those age 18–25.

Among treatment admissions in metropolitan Atlanta, those reporting marijuana as their primary drug of choice accounted for 17 percent in the second half of 2001, up slightly from the first half of the year (16 percent) (exhibit 3). African-Americans accounted for the majority of marijuana admissions (54 percent), followed by Whites (42 percent) and Hispanics

(2 percent) (exhibit 4). The ratio of male-to-female admissions in the second half of 2001 held steady from the first half of the year at 1.8:1 (exhibit 5). The highest proportion of marijuana admissions occurred among those age 35 and older (80 percent), consistent with the previous half-year. Among marijuana admissions who named a secondary drug, alcohol was the most common (22 percent), followed by cocaine (14 percent). Among those entering treatment for another drug, marijuana is often mentioned as a secondary (12 percent) and a tertiary (7 percent) drug choice.

In nonmetropolitan Atlanta, marijuana accounted for a larger percentage of total treatment admissions (25 percent). As with other drugs, African-Americans were less represented among marijuana treatment admissions outside metropolitan Atlanta, representing 37 percent (exhibit 7). Whites accounted for the largest proportion at 62 percent, and Hispanics constituted less than 1 percent. The gap between male and female admissions was larger (2:1) than in metropolitan counties. Marijuana also accounted for a larger percentage of secondary and tertiary drug choices, at 19 percent and 9 percent, respectively.

The DEA asserts that marijuana continued to be the most widely used drug in the State. Much of the marijuana found in Georgia is brought in along the same route as other imported drugs: from the U.S. southwest border and often by Mexican nationals. In 2001, more than 5,200 kilograms of marijuana were seized throughout the State. There were other routes of marijuana distribution. In Arizona, for example, troopers in October 2002 stopped a man on his way back to Duluth, Georgia (located just northwest of Atlanta), where he lived, and found 100 pounds of marijuana with a potential street value of \$73,000. Also in October 2002, authorities arrested two men just outside of Savannah, Georgia, and seized 400 pounds of marijuana (with a potential street value of \$770,000) that was determined to have come from "out of State." While most marijuana is believed to come from outside the State, there is a significant amount of local growth. In July 2002, State and local officials found and destroyed approximately 1,600 marijuana plants in rural portions of Oglethorpe and Wilkes Counties in northeast Georgia, approximately 100 miles from Atlanta. The estimated street value of the plants was nearly \$2 million, but no arrests were made in connection with the plants.

### Stimulants

The rate of methamphetamine ED mentions per 100,000 population in Atlanta continued its steady increase, from 3 in 1999, to 4 in 2000, and to 5 in 2001 (exhibit 1). This local trend closely mirrors that

of the Nation (exhibit 11). The rate of amphetamine mentions per 100,000 population in metropolitan Atlanta in 2001 was twice that for methamphetamine, at 10 (exhibit 12). Whites accounted for the largest group for both methamphetamine (80 percent) and amphetamine (65 percent) mentions. The male-to-female ratio of methamphetamine mentions narrowed from 2.5:1 in 2000 to 2:1 in 2001. The ratio was even smaller for amphetamines at 1.5:1. As mentioned previously, there were more overall mentions for amphetamine, and those mentions were spread over a wider range of users than those for methamphetamine. For amphetamine mentions, the rate of mentions among those younger than 17 was 4 per 100,000 population. For methamphetamine mentions, the highest rate of mentions occurred among those age 18–25 (30), and the rate for those younger than 17 was zero.

The proportion of clients in metropolitan Atlanta who sought treatment for primary methamphetamine abuse rose from 1.5 percent in 2000, to 1.6 percent in the first half of 2001, and to 2.4 percent in the second half of the year (exhibit 3). (Georgia DHR uses methamphetamine specifically and not stimulants in general as a category.) The vast majority of methamphetamine treatment admissions continued to be White, stable at 96 percent (exhibit 4). The proportion of African-Americans dropped from 3 to 2 percent, and the percentage of Hispanics was 2 percent. The ratio of male-to-female methamphetamine admissions also stayed relatively stable at 1.4:1, down slightly from 1.6:1 in the first half of the year (exhibit 5).

The proportion of methamphetamine admissions in metropolitan Atlanta who reported injection fell from 27 percent in 2000 to 17 percent in the first half of 2001, and then rose to 29 percent in the second half of the year (exhibit 6). The increase in injection between the first and second halves of 2001 was accompanied by a slight rise in smoking, from 17 to 19 percent, and decreases in those reporting oral, from 30 to 26 percent, and inhalation, from 31 to 23 percent.

The proportion of persons who entered publicly funded treatment in nonmetropolitan counties for methamphetamine use in the second half of 2001 was even larger than that in Atlanta, at 5 percent, consistent with the first half of 2001. The ratio of male-to-female admissions was smaller than in metropolitan Atlanta counties, at 1.2:1. All methamphetamine admissions outside of Atlanta, with the exception of one individual, were White (exhibit 7). A greater number of these nonmetropolitan methamphetamine admissions reported smoking as their

preferred route of administration (30 percent), followed by oral (24 percent), injection (21 percent), and inhalation (20 percent) (exhibit 8).

### Depressants

Benzodiazepines accounted for the largest proportion of Atlanta psychotherapeutic agent ED mentions, with a rate of 32 mentions per 100,000 population. Within the benzodiazepines category, alprazolam, better known as Xanax, had the highest rate (9), which is steady from 2000 but down from a high of 14 in 1998. The rate of mentions of both clonazepam (Klonopin) and diazepam (Valium) remained constant, with 3 mentions each, and the rate of lorazepam (Ativan) mentions stayed at 2.

While data on publicly funded treatment in Georgia do not capture depressants as a category for primary drug of choice, depressants do appear as secondary and tertiary drug choices, especially among heroin admissions in metropolitan Atlanta. In nonmetropolitan counties, benzodiazepines remained a choice for some heroin users. An even greater portion of those reporting methamphetamine as their primary drug of choice, however, cited depressants as a secondary (3.7 percent) and tertiary (3.2 percent) choice.

Ethnographers continually find that regardless of ED or treatment data, many individuals use various depressants as part of a pattern of polydrug use. Xanax, Valium, and Dilaudid are mentioned most often. Most contacts report using depressants in their original pill form, but there are occasional reports of crushing the pills to either snort or inject them.

### Hallucinogens

The rate of ED mentions per 100,000 population in metropolitan Atlanta for lysergic acid diethylamide (LSD) remained stable from 2000 to 2001 at 2 (exhibit 12). Since 1994, mentions in this category have dropped by 73 percent. The ratio of male-to-female mentions has generally been high, but the gap narrowed from 4:1 in 2000 to 3:1 in 2001. While the rate of LSD mentions has declined over the years, the rate has remained highest among those age 18–25.

Currently, LSD is mentioned most among those who are also regular users of methylenedioxymethamphetamine (MDMA). It remains fairly common to combine the two, a practice known as candyflipping.

### Club Drugs

After a slow rise over the past few years, the rate of MDMA (ecstasy) ED mentions per 100,000 popula-

tion in metropolitan Atlanta more than doubled between 2000 and 2001, from 2 to 5 (exhibit 12). While this rate is low compared with other drugs, it is more than double the national rate of 2 (exhibit 13). Unlike many other drugs, the racial composition of total MDMA mentions was evenly split between Whites and African-Americans, at 43 percent and 42 percent, respectively. Hispanics accounted for 3 percent. Much like methamphetamine, the rate of MDMA mentions per 100,000 population was high among younger users, with the highest rates reported among those age 18–25 (17), followed by those 26–34 (8).

The rate of gamma hydroxybutyrate (GHB) mentions per 100,000 population fell significantly, from 5 in 2000 to 2 in 2001. The ratio of male-to-female mentions was 3:1, and Whites continued to account for the majority of mentions at 74 percent. The rate of ketamine mentions has always been small. In 2001, the rate was 1 among those younger than 18.

Currently, publicly funded treatment programs throughout Georgia do not report data on MDMA. It is possible that some individuals seeking treatment for primary MDMA abuse are being incorporated into the methamphetamine category, or that MDMA is a secondary or tertiary drug of choice that is considered an ‘other drug.’ An informal poll of some private and public treatment places in and around Atlanta, particularly in Atlanta’s northern suburbs, suggested that a number of young, primarily White clients have been seeking treatment for primary MDMA abuse.

#### INFECTIOUS DISEASES RELATED TO DRUG ABUSE

Georgia accounted for 3 percent of the Nation’s total AIDS cases and remained ninth among States, based on reported AIDS cases through December 2001. The Georgia DHR reported 25,485 cumulative adult and

pediatric AIDS cases from 1981 through the third quarter 2002 (September 30), with 12,119 of those cases currently living with AIDS. Since the end of the second quarter of 2002, the percentage of cases among injection drug users (IDUs) and those who have male-to-male sexual contact and are also IDUs (MSM/IDUs) fell from 23 to 21.1 percent. The decline occurred among IDUs (from 17.7 to 15.9 percent), while cases among MSM/IDUs rose slightly (from 5.5 to 5.9 percent). This drop in total cases ascribed to injection drug use has closed the gap some between male and female IDU cases. Females still outpace males among injection-related cases 22.1 to 21.1 percent, even when factoring in MSM/IDU cases.

An eight-county metropolitan Atlanta area accounts for 67 percent of the total cumulative Georgia AIDS cases. Consequently, this area bears 2 percent of the national total, ranking it 10th among selected metropolitan areas in the number of cases. Many of the statewide trends are echoed in metropolitan Atlanta. Injection drug use is associated with 23 percent of all reported metropolitan adult and pediatric AIDS cases (17.4 percent IDU and 5.6 percent MSM/IDU), falling slightly since the second half of 2001. In the Atlanta-area cases related to injection drug use, the disparity between cases among women and men is even larger than statewide, at 30.8 percent vs. 22.1 percent.

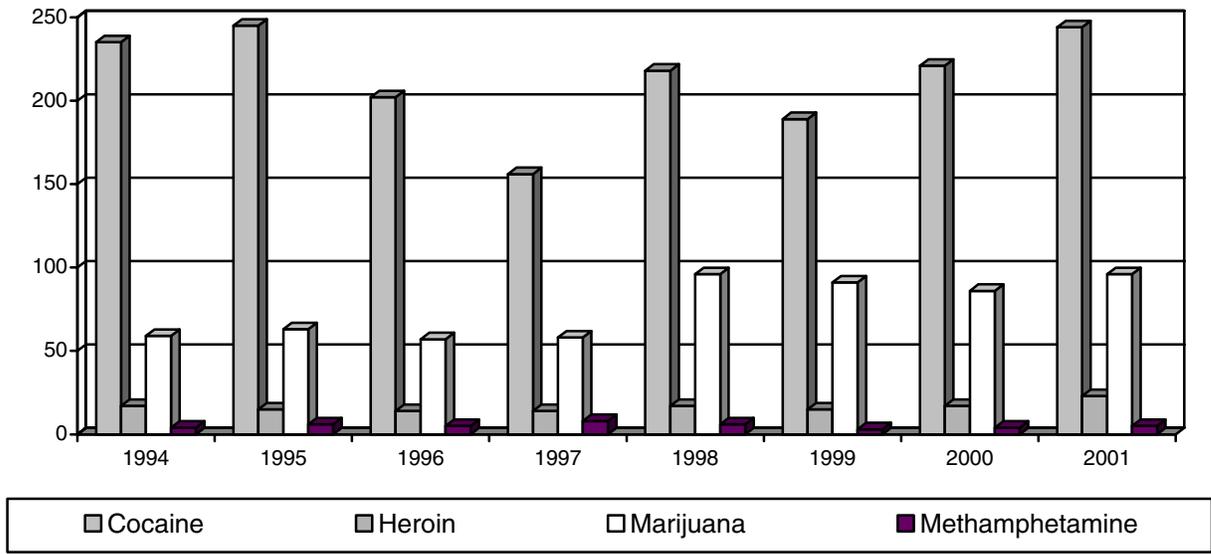
#### REFERENCES

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

---

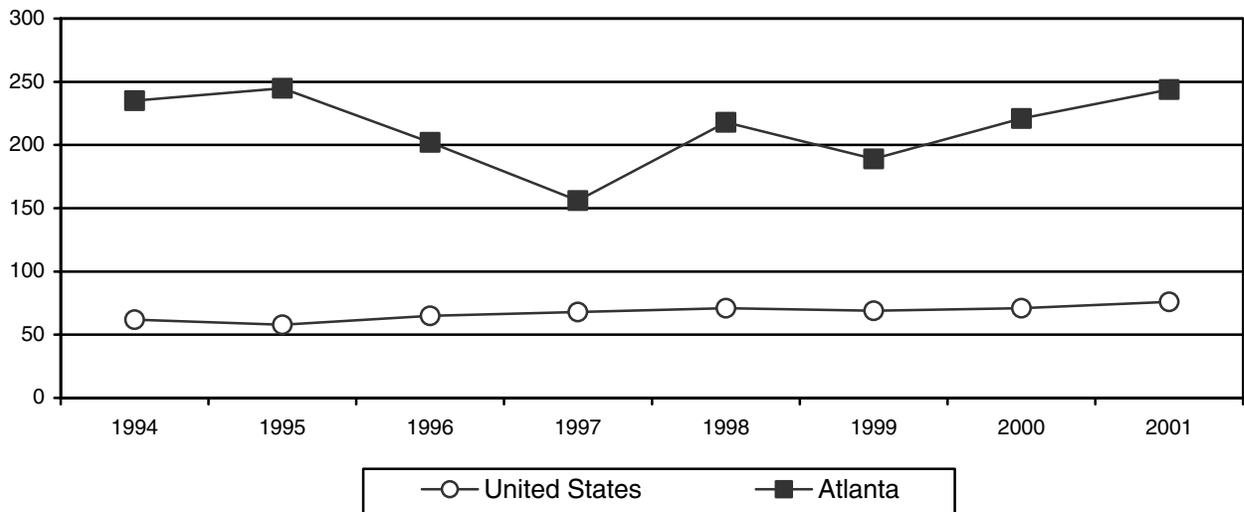
*For inquiries concerning this report, please contact Claire E. Sterk, Ph.D., Rollins School of Public Health at Emory University, 1518 Clifton Road, NE, Atlanta, GA 30322, Tel: (404) 727-9124, Fax: (404) 727-1369, E-mail: <[csterk@sph.emory.edu](mailto:csterk@sph.emory.edu)>.*

**Exhibit 1. Estimated Rate of ED Mentions Per 100,000 Population in Atlanta: 1994–2001**



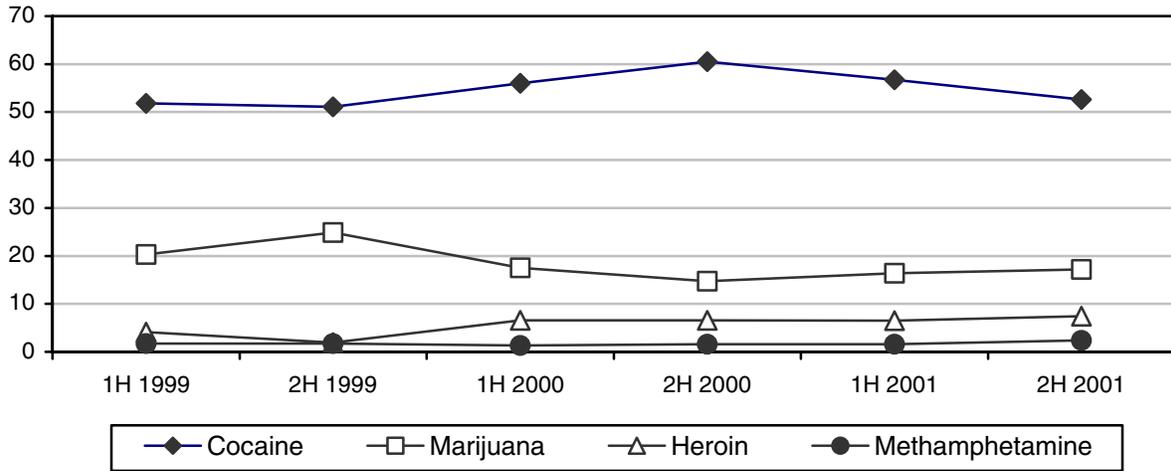
SOURCE: DAWN, OAS, SAMHSA

**Exhibit 2. Rate of ED Cocaine Mentions Per 100,000 Population in the United States and Atlanta: 1994–2001**



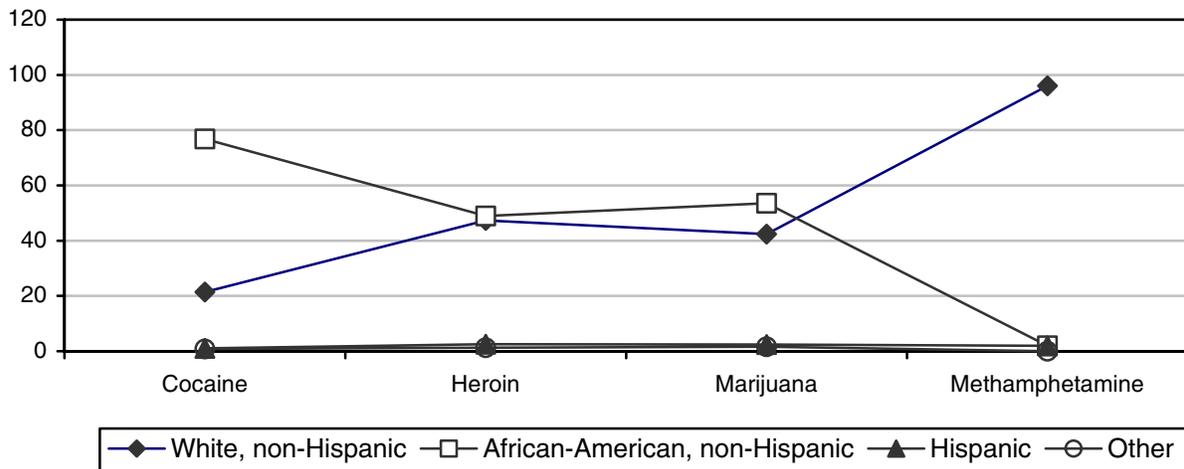
SOURCE: DAWN, OAS, SAMHSA

**Exhibit 3. Primary Drug of Abuse Among Public Drug Treatment Admissions in Metropolitan Atlanta by Percent and Half-Year: 1999–2001**



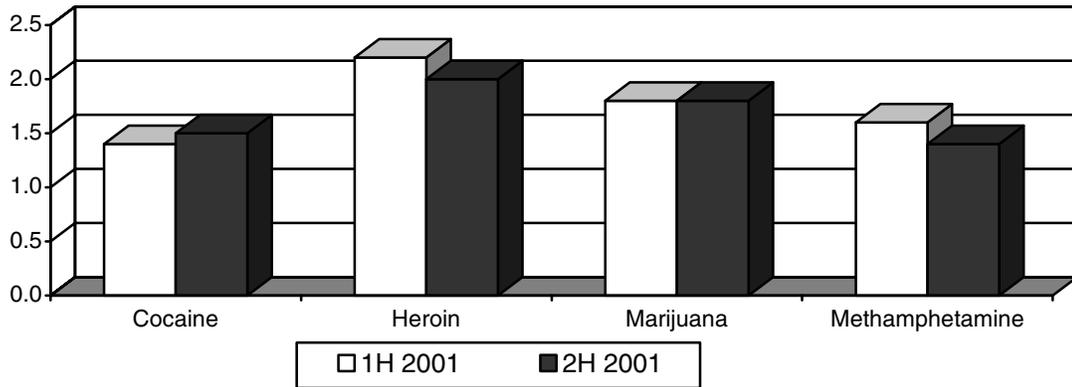
SOURCE: Department of Human Resources

**Exhibit 4. Primary Drug Treatment Admissions in Metropolitan Atlanta by Race/Ethnicity and Percent: July–December 2001**



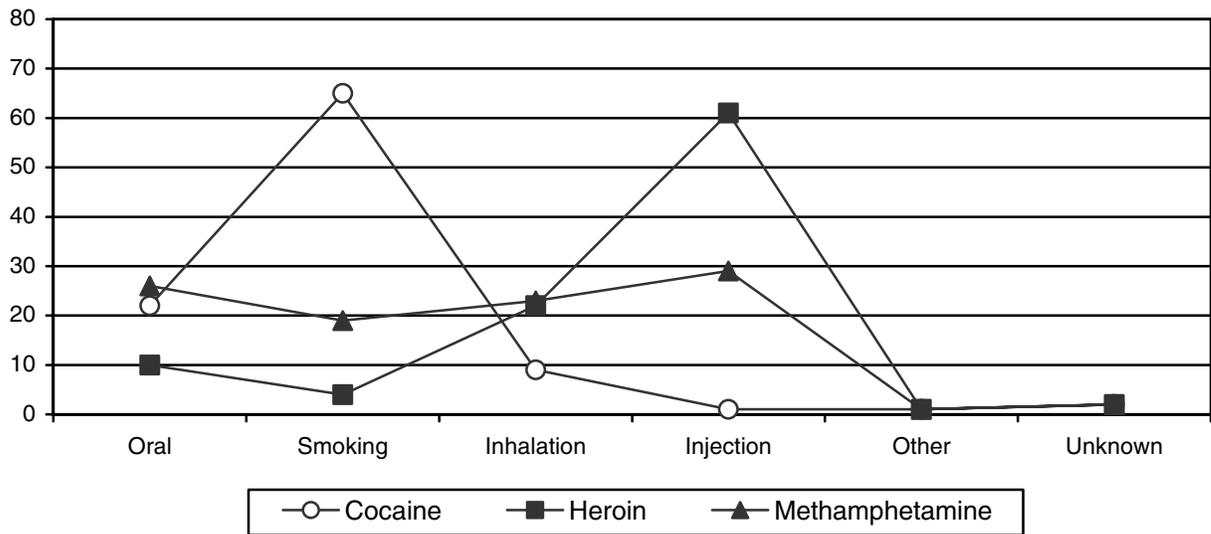
SOURCE: Department of Human Resources

**Exhibit 5. Male-to-Female Ratio of Treatment Admissions in Metropolitan Atlanta by Half-Year: 2001**



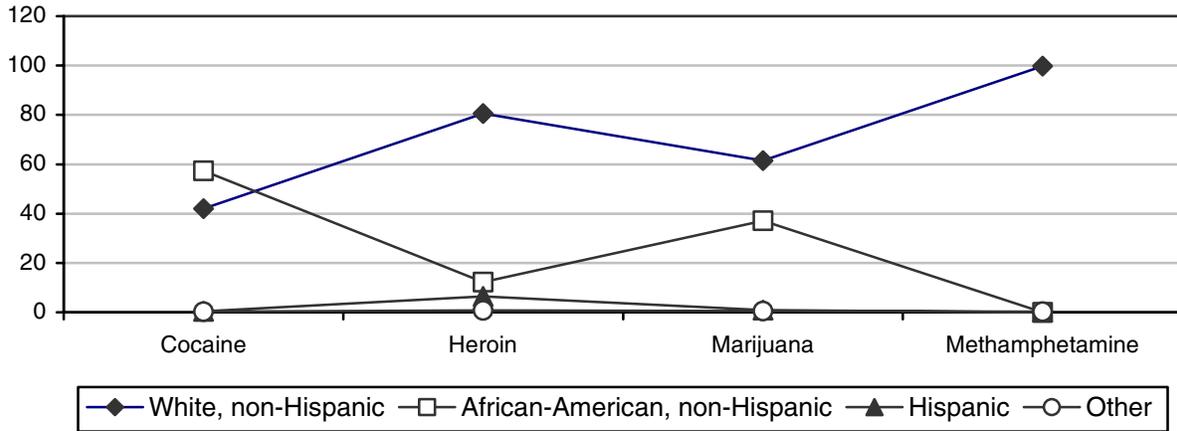
SOURCE: Department of Human Resources

**Exhibit 6. Route of Cocaine, Heroin, and Methamphetamine Administration Among Treatment Admissions in Metropolitan Atlanta by Percent: July–December 2001**



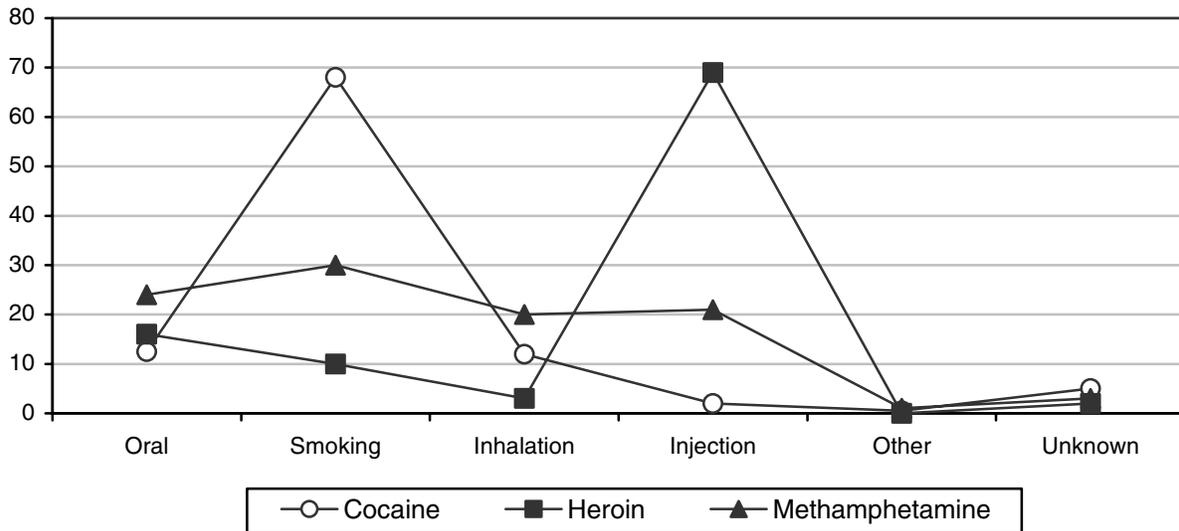
SOURCE: Department of Human Resources

**Exhibit 7. Primary Drug Treatment Admissions in Nonmetropolitan Atlanta by Race/Ethnicity and Percent: July–December 2001**



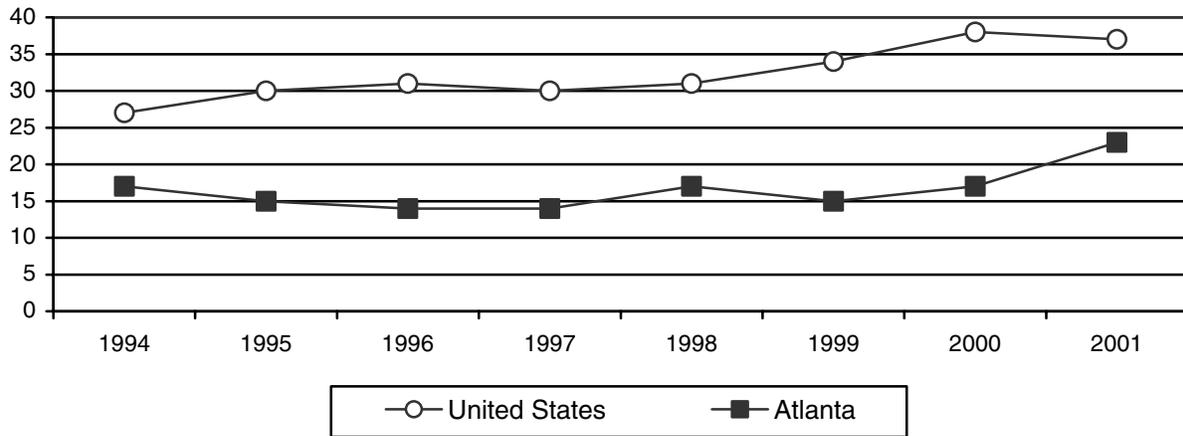
SOURCE: Department of Human Resources

**Exhibit 8. Route of Cocaine, Heroin, and Methamphetamine Administration Among Treatment Admissions in Nonmetropolitan Atlanta: July–December 2001**



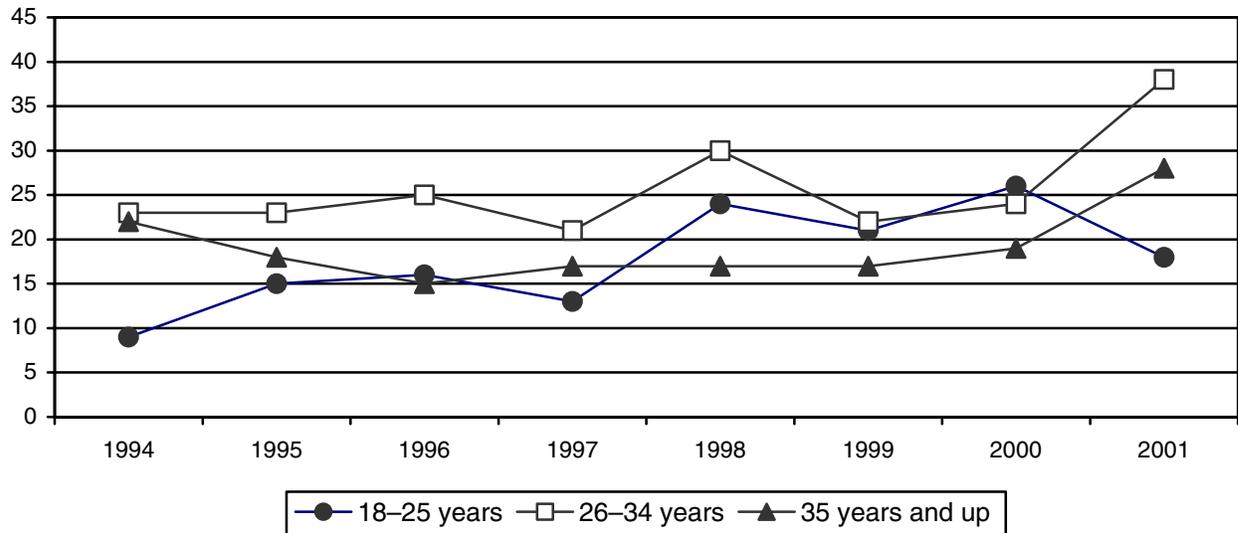
SOURCE: Department of Human Resources

**Exhibit 9. Rate of Heroin ED Mentions Per 100,000 Population in the United States and Atlanta: 1994–2001**



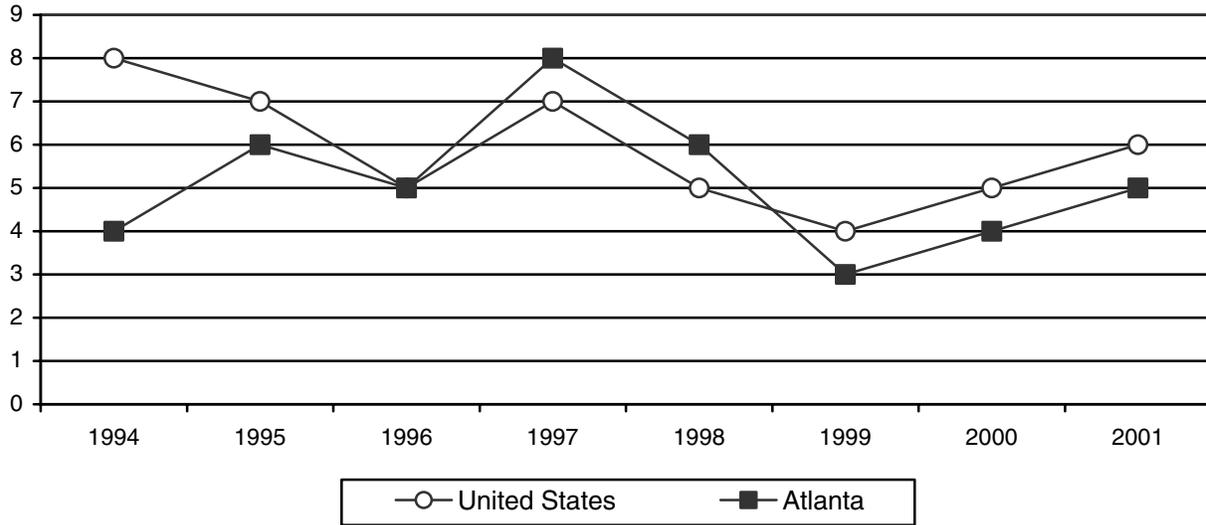
SOURCE: DAWN, OAS, SAMHSA

**Exhibit 10. Rate of Heroin ED Mentions Per 100,000 Population by Age and Percent in Atlanta: 1994–2001**



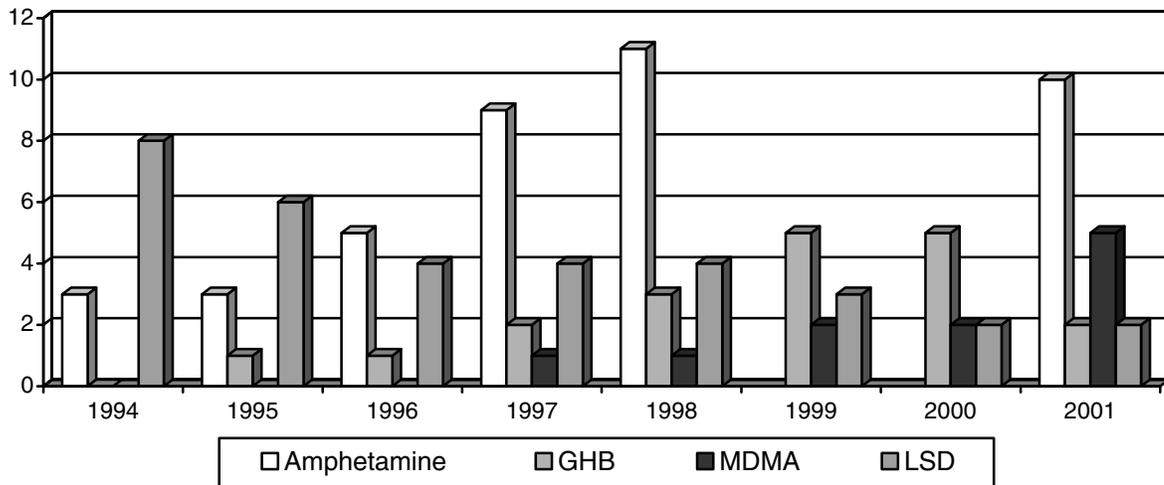
SOURCE: DAWN, OAS, SAMHSA

**Exhibit 11. Rate of Methamphetamine ED Mentions Per 100,000 Population in the United States and Atlanta: 1994–2001**



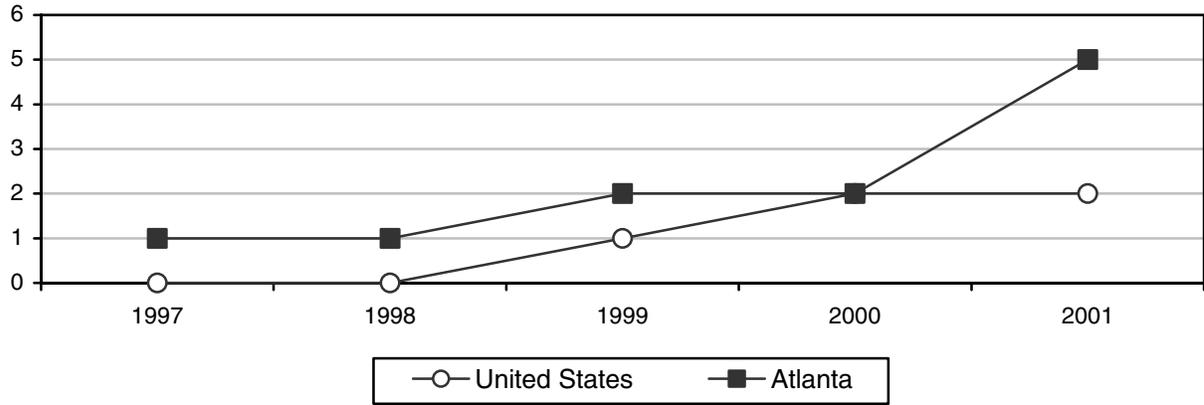
SOURCE: DAWN, OAS, SAMHSA

**Exhibit 12. Estimated Rate of ED Mentions Per 100,000 Population for Selected Drugs in Atlanta: 1994–2001**



SOURCE: DAWN, OAS, SAMHSA

**Exhibit 13. Rate of MDMA ED Mentions Per 100,000 Population in the United States and Atlanta 1997–2001**



SOURCE: DAWN, OAS, SAMHSA

# Drug Use in the Baltimore Metropolitan Area: Epidemiology and Trends, 1997–2001

Leigh A. Henderson, Ph.D.<sup>1</sup>

## ABSTRACT

*Heroin indicators, including treatment admission rates and rates of emergency department (ED) mentions, were mixed for the Baltimore metropolitan area as a whole. The rate of heroin ED mentions fell significantly, as did heroin treatment admission rates for both intranasal and injection use in the city. However, treatment admission rates for both routes of administration increased in the suburban counties. In Baltimore City, the admission rate for intranasal heroin use was 39 percent higher than for injection. In the suburban counties, the rate for heroin injection was 24 percent higher than for inhalation. Admissions for intranasal heroin use were comprised predominantly of an aging Black population. Admissions for heroin injection were split into two distinct populations: an aging Black population and new White users. Cocaine treatment admission rates and ED mentions were stable. The population in treatment for smoked cocaine (crack) continued to age: in 2001, 66 percent were older than 35, compared with 44 percent in 1997. Marijuana treatment admission rates and rates of ED mentions increased. Nearly one-half of marijuana treatment admissions were younger than 18, and 64 percent entered treatment as the result of a judicial process. Stimulants represented insignificant but apparently growing proportions of ED and treatment admissions.*

## INTRODUCTION

### Area Description

The Baltimore primary metropolitan statistical area (PMSA) was home to some 2.6 million persons in 2001. 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. According to the 2000 census, however, the population rose to 648,000 in 2000. The population of the surrounding counties has

grown steadily, from approximately 1.7 million in 1990 to 1.9 million in 2001.

The city and the suburban counties represent distinctly different socioeconomic groups. In 1999, median household income in the city was \$30,000, and 23 percent of the population lived in poverty. In the suburban counties, however, median household income ranged from \$50,000 to \$74,000, and the poverty rate ranged from 4 to 7 percent. In 2000, the population composition of the city differed markedly from that of the surrounding counties: 31 percent White and 64 percent African-American versus 78 percent White and 14 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 estimates** for 1990–2001 and model-based income and poverty estimates for 1999 for Maryland counties were derived from the U.S. Bureau of the Census data (electronic access: <<http://factfinder.census.gov>> and <<http://quickfacts.census.gov>>) and Census 2000 Summary File 3.
- **Emergency department (ED) drug mentions data** were provided by the Drug Abuse Warning

<sup>1</sup> The author is affiliated with Synectics for Management Decisions, Inc.

Network (DAWN), Office of Applied Studies (OAS), Substance Abuse and Mental Health Services Administration (SAMHSA), for the Baltimore PMSA for 1997–2001.

- **Drug treatment admissions data** were provided by the Maryland Alcohol and Drug Abuse Administration, Department of Health and Mental Hygiene, for 1997–2001. Data are presented for the PMSA as a whole, as well as separately for Baltimore City and the suburban counties. Included are those programs that receive 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.
- **Drug-related mortality data** were provided by DAWN, OAS, SAMHSA, for the Baltimore PMSA for 2000.
- **Heroin price and purity data** are preliminary for 2001 and were provided by the Drug Enforcement Administration (DEA)'s Domestic Monitor Program (DMP).
- **Data on drug use prevalence among 12th-grade students** are from the Maryland State Department of Education's 2001 Maryland Adolescent Survey; electronic access: <<http://www.msde.state.md.us>>.
- **Acquired immunodeficiency syndrome (AIDS) and human immunodeficiency virus (HIV) data** were provided by the Maryland Department of Health and Mental Hygiene, AIDS Administration, "The Maryland 2001 HIV/AIDS Annual Report" (1999 demographic and risk category information for Baltimore); <<http://www.dhnh.state.md.us/AIDS/epictr.htm>> (2001 data for Maryland and Baltimore).

#### 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 2001 reported problems with at least one substance other than the primary drug of abuse. An average of 1.8 drugs was mentioned per ED visit in 2001. In 2000 (the latest year for which mortality data were available), multiple drugs were found in 91 percent of the 532 drug-involved deaths; the average number of drugs found was 3.

In the second half of the 1990s, abuse of both heroin and cocaine emerged as the dominant pattern of drug abuse in the Baltimore PMSA. The cocaine and heroin ED rates and patterns have been similar since 1995, probably because of the concurrent use of the two drugs. In the PMSA, cocaine was reported as the primary substance by 13 percent of drug-related treatment admissions, but was reported as a secondary substance by an additional 36 percent. Among 2001 treatment admissions for heroin injection, 61 percent also used cocaine, primarily by injection (51 percent), although 10 percent reported smoking cocaine. Secondary cocaine use was also reported by 48 percent of treatment admissions for heroin inhalation. Heroin inhalers, however, were more likely to report smoking cocaine (33 percent) than using it by other routes (15 percent).

Heroin abuse indicators for the Baltimore metropolitan area as a whole were mixed in 2001. However, heroin abuse in Baltimore is complex and dynamic. There appear to be different groups of heroin users (urban versus suburban, intranasal users versus injectors), and indicators for some of these groups increased in 2001. Heroin treatment admission rates for both intranasal and injection use fell in the city, but rates for both routes increased in the suburban counties. In Baltimore City, the admission rate for intranasal heroin use was 39 percent higher than for injection. In the suburban counties, the rate for heroin injection was 24 percent higher than for inhalation. Admissions for intranasal heroin use were comprised predominantly of an aging African-American population. Admissions for heroin injection were split into two distinct populations: an aging Black population and new White users.

Women outnumbered men among heroin and cocaine treatment admissions younger than 30. In 2001, 59 percent of heroin inhalation admissions younger than 30 were female, compared with 49 percent of admissions age 30 and older. Similarly, 52 percent of heroin injection admissions younger than 30 were female, compared with 38 percent of admissions age 30 and older. Among cocaine treatment admissions younger than 30, 52 percent were female, compared with 46 percent of those aged 30 and older.

#### Cocaine and Crack

Cocaine indicators (treatment admission rates and rates of ED mentions) were stable between 2000 and 2001. The rate of cocaine-related ED episodes (214 per 100,000 for 2001) was similar to the rate reported in 2000 (exhibit 1). Cocaine remained highly

prevalent among treatment admissions, although the treatment admission rate for cocaine was stable at 163 per 100,000 population age 12 and older (exhibit 2). The treatment admission rate for primary cocaine use remained well below that for heroin use.

According to the indicator data, cocaine use was generally associated with the use of alcohol and other drugs as well. Almost all (84 percent) cocaine-related ED episodes involved another drug in addition to cocaine (exhibit 1). While cocaine was reported as a primary substance by 13 percent of treatment admissions in 2001, it was reported as a secondary substance by an additional 36 percent (exhibit 2).

Crack cocaine represented nearly 75 percent of the treatment admissions for primary cocaine use (exhibit 2). The population in treatment for cocaine smoking has aged; 66 percent were age 35 or older in 2001 (exhibit 3). The median age at admission to treatment was 37, compared with 34 in 1997. Nearly one-half (47 percent) of those in treatment for smoking cocaine were women, and two-thirds (66 percent) were African-American. Less than one-half (40 percent) of the crack smokers were entering treatment for the first time, and 64 percent were likely to be referred through sources outside the criminal justice system. Daily crack use was reported by 37 percent, and use of other drugs was reported by more than two-thirds (69 percent). Alcohol was the most common secondary drug (used by 49 percent), followed by marijuana (26 percent) and opiates used intranasally (14 percent). Only 3 percent of crack smokers reported opiate injection.

## Heroin

Heroin indicators were mixed for the Baltimore metropolitan area as a whole in 2001. The 2001 rate of heroin ED mentions (195 per 100,000 population) represented a significant decline from 227 per 100,000 in 2000 (exhibit 1). Treatment admissions in the PMSA for primary heroin use remained stable in 2001 at a rate of 647 admissions per 100,000 population age 12 and older, compared to 651 per 100,000 in 2000 (exhibit 2).

In the indicator data, heroin use was frequently accompanied by the use of alcohol and other drugs. More than one-half (58 percent) of heroin-related ED episodes involved other drugs in addition to heroin (exhibit 1). Among treatment admissions in the PMSA, heroin was reported as a primary substance by 50 percent and as a secondary substance by 9 percent (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. Treatment admissions for some of these groups increased in 2001. The heroin treatment admission rate was 4½ times higher in Baltimore City than in the suburban counties (exhibit 2). While heroin treatment admission rates for both intranasal and injection use fell in the city in 2001, rates for both routes increased in the suburban counties. In Baltimore City, intranasal use was the preferred route of administration, and the admission rate for intranasal use was 39 percent higher than for injection. In the suburban counties, however, the admission rate for heroin injection was 24 percent higher than for inhalation.

Exhibit 4 compares the number of treatment admissions in 2001 by urbanicity, age, and race for heroin injection and heroin inhalation. Baltimore City has a core of older African-American heroin users, both injectors and intranasal users. Inhalers as a group were slightly younger than injectors. White users entering treatment for heroin were younger, and they were predominantly injectors. In the suburban counties, heroin users entering treatment were predominantly young, White injectors.

In the total PMSA, the proportion of White heroin injectors entering treatment increased from 42 percent in 1997 to 49 percent in 2001 (exhibit 5). The proportion of admissions younger than 25 also increased, from 15 percent in 1997 to 21 percent in 2001. In the suburban counties, admissions of those younger than 25 increased from 27 percent in 1997 to 32 percent in 2001. The median age at admission for heroin injectors was 39 in Baltimore City and 32 in the suburban counties. Women accounted for 39 percent of admissions in the total PMSA. In the PMSA, most persons reported daily use (75 percent), and relatively few had been referred through the criminal justice system (24 percent). The proportion receiving treatment for the first time declined slightly, from 39 percent in 1997 to 32 percent in 2001. Use of other drugs was reported by 75 percent of heroin injectors entering treatment in the PMSA: 51 percent used cocaine by routes other than smoking, 10 percent smoked cocaine, 27 percent had an alcohol problem, and 12 percent used marijuana.

Among heroin intranasal users in the PMSA, most admissions were African-American (81 percent) and age 26 and older (91 percent) (exhibit 6). The median duration of use before first entering treatment was 10 years. Nearly one-half of total PMSA admissions for

heroin intranasal use (48 percent) occurred among women. The proportion of intranasal users younger than 25 decreased from 21 percent in 1997 to 9 percent in 2001. The median age at admission was 35. Nearly three-quarters (71 percent) reported daily heroin use. Intranasal users were more likely than injectors to be referred through the criminal justice system (32 vs. 23 percent) and to be receiving treatment for the first time (38 vs. 32 percent). Heroin intranasal users were less likely than injectors to report use of other drugs (66 vs. 75 percent), and the drugs used were different. Cocaine smoking was much greater among heroin intranasal users (33 percent), and 15 percent reported using cocaine by other routes. Alcohol use, at 27 percent, was similar in the two groups, but marijuana use was somewhat higher among heroin intranasal users than injectors (16 vs. 12 percent).

Heroin purity remained low in 2001, at 24 percent, below the national metropolitan average of 35 percent. Price also remained low, at \$0.33 per milligram pure, compared with \$1.05 per milligram pure as the national metropolitan average. Ethnographic research suggests that there are two grades of heroin sold in Baltimore. “Raw dope,” said to be of higher purity and preferred by inhalers, is sold in west Baltimore City. “Scramble” (heroin of lower purity, containing a higher proportion of adulterants and diluents) is preferred by injectors and is sold in east Baltimore City.

### **Other Opiates/Narcotics**

Narcotic analgesics and narcotic analgesics/combinations have been mentioned with increasing frequency in drug-related ED episodes. In 2001, they were mentioned in 23 percent of these episodes at a rate of 114 per 100,000 population, compared with 17 percent and 80 per 100,000 in 2000. Eighty-two percent of the narcotic analgesics/combinations mentions were in the “not otherwise specified” category, with oxycodone/combinations accounting for 7.8 percent and methadone for 5.7 percent.

### **Marijuana**

Indicators of marijuana use increased between 2000 and 2001. The marijuana ED rate (78 per 100,000) increased significantly, and it did so among all age groups shown in exhibit 1 and for both males and females. The marijuana treatment admission rate in the PMSA rose from 199 per 100,000 population age 12 and over in 2000 to 205 per 100,000 in 2001 (exhibit 2).

More often than not, marijuana use in the 2001 indicator data sets was associated with the use of alcohol or other drugs. A majority (63 percent) of marijuana ED episodes involved multiple substances (exhibit 1). Among PMSA treatment admissions for primary marijuana use, 69 percent reported using additional substances: 59 percent reported alcohol use, 9 percent reported cocaine use, and 6 percent reported use of heroin or other opiates (exhibit 7). Some 11 percent of admissions used other substances, primarily hallucinogens and inhalants.

Among 2001 treatment admissions, marijuana was more frequently reported as a secondary substance than as a primary substance, at 22 percent and 16 percent, respectively, in the PMSA (exhibit 2).

As shown in exhibit 2, the proportion of marijuana treatment admissions in 2001 was higher in the suburban counties (19 percent) than in Baltimore City (12 percent), but the admission rate was higher in the city (299 per 100,000 age 12 and over vs. 175 per 100,000 in the counties).

Persons entering treatment for marijuana use were young: 48 percent in the PMSA were younger than 18, and the median age at admission to treatment was 18 (exhibit 7). Marijuana admissions were primarily male (82 percent). The racial breakdown of marijuana admissions approached that of the underlying population more closely than for other illicit drugs (50 percent White and 48 percent African-American). A large proportion of marijuana treatment admissions (64 percent) represented referrals through the criminal justice system. Admission rates for criminal justice referrals were 80 percent higher than those for other referrals in 2001. Admissions were likely to be experiencing their first treatment episode (71 percent), and more than one-third (36 percent) reported daily marijuana use.

Marijuana use in the past month was reported by 21 to 29 percent of 12th-grade students in five of the six suburban counties, according to the 2001 Maryland Adolescent Survey. The proportion reporting past-month use in Baltimore City, however, was only 14 percent.

### **Stimulants**

Stimulants were rarely mentioned as the primary substance of abuse by treatment admissions (exhibit 2). ED mentions of amphetamines increased significantly between 2000 and 2001, but the numbers remained low. Amphetamines were mentioned in 2

percent of drug-related ED episodes in 2001. Methamphetamine was reported in only six ED episodes in 2001.

Amphetamine use in the past month was reported by about 5 to 10 percent of 12th-grade students in the suburban counties in the 2001 Maryland Adolescent Survey. Methamphetamine use in the past month was reported by 1 to 5 percent of 12th-grade students in the suburban counties. Use of any of the stimulant categories was lower in Baltimore City than in the suburban counties.

### **Depressants**

Benzodiazepines were mentioned in 12 percent of drug-related ED episodes in 2001. This represented a significant increase in the rate of benzodiazepine ED mentions, from 45 per 100,000 in 2000 to 59 per 100,000 in 2001. The specific benzodiazepines involved were generally not reported.

### **Hallucinogens**

Lysergic acid diethylamide (LSD) use in the past month was reported by between 3 and 9 percent of 12th-grade students in the suburban counties, as was use of other hallucinogens (mescaline, 'shrooms), according to the 2001 Maryland Adolescent Survey. Reported use for any of the hallucinogen categories was lower in Baltimore City than in the counties.

LSD mentions in drug-related ED episodes fell significantly from 49 mentions in 2000 to 29 in 2001. Phencyclidine (PCP) mentions remained stable, at 73 in 2000 and 75 in 2001.

### **Club Drugs**

The 2001 Maryland Adolescent Survey reported that "designer drugs" (including ecstasy) had been used in

the past month by between 5 and 10 percent of 12th-graders in the suburban counties. Use in the past month in Baltimore City, however, was only 2 percent.

ED mentions of methylenedioxymethamphetamine (MDMA or ecstasy) increased significantly between 2000 and 2001, but the numbers remained low, increasing from 64 in 2000 to 75 in 2001. MDMA was mentioned in less than 1 percent of drug-related ED episodes in 2001.

ED mentions of gamma hydroxybutyrate (GHB), flunitrazepam (Rohypnol), and ketamine remained low, at 7, 0, and 6, respectively, in 2001.

### **INFECTIOUS DISEASES RELATED TO DRUG ABUSE**

The Baltimore metropolitan area had an AIDS incidence rate of 50.0 per 100,000 population in 2001, an increase over the 37.8 per 100,000 reported in 2000. Improvements in reporting beginning in November 2000 led to an increase in the reported number of AIDS cases in Baltimore and Maryland, changing Baltimore's AIDS incidence rank among major metropolitan areas from eighth to fifth. In the year ending December 31, 2000, the Baltimore metropolitan area accounted for 64 percent of Maryland's incident HIV infections, 61 percent of its incident AIDS cases, and 63 percent of the 23,229 persons in Maryland living with HIV or AIDS. In 1998 (the latest year for which data by geographic region are available), Baltimore's prevalent AIDS cases were about 70 percent male and 83 percent African-American. Sixty percent of cases were among injection drug users (IDUs), 21 percent were non-IDU men who had sex with men, and 16 percent involved heterosexual transmission.

---

*For inquiries concerning this report, please contact Leigh A. Henderson, Ph.D., Synectics for Management Decisions, Inc., 3001 Guilford Avenue, Baltimore, Maryland 21218-3926, Phone: 410-235-3096, Fax: 703-528-6421, E-mail: <leighh@smdi.com>.*

**Exhibit 1. Cocaine, Heroin, and Marijuana ED Mentions in Baltimore by Demographic Characteristic: 1997–2001**

	Cocaine			Heroin			Marijuana			
	1997	1998	2000	1997	1998	2001	1997	1998	2000	2001
(Number of Mentions)	(6,253)	(6,871)	(6,921)	(5,863)	(6,711)	(4,481)	(1,402)	(1,495)	(1,620)	(1,786)
Percent of All Episodes	49.0	50.0	48.8	46.0	48.9	38.5	11.0	10.9	11.8	15.4
Percent of All Mentions	28.4	29.2	27.9	26.6	28.5	21.6	6.4	6.4	6.8	8.6
Rate of Mentions Per 100,000 Population										
Total	273	296	295	256	289	195	61	64	72	78
12–17	22	40	26	25	42	16	164	146	159	174
18–25	261	300	285	302	378	303	149	174	206	231
26–34	627	667	651	527	579	450	97	107	115	122
35 and older	255	278	290	245	274	182	28	29	32	35
Percentage Distributions <sup>1</sup>										
Multiple-Drug Episode	77.4	79.9	80.6	62.7	57.8	58.1	66.8	67.6	66.8	63.0
Sex										
Male	63.2	62.5	60.8	61.4	61.5	62.8	67.8	65.4	65.6	65.5
Female	36.0	36.7	38.6	37.9	37.8	35.9	31.3	34.0	33.5	33.4
Unknown	0.8	0.8	0.5	0.7	0.7	1.2	0.9	0.5	0.9	1.2
Race/Ethnicity										
White	24.1	26.1	28.1	22.5	26.4	39.7	53.2	50.1	52.2	58.4
Black	72.9	70.7	68.9	73.9	70.9	49.3	44.0	42.9	38.5	31.9
Hispanic	0.4	0.4	0.3	0.4	0.4	0.6	0.8	0.3	0.5	0.5
Race/ethnicity NTA	0.3	0.2	0.3	0.3	0.2	0.3	0.4	0.5	0.6	0.7
Unknown	2.3	2.6	2.5	3.0	2.1	10.1	1.6	6.2	8.2	8.3
Age at Admission										
12–17	0.7	1.1	0.8	0.8	1.3	0.8	22.5	19.1	18.6	21.1
18–25	10.6	11.2	10.7	13.0	14.4	17.9	26.9	29.8	31.9	34.2
26–34	36.6	34.7	33.0	32.8	30.9	27.8	25.3	25.6	24.1	18.9
35 and older	51.9	52.6	55.3	53.2	53.1	53.3	25.2	25.5	25.3	25.7
Unknown	0.3	0.3	0.2	0.2	0.3	0.3	...2	0.1	0.1	0.1
Reason for ED Contact										
Unexpected reaction	6.8	10.9	10.9	4.2	7.4	5.0	14.8	18.7	18.9	20.2
Overdose	8.1	9.9	9.7	9.5	11.7	13.7	7.6	11.4	11.0	9.0
Chronic effects	30.5	30.6	27.6	34.2	34.4	25.2	12.1	12.6	10.1	5.4
Withdrawal	12.3	5.8	4.4	18.6	13.2	14.2	4.6	2.2	1.6	3.0
Seeking detox	7.9	11.2	13.6	7.1	9.4	20.7	8.3	11.6	14.5	16.2
Accident/injury	3.1	3.3	3.6	3.3	4.6	1.5	3.9	7.6	7.4	5.3
Other	11.8	11.9	24.0	8.9	7.4	17.7	14.4	19.9	30.2	24.2
Unknown	19.5	16.3	6.2	14.2	11.8	1.9	34.3	16.0	6.3	10.3

<sup>1</sup> Percentages may not sum to 100.0 because of rounding DAWN estimates. NTA=Not tabulated above.

<sup>2</sup> Dots (.) indicate that an estimate with relative standard error greater than 50 percent has been suppressed.

<sup>3</sup> Quantity is zero.

SOURCE: DAWN, OAS, SAMHSA

**Exhibit 2. Characteristics of All Drug-Related Treatment Admissions in Baltimore: 1997–2001**

	Total PMSA				Baltimore City				PMSA Excluding Baltimore City						
	1997	1998	1999	2000	2001	1997	1998	1999	2000	2001	1997	1998	1999	2000	2001
(Number of Admissions)	(27,288)	(26,291)	(26,863)	(27,104)	(27,918)	(13,285)	(12,589)	(13,317)	(13,520)	(12,909)	(14,003)	(13,702)	(13,546)	(13,584)	(15,009)
<b>Primary Substance (%)</b>															
Alcohol with Secondary Drug	98.5	98.6	98.5	98.2	97.4	99.1	99.3	99.5	99.3	98.9	98.0	97.8	97.6	97.2	96.1
Cocaine	20.0	20.3	19.2	17.9	17.5	10.7	10.7	10.0	8.8	8.5	28.8	29.3	28.2	26.9	25.3
Smoked	17.5	15.9	14.9	12.7	12.5	18.5	15.6	14.8	12.8	13.4	16.6	16.1	15.0	12.7	11.8
Injected	12.7	11.7	10.8	9.5	9.4	13.3	11.4	10.8	9.8	10.4	12.0	11.9	10.9	9.2	8.4
Other	1.7	1.4	1.3	1.0	0.9	2.2	1.8	1.7	1.2	1.0	1.3	1.0	1.0	0.8	0.8
Marijuana/Hashish	3.1	2.8	2.8	2.2	2.3	3.0	2.5	2.3	1.8	1.9	3.2	3.2	3.2	2.7	2.6
Heroin	15.0	14.9	14.7	15.6	15.8	10.8	11.2	10.3	11.5	12.3	18.9	18.4	19.0	19.7	18.8
Injected	44.3	46.4	48.8	51.0	49.8	58.2	61.3	63.9	65.8	64.2	31.1	32.6	34.0	36.4	37.4
Snorted	22.6	22.6	23.5	23.7	22.3	28.6	27.3	28.4	27.8	25.6	16.9	18.2	18.7	19.7	19.4
Other	20.1	20.7	21.6	24.6	24.9	27.6	29.9	30.4	34.8	35.6	12.9	12.2	13.1	14.5	15.6
Other Opiates	1.6	3.1	3.7	2.7	2.7	2.0	4.0	5.2	3.1	3.0	1.3	2.1	2.2	2.2	2.4
Stimulants	1.5	1.4	1.5	1.8	2.6	0.9	0.7	0.5	0.7	1.1	2.0	2.2	2.4	2.8	3.9
All Other	0.3	0.0	0.0	0.0	0.0	0.2	0.0	- <sup>2</sup>	0.0	0.0	0.3	0.1	0.0	0.0	0.0
All Other	1.5	1.0	0.9	0.9	1.7	0.6	0.5	0.5	0.4	0.5	2.4	1.5	1.4	1.4	2.8
<b>Primary Substance (annual admissions per 100,000 population age 12+)</b>															
Alcohol with Secondary Drug	265	260	249	228	228	263	253	256	223	206	266	262	246	229	235
Cocaine	233	202	193	162	163	455	370	378	324	325	153	144	131	108	109
Smoked	168	149	140	122	122	328	270	275	249	254	111	107	95	79	78
Injected	23	18	17	12	12	54	42	42	30	25	12	9	9	7	7
Other	41	36	36	28	29	73	58	60	45	46	30	28	28	23	24
Marijuana/Hashish	199	190	190	199	205	266	265	264	292	299	175	165	166	168	175
Heroin	588	591	633	651	647	1,430	1,454	1,636	1,667	1,561	288	292	297	310	347
Injected	300	288	305	303	289	703	648	726	705	623	156	163	164	168	180
Snorted	266	264	281	314	323	679	710	777	883	866	119	109	114	124	145
Other	22	39	48	34	35	48	96	132	80	72	12	19	19	19	22
Stimulants	4	1	0	0	0	6	0	-	0	1	3	1	0	0	0
All Other	20	13	12	12	22	14	13	12	11	13	22	13	12	12	26
<b>Secondary Substance (%)<sup>1</sup></b>															
None	25.5	23.9	23.8	25.6	24.9	27.8	25.4	25.4	28.7	28.4	23.5	22.5	22.2	22.5	22.0
Alcohol	27.0	27.9	28.1	28.7	30.2	26.2	27.5	27.4	28.2	30.9	27.8	28.2	28.8	29.3	29.5
Cocaine	36.4	37.7	37.9	36.1	35.5	43.2	45.3	45.5	42.9	42.2	29.9	30.8	30.4	29.3	29.7
Marijuana/Hashish	25.2	25.2	23.7	23.2	21.8	17.4	17.0	15.9	15.0	14.6	32.6	32.7	31.5	31.4	28.0
Heroin/Other Opiates	9.2	8.7	8.9	8.4	8.6	9.8	8.9	9.1	8.4	7.8	8.6	8.6	8.7	8.4	9.4
All Other	6.6	5.2	5.3	5.6	8.0	3.4	2.7	2.9	2.3	2.9	9.5	7.6	7.6	8.9	12.3

<sup>1</sup> "Secondary substance" totals equal more than 100 percent because they include secondary and tertiary substances.  
<sup>2</sup> Quantity is zero.

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

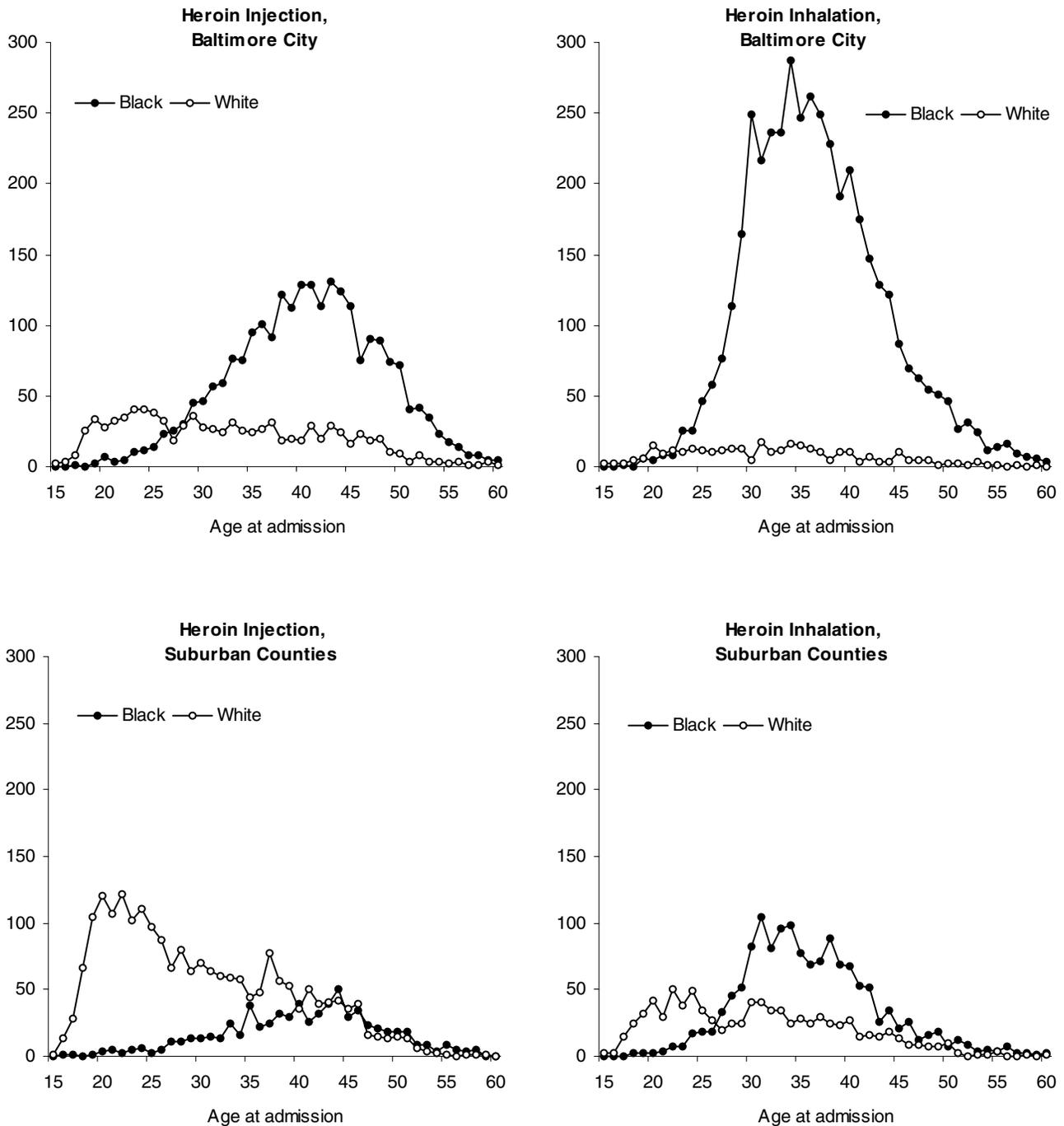
**Exhibit 3. Characteristics of Primary Crack Cocaine Treatment Admissions in Baltimore: 1997–2001**

	Total PMSA				Baltimore City				PMSA Excluding Baltimore City						
	1997	1998	1999	2000	2001	1997	1998	1999	2000	2001	1997	1998	1999	2000	2001
(Number of Admissions)	(3,460)	(3,063)	(2,905)	(2,585)	(2,614)	(1,773)	(1,433)	(1,432)	(1,330)	(1,348)	(1,687)	(1,630)	(1,473)	(1,255)	(1,266)
<b>Primary use of Substance (%)</b>	12.7	11.7	10.8	9.5	9.4	13.3	11.4	10.8	9.8	10.4	12.0	11.9	10.9	9.2	8.4
<b>Sex (%)</b>															
Male	55.2	56.6	55.4	55.4	52.7	51.0	49.5	45.5	46.4	45.5	59.6	62.8	65.0	64.9	60.4
Female	44.8	43.4	44.6	44.6	47.3	49.0	50.5	54.5	53.6	54.5	40.4	37.2	35.0	35.1	39.6
<b>Race/Ethnicity (%)</b>															
White	35.8	39.2	37.0	31.6	32.5	17.2	18.6	16.1	13.2	12.0	55.2	57.4	57.3	51.1	54.3
African-American	62.9	59.2	61.5	67.0	66.2	82.0	80.3	82.8	85.9	86.9	42.9	40.7	40.8	47.0	44.1
Hispanic	0.8	0.8	0.8	0.7	0.5	0.6	0.3	0.4	0.4	0.3	1.1	1.2	1.2	1.1	0.8
Other	0.5	0.8	0.7	0.7	0.8	0.2	0.8	0.7	0.5	0.7	0.8	0.7	0.7	0.8	0.8
<b>Age at Admission (%)</b>															
17 and younger	1.3	1.6	0.6	0.5	0.8	0.5	1.2	0.4	0.3	0.9	2.1	1.9	0.8	0.7	0.7
18–25	9.5	8.7	8.3	6.6	7.3	6.7	6.0	4.7	4.4	4.3	12.5	11.0	11.7	8.8	10.4
26–34	45.0	40.8	36.8	33.9	25.6	45.2	38.1	34.8	31.5	22.7	44.8	43.3	38.6	36.5	28.8
35 and older	44.2	48.9	54.4	59.0	66.3	47.6	54.7	60.1	63.8	72.1	40.6	43.7	48.9	53.9	60.1
<b>Median Age at Admission</b>	34yrs	34yrs	35yrs	36yrs	37yrs	34yrs	35yrs	36yrs	37yrs	38yrs	33yrs	33yrs	34yrs	35yrs	36yrs
<b>Daily Use (%)</b>	37.5	35.9	35.4	35.1	36.5	40.3	41.7	43.2	44.1	42.1	34.6	30.9	27.8	25.6	30.6
<b>First Treatment Episode (%)</b>	48.6	41.9	42.9	42.4	40.0	48.4	43.1	43.0	38.8	39.3	48.9	40.9	42.9	46.1	40.6
<b>Median Duration of Use<sup>1</sup></b>	8yrs	9yrs	10yrs	10yrs	11yrs	8yrs	9yrs	10yrs	10yrs	10yrs	8yrs	9yrs	10yrs	11yrs	11yrs
<b>Criminal Justice Referral (%)</b>	32.2	36.0	37.3	40.5	36.5	28.7	33.1	30.9	32.7	30.1	35.9	38.6	43.6	48.8	43.4
<b>Secondary Substance<sup>2</sup> (%)</b>															
None	34.9	32.9	30.0	31.1	31.0	39.5	36.7	32.5	35.0	35.4	29.9	29.5	27.6	27.0	26.4
Alcohol	46.6	48.3	47.8	47.8	48.6	39.9	43.5	42.7	41.4	43.4	53.7	52.5	52.8	54.6	54.1
Cocaine	0.2	0.2	0.1	0.1	0.0	0.2	0.1	0.1	0.1	-	0.2	0.2	0.1	0.1	0.1
Smoked cocaine (crack)	- <sup>3</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other cocaine	0.2	0.2	0.1	0.1	0.0	0.2	0.1	0.1	0.1	-	0.2	0.2	0.1	0.1	0.1
Marijuana/Hashish/THC	28.2	29.6	29.7	28.5	26.2	23.6	25.0	24.7	23.3	20.8	33.0	33.7	34.6	34.1	32.1
Heroin/Other Opiates	13.9	15.5	18.5	18.5	19.6	17.3	21.0	24.2	23.8	24.9	10.3	10.7	13.0	12.7	14.1
Injected	2.1	2.3	2.5	2.0	2.9	1.8	2.7	2.8	2.1	2.5	2.3	2.0	2.3	1.9	3.2
Snorted	10.1	11.1	13.3	13.2	13.7	13.3	16.2	18.9	19.2	20.3	6.8	6.7	7.9	6.9	6.6
All Other	3.7	2.2	2.4	2.9	3.7	2.1	0.9	1.3	1.1	1.0	5.3	3.4	3.5	4.8	6.6

<sup>1</sup> For first-time admissions.  
<sup>2</sup> "Secondary substance" totals equal more than 100 percent because they include secondary and tertiary substances.  
<sup>3</sup> Quantity is zero.

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

**Exhibit 4. Number of Treatment Admissions in Baltimore PMSA for Primary Heroin by Urban Area, Selected Route of Administration, Age, and Race: 2001**



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

**Exhibit 5. Characteristics of Primary Injected Heroin Treatment Admissions in Baltimore: 1997–2001**

	Total PMSA				Baltimore City				PMSA Excluding Baltimore City						
	1997	1998	1999	2000	2001	1997	1998	1999	2000	2001	1997	1998	1999	2000	2001
(Number of Admissions)	(6,167)	(5,942)	(6,316)	(6,436)	(6,214)	(3,803)	(3,442)	(3,780)	(3,758)	(3,307)	(2,364)	(2,500)	(2,536)	(2,678)	(2,907)
<b>Primary Use of Substance (%)</b>	22.6	22.6	23.5	23.7	22.3	28.6	27.3	28.4	27.8	25.6	16.9	18.2	18.7	19.7	19.4
<b>Sex (%)</b>															
Male	58.5	58.6	59.6	58.0	60.7	56.0	56.2	56.8	54.3	57.8	62.5	62.0	63.8	63.2	63.9
Female	41.5	41.4	40.4	42.0	39.3	44.0	43.8	43.2	45.7	42.2	37.5	38.0	36.2	36.8	36.1
<b>Race/Ethnicity (%)</b>															
White	42.0	45.8	44.7	45.0	49.0	23.8	24.4	24.6	25.2	27.6	71.3	75.0	74.4	72.6	73.1
African-American	56.5	52.9	53.4	53.6	49.0	75.2	74.6	74.3	73.9	71.4	26.6	23.1	22.5	25.2	23.6
Hispanic	0.7	0.7	1.1	0.8	1.0	0.4	0.5	0.3	0.5	0.5	1.2	0.9	2.1	1.2	1.5
Other	0.7	0.7	0.8	0.7	1.1	0.6	0.5	0.7	0.5	0.5	1.0	0.9	0.9	1.0	1.7
<b>Age at Admission (%)</b>															
17 and younger	1.4	2.0	1.4	1.0	1.0	0.5	1.0	0.6	0.5	0.5	3.0	3.3	2.6	1.6	1.6
18–25	13.2	17.1	17.2	17.9	19.6	6.8	9.6	8.2	8.7	10.2	23.5	27.4	30.6	30.8	30.1
26–34	26.9	24.5	22.7	23.3	23.5	27.3	23.9	22.3	22.1	21.1	26.1	25.3	23.3	25.1	26.3
35 and older	58.5	56.5	58.7	57.9	55.9	65.3	65.5	68.8	68.7	68.2	47.5	44.0	43.6	42.6	42.0
<b>Median Age at Admission</b>	36yrs	36yrs	37yrs	37yrs	36yrs	38yrs	38yrs	39yrs	39yrs	39yrs	34yrs	33yrs	32yrs	32yrs	32yrs
<b>Daily Use (%)</b>	73.9	75.4	73.0	75.1	74.8	73.4	77.8	75.7	80.0	77.8	74.7	72.0	68.8	68.3	71.4
<b>First Treatment Episode (%)</b>	39.4	34.3	37.3	32.8	31.7	38.7	32.1	34.5	31.0	31.8	40.5	37.2	41.4	35.4	31.5
<b>Median Duration of Use<sup>1</sup></b>	12yrs	11yrs	11yrs	12yrs	10yrs	15yrs	15yrs	15yrs	16yrs	15yrs	7yrs	6yrs	7yrs	7yrs	7yrs
<b>Criminal Justice Referral (%)</b>	22.2	24.5	23.0	24.2	23.5	23.8	25.7	23.2	22.5	25.2	19.5	22.8	22.7	26.7	21.5
<b>Secondary Substance<sup>2</sup> (%)</b>															
None	26.3	23.6	27.3	28.4	24.9	20.9	17.8	23.4	26.0	22.5	34.8	31.7	33.2	31.7	27.7
Alcohol	23.7	23.2	22.9	23.1	26.7	25.4	23.2	23.6	24.3	29.2	20.9	23.2	21.9	21.5	23.9
Cocaine	62.5	64.6	61.3	58.8	61.5	71.4	74.3	68.6	64.9	68.0	48.2	51.3	50.3	50.2	54.1
Smoked cocaine (crack)	7.3	8.5	8.7	9.0	10.1	7.0	7.9	8.6	9.2	10.3	7.7	9.4	8.8	8.7	9.8
Other cocaine	55.3	56.2	52.6	49.8	51.4	64.4	66.4	60.1	55.7	57.7	40.7	42.2	41.4	41.5	44.4
Marijuana/Hashish/THC	11.7	12.5	11.6	12.3	12.3	8.4	8.3	7.3	7.9	7.9	17.0	18.4	18.0	18.4	17.3
Heroin/Other Opiates	3.7	3.1	2.8	3.3	3.9	2.6	1.6	1.7	1.6	1.7	5.5	5.2	4.4	5.8	6.4
Injected	0.8	0.5	0.4	0.4	0.5	0.5	0.1	0.2	0.1	0.2	1.4	0.9	0.8	0.8	0.9
Snorted	0.1	0.2	0.0	0.2	0.1	0.1	– <sup>3</sup>	0.0	0.0	0.1	0.2	0.4	0.1	0.4	0.2
All Other	4.9	4.1	4.0	4.1	4.9	3.8	2.7	2.9	2.4	3.1	6.7	6.0	5.6	6.3	7.0

<sup>1</sup> For first-time admissions.  
<sup>2</sup> "Secondary substance" totals equal more than 100 percent because they include secondary and tertiary substances.  
<sup>3</sup> Quantity is zero.

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

**Exhibit 6. Characteristics of Primary Intranasal Heroin Treatment Admissions in Baltimore: 1997–2001**

	Total PMSA			Baltimore City			PMSA Excluding Baltimore City			
	1997	1998	1999	2000	2001	1997	1998	1999	2000	2001
(Number of Admissions)	(5,473)	(5,441)	(5,814)	(6,679)	(6,943)	(3,671)	(3,770)	(4,046)	(4,708)	(4,597)
<b>Primary Use of Substance (%)</b>	20.1	20.7	21.6	24.6	24.9	27.6	29.9	30.4	34.8	35.6
<b>Sex (%)</b>										
Male	54.5	51.8	52.6	52.9	52.5	51.1	46.0	46.2	47.6	48.5
Female	45.5	48.2	47.4	47.1	47.5	48.9	54.0	53.8	52.4	51.5
<b>Race/Ethnicity (%)</b>										
White	20.4	23.3	19.2	17.0	17.6	8.3	9.7	8.1	7.0	7.2
African-American	78.6	75.7	79.6	82.0	81.3	91.0	89.7	91.3	92.2	92.3
Hispanic	0.4	0.5	0.7	0.5	0.5	0.4	0.3	0.3	0.3	0.2
Other	0.6	0.5	0.5	0.5	0.6	0.4	0.3	0.3	0.4	0.3
<b>Age at Admission (%)</b>										
17 and younger	2.2	2.5	2.0	0.4	0.4	0.8	1.5	1.3	0.1	0.2
18–25	19.0	15.4	11.0	8.6	8.4	15.2	10.0	7.2	4.9	4.6
26–34	49.8	46.7	46.5	41.7	38.1	54.4	51.4	48.9	41.6	38.2
35 and older	29.0	35.4	40.5	49.2	53.0	29.6	37.1	42.7	53.4	57.0
<b>Median Age at Admission</b>	30yrs	32yrs	33yrs	34yrs	35yrs	31yrs	32yrs	33yrs	35yrs	36yrs
<b>Daily Use (%)</b>	70.7	70.8	65.7	71.2	70.9	68.9	73.1	68.2	76.7	73.7
<b>First Treatment Episode (%)</b>	48.4	42.2	42.9	38.7	37.8	47.2	40.5	40.3	34.9	36.0
<b>Median Duration of Use<sup>1</sup></b>	7yrs	7yrs	8yrs	9yrs	10yrs	8yrs	8yrs	10yrs	10yrs	11yrs
<b>Criminal Justice Referral (%)</b>	31.4	33.7	34.7	31.7	31.5	32.1	33.6	34.4	29.3	32.3
<b>Secondary Substance (%)<sup>2</sup></b>										
None	34.8	33.6	32.8	35.6	33.7	35.8	33.8	32.2	35.6	35.6
Alcohol	22.2	24.4	24.3	24.5	27.3	20.6	22.9	24.4	24.0	26.2
Cocaine	47.9	47.7	49.0	45.9	47.7	50.3	50.4	52.1	48.6	49.4
Smoked cocaine (crack)	28.9	29.4	30.2	29.4	32.8	31.8	33.4	34.8	33.8	36.9
Other cocaine	19.0	18.3	18.7	16.5	14.9	18.6	17.0	17.2	14.8	12.5
Marijuana/Hashish/THC	20.8	19.3	17.6	17.2	16.1	17.4	16.5	15.2	14.3	12.8
Heroin/Other Opiates	2.5	2.1	2.5	2.4	3.0	1.6	1.3	1.5	1.3	1.3
Injected	0.1	0.0	0.0	0.1	0.0	– <sup>3</sup>	0.0	0.0	0.0	–
Snorted	0.6	0.2	0.2	0.2	0.3	0.3	0.1	0.1	0.1	0.0
All Other	2.3	2.3	2.0	1.9	2.5	1.4	1.6	1.4	1.3	1.2

<sup>1</sup> For first-time admissions.

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

<sup>3</sup> Quantity is zero.

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

**Exhibit 7. Characteristics of Primary Marijuana Treatment Admissions in Baltimore: 1997–2001**

	Total PMSA				Baltimore City				PMSA Excluding Baltimore City						
	1997	1998	1999	2000	2001	1997	1998	1999	2000	2001	1997	1998	1999	2000	2001
(Number of Admissions)	(4,084)	(3,923)	(3,940)	(4,240)	(4,409)	(1,441)	(1,405)	(1,373)	(1,558)	(1,585)	(2,643)	(2,518)	(2,567)	(2,682)	(2,824)
<b>Primary Use of Substance (%)</b>	15.0	14.9	14.7	15.6	15.8	10.8	11.2	10.3	11.5	12.3	18.9	18.4	19.0	19.7	18.8
<b>Sex (%)</b>															
Male	83.1	83.9	82.9	81.9	82.1	86.5	84.2	80.6	79.0	79.7	81.2	83.8	84.1	83.6	83.5
Female	16.9	16.1	17.1	18.1	17.9	13.5	15.8	19.4	21.0	20.3	18.8	16.2	15.9	16.4	16.5
<b>Race/Ethnicity (%)</b>															
White	53.0	53.8	52.0	50.6	49.5	23.5	25.8	32.5	29.4	23.7	69.1	69.3	62.5	62.9	63.9
African-American	44.2	43.1	44.8	46.2	47.5	74.7	71.4	65.9	68.6	74.7	27.5	27.3	33.5	33.2	32.2
Hispanic	1.7	2.0	1.8	1.6	1.5	1.0	1.7	0.9	1.0	0.8	2.0	2.1	2.2	1.9	1.9
Other	1.2	1.1	1.4	1.7	1.5	0.7	1.1	0.7	1.0	0.8	1.4	1.2	1.9	2.1	1.9
<b>Age at Admission (%)</b>															
17 and younger	48.3	49.3	47.4	47.9	47.8	45.6	51.8	54.6	56.6	56.0	49.8	47.9	43.6	42.9	43.2
18–25	30.1	32.2	32.2	30.9	31.9	29.2	29.1	26.7	23.3	25.5	30.6	33.9	35.2	35.3	35.4
26–34	13.3	10.5	11.9	11.6	11.1	15.9	11.1	10.9	10.9	9.6	11.9	10.2	12.4	12.0	11.9
35 and older	8.3	8.0	8.5	9.6	9.3	9.3	8.0	7.9	9.2	8.8	7.8	8.1	8.9	9.8	9.5
<b>Median Age at Admission</b>	18yrs	18yrs	18yrs	18yrs	18yrs	18yrs	17yrs	17yrs	17yrs	17yrs	18yrs	18yrs	18yrs	18yrs	18yrs
<b>Daily Use (%)</b>	30.8	26.7	23.4	29.3	36.4	33.0	31.4	25.0	44.1	49.6	29.6	24.0	22.5	20.6	29.0
<b>First Treatment Episode (%)</b>	71.5	71.5	68.4	71.0	71.2	77.7	75.4	70.8	72.7	76.5	68.1	69.2	67.1	70.0	68.3
<b>Median Duration of Use<sup>1</sup></b>	3yrs	3yrs	4yrs	4yrs	4yrs	3yrs	3yrs	3yrs	4yrs	4yrs	3yrs	3yrs	4yrs	4yrs	4yrs
<b>Criminal Justice Referral (%)</b>	56.7	59.6	63.0	64.9	64.4	68.4	67.0	64.4	62.9	62.1	50.4	55.6	62.3	66.1	65.6
<b>Secondary Substance<sup>2</sup> (%)</b>															
None	34.1	32.7	28.8	28.8	32.3	36.2	33.5	29.0	29.2	32.3	32.9	32.3	28.7	28.6	32.3
Alcohol	53.8	57.5	60.4	62.4	58.8	49.1	56.1	55.6	59.8	58.6	56.3	58.2	63.0	63.8	58.9
Cocaine	12.7	11.6	11.0	11.0	9.0	13.0	10.9	11.5	12.6	9.6	12.5	12.0	10.8	10.1	8.6
Smoked cocaine (crack)	6.1	5.6	5.5	4.8	3.9	6.0	4.7	5.1	5.7	3.8	6.2	6.1	5.6	4.3	4.0
Other cocaine	6.6	6.1	5.6	6.2	5.0	7.0	6.2	6.4	6.9	5.8	6.3	6.0	5.2	5.8	4.6
Marijuana/Hashish/THC	— <sup>3</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Heroin/Other Opiates	7.7	6.5	5.8	6.4	6.2	9.2	7.8	7.3	9.0	7.1	6.9	5.7	5.1	5.0	5.8
Injected	1.9	1.1	0.9	1.2	1.0	1.9	1.2	1.0	1.7	0.8	1.9	1.1	0.9	0.9	1.1
Snorted	4.5	3.8	3.5	3.3	2.8	6.2	5.4	4.7	4.9	3.6	3.6	2.9	2.8	2.3	2.4
All Other	11.9	8.0	9.6	8.0	10.6	6.6	5.1	9.1	4.7	6.9	14.8	9.5	9.8	9.8	12.6

<sup>1</sup> For first-time admissions.

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

<sup>3</sup> Quantity is zero.

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

# Patterns and Trends in Drug Abuse: Greater Boston

Daniel P. Dooley<sup>1</sup>

## ABSTRACT

*Heroin, cocaine, and marijuana continue to dominate as the major street drugs in Boston. Heroin treatment admissions and rates of emergency department (ED) mentions continued to increase through fiscal year 2002 and calendar year 2001, respectively. Although the number of cocaine treatment admissions has remained level, the rate of cocaine ED mentions increased between 2000 and 2001. Marijuana indicators have remained relatively flat during the past year. Rates of ED mentions for amphetamines and MDMA are significantly higher than the 1999 rates. ED rates of barbiturates, benzodiazepines, and narcotic analgesics continue to increase annually. The drug arrest percentage of all arrests in the city of Boston was unchanged between 2000 and 2001 but down 30 percent from 1997 (23.7 to 16.7 percent). The drug class distribution for drug arrests has remained unchanged between 2000 and 2001, with arrests for class B drugs (mainly cocaine/crack) accounting for the highest proportion (42 percent). The Drug Enforcement Agency reports that price, purity, and availability of all reported illicit drugs has remained unchanged across New England despite various successful interdiction efforts, including eradication of 1,853 marijuana plants between July and September 2002. In 2001, there were 166 new HIV cases in Boston. The primary transmission risks for these new cases included 11 percent who were injection drug users (IDUs), 3 percent who had sex with IDUs, and 33 percent with an unknown/undetermined transmission status. In 2001, there were 145 new AIDS cases. Transmission risk included 23 percent who were IDUs, 1 percent who had sex with IDUs, and 31 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). The 746,914 people in the metropolitan Boston 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

### Data Sources

Data sources for this report include the following:

- **Emergency department (ED) drug mentions data** for the Boston metropolitan statistical area from 1997 to 2001 were provided by the Drug Abuse Warning Network (DAWN), Office of Applied Studies, Substance Abuse and Mental Health Services Administration (SAMHSA).
- **Drug treatment admissions data** were provided by the Massachusetts Department of Public Health (DPH), Bureau of Substance Abuse

<sup>1</sup> The author is affiliated with the Boston Public Health Commission, Boston, Massachusetts.

Services. These data represent State-funded substance abuse treatment admissions for fiscal year (FY) 1994 (starting July 1993) through FY 2002 (ending June 30, 2002).

- **Information on seized drug samples** for January 1, 1993, through June 30, 2002, were provided by the DPH Drug Analysis Laboratory.
- **Data on drug mentions in helpline calls** from January through September 2002 were provided by the Massachusetts Substance Abuse Information and Education Helpline.
- **Drug arrests, 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).
- **Self-reported drug use among Boston high school students**, 2001, were derived from the Boston Youth Risk Behavior Survey (YRBS).
- **Acquired immunodeficiency syndrome (AIDS) and human immunodeficiency virus (HIV) data** by year between 1993 and 2001, and cumulative data through November 1, 2002, were provided by DPH, AIDS Surveillance Program.

#### DRUG ABUSE PATTERNS AND TRENDS

##### Cocaine and Crack

Cocaine/crack indicators were mixed, either increasing or remaining fairly stable in 2001. According to DAWN, the number and rate of cocaine ED mentions increased, while the proportion of greater Boston substance abuse treatment admissions who reported current cocaine abuse decreased slightly in FY 2002.

In 2001, there were 4,933 cocaine/crack ED mentions in greater Boston, up 20 percent from 2000 (exhibit 1). Similarly, the rate of 138 cocaine/crack ED mentions per 100,000 population in 2001 was 28 percent higher than the 2000 rate and 45 percent higher than the 1999 rate. The 2001 rate marks a return to levels of cocaine/crack ED mentions in the mid-1990s (136 per 100,000 population in 1994).

The 2001 cocaine/crack ED mention rate for males was more than 1½ times the rate for females (174 vs. 103 per 100,000 population). Both male and female rates increased significantly from 2000 (32 and 21 percent, respectively) and 1999 (51 and 35 percent, respectively). Similarly, all reported adult age group rates for cocaine/crack ED mentions increased

significantly in 2001 from 2000 and 1999. The highest rate was seen among those age 26–34 (317 mentions per 100,000 population), reflecting a 50-percent increase from 1999 to 2001 and a 29-percent increase from 2000 to 2001. From 1999 to 2001, the largest rate increase—70 percent—was reported for those age 45–54 (the 2001 rate was 112 mentions per 100,000 population).

In FY 2002, 2,230 treatment admissions (9 percent of all admissions) reported cocaine as their primary drug, and 6,141 mentions (24 percent of all mentions) of current cocaine use were made by those admitted to treatment (exhibit 2). The percent reporting cocaine as their primary drug did not change from FY 2001 to FY 2002, but it decreased 25 percent from FY 2000 to FY 2002. The percent of mentions of current cocaine use decreased slightly (4 percent) from FY 2001 to FY 2002.

The gender distribution of cocaine treatment admissions (63 percent male and 37 percent female) did not change from FY 2001 to FY 2002 (exhibit 3a). However, the percentage of males increased 7 percent and the percentage of females decreased 10 percent from FY 2000. The percentage of females admitted for a primary cocaine/crack problem was 14 percentage points higher than the proportion of females among total admissions for FY 2002 (exhibit 4).

The mean age of those admitted to cocaine treatment in FY 2002 was 36.7 years. The proportion of admissions age 40–49 (29 percent in FY 2002) increased 16 percent from FY 2001. The racial distribution for cocaine admissions in FY 2002 (25 percent White, 61 percent Black, and 11 percent Hispanic) was nearly identical to that in FY 2001. However, the proportion of Black cocaine admissions decreased slightly from FY 2000 to FY 2002. The proportion of homeless cocaine admissions increased from FY 2001 to FY 2002.

The percentage of class B arrests (mainly cocaine and crack) among all drug arrests in the city of Boston did not change from 2000 to 2001 (42 percent) (exhibit 5). However, the proportion of class B arrests did decrease 12 percent since 1997.

A comparison of seized drug lab submissions during the first halves of 2000–2002 shows a 9-percent increase in the proportion of cocaine submissions from 2000 to 2002 ( $n=1,381$ ) for greater Boston.

YRBS data show that 3.6 percent of Boston high school students reported having used cocaine/crack at some point in their lives.

The DEA reports that a gram of cocaine costs between \$50 and \$90, and a vial of crack costs \$20–\$50. Crack is reportedly “more available in the inner cities” of New England.

## Heroin

Heroin indicators were up during this reporting period, including ED mentions and treatment admissions.

In 2001, there were 4,358 heroin ED mentions, up 13 percent from 2000 in greater Boston. Similarly, the heroin ED mentions rate of 122 per 100,000 population for 2001 was 20 percent higher than the 2000 rate and 59 percent higher than the 1999 rate (exhibit 1).

The 2001 rates by gender show that the heroin ED rate for males was approximately 2½ times the female rate (173 vs. 73 per 100,000 population). Both male and female rates increased significantly from 1999 (61 and 53 percent, respectively) and 1994 (74 and 59 percent, respectively). Similarly, except for the 6–17-year-old age group, rates for all reported age groups of heroin ED mentions increased significantly from 1999 to 2001. The highest rate by age group in 2001 (367 per 100,000 population) was seen among those age 26–29; that rate increased 256 percent from 1999 to 2001. Substantial rate increases of 166 and 236 percent from 1994 to 2001 were reported among two other age groups (those age 18–25 and 45–54, respectively).

In FY 2002, there were 11,828 treatment admissions (46 percent of all admits) who reported heroin as their primary drug, and 10,746 mentions (42 percent of all mentions) of current heroin use among those admitted to State-funded treatment programs (exhibit 2). The percent reporting heroin as their primary drug increased 10 percent from FY 2001, 24 percent from FY 2000, and 59 percent since 1996. The percent of mentions of current heroin use increased 8 percent from FY 2001, 20 percent from FY 2000, and 45 percent from FY 1996.

The gender distribution of heroin treatment admissions in FY 2002 (77 percent male and 23 percent female) was similar to that in FY 2001 (exhibit 3a). However, the male proportion increased 12 percent and the female proportion decreased 26 percent from FY 1997.

The mean age of those admitted to heroin treatment in FY 2002 was 34.6 years. The percentage of admissions age 19–29 (32 percent) increased 19 percent from FY 2000. The racial distribution for

heroin admissions in FY 2002 (53 percent White, 18 percent Black, 25 percent Hispanic) reflected moderate changes, with Whites increasing 6 percent and Blacks decreasing 14 percent from FY 2001. There was a 21-percent increase in the percentage of heroin admissions who were homeless from FY 2001 to FY 2002. Sixty-two percent of those in treatment for heroin as their primary drug of abuse reported needle use in the past year.

The percentage of class A drug arrests (mainly heroin and other opiates) among all drug arrests (26 percent) in the city of Boston did not change from 2000 to 2001 (exhibit 5). However, the proportion of class A arrests increased 16 percent from 1997 to 2001.

A comparison of seized drug lab submissions during the first halves of 2000–2002 shows a 25-percent decrease in the number of heroin submissions from 2000 to 2002 ( $n=819$  and 668, respectively) for greater Boston.

YRBS data show that 1.5 percent of Boston high school students have used heroin at some point in their lives.

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

## Marijuana

Marijuana indicators were level for 2001, including ED mentions and FY 2001 treatment admissions, but the rate of ED mentions did increase from 1999 to 2001.

In 2001, there were 3,423 marijuana ED mentions in greater Boston, up 75 percent from 1999 (exhibit 1). Similarly, the rate of 96 marijuana ED mentions per 100,000 population for 2001 was 83 percent higher than the 1999 rate of 53 mentions per 100,000 population, but not significantly greater than the rate of 78 reported in 2000.

The 2001 marijuana ED mentions rate for males was nearly 2½ times the rate for females (136 vs. 58 mentions per 100,000 population). In 2001, male ED rates increased significantly from 2000 (up 28 percent) and 1999 (up 91 percent). Although the number of marijuana mentions among females has been increasing steadily, these increases have not tested significant. All three age group rates for marijuana ED mentions increased significantly from 1999 to 2001. In 2001, the highest rate (246 mentions) was reported among those age 18–25, reflecting an increase of 84 percent from 1999. Substantial rate increases of 114 percent and 107 percent occurred between 1999 and 2001 among the

two other age groups (those age 26–34 and 35 and older, respectively).

In FY 2002, 1,054 treatment admissions (4 percent of all admissions) reported marijuana as their primary drug, and there were 2,814 mentions (11 percent of all mentions) of current marijuana use among those admitted to treatment. The percentage reporting marijuana as their primary drug did not change from FY 2001. The percentage of mentions of current marijuana use decreased 15 percent from FY 2001 and FY 2000 and decreased 31 percent from FY 1996.

The gender distribution of marijuana treatment admissions (77 percent male and 23 percent female) did not change between FYs 2001 and 2002 (exhibit 3b). However, compared with FY 2000, the male proportion increased nearly 6 percent, while the female proportion decreased 15 percent.

The mean age of marijuana admissions in FY 2002 was 24.8 years. The proportion of admissions who were younger than 30 (74 percent) did not change from FY 2001 to FY 2002, nor did the racial/ethnic distribution for marijuana admissions (27 percent White, 48 percent Black, 20 percent Hispanic). However, from FY 1996 to FY 2001, there was a 23-percent decrease in White marijuana admissions and a 23-percent increase in Black admissions.

The proportion of class D arrests (mainly marijuana) among all drug arrests (29 percent) in Boston in 2001 did not change from 2000 (exhibit 5).

A comparison of drug lab submissions during the first halves of 2000–2002 shows no significant change in the proportion of marijuana submissions (37 percent) for greater Boston.

YRBS 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 highly potent marijuana is readily available throughout New England despite various successful interdiction efforts, including the eradication of 1,853 marijuana plants between July and September 2002.

### **Narcotic Analgesics**

There were 2,902 narcotic analgesics/combinations (NA/C) ED mentions in 2001. The 2001 NA/C rate of 81 per 100,000 population is fourth highest among the 21 DAWN sites and represents a 53-percent increase since 2000, a 104-percent increase since

1999, and a 145-percent increase since 1994. In 2001, Boston had the highest oxycodone/combinations ED rate (a subset of the NA/C category) of 27 per 100,000 population among the 21 DAWN sites. The number of oxycodone/combinations ED mentions of 948 increased nearly 59 percent from 2000, 222 percent from 1999, and 229 percent from 1994.

Drug lab submissions of oxycodone samples increased 57 percent between the first halves of 2000 and 2001 (233 and 365 samples, respectively). There were 89 statewide OxyContin thefts from pharmacies during the first 10 months of 2002, compared with 139 thefts during the same 10-month period in 2001. A new pharmacy regulation effective July 1, 2002, permits pharmacies to not stock OxyContin. Some pharmacies have displayed signs stating that limited quantities of OxyContin are on the premises in an effort to ward off thefts.

### **MDMA**

There were 140 methylenedioxymethamphetamine (MDMA) (ecstasy) ED mentions in 2001 (up 61 percent from 1999), producing a rate of 4 mentions per 100,000 population. Of these, 71 percent were among males, and 74 percent were among those younger than 26. YRBS data show that 7 percent of Boston high school students reported having used ecstasy at some point in their lives. The DEA reports that “MDMA availability has remained high.”

### **Other Drugs**

The rate of amphetamine ED mentions per 100,000 population increased nearly 90 percent from 1999 to 2001 (6 and 11, respectively). The 2001 rate is the highest amphetamine ED mentions rate that Boston experienced from 1994 to 2001.

There were few ED mentions of methamphetamine ( $n=14$ ) or ketamine (10) in 2001. Comparison of half-year lab submissions (January through June) for ketamine show small but increasing numbers of submissions (7, 11, and 22 samples for 2000–2002, respectively).

There were 3,388 benzodiazepine ED mentions in 2001, an increase of 16 percent from 2000 and 25 percent from 1999. The benzodiazepine ED rate of 95 mentions per 100,000 population is the highest among all 21 DAWN sites.

There were 536 barbiturate ED mentions, yielding a rate of 15 mentions per 100,000 population, the highest barbiturates rate during the 8 years of DAWN reporting in the Boston area from 1994 to 2001.

There were few lysergic acid diethylamide (LSD) (33 mentions) or phencyclidine (PCP) (23 mentions) ED mentions in Boston during 2001. However, the number of PCP mentions increased significantly from 2000 to 2001 (109 percent) and also from 1999 to 2001 (229 percent).

#### INFECTIOUS DISEASES RELATED TO DRUG ABUSE

In 2001, there were 166 new HIV cases in Boston (exhibit 6). The primary risk factors included the

following: 11 percent were injection drug users (IDUs), 3 percent had sex with an injection drug user, and 33 percent had an unknown/undetermined transmission status. In 2001, there were 145 new AIDS cases. By transmission risk this included 23 percent who were IDUs, 1 percent who had sex with an IDU, and 31 percent for whom the risk behavior was unknown/undetermined.

---

*For inquiries concerning this report, please contact Daniel P. Dooley, Boston Public Health Commission, 1010 Massachusetts Avenue, Boston, MA 02118, Phone: 617-534-2360, Fax: 617-534-2422, E-mail: <Ddooley@bphc.org>.*

**Exhibit 1. Biannual Estimated ED Mentions in Boston for Selected Drugs as a Percentage of Total Drug Episodes<sup>1</sup>: July 1997–June 2002**

Drug	1997		1998		1999		2000		2001		2002 <sup>3</sup>	
	Jul-Dec	Jan-Jun	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. (%)	No. (%)	No. (%)
Alcohol-in-Combination	2,315 (39)	2,545 (38)	2,585 (37)	2,229 (38)	2,211 (38)	2,361 (33)	2,615 (34)	2,675 (33)	3,144 (36)	2,616 (31)	2,616 (36)	2,616 (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)	2,524 (30)	2,666 (31)	2,524 (30)
Heroin/Morphine	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)	2,155 (26)	2,336 (27)	2,155 (26)
PCP	12 (<1)	10 (<1)	11 (<1)	5 (<1)	2 (<1)	4 (<1)	7 (<1)	5 (<1)	18 (<1)	19 (<1)	18 (<1)	19 (<1)
LSD	10 (<1)	18 (<1)	35 (<1)	25 (<1)	19 (<1)	11 (<1)	31 (<1)	18 (<1)	16 (<1)	—	16 (<1)	—
Amphetamines	— <sup>2</sup>	85 (1)	95 (1)	115 (2)	100 (2)	196 (3)	173 (2)	188 (2)	204 (2)	213 (3)	204 (2)	213 (3)
Methamphetamine	9 (<1)	3 (<1)	3 (<1)	8 (<1)	—	7 (<1)	—	4 (<1)	10 (<1)	7 (<1)	—	7 (<1)
MDMA	—	10 (<1)	29 (<1)	37 (1)	49 (1)	48 (1)	77 (1)	63 (1)	77 (1)	37 (<1)	77 (1)	37 (<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)	1,741 (21)	1,739 (20)	1,741 (21)
<b>Total Drug Episodes</b>	<b>5,868</b>	<b>6,739</b>	<b>6,917</b>	<b>5,784</b>	<b>5,885</b>	<b>7,230</b>	<b>7,672</b>	<b>8,163</b>	<b>8,690</b>	<b>8,452</b>	<b>8,690</b>	<b>8,452</b>
<b>Total Drug Mentions</b>	<b>10,654</b>	<b>12,236</b>	<b>12,640</b>	<b>10,504</b>	<b>10,715</b>	<b>12,511</b>	<b>13,352</b>	<b>14,154</b>	<b>15,641</b>	<b>15,114</b>	<b>15,641</b>	<b>15,114</b>

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

<sup>2</sup> Estimate does not meet standard of precision or is less than 10.

<sup>3</sup> Preliminary data.

SOURCE: DAWN, OAS, SAMHSA

**Exhibit 2. Percentage of Admissions to State-Funded Substance Abuse Treatment Programs by Drug Used in the Past Month in Greater Boston and the Remainder of Massachusetts<sup>1</sup>; FY 1994–FY 2002<sup>2</sup>**

Drug Used Past Month	FY 1994 <sup>2</sup>	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002
Greater Boston									
Alcohol	62	59	58	60	58	59	58	56	52
Heroin/Other Opiates	23	28	29	28	32	34	35	39	42
Cocaine/Crack	39	40	37	34	29	30	28	25	24
Marijuana	16	16	16	16	14	14	13	13	11
Other <sup>3</sup>	7	7	8	8	9	9	10	10	10
<b>Total (N)</b>	<b>(20,968)</b>	<b>(23,282)</b>	<b>(24,363)</b>	<b>(25,470)</b>	<b>(26,505)</b>	<b>(24,653)</b>	<b>(24,478)</b>	<b>(25,269)</b>	<b>(25,586)</b>
Remainder of Massachusetts									
Alcohol	62	60	60	59	57	56	54	51	50
Heroin/Other Opiates	21	23	25	25	29	31	33	34	34
Cocaine/Crack	25	26	25	22	20	21	20	19	19
Marijuana	16	16	18	17	18	18	17	16	15
Other <sup>3</sup>	8	10	10	10	10	10	11	11	11
<b>Total (N)</b>	<b>(72,846)</b>	<b>(76,414)</b>	<b>(73,801)</b>	<b>(77,673)</b>	<b>(86,297)</b>	<b>(87,848)</b>	<b>(90,919)</b>	<b>(91,852)</b>	<b>(95,249)</b>

<sup>1</sup> Excluding prisoners and out-of-State admissions.

<sup>2</sup> Fiscal years are from 7/1 to 6/30 for each time period.

<sup>3</sup> 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 3a. Client<sup>1</sup> Characteristics in Greater Boston State-Funded Substance Abuse Treatment Programs by Drug of Choice by Percent: FY 1997–FY 2002**

Characteristic	Cocaine/Crack						Heroin/Opiates					
	FY 1997 <sup>2</sup>	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002
Gender												
Male	60	60	59	59	62	63	69	72	72	75	76	77
Female	40	40	41	41	38	37	31	28	28	25	24	23
Race/Ethnicity												
White	24	23	22	23	26	25	49	47	49	51	50	53
Black	63	64	63	65	60	61	25	24	24	22	21	18
Hispanic	10	10	11	10	12	11	21	23	22	23	25	25
Other	2	3	3	3	3	3	4	6	5	5	5	4
Age at Admission (Average age)	(32.8)	(33.7)	(35.2)	(35.5)	(36.0)	(36.7)	(34.5)	(34.6)	(35.2)	(35.3)	(35.1)	(34.6)
18 and younger	1	1	1	<1	1	<1	1	1	1	<1	1	1
19–29	31	28	19	18	15	15	28	29	27	27	29	32
30–39	53	53	56	55	55	51	45	42	42	40	39	37
40–49	13	16	21	23	26	29	24	24	25	27	25	24
50 and older	2	2	4	4	4	5	3	4	6	5	6	6
Marital Status												
Married	9	10	11	10	11	12	11	10	10	11	10	10
Separated/divorced	16	19	18	16	17	19	22	21	20	19	17	15
Never married	75	71	71	74	72	69	68	69	70	70	73	75
Annual Income												
Less than \$1,000	59	56	56	59	58	60	67	67	67	72	73	78
\$1,000–\$9,999	28	28	28	24	22	23	23	23	23	16	15	11
\$10,000–\$19,999	8	11	10	10	11	10	6	6	6	7	6	5
\$20,000 and over	5	5	6	7	9	8	4	4	4	5	6	6
Homeless	28	27	23	21	24	28	28	26	26	22	29	35
Criminal Justice Involvement	25	29	34	34	35	37	20	19	22	22	22	22
Mental Health Problem	23	26	29	30	32	33	19	20	21	18	18	18
Needle Use in Past Year	5	5	6	5	7	7	64	63	63	58	62	62
<b>Total (N)</b>	<b>(4,920)</b>	<b>(3,869)</b>	<b>(3,165)</b>	<b>(2,837)</b>	<b>(2,283)</b>	<b>(2,230)</b>	<b>(7,359)</b>	<b>(9,240)</b>	<b>(8,915)</b>	<b>(9,137)</b>	<b>(10,553)</b>	<b>(11,828)</b>

<sup>1</sup>Excludes prisoners and out-of-State admissions.  
<sup>2</sup>Fiscal years are from 7/1 to 6/30 for each time period.

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

**Exhibit 3b. Client<sup>1</sup> Characteristics in Greater Boston State-Funded Substance Abuse Treatment Programs by Drug of Choice by Percent: FY 1997–FY 2002**

Demographic Characteristic	Marijuana					Alcohol						
	FY 1997 <sup>2</sup>	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002
Gender												
Male	76	79	76	73	78	77	80	81	81	82	82	82
Female	24	21	24	27	22	23	20	19	19	18	18	18
Race/Ethnicity												
White	37	30	28	28	28	27	55	56	55	55	51	51
Black	39	45	44	47	46	48	30	30	30	31	32	32
Hispanic	20	22	23	21	22	20	12	11	12	12	14	13
Other	4	4	4	4	3	5	3	3	3	3	3	4
Age at Admission (Average age)	(24.0)	(23.8)	(25.1)	(25.4)	(24.2)	(24.8)	(37.5)	(38.1)	(39.1)	(39.4)	(39.8)	(39.8)
18 and younger	33	34	24	19	27	24	2	2	1	1	1	1
19–29	43	44	50	56	51	50	19	17	15	14	14	13
30–39	18	17	17	18	16	19	40	41	39	38	36	36
40–49	5	5	6	5	6	6	26	27	32	34	35	36
50 and older	1	1	2	2	1	1	13	13	14	14	14	15
Marital status												
Married	6	6	4	5	5	6	10	10	10	10	10	11
Separated/divorced	5	5	6	7	6	7	25	26	24	22	21	22
Never married	89	89	90	88	89	88	65	64	66	68	69	67
Annual Income												
Less than \$1,000	58	55	59	55	57	60	54	53	51	55	57	65
\$1,000–\$9,999	28	28	26	27	22	21	27	27	28	24	22	14
\$10,000–\$19,999	10	11	10	12	13	11	10	10	10	10	9	9
\$20,000 and over	5	6	4	6	8	7	9	10	11	11	12	12
Homeless	8	7	9	10	11	12	38	40	40	41	43	44
Criminal Justice System Involvement	47	55	62	57	55	57	27	28	28	26	25	27
Mental Health Problem	41	32	28	31	29	32	20	23	24	23	22	24
Needle Use in Past Year	1	2	2	2	2	2	4	4	4	5	4	6
<b>Total (N)</b>	<b>(1,119)</b>	<b>(1,143)</b>	<b>(1,125)</b>	<b>(1,109)</b>	<b>(1,098)</b>	<b>(1,054)</b>	<b>(11,833)</b>	<b>(11,980)</b>	<b>(11,154)</b>	<b>(11,099)</b>	<b>(11,025)</b>	<b>(10,196)</b>

<sup>1</sup>Excludes prisoners and out-of-State admissions.  
<sup>2</sup>Fiscal years are from 7/1 to 6/30 for each time period.

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

**Exhibit 4. Characteristics of Admissions<sup>1</sup> to Greater Boston State-Funded Substance Abuse Treatment Programs by Percent: FY 1995–FY 2002**

Characteristic	FY <sup>2</sup> 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002
Gender								
Male	73	72	72	75	74	76	77	77
Female	27	28	28	25	26	24	23	23
Race/Ethnicity								
White	44	45	47	47	48	48	48	49
Black	39	38	35	33	32	32	30	29
Hispanic	13	14	14	15	16	16	18	18
Other	4	4	3	4	4	4	4	4
Age at Admission								
(Average age)	(34.2)	(34.6)	(35.1)	(35.5)	(36.5)	(36.7)	(36.5)	(36.5)
18 and younger	2	2	3	3	2	2	2	2
19–29	31	29	25	24	22	21	22	24
30–39	42	42	43	42	41	40	38	37
40–49	19	20	22	23	27	29	29	28
50 and older	6	6	7	8	9	9	9	10
Marital Status								
Married	12	11	10	10	10	10	10	10
Separated/divorced	22	22	22	22	21	19	18	18
Never married	66	68	68	68	69	71	72	72
Annual Income								
Less than \$1,000	55	56	59	58	58	62	64	70
\$1,000–\$9,999	28	29	26	26	26	21	19	14
\$10,000–\$19,999	10	9	9	9	8	9	8	7
\$20,000 and over	7	7	7	7	8	8	9	9
Homeless	20	24	32	31	31	30	34	37
Criminal Justice System Involvement	25	27	26	26	28	27	26	27
Mental Health								
No prior treatment	78	77	79	77	76	78	78	78
No treatment but has problem	6	5	3	3	3	3	2	2
Prior treatment (counseling or hospitalization)	16	18	18	21	21	20	19	20
Needle Use in Past Year	21	21	22	25	26	26	27	32
<b>Total (N)</b>	<b>23,282</b>	<b>24,363</b>	<b>25,470</b>	<b>26,505</b>	<b>24,653</b>	<b>24,478</b>	<b>25,269</b>	<b>25,586</b>

<sup>1</sup> Excludes prisoners and out-of-State admissions.

<sup>2</sup> Fiscal years are from 7/1 to 6/30 for each time period.

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

**Exhibit 5. Boston Police Department Arrests by Substance Class<sup>1</sup>: January 1997–December 2001**

Drug Class	1997		1998		1999		2000		2001	
	Number	(Percent)								
Class A (Heroin, Morphine, GHB, Ketamine and Many Opiate Derivatives)	1,392	(22.7)	1,061	(22.5)	984	(24.0)	1,022	(27.1)	905	(26.4)
Class B (Cocaine, Opium MDMA, LSD, PCP, Methadone, Fentanyl, Amphetamines, Methamphetamine, Barbiturate Acid, Methaqualone and Others)	2,918	(47.5)	2,225	(47.1)	1,847	(45.1)	1,532	(40.6)	1,428	(41.7)
Class D (Marijuana, Barbitol, Butyl Nitrite and Others)	1,617	(26.3)	1,211	(25.6)	1,133	(27.7)	1,093	(29.0)	982	(28.7)
Other	216	(3.5)	226	(4.8)	133	(3.3)	123	(3.3)	111	(3.2)
<b>Total Drug Arrests (N)</b>	<b>6,143</b>		<b>4,723</b>		<b>4,097</b>		<b>3,770</b>		<b>3,426</b>	
<b>Total Arrests (N)</b>	<b>27,843</b>		<b>25,481</b>		<b>23,592</b>		<b>22,216</b>		<b>20,470</b>	
<b>Drug Arrests As Percentage of Total Arrests</b>		<b>(23.7)</b>		<b>(18.5)</b>		<b>(17.4)</b>		<b>(17.0)</b>		<b>(16.7)</b>

<sup>1</sup> Includes all arrests made by the Boston Police Department (i.e., arrests for possession, distribution, manufacturing, and trafficking).

SOURCE: Boston Police Department, Office of Planning and Research

**Exhibit 6. Trends in HIV and AIDS Cases in Boston<sup>1</sup> By Risk Factor and Year of Diagnosis: Cumulative Cases as of January 1, 2003**

Mode of HIV <sup>2</sup> Exposure	1998	1999	2000	2001	TOTAL <sup>3</sup>
Male Sex w/Male (MSMs)	591 51.4%	75 42.6%	77 43.8%	76 45.8%	889 49.1%
Injection Drug Users (IDUs)	258 22.4%	31 17.6%	25 14.2%	18 10.8%	348 19.2%
MSMs and IDUs	55 4.8%	5 2.8%	2 1.1%	2 1.2%	66 3.6%
Recipient of Blood Product (RBP)	3 0.3%	2 1.1%	1 0.6%	0 0.0%	6 0.3%
Heterosexual	91 7.9%	25 14.2%	17 9.7%	15 9.0%	165 9.1%
Sex w/IDU	43 3.7%	6 3.4%	6 3.4%	5 3.0%	64 3.5%
Sex w/Bi Male	2 0.2%	2 1.1%	0 0.0%	1 0.6%	5 0.3%
Sex w/RBP	1 0.1%	0 0.0%	0 0.0%	0 0.0%	1 0.1%
Sex w/HIV/AIDS	45 3.9%	17 9.7%	11 6.3%	9 5.4%	95 5.2%
Undetermined/Other	152 13.2%	38 21.6%	54 30.7%	55 33.1%	337 18.6%
Presumed Hetero-Unknown <sup>4</sup>	114 9.9%	29 16.5%	40 22.7%	39 23.5%	247 13.6%
Undetermined/Other <sup>5</sup>	38 3.3%	9 5.1%	14 8.0%	16 9.6%	90 5.0%
Pediatric	N/A	N/A	N/A	N/A	N/A
<b>TOTAL (% of total)</b>	<b>1,150 63.5%</b>	<b>176 9.7%</b>	<b>176 9.7%</b>	<b>166 9.2%</b>	<b>1,811 100.0%</b>

Mode of AIDS Exposure	1993	1994	1995	1996	1997	1998	1999	2000	2001	TOTAL <sup>3</sup>
MSMs	1,824 54%	193 44%	161 41%	121 38%	86 36%	94 33%	68 33%	50 27%	45 31%	2,681 47%
IDUs	847 25%	115 26%	112 28%	91 29%	67 28%	76 27%	57 28%	43 23%	34 23%	1,470 26%
MSMs and IDUs	136 4%	21 5%	26 7%	7 2%	4 2%	5 2%	5 2%	3 2%	8 6%	216 4%
RBP	57 2%	1 0%	4 1%	5 2%	3 1%	5 2%	2 1%	0 0%	1 1%	78 1%
Heterosexual	177 5%	59 14%	47 12%	48 15%	45 19%	36 13%	24 12%	30 16%	12 8%	502 9%
Sex w/IDU	92 3%	27 6%	16 4%	14 4%	10 4%	10 4%	6 3%	11 6%	1 1%	196 3%
Sex w/Bi-Male	3 0%	1 0%	0 0%	0 0%	1 0%	0 0%	0 0%	1 1%	0 0%	7 0%
Sex w/RBP	2 0%	0 0%	0 0%	1 0%	0 0%	0 0%	0 0%	0 0%	0 0%	3 0%
Sex w/HIV/AIDS	80 2%	31 7%	31 8%	33 10%	34 14%	26 9%	18 9%	18 10%	11 8%	296 5%
Undetermined/Other	276 8%	41 9%	41 10%	39 12%	36 15%	68 24%	47 23%	58 31%	45 31%	681 12%
Presumed Hetero-Unk. <sup>4</sup>	197 6%	17 4%	25 6%	24 8%	22 9%	52 18%	43 21%	45 24%	34 23%	481 8%
Undetermined/Other <sup>5</sup>	79 2%	24 6%	16 4%	15 5%	14 6%	16 6%	4 2%	13 7%	11 8%	200 4%
Pediatric	46 1%	5 1%	3 1%	5 2%	0 0%	1 0%	0 0%	1 1%	0 0%	62 1%
<b>TOTAL (% of total)</b>	<b>3,363 59%</b>	<b>435 8%</b>	<b>394 7%</b>	<b>316 6%</b>	<b>241 4%</b>	<b>285 5%</b>	<b>203 4%</b>	<b>185 3%</b>	<b>145 3%</b>	<b>5,690 100%</b>

<sup>1</sup> Boston cases do not include prisoners.

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

<sup>3</sup> Row totals include cases diagnosed in 2002.

<sup>4</sup> Risk of partner unknown and primary risks denied; definition revised 7/1/99.

<sup>5</sup> Includes those still being followed up for risk information, those who have died with no determined risk, those lost to followup, 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., and Wayne Wiebel, Ph.D.<sup>1</sup>

## ABSTRACT

*Emergency department (ED) mentions stabilized at high levels and treatment admissions increased, indicating continued high levels of heroin use in Chicago during 2001. Between the second halves of 2000 and 2001, 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. 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 decreased significantly in 2001 by 44 percent from the previous year and continued to remain highest among White youth. Methamphetamine indicators suggested continuing 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, Substance Abuse and Mental Health Services Administration (SAMHSA), for 1994 through 2001; 2000 ED data were unavailable for methamphetamine.
- **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).
- **Drug-related mortality data** were derived from the DAWN mortality system for 1998–2000. The DAWN system covered 56 percent of the MSA jurisdictions and 92 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 for 1980–98, were also provided by IDPH and the Chicago Department of Public Health (CDPH); the report on deaths related to accidental drug poisonings has not been updated since the Chicago CEWG June 2000 report.
- **Arrestee drug testing data** were provided by the Arrestee Drug Abuse Monitoring (ADAM) program, National Institute of Justice (NIJ), for 1991 through 2001. Male and female arrestee urine toxicology results were from Treatment

<sup>1</sup> The authors are affiliated with the University of Illinois at Chicago, School of Public Health, Chicago, Illinois.

Alternatives for Special Clients (TASC). The 2000 data are based only on the first through third quarters, and 2001 data are based only on the fourth quarter. Female results were unavailable for 2001. Provisional unweighted data were obtained for males for the first three quarters of 2002.

- **Heroin price and purity data** were provided by the Drug Enforcement Administration (DEA), Domestic Monitor Program (DMP), for 1993 through 2001; the data are preliminary and subject to updating. Price and purity data on drug samples analyzed from August 1989 to October 2002 were provided by the Illinois State Police (ISP), Division of Forensic Science. 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). 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), 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.

- **Acquired immunodeficiency syndrome (AIDS) and human immunodeficiency virus (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 1994–96 study of 794 IDUs, age 18–50, in Chicago (Ouellet et al. 2000) and a 1997–99 study of 700 IDUs, age 18–30, in Chicago and its suburbs (Thorpe et al. 2000; Bailey et al. 2001).

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 July and December 2001 were alcohol-in-combination mentions, similar 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 trend analysis of death certificates suggests that absolute drug-related mortality in Chicago increased more than 30 percent over the 10-year period from 1989 to 1998. The total annual number of deaths from accidental drug poisonings rose from 256 in 1989 to a peak of 352 in 1993. In 1998, 344 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 2000. The total number of drug abuse-related deaths reported to DAWN ME sites in 2000 was 869, compared with 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 slightly over the last few years. Evidence of an increase is uniform across indicators. Drug-specific analyses later in this report provide more insight into factors that have shaped this overall drug mortality trend.

### Cocaine and Crack

In this reporting period, the majority of quantitative cocaine indicators were mixed, but they suggested that use has increased slightly or remained stable and is comparable to levels in the mid-1990s.

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 1999. During 2001, mentions decreased slightly (4 percent) between the first and second halves, from 8,269 to 7,933.

In terms of rates per 100,000 population, mentions increased from 1999 (225) to 2000 (246) and continued to increase in 2001 (277), a 23-percent change from 1999. Rates of ED mentions decreased by nearly 6 percent between the first and second halves of 2001, from 142 to 134 per 100,000 population (exhibit 1). Chicago had the most cocaine ED mentions among DAWN sites in 2001 and the highest rate per 100,000 population: 277.

Cocaine ED mentions increased slightly across nearly every demographic group. Between 2000 and 2001, cocaine ED mentions increased significantly (13 percent) among Whites. Slight but nonsignificant increases were reported for African-Americans and Hispanics during this period. Hispanics experienced a significant increase between 1999 (1,479) and 2001 (1,976), a change of 34 percent. During 2001, ED mentions remained stable across racial/ethnic groups, except among African-Americans, for whom mentions decreased by nearly 10 percent between the first and second halves of the year. However, for the second half of 2001, African-Americans continued to report the highest number of cocaine ED mentions (4,516), followed by Whites and Hispanics (race/ethnicity was unknown for 1,330 of the 7,933 cocaine ED mentions). In the second half of 2001,

mentions decreased for all age categories except the 20–25 group, with the 30–34 group experiencing the largest significant decrease (11 percent). Males continued to account for more cocaine ED mentions than females, with mentions increasing significantly for males between 2000 and 2001 by 11 percent.

According to DAWN ME data, deaths associated with cocaine increased 9 percent, from 468 in 1998 to 511 in 1999, but decreased 9 percent to 464 in 2000. Of the 869 total drug abuse deaths in 2000, 464 (53 percent) had a mention of cocaine.

State-supported drug treatment programs report that cocaine abuse remained the most frequent 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, which decreased 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), though they continued to make up the largest proportion of total admissions (64 percent). Cocaine-related admissions decreased by 10 percent for both females and males between FY 2001 and 2002.

According to the 2001 fourth quarter ADAM report, the weighted data for adult male arrestees showed that 41 percent tested cocaine-positive (exhibit 3). The provisional unweighted data for the first three quarters of 2002 suggested a stable trend or a slight increase in recent cocaine use by adult male arrestees.

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 1991–99. 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.

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–\$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. Only one report was obtained for kilogram prices for rock cocaine: \$19,000. In comparison, the Illinois Drug Threat Assessment, using DEA data, estimated kilogram prices in 2000 as ranging from \$18,000 to \$25,000. 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 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, cocaine use prevalence remained at 5 percent. According to the MTF Study, cocaine and crack use decreased for all age groups (8th, 10th, and 12th graders) in 2001.

The 2001 Chicago YRBS of public school students in grades 9–12 showed a steady decline in levels of cocaine use 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

The rate of heroin/morphine ED mentions in Chicago increased significantly from 84 per 100,000 population in 1994 to 203 in 2001, an increase of 142 percent. While there was a significant decrease of 10 percent between the second halves of 2000 and 2001, the rates of heroin ED mentions remained high (exhibit 1), and Chicago ranked second in heroin ED rates in the contiguous United States. The number of heroin ED mentions increased from 4,640 in the first half of 1999 to 6,109 in the first half of 2000 and remained stable in the first half of 2001 (6,178). Between the first and second halves of 2001, the number of heroin ED mentions decreased significantly, a change of 7 percent.

Within Chicago, heroin ED mentions were highest among African-Americans, followed by Whites and Hispanics. Between 2000 and 2001, heroin ED mentions remained relatively stable across all race/ethnic groups. Significant decreases were observed, how-

ever, between the first and second halves of 2001 for all race/ethnic categories except Whites. In the second half of 2001, rates of ED mentions for heroin were higher among males than among females (115 vs. 79 per 100,000 population), but the rate declined significantly for women (10 percent) from the second half of 2000 and for men (8 percent) from the first half of 2001. Between the second halves of 2000 and 2001, significant decreases in the number of ED mentions were observed in all age groups, except those age 35 and older (stable) and those age 26–29 (12-percent increase). The largest change in this reporting period was among 20–25-year-olds, with a decrease of 43 percent.

In 2000, 499 heroin deaths were reported by sentinel DAWN ME sites in the six-county Chicago area. This represents a 9-percent increase from the previous year, when 456 heroin deaths were recorded. Heroin-related deaths have increased more than twofold from the late 1980s, when less than 200 per year were reported. Of the 869 total drug abuse deaths in 2000, 499 (57 percent) had a mention of heroin, which makes it a factor in more deaths in the Chicago area than any other illicit drug.

Health department death certificates also revealed a heroin mortality peak for the city of Chicago in 1993, with 143 certificates containing heroin-related ICD-9 codes. While death certificate mentions of heroin declined to 92 in 1996, this number still exceeds annual heroin-related deaths noted during the 1980s. Heroin-associated death certificates increased to 128 in 1997 and 130 in 1998, suggesting a relative rise in heroin-related overdose deaths in the past few years.

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.

Between FY 2001 and 2002, heroin-related admissions decreased 12 percent among African-Americans and 5 percent among Whites, and they increased by 23 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.

According to 2001 fourth quarter ADAM data, 22 percent of adult male arrestees in Chicago tested positive for opiates (exhibit 3). The provisional unweighted data for the first three quarters of 2002

suggest that the percent of male arrestees positive for opiates remained relatively stable or increased slightly. Figures were not available for female arrestees.

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 for the decade 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.

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), though \$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–\$2,400. Prices for brown and black tar heroin were reported as somewhat lower than for white heroin: \$60–\$150 per gram and \$1,400–\$2,000 per ounce.

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.

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). 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. In 2000, 88 codeine-related deaths were reported from sentinel DAWN ME sites in the 6-county Chicago area, a 15-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 mentions increased significantly from 61 in 1999 to 100 in 2000, a 63.9-percent increase. A nonsignificant decline to 85 mentions was observed in 2001. Compared with 1994, when 181 mentions were observed, mentions declined 53 percent by 2001.

On the street, acetaminophen-codeine pills sell for \$1–\$4 each. There were 284 hydrocodone/com-bination ED mentions reported in Chicago in 2000 (the fourth highest among CEWG cities) and 339 in 2001. Methadone mentions increased significantly between 1994 (103) and 2001 (355). Oxycodone and oxycodone/combinations ED mentions have in-creased significantly from the previous years, but remain relatively low with 37 and 50 mentions, respectively, reported in 2001. Reports of OxyContin use remain uncommon.

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, who reported a 6-percent decrease. In FY 2002 treatment admissions remained stable among Whites and decreased 33 percent among African-Americans and 31 percent among Hispanics. Whites continued to make up the largest proportion of all admissions (68 percent). After increasing 159 percent for males, from 313 in 1999 to 810 in 2000, admissions 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

In the 1990s, marijuana indicators increased, closely corresponding with the rise in popularity of blunt smoking, especially common among African-American youth in the 14–24 age group. Blunt smokers cut cigars open with a razor, remove the tobacco, and replace it with marijuana. Cigars without tobacco are reportedly for sale at certain stores. Some blunt smokers add crack or phencyclidine (PCP) to the blunt before smoking it.

The number of marijuana ED mentions remained relatively stable between the second halves of 2000 and 2001 and changed significantly from 1994 to 2001 by 133 percent. Marijuana ED mentions totaled 2,482 in the second half of 2001. The rate of marijuana ED mentions per 100,000 was reported to be 89 for both 2000 and 2001. According to DAWN

mortality data, marijuana was mentioned in 3 percent of total drug-related deaths reported in 2000.

The number of marijuana ED mentions in Chicago have been higher among African-Americans and Whites than among Hispanics since 1994. In 2001, 22 percent of all mentions were among Whites, 34 percent were among African-Americans, and 15 percent were among Hispanics. However, 29 percent of mentions were of unknown race/ethnicity. Between the first and second halves of 2001, marijuana mentions decreased for both Whites (16 percent) and African-Americans (15 percent), and increased for Hispanics, though not significantly. For Whites, ED mentions also decreased significantly between the second halves of 2000 and 2001.

Marijuana ED mentions remained relatively stable across all age groups in 2001, except for the 18–25-year-olds. Between the second halves of 2000 and 2001, mentions decreased by 40 percent in this age group. A significant decrease was also reported between the first and second halves of 2001 (22 percent). This decrease was primarily driven by 18–19-year-olds. Males continued to have more than twice as many mentions as females.

In FY 2002, marijuana users represented 19 percent of all treatment admissions in Illinois and 28 percent of admissions when those for primary alcohol abuse are excluded; these proportions reflected a slight increase from FY 2001 (17 percent and 26 percent, respectively). Total marijuana admissions increased from 20,773 in FY 2000 to 25,626 in FY 2001, and 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 the first three quarters of 2002 suggest a stable trend. Data for female arrestees was unavailable.

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 up-

ward 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. However, student reports of past-year marijuana use increased sharply to 28 percent in 1995 and to more than 30 percent in 1997. This trend of increasing use continued with a 38-percent prevalence in 2000. According to the MTF Study, student usage remained stable in 2001.

The 2001 Chicago YRBS showed that the proportion of high school respondents who reported ever using marijuana steadily increased since 1993. In 2001, the percentage of 9th–12th graders who reported using marijuana at least once in their lifetime was nearly 50. Similarly, the proportion of those who reported current marijuana use increased since 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 high 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 \$900 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 2000 ADAM data, no male arrestees and only 0.3 percent of female arrestees in Chicago tested positive for methamphetamine. However, the most recent data from the ISP indicate that in October 2002, more methamphetamine was seized than cocaine or heroin in nearly 50 percent of Illinois counties. Even 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.

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. In the second half of 2001, 35 mentions were reported, and the rate of mentions per 100,000 population was 1 (exhibit 1).

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.

Amphetamine ED mentions have been increasing since 1994. Between the first halves of 2000 and 2001, mentions increased 55 percent, from 143 to 223. However, a nonsignificant decline to 185 ED mentions was observed in the second half of 2001.

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 28 percent among Whites and 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 increased 7 percent, from 1,679 in 2001 to 1,801 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; however, many drug users still report that the drug is difficult to obtain.

### 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 2001, with 243 mentions in the second half of 2001.

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. In 2001, alprazolam (Xanax) was mentioned most often (283), followed by clonazepam (Klonopin) (229), lorazepam (Ativan) (228), and diazepam (Valium) (180). 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. In 2001, ED mentions were 1 per 100,000 population, a 38-percent decrease from the previous year. Although the decrease in 2001 is large, it is too soon to interpret the change as a downward trend in LSD use in Chicago.

According to some accounts by White youth, hallucinogenic mushrooms remain available. Reported prices were \$10–\$40 per bag and \$200–\$250 per ounce.

Though not significant, recent ED mentions for PCP and its combinations increased from 429 in the first half of 2000 to 519 in the first half of 2001. The second half of 2001 experienced a significant decline in ED mentions to 355, a 32-percent change from the first half of the year. As with LSD, whether the sharp decline in PCP ED mentions will continue is difficult to conclude at this time.

There was one report from a suburban injection drug user in his twenties who said the hallucinogen N,N-dimethyltryptamine (DMT) was available in rock form. Typically this drug is smoked or injected and is said to produce a psychoactive state similar to LSD, though more intense and of shorter duration.

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.

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. Sherm sticks typically are cigarettes or small cigars dipped in PCP, drained, and dried. The cigarettes—most often Mores—are sold for about \$20 each and are mainly available on the far South Side. “Wicky sticks” are said to be cigarettes dipped in PCP and embalming fluid. PCP was also said to be sold in sugar cubes, though prices were not given. Liquid PCP (“water”) was said to sell for \$120 for a vial and \$800–\$1,000 for a bottle (unit amounts were not verified).

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

### Club Drugs

In the Chicago area, methylenedioxymethamphetamine (MDMA or ecstasy) is the most prominently identified of the club drugs used.

After a 46-percent increase in ED mentions for MDMA in Chicago from the first 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. ED mentions per 100,000 population decreased by 42 percent between 2000 (4) to 2001 (2). Of all the CEWG sites, Chicago had the most MDMA ED mentions in 2000 (215). The number of mentions increased 760 percent from 1998 (25 mentions) to 2000, and nearly 109 percent from 1999 (103 mentions) to 2000. However, mentions decreased significantly to 121 in 2001.

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.

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. ED mentions per 100,000 population have remained at 1.0 since 1999.

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 in 2001 were virtually unchanged from 1997 (from 16 to 14). The rate of ED mentions per 100,000 population (0.3) also remained unchanged since 1997. 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 22 percent in 1997, and remained stable through 1999. African-Americans accounted for 68 percent of new AIDS cases in 1999, although they constituted only 36 percent of the Chicago population. Of the remaining new cases, 19 percent were among Whites and 12 percent were among Hispanics.

Between 1988 and 1999, 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 38 percent. In 1999, 4 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 AIDS intervention study, 25 percent of the 850 IDUs tested at baseline in 1998 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 1994–96 from inner-city Chicago neighborhoods for 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. Preliminary data indicate a rate of new HIV infections in this group of 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 (HCV) among this sample was 27 percent (Thorpe et al. 2000) and 10 percent per person-year observed (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 at least some 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. Though 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.

#### ACKNOWLEDGEMENTS

The authors wish to thank the field staff of the Community Outreach Intervention Projects, School of Public Health, University of Illinois at Chicago, for their contributions to this report. We particularly thank site supervisors Raquel Rondon, Ed Snulligan, and Otis McCoy, and outreach workers James Crues, Hermenegildo 'Armando' Lira, and Robert Banks. The authors also wish to thank staff at the agencies and organizations that contributed data used in this report.

#### REFERENCES

- Bailey, S.L.; Huo, D.; Garfein R.S.; and Ouellet, L.J. Needle exchange as a harm reduction strategy for young injection drug users. *Journal of Acquired Immune Deficiency Syndrome* (In press).

- Johnston, L.D.; O'Malley, P.M.; and Bachman, J.G. *Monitoring the Future: National Survey Results on Drug Use, 1975–2000*. Volume I. (NIH Publication No. 01-4924.) Rockville, MD: National Institute on Drug Abuse, 2001.
- Ouellet, L.J.; Thorpe, L.E.; Huo, D.; Bailey, S.L.; Jimenez, A.D.; Johnson, W.A.; Rahimian, A.; and Monterroso, E. "Prevalence and incidence of human immunodeficiency virus infection among a cohort of injecting drug users: Chicago, 1994–1996." *Journal of Acquired Immune Deficiency Syndromes* 25(5):443–450, 2000.
- Thorpe, L.E.; Ouellet, L.J.; Hershov, R.; Bailey, S.L.; Williams, I.T.; Williamson, J.; Monterroso, E.; and Garfein, R. "Risk of hepatitis C virus infection among young adult injection drug users who share injection equipment." *American Journal of Epidemiology* 155(7):645–653, 2002.
- Thorpe, L.E.; Bailey, S.L.; Huo, D.; Monterroso, E.R.; and Ouellet, L.J. "Injection-related risk behaviors in young urban and suburban injection drug users in Chicago (1997–1999)." *Journal of Acquired Immune Deficiency Syndromes* 27(1):71–8, 2001.
- Thorpe, L.E.; Ouellet, L.J.; Levy, J.R.; Williams, I.T.; and Monterroso, E. "Hepatitis C virus infection: prevalence and prevention opportunities among young injection drug users in Chicago, 1997–1999." *Journal of Infectious Diseases* 182(6):1588–1594, 2000.
- Wiebel, W.W.; Jimenez, A.D.; Johnson, W.A.; Ouellet, L.J.; Jovanovic, B.; Lampinen, T.; Murray, J.; and O'Brien, M.U. "Risk behavior and HIV seroincidence among out-of-treatment injection drug users: a four-year prospective study." *Journal of Acquired Immune Deficiency Syndromes* 12: 282–289, 1996.

---

*For inquiries concerning this report, please contact Lawrence Ouellet, Ph.D., Director, Community Outreach Intervention Projects, Epidemiology and Biostatistics (MC923), School of Public Health, University of Illinois at Chicago, 1603 West Taylor Street, Chicago, Illinois 60612-4394, Phone: (312) 996-5523, Fax: (312) 996-1450, E-mail: <ljo@uic.edu>.*

**Exhibit 1. Estimated Rate of ED Mentions Per 100,000 Population in Chicago for Selected Drugs by Half Year: 1994–2001**

Year	Cocaine	Heroin/Morphine	Marijuana	Methamphetamine
1994				
1H	86	41	18	... <sup>1</sup>
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

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

SOURCE: 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. Percentage of ADAM Adult Male Arrestees Testing Positive in Chicago for Selected Drugs by Year: 1991–2001**

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 <sup>1,2</sup>	45	37	27
2001 <sup>1,2</sup>	50	41	22

<sup>1</sup> Figures for 2000 and 2001 are based on a new method of data collection and cannot be compared with those from previous years; data are weighted.

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

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<sup>1</sup>

## ABSTRACT

*Most amphetamine and methamphetamine indicators have fluctuated in the past 6 years. However, in 2002, methamphetamine treatment admissions reached their highest level ever. 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 emergency department (ED) mentions, which increased by 55 percent from 1995 to 2000, stabilized during 2001. Conversely, marijuana-related hospital discharges climbed to their highest level in the 1995-2001 time period. Similar to marijuana, most cocaine indicators were stable or down slightly in the past 1½ years, with deaths, ADAM data, and treatment admissions remaining stable, while ED mentions and new users in treatment declined somewhat. The proportion of cocaine smokers entering treatment had been declining, but it increased slightly in the first half of 2002. Curiously, this increase was attributable to Hispanic, rather than African-American, clients. A mixed pattern is also characteristic of heroin indicators, with hospital discharges and deaths increasing, ADAM data and ED mentions stable, and treatment admissions and new users in treatment down slightly. Also, heroin treatment client demographics have changed somewhat, with more White and younger users, but fewer Hispanics. Accompanying this has been a continuing small upward trend in the proportion of heroin smokers and inhalers. Finally, limited indicator data, a recent treatment study, data from the 2002 Colorado Youth Survey, and most anecdotal data point to an increasing 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. This area constitutes 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, this had grown by 30 percent to 2,109,282. In general, Colorado has been one of the top 5 fastest growing States in the Nation, 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.
- The 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 for September 2002 was 5.0 percent, up from 3.9 in September 2001. Likewise, Denver's unadjusted unemployment rate for September 2002 was 6.1 percent, compared with 4.8 percent in September 2001.

### Data Sources

Data presented in this report were collected and analyzed in October and November 2002. Although

<sup>1</sup> The author is affiliated with the Alcohol and Drug Abuse Division, Colorado Department of Human Services.

these indicators reflect trends throughout Colorado, they are dominated by the Denver metropolitan area.

- **Qualitative and ethnographic data** for this report are primarily from clinicians in treatment programs across the State, local researchers, and street outreach workers.
- **Drug-related emergency department (ED) mentions data** for the Denver metropolitan area for 1994 through 2001 are provided by the Drug Abuse Warning Network (DAWN), Office of Applied Studies, Substance Abuse and Mental Health Services Administration (SAMHSA).
- **Hospital discharge data** statewide for 1995–2001 are available from the Colorado Hospital Association through the Colorado Department of Public Health and Environment (CDPHE), Health Statistics Section. Data included are diagnoses based on the International Classification of Disease, Ninth Revision (ICD-9-CM) codes for inpatient clients at discharge from all acute care hospitals and some rehabilitation and psychiatric hospitals. These data do not include ED care.
- **Treatment data** were provided by the Drug/Alcohol Coordinated Data System (DACODS). Client reports are 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** are available from local Drug Enforcement Administration (DEA) Denver Division officials in their 3rd quarter fiscal year (FY) 2002 report. Data from DEA's Domestic Monitor Program (2001) are also reported.
- **Death statistics and communicable diseases data** are from CDPHE for 1995–2001.
- **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 1994 through 2001.
- **Arrestee Drug Abuse Monitoring (ADAM) program data** on arrestee urinalysis results are 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 calendar year 2000, NIJ changed its procedures for covering adult male arrestees from convenience to probability sampling. The female convenience samples remain small and are not comparable to adult male data. Thus, no ADAM trend data are presented. Rather, 2001 and 2002 (first two quarters) use percentages by drug type are indicated.

- **The Colorado Youth Survey (CYS)** is an annual, statewide survey of 6th through 12th graders, with questions 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.
- **Acquired immunodeficiency syndrome (AIDS) data** were provided by the CDPHE through September 30, 2002.

#### DRUG ABUSE PATTERNS AND TRENDS

##### Cocaine and Crack

Most cocaine indicators remained stable or declined in 2001 and the first half of 2002. Denver metropolitan cocaine ED mentions per 100,000 population (exhibit 1), declined from 75 to 53 from 1995 to 1996 and increased steadily to 87 in 1999. The rate declined slightly to 83 per 100,000 in 2000 and to only 69 per 100,000 for 2001. None of these changes was statistically significant.

Also, statewide hospital discharge data (exhibit 2) showed that cocaine occurrences per 100,000 population increased from 55.3 in 1995 to 62.8 in 1998, but remained relatively stable through 2001 (63.2).

In 1994 there were 71 calls to the RMPDC concerning cocaine. The number dropped to 49 in 1995, remained at about that level through 1999, increased to 59 in 2000, and more than doubled to 127 in 2001.

The proportion of cocaine treatment admissions has declined considerably over the past 6½ years (exhibit 3). In 1996, primary cocaine abuse accounted for 30.6 percent of all illicit 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, at 15.3

percent, to 2001, at 15.7 percent, but declined to 13.8 percent during the first half of 2002 (exhibit 4).

Treatment admissions data indicate that cocaine injecting has remained relatively stable, accounting for 11–13 percent of 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 to 37.9 percent. However, in the first half of 2002, the percentage of Hispanics who inhaled dropped to only 27.2 percent. Conversely, the proportion of Hispanics smoking cocaine 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 occurrence may relate to the intertwining of 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), a substantial decline from their proportion of total cocaine clients in 2001 (47.3 percent). Hispanic cocaine admissions increased dramatically from only 17.5 percent in 1996 to a high of 28.8 percent in 2000, but 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 were nearly cut in half, 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, there have been changes in the age categories of treatment admissions since 1996. In 1996, 57 percent of cocaine admissions were younger than 35; the proportion decreased to 45.2 percent in the first half of 2002. Conversely, 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 being relatively constant from 1996 (59.6 percent) through the first half of 2002 (59.5 percent).

Cocaine-involved deaths in the State climbed from 86 in 1995 (23 per million) to a peak of 146 in 1999 (36 per million). While cocaine-involved deaths declined to 116 in 2000 (27 per million), they increased again to 134 in 2001 (30.4 per million), the second highest number of deaths in the time period indicated.

In recent ADAM data for samples of Denver arrestees, 35.4 percent of the adult males had cocaine-positive urine samples in 2000, as did 33.8 percent in 2001. Among adult female arrestees, 46.5 percent tested cocaine-positive in 2000, with 45.0 percent testing positive in 2001. Provisional data for the first quarter of 2002 showed a substantial decline in positive cocaine urines for both males (27.1 percent) and females (33.3 percent). However, these numbers substantially increased during the second quarter of 2002 to 33.7 percent of the weighted sample of males and 51.7 percent of the unweighted sample of females.

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; suppliers continue to be 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.

The DEA reports current cocaine prices as follows: \$17,000–\$20,000 per kilogram (down from \$20,000), and \$500–\$900 per ounce (down from \$500–\$1,100) in the Denver metropolitan area, with purity in the 30 to 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 remain relatively stable at \$900–\$1,000 per ounce and \$10–\$20 per rock in Denver.

## Heroin

For 2001 and the first half of 2002, most 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 increased significantly from 1994 (31) to 2001 (40) (exhibit 1). This rate declined slightly (3.9 percent) from 2000 to 2001.

Conversely, hospital discharge data (exhibit 2) indicate that opiate (narcotic analgesics) occurrences per 100,000 population, dropped from 29.4 to 19.9 from 1995 to 1996, and then climbed steadily to 50.8 per 100,000 in 2001 (an overall increase of 73 percent).

Heroin-related calls to the RMPDC, which had been steady from 1994 (21 calls) to 1998 (22 calls), increased to 36 in 1999 but declined to only 12 in 2000. However, in 2001, heroin-related calls increased to the 1999 level of 36.

Among Colorado treatment admissions (exhibit 3), 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 4).

Like cocaine, there have also been some changes in the demographics 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 the same time period. Whites increased as a proportion of total admissions, from 57.6 percent in 1996 to 65.5 percent in the first half of 2002, while Hispanics decreased, from 29.4 percent 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 were 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 were distinctly different from one another demographically. The heroin smokers were much more likely to be White (78 percent) than inhalers (59 percent) or injectors (62 percent). Also, smokers were 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 three in five smokers abused heroin for 4 years or less, compared with only 41 percent of inhalers and 31 percent of injectors. Gender differences were small, however, with females constituting 36 percent of the smokers, 32 percent of inhalers, and 34 percent of injectors. Regarding educational levels, one-half of smokers had at least some college, compared with only 39 percent of inhalers and 32 percent of injectors. Thus, not surprisingly, smokers were more likely to be employed full or part time (55 percent) than were 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 were somewhat more likely (78 percent) to live outside the city and county of Denver than inhalers (71 percent) or injectors (67 percent).

From 1990 through 1996, opiate-related deaths averaged 85 per year. However, this average increased dramatically to 150 deaths per year from 1996 through 2001, an increase of 76 percent.

The 2000 ADAM data showed that 5.8 percent of females were opiate-positive, as were 3.4 percent of males. In 2001, 5.2 percent of males tested opiate-positive. Only 2.4 percent of females tested positive for opiates in that year. Provisional data for the first two quarters of 2002 show a continuance of this seesaw pattern. In the first quarter of 2002, 1.9 percent of females and 2.1 percent of males tested positives for opiates. However, in the second quarter, 5.2 percent of females and 2.7 percent of males tested opiate-positive.

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, who also control the street-level heroin market through 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 involved 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 priced at \$100–\$150, with ounces selling for \$1,500–\$3,000. The DMP buys reveal that the purity of Mexican heroin ranges from 8 to 64 percent (the average purity is around 18 percent).

In Colorado Springs, quantities of heroin are selling for \$1,800–\$3,500 per ounce and \$75–\$300 per gram. The average purity is around 40 percent.

### **Marijuana**

Most marijuana indicators were stable or decreasing for 2001 and the first half of 2002.

From 1994 to 2001, the rate per 100,000 population of marijuana ED mentions increased significantly (92.5 percent) from 26 to 50 (exhibit 1). The 2001 rate remained stable from 2000. However, marijuana hospital discharge occurrences per 100,000 population rose dramatically from 45.6 in 1995 to 62.5 in 2001 (exhibit 2).

Marijuana 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 the effects of marijuana use.

The proportion of marijuana treatment admissions increased from 38.8 percent in 1996 to 43.7 percent in 1999 (exhibit 3). However, after that time, the proportion declined slightly to 40.6 percent in 2001 and to 39.1 percent in the first half of 2002. In general, marijuana users accounted for the largest proportion of all Colorado drug treatment clients since 1996. These increases may be partly related to users' accounts of increased potency of marijuana and to a more casual attitude about marijuana use in society in general.

The proportion of new users entering treatment for marijuana declined steadily from 1996 (35.8 percent) through 1999 (25.4 percent). This proportion climbed slightly to 29.9 percent in 2000, remained at that level (29.2 percent) during 2001, and dropped to 25.5 percent in the first half of 2002 (exhibit 4).

Data indicate only slight changes in the demographics of marijuana treatment clients. Race proportions re-

mained relatively stable from 1996 through the first half of 2001. Hispanics increased as a percentage of marijuana admissions, from 31.4 percent in 1995 to 36.3 percent in 1999, but declined to only 26.1 percent through the first half of 2002. The proportion of Whites fluctuated 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 were also 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 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 proportion for the 18–25 age group, which fluctuated between 27 and 31 percent from 1996 through 2001, increased to 33.2 percent during the first half of 2002. Similarly, the proportion for the 26–34 age group increased slightly, from 15.4 percent in 2001 to 17.9 percent in 2002, the highest percentage in the 6½-year time period. Likewise, the proportion of those age 35 and older, which increased from 12.4 percent in 1996 to 23.8 percent in 1999 only to drop to 15.6 percent in 2001, increased to 18.0 percent in the first half of 2002.

The 2000 ADAM data indicated that 40.9 percent of the adult male arrestee sample had marijuana-positive urine screens. Among females, 38.5 percent tested marijuana-positive. These percentages remained relatively stable in 2001, with 40 percent of males and 33 percent of females testing positive. In the first and second quarters of 2002, positive test proportions remained constant for males (41.5 and 38 percent, respectively) and females (33.3 and 31.3 percent, respectively).

The Denver DEA reports 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 multipound quantities.” Mexican marijuana sells for \$500–\$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–\$4,000 per pound.

Further, according to the DEA, locally grown marijuana is almost always grown indoors by independent

operators with grow equipment varying from basic to elaborate operations with sophisticated lighting and irrigation systems. Domestically grown marijuana prices range from \$1,000 to \$3,000 per pound and \$200 to \$300 per ounce.

### Stimulants

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

Methamphetamine ED mentions per 100,000 population in Denver decreased from 9 in 1994 to only 5 in 2001; this change was not significant (exhibit 1). Conversely, the rate of amphetamine ED mentions increased nearly 67 percent from 1994 to 2001, from 13 to 21, but remained stable from 2000 to 2001. Amphetamine-related hospital discharge occurrences per 100,000 population also showed a fluctuating pattern from 1995 to 2001 (exhibit 2). However, overall amphetamine-related discharges increased during that time period, from 19.4 to 26.3 per 100,000 population.

Amphetamine-related calls (in the street drug category) to the RMPDC decreased from 1994 ( $n=36$ ) to 1996 (16), but increased sharply in 1997 (38). 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 (exhibit 3). Overall, they doubled from only 8.9 percent of illicit 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, primary amphetamine admissions increased from 65 to 171, or from 0.5 percent to 1.3 percent of all illicit drug treatment admissions, but declined slightly to 128 admissions (1.0 percent) during 2001 and to only 52 (1.0 percent) during the first half of 2002.

In 1996, 25.8 percent of primary methamphetamine users entering treatment were new users (exhibit 4). This percentage rose to 30.5 in 1997. However, by the first half of 2002, the proportion of new users declined to only 18.6 percent.

Injecting had been the most common route of administration for methamphetamine among primary methamphetamine admissions. However, the 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). In terms of age, from 1996 to the first half of 2002, those 25 and younger remained at about one-third of admissions, those age 26–34 declined from 40.0 to 32.1 percent of admissions, and those 35 and older have increased from about one-fourth to one-third of methamphetamine admissions.

Although amphetamine-related deaths in Colorado are far fewer than deaths involving opiates or cocaine, the number has increased sharply from only 15 between 1994 and 1997 to 34 between 1998 and 2001 (a 127-percent increase).

According to ADAM data, only a small percentage of positive methamphetamine urine screens were reported in 2000. These involved 2.6 percent of the adult male arrestees. Among adult females, 5.3 percent tested methamphetamine-positive. These figures changed only slightly in 2001 and the first quarter of 2002, with 3.4 and 4.3 percent of males, respectively, and 4.3 and 3.7 percent of females, respectively, testing positive for methamphetamine. However, in the second quarter of 2002, only 3.3 percent of males had positive methamphetamine urines; 8.6 percent of females tested positive.

The DEA describes widespread methamphetamine availability, with a majority of the drug originating in Mexico or in large-scale labs in California. The DEA, however, is making extensive lab seizures in the Rocky Mountain West (147 from April through June 2002). These labs, 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, and chemical supply companies). The average purity for methamphetamine is 8 to 12 percent. The DEA reports that Colorado

methamphetamine street prices are stable at \$80–\$110 per gram and \$700–\$1,000 per ounce.

### 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) (“roofies”), and ketamine (Special K).

Information on use of these drugs in Colorado remains limited. While ADAD has added club drugs to an expanded treatment client data set, the new information will not be available until early 2003. Also, hospital discharge and ADAM data have not routinely included separate breakout data 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.

Additionally, 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 presented from the DEA.

### MDMA

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 significantly from 2 in 1994, to 15 in 1999, to 57 in 2000; they declined significantly to 42 in 2001.

Exhibit 5 shows data from the 2002 CYS. 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 clients, 267 (34 percent) respondents reported lifetime use of ecstasy, with 4.5 percent having used it in the past 30 days. The average age of the users was 17.3, and the average age of first use was 15.9.

The above information 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, and 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 that have source connections in Europe. The DEA places the one-tablet or capsule price at \$15–\$20, with larger quantities selling for \$8–\$12 per tablet.

### GHB

During the 1994 to 1998 time period, the RMPDC reported only 1 to 6 calls about GHB. However, in 1999, the number of GHB calls rose to 92. GHB ED mentions had also increased from 7 in 1997, to 13 in 1998, to 71 in 1999. However, such mentions dropped significantly from 1999 to 2000 ( $N=43$ ), and again from 2000 to 2001, when there were 16 mentions.

In the 2001 CYS, 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 (exhibit 5).

In ADAD’s treatment survey sample of 782 clients, 73 (10.0 percent) respondents reported lifetime use of GHB, with 0.5 percent having used it in the past 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

There does not appear to be widespread use of this drug among either the general population or those in the rave scene in Colorado. The number of calls received by RMPDC about this drug jumped from 1 in 1994 and 1995 to 22 in 1998. However, such calls declined to only seven in 1999. Also, there were only two ED mentions from 1994 through 2001.

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

### Ketamine

The RMPDC did not report any ketamine calls from 1994 to 1999. There were only three ketamine ED

mentions from 1994 to 1999. However, there were 12 and 11 such mentions in 2000 and 2001, respectively. The increase from 1999 to 2001 was statistically significant.

Interestingly, the CYS results indicated greater lifetime use of ketamine than GHB. As shown in exhibit 5, 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, 139 (19 percent) client respondents reported lifetime use of ketamine, with 2.2 percent having used it in the past 30 days. The average age of the users was 17, while the average age of first use was 15.6 years.

#### *Dextromethorphan (DXM)*

In ADAD's treatment survey, 78 (11 percent) client respondents in 2001 reported lifetime use of DXM, with 2.2 percent having used it in the past 30 days. The average age of the users was 16, while the average age of first use was only 14.9.

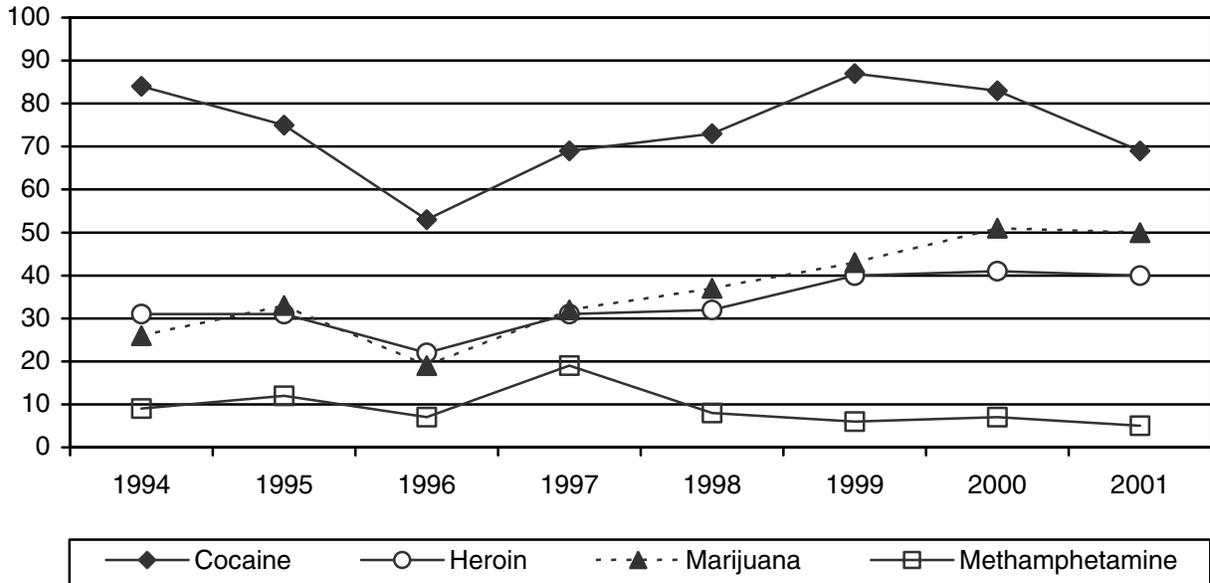
#### INFECTIOUS DISEASES RELATED TO DRUG ABUSE

Of the 7,560 AIDS cases reported in Colorado through September 30, 2002, 9.0 percent were classified as injection drug users (IDUs), and 11.2 percent were classified as homosexual or bisexual males and IDUs (exhibit 6).

---

*For inquiries concerning this report, please contact Bruce Mendelson, Colorado Department of Human Services, Alcohol and Drug Abuse Division, 4055 South Lowell Boulevard, Denver, Colorado 80236-3120, Phone: (303) 866-7497, Fax: (303) 866-7481, E-mail: <bruce.mendelson@state.co.us>.*

**Exhibit 1. Rates of DAWN ED Mentions Per 100,000 Population in the Denver Area for Selected Drugs: 1994–2001**



SOURCE: DAWN, OAS, SAMHSA

**Exhibit 2. Colorado Hospital Discharge Mentions and Rates<sup>1</sup> for Selected Drugs: 1995–2001**

Drug	1995	1996	1997	1998	1999	2000	2001
Cocaine (M) Rate	(2,070) 55.3	(2,255) 59.0	(2,245) 57.7	(2,492) 62.8	(2,517) 62.3	(2,732) 63.2	(2,787) 63.2
Marijuana (M) Rate	(1,708) 45.6	(1,740) 45.6	(2,118) 54.4	(2,227) 56.1	(2,204) 54.6	(2,455) 56.8	(2,755) 62.5
Amphetamine (M) Rate	(728) 19.4	(532) 13.9	(959) 24.6	(815) 20.5	(682) 16.9	(942) 21.8	(1,161) 26.3
Narcotic Analgesics (M) Rate	(1,103) 29.4	(760) 19.9	(1,458) 37.5	(1,566) 39.5	(1,639) 40.6	(2,053) 47.5	(2,237) 50.8
Population	3,746,585	3,819,789	3,892,996	3,966,198	4,039,402	4,324,920	4,407,305

<sup>1</sup> Per 100,000 population.

SOURCES: Colorado Hospital Association and the Colorado Department of Public Health and Environment, Health Statistics Section

**Exhibit 3. Treatment Admissions in Colorado by Primary Drug of Abuse and Percent: 1996–1H 2002<sup>1</sup>**

Drug	1996	1997	1998	1999	2000	2001	2002
Total Admissions ( <i>N</i> )	(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 <sup>2</sup>	2.2	2.3	2.5	2.9	3.4	3.8	4.0
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
Other drugs <sup>3</sup>	3.7	3.2	3.7	3.5	4.0	4.0	3.6

<sup>1</sup> Excludes alcohol-only and alcohol-in-combination admissions.

<sup>2</sup> Includes a small percentage of nonprescription methadone admissions (0.1–0.3 percent per year).

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

SOURCE: Drug/Alcohol Coordinated Data System

**Exhibit 4. Annual Number and Percentage 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
Cocaine							
( <i>N</i> )	(599)	(433)	(587)	(516)	(447)	(418)	(193)
Percent	15.3	14.0	15.8	15.5	16.5	15.7	13.8
Heroin							
( <i>N</i> )	(328)	(262)	(362)	(356)	(352)	(301)	(113)
Percent	17.0	16.6	19.6	17.6	18.7	16.6	14.0
Marijuana							
( <i>N</i> )	(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							
( <i>N</i> )	(296)	(514)	(517)	(312)	(347)	(406)	(217)
Percent	25.8	30.5	27.3	20.5	20.5	20.0	18.6

SOURCE: Drug/Alcohol Coordinated Data System

**Exhibit 5. Lifetime Use of Club Drugs Among 6th–12th Graders—Colorado Youth Survey: 2002**

Grade	MDMA			Ketamine			GHB		
	(N) <sup>1</sup>	(n Used)	% Used	(N) <sup>1</sup>	(n Used)	% Used	(N) <sup>1</sup>	(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

<sup>1</sup> N=Total sample number.

SOURCE: Omni Research and Training

**Exhibit 6. Colorado Cumulative AIDS Cases by Demographic Category: Through September 30, 2002**

Category	Number of Confirmed Cases	Percent
Total	7,560	100.0
Gender		
Male	6,999	92.6
Female	561	7.4
Race/Ethnicity		
White	5,483	72.5
African-American	852	11.3
Hispanic	1,145	15.1
Asian	30	0.4
Native American	50	0.7
Exposure Category		
Men/sex/men	5,138	68.0
Injection drug user (IDU)	683	9.0
MSM and IDU	843	11.2
Heterosexual contact	436	5.8
Other	184	2.3
Risk not identified	276	3.7

SOURCE: Colorado Department of Public Health and Environment

# Drug Abuse Trends in Detroit/Wayne County and Michigan

Richard F. Calkins<sup>1</sup>

## ABSTRACT

*Cocaine indicators continued to stabilize. With increases in heroin ED mentions and heroin-involved deaths, heroin indicators appeared to be 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 and ecstasy showed increases, while indicators for abuse of 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. Hepatitis C cases showed a sharp increase in 2001.*

## 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 that also have international flights, with more than 200,000 arrivals in 2000; and 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 were obtained from the Drug Abuse Warning Network (DAWN), Office of Applied Studies, Substance Abuse and Mental Health Services Administration (SAMHSA).
- **Treatment admissions data** were provided by the Division of Quality Management and Plan-

<sup>1</sup> The author is affiliated with the Office of Drug Control Policy, Michigan Department of Community Health, Lansing, Michigan.

ning, 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 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 is 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 2002 data just recently became available for use in this report.

- **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 toxicology from 1995 through March 2002. 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 methamphetamines/stimulants.
- **Arrestee drug testing data** were provided by the Arrestee Drug Abuse Monitoring (ADAM) program, National Institute of Justice (NIJ). The ADAM data are based on a sample of arrestees in Detroit/Wayne County, as collected by Michigan State University. Data for 2000 are for adult arrestees and are based on a weighted sample for males and an unweighted sample for females. Data for 2001 are for the third and fourth quarters only and are limited to male arrestees. The ADAM sampling plan was revised in 1999 and 2000, as directed by NIJ, in an effort to gain data that would be statistically representative of Wayne County arrestees. Earlier data were for city of Detroit arrestees only. Caution is suggested in making comparisons between 1999, 2000, and 2001 findings. The ADAM effort was discontinued at the end of 2001, and it is not clear if it will be resumed.
- **Drug price and purity data** were provided by the Drug Enforcement Administration (DEA). Preliminary data on heroin purity in early 2001 were from the DEA's Domestic Monitor Program (DMP).
- **Drug seizure data and trends** were provided by the Michigan State Police and the U.S. Customs Service, as well as DEA and local police departments, for 2001 and 2002.
- **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 through September 2002. 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 July 1, 2002. Statewide data on hepatitis C trends were also provided by MDCH.

#### DRUG ABUSE PATTERNS AND TRENDS

##### Cocaine and Crack

Between 1994 and 1999, cocaine was the most frequent DAWN ED drug mention in Detroit metropolitan counties (exhibits 1 and 2). 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. Data for 2001 suggest there was a slight but nonsignificant decrease for the year compared with 2000.

The typical cocaine ED case continued to be a male, age 35 or older, who went to the emergency department seeking help for chronic effects or unexpected reaction and was treated and released in a multidrug-involved episode. There was a significant increase in cases among those age 45 and older between 1994 and 2001.

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 remained the top illicit drug among statewide admissions, accounting for 18 percent of total admissions. In FY 2002, cocaine/crack accounted for 17 percent of statewide admissions. In Detroit/Wayne County, cocaine represented 28 percent of total admissions in FY 2001 and 26 percent in FY 2002. It was exceeded only by heroin, which accounted for 34 percent (FY 2001) and 29 percent (FY 2002) of total admissions.

Cocaine (including crack) was involved (as either primary, secondary, or tertiary drug) in 35 percent of all treatment admissions statewide in FY 2002 and in 52 percent of all admissions in Detroit/Wayne County. About one of every three cocaine-involved admissions statewide in FY 2002 was in Detroit/Wayne County.

The number of decedents with a positive drug toxicology for cocaine in Detroit/Wayne County were basically stable between 1995 and 1999, with plus or minus 1–12-percent fluctuations year to year (exhibit 3). 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 the first 9 months of 2002, 304 cocaine deaths were identified. At this rate, the yearend total will equal that of 2001.

Prior to 2000, when ADAM began probability sampling of adult male arrestees, the proportion of males who tested positive for cocaine declined from a peak of 53 percent in 1987 to 27 percent in 1999. In 2000, 24 percent of male arrestees (weighted Wayne County sample) tested cocaine-positive, while 42 percent of female arrestees (unweighted Wayne County sample) tested cocaine-positive (exhibit 4). Weighted results for male arrestees in the third and fourth quarters of 2001 showed 22 percent were cocaine-positive. Among those who admitted to cocaine use in the month before their arrest, crack was used on about twice as many days (9.5 days) as cocaine powder (4.4 days). ADAM data collection ceased in 2002.

Cocaine powder and crack availability, prices, and purity remained relatively stable. Ounce and kilogram prices have been stable for at least the past 8 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 in Detroit. Small plastic bags (heat-sealed or ziplock) 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.

The U.S. Customs Service in Detroit reported seizing 161 kilograms of cocaine during the 6 months following September 2001, compared with 28 kilograms in the previous 6 months. Michigan State Police have continued to make more large (multikilogram) seizures in the past several months in many urban areas outside Detroit, compared with earlier time periods. Some dealers reportedly have switched to selling marijuana because of the more severe criminal consequences for selling cocaine.

### Heroin

ED mentions for heroin have trended gradually upward since 1994 (exhibits 1 and 2). 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. The number of heroin ED mentions was 51 percent higher in 2001 than in 1999. Heroin mentions increased significantly (by nearly 76 percent) between 1994 and 2001.

The typical heroin ED case continued to be a male, age 45–54, who sought help in an emergency department for chronic effects or unexpected reaction and was treated and released. Between 1994 and 2001, there have been significant increases in females (more than doubling), in those age 20–25, and in those older than 35.

Heroin, as the primary drug among treatment admissions in FY 2002, accounted for 29 percent of all admissions in Detroit/Wayne County and 12 percent of admissions statewide. The 4,138 admissions in Detroit/Wayne County involving heroin (as primary, secondary, or tertiary drug) accounted for 52 percent of the statewide total of 7,924 heroin-involved admissions. 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 3). The 383 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. During 2001, the 465 heroin-present deaths was a slight decrease from the 473 deaths in 2000. During the first 9 months of 2002, 381 heroin-present deaths were identified. At the current rate, it is expected that heroin deaths could total more than 500 by the end of 2002. There were at least two bodypacker fatalities in 2002.

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. In the 6 months from April through September 2002, there were 100 findings of 6-AM and 269 findings of heroin (morphine); this is a ratio of about 37 percent of 6-AM to heroin being present.

Findings of heroin metabolites among urinalyses of city of Detroit adult arrestees were relatively stable from 1995 to 1999, with 5–9 percent of adult males and 9–22 percent of adult females testing opiate-positive (exhibit 4). The female samples were relatively small, likely impacting year-to-year fluctuations. In 2000, 8 percent of a weighted sample of Wayne County adult male arrestees tested opiate-positive. Among adult females in 2000, 24 percent of the unweighted Wayne County sample tested opiate-positive. Weighted results for male arrestees in the third and fourth quarters of 2001 were stable, at 7 percent opiate-positive. Just over 4 percent of arrestees reported they used opiates in the month prior to their arrest, and the average number of days used was 11.8.

Nearly all available heroin continued to be white in color. South America (Colombia) remains the dominant source, although in the past 3 years or so, 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 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 ziplock bags. The practice of using brand names by dealers has reportedly declined greatly.

According to the most recent information from the DEA, the average heroin price per pure milligram in the first half of 2001 was \$0.95. Heroin purity, which had increased from the early 1990s to a peak of nearly 50 percent in 1999, was about 43 percent in the first half of 2001, with a range of 37–72 percent per milligram pure.

#### **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) use, while indicators for carisoprodol (Soma) and oxycodone (OxyContin) appeared to be more stable. These drugs are available in myriad combinations that involve other drugs in the formulation of the pill or capsule.

Other opiates, as primary drugs among treatment admissions in FY 2002, were reported for 284 cases in Detroit/Wayne County and 1,930 cases statewide. 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. The other opiates-involved admissions in Detroit/Wayne County accounted for one of every five statewide other opiates-involved admissions during this time period.

Toxicology findings from the Wayne County ME lab showed 225 cases of codeine positivity in the 12 months between April 2001 and April 2002, compared with 121 cases from April through September 2002.

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), and 2001 (483) (exhibit 1). There was a 443-percent increase in hydrocodone mentions between 1994 and 2001. This drug was identified by the Wayne County ME lab in 60 decedents in 2000, 80 in 2001, and 66 in April–September, 2002. Information from the Children’s Hospital of Michigan Poison Control Center on intentional hydrocodone abuse cases for 2001 identified about 40 cases; about one-half were female. In the first 9 months of 2002, 39 cases of intentional hydrocodone abuse were reported to the poison control center.

Carisoprodol was identified in 20 Wayne County decedents in 2000, 30 in 2001, and 15 in the 6 months between April and September 2002. There were 21 cases of intentional carisoprodol abuse reported to the poison control center during the first 9 months 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, and 45 in both 2000 and 2001. Since about 2000, oxycodone (OxyContin) has been increasingly 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 specifically related to this drug continued to be reported. Oxycodone was found in 10 decedents in Wayne County in 2000, 13 in 2001, and about this same number in 2002. It was involved in five intentional abuse cases reported to Children’s Hospital of Michigan Poison Control Center in the 3-month period between July 1 and October 1, 2001; four of these cases involved female teens. Ten cases were reported to the poison control center in the first 9 months of 2002. OxyContin pills sell for \$0.50–\$1.50 per milligram. More than 50 arrests were made by Michigan State Police in the first 9 months of 2002. Some oxycodone reportedly is being smuggled from Canada.

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 36 decedents between April and September 2002.

## **Marijuana**

Marijuana indicators either stabilized or increased. 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 (exhibits 1 and 2). In 1999, the case rate for marijuana mentions per 100,000 population was 95; in 2000, the case rate was 99, while in 2001 the case rate was 121. Although this was an increase (paralleled by the number of marijuana mentions over this same time period), it was not significant. However, there has been a significant increase in marijuana mentions among females since 1994.

Treatment admissions during FY 2002 in Detroit/Wayne County for marijuana as primary drug totaled 1,105. For this same period statewide, there were 8,834 marijuana admissions as primary drug. 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. The Detroit/Wayne County marijuana-involved admissions accounted for about one of every six (17 percent) statewide marijuana-involved admissions in FY 2002.

Marijuana-positive drug test findings among Detroit arrestees since 1995 were relatively stable, but showed a slight increase (exhibit 4). Between 1995 and 1999, 42–48 percent of the adult males arrested in Detroit were marijuana-positive, as were 16–28 percent of the adult females. In Wayne County in 2000, one-half of the weighted sample of male arrestees and 24 percent of the unweighted sample of female arrestees were marijuana-positive. Weighted results for male arrestees in the third and fourth quarters of 2001 were stable, with 48 percent testing marijuana-positive. This same percentage of arrestees admitted use in the month before their arrest, and the average number of days used was 10.9.

The majority of marijuana seized in Michigan originate in Mexico, with some of it passing through the United States and into Canada, where it is then repackaged into smaller amounts and brought back into the United States. The U.S. Customs Service seized about five times as much marijuana (1,782 kilograms) in the 6 months after September 2001 than in the previous 6 months (351 kilograms). The U.S. Customs Service also reported sharp increases in seizures in hydroponically grown marijuana from Canada, which was being 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. A Methamphet-

amine Strategy has been developed to address the situation, and it is beginning to be implemented.

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. It is suspected that much of the reported amphetamine mentions may actually be methamphetamine.

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. Eight of the 10 cases in FY 2002 were admitted in southeast Michigan.

In FY 2002, there were 280 primary methamphetamine admissions statewide, with 5 in Detroit/Wayne County. The 280 methamphetamine admissions in FY 2001 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. Upper Peninsula residents accounted for 10 of the 280 methamphetamine admissions in FY 2002.

Among primary drug methamphetamine admissions statewide in FY 2002, smoking was reported by almost one-half (43 percent), followed by inhalation (33 percent), oral (17 percent), and injection (eight percent) as the route of administration.

Mortality data from the Wayne County ME lab show two methamphetamine-positive cases among decedents between April and September 2001, one case between October 2001 and March 2002, and four cases between April and September 2002.

A special analysis of statewide death certificate data conducted by MDCH Vital Statistics found 35 deaths in which involvement of amphetamines or stimulants was mentioned in both 1999 and 2000, compared with 20 in 1998 and 17 in 1997. In 2001, there may have been 19 such deaths, but this is difficult to determine, as the coding structure available to report this drug is complex and covers a wide variety of other drugs as well. There were three reported methamphetamine overdoses during 2001.

No methamphetamine has been found in drug testing of Detroit or Wayne County arrestee samples since the testing effort began.

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. The U.S. Customs Service in Detroit reported seizures of more than 10,000 kilograms of pseudoephedrine in the 6 months after September 2001, compared with 50 kilograms in the previous 6 months. Multimillion tablet seizures are now commonplace.

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. At least three labs have been found in the Upper Peninsula, where none were found in 2000. Environmental cleanups are an increasing problem. At least three labs exploded and burned in 2001, causing serious injuries. Most of the lab seizures have been in southwestern lower Michigan (particularly Allegan, Van Buren, and Barry Counties). Through October 2002, Michigan State Police had seized 172 labs; at this rate, the year-end total will easily be double that of 2001. At least three labs were seized in southeast Michigan to date in 2002. Some methamphetamine in pill form was reported in parts of Michigan in 2002.

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. There has been some recent efforts by the State legislature to reduce the emphasis of reliance on methylphenidate to deal with behavior difficulties in children.

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. At least one smaller northern Lower Peninsula airport encountered several shipments.

### **Depressants**

All indicators are relatively stable for depressants.

Depressant treatment admissions in FY 2002 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.

### **Hallucinogens**

Lysergic acid diethylamide (LSD) continued to be sporadically reported, and use remained relatively low. LSD is generally limited to high-school-age suburban and rural youth. Dose forms are primarily paper cutouts of various designs. Recently, however, there was a report of a liquid form (sold in breath drop bottles) and a geltab form.

Hospital ED mentions for hallucinogens have been declining overall since about 1995 (exhibit 1). In 2001 there was a slight but nonsignificant increase in PCP mentions.

During FY 2002, there were 63 hallucinogen treatment admissions as primary drug statewide, with 8 of these cases involving phencyclidine (PCP).

Law enforcement sources noted more LSD activity recently in northern lower Michigan, and recent school survey data suggested that use may be higher in this area than in other parts of the State.

### **Club Drugs**

This category of 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 methylenedioxymethamphetamine (MDMA) or methylenedioxyamphetamine (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.

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.

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. It was more common that ecstasy would 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 16 cases involving ecstasy in the 3-month period between July 1 and October 1, 2001; cases were equally divided among males and females and ranged in age from 13 to 31. In the first 9 months of 2002, there were 32 cases of intentional ecstasy abuse; half were younger than age 20.

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. Three cases were found in the first 9 months of 2002, with homicide as the cause of death. 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 (where it is rumored that labs are operating in Quebec or Ontario). More recently, there were reports that this drug is being made in Michigan. Wholesale prices can be as low as \$10 per pill for quantities of 500 via Canada. Terms such as "jars" (usually 100 pills) and "buckets" (up to 1,000 pills) continued to be used in the distribution chain. U.S. Customs Service seizures at the airports and the border were 14,145 pills in 1998, 42,000 in 1999, 131,000 in 2000, and almost 400,000 in 2001. 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.

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 three cases of hospitalization involving ketamine during the first 6 months of 2001. Five cases of intentional ketamine abuse were reported to the poison control center during the first 9 months of 2002. There were 11 ketamine-involved treatment admissions statewide in FY 2002.

GHB and 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, and 31 in 2001 (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 the first 9 months of 2002, Children's Hospital of Michigan Poison Control Center was notified of only seven cases of intentional GHB abuse. It is believed that GHB is now being underreported to this source. 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.

### **Other Drugs**

Nitrous oxide reportedly continued to be used at private parties and dance venues; most often it was combined with a variety of other drugs, primarily ecstasy.

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, 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.

Abuse of cough syrup (also containing dextromethorphan) continued to be noted. Shoplifting is reportedly a common way of obtaining the substance.

More than one in three (38 percent) male arrestees participating in the ADAM survey in the second half of 2001 in Detroit/Wayne County reported heavy use of a NIDA-5 drug (those tested for), and this same proportion was found to be at risk for drug dependence. More than one in four male arrestees were found to be at risk for alcohol dependence. Slightly more than 8 percent reported that they had participated in a drug treatment program in the year before arrest.

### **INFECTIOUS DISEASES RELATED TO DRUG ABUSE**

#### **HIV/AIDS**

Michigan ranks 17th among all States, with an AIDS case rate of 113.9 per 100,000 population. As of July 1, 2002, a cumulative total of 12,232 cases of AIDS had been reported in Michigan. Only 2 of Michigan's 83 counties have no reported AIDS cases.

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 8,358 male cases currently living with AIDS or HIV, 14 percent are IDUs and 7 percent are in the dual risk group.

Among the 2,442 females living with AIDS or HIV, 31 percent are IDUs, 40 percent were infected through heterosexual contact, and 26 percent have undetermined risk factors.

Statewide, HIV prevalence is now estimated at a maximum of 3,260 IDUs and 1,090 IDUs who also engage in male-to-male sex. The total HIV prevalence estimate for Michigan increased from 15,300 cases to 15,500 cases.

#### **Hepatitis C**

Hepatitis C cases reported to the MDCH communicable disease surveillance system began to show increases in 1998, with 464 cases, compared with 362 cases in the prior year. In 1999, total cases increased by 72 percent to 798. In 2000, cases again increased sharply to 2,754, a 245-percent increase from 1999. In 2001, there were a total of 4,594 cases, almost double that of the prior year.

## **Syphilis**

There has been a significant primary syphilis outbreak in Detroit, with increases in cases reported each

year since 1997. About 500 new cases were expected during 2002. Inadequate outreach and followup have been cited as contributing to increased syphilis cases.

---

*For inquiries concerning this report, please contact Richard Calkins, Michigan Department of Community Health, Office of Drug Control Policy, Lewis Cass Building, 2nd Floor, 320 South Walnut Street, Lansing, Michigan 48913-2014, Phone: 517-335-5388, Fax: 517-373-2963, E-mail: <calkinsr@michigan.gov>.*

**Exhibit 1. Estimated Number of ED Drug Mentions in a Seven-County Area in Southeast Michigan: 1994–2001<sup>1</sup>**

Drug Mentions	1994	1995	1996	1997	1998	1999	2000	2001
Alcohol-in-combination	7,220	8,379	9,087	7,984	7,992	7,199	8,447	9,109
Cocaine	8,268	8,763	10,435	8,093	8,617	7,699	7,870	7,730
Heroin/morphine	2,160	2,390	3,188	3,028	2,879	2,653	3,328	3,870 <sup>2</sup>
PCP/PCP combinations	26	56	21	19	20	24	21	38
LSD	99	143	57	74	27	63	35	15
Amphetamine	305	292	440	359	362	178	...	437
Methamphetamine/speed	17	15	...	...	0	...	...	...
Marijuana/hashish	2,955	3,875	4,210	3,742	4,335	4,100	4,344	5,017
GHB	...	0	...	...	11	45	22	31
Ketamine	-	0	0	...	...	...	...	12
MDMA (ecstasy)	...	0	0	...	6	40	60	111
Rohypnol	-	0	0	0	0	0	0	0
Hydrocodone/combinations	89	129	165	160	185	238	371	483
Drug Episodes	17,653	18,626	20,796	17,604	17,477	16,125	17,042	19,265
Total Drug Mentions	31,633	34,152	38,952	32,487	32,582	30,207	32,740	37,164
Total ED Visits (in 1,000s)	1,436	1,513	1,537	1,449	1,461	1,481	1,474	1,583
Drug Episodes (rate/100,000)	432	451	498	417	409	374	388	463
Drug Mentions (rate/100,000)	775	828	933	770	763	700	746	893

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

<sup>2</sup> 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. Estimated Rates of ED Drug Mentions and Episodes by Age Group in a Seven-County Area in Southeast Michigan: 1994–2001**

Rate <sup>1</sup>	1994	1995	1996	1997	1998	1999	2000	2001
Total Drug Episodes	432	451	498	417	409	374	388	463
Total Drug Mentions	775	828	933	770	763	700	746	893
Cocaine Mentions	203	212	250	192	202	178	179	186
Heroin Mentions	53	58	76	72	67	62	76	93
Marijuana Mentions	72	94	101	89	101	95	99	121
Episodes by Age Group								
6–17	130	132	130	97	87	87	90	119
18–25	610	616	586	558	532	448	445	512
26–34	772	770	842	656	645	554	557	692
35–44	400	440	514	439	437	414	440	821
45–54	352	399	492	463	496	519	568 <sup>2</sup>	736 <sup>2</sup>
55 and older	62	68	73	80	80	80	93 <sup>3</sup>	132 <sup>3</sup>

<sup>1</sup> All rates are per 100,000 population.

<sup>2</sup> Represents a 109.1-percent increase from 1994 to 2000, and a 41.8-percent increase from 1999 to 2001.

<sup>3</sup> Represents a 112.8-percent increase from 1994 to 2000, and a 63.8-percent increase from 1999 to 2001.

SOURCE: DAWN, OAS, SAMHSA

**Exhibit 3. Detroit/Wayne County Positive Drug Toxicology Cases Involving Heroin or Cocaine as an Independent Cause of Death: 1995–September 2002**

<b>Month</b>		<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002<sup>1</sup></b>
January	Heroin	16	21	17	21	23	43	52	29
	Cocaine	31	36	29	32	21	39	50	25
February	Heroin	14	16	27	26	31	37	40	35
	Cocaine	23	29	33	27	20	27	36	28
March	Heroin	11	13	13	21	41	34	45	48
	Cocaine	28	15	29	27	33	38	39	32
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	
	Cocaine	29	34	32	33	35	26	42	
November	Heroin	21	20	27	32	41	40	23	
	Cocaine	29	28	28	32	32	35	22	
December	Heroin	19	33	24	35	23	38	27	
	Cocaine	28	37	36	35	25	33	26	
<b>Total</b>	<b>Heroin</b>	<b>203</b>	<b>240</b>	<b>287</b>	<b>309</b>	<b>383</b>	<b>473</b>	<b>465</b>	
	<b>Cocaine</b>	<b>317</b>	<b>349</b>	<b>344</b>	<b>385</b>	<b>342</b>	<b>396</b>	<b>406</b>	

<sup>1</sup> The 2002 data are for the first 9 months. Annual projections are 508 cases for heroin and 405 cases for cocaine.

SOURCE: Wayne County Office of the Medical Examiner

**Exhibit 4. Percentages of Adult Arrestees Testing Positive for Cocaine, Opiates, and Marijuana in Detroit<sup>1</sup>: 1995–2001**

<b>Drug/Year</b>	<b>Males Positive</b>	<b>Females Positive</b>
<b>Cocaine</b>		
1995	30	61
1996	27	53
1997	23	48
1998	28	46
1999	27	46
2000 <sup>2</sup>	24	42
2001 <sup>3</sup>	22	N/A
<b>Opiates</b>		
1995	6	17
1996	7	18
1997	5	9
1998	7	22
1999	9	16
2000 <sup>2</sup>	8	24
2001 <sup>3</sup>	7	N/A
<b>Marijuana</b>		
1995	42	16
1996	46	19
1997	44	28
1998	47	22
1999	48	26
2000 <sup>2</sup>	50	24
2001 <sup>3</sup>	48	N/A

<sup>1</sup> In year 2000, a revised sampling strategy was implemented to reflect a Detroit/Wayne County representative sample; earlier samples were for city of Detroit arrestees only.

<sup>2</sup> Results for 2000 are based on a weighted sample of male arrestees; the findings for the smaller sample of female arrestees are unweighted.

<sup>3</sup> Results for 2001 are for 3rd and 4th quarters only. They are only for males and are weighted.

SOURCE: ADAM, NIJ

# Illicit Drug Use in Honolulu and the State of Hawaii

D. William Wood, M.P.H., Ph.D.<sup>1</sup>

## ABSTRACT

*It is reported that the events surrounding September 11, 2001, did not hurt Hawaii as much as had been anticipated. While that statement may be true, it is certainly also true that the events did not help. Because of these horrific events, it was initially noted that there was a sharp decline in drug availability, a concomitant increase in price, and a notable drop in drug use in Hawaii. However, by the beginning of 2002, it was almost as though nothing had happened—supply was back, prices were down, and use was once again high. On reflection, the changes noted in patterns of reduced drug use, increasing unemployment, and decreasing tourism were already present before that fateful day, and, over time, the trends now experienced have emerged clearly as signs of the serious recession that began several years ago in Hawaii. The occurrences of September 11, 2001, merely provided a convenient excuse to do what was already planned, namely, to adjust the economic and social circumstances of the State to a new paradigm, one far more austere. In the first 6 months of 2002, some shifts occurred in drug use for the State. There was a slight increase in cocaine treatment admissions, and it was accompanied by a decline in deaths in which cocaine was detected through postmortem toxicological screens. Heroin treatment admissions were down, but deaths in which heroin was detected increased considerably. Marijuana use, as indicated by treatment admissions, appeared to be slightly lower than in previous CEWG reporting periods, while methamphetamine indicators remained high. The continued presence of oxycodone among decedents remained a concern of the medical examiner as well as the police.*

## 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 October 25, 2002. Data were provided by most neighbor islands, excluding Kauai and the Kona-side of the island of Hawaii.

## Area Description

The U.S. Census Bureau now reports that the State's estimated 1.2 million population in 2000 was an undercount of approximately 2.4 percent. The main components of the undercount are those without fixed addresses (homeless) and those who would be described as "in transition." The undercount is not believed to materially change the demographics of the State as reported in recent CEWG reports.

This report is for the period January–June 2002. The State legislature was in session throughout this period, but major legislation that may have had social consequences was not on the agenda since almost all members of both the senate and house were standing for reelection. In addition, term limits had been reached for the current Governor, so both the Governor and Lieutenant Governor were also up for reelection.

The economy remained the greatest challenge to living in Hawaii throughout the period, with tourism still much lower than in the past decade, unemployment still high, and other sectors of the economy weak. Because Hawaii's economy is so dependent on tourism, the slow recovery of the mainland economy and the continued uncertainty in major Asian markets has meant that predictions for the future are tentative at best.

## Data Sources

Data from the following sources are for January–June 2002 but are reported as annual data, except as otherwise noted.

- **Quantitative and qualitative data** were compiled from participants in the October 25, 2002, 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.
- **Drug treatment admissions and demographic data** were provided by the Hawaii State Department of Health, Alcohol and Drug Abuse Divi-

<sup>1</sup> The author is affiliated with the Department of Sociology, University of Hawaii at Mānoa, Honolulu, Hawaii.

sion (ADAD). Previous data from ADAD are updated for this report whenever ADAD reviews its records. These data represent all the 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 CEWG 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 to them for examination. The sorts of circumstances that would lead to the body being examined by the ME include unattended deaths, death by suspicious cause, and clear drug-involved 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. Data in some exhibits have been adjusted to fit the axes (multiplied by 10).
- **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 recent data from all others are included.
- **Arrestee drug testing data** were provided by the Arrestee Drug Abuse Monitoring (ADAM) program, National Institute of Justice. The ADAM program now reports data regularly to the CEWG. The latest report is based on data from the first two quarters of 2002; the second quarter data are preliminary. The ADAM program collects data at the Central Receiving Unit of the Honolulu Police Department (HPD). Data on the results of the urine testing are presented.
- **Acquired immunodeficiency syndrome (AIDS) case data** were reported by the Department of Health, Honolulu STD/AIDS Prevention Branch, AIDS Surveillance Program, for 1982 to 2001.

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 Drug Abuse Warning Network (DAWN) have resulted in a briefing of all hospital chief executive officers and the sharing of DAWN information. However, with a possible nurse's strike looming, no decisions were possible during this reporting period.

#### DRUG ABUSE PATTERNS AND TRENDS

Indicators reflect the principal areas of activity with respect to substance abuse in the State of Hawaii. While much of the activity of participating agencies concerns alcohol and tobacco, crystal methamphetamine became more dominant about a year ago and remains so in terms of agency activity, including that of the ME Office. Police, treatment, and ME activity increased from previous CEWG reporting periods.

Hawaiians and Whites remain the major user groups within the 17 identified ethnic groups (plus 2 other categories: "other" and "unknown/blank") accessing ADAD facilities for substance abuse treatment. During January–June 2002, 42.8 percent and 23.9 percent of the admissions were Hawaiians and Whites, respectively. All other groups had significantly lower rates.

Methamphetamine remained the leading primary substance of abuse for those admitted to treatment (38.3 percent of admissions). Alcohol, the primary substance for many years, accounted for 26.9 percent. However, it is important to note that almost all poly-drug treatment admissions listed alcohol as a substance of abuse. Marijuana remained the third most frequently reported (20.4 percent) primary substance for treatment admissions. Those age 25–34 and 35–44 had the highest representation among treatment admission groups. While marijuana abuse accounted for the majority of treatment admissions among those younger than 18, the abuse of crystal methamphetamine still loomed as a major treatment category for this group.

Price data for this period were not available at the time of the CEWG meeting. However, anecdotal reports from the HPD Narcotics/Vice Division suggest that prices have been stable. 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.

“Ice”—the crystallized form of methamphetamine—continues to dominate the Hawaiian drug market. Prices remained stable during the reporting period; this may indicate that still more ice is available on the street. It was easier to purchase larger quantities than in the past. The final police evidence of increased ice availability was the presence of clandestine labs, almost exclusively reprocessing labs that continued to be closed at a regular pace.

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, interisland flights continue to be used because of reduced security. The mainland supply chain is the major source of the material used for reprocessing to crystal methamphetamine. 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.

Marijuana remains a drug for which arrests result 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 this period have netted about 15,800 plants. Maui officials have seized nearly 7,000 pounds, compared with only 5,000 pounds in the last CEWG reporting period.

The Hawaii DEA continued its efforts to deal with crystal methamphetamine and, in particular, to break the supply route from California for the chemicals necessary to operate Hawaii’s ice labs. During this period, the HPD seized and closed several clandestine methamphetamine laboratories and seized 12,000 grams of the drug.

In the following sections, the police activity data exhibits show all neighbor island data combined and are titled “neighbor island.” Because of inconsistencies in 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 and Crack**

Cocaine and crack treatment admissions somewhat stabilized in the first half of 2002. There were 433 admissions in 2001; in the first 6 months of 2002, there were 222 (exhibit 1). Thus, admissions for cocaine use, after being quite stable between 1996 and 1999, began a decline in 2000 and have begun to stabilize again. Again cocaine and crack ranked fourth among primary drugs of treatment admissions, after methamphetamine, alcohol, and marijuana.

Between 1996 and 2001, the Honolulu ME consistently reported between 22 and 32 deaths per year with cocaine-positive toxicology screens (exhibit 1). Data from January–June 2002 suggest a decline. Again, it should be pointed out that the number of deaths was 7 during that period and not 70. 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 5 years. Neighbor island data are from all islands and showed a slight increase in cases in the first half of 2002 (exhibit 2).

## **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” is uncommon, but present. Seizure data show a 20-to-1 ratio for the amount of tar and powder seized. According to the HPD, heroin prices remained stable in Honolulu, at \$50 per one-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 3). In the first half of 2002, heroin ranked fifth among treatment admissions, at 3.2 percent.

The Honolulu ME reported that deaths in which heroin was detected increased from previous periods. In the first 6 months of 2002, a total of 16 decedents had heroin in their systems. If this rate continues for the rest of the year, a total of 32 heroin-related deaths will occur, an increase of 28 percent. In 2001, there were 25 deaths with positive heroin toxicology screens.

Honolulu police reported only 17 heroin cases in 2001. In the first half of 2002, a total of 25 cases were reported (exhibit 4). Neighbor Island police reported 13 heroin cases in the first half of 2002, about one-half the rate recorded over the previous 2 years.

### **Marijuana**

Marijuana treatment admissions tapered off during the first half of 2002. They remained high (exhibit 5), but if the rate continues for the balance of the year, the number of total marijuana admissions will be similar to that in 1999. There were 1,544 admissions for marijuana treatment in 2001. 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 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 1996 and 2000, marijuana was found in 15–25 deaths per year among specimens submitted for toxicology screening. In 2001, there were 36 such deaths and in the first half of 2002, there were 18.

Honolulu police continue to monitor, but not to specifically report, case data for marijuana. As mentioned in previous CEWG reports, possession cases are 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, and case data for the Big Island have increased substantially. The data on police cases are shown in exhibit 6.

### **Methamphetamine**

On the basis of several indicators, Hawaii retains the title as the “crystal methamphetamine” capital of the United States. 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 6-month CEWG reporting period, and still exceeded those for alcohol. A total of 1,312 admissions occurred during the first 6 months of 2002, compared with 2,644 in 2001. Exhibit 7 shows the trend over the past decade. The rate of increase in demand for treatment space for

methamphetamine abuse has been geometric and not linear. This situation has so far outstripped the treatment system's capacity that even people who might want treatment would not likely receive it in a timely manner.

Between 1995 and 2000, the Oahu ME reported between 24 and 39 crystal methamphetamine cases per year (exhibit 7). In 2001, however, the number of such deaths increased to 54, and there were 32 in the first half of 2002. The numbers of decedents with methamphetamine present continued to exceed the number found with alcohol present.

Crystal methamphetamine prices have remained stable for larger quantities. It is sold in the islands as “clear” (a cleaner, white form) or “wash” (a brownish, less processed form). Prices and availability for ice vary widely for these two categories. On Oahu, prices are as follows: \$50 (wash) or \$75 (clear) per one-tenth gram; \$100–\$200 (wash) or \$600–\$900 (clear) per gram; \$250–\$400 (wash) or \$1,000–\$2,000 (clear) per one-quarter ounce; and \$2,200–\$3,000 (wash) per ounce.

HPD methamphetamine case data show decreases again (exhibit 8). The annual number of cases peaked in 1995 and has subsequently declined annually. In the first half of 2002, there were 265 Honolulu cases and 269 from the neighbor islands.

Weighted data for 2001, and unweighted data for the first and second quarters of 2002 show that the drug most frequently found in urines of adult male arrestees was amphetamines, which was almost entirely methamphetamine. The proportion of arrestees with positive toxicology screens for methamphetamine was nearly 50 percent, up from about 37 percent in 2000.

### **Depressants**

Barbiturates, sedatives, and sedatives/hypnotics are combined into 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 continued to have a minimal impact on the system. Annually, the numbers admitted to treatment for these drugs have been less than 10 since 1998 (exhibit 9).

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

The HPD has not reported depressant case data since 1991. Neighbor island police report fewer than 20 cases per year (exhibit 10) since 1997.

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

### **Hallucinogens**

Hallucinogen treatment admissions have decreased since 1997 and totaled three in the first half of 2002 (exhibit 11). 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 by the HPD for 2001 or the first half of 2002. Trends are shown in exhibit 12.

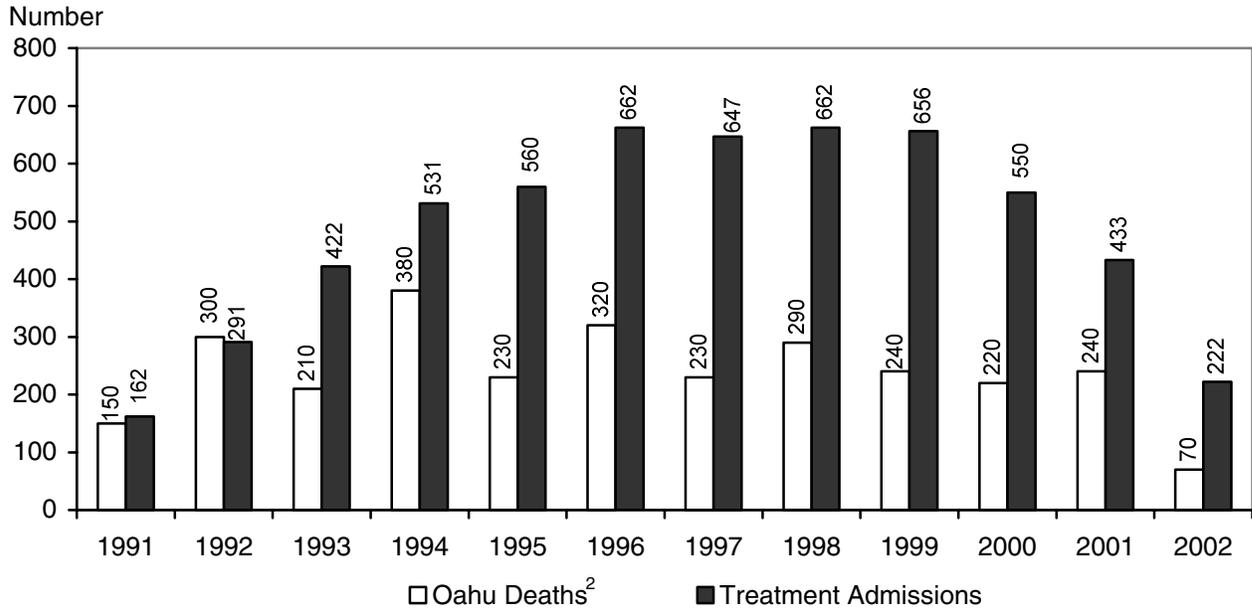
### **INFECTIOUS DISEASES RELATED TO DRUG ABUSE**

As shown in exhibit 13, the rate of newly diagnosed cases of AIDS per 100,000 population varied considerably by year from 1983 to 2001. The highest rate (34.0) was in 1993, with subsequent declines thereafter. The rate rose from 9.0 per 100,000 population in 2000 to 10.5 in 2001. In 2001, nearly two-thirds of the AIDS cases involved men who have sex with men (MSM), 7 percent involved injection drug users (IDUs), and 1 percent involved MSM/IDUs (exhibit 14).

---

*For inquiries concerning this report, please contact D. William Wood, Ph.D., University of Hawaii at Manoa, Department of Sociology, 265 N. Kalaheo Avenue, Honolulu, HI 96822, Phone: (250) 384-3748, Fax: (808) 956-3707, E-mail: <dwwood@hawaii.rr.edu>.*

**Exhibit 1. Cocaine Use Indicators in Hawaii: 1991–2002<sup>1</sup>**

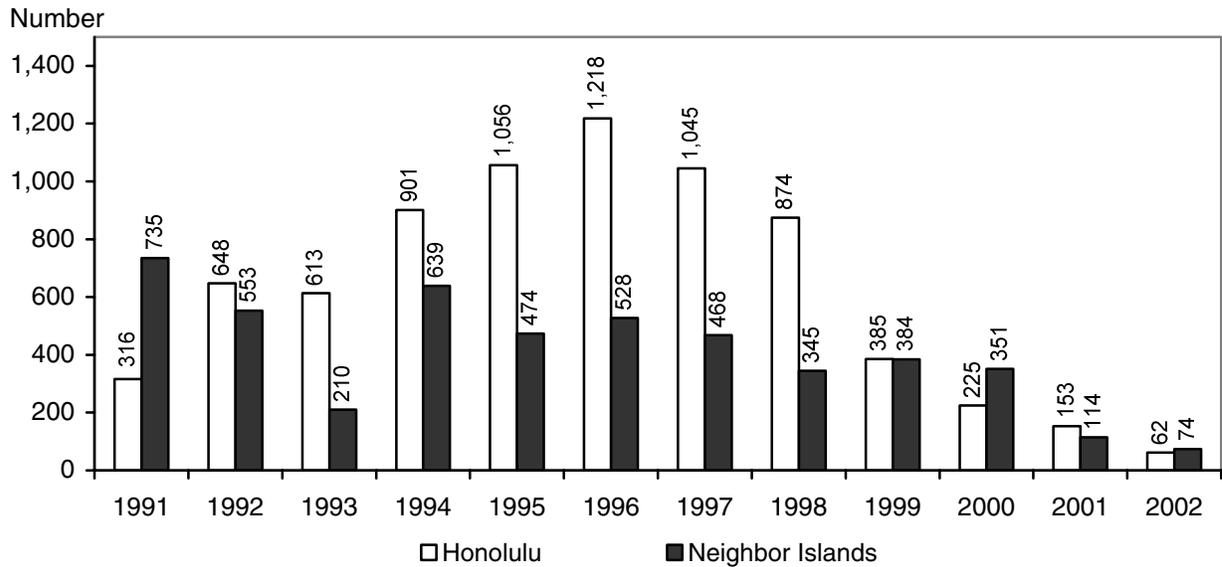


<sup>1</sup> January–June 2002.

<sup>2</sup> The number of deaths each year is multiplied by 10 to fit exhibit axes.

SOURCES: Honolulu City and County Medical Examiner Office and ADAD

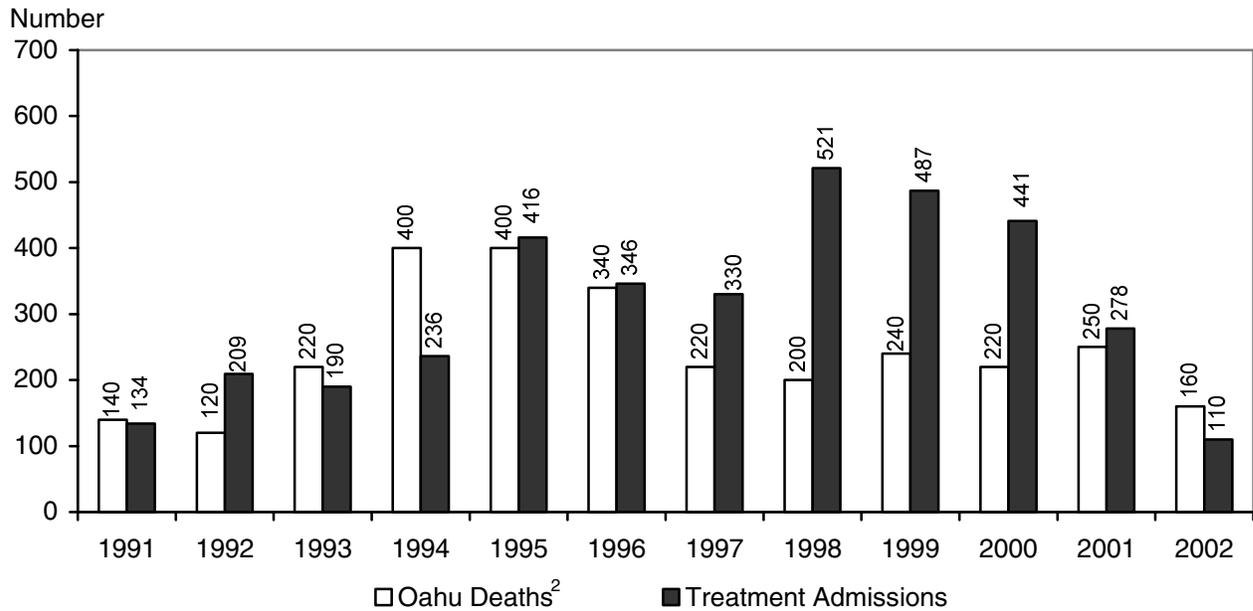
**Exhibit 2. Cocaine Cases Reported by Police in Hawaii: 1991–2002<sup>1</sup>**



<sup>1</sup> January–June 2002.

SOURCE: Police Departments

**Exhibit 3. Heroin Use Indicators in Hawaii: 1991–2002<sup>1</sup>**

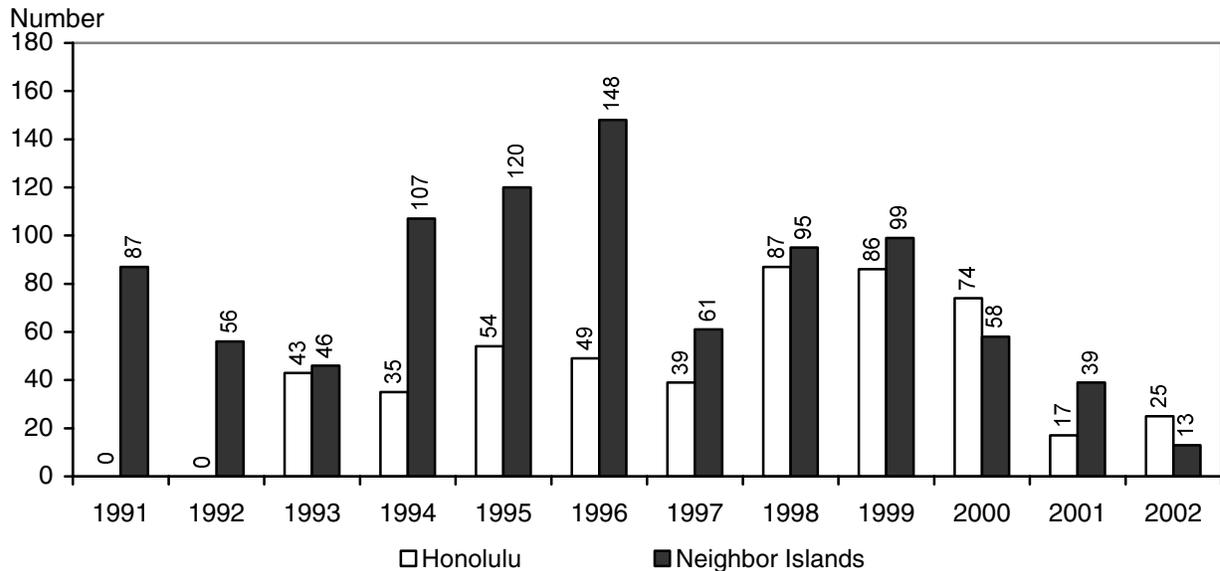


<sup>1</sup> January–June 2002.

<sup>2</sup> The number of deaths each year is multiplied by 10 to fit exhibit axes.

SOURCES: Honolulu City and County Medical Examiner Office and ADAD

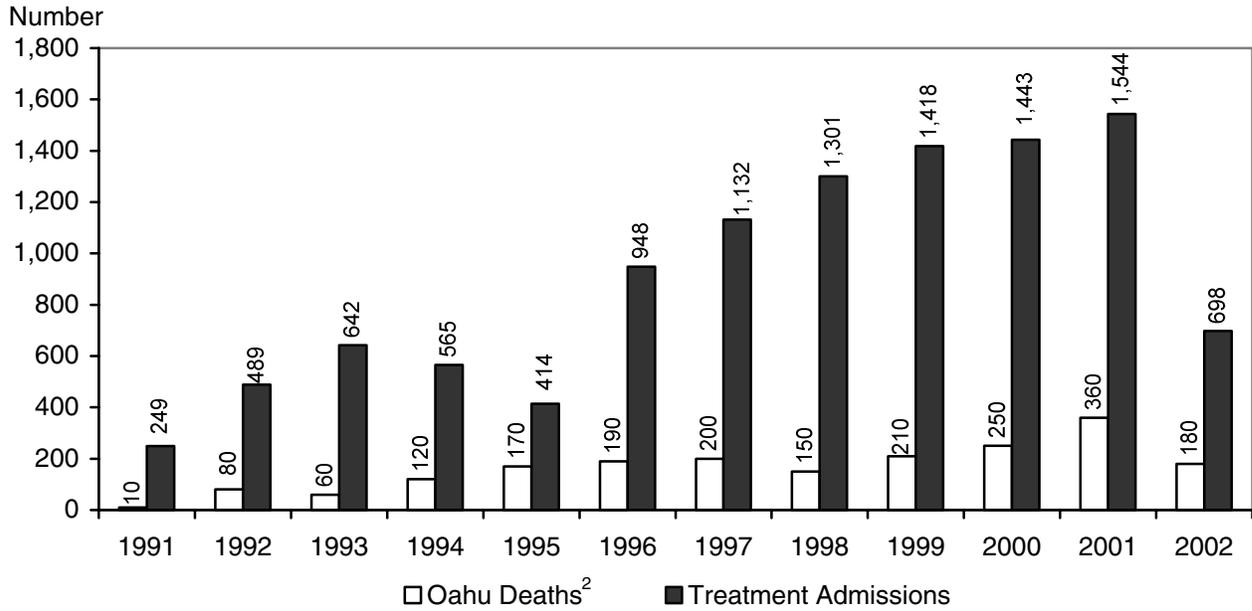
**Exhibit 4. Heroin Cases Reported by Police in Hawaii: 1991–2002<sup>1</sup>**



<sup>1</sup> January–June 2002.

SOURCE: Police Departments

**Exhibit 5. Marijuana Use Indicators in Hawaii: 1991–2002<sup>1</sup>**

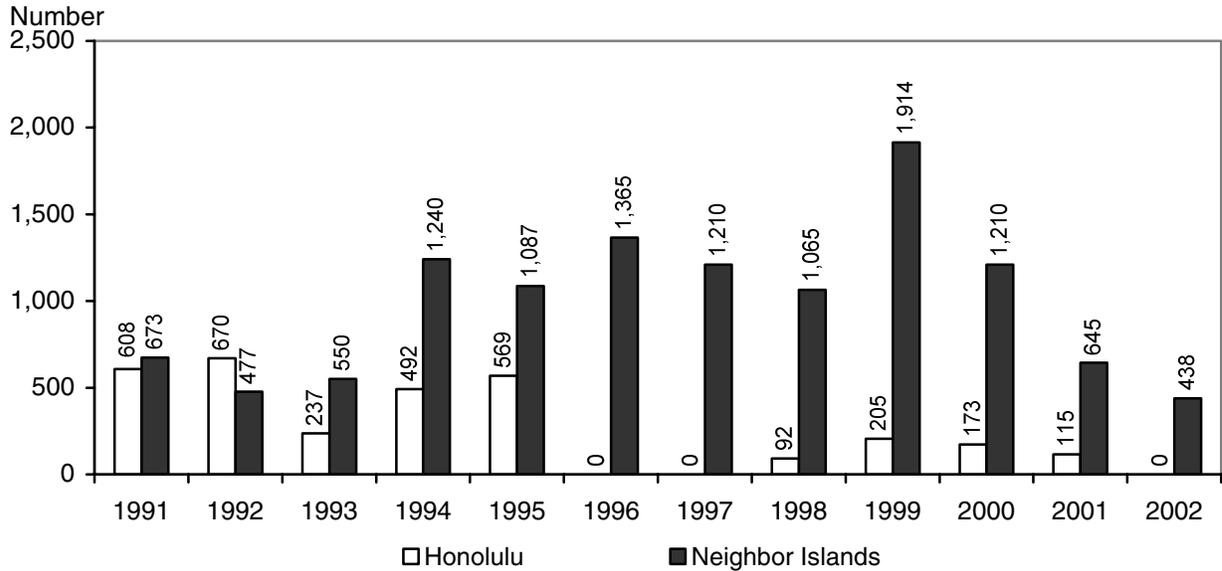


<sup>1</sup> January–June 2002.

<sup>2</sup> The number of deaths each year is multiplied by 10 to fit exhibit axes.

SOURCES: Honolulu City and County Medical Examiner Office and ADAD

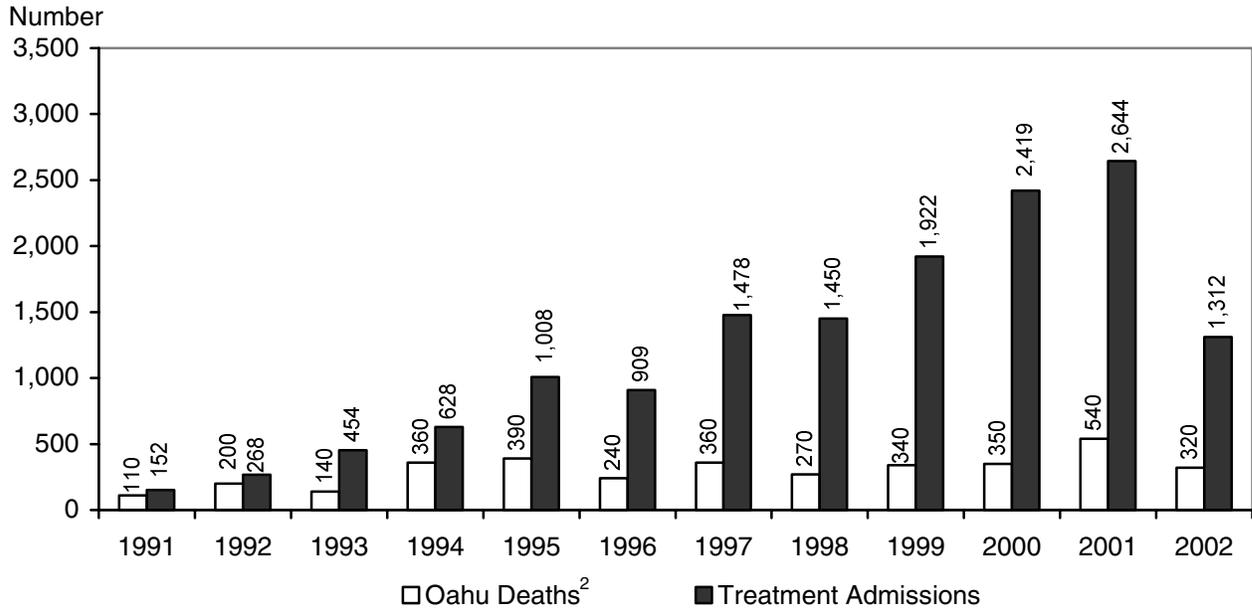
**Exhibit 6. Marijuana Cases Reported by Police in Hawaii: 1991–2002<sup>1</sup>**



<sup>1</sup> January–June 2002.

SOURCE: Police Departments

**Exhibit 7. Methamphetamine Use Indicators in Hawaii: 1991–2002<sup>1</sup>**

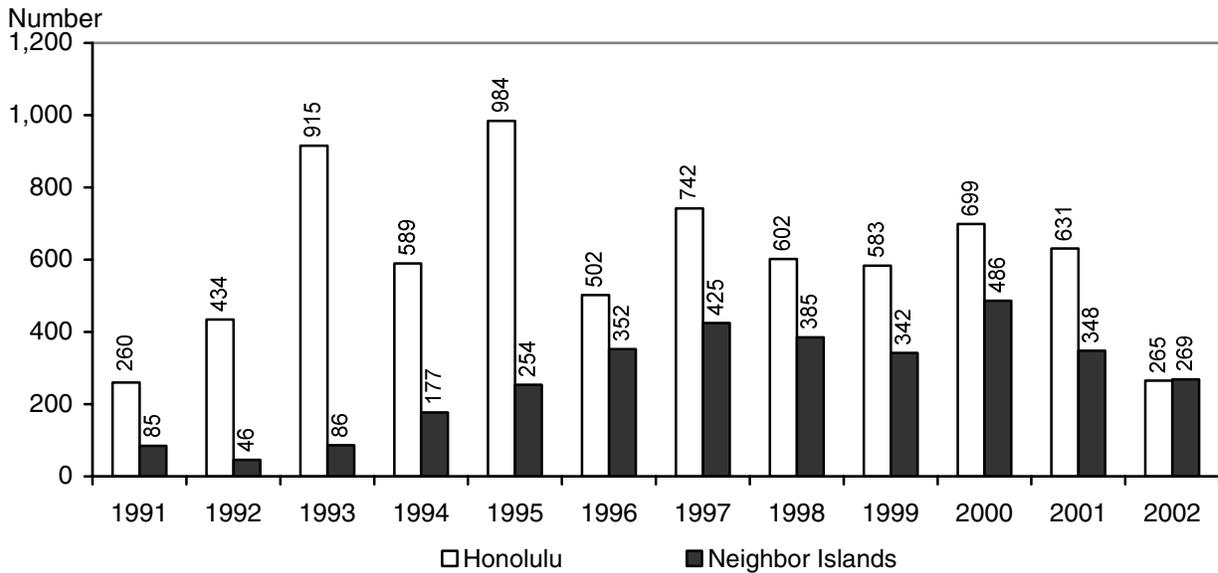


<sup>1</sup> January–June 2002.

<sup>2</sup> The number of deaths each year is multiplied by 10 to fit exhibit axes.

SOURCES: Honolulu City and County Medical Examiner Office and ADAD

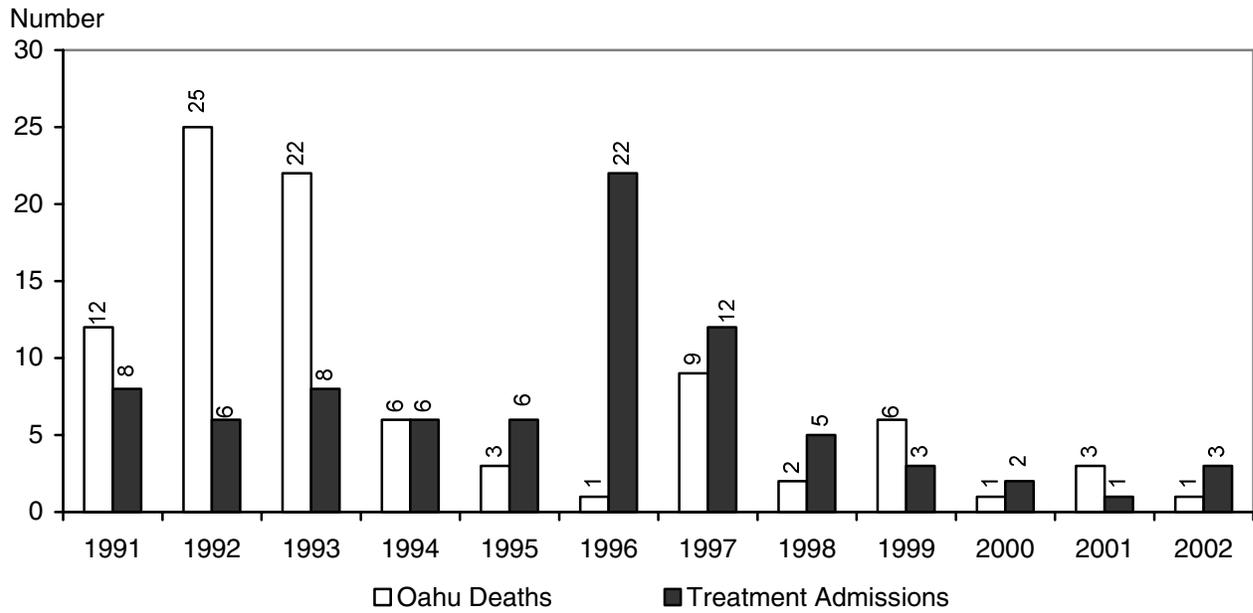
**Exhibit 8. Methamphetamine Cases Reported by Police in Hawaii: 1991–2002<sup>1</sup>**



<sup>1</sup> January–June 2002.

SOURCE: Police Departments

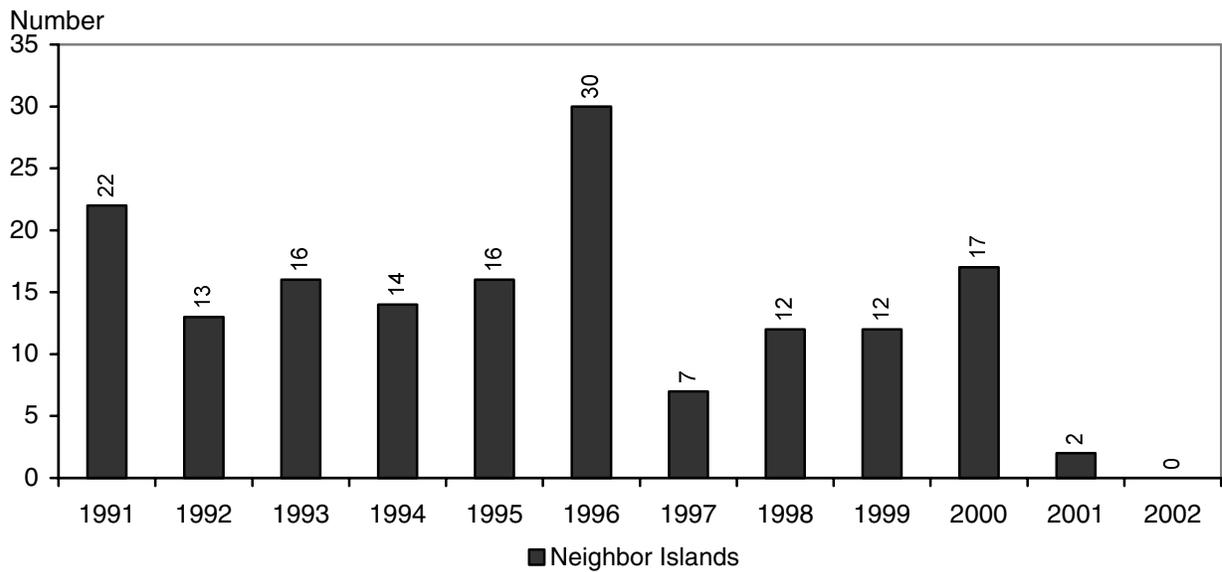
**Exhibit 9. Barbiturate Use Indicators in Hawaii: 1991–2002<sup>1</sup>**



<sup>1</sup> January–June 2002.

SOURCES: Honolulu City and County Medical Examiner Office and ADAD

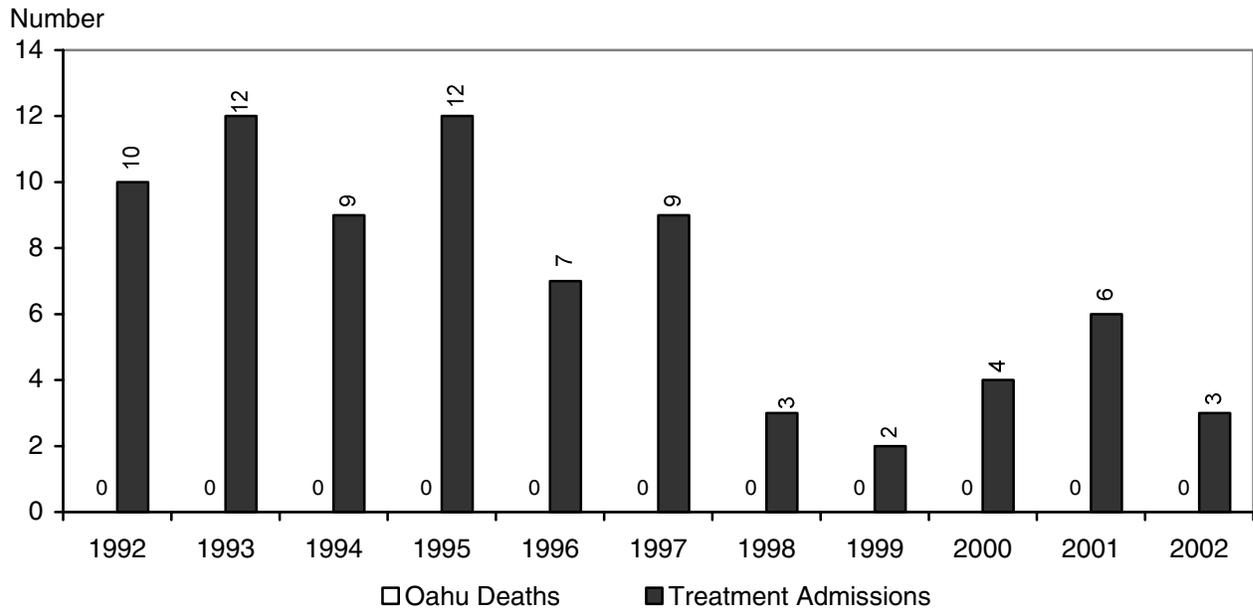
**Exhibit 10. Barbiturate Cases Reported by Police in Hawaii: 1991–2002<sup>1</sup>**



<sup>1</sup> January–June 2002.

SOURCE: Neighbor Island Police Departments

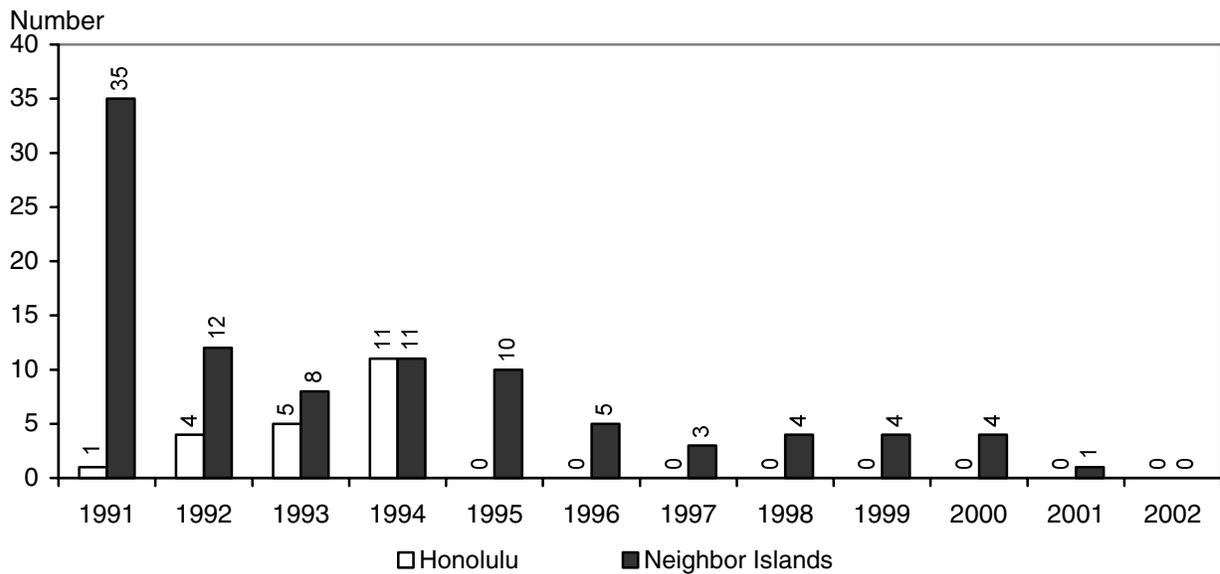
**Exhibit 11. Hallucinogen Use Indicators in Hawaii: 1992–2002<sup>1</sup>**



<sup>1</sup> January–June 2002.

SOURCES: Honolulu City and County Medical Examiner Office and ADAD

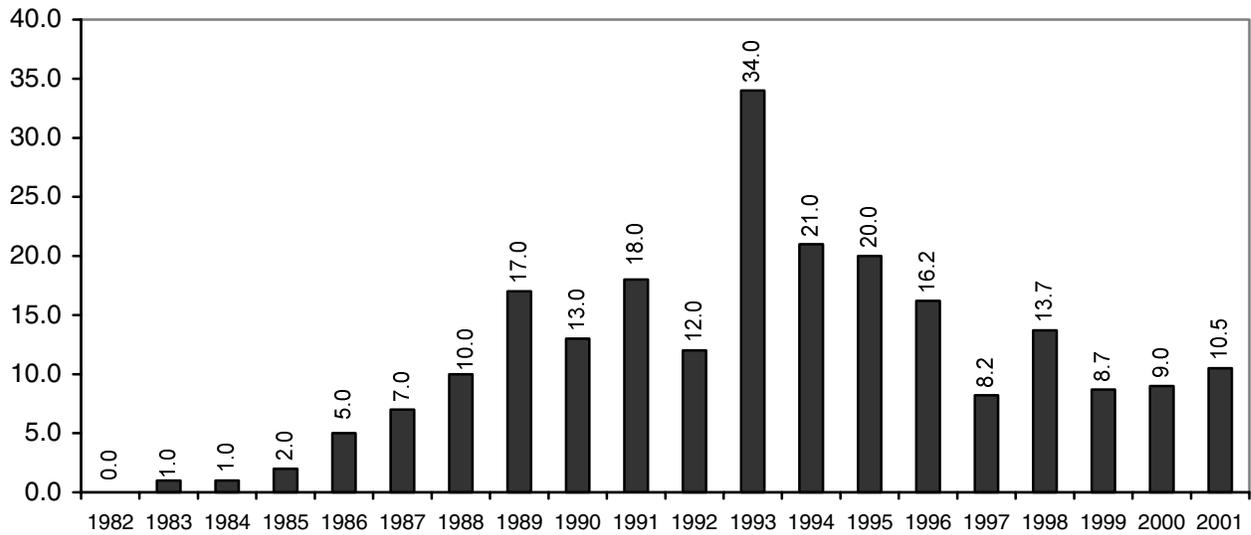
**Exhibit 12. Hallucinogen Cases Reported by Police in Hawaii: 1991–2002<sup>1</sup>**



<sup>1</sup> January–June 2002.

SOURCE: Police Departments

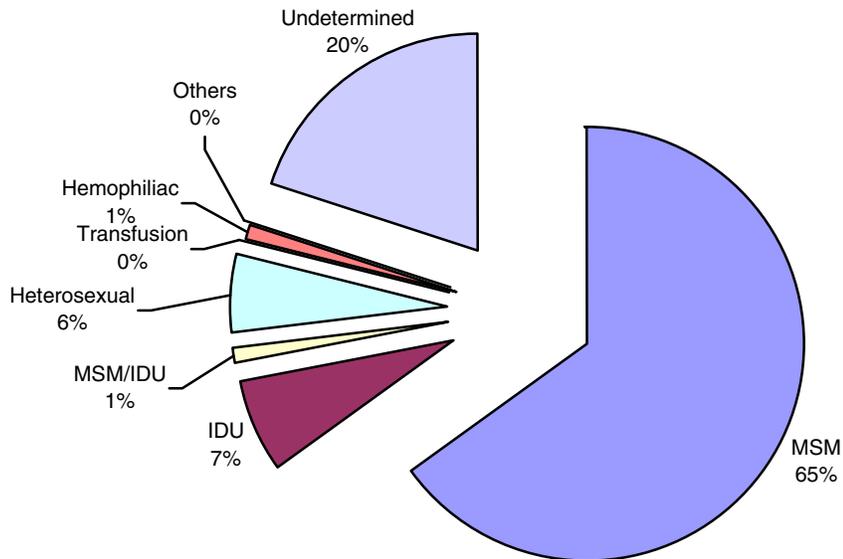
**Exhibit 13. Rate of Newly Reported Cases<sup>1</sup> of AIDS Per 100,000 Population Reported in Hawaii: 1982–2001**



<sup>1</sup> N=2,581.

SOURCE: Honolulu STD/AIDS Prevention Branch, AIDS Surveillance Program

**Exhibit 14. AIDS Cases<sup>1</sup> by Risk Factor: 2001**



<sup>1</sup> N=127.

SOURCE: Honolulu STD/AIDS Prevention Branch, AIDS Surveillance Program

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

Beth Finnerty, M.P.H.<sup>1</sup>

## ABSTRACT

*Overall, patterns and trends in illicit drug use, purity, availability, and consequences in Los Angeles County remained relatively stable during the first half of 2002, compared with previous reporting periods. One exception is methamphetamine, whose presence is increasing both locally and regionally. The Los Angeles High Intensity Drug Trafficking Area (HIDTA) led all California HIDTAs in terms of clandestine laboratory seizures, with a total of 135 seizures made during the second quarter of 2002. Primary methamphetamine treatment admissions continued to climb as well. According to the California Department of Alcohol and Drug Programs' First Annual Report to the Legislature, methamphetamine was the drug of choice for nearly one-half (48 percent) of all clients who received treatment under the Substance Abuse and Crime Prevention Act of 2000 (a.k.a. Proposition 36) from July 1 to December 31, 2001. Heroin and crack/cocaine, the principal illicit drugs of abuse in the county, continuously dominated many of the traditional substance abuse indicators. Although primary heroin treatment admissions continued to follow a declining trend that began in the late 1990s, they still account for the highest proportion of all admissions (33 percent). Primary crack/cocaine treatment admissions have remained relatively stable, at approximately 20 percent of all admissions. According to the Drug Abuse Warning Network, cocaine was mentioned much more frequently during emergency department (ED) episodes than heroin, which has been the case for several years. Marijuana, the most widely used illicit drug in Los Angeles County, was the primary drug for which 65 percent of youth (under the age of 18) entered treatment in the first half of 2002. Despite a recent significant decline in the number of MDMA (ecstasy) and GHB mentions recorded during drug-related ED episodes, anecdotal evidence from a variety of local sources continues to lend support to the claim that the use of club drugs is spreading in Los Angeles County.*

## INTRODUCTION

### Area Description

Los Angeles County has the largest population (9,824,800 as of January 1, 2002) of any county in the Nation, and its population is exceeded in size by only 8 States. Approximately 29 percent of California's residents live in Los Angeles County. Los Angeles County includes the islands of San Clemente and Santa Catalina. It 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. Its coastline is 81 miles long.

The City of Los Angeles, with approximately 3.8 million residents—an estimated 8,146 persons per square mile—is the largest city in California and the second largest city in the United States. 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 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 report).

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, 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

<sup>1</sup> The author is affiliated with the University of California, Integrated Substance Abuse Programs, Los Angeles, California.

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 August 2002, researchers from the State University of New York (SUNY) Downstate Medical Center in Brooklyn, New York, released a report entitled "Healthy Cities, Healthy Suburbs: Progress in Meeting Healthy People Goals for the Nation's 100 Largest Cities and Their Suburbs." The report focused on a set of seven infant health and infectious disease indicators and homicide goals, including the following: low birth weight (5 percent of all live births); infant mortality (7 deaths per 1,000 live births); tuberculosis (3.5 cases per 100,000 population); the acquired immunodeficiency syndrome (AIDS) (43 cases per 100,000 population); syphilis (4 cases per 100,000 population); gonorrhea (100 cases per 100,000 population); and homicide (7.2 homicides per 100,000 population). On average, cities met or made progress towards meeting these goals for infant mortality, AIDS, tuberculosis, syphilis, and homicide between 1990 and 1999 or 2000. The Los Angeles/Long Beach/Glendale metropolitan statistical area (MSA) met the goals for infant mortality, syphilis, and gonorrhea. The percentages and rates of the Healthy People goals for the three California CEWG cities (Los Angeles, San Diego, and San Francisco) and their suburbs are shown in exhibit 1.

#### Data Sources

This report describes drug abuse trends in Los Angeles County from 1995 to June 2002. Information was collected from the following sources:

- **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 (AOD) treatment and recovery program admissions from January 2000–June 2002. It should be noted that

admissions for heroin treatment are disproportionately represented due to 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, whereas for other drug types, only publicly funded providers must report.

- **Emergency department (ED) drug mentions data** were accessed from the Substance Abuse and Mental Health Services Administration (SAMHSA), Office of Applied Studies (OAS), Drug Abuse Warning Network (DAWN) for 1997–December 2001.
- **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.
- **AIDS and human immunodeficiency virus (HIV) data** (cumulative through June 2001) were provided by the Los Angeles County Department of Health Services, HIV Epidemiology Program.
- **Healthy Cities data** were compiled from a report released by SUNY Downstate Medical Center entitled "Healthy Cities, Healthy Suburbs: Progress in Meeting Healthy People Goals for the Nation's 100 Largest Cities and Their Suburbs," August 2002.
- **Adolescent substance use data** were accessed from the Los Angeles County-level California Healthy Kids Survey (CHKS) data for the 2001–2002 school year 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 and Crack**

Cocaine/crack was second only to alcohol-in-combination as the most frequently mentioned substance of abuse in the Los Angeles-Long Beach metropolitan area in 2001, accounting for 22 percent of all DAWN ED drug mentions. Cocaine mentions increased significantly (48 percent) from 1999 (6,768 mentions) to 2001 (9,999 mentions) (exhibit 2). ED cocaine/crack mentions as a percentage of all ED drug episodes rose as well, from 34 percent in 1998 to 41 percent in 2001. As shown in exhibit 3, ED cocaine/crack mentions totaled 5,123 in the second half of 2001, a non-significant increase of 5 percent from the first half of 2001, but a continuation of a rising trend that began in the first half of 1997.

Of the 9,999 ED cocaine/crack mentions reported in 2001, 69 percent occurred among males, 47 percent occurred among Blacks, and 58 percent occurred among individuals age 35 and older. Seventy-six percent of the ED cocaine mentions represented multi-drug episodes. In these cases, at least one other drug was mentioned during the episode. When asked about drug use motive, slightly more than one-half (52 percent) reported cocaine dependence. Chronic effects (38 percent) was the most frequently reported reason for ED contact. An additional 9 percent of the cocaine mentions reported overdose as the reason for ED contact.

After a significant increase of 47.5 percent in the rate of population-adjusted ED cocaine/crack mentions per 100,000 population from 1999 to 2000, the rate remained relatively stable from 2000 to 2001 (at 105 and 117 mentions, respectively) (exhibit 4). Between 1994 and 2000, population-adjusted ED cocaine/crack mentions fluctuated between 56 and 79. In 2000, population-adjusted cocaine mentions rose above 100 per 100,000 population. In 2001, Los Angeles was one of 14 CEWG cities in which the rate of cocaine/crack mentions surpassed 100. 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, San Francisco, and Seattle had 2001 ED cocaine rates that exceeded 100 per 100,000 population. Seattle led the group with 160 mentions per 100,000 population, followed by San Francisco (158) and Los Angeles (117).

Despite the fact that cocaine/crack continually ranks highest in terms of DAWN ED illicit drug mentions, only 20 percent of Los Angeles County treatment and recovery program admissions between January and 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 since July 1999. Alcohol has been the most commonly abused secondary drug among primary cocaine admissions (41 percent) for several reporting periods, followed by marijuana (20 percent). The preferred route of administration for approximately 87 percent of the cocaine admissions was smoking; another 9 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, 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 57 percent), followed by Hispanics (21 percent) and Whites (15 percent). Compared with other major illicit drug admissions, primary cocaine admissions included the largest proportion of Blacks. The majority of cocaine admissions were age 36 and older (60 percent).

Nearly one-third of the primary cocaine/crack treatment admissions were homeless at the time of admission (30 percent), and slightly more than one-quarter (27 percent) were referred by the court or criminal justice system. Thirty-seven percent did not have a history of prior treatment episodes. Forty-three percent had graduated from high school. At the time of admission, 14 percent were employed full- or part-time (exhibit 7).

According to CHKS data for the 2001–2002 school year (exhibit 8), 8.0 percent of all Los Angeles County secondary school students who responded to the survey had ever used cocaine (crack or powder), and 3.9 percent were current cocaine users (defined as any use in the past 30 days). A breakdown of the data by grade level illustrated that among responding 9th-graders, 5.5 percent had ever used cocaine and 3.0 percent were current cocaine users. Rates of use were higher among 11th-graders; 8.4 percent had ever used cocaine and 3.3 percent used some form of cocaine within the past 30 days. Additional analyses will appear in future proceedings, including long-term trends in self-reported drug use among secondary school students in Los Angeles County.

A total of 1,228 cocaine arrests were made within the city of Los Angeles in the first half of 2002. This represented a 48-percent decrease from the number of cocaine arrests made in the first half of 2001. Cocaine

arrests accounted for roughly 10 percent of all narcotics arrests made between January and June 2002.

Citywide cocaine (includes crack and powder) seizures increased 6 percent, from 500 pounds seized in January–June 2001 to 534 pounds seized in January–June 2002. The street value of the seized cocaine accounted for nearly 50 percent of the total street value of all drugs seized in the first half of 2002.

Cocaine availability throughout Los Angeles County was high and stable. The wholesale price for 1 kilogram of cocaine ranged from \$14,000 to \$17,000, which is similar to the multikilogram wholesale price reported in the June 2002 CEWG report. The current retail price of cocaine is \$80 per gram and \$500–\$600 per ounce (down from \$600–\$700). The purity of cocaine available in Los Angeles County continues to be high, but it decreased recently to approximately 78 percent. Purity levels had been at 80–85 percent for several reporting periods. Indications that cocaine popularity has peaked and even declined in many regions throughout the LA HIDTA continue to be reported. In those areas, another stimulant—methamphetamine—has supplanted cocaine in popularity.

According to NDIC, Mexican drug trafficking organizations smuggle large quantities of cocaine into California, which are destined for drug markets in the State and throughout the Nation. The Los Angeles area serves as a significant transportation and distribution center. Most of the cocaine available in the State is smuggled through U.S.-Mexico land ports of entry in commercial and private vehicles. Mexican drug trafficking organizations dominate both the wholesale and retail distribution of powdered cocaine. Street gangs dominate the retail level distribution of crack cocaine throughout California.

According to the DEA, more than 100 individuals were arrested in November 2002 in connection with coordinated investigations in Los Angeles, California, Anchorage, Alaska, and Kansas City, Kansas. Sixteen subjects were named in Federal complaints or indictments in Operations “Heavy Hitter,” “Once Again,” and “So-Cal Snow.” The cases focused on targets in Los Angeles who were importing cocaine from Mexico and delivering it to the Los Angeles area for further distribution to cities nationwide.

## Heroin

Heroin was the fourth most frequently mentioned major substance of abuse in the Los Angeles-Long Beach metropolitan area in 2001, accounting for approximately 6 percent of all DAWN ED drug mentions (exhibit 2). Heroin mentions steadily

increased, but not significantly, from 1997 to 2000. Between 2000 and 2001, however, heroin mentions decreased significantly by 9 percent (from 3,177 mentions to 2,878 mentions). Similarly, ED heroin mentions as a percentage of total ED drug episodes declined slightly, from 15 percent in 1998 to 12 percent in 2001 (exhibit 2). ED heroin mentions totaled 1,372 in the second half of 2001 (exhibit 3), a slight decline from 1,506 mentions in the first half of 2001.

Of the 2,878 ED heroin mentions reported in 2001, 74 percent were made by males. In terms of race/ethnicity, Hispanics continued to account for the highest proportion of mentions, at 41 percent, followed by Whites (33 percent) and Blacks (16 percent); race was unknown in 9 percent of the cases. Like ED cocaine mentions, the age category representing the highest percentage of heroin mentions was the 35-and-older category (72 percent), followed by those age 26–34 (18 percent) and 18–25 (9 percent). Between 1994 and 1997, a greater percentage (approximately 60 percent) of heroin mentions were associated with single-drug episodes. Starting in 1998, the proportion of heroin mentions occurring during single-drug episodes decreased consistently, and in 2000 and 2001, approximately one-half of all heroin mentions were associated with multidrug episodes.

In 2001, heroin dependence was reported as the drug use motive among the vast majority (85 percent) of these mentions. Chronic effects (45 percent) and overdose (28 percent) were the two most frequently reported reasons for ED contact. In terms of patient disposition, roughly the same proportion were treated and released (45 percent) or admitted to the hospital (44 percent).

The population-adjusted rate of heroin ED mentions in the Los Angeles-Long Beach metropolitan area in 2001 remained stable at 34 mentions per 100,000 population. This rate has fluctuated between 30 and 37 mentions per 100,000 population since 1997 (exhibit 4). For population-adjusted rates of ED heroin mentions in the six western CEWG cities, San Francisco continued to lead the group in 2001, with 178 mentions per 100,000 population. Phoenix had the lowest number of population-adjusted mentions of heroin (27 per 100,000 population). Since 1997, Denver and Los Angeles have had similar rates of heroin mentions, fluctuating between 30 and 41 mentions per 100,000 population (exhibit 4).

The percentage of primary heroin treatment admissions to Los Angeles County treatment and recovery programs continued to decrease slightly overall, from nearly 36 percent of all admissions

(8,033 admissions) in July–December 2001 to 33 percent (7,767 admissions) in January–June 2002 (exhibit 5). In the first half of 2002, primary heroin admissions were predominantly male (72 percent), older than 35 (73 percent), and somewhat more likely to be Hispanic (44 percent) than White (37 percent) or Black (12 percent) (exhibit 6). Primary heroin admissions were most likely to report cocaine/crack as their secondary drug of abuse (23 percent). Alcohol was the second most frequently reported secondary drug of abuse (9 percent). Eighty-eight percent of the primary heroin admissions injected heroin, 6 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). Compared with other major types of illicit drug admissions, primary heroin admissions had the largest proportion of users age 36 and older (73 percent).

Twelve percent of the primary heroin admissions were homeless at time of admission, and only 4 percent were referred by the court or criminal justice system. Sixteen percent of the admissions indicated it was their first treatment episode. Forty-nine percent had graduated from high school, and, at the time of admission, 27 percent were employed full- or part-time (exhibit 7).

According to CHKS data for the 2001–2002 school year, 4 percent of all Los Angeles County secondary school students who responded to the survey had ever used heroin (exhibit 8). A breakdown of the data by grade level showed that among responding 9th-graders, 3.3 percent had ever used heroin. Lifetime heroin use was slightly higher among 11th-graders: 3.5 percent.

A total of 4,254 heroin arrests were made within the city of Los Angeles in the first half of 2002. This represented a 21-percent increase from the number of heroin arrests made in the first half of 2001. Heroin arrests accounted for approximately 36 percent of all narcotics arrests made between January and June 2002.

Continuing the major reversal of trends that was reported in December 2001, citywide seizures of black tar heroin decreased 95 percent, from 322 pounds seized in January–June 2001 to 17 pounds seized in January–June 2002. Similarly, seizures of other types of heroin decreased 72 percent, from 35 pounds seized in the first half of 2001 to 10 pounds seized in the first half of 2002. The street value of seized heroin accounted for 3 percent of the total street value of all drugs seized in the first half of 2002.

According to NDIC, Mexican drug trafficking organizations and criminal groups dominate the wholesale and retail supply and distribution of Mexican black tar and brown powdered heroin in California. The wholesale price (per kilogram) of black tar heroin increased again in the second quarter of 2002, to approximately \$19,200–\$23,200 (up from \$18,000–\$22,000 in the latter part of 2001). The current retail value for a gram is \$90–\$100, and the retail value for a “pedazo” (Mexican ounce) is \$700–\$800 (up from approximately \$600–\$700 in 2001). A regular ounce is 28.5 grams, whereas a pedazo is 25 grams. According to the LA HIDTA, street samples of Mexican black tar heroin have a purity level of 16–18 percent. This purity level signifies a substantial decrease in purity from previous years, when purity levels for street samples of black tar averaged 30–35 percent.

Mexican brown heroin sells for a wholesale price of \$24,000–\$34,000 per kilogram and retail price of \$35,000–\$50,000 per kilogram. Mexican heroin continues to be the heroin of choice in the Los Angeles area. 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) to \$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 the Los Angeles metropolitan area has one of the largest Middle Eastern populations in the United States. Because of this, it is believed that Southwest Asian opium trafficking activities may increase in the area.

### Other Opiates/Narcotics

ED mentions of narcotic analgesics/combinations continued to increase steadily, but not significantly, from 1,978 mentions in 2000 to 2,135 mentions in 2001. Of those in 2001, roughly three-quarters were mentions of a single formulation narcotic analgesic. The remaining one-quarter of mentions were for narcotic analgesics produced in combination. The vast majority of the 437 hydrocodone/combinations mentions were mentioned as an acetaminophen-

hydrocodone combination (97 percent). Thirty-eight percent of the 52 oxycodone/combinations mentions were for an acetaminophen-oxycodone combination. Mentions of methadone have fluctuated over the years, from 175 mentions in 1997 to 137 mentions in 2000. From 2000 to 2001, methadone mentions increased dramatically from 137 to 368 mentions; this increase was statistically significant.

The population-adjusted rates for ED mentions of narcotic analgesics/combinations (25 per 100,000 population), hydrocodone/combinations (5 per 100,000 population), and oxycodone/combinations (1 per 100,000 population) were consistently lower in the Los Angeles-Long Beach metropolitan area than in the coterminous United States (39, 9, and 7 per 100,000 population, respectively). The population-adjusted rate for mentions of methadone was identical in both Los Angeles and the coterminous United States (4 per 100,000 population).

In January–June 2002, 431 (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 second half of 2001. Fifty-four percent of the other opiates/synthetics admissions were male, which was down slightly from 60 percent in the second half of 2001. Seventy-three percent were White, and 76 percent were age 36 and older.

### **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. The proportion of marijuana/hashish ED mentions among ED drug episodes remained stable at approximately 23 percent in 2001 (exhibit 2). ED marijuana mentions increased slightly (4 percent), from 2,814 mentions in the first half of 2001 to 2,915 mentions in the second half of 2001 (exhibit 3). This change was not significant.

Of the 5,729 ED marijuana mentions reported in 2001, 67 percent occurred among males, 24 percent among Hispanics, and 20 percent among Whites. The vast 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, 32 percent of the mentions reported marijuana dependence. Thirty-seven percent were treated in the emergency department and released.

In 2001, the Los Angeles population-adjusted rate of marijuana/hashish ED mentions was 67 per 100,000 population. This rate has remained stable since 1999 (exhibit 4). Prior to 1999, the population-adjusted rate had fluctuated between 25 and 40 per 100,000 population. With regards to population-adjusted ED marijuana mentions in the six western CEWG sites, Seattle led the group in 2001 with 75 mentions per 100,000 population. San Diego, San Francisco, and Phoenix had the lowest population-adjusted rates (44–45 per 100,000 population) (exhibit 4).

In terms of unadjusted ED mentions, the age group with the largest proportion of ED marijuana mentions was the 35-and-older group (38 percent), followed by those age 18–25 (27 percent) and 26–34 (22 percent). The age group with the highest rate of ED marijuana mentions was 18–25-year-olds (119 per 100,000 population), followed by those age 26–34 (106 per 100,000 population) and the 35-and-older group (51 per 100,000 population). The population-adjusted rates more accurately reflect which group in Los Angeles County is accessing emergency department services for marijuana-related health problems and emergencies.

The percentage of primary marijuana admissions among all Los Angeles County treatment and recovery program admissions increased 32 percent, from 9 percent of all admissions in July–December 2001 to 11 percent of all admissions in January–June 2002 (exhibit 5). This increase followed a 10-percent decrease in the total number of marijuana admissions from the first to second half of 2001. Males (74 percent) and individuals younger than 18 (51 percent) constituted the majority of these admissions; 48 percent were Hispanic (up from 43 percent in July–December 2001), 25 percent were Black, and 18 percent were White (exhibit 6). The proportion of young marijuana users was up again, after having declined from the first to second half of 2001. In July–December 2001, 47 percent of the primary marijuana admissions were among those younger than 18, compared with 51 percent in the first half of 2002. Alcohol was identified as a secondary drug problem for 44 percent of the primary marijuana admissions in the first half of 2002. An additional 10 percent reported either cocaine or methamphetamine 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, only 1 percent of all primary marijuana admissions answered affirmatively (exhibit 7).

Eight percent of the primary marijuana treatment admissions in the first half of 2002 were homeless at the time of admission, and two-fifths (40 percent) were referred to treatment by the court or criminal justice system. Seventy percent were entering treatment for the first time. Twenty-one percent had graduated from high school, and, at the time of admission, 13 percent were employed full- or part-time (exhibit 7). Such characteristics reflect the fact that one-half of all primary marijuana admissions were younger than 18 at the time of admission.

According to CHKS data for the 2001–2002 school year, 22.9 percent of all Los Angeles County secondary school students who responded to the survey had ever used marijuana, and 12 percent had used marijuana in the past 30 days (exhibit 8). A breakdown of the data by grade level illustrated that among responding 7th-graders, 7.8 percent had ever used marijuana, and 4.4 percent had used in the past 30 days. Among 9th-graders, 22.2 percent had ever used marijuana, and 12.0 percent were current marijuana users. Rates of both lifetime and current marijuana use were highest among 11th-graders: 37.5 percent had ever used marijuana and 18.0 percent used marijuana within the past 30 days.

A total of 2,402 marijuana arrests were made within the city of Los Angeles in the first half of 2002. This represented a 13-percent decrease from the number of marijuana arrests made in the first half of 2001. Marijuana arrests accounted for roughly 20 percent of all narcotics arrests made between January and June 2002.

Citywide marijuana seizures decreased 43 percent, from 8,012 pounds seized in January–June 2001 to 4,539 pounds seized in January–June 2002. The street value of the seized marijuana accounted for approximately 34 percent of the total street value of all drugs seized in the first half of 2002.

Mexican low-grade marijuana was prevalent throughout the Los Angeles HIDTA. The wholesale price of low-grade marijuana ranged from \$300–\$400 per pound to \$60–\$80 per ounce. The retail price for a gram of commercial grade marijuana was \$10 per gram. All wholesale and retail prices remained stable from the second half of 2001. According to LA CLEAR, domestic midgrade outdoor and indoor growers continued to increase their share of the local marijuana market. The wholesale price of domestic midgrade marijuana ranged from \$1,000 to \$1,200 per pound and from \$200 to \$250 per ounce. A gram of domestic midgrade marijuana sold for \$25 on the street. Sinsemilla (high-grade) marijuana has a very high tetrahydrocannabinol (THC) content and is prized for its high potency. Wholesale prices of

sinsemilla were as follows: \$2,500–\$6,000 per pound and \$400–\$600 per ounce. One-eighth ounce of sinsemilla has a retail price range of \$60–\$80. There were indications that “BC Bud,” a hybrid type of cannabis bud grown in Canadian British Columbia, continued to be smuggled into Southern California. A pound of BC Bud had a wholesale value of \$6,000. Supposedly, a pound of BC Bud was being swapped straight across for a pound of cocaine. Demand for hashish, the compressed form of THC-rich resinous cannabis material, remained limited throughout the Los Angeles HIDTA; when it was available, it had a wholesale price of \$8,000 per pound.

### Stimulants

Methamphetamine was among the top five most frequently mentioned major substances of abuse in the DAWN Los Angeles-Long Beach metropolitan area in the year 2001, accounting for 3.4 percent of all ED drug mentions. ED mentions of amphetamines accounted for an additional 2.8 percent. Methamphetamine mentions have experienced numerous statistically significant increases over the past few years. From 1999 to 2001, there was a 67-percent increase. Following the same trend, methamphetamine mentions increased significantly from 2000 to 2001 (10 percent), from 1,375 to 1,517 mentions (exhibit 2). Amphetamine mentions increased significantly (46 percent) from 1999 (866 mentions) to 2001 (1,261 mentions). From 2000 to 2001, amphetamine mentions continued to increase (18 percent), but the increase was not statistically significant. The proportions of ED methamphetamine and amphetamine mentions among ED drug episodes have remained stable at approximately 6 percent and 5 percent, respectively, since 1996. ED methamphetamine mentions remained relatively stable in 2001, increasing slightly (6 percent) from the first half to the second half of the year (exhibit 3). The number of ED amphetamine mentions totaled 630 in the first half of 2001 and 631 in the second half.

In 2001, 73 percent of the ED methamphetamine mentions reported occurred among males, 46 percent occurred among Whites, and 39 percent occurred among Hispanics. A comparable proportion of 18–25-year-olds, 26–34-year-olds, and those age 35 and older mentioned methamphetamine during an ED drug episode (30, 32, and 29 percent, respectively).

Approximately two-thirds (65 percent) of all ED methamphetamine mentions occurred during multi-drug episodes. When asked about drug use motive, 58 percent reported methamphetamine dependence, and another approximately 30 percent reported psychic effects. Chronic effects and unexpected reaction were reported as reasons for ED contact among 43 percent and 34 percent of the mentions, respectively.

Five of the six western CEWG sites continued to dominate for the rate of population-adjusted methamphetamine ED mentions in 2001. San Francisco led with 39 mentions per 100,000 population, followed by San Diego (27 mentions), Phoenix (21 mentions), and Los Angeles and Seattle (each with 18 mentions) (exhibit 4). Denver had just 5 mentions per 100,000 population, which was nearly identical to the rate for the coterminous United States (6 mentions).

Primary methamphetamine admissions to Los Angeles County treatment and recovery programs continued to increase. The 3,453 primary methamphetamine admissions that were reported in January–June 2002 accounted for nearly 15 percent of all admissions (exhibit 5). Among those admissions, 58 percent were male (up slightly from 55 percent in the second half of 2001) (exhibit 6). Nearly 67 percent of the admissions were age 18–35. Whites (47 percent) were the predominant racial/ ethnic group among primary methamphetamine admissions, followed rather closely by Hispanics (37 percent). It is interesting to note that the decrease in the proportion of Whites was the same as the increase in the proportion of Hispanics entering treatment in the first half of 2002 (4 percent). Compared with other major illicit drug admissions, primary methamphetamine admissions had the largest proportion of females (42.2 percent), Whites (47.4 percent), Asian/Pacific Islanders (3.9 percent), 18–25-year-olds (28.3 percent), and 26–35-year-olds (38.3 percent).

On November 7, 2000, California voters approved the Substance Abuse and Crime Prevention Act (SACPA) of 2000 (a.k.a. Proposition 36), which mandates probation and community-based treatment instead of incarceration for nonviolent drug offenses. An observation made early on in the implementation process was that there was a high percentage of admissions for primary methamphetamine abuse. In Los Angeles County, primary methamphetamine abuse was reported by 32 percent of all SACPA-referred treatment admissions from January to June 2002. Among non-SACPA-referred clients admitted during the same 6-month period, only 12 percent reported primary methamphetamine abuse. The same pattern was seen at the State level. The California Department of Alcohol and Drug Program's First Annual Report to the Legislature stated that from July through December 2001, 48 percent of the statewide SACPA treatment admissions reported methamphetamine abuse as their primary problem. The proportion of non-SACPA admissions identifying methamphetamine as the primary drug of abuse was much lower (approximately 20 percent).

The demographics for primary amphetamine admissions were roughly comparable to primary methamphetamine admissions in terms of age and race/ ethnicity, except that a slightly lower proportion of Whites reported amphetamine rather than methamphetamine as their primary problem. And unlike primary methamphetamine admissions, more females (52 percent) than males (48 percent) reported amphetamines as their primary problem.

The greatest percentage of primary methamphetamine admissions reported smoking as their preferred route of administration (61 percent). Intranasal administration (snorting) and intravenous injection followed suit, at 24 and 10 percent, respectively. When asked whether they had used any drug intravenously in the year prior to admission, 15 percent of all primary methamphetamine admissions reported that they had used needles to administer one or more drugs intravenously at least once during the specified time period (exhibit 7). The preferred routes of administration for other amphetamine admissions were smoking (53 percent), snorting (21 percent), and oral ingestion (11 percent). An interesting shift in the route of other amphetamine administration occurred between the fall of 2001 and the spring of 2002. From July to December 2001, 5 percent of primary other amphetamine admissions reported injection as their primary route of administration. But from January to June 2002, the proportion preferring to inject doubled to 10 percent (equal to the proportion of primary methamphetamine injectors during the same time period). Primary methamphetamine and other amphetamine admissions tended to most frequently report secondary alcohol or marijuana abuse.

Approximately one-fifth of the primary methamphetamine treatment admissions were homeless at time of admission (21 percent), and slightly more than one-quarter were referred by the court or criminal justice system (29 percent) (exhibit 7). Nearly one-half (47 percent) were entering treatment with a primary methamphetamine problem for the first time. Forty-two percent had graduated from high school, and, at the time of admission, 17 percent were employed full- or part-time.

According to CHKS data for the 2001–2002 school year, 8.3 percent of all Los Angeles County secondary school students who responded to the survey had ever used methamphetamine (including crystal, “ice,” speed, and other amphetamines), and 4.1 percent had used methamphetamine in the past 30 days (exhibit 8). A breakdown of the data by grade level illustrated that among responding 9th-graders, 5.6 percent had ever used methamphetamine, and 2.9 percent were current users of methamphetamine.

Among 11th-graders, 9.0 percent had ever used methamphetamine, and 3.7 percent had used the drug within the past 30 days.

Sixty-five amphetamine arrests were made within the City of Los Angeles in the first half of 2002, which nearly matched the number of arrests made in the first half of 2001 (64). Amphetamine arrests accounted for less than 1 percent of all narcotics arrests made between January and June 2002.

Citywide methamphetamine seizures decreased 80 percent, from 192 pounds seized in January–June 2001 to 39 pounds seized in January–June 2002. The street value of the seized methamphetamine accounted for approximately 3 percent of the total street value of all drugs seized in the first half of 2002.

The wholesale price per pound of methamphetamine ranged from \$3,700–\$5,000, which was the wholesale price level seen in late 2000 and early 2001. The street value ranged from \$450 to \$550 per ounce (down from \$500–\$700), \$100–\$120 for one-eighth ounce (“eightball”), and \$60 for one-sixteenth ounce (“teener”). According to LA CLEAR, there are indications that the purity level of finished methamphetamine is once again increasing in potency. Mexican national methamphetamine traffickers continue to cut the drug with methylsulfonylmethane (MSM), but they are beginning to increase the purity to levels seen several years ago. The purity of methamphetamine available in the Los Angeles area has increased recently to approximately 30–35 percent. This development signals a reversal of a long-standing trend that saw a reduction in methamphetamine purity to a low of 15 to 20 percent.

Ice, a potent form of methamphetamine, was not frequently encountered in the Los Angeles area. Anecdotal evidence from several local sources suggests, however, that ice was smuggled from California to Hawaii by Asian organized criminal groups. A pound of ice that would sell for \$22,000–\$31,000 in Los Angeles sold for between \$35,000 and \$40,000 (wholesale) in Hawaii. The retail price for an ounce of ice ranged from \$600 to \$800. A double case of pseudoephedrine (60-milligram tablets/17,000 tablets per case) sold for \$2,800–\$3,400 (up from \$2,000–\$3,400). In addition, a 1,000-count bottle of 60-milligram tablets sold for \$200.

According to NDIC in its 2002 report, Mexican drug trafficking organizations and criminal groups continued to dominate the production and distribution of methamphetamine in California. The groups used established smuggling and distribution networks to supply methamphetamine to markets throughout the

State. Local independent dealers, street gangs, and outlaw motorcycle gangs played a role in distributing the drug, as well.

According to LA CLEAR, from April to June 2002 a total of 179 methamphetamine clandestine lab activities occurred throughout the LA HIDTA. Seventy-five percent of these activities were laboratory seizures. With 135 methamphetamine lab seizures, the LA HIDTA led all California HIDTAs in clandestine lab seizures. Combined seizures in Los Angeles and San Bernardino Counties accounted for 60 percent (30 percent in each county) of all lab seizures in the LA HIDTA from April to June 2002.

The LA HIDTA reported the most dumpsites as well—a total of 33. Most of the dumpsites were reported in San Bernardino and Riverside Counties, with 16 and 13 dump sites reported, respectively. The location of a dumpsite is often indicative of a methamphetamine clandestine lab operation that is producing methamphetamine at a nearby location or a lab that operates in seclusion.

The production of methamphetamine has major effects on the environment, as evidenced by the death of livestock, the contamination of streams, and the destruction of large trees and vegetation that results from the precursor chemicals used in manufacturing the drug. In its May 2002 Drug Threat Assessment Update, NDIC stated that in 2001, the California Department of Toxic Substances Control conducted more than 2,000 methamphetamine lab and dumpsite cleanups. The cleanups were estimated to cost California taxpayers close to \$5.5 million, or \$2,450 per lab. These figures do not encompass building and environment remediation, which costs taxpayers even more money.

According to the Associated Press (“Number of Meth Raids Increasing in Missouri,” November 5, 2002), Missouri has surpassed California to lead the Nation in methamphetamine-related law enforcement activity, with 2,130 raids on drug labs or discoveries of ingredient caches and methamphetamine-related dumps. A difference exists, however, in the yield of methamphetamine labs in California and Missouri. In California, most methamphetamine is made in so-called “superlabs,” which can make as much as 10 pounds of finished methamphetamine in an 8-hour period. Missouri labs tend to be much smaller (i.e., kitchen-, garage-, or automobile-based) and are capable of producing only a few ounces in the same 8-hour period.

On September 22, 2002, the Napa Valley Register reported that the newest thing to hit the underground

club scene in California is a “sweet, colorful little pill that can keep someone dancing all night long.” The pill is a new form of methamphetamine called “ya ba,” which is Thai for “crazy drug.” The drug is significantly more powerful and dangerous than ecstasy. In its pill form, ya ba is sometimes passed off at raves as ecstasy. So far, the drug has mostly appeared in Southeast Asian communities throughout California. In August 2002, 10 individuals in Sacramento were arrested for allegedly smuggling 75,000 pills from Thailand and Laos. In addition, the U.S. Customs Service seized 46 shipments of ya ba in Oakland, San Francisco, Los Angeles, and Honolulu. All shipments were destined for Sacramento addresses.

### Depressants

Los Angeles ED mentions of psychotherapeutic agents, which include mentions of antidepressants, barbiturates, and benzodiazepines, decreased significantly (17 percent), from 4,460 mentions in 2000 to 3,694 mentions in 2001. All three individual subgroups showed signs of decline, but the only statistically significant decrease was seen among antidepressants (20 percent). Nonsignificant decreases were reported for benzodiazepines (from 2,113 to 1,823 mentions) and barbiturates (from 333 to 325 mentions) from 2000 to 2001. ED mentions of benzodiazepines primarily consisted of alprazolam (Xanax, with 263 mentions), clonazepam (Klonopin, with 261 mentions), diazepam (Valium, with 267 mentions), and lorazepam (with 167 mentions). Frequently mentioned barbiturates included pentobarbital (31 mentions) and phenobarbital (34 mentions).

The rates per 100,000 population for ED mentions of antidepressants ( $n=9$ ) and benzodiazepines (21) were consistently lower in the Los Angeles-Long Beach metropolitan area than in the coterminous United States (24 and 41 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 (4 per 100,000 population).

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

### Hallucinogens

The proportion of ED hallucinogen mentions among ED drug episodes continued to remain low. ED mentions of phencyclidine (PCP) far outweigh ED lysergic acid diethylamide (LSD) mentions. The number of ED

PCP mentions increased, though not significantly, from 2000 to 2001. ED mentions of miscellaneous hallucinogens remained stable at approximately 86 mentions. Conversely, ED LSD mentions experienced a statistically significant decrease of 19 percent from 2000 to 2001. The rate of PCP ED mentions per 100,000 population has remained low and relatively stable since the mid 1990s. The population-adjusted rate of LSD mentions decreased significantly (18 percent) from 2000 to 2001.

Over the past several years, the proportion of primary PCP admissions has stabilized at approximately 1 percent. The number of primary PCP admissions remained relatively stable from the second half of 2001 (207) to the first half of 2002 (196). Alcohol (30 percent), marijuana (22 percent), and cocaine (14 percent) were the secondary drugs used most frequently by primary PCP admissions. The vast majority (95 percent) of PCP admissions continued to smoke 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 CHKS data for the 2001–2002 school year (exhibit 8), 7.9 percent of all Los Angeles County secondary school students who responded to the survey had ever used LSD or another psychedelic, and 3.3 percent had used LSD/other psychedelics in the past 30 days. A breakdown of the data by grade level illustrated that among responding 9th-graders, 5.3 percent had ever used LSD/other psychedelics, and 2.5 percent were current LSD/other psychedelics users. Among 11th-graders, 9.1 percent had ever used LSD/other psychedelics, and 3.1 percent had used the drug within the past 30 days.

Ninety-one PCP arrests were made within the city of Los Angeles in the first half of 2002. This represented a 42-percent increase from the number of PCP arrests made in the first half of 2001. PCP arrests accounted for less than 1 percent of all narcotics arrests made between January and June 2002.

Citywide PCP seizures increased substantially (by over 685 percent) from the first half of 2001 to the first half of 2002 (from 22 pounds seized in January–June 2001 to 173 pounds seized in January–June 2002). The street value of the PCP seized between January and June 2002 represented roughly 11 percent of the total street value of all drugs seized during that time period.

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

A sheet of approximately 100 doses of LSD had a wholesale price range of \$150–\$200. Typically, a single dose sold on the streets for \$5–\$10. At the retail level, psilocybin mushrooms continued to run at about \$20 per one-eighth ounce.

### Club Drugs

Anecdotal evidence continued to circulate throughout the Los Angeles area regarding the use of club drugs, particularly ecstasy and gamma hydroxybutyrate (GHB). Currently, individual club drugs do not have separate entries under the “primary drug” section of the CADDSS admission/discharge questionnaire. Instead, if an individual enters treatment for primary GHB, ketamine, or ecstasy abuse, his or her primary drug problem is most likely listed as methamphetamine, other amphetamines, other stimulants, or other tranquilizers.

ED club drug mentions continued to represent a much smaller percentage of all mentions than mentions of other major substances of abuse. In 2001, 142 ED mentions for methylenedioxyamphetamine (MDMA) were reported to the DAWN system in the Los Angeles area. This represented a statistically significant decrease of 20 percent from 2000. MDMA mentions were more likely to be male (53 percent) and White (35 percent) or Hispanic (29 percent). In addition, they were equally likely to be 18–25-year-olds or 26–34-year-olds (40 percent). Furthermore, two-thirds of all MDMA mentions were part of multidrug episodes. Nearly 50 percent involved a drug use motive of psychic effects. More than one-half (51 percent) visited the emergency department because of an unexpected reaction. Nearly 70 percent were treated and released. Twenty-five percent were admitted to the hospital.

ED mentions of GHB experienced an even greater statistically significant decrease of 44 percent, from 149 mentions in 2000 to 83 mentions in 2001. This decrease corresponds to half-year decreases that were noted in the June 2002 CEWG proceedings. Mentions of ketamine and flunitrazepam (Rohypnol) remained marginal.

The general demographics of ED GHB mentions were quite different from those of ED MDMA mentions. In 2001, 9 out of 10 GHB mentions occurred among males, a shift from 2000, when the proportion of male GHB mentions was 72 percent. In 2001, 71 percent of the GHB mentions occurred among Whites, and an additional 14 percent occurred among

Hispanics. In 2000, the racial/ethnic makeup of the GHB mentions was slightly different—80 percent were White, and only 5 percent were Hispanic. In 2001, 51 percent of the GHB mentions occurred among individuals age 26–34, followed by 31 percent among 18–25-year-olds and 16 percent among those aged 35 or older. Like ED MDMA mentions, approximately two-thirds of GHB mentions were part of a multidrug episode. Nearly 81 percent reported psychic effects as their drug use motive. Fifty-two percent visited the emergency department because of an unexpected reaction, and 41 percent visited for overdose. Most (77 percent) of the individuals were treated and released.

According to CHKS data for the 2001–2002 school year, 8.3 percent of all Los Angeles County secondary school students who responded to the survey had ever used ecstasy (exhibit 8). Lifetime ecstasy use ranged from 2.6 percent among 7th-graders, to 6.0 percent among 9th-graders and 9.6 percent among 11th-graders. Students were not asked about past-month ecstasy use.

All wholesale and retail prices for club drugs have remained stable since the second half of 2001. In multiple quantities, MDMA had a wholesale price of \$12 per pill or capsule. At the retail level, ecstasy usually sold for \$25–\$40 per pill. A standard dose of ecstasy is 60–150 milligrams, which is equivalent to about 1–2 pills. In Los Angeles, there is something known as a “boat.” A boat contains 1,000 MDMA pills and sells for \$8,000. Rohypnol had a retail value of \$6–\$10 for a 1-milligram pill. The wholesale and retail prices of GHB were \$65–\$100 per 16-ounce bottle and \$5–\$20 per bottle capful, respectively. The vast majority of GHB users ingested the drug as a liquid, either in straight shots or mixed with a drink. Lastly, on the streets, ketamine sold for \$60–\$100 for a 10-milliliter vial or \$20 for two-tenths grams of powder. In the party scene, ketamine is often taken with MDMA, which is known as “kitty flipping.”

According to an NDIC “Information Bulletin” (August 2002), more than 57 individuals in southern California were arrested in connection with a 2-year investigation involving the production and distribution of methamphetamine, distribution of MDMA, and drug money laundering on August 8, 2002. Throughout the course of the investigation, 33 pounds of methamphetamine, 8 pounds of crystal methamphetamine, 196 gallons of methamphetamine oil, and 100 pounds of pseudoephedrine were seized. Weapons, vehicles, money, and 30,000 MDMA tablets were seized as well.

## INFECTIOUS DISEASES RELATED TO DRUG ABUSE

A cumulative total of 44,308 adult/adolescent AIDS cases were reported in Los Angeles County through June 30, 2002. Of those cases, 415 were reported between April 1, 2002, and June 30, 2002. Approximately 16,663 Los Angeles County residents are currently living with advanced HIV disease. Los Angeles County cumulative cases represent approximately 35 percent of the 125,848 cumulative cases in California and 6 percent of the 793,026 cumulative cases nationwide. Of the total cases reported in Los Angeles County, 49 percent occurred among Whites, 29 percent among Hispanics, 20 percent among Blacks, 45 percent among 30–39-year-olds, and 93 percent among males.

In 2001, 60 percent of males diagnosed with AIDS were exposed to the disease through male-to-male sexual contact. This proportion is down from 76 percent in 1995 (exhibit 9). The proportion of males exposed through injection drug use, a combination of male-male sexual contact and injection drug use, heterosexual contact, blood transfusion, or hemophilia/coagulation disorder remained relatively stable between 1995 and 2001. The “other or undetermined” exposure category accounted for 9 percent of all males diagnosed in 1995. The proportion of male cases with an exposure category of “other or undetermined” rose steadily over the years to eventually account for 21 percent of all male cases diagnosed in 2001.

The modal exposure category for females diagnosed with AIDS in 1995 was heterosexual contact (55 percent). This exposure category has been associated with a lesser proportion of female AIDS cases since then, and in 2001, was associated with 28 percent of all newly diagnosed female AIDS cases. Female cases attributable to injection drug use remained relatively stable, ranging from 27 percent of all female cases in 1995 to 20 percent of all female cases in 2001 (exhibit 9). As was the case with males diagnosed with AIDS, the proportion of female cases with an exposure category of “other or undermined” increased dramatically from 14 percent of all female cases in 1995 to 50 percent of all female cases in 2001.

In Los Angeles County, less than one-tenth (7 percent) of the total cumulative AIDS cases involved injection drug use (alone) as the primary route of exposure. Among the 3,108 cases primarily attributable to injection drug use, 74 percent occurred among males. Black males continued to be the modal group

of male injection drug users (IDUs) (accounting for 38 percent), followed by White males (31 percent) and Hispanic males (30 percent). For AIDS cases among female IDUs, Blacks continued to represent the majority (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 occurred among White males.

The Supplement to the HIV/AIDS Surveillance (SHAS) Project is a U.S. Centers for Disease Control and Prevention-sponsored interview study designed to obtain supplemental descriptive information on persons diagnosed with AIDS. The project began in 1990 and is conducted in Los Angeles County and 18 other sites in the United States. The SHAS questionnaire includes information on demographics; sexual behaviors and sexually transmitted disease (STD) history; drug and alcohol use; reproductive/gynecological history; HIV testing and medical therapy; and health and social services. In June 2002, the SHAS Project released an annual report through the HIV Epidemiology Program. Included in the report was a section on alcohol and drug use captured in interviews conducted from 1995 to 2000. Sixty percent of males and 41 percent of females reported ever using non-injection drugs. Of those, 74 percent of both males and females had used non-injection drugs in the prior 5 years. Additional information on non-injection drug use, such as type(s) of drugs used in the past 5 years is highlighted in exhibit 10. Fifteen percent of males and 14 percent of females had injected drugs in the prior 5 years (exhibit 11). Also, 24 percent of males and 28 percent of females had injected drugs in the past year. Of those individuals, 20 percent of males and 52 percent of females injected drugs several times a day. Finally, 30 percent of males and 57 percent of females had shared needles in the past year.

## ACKNOWLEDGEMENTS

The author wishes to thank those agencies and individuals who provide valuable substance abuse-related data and information. Los Angeles County’s participation in and contribution to the Community Epidemiology Work Group would be extremely difficult without the continuous cooperation of several local, State, and national agencies.

*For inquiries concerning this report, please contact Beth Finnerty, M.P.H., University of California at Los Angeles, Integrated Substance Abuse Programs, 11075 Santa Monica Boulevard, Suite 200, Los Angeles, CA 90025, Phone: 310-312-0500 ext. 376, Fax: 310-312-0552, E-mail: <finnerty@ucla.edu>.*

**Exhibit 1. Healthy Cities, Healthy Suburbs: A Look at the Three California CEWG Areas**

Healthy People 2000/2010 Objectives	Healthy People Rate	Los Angeles/Long Beach/Glendale, California		San Diego, California		San Francisco, California	
Low birth weight (percent of all live births), 1999	5.0	City 6.7 Suburb 6.4	City 6.3 Suburb 5.6	City 6.8 Suburb 5.7			
Infant mortality (deaths per 1,000 live births), 1999	7.0	City 6.0 Suburb 4.8	City 5.4 Suburb 5.1	City 3.8 Suburb 3.5			
Tuberculosis (cases per 100,000 population), 2000	3.5	City 12.0 Suburb 12.3	City 13.8 Suburb 3.7	City 21.9 Suburb 6.8			
AIDS (cases per 100,000 population), 2000	43.0	MSA 18.0	MSA 16.0	MSA 44.0			
Syphilis (cases per 100,000 population), 2000	4.0	City 1.5	City 1.0	City 7.1			
Gonorrhea (cases per 100,000 population), 2000	100.0	City 84.0	City 64.0	City 289.0			
Homicide (homicides per 100,000 population), 1999	7.2	City 10.9 Suburb 8.1	City 4.7 Suburb 3.1	City 8.2 Suburb 2.1			

SOURCE: SUNY Downstate Medical Center, Brooklyn, New York, August 2002

**Exhibit 2. Los Angeles-Long Beach Annual Estimated ED Mentions for Selected Drugs and Percentage of Mentions Per Drug in Total Drug Episodes: 1997–2001**

Substance of Abuse	1997		1998		1999		2000		2001	
	Number	Percent								
Alcohol-in-Combination	4,650	(27)	6,129	(36)	8,195	(40)	10,993	(43)	10,907	(44)
Cocaine	4,703	(27)	5,779	(34)	6,768	(33)	9,094	(36)	9,999	(41)
Heroin	2,471	(14)	2,601	(15)	2,923	(14)	3,177	(13)	2,878	(12)
Marijuana	2,084	(12)	3,422	(20)	5,472	(26)	5,846	(23)	5,729	(23)
Methamphetamine	1,229	(7)	786	(5)	910	(4)	1,375	(5)	1,517	(6)
Amphetamines	728	(4)	541	(3)	866	(4)	1,072	(4)	1,261	(5)
PCP	696	(4)	605	(4)	731	(4)	823	(3)	990	(4)
LSD	186	(1)	162	(<1)	229	(1)	217	(<1)	175	(<1)
Total Drug Episodes	17,187		17,103		20,667		25,286		24,669	
Total Drug Mentions	29,684		29,805		36,945		45,015		44,670	

SOURCE: DAWN, OAS, SAMHSA

**Exhibit 3. Estimated Semiannual ED Mentions in Los Angeles-Long Beach: January 1997 to December 2001**

Year	1H97	2H97	1H98	2H98	1H99	2H99	1H00	2H00	1H01	2H01
Cocaine	2,295	2,408	2,629	3,150	3,183	3,586	4,622	4,472	4,876	5,123
Heroin	1,324	1,147	1,214	1,387	1,431	1,491	1,791	1,386	1,506	1,372
Marijuana	1,061	1,023	1,343	2,079	2,517	2,955	3,219	2,627	2,814	2,915
Methamphetamine	596	633	418	368	414	496	682	693	737	780
Amphetamines	337	391	272	268	410	456	532	540	630	631

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: 1997–2001**

<b>Drug Mentions</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>
<b>Cocaine</b>					
Denver	69	73	87	83	69
Los Angeles	56	68	79	105	117
Phoenix	66	73	91	85	62
San Diego	36	41	44	41	32
San Francisco	126	116	120	126	158
Seattle	150	125	130	169	160
<b>Heroin</b>					
Denver	30	31	40	41	40
Los Angeles	30	31	34	37	34
Phoenix	41	43	41	40	27
San Diego	39	41	44	42	29
San Francisco	173	148	190	168	178
Seattle	152	126	127	126	90
<b>Marijuana</b>					
Denver	32	37	43	51	50
Los Angeles	25	40	64	67	67
Phoenix	37	36	50	51	45
San Diego	41	47	38	39	44
San Francisco	25	25	29	38	45
Seattle	87	49	42	72	75
<b>Methamphetamine</b>					
Denver	19	8	6	7	5
Los Angeles	15	9	11	16	18
Phoenix	40	22	17	29	21
San Diego	41	30	24	31	27
San Francisco	64	39	34	36	39
Seattle	25	14	18	27	18

SOURCE: DAWN, OAS, SAMHSA

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

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

SOURCE: California Alcohol and Drug Data System (CADDs)

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

Characteristics	Cocaine	Heroin	Marijuana	Methamphet-amine	All Admissions
Gender					
Male	64.4	72.0	74.2	57.8	67.0
Female	35.6	28.0	25.8	42.2	33.0
Race/Ethnicity					
White/non-Hispanic	15.1	37.1	17.6	47.4	31.7
Black/non-Hispanic	57.4	12.1	25.2	3.8	24.2
Hispanic origin	20.9	44.5	48.5	37.1	35.9
American Indian	<1.0	<1.0	<1.0	1.2	<1.0
Asian/Pacific Islander	1.5	<1.0	2.5	3.9	1.8
Other	4.6	4.8	5.6	6.6	5.5
Age					
17 and younger	1.1	<1.0	50.6	5.4	8.8
18–25	10.8	6.6	22.8	28.3	13.5
26–35	28.4	20.3	14.3	38.3	24.6
36 and older	59.7	73.0	12.3	28.0	53.1
Route of Administration					
Oral	2.3	1.2	2.6	4.0	21.0
Smoking	86.7	6.1	95.1	61.1	40.2
Inhalation	9.4	4.1	1.9	24.3	7.1
Injection	<1.0	88.0	<1.0	9.6	30.6
Unknown/other	<1.0	<1.0	<1.0	1.0	1.1
Secondary Drug	Alcohol	Crack/ Cocaine	Alcohol	Marijuana	Alcohol
<b>Total Admissions (N)</b>	<b>(4,655)</b>	<b>(7,767)</b>	<b>(2,686)</b>	<b>(3,453)</b>	<b>(23,695)</b>

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: January–June 2002**

Characteristics	Cocaine	Heroin	Marijuana	Methamphet-amine	All Admissions
Percent Positive for IV Drug Use in Past Year	5	90	1	15	34
Percent Homeless	30	12	8	21	19
Percent Employed Full- or Part-Time	14	27	13	17	19
Percent Graduated from High School	43	49	21	42	42
Percent Referred by Court/Criminal Justice System (Not Including SACPA <sup>1</sup> Referrals)	27	4	40	29	19
Percent First Treatment Episode	37	16	70	47	37
<b>Total Admissions (N)</b>	<b>(4,655)</b>	<b>(7,767)</b>	<b>(2,686)</b>	<b>(3,453)</b>	<b>(23,695)</b>

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

SOURCE: California Alcohol and Drug Data System (CADDs)

**Exhibit 8. Drug Use Among Los Angeles County Secondary School Students by Percent: 2001–2002 School Year**

<b>Usage Patterns Among Survey Respondents</b>	<b>7th Grade</b>	<b>9th Grade</b>	<b>11th Grade</b>	<b>All Respondents<sup>1</sup></b>
<b>Cocaine (any form)</b>				
Lifetime	N/A <sup>2</sup>	5.5	8.4	8.0
Past 30 days	N/A	3.0	3.3	3.9
<b>Ecstasy</b>				
Lifetime	2.6	6.0	9.6	8.3
Past 30 days	N/A	N/A	N/A	N/A
<b>Heroin</b>				
Lifetime	N/A	3.3	3.5	4.0
Past 30 days	N/A	N/A	N/A	N/A
<b>Inhalants</b>				
Lifetime	10.0	12.9	15.5	13.2
Past 30 days	4.5	4.8	4.1	5.0
<b>LSD/Other Psychedelics</b>				
Lifetime	N/A	5.3	9.1	7.9
Past 30 days	N/A	2.5	3.1	3.3
<b>Marijuana</b>				
Lifetime	7.8	22.2	37.5	22.9
Past 30 days	4.4	12.0	18.0	12.0
<b>Methamphetamine</b>				
Lifetime	N/A	5.6	9.0	8.3
Past 30 days	N/A	2.9	3.7	4.1

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

<sup>2</sup> N/A=Not applicable.

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

**Exhibit 9. Annual Adult/Adolescent AIDS Cases by Gender, Year of Diagnosis, and Exposure Category: 1995–2001**

<b>Adult/Adolescent Exposure Category<sup>1</sup></b>	<b>1995 Number (%)</b>	<b>1996 Number (%)</b>	<b>1997 Number (%)</b>	<b>1998 Number (%)</b>	<b>1999 Number (%)</b>	<b>2000 Number (%)</b>	<b>2001 Number (%)</b>
<b>Males</b>							
Male-Male Sexual Contact	2,351 (76)	1,807 (74)	1,195 (66)	1,041 (63)	911 (63)	722 (61)	597 (60)
Injection Drug User (IDU)	180 (6)	163 (7)	129 (7)	101 (6)	78 (5)	81 (7)	75 (8)
Male-Male Sexual Contact/IDU	197 (6)	144 (6)	104 (6)	91 (6)	69 (5)	62 (5)	55 (6)
Hemophilia or Coagulation Disorder	12 (<1)	5 (<1)	10 (<1)	1 (<1)	2 (<1)	3 (<1)	5 (<1)
Heterosexual Contact	71 (2)	47 (2)	61 (3)	59 (4)	45 (3)	44 (4)	51 (5)
Transfusion Recipient	15 (<1)	14 (<1)	7 (<1)	3 (<1)	3 (<1)	4 (<1)	2 (<1)
Other/Undetermined	276 (9)	264 (11)	319 (17)	344 (21)	339 (23)	266 (23)	214 (21)
<b>Male Subtotal</b>	<b>3,102</b>	<b>2,444</b>	<b>1,825</b>	<b>1,640</b>	<b>1,447</b>	<b>1,182</b>	<b>999</b>
<b>Females</b>							
IDU	90 (27)	71 (26)	69 (26)	40 (20)	38 (19)	30 (15)	30 (20)
Hemophilia or Coagulation Disorder	0 (0)	0 (0)	0 (0)	1 (0)	0 (0)	0 (0)	0 (0)
Heterosexual Contact	187 (55)	140 (51)	121 (46)	95 (47)	89 (45)	79 (40)	42 (28)
Transfusion Recipient	15 (4)	9 (3)	7 (3)	3 (1)	3 (2)	0 (0)	3 (2)
Other/Undetermined	49 (14)	57 (20)	66 (25)	63 (32)	68 (34)	89 (45)	74 (50)
<b>Female Subtotal</b>	<b>341</b>	<b>277</b>	<b>263</b>	<b>202</b>	<b>198</b>	<b>198</b>	<b>149</b>
<b>TOTAL</b>	<b>3,443</b>	<b>2,721</b>	<b>2,088</b>	<b>1,842</b>	<b>1,645</b>	<b>1,380</b>	<b>1,148</b>

<sup>1</sup>Exposure 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 July 15, 2002

**Exhibit 10. Non-Injection Drug Use—Supplement to HIV/AIDS Surveillance (SHAS) Project Interviews: 1995–2000**

Non-Injection Drug Use Questions	Males (n=1,312)		Females (n=549)	
	Number	Percent	Number	Percent
Ever used non-injection drugs				
Yes	782	60	224	41
No	530	40	325	59
Used non-injection drugs in past 5 years				
Yes	580	74	166	74
No	202	26	58	26
Non-injection drugs used in past 5 years				
Heroin	45	8	28	17
Powder cocaine	274	47	71	43
Crack cocaine	189	33	98	59
Methamphetamine	36	6	8	5
Marijuana/hashish/THC	446	77	113	68
Amphetamines/speed (pills)	142	24	26	16
Nitrites (“poppers,” “rush,” “hardware”)	67	12	1	1

SOURCE: Supplement to HIV/AIDS Surveillance (SHAS) Project Los Angeles County, Annual Report, June 2002

**Exhibit 11. Injection Drug Use—Supplement to HIV/AIDS Surveillance (SHAS) Project Interviews: 1995–2000**

Injection Drug Use Questions	Males (n=1,312)		Females (n=549)	
	Number	Percent	Number	Percent
Used injection drugs (ever)				
Yes	194	15	75	14
No	1,118	85	474	86
Injection drugs used (ever)				
Heroin	101	53	53	71
Cocaine	29	15	4	5
Heroin and cocaine (“speedball”)	56	29	46	61
PCP, ketamine, hallucinogens	11	6	3	4
Barbiturates	18	9	8	11
Stimulants/amphetamines/methamphetamine	83	43	15	20
Injected drugs in the past year				
Yes	46	24	21	28
No	148	76	54	72
How often did you inject drugs in past year				
Once a month or less	18	45	4	19
Once a week	5	13	0	0
Several times a week	7	18	3	14
Once a day	2	5	3	14
Several times a day	8	20	11	52
Shared needles in past year				
Yes	14	30	12	57
No	32	70	9	43
How often did you share needles in past year				
Sometimes (less than half the time)	6	43	7	58
Usually (more than half the time)	2	14	3	25
Every time	6	43	1	8
Don’t know/not sure	0	0	1	8

SOURCE: Supplement to HIV/AIDS Surveillance (SHAS) Project Los Angeles County, Annual Report, June 2002

# Drug Abuse in Miami and South Florida

James N. Hall,<sup>1</sup> Joe Spillane, Pharm.D.,<sup>2</sup> and Madeline Camejo, Pharm.D.<sup>3</sup>

## ABSTRACT

*Cocaine indicators remained stable at high levels, as the population abusing the drug continued to age. Cocaine remained the most frequently mentioned illicit substance in emergency department (ED) visits across the region. Many cocaine deaths also involved opioid abuse. Opioid abuse continued to diversify, with heroin, oxycodone, hydrocodone, and increasingly methadone diverted from medical pain management sources. Opioid abuse indicators appeared to be increasing; users remained predominantly White males older than 30 who also abuse benzodiazepines. Marijuana indicators continued to rise in Miami-Dade County, with DAWN ED mentions increasing 51 percent between 1999 and 2001 and Broward County cocaine ED cases accounting for 51 percent of illicit drug cases in the first half of 2002. A 2002 statewide middle and high school survey revealed overall downward trends in the use of most substances. High school seniors in Florida were almost twice as likely to have tried ecstasy as cocaine and 10 times as likely to have tried ecstasy as crack cocaine. A relatively high percentage of ecstasy abusers were White. It is becoming increasingly difficult to distinguish between ecstasy and other amphetamines, as use of amphetamines and methamphetamine increases and ecstasy pills become more adulterated with amphetamines or methamphetamine. GHB hospital episodes declined, but there were three deaths related to the use of this drug in Broward County during the first half of 2002. Indicators for three narcotic analgesics appeared to be increasing and bear watching in the future: methadone, hydrocodone, and buprenorphine. Alprazolam (Xanax) remained popular among both younger and older drug abusers.*

## 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, 28 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 port of entry 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.

<sup>1</sup> Mr. Hall is affiliated with Up Front Drug Information Center, Miami, Florida.

<sup>2</sup> Dr. Spillane is affiliated with Nova Southeastern University College of Pharmacy and Broward General Medical Center, Ft. Lauderdale, Florida.

<sup>3</sup> Dr. Camejo is affiliated with Broward General Medical Center and the Broward County United Way Commission on Substance Abuse, Ft. Lauderdale, Florida.

- South Florida is a designated High Intensity Drug Trafficking Area and a leading U.S. cocaine importation center. 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—most 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.

### Data Sources

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

- **Drug treatment data** on a sample of admissions were provided by Spectrum Programs, Inc., for 1999 through June 2002. Data from the Broward Addiction Recovery Center (BARC) were not available for 2002.
- **Drug-related mortality data** were provided by the Broward County Medical Examiner Department in “Drug Deaths 1999–June 2002,” a review of all deaths in Broward County directly caused by or associated with drugs, and the Florida Department of Law Enforcement Medical Examiners Commission, January–June 2002 “Report of Drugs Identified in Deceased Persons by Florida Medical Examiners.”
- **Emergency department (ED) drug mentions data** were derived from the Broward General Medical Center (BGMC) Emergency Department Drug Abuse Case Review, which is a review of all drug abuse cases presenting to the emergency department for the five semiannual periods from the first half of 2000 through the first half of 2002; and from the Drug Abuse Warning Network (DAWN), Office of Applied Studies (OAS), Substance Abuse and Mental Health Services Administration (SAMHSA) for 1994 through 2001. At the BGMC in the first half of 2002, all ED charts were reviewed daily to identify illicit substance abuse-related ED cases. Drug abuse was identified in 3.5 percent (1,249) of the 36,621 charts reviewed, an average of approximately 7 drug abuse cases per day.
- **Drug analyses data** were derived from reports of illicit substances analyzed from 1999 to June

2002 by the Broward Sheriff’s Office (BSO) Crime Lab.

- **Heroin price and purity data**, preliminary for 2001, were obtained from the Drug Enforcement Administration (DEA)’s Domestic Monitor Program (DMP).
- **Drug seizure information** was available from the U.S. Customs Service.
- **School survey data** were from two sources: the Florida Youth Surveys on Substance Abuse for 2000 and 2002, which provide prevalence data on drug use among Florida students in grades 6–12, and the 2001 Miami-Dade School Survey conducted by The Miami Coalition for A Safe and Drug-Free Community, which provides prevalence and risk-factor data on Miami-Dade public and parochial middle and high school students.

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

### DRUG ABUSE PATTERNS AND TRENDS

#### Cocaine and Crack

Cocaine continued to be a major problem in South Florida, as indicated by ED visits, crime lab data, and drug treatment admissions. However, cocaine-related deaths decreased in the first half of 2002. Older patients continued to dominate among cocaine abusers seeking emergency medical care and addiction treatment.

Throughout Florida, there were 180 cocaine-caused fatalities in the first half of 2002. This represented an 8-percent decrease from the last half of 2001. There were 13 cocaine-induced deaths in Miami-Dade County in first half of 2002, a 42-percent decrease from the 45 cocaine-induced deaths in all of 2001. In 2000 there were 30 cocaine-induced deaths, in 1999 there were 43, and in 1998 there were 39. The 59 cocaine-related deaths in the first half of 2002 represent a 21-percent decrease from the previous semiannual period. There were 149 such cases during all of 2001, 144 in 2000, 226 in 1999, and 246 in 1998.

In Florida, a drug is considered to be a cause of death if the amount detected is considered to be a lethal dose by the local medical examiner. Mixtures of other drugs (unspecified) were detected in 26 of the 59 cocaine-related deaths during the first half of 2002 in Miami-Dade County.

In Broward County, 30 fatalities were attributed to cocaine use in the first half of 2002, compared with 33 in the prior 6-month period. Opiates such as heroin, oxycodone, and methadone were involved in 17 of the deaths in 2002. In an additional two deaths, both cocaine and heroin were considered the causes of death; six deaths involved cocaine and oxycodone; three others involved cocaine and methadone; and two involved cocaine, methadone, and oxycodone. Among cocaine decedents, there were 24 males and 6 females. Twenty-five were White, four were Black (all four were positive for cocaine but not opioids), and one was Hispanic (cocaine and oxycodone). Among the 30 cocaine decedents, there were no teenagers; 17 percent were in their twenties, 50 percent were in their thirties, 27 percent were in their forties, and 7 percent were their fifties. In 2000, there were 40 cocaine-caused deaths, and in 2001, there were 52. The recent increase in cocaine-deaths appears to be at least partly attributable to the opioid-cocaine combinations.

Among the combined 243 cocaine-related deaths in both Broward and Miami-Dade Counties during 2001, fewer than 2 percent were younger than 18, 11 percent were 18–25, 25 percent were 26–34, 47 percent were 35–50, and 15 percent were older than 50.

In Miami-Dade County in 2001, there were 4,641 cocaine/crack ED mentions in the DAWN system (exhibit 1). Annual data reflect an insignificant increase in cocaine/crack ED mentions between 2001 and 2000 and a significant 69-percent increase between 1994 and 2001. The number of ED cocaine mentions for those age 45–54 rose nearly 185 percent between 1994 and 2001 and 37 percent between 1999 and 2001.

At BGMC in the first half of 2002, cocaine was clearly the most commonly involved illicit drug, accounting for 641 (51percent) drug abuse cases. Of the cocaine cases, males accounted for 70 percent, Whites for 52 percent, Blacks for 42 percent, and Hispanics/others for 7 percent. Eighty-three percent of the cocaine-using BGMC patients were age 30 or older, continuing a trend towards older cocaine ED patients. Only 3 percent were younger than 20; 14 percent were in their twenties, 39 percent were in their thirties, 33 percent were in their forties, and 11 percent were age 50 or older.

The most common reasons for visiting the BGMC ED for cocaine use were as follows: depression/suicidal (37 percent); chest pain/cardiac problems (10 percent); psychosis/schizophrenia/hallucinations (8 percent); dependence/seeking detoxification (7 percent); trauma/accidents (7 percent); altered mental

status (5 percent); and gastrointestinal complaints (5 percent).

Crack cocaine was mentioned in 29 percent of the BGMC ED cases in the first half of 2002. Cocaine was used in combination with alcohol in 43 percent of cocaine ED cases. This dangerous combination forms a cometabolite, cocaethylene, which can dramatically increase toxicity. Another common combination was cocaine and marijuana (24 percent of all cocaine cases).

Among a sample of Spectrum Program treatment admissions in the first half of 2002, cocaine abuse accounted for 34 percent of the sample. Of the 602 cocaine treatment clients in the first half of 2002, 55 percent were White, 34 percent were Black, and 11 percent were Hispanic/other. Among these same clients, 55 percent were age 35 or older, 29 percent were 26–34, 11 percent were 18–25, and 5 percent were younger than 18.

Powder cocaine and crack are still reported as “widely available” throughout Florida. Cocaine remains the most commonly analyzed substance by the BSO Crime Lab, accounting for 83 percent of all items analyzed in the first half of 2002.

In Miami, crack cocaine sells for \$5–\$20 per one-tenth gram and is roughly 80 percent pure. Powder cocaine sells for \$40–\$60 per gram and is approximately 80 percent pure. The cocaine kilogram price range remains fairly stable at \$18,000–\$22,000, according to law enforcement officials.

The 2002 Florida Youth Survey on Substance Abuse revealed that 3.2 percent of 8th graders, 5.1 percent of 10th graders, and 7.5 percent of the 12th graders surveyed statewide reported having ever used (lifetime) cocaine. These percentages were lower than those from the 2000 survey when 4.4 percent of 8th graders, 7.8 percent of 10th graders, and 8.7 percent of 12th graders reported having tried cocaine in their lifetime. In the 2001 Miami-Dade School Survey, 1.8 percent of middle and high school students reported current (past-30-day) cocaine use. This percentage remained stable over the prior 6 years; however, the “perceived risk of harm from cocaine use” declined a full 10 percentage points from 1997 to 2001.

### Heroin

Of all DAWN sites, Miami had the greatest increase in heroin ED mentions from 1994 to 2001, increasing significantly by 546 percent. Across the coterminous United States, DAWN heroin ED mentions rose 47 percent over the same period. In Miami, the rate of

increase stabilized at nearly 15 percent between 2000 and 2001. There has been an opiate epidemic in South Florida, with concentrations greatest in Palm Beach County, immediately north of Broward County. Older, White males continue to account for the majority of opiate-addicted treatment admissions and most narcotic-related deaths. Most DAWN ED heroin-related episodes were for chronic effects or because the patient was seeking detoxification.

Throughout Florida, there were 120 heroin-involved deaths in the first half of 2002, representing a 10-percent decline from the prior 6 months.

In Miami-Dade County, heroin was detected in 14 decedents during the first half of 2002, and it was considered the cause of death in all of those cases (exhibit 2). This represented the fewest annual number of deaths attributed to heroin in the county since 1996, when there were 31 heroin-induced deaths. There were 51 heroin-related fatalities in Miami-Dade County in 2001, including 32 heroin-induced deaths. Of the 14 heroin-induced decedents during the first half of 2002, other drugs were detected in 8 cases. None of these decedents were younger than 18, 7 percent were age 18–25, 29 percent were 26–34, 50 percent were 35–50, and 14 percent were older than 50.

In the first 6 months of 2002, heroin was considered a cause of 22 deaths in Broward County. In two of these deaths, the combination of heroin and cocaine was determined to be the cause; one death was caused by oxycodone and heroin. Heroin alone was involved in seven deaths, while heroin combined with alcohol and/or benzodiazepines in various combinations accounted for the remaining heroin-related deaths. Interestingly, there were no methadone/heroin combination deaths, although there were 18 methadone-induced deaths and 22 heroin-induced deaths.

In the first half of 2002, Broward County heroin decedents remained predominately White (91 percent) and male (86 percent), similar to the past several years. Of the 22 heroin decedents in Broward County, none were younger than 18; 20 percent were age 20–29, 23 percent were 30–39, 36 percent were 40–49, and 18 percent were older than 50.

From 1995 to 2000, Miami-Dade County recorded the greatest number of heroin-involved deaths of any county or medical examiner district in the State. By the first half of 2002, Miami-Dade County ranked sixth in the State for heroin-involved deaths, behind Palm Beach County, Broward County, Hillsboro County (Tampa), St. Petersburg, and Orlando.

As noted earlier, in Miami-Dade County the number of DAWN heroin ED mentions increased significantly from 258 in 1994 to 1,666 in 2001 (exhibit 1), the largest percentage increase (546 percent) in heroin ED mentions across the coterminous United States. Males accounted for 81 percent of the 2001 heroin ED mentions. Among the heroin ED mentions, White non-Hispanics accounted for 61 percent, Blacks for 23 percent, and Hispanics for 15 percent. Of these racial/ethnic groups, the number of Hispanic mentions increased most significantly (1,055 percent) between 1994 and 2001, 1999 to 2001 (187 percent), and 2000 to 2001 (37 percent). One-third of the mentions in 2001 were age 26–34, 34 percent were 35–44, one-fifth were older than 44, and 12 percent were 18–25. Data on episode characteristics show that dependence accounted for 95 percent of the “drug use motive” for heroin; two-thirds of the mentions cited “seeking detoxification” as the reason for ED contact.

Based on a daily review of all ED charts at BGMC for the first half of 2002, there were 65 heroin cases (5 percent of all illicit substance abuse cases), a slight decline from the second half of 2001 when there were 70 cases (6 percent). However, the 159 cases in 2001 represented a 15-percent increase from 2000, when there were 138 heroin cases.

The BGMC heroin cases in the first half of 2002 were predominantly older White males, with males accounting for 72 percent of the ED patients and Whites for 83 percent. Of the 65 heroin cases, 3 percent were teenagers, 20 percent were in their twenties, 40 percent were in their thirties, 23 percent were in their forties, and 14 percent were age 50 or older.

Heroin was the sole drug of abuse (with or without alcohol) in 40 percent of the heroin BGMC ED cases. Cocaine was a coexposure in 48 percent of the cases, followed by benzodiazepine (26 percent) and marijuana (11 percent). Alcohol was involved in 52 percent of cases. The most common reason for the patient to visit the BGMC ED was withdrawal/seeking detoxification (40 percent of the cases). Depression accounted for 17 percent of the cases, followed by altered mental status (9 percent). Psychosis and chest pain each accounted for 3 percent of the heroin ED cases.

In the first half of 2002, 3 percent ( $n=60$ ) of the Spectrum treatment sample reported heroin as their primary drug of abuse. One-half of these clients were older than 34, 20 percent were age 25–34, 22 percent were 18–24, and 8 percent were younger than 18. White non-Hispanics accounted for 66 percent of the

heroin treatment clients, Hispanics for 20 percent, and Blacks for 13 percent.

During the first half of 2002, 102 heroin cases were analyzed by the BSO Crime Lab, compared with 71 such cases during the first half of 2001.

Colombian heroin is still reported as being widely available in South Florida. Heroin prices have remained steady at about \$60,000–\$65,000 per kilogram over the past year after declining sharply several years 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 \$10 bag of heroin (roughly 20 percent purity) weighing about one-tenth of a gram is the most common unit of street heroin. One street name given to heroin in the southeastern United States is “bin laden murder one.”

Current heroin use was reported by 1.1 percent of Miami-Dade middle and high school students in the 2001 survey conducted by The Miami Coalition.

### Other Opiates

Deaths from opiates other than heroin have been tracked in Florida since 2000. Methadone-related deaths increased 31 percent statewide between the second half of 2001 and the first half of 2002, rising from 194 to 254. Methadone was the cause of death in 52 percent of the cases in the first half of 2002. The number of hydrocodone deaths rose 19-percent from 209 in the second half of 2001 to 248 in the first half of 2002; it was the cause of death in 25 percent of those cases in 2002. The number of oxycodone deaths increased 7 percent from 249 in the second half of 2001 to 267 in the first half of 2002; it was the cause of death in 42 percent of those cases in 2002.

In the year 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. Since Florida is by far the most heavily populated of these five States, it is the largest market for OxyContin. A proposal to establish a prescription drug monitoring program in Florida to combat prescription drug abuse failed to pass the State legislature in 2002.

Miami-Dade County reported seven oxycodone-related deaths during the first half of 2002; three were oxycodone-induced deaths (exhibit 2). Broward County recorded 33 oxycodone-related deaths; 22 were oxycodone-induced deaths. Only 1 of the 22 cases in Broward County involved only oxycodone. Benzodiazepine was present in 73 percent of these cases, and

was at lethal levels in 64 percent of the cases. In Palm Beach County, there were 30 oxycodone-related and 12 oxycodone-induced deaths.

Miami-Dade County reported nine hydrocodone-related deaths during the first half of 2002; four were hydrocodone-induced. Broward County recorded 14 hydrocodone-related deaths; 6 were hydrocodone-induced. In Palm Beach County, 5 of the 22 hydrocodone-related deaths were hydrocodone-induced.

Miami-Dade County reported five methadone-related deaths during the first half of 2002; three were considered methadone-induced. Broward County recorded 18 methadone-related deaths; 15 were considered methadone-induced. In Palm Beach County, there were 37 methadone-related deaths, with 24 considered methadone-induced.

The number of DAWN narcotic analgesics ED mentions in Miami-Dade County increased 254 percent between 1994 and 2001, rising from 86 to 304 (exhibit 1). The number of ED mentions for narcotic analgesics/combinations also increased significantly (55 percent), from 86 to 133 between 1994 and 2001, and again from 1999 to 2001 approximately 70 percent.

A total of 36 oxycodone overdose ED cases were treated at BGMC in the first half of 2002. Males accounted for 55 percent of the cases, and 89 percent were White. The ages of these patients ranged from 16 to 53. There was one teenager; 16 percent of the patients were in their twenties, 42 percent were in their thirties, 32 percent were in their forties, and 8 percent were age 50 or older. The brand name product, OxyContin, was specifically mentioned in 61 percent of these cases. The route of administration was unclear upon reviewing most charts.

In 34 percent of the oxycodone cases, the reason for visiting the BGMC ED was dependence/withdrawal. In 16 percent of the cases, the drug was used non-medically. In 26 percent of cases, oxycodone was being used for other psychic effects (e.g., pain relief), and in 18 percent of cases, the oxycodone was taken in a suicidal gesture.

Five percent of the oxycodone ED patients at BGMC presented with central nervous system depression, and 5 percent visited the emergency department because of convulsions. Naloxone was administered to 14 percent of these cases. Twenty-six percent required hospital admission, and 74 percent were treated and released from the emergency department. Co-ingestants included benzodiazepines (in 32 percent of the cases), marijuana (16 percent), cocaine (39 percent), other opioids such as heroin or metha-

done (29 percent), and hydrocodone (2 percent). The benzodiazepine alprazolam was identified in 21 percent of all cases.

Diverted OxyContin is being sold in the same places that had traditionally sold crack cocaine, according to law enforcement in the Office of National Drug Control Policy's April 2002 Pulse Check.

The BSO Crime Lab analyzed 115 oxycodone cases in the first half of 2002 compared with 95 in the previous 6 months. There were also 88 hydrocodone crime lab cases in the first half of 2002 compared with 69 in the second half of 2001.

### **Marijuana**

Cannabinoids were detected in 331 deaths statewide in the first half of 2002. If this trend continues for the rest of the year, the total deaths in 2002 will be 6 or 7 percent lower than the 707 marijuana-related deaths for all of 2001.

In Miami-Dade County, marijuana ED mentions reported by DAWN increased 171 percent from 1994 to 2001 and nearly 51 percent from 1999 to 2001. In 2001, there were 1,932 mentions (exhibit 1). In 2001, the rate of marijuana ED mentions per 100,000 population across the coterminous United States was 44; Miami ranked sixth in the DAWN system, with a rate of 94. A demographic profile of the Miami ED mentions from 2001 shows that 74 percent were male, 47 percent were Black, 37 percent were White, and 15 percent were Hispanic. Nine percent of the marijuana ED patients were age 12–17, 27 percent were 18–25, 24 percent were 26–34, and 40 percent were age 35 and older.

There were 461 BGMC marijuana ED cases in the first half of 2002, representing 37 percent of all drug ED mentions. Seventy-five percent of the patients were male. Whites accounted for 57 percent of marijuana ED cases, Blacks for 37 percent, and Hispanics/others for 5 percent. Twelve percent were teenagers, 32 percent were in their twenties, 28 percent were in their thirties, 21 percent were in their forties, and 6 percent were age 50 or older.

Marijuana was the only illicit drug (with or without alcohol) in 41 percent of the BGMC ED marijuana cases. More than one-third of the Broward County marijuana ED cases involved marijuana in combination with cocaine. Marijuana was also found in combination with MDMA or amphetamines in 26 additional cases. In 15 percent of the cases, alcohol was the only documented coingestant with marijuana.

The most common reasons for BGMC marijuana ED visits in the second half of 2001 were as follows: depression/suicidal (26 percent), trauma (13 percent), psychiatric-related (e.g., hallucinations, anxiety, bizarre behavior, delusions) (10 percent), chest pain (9 percent), and altered mental status (8 percent).

Marijuana is still the most prevalent drug of abuse among young patients treated in the BGMC ED. Fifty-nine percent of all illicit substance abuse cases in the 12–25 age group involved marijuana.

In the first half of 2002, 970 treatment clients (54 percent of the Spectrum sample) cited marijuana as their primary drug of abuse. Forty-eight percent were White, 38 percent were Black, and 14 percent were Hispanic/other. In contrast to cocaine and heroin patients, those seeking treatment for marijuana tended to be younger: 34 percent were age 17 or younger and 27 percent were 18–25.

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.

The Miami-Dade School Survey showed a continuing downward trend in current (past-30-day) marijuana use among middle and high school students, from 13.4 percent in 1995 to 9.4 percent in 2001. Yet, the perceived use of marijuana by friends and ease in obtaining the drug increased between 1999 and 2001. The 2002 Florida Youth Substance Abuse Survey reported decreases in lifetime marijuana use statewide since 2000, with decreases noted among 8th graders (24.4 to 19.8 percent), 10th graders (38.6 to 32.9 percent), and 12th graders (43.9 to 40.6 percent). Students in Miami-Dade County recorded the lowest rate of current marijuana use in the State, at 6.5 percent of all students in grades 6–12. Ten percent of the Broward County students reported current marijuana use, ranking the county fifth lowest among the 60 counties reporting.

### **Gamma Hydroxybutyrate (GHB)**

The anesthetic GHB is a commonly abused substance in South Florida. Several compounds that are converted by the body to GHB include gamma butyrolactone (GBL) and 1,4 butanediol (1,4 BD). Recently, most GHB abuse has involved 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. The drugs 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 Florida, GHB-related deaths increased from 23 in 2000 to 28 in 2001. However, there were only eight GHB deaths in the second half of 2001, a 60-percent decrease from the previous 6 months. An additional eight GHB-related deaths were reported in the first half of 2002, one of which was considered to be caused by the drug.

GHB-involved deaths in Miami-Dade County declined from three in 2000 to one in 2001. No GHB-involved deaths were reported in the first half of 2002.

In Broward County, there were three GHB-caused fatalities in the first 6 months of 2002. The first involved a 30-year-old White male who was found with two empty medication bottles, one of an antidepressant (amitriptyline) and one of an antipsychotic/anticonvulsant (gabapentin). He was pronounced dead at the scene. On autopsy, both medications, as measured in his blood, 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 (2,520 milligrams per deciliter). Given this information, the cause of death was recorded 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 by this man.

In the 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 no history of GHB abuse, but his blood GHB level was extremely high, at 1,600 milligrams per deciliter, and he was also positive for benzodiazepines. His blood alcohol level was negative. This death, caused by GHB, was also considered to be a suicide.

The third death involved a 21-year-old White male with a history of alcoholism but apparently no 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 staff of the Fire Rescue and the emergency department were unsuccessful. Initially, the medical examiner ruled that he had died of natural causes. However, the autopsy found a GHB blood level of 589 milligrams per deciliter. 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 there was no documented GHB abuse history, he was a user of multiple “health foods.”

From 1996 to June 2002 in Broward County, there was 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 the first 6 months of 2002). In 12 of these cases, GHB was mentioned as one of the causes of death. In another case, a patient who was admitted to a hospital for GHB intoxication appeared to have recovered but subsequently succumbed because of other problems. In still another death, the patient was dead on arrival at the BGMC ED; the death was recorded as a multiple drug overdose that included a history of GHB use. However, the medical examiner found GHB to be a non-contributory cause of death.

Ten of the 12 GHB-caused fatalities involved co-ingestants, including alcohol, cocaine, marijuana, benzodiazepines, opioids, carisoprodol (Soma), sertraline (Zoloft), gabapentin, amitriptyline, and methylenedioxymethamphetamine (MDMA or ecstasy). Alcohol was detected in seven cases in quantities ranging from 90 to 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 refute the commonly espoused misperception that GHB is only fatal when taken with another central nervous system depressant. Two of the 12 cases were ruled suicides and had extremely high levels of GHB in their blood.

In Miami-Dade County, DAWN ED mentions for GHB rose from zero in 1994 to 46 in 2000, before declining 28 percent to 33 in 2001 (exhibit 1).

In the Broward County ED, there was a dramatic decrease in the number of GHB or GHB analog cases treated in the first 6 months of 2002, compared with 39 in the last 6 months of 2001, 32 in the first 6 months of 2001, and 77 in all of 2000.

During the second half of 2001, the BGMC ED treated 39 people with GHB or GHB precursor overdose, compared with 32 in the first half of 2001 and 77 in all of 2000. In most of the GHB overdose cases during the period from July 2001 to June 2002, the reason for the ED visit was decreased responsiveness/coma usually lasting less than 3 hours.

The ages of the 16 GHB toxicity patients at BGMC in the first half of 2002 ranged from 19 to 35, with an average of 24.3 years. There were 2 teenagers (13 percent); 11 (69 percent) were in their twenties, and 3 (19 percent) were in their thirties. Twelve of these GHB overdose patients were men (75 percent); 14 (88 percent) were White non-Hispanic, 1 (6 percent) was Native American, and race/ethnicity was unknown in 1 case.

Among the GHB BGMC patients in the first half of 2002, a urine toxicology screen was amphetamine-positive in two cases, cocaine-positive in two, and marijuana-positive in two. A urine toxicology screen was not obtained for every case. Alcohol was involved in 7 of the 16 cases, confirmed either by history or through a blood alcohol level test. In the GHB cases for which a blood alcohol level was obtained, the level ranged from zero to 212 milligrams per deciliter.

The location of the incident requiring the ED visit was a local bar, nightclub, or the beach in four cases (25 percent). Ten cases (63 percent) presented to the ED between 11 p.m. and 6 a.m. Many patients were temporarily unresponsive, and two (13 percent) required intubation and mechanical ventilation. At least 4 (25 percent) of the 16 patients vomited. Most patients were treated and released from the ED after several hours. However, one patient required hospital admission.

During the first half of 2002, six GHB, eight GBL, and six 1,4 BD cases were analyzed by the BSO Crime Lab. In the last half of 2001, there was one GHB, eight GBL, and three 1,4 BD cases analyzed by the BSO Crime Lab, compared with two GHB, five GBL, and four 1,4 BD cases in the first half of 2001. Only three GHB cases and one GBL case were analyzed by the crime lab in the second half of 2000, compared with 12 GHB-related cases and 1 GBL case during the first half of the year.

## MDMA

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 “hug drug” that can promote empathy, relaxation, and sexuality. Many indicators such as crime lab statistics and drug confiscations point to increased abuse of this drug. For the first time in 2000, more teens said they had abused MDMA or ecstasy than cocaine.

Ecstasy pills generally contain 75–125 milligrams of MDMA, but they are often adulterated. Some ecstasy pills or tablets may contain no MDMA. Wholesale prices are approximately \$8 per pill for 100 units, but retail prices in clubs and raves range from \$10 to \$50. According to local law enforcement sources, South Florida ecstasy prices began to drop in the first half of 2001, reflecting increased supply. In addition, giveaway deals are often brokered to establish future customers.

The major sources of the designer logo-emblazoned pills are clandestine labs in Western Europe, especially the Netherlands and Belgium. There are unverified rumors of clandestine labs in South Florida attempting MDMA production, and more recently, evidence suggesting that Colombian drug trafficking organizations may be trying to enter ecstasy distribution.

There were 52 methylated amphetamine-related deaths in the State of Florida during the first half of 2002; 8 were considered to have been caused by the drug. Two deaths were in Miami-Dade County and one was considered to have been caused by the drug. There were five methylated amphetamine-related deaths in Broward County, but the drug was not considered the cause of death in these cases. Florida recorded 147 methylated amphetamine-related deaths statewide in 2001; in 37 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 (exhibit 1), a 75-percent increase from 2000. A total of 105 MDMA mentions were reported in 2000, a significant increase from the 2 reported in 1994.

In Broward County, it has become increasingly difficult to determine by chart review if MDMA 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 say, and therefore it is rarely documented, which type of amphetamine was taken. Although the urine toxicology screen may be positive for amphetamines, this does not reliably distinguish between MDMA and other amphetamines. Since some patients use both, and many ecstasy pills are adulterated or substituted with other amphetamines, the picture becomes even less clear.

At BGMC, ED cases involving ecstasy during the first half of 2002 can be divided into three major categories: (1) those in which ecstasy was mentioned in the medical record and the patient tested positive for amphetamines (there was only one of these cases); (2) those in which ecstasy was mentioned but the toxicology screen was either not obtained or negative for amphetamines (there were nine of these cases); and (3) cases for which ecstasy was not specifically mentioned but was suspected, based on circumstances and a positive urine screen for amphetamines. It has become increasingly difficult to determine a number in the last category because of the increasing use of methamphetamine and other amphetamines other than ecstasy.

There were 45 additional BGMC ED cases in which some type of amphetamine was either mentioned or analyzed by toxicology screening; 39 were amphetamine-positive.

Adding only the first two categories mentioned above, there were only 10 ecstasy cases. If the third category is added, there were 55 cases. The actual number is probably somewhere in between.

By adding all three of these types of cases, there were a total of 30 ED cases at BGMC in which ecstasy was involved in the last half of 2001. This was down from 49 in the previous 6-month period.

There are several reasons to believe that more and more of these amphetamine cases are methamphetamine or amphetamines other than ecstasy. First, with the increased airport security since September 11, 2001, less ecstasy may be available. Secondly, as methamphetamine and other amphetamines become more popular and cheaper, they are more readily available adulterants or substitutes.

The 10 ecstasy (MDMA) cases were all young, White non-Hispanic patients age 15–27. Forty percent were in their teens, the others were in their twenties. Sixty-percent also tested positive for marijuana; 30 percent had used cocaine, 20 percent had used alcohol, and only 1 had also used GHB.

Sixty-percent were in the ED because of anxiety, agitation, confusion, paranoia, or bizarre behavior, 20 percent for altered mental status/decreased responsiveness, and 10 percent for depression/suicidal ideation.

In the first half of 2002, the BSO Crime Lab analyzed 115 MDMA cases (only 1 was MDMA and 2 were methylenedioxyamphetamine [MDA]). In the last half of 2001, there were 121 MDMA cases; there were 132 in the first 6 months of 2001. MDMA was the fourth most common case analyzed, behind cocaine, marijuana, and alprazolam.

According to the 2002 Florida Youth Substance Abuse Survey, lifetime ecstasy use among 12th graders was at an all time high (14.2 percent), and ecstasy was used more often than any other illicit drug except marijuana. Twice as many Florida 12th graders had used ecstasy in their lifetime as had used cocaine, and 10 times as many seniors had used ecstasy as had used crack cocaine. The 2002 Florida Survey also showed that current (past-30-day) ecstasy use was reported by 1.4 percent of Miami-Dade County and 1.3 percent of Broward County 6–12th graders. MDMA current use was reported by 2.8 percent of

Miami-Dade 7th–12th graders in the 2001 survey conducted by the Miami Coalition.

### Other Stimulants

Methamphetamine abuse is an emerging drug epidemic (in the “outbreak” stage) across the region and is linked to the techno-dance scene. The drug is being promoted to populations of men who have sex with men (MSM), who often combine it with sildenafil (Viagra) for high-risk sexual behavior known as “Party and Play” (PNP). Sources report the drug is being shipped by overnight delivery from California. Law enforcement sources confirm increased local trafficking of methamphetamine.

There was a significant increase in methamphetamine cases analyzed by the BSO Crime Lab in the first half of 2002. There were 41 cases from January to June 2002, more than the total of 39 in 2001. There were 30 cases 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 16 of the 52 methylated amphetamine-related deaths in Florida in the first half of 2002. The drugs were detected in 44 of the 147 methylated amphetamine-related deaths statewide in 2001.

Between the 2000 and 2001, the number of amphetamine-related DAWN ED mentions in Miami-Dade County declined insignificantly from 83 to 64 (exhibit 1). Over the same time period, there was an 80-percent increase in the number of methamphetamine-related ED mentions, from 15 to 27. It remains unclear how hospital staff classify amphetamine and methamphetamine cases.

In the first half of 2002, there were 45 BGMC ED cases involving amphetamines, either as mentioned in the history or detected in a toxicology screen, more than the total for MDMA cases. This represents a 55-percent increase over the 29 cases in the previous 6-month period. Of the 45 cases, 84 percent were White and 78 percent were male. Teenagers accounted for 13 percent of the cases; 29 percent were in their twenties, 40 percent in their thirties, 13 percent in their forties, and 4 percent in their fifties. Most cases were amphetamine-positive on their toxicology screens (39, or 86 percent). In the majority of cases, the exact form of the amphetamine was not documented. However, a smokable form of methamphetamine was documented in two cases. Marijuana was a cointoxicant in 44 percent of the cases, cocaine in 20 percent, and GHB in

one case (2 percent). Fifteen patients (33 percent) came to the ED for altered mental status, and 5 cases (11 percent) were described as an overdose. Four of the patients reported gastrointestinal problems, four reported depression, and four others reported psychiatric problems (9 percent each). Other common complaints included chest pain ( $n=3$ ), convulsions ( $n=3$ ), and trauma ( $n=3$  or 7 percent each).

Local and national media has focused on the abuse of methylphenidate (Ritalin) by college students who use it either orally or crush it for intranasal use. Hotline calls and student personnel administrators at local universities confirm that methylphenidate abuse is a problem.

### **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 by most hospital urine toxicology screens. The drug became popular again in the 1990s at lower doses as a stimulant and hallucinogen. However, in Miami-Dade County, LSD appears to be losing popularity among young people.

There were 55 LSD DAWN ED mentions in Miami-Dade County in 2001, the same number reported in 2000 (exhibit 1).

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 more difficult to track benzodiazepine abuse than abuse of other substances. However, there are indicators that point to benzodiazepines in general and alprazolam (Xanax) in particular as substantial problems. Benzodiazepines were second only to alcohol in drug-related deaths throughout Florida.

There were 734 benzodiazepine-related deaths in Florida during the first half of 2002; a benzodiazepine was identified as the cause of death in 150 (20 percent) of these cases.

Benzodiazepines in general, and alprazolam (Xanax) in particular, are popular among opioid abusers. In Broward County, benzodiazepines were involved in 16 of the 22 oxycodone deaths and alprazolam in 12 in the first half of 2002. Among Broward County heroin-caused fatalities, benzodiazepines were involved in 8 of the 22 deaths and alprazolam in 5 over the same time period. Benzodiazepines were also involved in 11 of the 16 Broward County methadone-caused deaths and in 8 of the 11 hydrocodone-caused deaths. In addition, benzodiazepines were involved in 17 of the 30 Broward cocaine-involved deaths in the first half of 2002.

DAWN ED data reveal that alprazolam is the fifth most commonly mentioned drug across DAWN sites, ranking behind cocaine, alcohol-in-combination, marijuana, and heroin. In Miami-Dade County, DAWN benzodiazepine-related ED mentions totaled 1,075 in 2001, representing a 43-percent increase over the number for 1999 (exhibit 1). Alprazolam accounted for 39 percent of these mentions, clonazepam for 10 percent, diazepam for 8 percent, temazepam for 7 percent, and lorazepam for 6 percent. A non-specified benzodiazepine accounted for 25 percent of these mentions.

In Broward County, benzodiazepines were involved in 32 percent of the 38 oxycodone hospital ED cases in the first half of 2002; alprazolam was involved in 21 percent of the oxycodone cases.

The BSO crime lab analyzed 296 alprazolam cases in the first 6 months of 2002, 244 in the last 6 months of 2001, and 258 in the first 6 months of 2001. The 2001 cases are almost three times the numbers for ecstasy and oxycodone cases. The BSO Crime Lab analyzed more alprazolam cases in 2002 than any other drug except cocaine and marijuana.

According to Broward High School substance abuse counselors, the most common drugs of abuse among high school students are alcohol, marijuana, and Xanax. Students refer to Xanax as “Xany Bars” or just “bars.” Alprazolam (Xanax) was added to the category of “Depressants” in the 2002 Florida Youth Abuse Survey. Lifetime use of “Depressants” increased from 4.0 percent in 2001 to 5.1 percent in 2002 among 8th graders, from 8.7 to 10.3 percent among 10th graders, and from 8.9 to 12.7 percent among 12th graders.

---

*For inquiries concerning this report, please contact James N. Hall, Up Front Drug Information Center, 12360 SW 132nd Court, Suite 215, Miami, Florida 33186, Phone: (786) 242-8222, Fax: (786) 242-8759, E-mail: <upfrontin@aol.com>.*

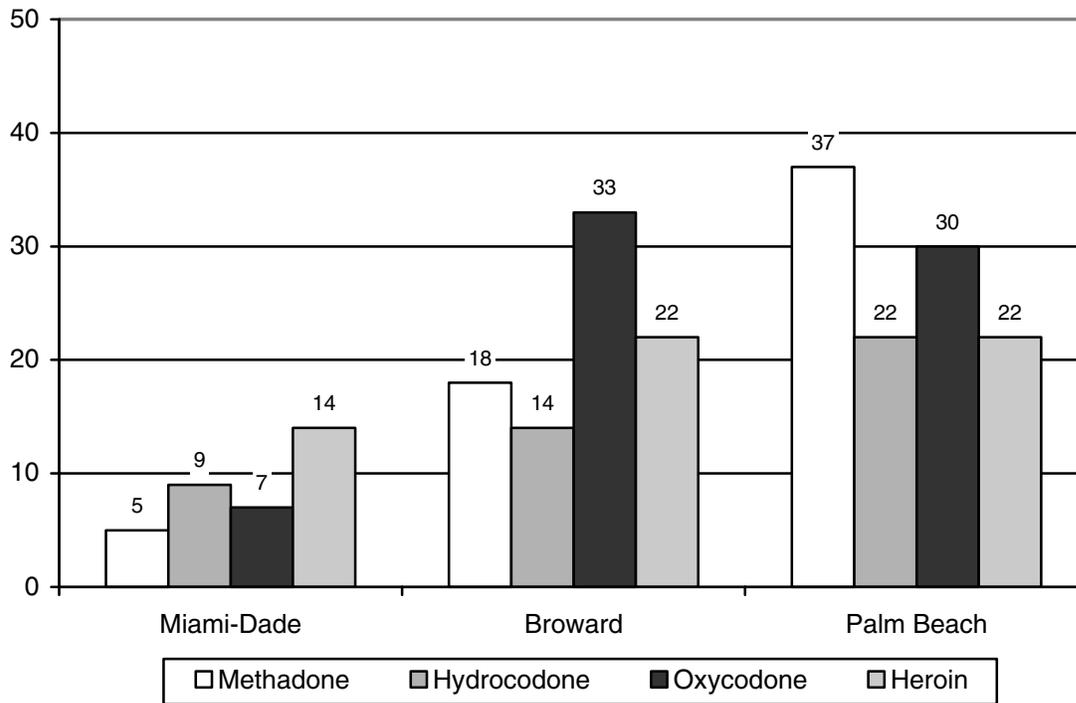
**Exhibit 1. Number of ED Mentions for Selected Drugs in Miami-Dade County: 1994–2001**

Drug Category	1994	1995	1996	1997	1998	1999	2000	2001
Cocaine	2,748	3,078	3,104	3,254	3,553	4,018	4,383	4,641
Heroin	258	333	388	591	767	917	1,452	1,666
Marijuana	713	966	1,011	1,024	1,113	1,283	1,768	1,932
Amphetamines	... <sup>1</sup>	...	...	28	64	53	83	64
Methamphetamine	8	5	9	10	16	9	15	27
MDMA	2	4	9	28	12	59	105	184
LSD	74	83	54	63	54	50	55	55
PCP	7	8	15	14	14	9	15	9
GHB	0	0	...	2	10	29	46	33
Benzodiazepine	700	742	769	715	761	750	963	1,075
Narcotic Analgesics	86	117	120	139	190	197	242	304
Narcotic Analgesics/Combinations	86	81	82	73	84	78	128	133

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

SOURCE: DAWN, OAS, SAMHSA

**Exhibit 2. Number of Narcotic-Related Death Mentions in Three Florida Counties: January–June 2002**



SOURCE: Florida Medical Examiners Commission and Broward County Medical Examiner Department

# Drug Abuse Trends in Minneapolis/St. Paul

Carol L. Falkowski<sup>1</sup>

## ABSTRACT

*Law enforcement seizures of cocaine and most other illicit drugs increased in 2002. Hospital emergencies involving cocaine jumped 34 percent from 2000 to 2001. The nonmedical use of prescription narcotic analgesics, particularly oxycodone, was identified as an emerging problem of expanding magnitude, as illustrated by hospital emergency department episodes, accidental deaths, and law enforcement activity. The continuing availability of high purity, low-cost heroin contributed to accidental overdose deaths and hospital emergencies. Methamphetamine-related hospital emergencies more than doubled from 2000 to 2001, although the growth in clandestine methamphetamine labs slowed somewhat. Hospital emergencies involving MDMA ('ecstasy') continued to increase, although less rapidly than in the past, and GHB hospital emergencies actually declined in 2001. More pills sold as ecstasy were found to contain substances other than MDMA. Roughly 4,000 annual admissions to addiction treatment programs cited marijuana as the primary substance problem; one-half of the patients were younger than 18.*

## INTRODUCTION

This report was compiled using the most recent available data and information from multiple sources. It is produced twice annually as part of a nationwide drug abuse epidemiological surveillance network of the National Institute on Drug Abuse.

### Area Description

The Minneapolis/St. Paul metropolitan area includes the City of Minneapolis (Hennepin County), the capital City of St. Paul (Ramsey County), and the surrounding counties of Anoka, Dakota, and Washington. Based on the 2000 census, the population is 2,482,353, roughly one-half of the Minnesota State population. More than one-half (56 percent) of the Ramsey County population live in the City of St. Paul, and one-third (34.2 percent) of the Hennepin County population live in the City of Minneapolis. The remainder of the State is more sparsely populated and rural in character.

In the five-county metropolitan area, 84 percent of the population is White. African-Americans constitute the largest minority group in Hennepin County, while Asians are the largest minority group in Ramsey, Anoka, Dakota, and Washington Counties. The total State population increased 9 percent from 1990 to 1998, while the minority population increased 45 percent. The Hmong population doubled over the past decade in St. Paul, reaching over 24,000, making it home to the largest Hmong population of any city in the United States. An estimated 40,000 Somalis also reside in the metropolitan area.

The majority of Minnesota's 600-mile northern international border with Canada is remote, undeveloped wilderness area. Duluth, the largest U.S. inland harbor, and other Lake Superior ports manage a high volume of foreign shipping, which also increases the opportunities for smuggling activity. Interstate Highway 35 runs north-south from Duluth through Minneapolis/St. Paul to the Mexican border. Interstate 90, which runs east-west from Boston to Seattle, passes through southern Minnesota, and Interstate 94 connects Minneapolis/St. Paul to Chicago. Minnesota borders Wisconsin to the east, Iowa to the south, and North Dakota and South Dakota to the west.

According to the 1999 National Household Survey on Drug Abuse (of people age 12 and older), 6.1 percent of Minnesotans reported illicit drug use in the past month, compared with 6.4 percent nationally. However, Minnesota ranked 10th highest for past-month illicit drug use among young people age 12–17 (11.6 percent, compared with 9.9 percent nationally), and among those age 18–25 (19.2 percent, compared with 16.1 percent nationally).

### Data Sources

- **Mortality data** on drug-related deaths are from the Hennepin County Medical Examiner and the Ramsey County Medical Examiner (through September 2002). Hennepin County cases include those in which drug toxicity was the immediate cause of death and those in which the recent use of a drug was listed as a significant condition contributing to the death. Ramsey

<sup>1</sup> The author is affiliated with the Butler Center for Research, Hazelden Foundation, Center City, Minnesota.

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 weighted estimates from the Drug Abuse Warning Network (DAWN), Office of Applied Studies, Substance Abuse and Mental Health Services Administration (SAMHSA), U.S. Public Health Service. These are weighted estimates of all drug abuse-related ED mentions in non-Federal, short-term general hospitals in the Minneapolis/St. Paul standard metropolitan statistical area (through 2001). 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 June 2002).
- **Poison center data** are from the Hennepin Regional Poison Center, Toxic Exposure Surveillance System (through September 2002).
- **Arrestee drug testing data** are from the Arrestee Drug Abuse Monitoring (ADAM) program of the National Institute of Justice (NIJ), U.S. Department of Justice, under the local direction of the Minneapolis Medical Research Foundation (through 2001). During 2001, there were 5,031 bookings of male arrestees in Hennepin County, from which a sample of 765 was drawn.
- **Drug-related law enforcement data** and information are from various agencies, including the U.S. Drug Enforcement Administration (DEA), the Hennepin County Sheriff, the Washington County Sheriff, the Ramsey County Sheriff, the St. Paul Police Department, and the Minneapolis Police Department. Crime lab data on seizures and purity level are from the St. Paul Police Department, the Minneapolis Department of Health and Family Support, and the Minnesota Bureau of Criminal Apprehension (through September 2002).
- **Acquired immunodeficiency syndrome (AIDS) data** are from the Minnesota Department of Health (through 2001).

- **Additional drug-related information** is from interviews with program staff of treatment programs, poison control specialists, and school-based “chemical health” specialists (November 2002).

## DRUG ABUSE PATTERNS AND TRENDS

### Cocaine and Crack

Indicators related to cocaine abuse either increased or remained stable in 2002. There were 22 cocaine-related deaths in Hennepin County in 2002 (through September), compared with 37 in all of 2001. Three of these cases involved the simultaneous use of opiates, one involved the use of amphetamines, and one was a stillbirth in which the maternal use of cocaine during pregnancy was a significant contributing condition. Ramsey County reported 7 deaths in 2002 (through September) and 11 in 2001. Five involved the simultaneous use of opiates.

Cocaine-related ED mentions increased 31.4 percent from 2000 to 2001, after increasing a significant 35.7 percent between 1999 and 2001. The numbers are shown in exhibit 1. The rate of cocaine-related hospital emergencies was 43 per 100,000 population in 2001, compared with 35 in 2000, a significant increase of nearly 23 percent. Very few (4.5 percent) cocaine mentions were made by those younger than 18, and nearly one-half (46.4 percent) of them were made by those age 35 and older (exhibit 2).

In the first half of 2002, 11.7 percent of the more than 8,800 admissions to treatment programs were cocaine-related (exhibit 3). Most of the 1,030 cocaine-related admissions were for crack cocaine. More than one-half (52.1 percent) were African-American, and 59.6 percent were age 35 and older (exhibit 4).

Roughly one-quarter (27.8 percent) of adult males arrested in Minneapolis in 2001 tested positive for cocaine (exhibit 5).

Seizures and law enforcement cases involving cocaine increased in 2002. Gangs continued to play a significant role in the street-level, retail distribution of cocaine, especially crack. Cocaine prices were \$100 per gram, \$200 per “eightball” (one-eighth ounce), \$700–\$800 per ounce, and \$22,000 per kilogram. The price of a rock of crack was \$10–\$20, higher in suburban and rural areas.

## Heroin

Heroin-related indicators remained at heightened levels in 2002. Opiate-related deaths, most from accidental heroin overdose, again surpassed those from cocaine in both cities, fueled by the steady supply of high-purity heroin at low prices.

Hennepin County reported 46 opiate-related deaths in 2002 (through September), compared with 58 in 2001, and 41 in 2000. Most were accidental heroin overdoses, although a growing number (nine) involved nonmedical use of prescription oxycodone, three were accidental methadone overdose deaths, and two were fentanyl overdose deaths. Three involved the simultaneous use of cocaine, and one involved the use of amphetamines. The ages of the decedents ranged from 22 to 58, with an average age of 41.7. Most were male, and seven were female.

Ramsey County reported 11 opiate-related deaths in 2002 (through September); 5 also involved opiates and 1 involved oxycodone. Two were female. This compares with 19 opiate-related deaths in 2001 and 17 in 2000. The age of decedents ranged from 23 to 48, with an average age of 38.4.

Heroin-related ED mentions rose 48 percent from 228 in 2000 to 338 in 2001 (exhibit 1) and increased nearly 86 percent from 1999 to 2001. The rate of heroin-related ED mentions per 100,000 population was 13 in 2001, compared with 9 in 2000, an increase of 38.4 percent. None of the mentions involved persons younger than 18; 51 percent involved persons age 35 and older.

Three percent of clients entering addiction treatment programs in 2002 reported heroin as the primary substance problem, a proportion basically unchanged from 2001 (exhibit 3). Most (82 percent) were age 26 and older (exhibit 4). More than one-half (55 percent) reported injection as the primary route of administration, and 40 percent reported sniffing. In addition to abstinence-based treatment programs, 6 methadone maintenance programs served roughly 1,400 clients in the metropolitan area. Among Minneapolis male arrestees in 2001, 5.3 percent tested opiate-positive (exhibit 5).

Law enforcement activity related to heroin increased in 2002. The St. Paul crime lab had 21 heroin cases in 2002 (through September), compared with 11 during the same period in 2001. Purity levels remained high. For example, 14 of the 32 samples analyzed at the Minneapolis lab had purity levels of 70 percent or greater.

The heroin seized by law enforcement officials in Hennepin County was typically white, off-white, or tan powder. The most commonly seized heroin in Ramsey County was dark-colored, Mexican “black tar” heroin. Since 2000, heroin prices have been at record low levels. Heroin sold for as little as \$10 per dosage unit or “paper,” \$50 per quarter gram, \$350–\$400 per gram, and \$900–\$2,000 per ounce.

## Other Opiates/Narcotics

Narcotic analgesics, medically prescribed for the treatment of pain, are sometimes used as heroin substitutes or are consumed by drug abusers and others seeking the predictable mood-altering, narcotic effects. DAWN collects data only on emergency department incidents involving the nonmedical use of these drugs.

In 2001, there were 953 hospital ED mentions of narcotic analgesics and narcotic analgesic combinations (collectively called “narcotic analgesics/combinations”), compared with 664 in 2000 and 461 in 1996 (exhibit 6). This represents a doubling since 1996 and a 43.5-percent increase from 2000 to 2001 alone. The rate of narcotic analgesics/combinations per 100,000 population rose nearly 105 percent from 18 in 1994 to 37 in 2001.

Some of the incidents in this category involved narcotic analgesics and some “narcotic analgesic combinations,” which are narcotic analgesics combined with other substances, such as acetaminophen or aspirin. There are significantly different trends for individual drugs, however, as discussed below and presented in exhibit 6.

Hospital emergencies involving codeine/codeine combinations declined 28.4 percent from 2000 to 2001. There were 96 mentions of codeine/codeine combinations in 2001, accounting for 10 percent of the total 953 narcotic analgesics/combinations that year. Most (86) involved codeine combined with acetaminophen. Propoxyphene/propoxyphene combinations (Darvon, Darvocet) declined nonsignificantly from 99 in 1999 to 72 in 2001. Almost all (61) involved the propoxyphene-with-acetaminophen combination (Darvocet).

In contrast, hospital ED mentions involving hydrocodone/hydrocodone combinations more than doubled since 1997 and increased a significant 54 percent from 2000 to 2001 alone. The 188 mentions of hydrocodone/hydrocodone combinations in 2001 represented 19.7 percent of the total narcotic analgesics/combinations that year. Almost all (177 out of

188) were hydrocodone with acetaminophen (Vicodin). Hydrocodone-related calls to the Hennepin Regional Poison Center grew from 5 in 2000 to 16 in 2001 (through September).

Methadone ED mentions more than doubled from 2000 to 2001, rising from 60 to 122 (103 percent change), and accounting for 12.8 percent of the total narcotic analgesics/combinations in 2001. Morphine ED mentions increased significantly as well, with 45 in 2001, compared with only 10 in 2000. Hydromorphone (Dilaudid), although a prescription painkiller popular among addicts, rarely appeared in hospital ED data, with 7 mentions in 2001 and 5 in 2000.

Oxycodone (Percodan, Percocet, and the longer-acting OxyContin) appears to be a significant and growing drug of abuse based on hospital, medical examiner, poison center, and law enforcement data. ED mentions of oxycodone/oxycodone combinations more than doubled from 2000 to 2001 (from 101 to 222, a significant 120-percent increase) and increased 372 percent from 1994 to 2001. Oxycodone accounted for 23.3 percent of the total narcotic analgesics/combinations ED mentions in 2001. The largest increase was in oxycodone-only mentions, which increased nearly fivefold from 2000 to 2001 (from 15 to 72, or 380 percent). Oxycodone-with-acetaminophen ED mentions increased 78 percent (from 80 in 2000 to 143 in 2001). ED mentions of oxycodone with aspirin remained stable and low, at seven in 2001.

Nine accidental overdose deaths in Hennepin County were attributable to oxycodone in 2002 (through September), compared with three in 2001. The ages of the decedents ranged from 29 to 56, with an average age of 39.3. All were male, seven were White, one was African-American, and one was American Indian. In Ramsey County, there was one oxycodone death in 2002 and two in 2001.

Law enforcement activity involving oxycodone escalated as well. The State crime lab reported 21 cases in 2002 (through September), compared with 18 in 2001. The St. Paul Police Department crime lab handled 14 oxycodone cases in 2002 (through September), compared with 4 during the same time period last year. The Hennepin Regional Poison Center received 7 calls regarding ingestion of oxycodone/combinations in 2001 compared with 17 in 2002 (through September).

In 2002, two deaths in Hennepin County and one in Ramsey County involved fentanyl, an extremely potent narcotic analgesic. There were eight fentanyl

ED mentions in 2001. Earlier this year, the sale of fentanyl lollipops on the black market was reported. Within the Hmong community, opium smoking continued, as a steady stream of packages containing opium were shipped from Asia to residents of the Southeast Asian community in the Twin Cities.

## **Marijuana**

Marijuana indicators continued upward trends. Hospital ED mentions increased 49.4 percent from 2000 to 2001, and 92.0 percent from 1999 to 2001 (exhibit 1). There were 46 marijuana ED mentions per 100,000 population in 2001, compared with 33 in 2000 and 26 in 1999. The changes in rates were significant. In 2001, roughly one-third (30.8 percent) of the mentions were among those younger than 18, and few (17.2 percent) were made by patients older than 35 (exhibit 2).

Marijuana was the primary substance problem reported by 22.7 percent of treatment admissions in the first half of 2002 (exhibit 4), compared with only 8 percent in 1991. One-half were younger than 18 and were entering treatment for the first time. The average age of first marijuana use among this group was 13.7 years.

Among adult male arrestees in Minneapolis, 53.4 percent tested marijuana-positive in 2001 (exhibit 5).

Marijuana cigarettes, “joints,” are sometimes dipped into other psychoactive substances, such as phencyclidine (PCP) and formaldehyde, to achieve additional, more pronounced effects or to enhance the effects of marijuana alone.

Standard grade marijuana sold for \$50 per quarter ounce, \$150–\$175 per ounce, and \$600–\$900 per pound. Higher potency “BC bud” from British Columbia sold for \$100 per quarter ounce and up to \$400 per ounce. Individual joints were typically \$5.

## **Other Stimulants**

The major stimulants of abuse other than cocaine are methamphetamine, also known as “meth,” “crystal,” or “crank,” and amphetamine, known as “speed,” or “crank.” Most indicators rose again in 2002.

Hennepin County reported seven methamphetamine-related deaths in 2002 (through September), compared with eight in 2001. Included were the deaths of two Black males (age 21 and 25) with recent methylenedioxymethamphetamine (MDMA) use a significant contributing condition. Ramsey County reported three

methamphetamine-related deaths in the first 9 months of 2002, compared with two in 2001. All were White males. None involved MDMA.

From 2000 to 2001, ED mentions of methamphetamine more than doubled (from 153 to 321, a change of nearly 110 percent); this was in the wake of a 187-percent increase a year earlier (from 1999 to 2000) (exhibit 1). There were 321 methamphetamine and 226 amphetamine-related ED mentions, for a combined total of 547 in 2001. This compares with a combined total of 342 in 2000 and 213 in 1999. Nearly 67 percent of the methamphetamine mentions involved people between the ages of 18 and 34 (exhibit 2).

Admissions to addiction treatment programs for methamphetamine accounted for 4.7 percent of total admissions in 2001 and 5.2 percent in 2002 (exhibit 3). Smoking was the most common route of administration among methamphetamine treatment admissions (38.6 percent), followed by sniffing (35.0 percent), and injection (18.0 percent) (exhibit 4).

Methamphetamine seizures increased in 2002. The State crime lab handled 883 cases in 2001 and 1,975 in 2002 (through September). The St. Paul crime lab handled 365 cases in 2002 (through September), compared with 295 during the same time period in 2001. Ramsey County reported one notable large case the summer of 2002 involving 28 pounds. Purity levels, as in years past, were still quite variable. Dimethylsulfoxide (DMSO), a fluffy, white substance used to treat arthritis in horses, was the most common cutting agent.

The growth of makeshift, do-it-yourself methamphetamine labs continued. In 2002 (through November 8) there were 230 clandestine methamphetamine labs shut down in Minnesota by the DEA, compared with 236 in 2001, and 138 in 2000.

Volatile and toxic raw ingredients, combined with rudimentary lab conditions and inexperienced “cookers,” create hazardous conditions that can lead to serious injury and property damage. The severe, long-lasting environmental contamination of surrounding areas continued to be taken seriously. For the first time, several apprehended methamphetamine lab operators were also charged in Federal court with violations of the Clean Water Act.

Methamphetamine-related calls to the Hennepin Regional Poison Center rose sharply from 7 in 2000 to 56 in 2001 (through September).

In Minneapolis 2.4 percent of adult male arrestees tested positive for methamphetamine in 2001 (exhibit 5). Prices were \$90–\$100 per gram, \$600–\$800 per ounce, and up to \$10,000 per pound. Methamphetamine comes in white, tan, and various pastel colors.

MDMA, a methamphetamine with mild hallucinogenic properties, is also known as “ecstasy,” “X,” or “e.” MDMA abuse by young people in the metropolitan area continued to escalate and was no longer limited to raves or nightclub settings. MDMA comes in small pills of different colors with various logos imprinted on them, or in capsules that typically sell for \$20 each.

MDMA hospital ED mentions rose significantly from 16 in 1999 to 77 in 2001 (exhibit 1). More females than males were represented in these mentions, and 86 percent were age 25 or younger (exhibit 2).

Law enforcement seizures of MDMA submitted to area crime labs revealed that the exact content of pills sold as ecstasy remained variable. Nearly 2,000 ecstasy pills seized by Minneapolis police actually contained a combination of MDMA, methamphetamine, and ketamine. Methylenedioxyamphetamine (MDA), a chemical similar in effect to MDMA, was also being sold as ecstasy.

Khat, a plant used for its stimulant effects in East Africa and the Middle East, first appeared several years ago within the growing Somali communities in the Twin Cities and Rochester, Minnesota. The active ingredients, cathinone and cathine, have been controlled substances in the United States since 1993. A bundle, typically wrapped in banana leaves to preserve freshness, consists of 15 to 30 khat sticks and sells for \$40. The active ingredients lose potency within 48 hours. The leaves are brewed in tea, chewed, or stuffed in the cheeks like chewing tobacco.

Methylphenidate (Ritalin), a prescription drug used in the treatment of attention deficit hyperactive disorder, is also used as a drug of abuse by crushing and snorting the pills, which sell for \$5 each. There were 26 hospital ED episodes involving methylphenidate in 2001.

### **Hallucinogens**

Lysergic acid diethylamide (LSD), a strong, synthetically produced hallucinogen, is typically sold on saturated, tiny pieces of paper known as “blotter acid,” for \$5–\$10 per dosage unit. Hospital ED men-

tions of LSD declined significantly, falling from 58 in 2000 to 19 in 2001. This decrease is probably related in large part to the growing availability and popularity of MDMA.

Ketamine, also known as “Special K,” “Vitamin K,” or “cat-killer,” is a veterinary anesthetic that first appeared as a drug of abuse among young people in Minnesota in 1997. There were three ED mentions of ketamine in 2001 and one in 2000. In 2002, the Minneapolis crime lab reported four cases of ketamine (two cases involved a white powder, one a tan powder, and one a greenish powder), and one case involving a mixture of ketamine and methamphetamine in a white powder. The State crime lab reported one ketamine case in 2001 and five in 2002 (through September). Ketamine is snorted, injected, or swallowed in capsules or pills. People under the influence are said to be in the “k-hole.”

Incidents involving ingestion of alpha-methyltryptamine (AMT), also known as “Amtrack,” or “Amthrax,” were reported by two law enforcement agencies. In both instances, it was a white granular powder purchased off the Internet that resulted in hallucinations and extreme, aggressive, and agitated behavior. Tryptamines are naturally occurring compounds with structures and properties similar to LSD. AMT is sold as powder or in capsules (for \$15 per pill). It can also be smoked or mixed with water and ingested.

There were 47 hospital ED mentions involving psilocybin mushrooms in 2001, compared with 36 in 2000 and 25 in 1999. They sell for up to \$200 per dried ounce.

PCP, a dissociative anesthetic, is most often used in combination with marijuana. Joints dipped in formaldehyde or embalming fluid, which is often mixed with PCP, are known as “wets,” “amp,” “wet sticks,” or “wet daddies.” They are easily distinguished by their pungent, unpleasant, chemical odor. PCP can also be injected or snorted. In Minneapolis, 3.3 percent of male arrestees tested positive for PCP in 2001, compared with 1.8 percent in 2000. ED mentions of PCP rose insignificantly to 24 in 2001 from 20 in 2000.

### **Sedatives/Hypnotics**

Gamma hydroxybutyrate (GHB), also known as “G,” “Gamma,” “Liquid E,” or “Liquid X,” is a highly concentrated liquid abused for its stupor-like, depressant effects and as a predatory drug-induced rape drug. It sells for \$10 by the capful.

After marked increases in prior years, GHB ED mentions declined in 2001 (exhibit 1). From 1999 to 2000, ED mentions rose from 33 to 93, an increase of 106 percent, but fell in 2001 to 68. Of the 2001 mentions, nearly one-half (48.5 percent) were made by those age 18–25. Two GHB-related deaths occurred in 1999.

Gamma butyrolactone (GBL), known as furanone dihydro, and 1,4 butanediol (“BD” or “1,4 BD”) are chemical cousins of GHB and, once ingested, convert into GHB. Despite recent State and Federal laws and regulatory actions targeting GHB, GBL, and 1,4 BD, as well as a recent nationwide, multicity law enforcement operation, it still may be possible to find recipes and purchase products containing these chemicals on the Internet, where they are sold as nutritional supplements, muscle-stimulating growth hormones, aphrodisiacs, or household cleaning solvents. In November 2001, a Minnesota man was convicted in Federal court for distributing more than 4,000 ounces of 1,4 butanediol in 1,041 separate spray bottles.

Flunitrazepam (Rohypnol), a long-acting pharmaceutical benzodiazepine known on the street as “roofies,” or “Roach pills,” produces amnesia and is also used in drug-assisted rapes and assaults. There was one ED mention of flunitrazepam in 2001 and none in 2000. However, DAWN does not record cases unless the patient knowingly ingested the drugs and thereby excludes all drug-rape cases from its database.

### **Other Drugs**

Alcohol remained the most prevalent drug of abuse and accounted for more than one-half of admissions to addiction treatment programs (exhibit 4).

In Hennepin County, there were 64 alcohol-involved deaths reported in 2002 (through September), compared with 96 in 2001. This included 5 cases of alcohol poisoning and 59 cases in which acute alcohol intoxication was listed as a significant contributing condition.

Ramsey County reported 13 alcohol-related deaths in 2002 (through September)—two from alcohol toxicity and 11 cases in which the blood-alcohol content level was over .10 percent. In comparison, there were 19 alcohol-related deaths in Ramsey County in 2000.

Because alcohol is reported by DAWN only when used in combination with other drugs, it is difficult to fully assess the relative contribution of alcohol versus

illegal drug abuse to the practice of emergency medicine. There were 2,238 ED mentions of alcohol-in-combination in 2001, compared with 1,780 in 2000, an increase of nearly 26 percent.

This year in Hennepin County, a 38-year-old Hispanic male died because of intentional inhalation of gold paint and paint thinner fumes.

School-based counselors and emergency medicine staff reported the intermittent abuse of dextromethorphan (DXM), a substance found in over-the-counter cough medications and sold as a powder or in clear capsules for \$5. Calls related to ingestions of cough/cold preparations, most of which contained DXM, grew from 68 in 2001 to 73 in 2002 (through September) according to the Hennepin Regional Poison Center.

#### INFECTIOUS DISEASES RELATED TO DRUG ABUSE

The rate of AIDS in Minnesota is 12th lowest in the Nation. Minnesota had 4 AIDS cases per 100,000 population in 1999, compared with a high of 42.3 in New York and a low of 1.1 in North Dakota. Most (90 percent) AIDS patients resided in the Minneapolis/St. Paul metropolitan area at onset of the disease.

Of the 1,489 males living with the human immunodeficiency virus (HIV) and AIDS in Minnesota in 2001, the modes of exposure were as follows: homosexual contact (70.9 percent), injection drug use (6.4 percent), homosexual contact and injection drug use (7.3 percent), heterosexual contact (2.7 percent), other (2 percent), and unspecified (10.5 percent).

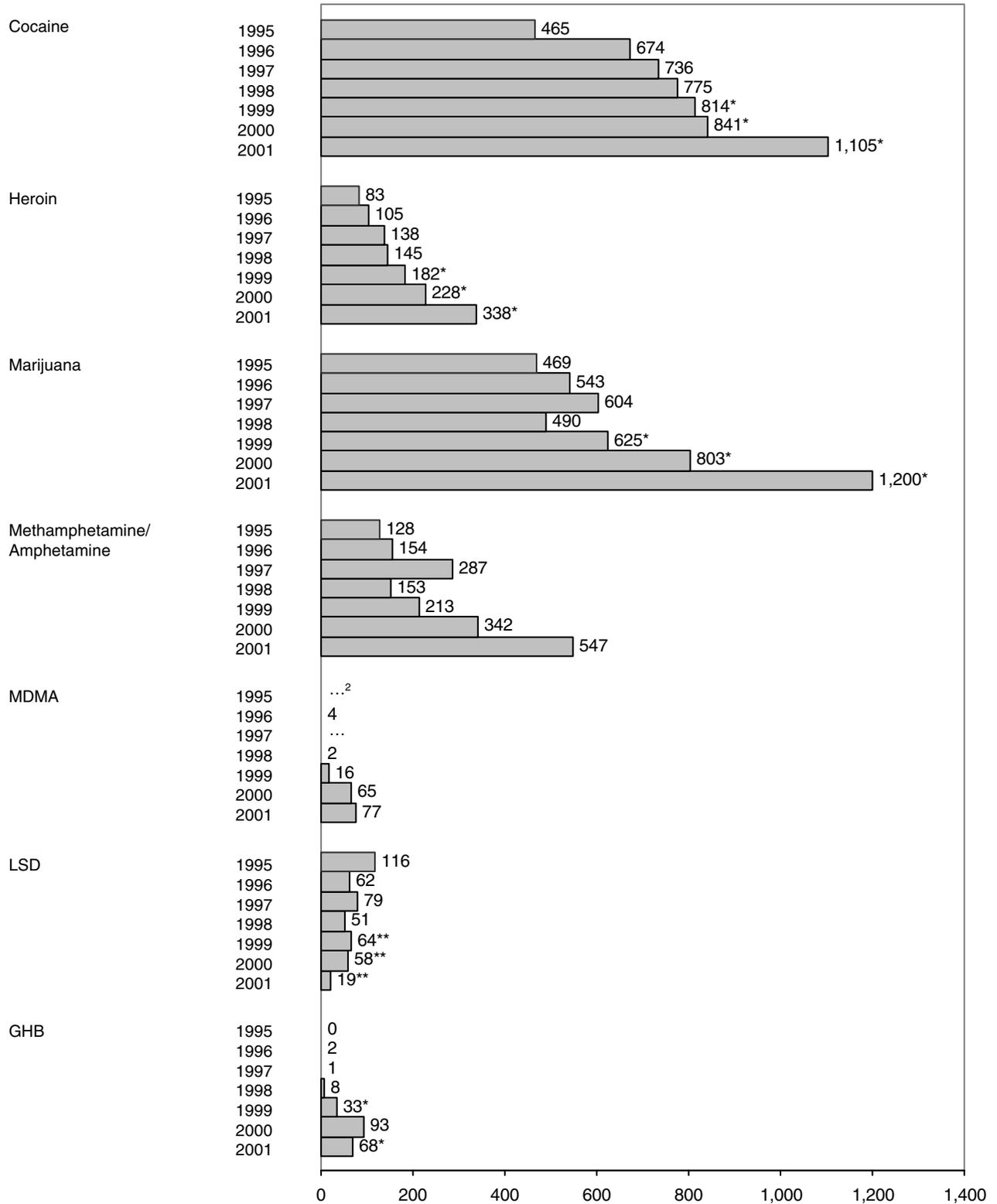
HIV exposure associated with injection drug use is a much more prevalent risk factor for women. Of the HIV and AIDS cases among 283 women in Minnesota in 2001, 21.9 percent were attributable to injection drug use and 45 percent to heterosexual contact.

Many addicts with a history of injection drug use contract the hepatitis C virus (HCV), a blood-borne liver disease, the symptoms of which may not appear for as long as 20 years after initial exposure. The estimated rate of HCV among methadone patients runs as high as 90 percent. In 2001, 31 cases of acute hepatitis C were reported in Minnesota; 35 percent were residents of the metropolitan area, and 55 percent reported using needles to inject drugs.

---

*For inquiries concerning this report, please contact Carol L. Falkowski, Hazelden Foundation, Butler Center for Research, 15245 Pleasant Valley Road, Box 11, Center City, Minnesota 55012-0011, Phone: 651-213-4566, Fax: 651-213-4356, E-mail: <cfalkowski@hazelden.org>.*

**Exhibit 1. Number<sup>1</sup> of ED Mentions of Selected Drugs in Minneapolis/St. Paul: 1995–2001**



<sup>1</sup> One asterisk denotes a statistically significant ( $p < 0.05$ ) increase from 1999 to 2001 and/or 2000 to 2001; two asterisks denote a significant decrease for the two time periods.

<sup>2</sup> Dots (.) indicate that an estimate with a relative standard error greater than 50 percent has been suppressed.

SOURCE: DAWN, OAS, SAMHSA

**Exhibit 2. Characteristics of Cocaine, Heroin, Marijuana, Methamphetamine, and MDMA ED Mentions in Minneapolis/St. Paul: 2001<sup>1</sup>**

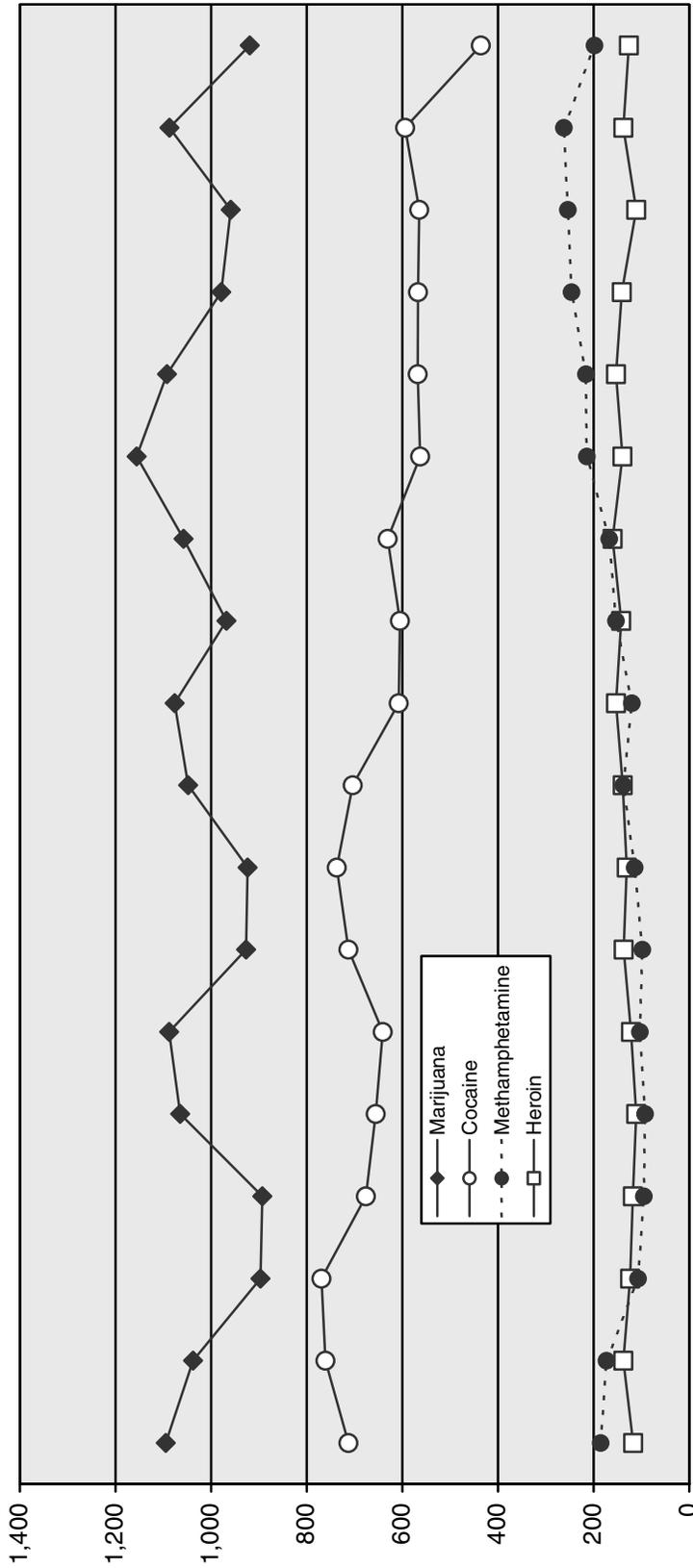
Characteristic	Cocaine	Heroin	Marijuana	Methamphetamine	MDMA
Gender					
Male	<b>63.0*</b>	<b>65.7*</b>	<b>63.5*</b>	<b>61.4*</b>	48.0
Female	36.1*	34.3*	35.9*	38.6	<b>52.0*</b>
Unknown	0.9	0.0	... <sup>2</sup>	0.0	0.0
Age Group					
6–17	4.5	0.0	30.8*	10.6	20.8
18–25	20.2*	18.8*	<b>35.2*</b>	<b>38.6*</b>	<b>64.9</b>
26–34	28.9*	30.5*	16.7*	28.0	9.1
35 and older	<b>46.4*</b>	<b>50.9*</b>	17.2	22.7*	5.2
Unknown	0.0	0.3	...	0.0	0.0
Race/Ethnicity					
White	<b>45.8*</b>	<b>34.9*</b>	<b>56.7*</b>	...	<b>55.8</b>
Black	22.3	14.8*	10.1*	1.2	...
Hispanic	1.7	1.5	1.7	...	0.0
Other	2.2	1.2	3.1*	...	...
Unknown	28.0*	47.6*	28.4*	<b>35.2*</b>	35.0
Concomitance					
Multidrug	<b>69.9</b>	<b>52.4*</b>	<b>66.6*</b>	<b>71.7*</b>	<b>92.2*</b>
Single drug	30.0	47.6*	33.4*	28.3	7.8
Unknown	0.1	0.0	0.0	0.0	0.0

<sup>1</sup> Asterisks denote a statistically significant ( $p < 0.05$ ) increase from 2000 to 2001.

<sup>2</sup> Dots (...) indicate that an estimate with a relative standard error greater than 50 percent has been suppressed.

SOURCE: DAWN, OAS, SAMHSA

**Exhibit 3. Primary Substance Problem Reported by Clients Admitted to Treatment Programs in Minneapolis/St. Paul by Quarter: 1998–2002**



Primary Substance Problem	1998				1999				2000				2001				2002 <sup>1</sup>	
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q
Heroin	117	138	124	118	111	122	137	131	139	153	142	160	140	153	141	111	138	126
Methamphetamine	185	173	107	95	92	103	98	114	138	120	153	167	214	216	246	254	262	198
Cocaine	713	761	769	676	656	641	713	737	704	608	605	631	563	568	567	565	594	436
Marijuana	1,095	1,038	897	893	1,065	1,088	927	924	1,048	1,076	968	1,058	1,156	1,092	979	959	1,087	919

<sup>1</sup> N=8,833

SOURCE: Drug and Alcohol Abuse Normative Evaluation System (DAANES), Minnesota Department of Human Services, 2002

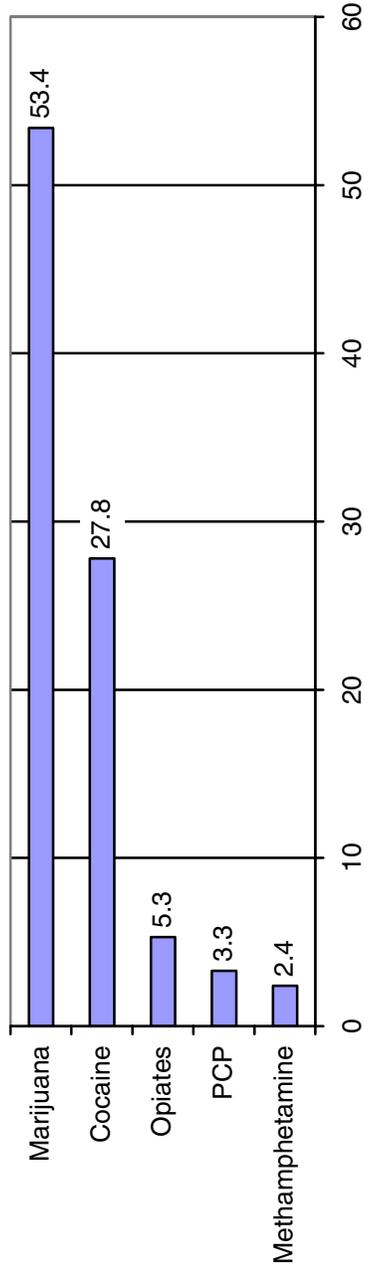
**Exhibit 4. Characteristics of Clients Admitted to Treatment Programs in Minneapolis/St. Paul by Percent: 2002 (January–June)**

Characteristic	Alcohol	Marijuana	Cocaine	Methamphetamine	Heroin
(Number)	(4,817)	(2,006)	(1,030)	(460)	(264)
Percent of Total <sup>1</sup>	54.5	22.7	11.7	5.2	3.0
Gender					
Male	74.0	77.1	67.5	65.7	69.3
Female	26.0	22.9	32.5	34.3	30.7
Race/Ethnicity					
White	80.2	68.6	39.9	94.3	48.1
African-American	11.7	20.1	52.1	1.0	46.0
Hispanic	3.0	3.6	4.5	1.9	2.5
American Indian	3.3	3.2	1.7	1.2	1.3
Asian	0.4	1.3	0.3	0.7	1.3
Age Group					
17 and under	5.1	49.9	1.7	10.2	0.4
18–25	16.1	28.3	9.0	33.9	17.4
26–34	19.8	12.5	29.7	29.6	31.1
35 and older	59.0	9.3	59.6	26.3	51.1
Route of Drug Administration					
Smoking			84.1	38.6	4.5
Sniffing			15.1	35.0	40.3
Injection			0.7	18.0	55.2
Other			–	8.4 (oral)	–
First Time in Treatment	33.6	50.1	20.5	35.8	20.2
Age of First Use (Average in years)	15.6	13.7	25.4	20.2	21.5
Secondary Drug	Marijuana 58.1	Alcohol 76.8	Alcohol 56.6	Marijuana 50.8	Cocaine 38.7
Tertiary Drug	Cocaine 40.6	Alcohol 29.0	Alcohol 41.1	Alcohol 47.3	Alcohol 33.3

<sup>1</sup> N=8,806.

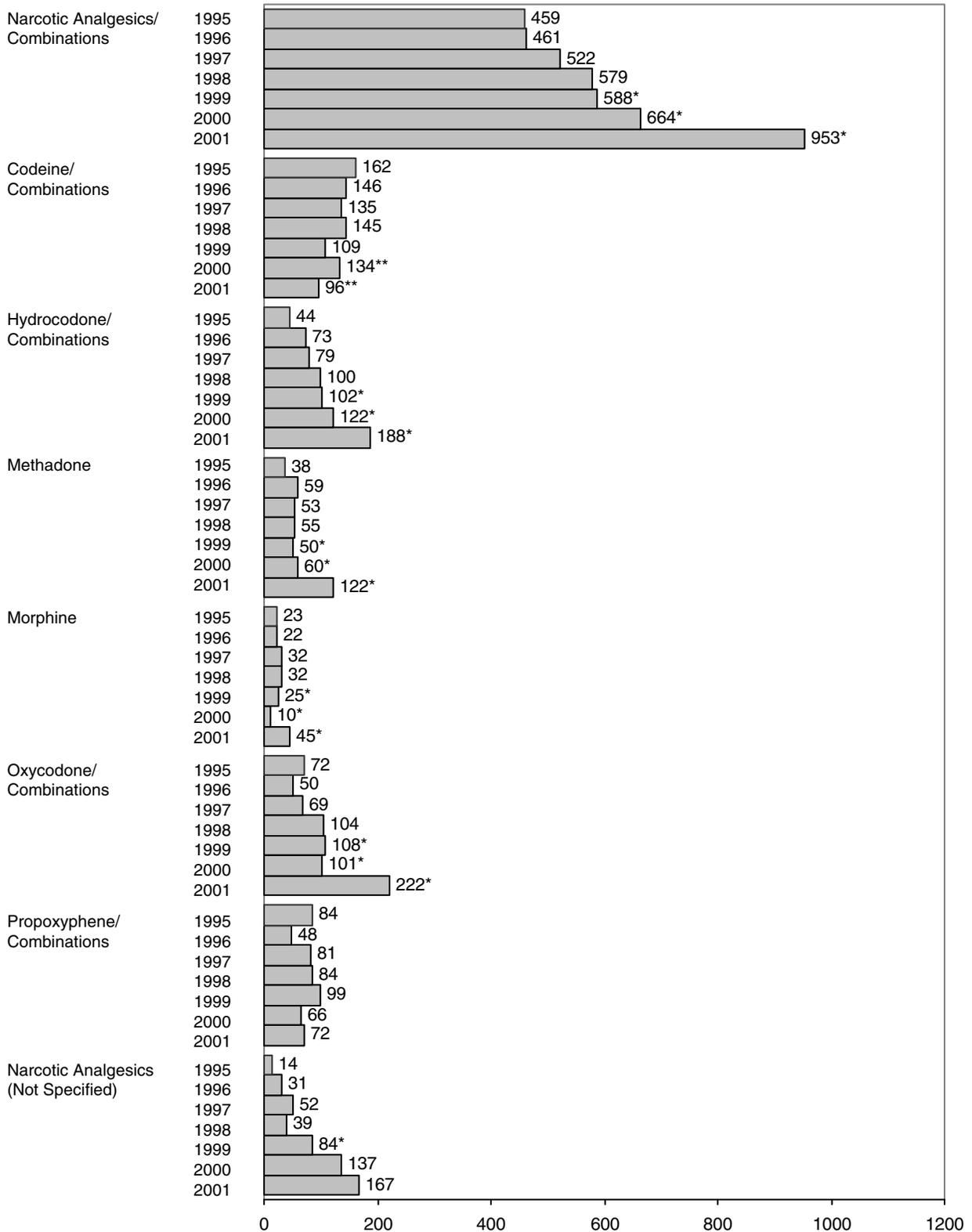
SOURCE: Drug and Alcohol Abuse Normative Evaluation System (DAANES), Minnesota Department of Human Services, 2002

**Exhibit 5. Percentage of Male Arrestees Testing Positive for Drugs in Minneapolis by Type of Drug: 2001**



SOURCE: ADAM, NIJ

**Exhibit 6. ED Mentions of Nonmedical Narcotic Analgesic Drugs in Minneapolis/St. Paul: 1995–2001<sup>1</sup>**



<sup>1</sup> One asterisk denotes a statistically significant ( $p < 0.05$ ) increase between 1999 and 2001 and/or between 2000 and 2001; two asterisks denote a significant decrease for the two time periods.

SOURCE: DAWN, OAS, SAMHSA

# Drug Use Indicators in Newark and the Primary Metropolitan Statistical Area

Abate Mammo, Ph.D.<sup>1</sup>

## ABSTRACT

*This report presents the recent drug abuse indicators in Newark and the primary metropolitan statistical area (PMSA). The report also provides comparative data for the State. Treatment data for Newark City show that almost all admissions in 2001 (96.4 percent of 5,615 admissions) were illicit drug-related. Heroin accounted for 78.2 percent of primary treatment admissions in Newark, compared with 6.3 percent for crack/cocaine and 5.6 percent for marijuana. Heroin use as a primary, secondary, or tertiary drug was also very high, with heroin's share increasing from 80.8 percent of 4,985 admissions in 2000 to 82.6 percent of 5,556 admissions in 2001. Emergency department (ED) data in the Newark PMSA corroborate the very high prevalence of heroin use. Statewide, heroin also became the single most important drug of choice in 2001, increasing from 26,570 admissions as a primary, secondary, or tertiary drug (48.9 percent of all admissions) in 2000 to 28,465 admissions (51.8 percent) in 2001. Alcohol, cocaine/crack, and marijuana remain important secondary and tertiary drugs used by clients presenting for treatment in the Newark PMSA and the State. Consistent with the high prevalence of heroin and cocaine/crack use in the Newark PMSA, cocaine- and heroin-related deaths accounted for most ME deaths in 2000, with heroin-related deaths surpassing cocaine-related deaths in 2000. Heroin purity remained high in 2001 (68.5 percent), compared with 72.2 percent in 2000, while its price remained at \$0.33 per milligram pure. Most of the heroin sold in the Newark PMSA continued to be South American. Heroin injection continued to increase among 18-25-year-old primary heroin admissions, accounting for 36.5 percent of the group in Newark in 2001 and 53.4 percent in the State. More importantly, heroin injection as a mode of use has been rising in all regions of the State, including cities, suburbs, and rural areas. There was also a marked increase in the use of narcotics analgesics/combinations, other opiates/synthetics, benzodiazepines, ecstasy, and oxycodone between 2000 and 2001 in the Newark PMSA.*

## INTRODUCTION

### Area Description

The population of Newark declined from 329,248 in 1980 to 275,221 in 1990; it further declined to 273,546 in 2000. Even with this sharp population decline, Newark remains the largest city in the State and houses diverse population groups. In 1990, Blacks accounted for 56 percent of the population, compared with 16 percent for Whites and 26 percent for Hispanics. By comparison, in 2000, Blacks accounted for 55 percent, Whites for 14 percent, and Hispanics for 29 percent. Only 4 percent reported multiple races. In 2000, about 5.0 percent of the population lived in group quarters, and 2.7 percent were institutionalized. More than one-half (51.9 percent) of the families had underage children, and 27.9 percent of Newark residents were younger than 18. Although the recent introduction of multiple race categories makes data less comparable with previous years, the relative share of the population groups has not changed much. The 2000 census suggested a decrease in fertility, with only 7 percent of Newark residents being age 5 or younger, compared with 10 percent in 1990. The average household size in Newark was 2.99, slightly larger than in 1990 (2.91). Statewide, the average household size increased from 2.70 to 2.75 during the same time period. Newark residents had one of the lowest per capita incomes (\$13,009) in 1999, compared with \$9,424 in 1989.

### 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

<sup>1</sup> The author is affiliated with Research and Information Systems, Division of Addiction Services, New Jersey Department of Health and Senior Services in Trenton, New Jersey.

abused drugs at the time of admission. ADADS has been operating since July 1, 1991, and contains more than 700,000 admission and discharge records. Treatment information obtained from ADADS includes all statistics for Newark City, the Newark primary metropolitan statistical area (PMSA), and the State. This report uses treatment data primarily from 2001. Also included are major drug treatment admissions in Newark and the Newark PMSA, excluding Newark City. In addition, data from the Client Oriented Data Program dating from 1985 to 1991 are used to study trends in drug injection among Newark and statewide heroin treatment admissions.

- **Emergency department (ED) drug mentions data** were obtained from the August 2002 issue of the “Emergency Department Trends From the Drug Abuse Warning Network, Final Estimates 1994–2001.” 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, Somerset, and Union Counties).
- **Drug-related mortality data** were obtained from the SAMHSA January 2002 report entitled “Mortality Data From the Drug Abuse Warning Network 2000.” 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 PMSA jurisdictions and 88 percent of the PMSA population in 2000.
- **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 December 31, 2001, are used in this report.

## DRUG ABUSE PATTERNS AND TRENDS

Drug abuse indicators for Newark (Newark City), the Newark PMSA, and the State are presented in this section. Since Newark City exhibits patterns of drug abuse that are usually unique from the rest of the PMSA, and because the State is diverse in its social, demographic, and economic composition, indicator data are presented for each geographic area to describe drug abuse variations. Summary trends are presented first, followed by details by drug type and region.

Exhibit 1 summarizes general trends for selected indicators in the Newark PMSA between 2000 and 2001. Treatment data show that drug-related admissions increased between 2000 and 2001, with the increases driven by heroin, “other opiates and synthetics,” and benzodiazepines. Injection drug use also increased in this time period. Trends suggested by ED data are not consistent with treatment data, except for cocaine, phencyclidine (PCP), and benzodiazepines. ED data further show that marijuana mentions increased between 2000 and 2001, as did mentions for narcotics analgesics/ combinations, oxycodone, ecstasy, and ketamine.

In Newark City, alcohol-related treatment admissions were stable, with their share remaining at about 8 percent (8.3 percent in 2000 and 8.7 percent in 2001) (exhibit 2). Unlike treatment data, which showed stability in alcohol-in-combination mentions, ED mentions in the Newark PMSA declined from 2,123 to 2,015 between 2000 and 2001. ME alcohol-in-combination mentions remained stable at 97 and 98 in the same time period.

Heroin was the most prevalent drug of abuse among treatment admissions in the Newark PMSA. Primary heroin treatment admissions accounted for 78.2 percent of all treatment admissions in Newark City, compared with 48.2 percent in the State. Between 2000 and 2001, primary heroin treatment admissions in the State increased by 8 percent. The rate of ED heroin mentions in the Newark PMSA declined from 238 to 215 per 100,000 population. The number of heroin ED mentions also decreased significantly, from 4,399 in 2000 to 3,718 in 2001. Despite the decline in heroin ED mentions, the rise in heroin abuse in the Newark PMSA and the State is consistent with the increase in heroin-related deaths between 1999 and 2000. The number of heroin-related deaths exceeded cocaine-related deaths in 2000 for the first time since 1996.

Most cocaine indicators continued to decline both in Newark and the PMSA. In Newark City, treatment admissions for primary abuse of cocaine/crack

accounted for only 6.3 percent of all treatment admissions in 2001, compared with 8.3 percent in 2000. ED cocaine mentions also declined in the same time period. Contrary to the continued decline in cocaine abuse, recent ME data show that cocaine-related deaths in the Newark PMSA increased from 130 in 1999 to 137 in 2000 (a 5.4-percent rise).

In 2001, primary marijuana use accounted for 5.6 percent of all treatment admissions in Newark City (exhibit 2), the same as in 2000. Marijuana's overall share as a primary, secondary, or tertiary drug, however, declined to 12.4 percent of treatment admissions in 2001, compared with 16.6 percent in 2000 (exhibit 3). ED marijuana mentions were up in the Newark PMSA, from 539 in 2000 to 647 in 2001. The decline in marijuana abuse among treatment admissions is consistent with the 33.3-percent decline in marijuana-related ME death mentions in the Newark PMSA between 1999 and 2000.

PCP and other hallucinogens were rarely reported in the Newark PMSA. Among treatment admissions, there were only 17 primary, secondary, or tertiary PCP admissions in 1999, compared with 34 in 2000 and 45 in 2001. By comparison, there were 67 other hallucinogen mentions in 1999, 65 in 2000, and 59 in 2001. Consistent with treatment data, ED PCP mentions totaled 39 in 2000 and 35 in 2001.

Methamphetamine use was rare among treatment admissions in the Newark PMSA, with only 25 admissions in 1999, 22 in 2000, and 20 in 2001. There were only six ED methamphetamine mentions in 2000, compared with none in 2001.

Club drugs, such as methylenedioxymethamphetamine (MDMA or ecstasy), gamma hydroxybutyrate (GHB), and ketamine, were rarely reported by treatment populations in the Newark PMSA. While still rare, there were 49 ED MDMA mentions in 2001, compared with 21 in 2000, a significant, 133-percent increase. By comparison, 2001 treatment data show that there were 10 clients admitted with MDMA as their primary, secondary, or tertiary drug.

Overall, substance abuse treatment admissions in the Newark PMSA increased by 3.7 percent, from 15,290 in 2000 to 15,851 in 2001, with heroin admissions increasing the fastest (8.2 percent in the Newark PMSA and 14.4 percent in Newark city).

Newark City continues to have 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 were in treatment. Estimates indicate that there were 16,839

heroin abusers and 4,669 cocaine abusers in Newark City who needed treatment in 2000. However, only 26.1 percent of those with a primary heroin problem and 7.6 percent of those with a primary cocaine problem received treatment in 2000.

Statewide, the proportionate share of heroin treatment admissions as a primary, secondary, or tertiary drug grew from 48.1 percent (26,570 admissions) in 2000 to 51.8 percent (28,465 admissions) in 2001. By comparison, primary, secondary, or tertiary alcohol treatment admissions declined from 52.2 percent ( $n=28,348$ ) in 2000 to 49.2 percent (27,019) in 2001, while marijuana admissions declined from 27.4 percent (14,868) to 26.0 percent (14,291) in 2001.

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 1999, 24.0 percent of primary heroin treatment admissions in Newark injected the drug, compared with 20.9 percent in 2001 (exhibit 2). Injection drug use is fast becoming popular among young heroin users in Newark and the State. In 2001, 36.5 percent of 18–25-year-old treatment admissions in Newark City injected heroin, up from 26.1 percent in 1999 and 28.9 percent in 2000 (exhibit 4). Statewide, heroin injection by 18–25-year-old clients increased from 49.5 percent in 2000 to 53.4 percent in 2001 (exhibit 5). Heroin injection remains highest among Whites, followed by Hispanics and Blacks.

During the period in which heroin injection increased, its purity rose modestly, except for some year-to-year fluctuations. The most recent data show that heroin purity in the Newark PMSA declined to 68.5 percent in 2001 from 72.2 percent in 2000. Heroin purity remained high in the Newark PMSA, second only to Philadelphia among the 21 DAWN cities.

The State AIDS Registry data show that 38 percent of people living with HIV/AIDS reported injection as a mode of transmission, compared with 44 percent in Newark. HIV/AIDS cases were predominantly Black (57 percent) or Hispanic (20 percent).

In 2000, the total number of drug-related deaths in the Newark PMSA was 250. Seventy-five percent of the decedents were male, with Blacks and Whites accounting for 45 and 43 percent of the ME drug-related deaths, respectively. Most of the decedents

(90 percent) were older than 25, with 67.6 percent being age 35 or older.

Arrests for the sale and manufacture of drugs in the Newark PMSA increased from 5,353 in 2000 to 9,414 in 2001. By comparison, arrests for drug possession and use declined from 12,382 in 2000 to 8,115 in 2001. In 2001, most of the arrests for sale and manufacture (64.5 percent) and for possession and sale (76.3 percent) were made in Essex County, where Newark is located. Statewide, arrest patterns were similar to patterns in the Newark PMSA. Statewide, drug abuse violation arrests dropped from 57,806 in 2000 to 55,451 in 2001, a 4-percent decline. More than one-half (53.2 percent) of the arrests in the State involved opium or cocaine and their derivatives (morphine, heroin).

The section below presents details of trends in indicators by drug type and demographic characteristics. A more in-depth look at patterns of drug abuse, drug-related arrests, and other indicators is also presented.

### **Cocaine and Crack**

Primary cocaine/crack treatment admissions in Newark accounted for 6.3 percent of treatment admissions (4.4 percent for crack cocaine and 1.9 percent for powder cocaine) in 2001 (exhibit 2). In 2000, 5.6 percent were primary crack abusers and 2.7 percent were powder cocaine abusers, for a total of 8.3 percent. Despite cocaine's small proportion as a primary drug among treatment admissions, it remained popular as a secondary drug for alcohol-in-combination and primary heroin clients in Newark. Consistent with the decline in Newark, the proportion of cocaine abuse as a primary, secondary, or tertiary drug in the rest of the Newark PMSA decreased to 36.6 percent in 2001, from 38.9 percent in 2000 (exhibit 3). It may be safe to attribute most of the recent decline in cocaine abuse to the reduced use of the drug by Newark PMSA residents.

In 2001, males accounted for 68.9 percent of powder cocaine admissions and 48.6 percent of crack cocaine admissions in Newark (exhibit 2). The majority (89.6 percent) of powder cocaine admissions in Newark were older than 25. By comparison, 59.8 percent of crack cocaine and 58.5 percent of powder cocaine admissions were age 35 or older.

More than two-thirds (70.1 percent) of cocaine/crack admissions in 2001 in Newark smoked the drug, while 24.7 percent used it intranasally. Reversing the long-term trend, cocaine injection among cocaine/crack treatment admissions increased from about 2.0

percent in 1999 to 4.9 percent in 2000, but fell to 3.7 percent in 2001.

Cocaine/crack use varies by race/ethnicity in Newark. In 2001, 85.9 percent of crack admissions were Black, 10.0 percent were Hispanic, and 4.0 percent were White. By comparison, 58.5 percent of powder cocaine admissions were Black, 30.2 percent were Hispanic, and 11.3 percent were White.

Cocaine as a primary, secondary, or tertiary drug among treatment admissions in the Newark PMSA decreased only slightly from 39.9 percent ( $n=6,083$ ) in 2000 to 38.4 percent (6,047) in 2001. Excluding Newark City, cocaine treatment admissions as a primary, secondary, or tertiary drug dropped from 38.9 percent in 2000 to 36.6 percent in 2001 (exhibit 3).

After declining from 246 to 201 per 100,000 population between 1994 and 1997, the rate of ED cocaine mentions in the Newark PMSA increased to 208 per 100,000 population in 1998. However, the rate declined significantly between 1999 (172 mentions) and 2000 (147). In 2001, cocaine mentions per 100,000 population inched up to 152, although the rate reflected a significant decline since 1999.

Cocaine prices have been remarkably stable over the years; the drug sold for \$5–\$30 per bag in the Newark PMSA in the first quarter of 2001. Price reports obtained from a survey of clients in methadone clinics also estimated the median price of cocaine at \$5 to \$35 per bag.

Cocaine-related deaths increased to 137 in 2000, up from 130 in 1999. The increase in cocaine-related deaths in the Newark PMSA was consistent with the marginal increase in cocaine treatment mentions and the increase in ED cocaine mentions per 100,000 population. ME data for 2001 were not available to report.

### **Heroin**

In Newark City, there were 4,389 primary heroin admissions in 2001 (exhibit 2), compared with 3,826 in 2000, suggesting a substantial increase in the number of primary heroin admissions. The proportion of primary heroin admissions also increased to 78.2 percent, from 76.9 percent in 2000.

In 2001, males accounted for 60.0 percent of heroin admissions. The racial/ethnic distribution of heroin admissions in Newark reflects the population distribution of the city, with Blacks accounting for 71.0 percent, Hispanics for 19.9 percent, and Whites for 7.0 percent of heroin treatment admissions.

Almost two-thirds (63.5 percent) of primary heroin admissions were older than 35, with only 5.3 percent age 25 or younger.

Heroin abuse as a primary, secondary, or tertiary drug as a proportion of total drug use was higher in Newark City (82.6 percent) compared with the rest of the Newark PMSA (62.5 percent) in 2001 (exhibit 3). Heroin use has continued to rise in the rest of the Newark PMSA, growing from 60.2 percent (6,169 mentions) in 2000 to 62.5 percent (6,375 mentions) in 2001. Early indications for 2002 suggest a further increase in the proportion of heroin mentions, both in the Newark PMSA and the State. The continued rise of heroin mentions beyond Newark City and its PMSA is consistent with the spread of heroin to suburban and rural areas of the State.

In the early 1980s, intranasal use of heroin in Newark was less common than injecting. In 1992, intranasal use surpassed injecting and has remained at elevated levels (78.2 percent in 2001) since. Heroin smoking in Newark remains rare, with 0.6 percent of primary heroin treatment admissions reporting this route of administration (exhibit 2).

In 2001, 20.9 percent of Newark's primary heroin admissions injected the drug. While heroin injection in Newark City appeared stable in recent years, heroin injection by 18–25-year-old clients has continued to rise, reaching a high of 36.5 percent in 2001, compared with the low of 11.8 percent in 1993 (exhibit 4).

Statewide, 59.6 percent of primary heroin treatment admissions used the drug intranasally, and 39.6 percent injected it. Consistent with Newark, heroin injection among 18–25-year-olds continued to increase. This pattern of injection is consistent with patterns in major urban areas, suburban areas, and rural areas of the State (exhibit 6). There was also a less dramatic but continued rise in statewide heroin injection by 26–34-year-old clients (exhibit 5). Older heroin users (35 or older) injected heroin less frequently compared with younger heroin users, suggesting a change in the culture of drug use in all areas of the State.

Following the increase that started in 1990, ED heroin mentions surpassed cocaine mentions in 1993. Between 1994 and 1998, the rate of ED heroin mentions per 100,000 population rose from 262 to 282, but declined to 238 in 2000 and further declined to 215 in 2001, a significant decrease of nearly 10 percent. Among Newark PMSA treatment admissions, the proportion of heroin mentions surpassed

that of cocaine mentions in 1994 after a lag of 1 year from the crossover in Newark (exhibit 3). This upward trend in the proportion of heroin admissions in the Newark PMSA has continued, with no indication of a decline in sight.

Although heroin purity is still very high, it has fluctuated in recent years. In 2001, heroin purity was estimated at 68.5 percent. In 2000, heroin was 72.2 percent pure, compared with 67.5 percent in 1999. The price per milligram of heroin has continued to fall. In 2001, the average price of a milligram of heroin was \$0.33. The Newark PMSA has the second highest heroin purity (after Philadelphia) coupled with the lowest price (with Baltimore) among the 21 DAWN cities. Most of the heroin sold in the Newark PMSA is South American.

In 2000, ME data showed 179 heroin-related deaths in the Newark PMSA, up from 128 in 1999 and 107 in 1998. Consistent with the ever-increasing percentage of heroin admissions among treatment admissions in the Newark PMSA, heroin-related deaths exceeded cocaine-related deaths in 2000, accounting for 28.6 percent of all ME drug mentions in the PMSA.

### **Opiates Other than Heroin**

There were 241 primary, secondary, or tertiary “other opiates or synthetics” drug abuse mentions among treatment admissions in 2001 in the Newark PMSA, of which 21 were in Newark. The corresponding numbers in 2000 were 183 and 29, respectively. Statewide, 1,739 “other opiates or synthetics” drug mentions were reported in 2001, compared with 1,291 in 2000.

Consistent with the increase in reported “other opiates or synthetics” drug abuse, ED narcotic analgesics/combinations mentions increased from a low of 332 in 1996 to a high of 739 in 2001. Most of the increase was driven by the rise in narcotic analgesics.

In 2000, there were 4 oxycodone overdose deaths in New Jersey and a total of 57 oxycodone mentions reported among State ME cases. There were no updates of mortality data for 2001 to report.

### **Marijuana**

The prevalence of primary marijuana use among treatment admissions in Newark stayed the same as in 2000, accounting only for 5.6 percent of all admissions (exhibit 2).

As expected, primary marijuana users were younger, with 21.8 percent being younger than 18. Only 15.1 percent of 2001 primary marijuana treatment admissions were age 35 or older. A substantial proportion (42.6 percent) of primary marijuana treatment admissions in Newark also abused alcohol as a secondary drug (36.3 percent) or tertiary drug (6.3 percent).

There were 29 ED marijuana mentions per 100,000 population in 2000 and 37 in 2001. Primary, secondary, or tertiary marijuana use among treatment admissions declined from 22.1 percent in 2000 to 19.4 percent in 2001 in the Newark PMSA (excluding Newark City) and from 16.6 to 12.4 percent in Newark during the same time period (exhibit 3). ME marijuana deaths declined by 33.3 percent (from 21 to 14) between 1999 and 2000 in the Newark PMSA. ME data for 2001 were not available to report.

Marijuana-related arrests in New Jersey declined from 24,422 in 2000 to 22,449 in 2001.

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.

### Stimulants

MDMA use is still rare in Newark City. In the Newark PMSA, there were 38 ED MDMA mentions in 1999. In 2001, there were 49 ED MDMA mentions in the Newark PMSA, a significant increase from the 21 reported in 2000. Among treatment admissions, there were 95 MDMA mentions as a primary, secondary, or tertiary drug in New Jersey in 2001. In the Newark PMSA, there were only 10 MDMA admissions in 2001.

In 2001, only one primary methamphetamine treatment admission was reported in Newark City. Methamphetamine use as a primary, secondary, or tertiary drug was reported 4 times in Newark and 20 times in the Newark PMSA. Methamphetamine use was also rare in the State, with its use as a primary, secondary, or tertiary drug reported 190 times in 2000 and 170 times in 2001.

### Depressants

Benzodiazepines remain the fifth most abused drugs in Newark after alcohol, heroin, cocaine, and marijuana. In 2001, 1.0 percent of treatment admissions reported benzodiazepines as a primary, secondary, or tertiary drug of abuse, compared with 0.7 percent in 2000. Statewide, benzodiazepine abuse accounted for 2.7 percent of primary, secondary, or tertiary drug use; benzodiazepines were the sixth

most abused drugs. In contrast to the low proportion of treatment admissions, benzodiazepines in the Newark PMSA accounted for 5.6 percent of ME cases in 2000, compared with 9.1 percent in 1999.

Use of GHB and ketamine (“Special K”) remained rare. According to the 2001 DAWN data, GHB ED mentions were too few for valid estimates, and only 5 mentions were reported in 2000. There were 12 ketamine ED mentions in 2001, compared with 9 in 2000. Statewide data also showed that there were only 7 GHB and 20 ketamine use treatment admissions as a primary, secondary, or tertiary drug.

### Hallucinogens

In the Newark PMSA, PCP abuse as a primary, secondary, or tertiary drug increased from 34 mentions in 2000 to 45 in 2001. Only 35 ED PCP mentions were reported in 2001 in the Newark PMSA. Statewide, PCP use as a primary, secondary, or tertiary drug rose from 338 in 2000 to 383 in 2001.

Lysergic acid diethylamide (LSD) use remained low in the Newark PMSA, with 20 ED mentions in 1999 and only 10 in each of the 2000 and 2001 reporting periods.

### Alcohol

In Newark City, primary alcohol abuse among treatment admissions declined from 26.0 percent to 8.7 percent between 1992 and 2000. In 2001, alcohol-only admissions accounted for 3.6 percent, while alcohol-in-combination admissions accounted for 5.1 percent of total Newark City primary treatment admissions (exhibit 2).

Alcohol continued to be an important concomitant drug among crack/cocaine, heroin, and marijuana treatment clients. In 2001, 36.6 percent of crack admissions and 36.3 percent of marijuana admissions reported alcohol as their secondary drug.

Alcohol abuse as a primary, secondary, or tertiary drug continued to decline in the Newark PMSA. In the Newark PMSA, excluding Newark City, alcohol as a primary, secondary, or tertiary drug fell from 47.3 percent in 2000 to 44.9 percent in 2001. The drop in alcohol use mentions in Newark City was less marked (from 28.3 percent to 27.3 percent). Statewide, alcohol abuse as a primary, secondary, or tertiary drug declined from 52.2 percent in 2000 to 49.2 percent in 2001.

As in previous years, large proportions of alcohol-only treatment admissions (84.0 percent) and alcohol-in-combination admissions (89.9 percent) were older

than 25 in 2001 (exhibit 2). In the Newark PMSA, alcohol-in-combination ME cases in 2000 were stable (98 in 2000 vs. 97 in 1999), while their proportionate share declined from 18.1 percent to 15.7 percent in the same time period.

### Tobacco

Cigarettes are the most commonly used substances by treatment populations in New Jersey. In 2001, 82.0 percent of treatment admissions in Newark reported smoking cigarettes, compared with 77.2 percent in the State.

Cigarette smoking in Newark continued to vary by gender, race/ethnicity, and type of drug abused. Exhibit 7 shows the proportions of admissions who reported smoking by selected drug type. Overall, 79.8 percent of male clients and 86.4 percent of female clients smoked cigarettes in 2001. Among male treatment admissions in Newark in 2001, heroin admissions smoked the most (85.1 percent), followed by admissions for alcohol-in-combination (79.4 percent), cocaine (74.0 percent), crack (68.6 percent), alcohol-only (56.7 percent), and marijuana (51.9 percent). For females, the corresponding percentages were 86.2, 79.6, 74.5, 76.3, 61.1 and 54.1 percent, respectively.

Females also smoked cigarettes at a higher proportion than males within each racial/ethnic group. Statewide, 75.7 percent of male and 81.8 percent of female treatment admissions smoked cigarettes. As in Newark City, cigarette smoking prevalence was the highest for heroin abusers and was increasing among heroin and powder cocaine users. Overall, smoking appears to have remained common among treatment admissions. The recent effort to curb smoking has not translated itself in these special population groups.

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. Among middle school students, only 7.2 percent of students in grades 7 and 8 in 2001 smoked cigarettes in the 30 days prior to the survey.

### INFECTIOUS DISEASES RELATED TO DRUG ABUSE

The drug-abusing population in Newark and the rest of the State and those living with HIV/AIDS exhibit

similar characteristics. There were 5,809 people living with HIV/AIDS in Newark as of December 31, 2001. Of these, 5,367 were adults/adolescents and 2,432 (41.8 percent) were females; 43.5 percent of the adult/adolescent cases were either injection drug users (IDUs) or IDUs who also engage in male-to-male sex (IDU/MSMs) (exhibit 8). Only 8 percent were younger than 20, and 19 percent were older than 49. Sixty-six percent of the cases were in the 30–49 age group.

The population living with HIV/AIDS in Newark was overwhelmingly Black (80 percent), followed by Hispanics (16 percent). In Newark, the AIDS Registry data suggest that for every 1,000 Black residents, there are about 28 people living with HIV/AIDS. The rates for Hispanics and Whites are also alarmingly high, at 10.9 and 4.7 per 1,000, respectively.

Statewide, the number of people living with HIV/AIDS as of December 31, 2001, was 30,536, of which 28,856 were adults; 35.4 percent of the adult cases were females. IDUs, including those who engage in male-to-male sex, accounted for 38.3 percent of statewide adult cases (exhibit 9).

Only 5 percent of statewide cases were younger than 20, and 19 percent were older than 49. The race/ethnicity distribution of people living with HIV/AIDS statewide is also skewed towards Blacks, who accounted for 57 percent of all cases, and Hispanics, who accounted for 20 percent.

A large and growing proportion of females in New Jersey (37 percent as of December 31, 2001) were infected through heterosexual contact, compared with 10 percent for males. In Newark, the corresponding percentages, respectively, were 37 and 13.

The continued increase in heroin injection by young adults (age 25 or younger), the rise in heroin abuse, and the sharp increase in 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, 120 South Stockton Street, 3rd Floor, P.O. Box 362, Trenton, New Jersey 08625-0362, Phone: (609) 292-8930, Fax: (609) 292-1045, E-mail: <abate.mammo@doh.state.nj.us>.*

**Exhibit 1. Trends in Selected Indicators in the Newark PMSA: 2000–2001**

<b>Drug Use Mentions</b>	<b>Treatment Data</b>	<b>ED Mentions</b>
Alcohol-in-Combination	Stable	Decreased
Heroin	Increased	Decreased
Other Opiates and Synthetics	Increased	(N/A)
Narcotics Analgesics/Combinations	(N/A)	Increased
Cocaine	Nonsignificant decrease	Decreased
Marijuana	Decreased	Increased
PCP	Increased	Increased
Methamphetamine	Nonsignificant decrease	Decreased
Benzodiazepines	Increased	Increased
Oxycodone	(N/A)	Increased
Ecstasy (MDMA)	(N/A)	Increased
Ketamine	(N/A)	Increased
Total	Increased	Decreased
Other Trends		
Heroin purity	Decreased slightly, but second highest among DAWN cities	
Heroin price	Stable	
Injection	Increased	
Drug-related deaths	Increased (Driven by heroin, cocaine, narcotic analgesics, and antidepressants)	

SOURCES: Division of Addiction Services, State Department of Health and Senior Services; DAWN, OAS, SAMHSA; Drug Enforcement Administration, Domestic Monitor Program

**Exhibit 2. Demographic Characteristics of Treatment Admissions in Newark City by Primary Drug at Admission by Percent<sup>1</sup>: 2001**

Demographic Characteristic	Alcohol-Only	Alcohol-in-Combination	Crack	Cocaine	Heroin	Marijuana
Gender						
Male	82.5	68.5	48.6	68.9	60.0	83.6
Female	17.5	31.5	51.4	31.1	40.0	16.4
Race/Ethnicity						
White	15.0	7.3	4.0	11.3	7.0	4.7
Black	52.0	74.1	85.9	58.5	71.0	71.9
Hispanic	31.0	18.2	10.0	30.2	19.9	22.4
Other	2.0	0.4	0.0	0.0	2.1	1.0
Age at Admission						
17 and younger	1.0	1.8	0.0	0.9	0.2	21.8
18–25	14.5	8.0	3.6	8.5	5.1	38.5
26–34	20.0	27.3	35.7	31.1	31.1	24.6
35 and older	64.0	62.6	59.8	58.5	63.5	15.1
Route of Administration						
Smoking	–	–	100	–	0.6	97.5
Inhaling	–	–	–	82.8	78.2	–
Injecting	–	–	–	12.3	20.9	–
All other/multiple	100	100	–	0.9	0.3	2.5
Most Frequently Reported Secondary Drug	–	Cocaine/Crack 51.8	Alcohol 36.6	Heroin 34.9	Cocaine/Crack 36.8	Alcohol 36.3
Most Frequently Reported Tertiary Drug	–	Cocaine/Crack 19.6	Alcohol 10.0	Alcohol 17.9	Alcohol 8.3	Alcohol 6.3
Total (N=5,615)	(200)	(286)	(249)	(106)	(4,389)	(317)
Percentage of Total	3.6	5.1	4.4	1.9	78.2	5.6

<sup>1</sup>Percentages may not add to 100 due to rounding.

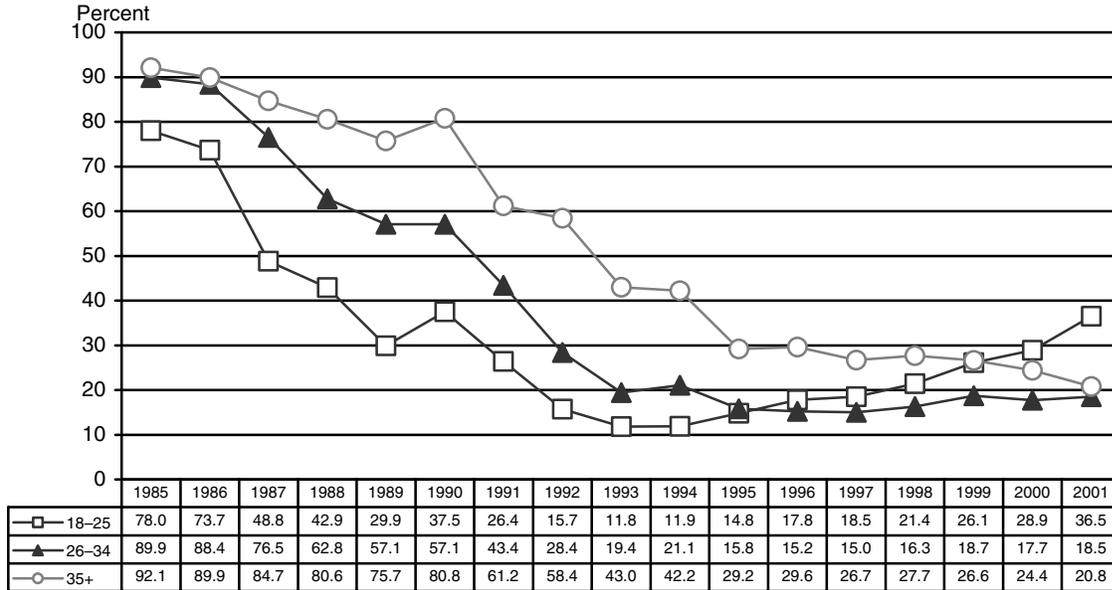
SOURCE: Alcohol and Drug Abuse Data System, Research and Information Systems, Division of Addiction Services, State Department of Health and Senior Services

**Exhibit 3. Primary, Secondary, or Tertiary Treatment Admissions in Newark City and the Newark PMSA Excluding Newark City (PMSA) by Major Drug Type and by Percent: 1992–2001**

Year	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Alcohol (PMSA)	73.1	67.1	62.0	58.7	56.4	53.3	49.8	48.1	47.3	44.9
Alcohol (City)	56.9	48.5	40.3	34.3	31.5	29.6	27.9	30.4	28.3	27.3
Heroin (PMSA)	30.5	40.4	44.9	50.9	52.0	53.9	58.0	59.9	60.2	62.5
Heroin (City)	54.0	66.8	70.4	79.0	78.6	78.6	80.5	80.4	80.8	82.6
Cocaine (PMSA)	49.0	45.6	42.9	44.3	44.4	41.1	41.6	40.7	38.9	36.6
Cocaine (City)	65.7	57.0	53.5	52.8	52.8	47.4	45.7	47.6	42.2	41.7
Marijuana (PMSA)	21.5	21.4	21.3	22.5	21.8	23.1	22.3	20.4	22.1	19.4
Marijuana (City)	12.4	12.6	15.0	12.7	15.5	16.5	14.5	14.2	16.6	12.4

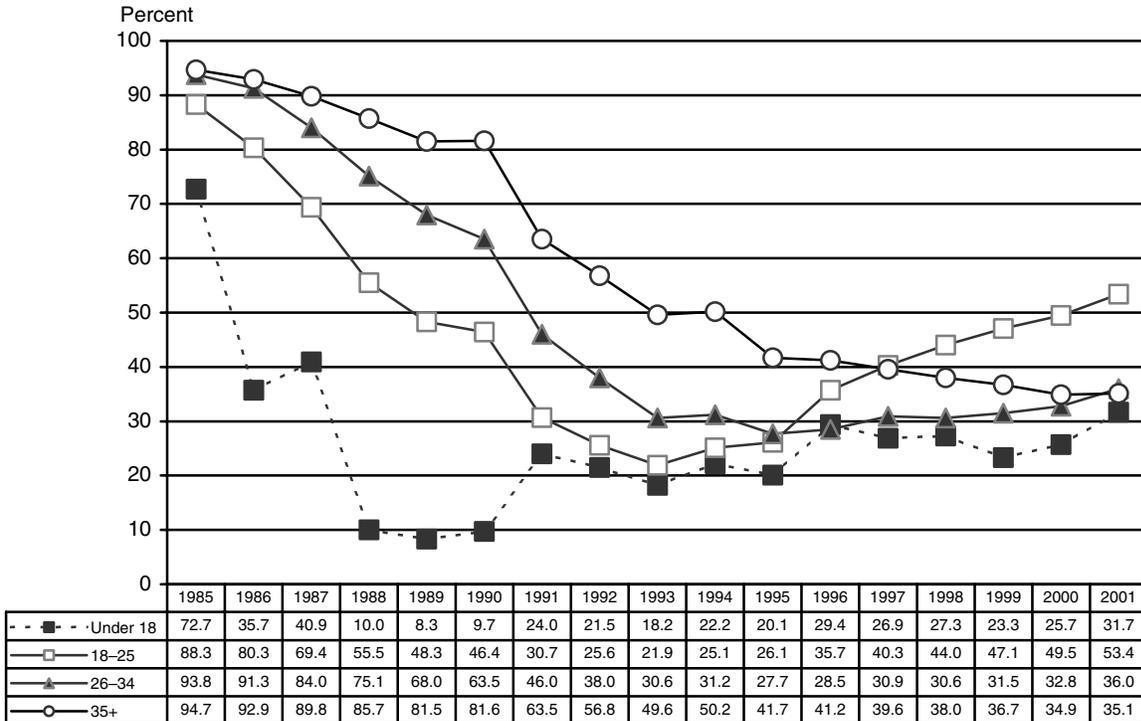
SOURCE: Alcohol and Drug Abuse Data System, Research and Information Systems, Division of Addiction Services, State Department of Health and Senior Services

**Exhibit 4. Heroin Injectors Among Treatment Admissions by Age Group in Newark City: 1985–2001**



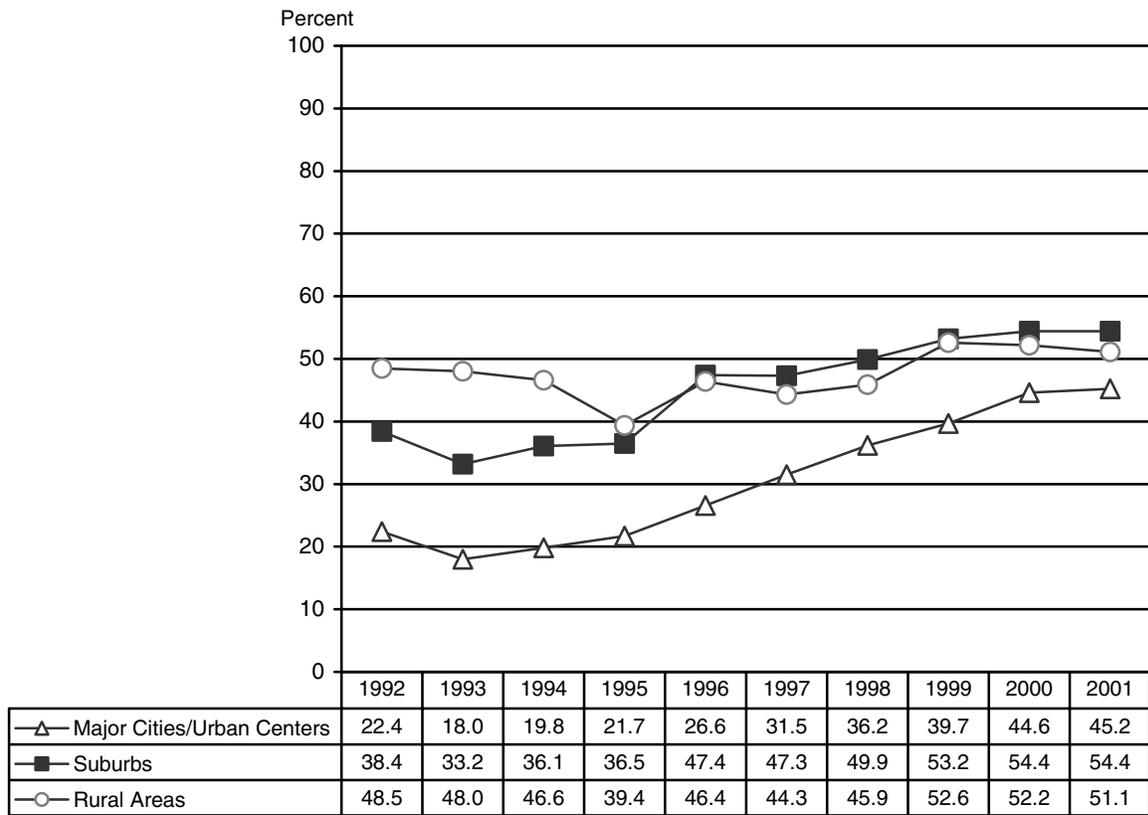
SOURCE: Client Oriented Data Program and Alcohol and Drug Abuse Data System

**Exhibit 5. Heroin Injection Among Treatment Admissions by Age Group in New Jersey: 1985–2001**



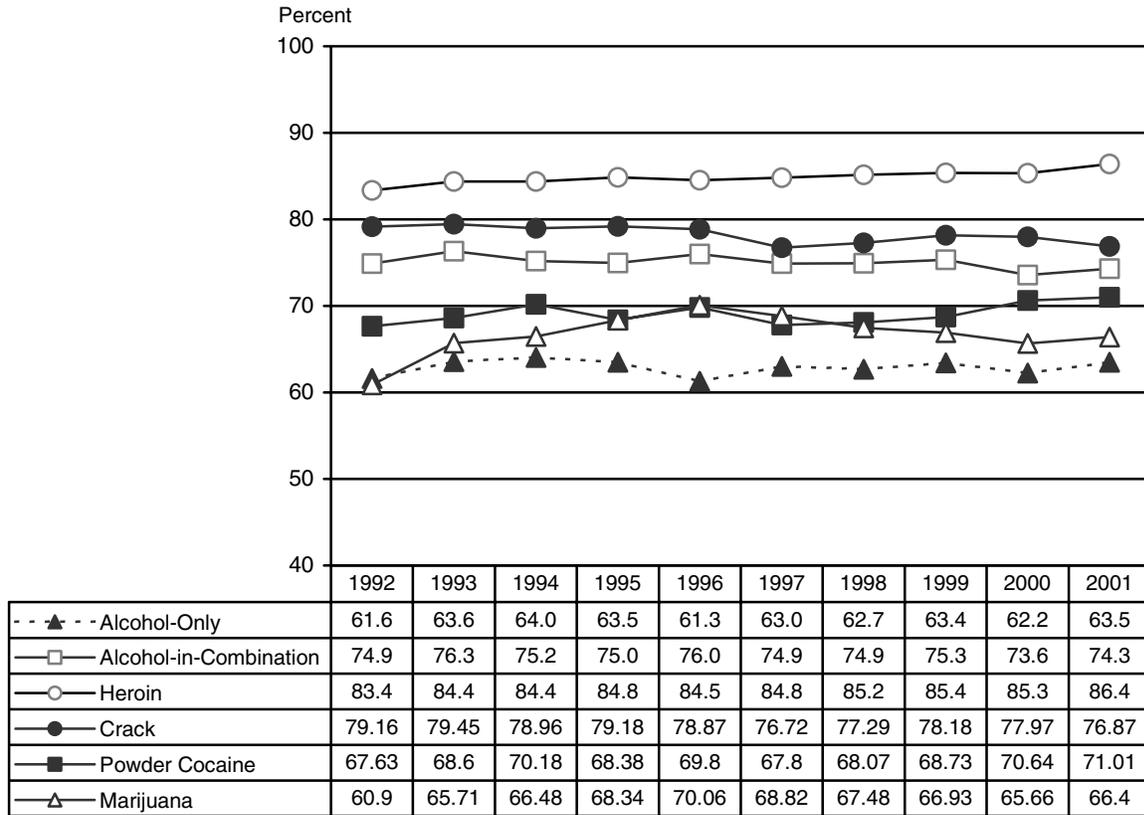
SOURCE: Client Oriented Data Program and Alcohol and Drug Abuse Data System

**Exhibit 6. Trends in Heroin Injection for 18–25-Year-Olds for Regions of New Jersey: 1992–2001**



SOURCE: Client Oriented Data Program and Alcohol and Drug Abuse Data System

**Exhibit 7. Trends in Cigarette Smoking by Treatment Clients by Major Drug Types: New Jersey, 1992–2001**



SOURCE: Client Oriented Data Program and Alcohol and Drug Abuse Data System

**Exhibit 8. Adult/Adolescent and Pediatric Cases Living With HIV/AIDS in Newark by Exposure Category and Gender as of December 31, 2001**

Exposure Category	Males		Females		Total	
	N	(%)	N	(%)	N	(%)
Adult/Adolescent						
Men/sex/men (MSM)	480	(15)	0	(0)	480	(9)
Injection drug user (IDU)	1,344	(42)	832	(38)	2,176	(41)
IDU/MSM	160	(5)	0	(0)	160	(3)
Hemophiliac	13	(<1)	0	(0)	13	(<1)
Heterosexual contact	415	(13)	807	(37)	1,222	(23)
Transfusion with blood/ products	9	(<1)	16	(1)	25	(<1)
Risk not specified/other	743	(23)	548	(25)	1,291	(24)
<b>Total</b>	<b>3,164</b>	<b>(100)</b>	<b>2,203</b>	<b>(100)</b>	<b>5,367</b>	<b>(100)</b>
Pediatric						
Hemophiliac	0	(0)	0	(0)	0	(0)
Parent at risk/has AIDS/HIV	212	(99)	224	(98)	436	(99)
Transfusion with blood/ products	0	(0)	0	(0)	0	(0)
Risk not specified/other	1	(<1)	5	(2)	6	(<1)
<b>Total</b>	<b>213</b>	<b>(100)</b>	<b>229</b>	<b>(100)</b>	<b>442</b>	<b>(100)</b>

SOURCE: New Jersey Department of Health and Senior Services, Division of AIDS Prevention and Control

**Exhibit 9. Adult/Adolescent and Pediatric Cases Living With HIV/AIDS in New Jersey by Exposure Category and Gender as of December 31, 2001**

Exposure Category	Males		Females		Total	
	N	(%)	N	(%)	N	(%)
Adult/Adolescent						
Men/sex/men (MSM)	4,957	(27)	0	(0)	4,957	(17)
Injection drug user (IDU)	6,676	(36)	3,561	(35)	10,237	(35)
IDU/MSM	826	(4)	0	(0)	826	(3)
Hemophiliac	67	(<1)	1	(<1)	68	(<1)
Heterosexual contact	1,836	(10)	3,750	(37)	5,586	(19)
Transfusion with blood/ products	94	(1)	141	(1)	235	(1)
Risk not specified/other	4,180	(22)	2,767	(27)	6,947	(24)
<b>Total</b>	<b>18,636</b>	<b>(100)</b>	<b>10,220</b>	<b>(100)</b>	<b>28,856</b>	<b>(100)</b>
Pediatric						
Hemophiliac	7	(1)	0	(0)	7	(<1)
Parent at risk/has AIDS/HIV	809	(98)	833	(98)	1,642	(98)
Transfusion with blood/ products	3	(<1)	6	(1)	9	(1)
Risk not specified/other	10	(1)	12	(1)	22	(1)
<b>Total</b>	<b>829</b>	<b>(100)</b>	<b>851</b>	<b>(100)</b>	<b>1,680</b>	<b>(100)</b>

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-Collins<sup>1</sup>

## ABSTRACT

*Crack cocaine remains a serious problem in the New Orleans area, but treatment admissions trended down, emergency department (ED) mentions dropped, and fewer adult female arrestees tested cocaine-positive. Heroin abuse was up despite mixed indicators. The number of ED mentions for narcotic analgesics/ combinations rose. Marijuana indicators, such as treatment admissions and the proportion of male adult arrestees testing marijuana-positive, were stable, but ED mentions declined. AIDS and HIV cases increased in Louisiana. Injection drug users accounted for 18 percent of adult AIDS cases and 17 percent of HIV cases statewide through November 2002.*

## 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 office offices in New Orleans.

### Data Sources

Information for this report was collected from the following 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 2001.
- **Drug-related homicide and suicide data** were derived by the Orleans Parish Coroner's Office for 1999, 2000, and 2001.
- **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 1991–2001.
- **Arrestee drug testing data** came from the Arrestee Drug Abuse Monitoring (ADAM) Program, National Institute of Justice (NIJ), for 2000, 2001, and the first three quarters of 2002.
- **Drug arrest data** were provided by the New Orleans Police Department (NOPD) for 2000, 2001, and the first half of 2002.
- **Drug price, purity, and seizure information** was provided by the New Orleans Division of the Drug Enforcement Administration (DEA) for 2000–2001. Data for 2001 were also 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 2002.

## DRUG ABUSE PATTERNS AND TRENDS

### Cocaine and Crack

Cocaine abuse remains at high levels, despite indicators declining in 2001.

Rates of cocaine/crack ED mentions per 100,000 population declined significantly from 164 in 1994 to 123 in 2001, with a continuing decline from 1999 to 2001 (exhibit 1). In 2001, cocaine ED rates were

<sup>1</sup> The author is affiliated with the New Orleans Health Department.

approximately 2.7 times higher among males (183 per 100,000) than females (68), and were highest among those age 26–29 (289 per 100,000). Significant declines by gender and all age groups were reported from 2000 to 2001.

In 1991, primary cocaine treatment admissions accounted for 57.6 percent of all admissions, but they declined over the subsequent 11-year period to 32.5 percent in 2001 (exhibit 2). Between 2000 and 2001, the decline in the proportion of cocaine admissions was slight—from 34.4 to 32.5 percent, respectively.

Cocaine/crack arrests totaled 2,464 for the first half of 2002, up from 1,751 in the same period in 2001. Cocaine/crack distribution arrests totaled 691 in the first half of 2002, compared with 474 in 2001. Possession arrests totaled 1,773 in 2002, up from 1,277 in the first half of 2001. Of the 691 distribution arrests, 3.6 percent ( $n=25$ ) were White males, 82.9 percent (573) were Black males, 0.8 percent (6) were White females, and 11.9 percent (82) were Black females. Of the 1,773 possession arrests, 12.2 percent (216) were White males and 66.9 percent (1,186) were Black males.

New Orleans ADAM data for the first three quarters of 2002 show that 41.0 percent of adult male arrestees tested positive for cocaine, compared with 37.2 percent in 2001 and 34.8 percent in 2000. In the first three quarters of 2002, 41.9 percent of adult female arrestees tested positive for cocaine, compared with 31.0 percent in 2001 and 41.0 percent in 2000.

The price and purity of powder cocaine remained stable over the last year, averaging \$80–\$150 per gram, \$800–\$1,200 per ounce, and \$20,000–\$28,000 per kilogram.

### Heroin

Heroin indicators are mixed. According to the DEA, NOPD, and the Coroner's Office, heroin distribution and deaths increased in the first half of 2002. ED rates of heroin mentions declined, however, from 2000.

Heroin ED rates increased significantly from 1994 to 2001, climbing from 17 to 46 per 100,000 population (exhibit 1). However, significant declines were reported in heroin ED rates from 1999 to 2001 and from 2000 to 2001. In 2001, heroin ED rates continued to be higher among males than females (82 vs. 13 per 100,000 population, respectively). The rates among age groups were highest among those age 26–29 and those age 20–25 (160 and 138 per 100,000, respectively). However, heroin ED rates declined signifi-

cantly from 2000 to 2001 for both males and females and for all age categories.

Despite decreases in ED rates, the proportion of primary heroin treatment admissions rose in 2001 to 14.8 percent of all admissions—the largest percentage since 1991 (2.6 percent) (exhibit 2). The admissions increased slightly from 11.2 percent in 2001 to 14.8 percent in 2001.

Among adult male arrestees in the ADAM program in the first three quarters of 2002, 17.5 percent tested positive for opiates, compared with 15.5 percent during the same period in 2001, and 15.5 percent in 2000. The percentage of female arrestees testing positive for opiates remained relatively stable, at approximately 8 percent in the first three quarters of 2002.

The NOPD reported 108 heroin possession arrests in the first half of 2002, compared with 165 in 2001, and 102 distribution arrests, compared with 75 in the same period in 2001. Of the 108 people arrested for possession in the first half of 2002, 12 percent ( $n=13$ ) were White males, 70 percent (76) were Black males, 8 percent (9) were White females, and 9 percent (10) were Black females.

Preliminary DMP data for 2001 showed heroin purity at 36.2 percent. The average price per milligram pure was \$3.74. The DEA reported that the price of heroin remained stable in the first half of 2002 compared with 2001. In the first half of 2002, a gram cost \$300–\$600, an ounce cost \$4,000–\$9,000, and a kilogram cost \$80,000–\$100,000.

### Marijuana

Marijuana continues as a major problem among youth in the city of New Orleans, but indicators were mixed.

While there was no significant change in the rate of marijuana ED mentions from 1994 to 2001, the rate decreased significantly from 87 to 71 per 100,000 population from 2000 to 2001 (exhibit 1). The rate for males continued to be higher than that for females (102 vs. 41 per 100,000 in 2001), but it did decline 22 percent from 2000. Rates by age group were highest among those age 26–29 (278) and those age 18–19 (225 per 100,000 population).

Primary marijuana treatment admissions increased slightly from 29.2 in 2000 to 30.5 in 2001 (exhibit 2).

ADAM data show that 45 percent of male arrestees tested positive for marijuana in the first three quarters of 2002, as did 35 percent of females. In 2001, 46.2

percent of males and 28.5 percent of females tested marijuana-positive.

According to the NOPD, marijuana possession arrests increased from 2,695 in the first half of 2001 to 3,474 in the first half of 2002. Of the 3,474 possession arrests in 2002, White males accounted for 18.4 percent ( $n=641$ ), Black males for 71.8 percent (2,495), White females for 3.2 percent (112), and Black females for 6.3 percent (217). Distribution arrests for marijuana increased from 402 in the first half of 2001 to 611 in the first half of 2002. The 2002 distribution arrests decreased among White males but increased among White females and among Black males and females. Black males accounted for nearly 83 percent of the marijuana distribution arrests, followed by Black females (11 percent).

Marijuana prices showed no change between 2001 and 2002, averaging \$2–\$5 a joint, \$700 per gram, \$125–\$160 per ounce, \$800–\$1,000 per pound, and \$2,000 per kilogram. Hashish remained at \$150 per

ounce and tetrahydrocannabinol (TCH) liquid at \$200 per milliliter.

### **Other Drugs**

There were few significant numbers or changes to report in drugs other than cocaine/crack, heroin, and marijuana; however, narcotic analgesics/combinations ED rates per 100,000 population increased significantly from 35 in 1994 to 74 in 2001 (exhibit 1). The 2001 ED rate for narcotic analgesics/combinations was higher than that for marijuana and heroin.

### INFECTIOUS DISEASES RELATED TO DRUG ABUSE

Through November 1, 2002, 6,655 adult cases of AIDS were reported in Louisiana. Of these, 18 percent were injection drug users (IDUs) and 9 percent were male IDUs who had sex with other men.

Through November 1, 2002, 6,429 new HIV cases were reported; 17 percent were IDUs and 7 percent were male IDUs who had sex with other men.

---

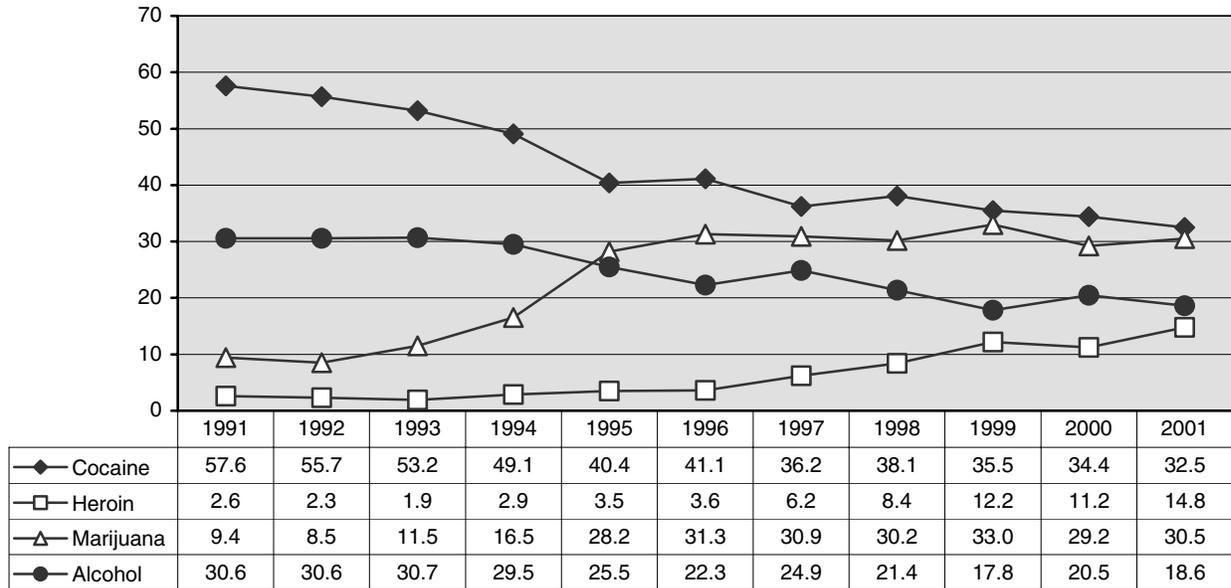
*For inquiries concerning this report, please contact Gail Thornton-Collins, New Orleans Health Department, 2025 Canal Street, Suite 200, New Orleans, LA 70112, Phone: (504) 528-1912, E-mail: <gaily47@hotmail.com>.*

**Exhibit 1. Rates of ED Mentions Per 100,000 Population in New Orleans: 1994, 1999–2001**

Drug	1994	1999	2000	2001	Percent Change		
					1994, 2001	1999, 2001	2000, 2001
Cocaine	164	176	162	123	-24.6	-30.0	-23.8
Heroin	17	53	80	46	177.0	-14.0	-42.2
Marijuana	77	86	87	71			-18.4
Narcotic Analgesics/ Combinations	35	49	55	74	112.3		

SOURCE: DAWN, OAS, SAMHSA

**Exhibit 2. Percentages of Admissions in Orleans Parish by Drug and Year: 1991–2001**



SOURCE: Louisiana State Office of Alcohol and Drug Abuse

# Drug Use Trends in New York City

Rozanne Marel, Ph.D., John Galea, M.A., Kenneth A. Robertson, M.A., Robinson B. Smith, M.A.<sup>1</sup>

## ABSTRACT

*Drug use trends were 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 treatment admissions for cocaine in the first half of 2002 showed increases, and the Street Studies Unit reported signs of a rebound in cocaine use, emergency department (ED) mentions were stable. Heroin trends again appeared to be mixed, with ED mentions remaining stable and treatment admissions decreasing slightly. 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. Ecstasy is widely available throughout New York City, especially at dance clubs and large social events. For AIDS cases in New York City, injection drug use remains the modal risk factor. The effects of September 11, 2001, on the New York City drug scene continue to be closely monitored.*

## 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 October 2002 was 7.8 percent, compared with 5.7 percent in New York State and 5.7 percent in the Nation. According to the Bureau of Labor Statistics, the New York City rate is dramatically higher than in October 2001, when the rate was 6.8, and October 2000, when the rate was 5.4. New York City is still feeling the economic effects of the September 11, 2001, attacks on the World Trade Center and their aftermath. Many jobs in New York City were lost as a result of decreased business activity and the relocation of business firms.

### Data Sources

This report describes current drug abuse trends in New York City from about 1991 to 2001, 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 Administration (SAMHSA), for 1991 through 2001. The comparable 1994–2001 weighted data are based on a representative sample of hospitals in New York City and Westchester, Rockland, and Putnam Counties.
- **Drug abuse-related death data** are from the DAWN mortality system. Data from 1991 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. The DAWN system covered 75 percent of the metropolitan statistical area (MSA) jurisdictions and 87 percent of the MSA population in 2000.
- **Drug treatment admissions data** were provided by the New York State Office of Alcoholism and Substance Abuse Services (OASAS) for 1991–

<sup>1</sup> The authors are affiliated with the New York State Office of Alcoholism and Substance Abuse Services, New York, New York.

2002 and included both State-funded and nonfunded admissions. Demographic data are for the first half of 2002.

- **Arrestee drug testing data** were provided by the Arrestee Drug Abuse Monitoring (ADAM) program, National Institute of Justice (NIJ), for 2001. The adult male sample data are weighted, based on probability sampling. Adult female data are unweighted and based on different sampling and data collection methods.
- **Drug-related arrest data** were provided by the New York City Police Department (NYPD) for 1991 through the first half of 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.
- **Cocaine use during pregnancy data** were provided by the New York City Department of Health for 1991–2000.
- **Acquired immunodeficiency syndrome (AIDS) data** were provided by the New York City Department of Health for 1984–2001.

#### DRUG ABUSE PATTERNS AND TRENDS

##### Cocaine and 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 1998 to 2000. The estimate for 2001 (13,898) shows a significant decrease of 31 percent from 1994. The rate of cocaine emergencies per 100,000 population in the New York City metropolitan area for 2001 was 166, the same as the previous year, and a decline of almost 34 percent since 1994. The comparable national rate for 2001 was 76. While the national rate had been relatively stable, there was a 22-percent increase in this rate from 1994.

While primary cocaine treatment admissions to State-funded and nonfunded programs in New York City declined from 17,572 in 1998 to 14,059 in 2000, they increased slightly in 2001 to 14,375, and showed

continuing increases, with 7,453 in the first half of 2002 (exhibit 1). In the first half of 2002, cocaine admissions constituted 22 percent of all New York City's 33,437 drug and alcohol treatment admissions (excluding alcohol-only).

Exhibit 2 shows demographic characteristics of cocaine treatment admissions for the first half of 2002 by the two primary modes of use: smoking crack (representing 63 percent of cocaine admissions) and using cocaine intranasally (representing 34 percent). Those who smoke crack are more likely than those who use intranasally to be female (37 vs. 24 percent), Black (66 vs. 43 percent), readmissions to treatment (78 vs. 70 percent), and without income (39 vs. 27 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 increase in Hispanics among treatment admissions who use cocaine intranasally, which had stabilized recently, has risen again to 38 percent in the first half of 2002.

ADAM urinalysis data for 2001 show drug positives remaining the highest for cocaine. The 2000 weighted data for adult males show that 45 percent tested cocaine-positive. In the unweighted adult female sample, 57 percent tested positive for cocaine.

The SSU finds powder cocaine quality to be relatively stable and buying and use to be rebounding. Powder cocaine has typically been a drug sold from indoor locations, but 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 one-fourth ounce. The \$25 and \$30 prices usually represent variation in quality, but not in the amount of product.

There is a great variety of packaging methods used in the marketing of cocaine in New York City. These materials include 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 material, aluminum foil, continues to be the most frequently used, followed by plastic wrap and cellophane. Users tend to prefer the malleability of the aluminum, but dislike that the cocaine can "cook up" (melt) in the foil from body heat. Plastic wrap has recently increased in use, while vials have declined.

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" is a common Spanish slang term

for cocaine; “powder” and “fishscale” are also common slang terms. Dominican drug gangs dominate the distribution of cocaine in New York City. At the street level, sellers frequently match the predominant racial composition of the surrounding community.

The selling of powder cocaine involves three basic methods. The method gaining popularity is the techno method or virtual connection method. 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 method of selling cocaine is from an apartment. Cocaine sellers typically work out of their own apartments or ones belonging to relatives. Another method, which is also becoming increasingly common, is the selling of cocaine from the street. Typically this form of street selling is done in connection with an apartment operation. In order to reduce the amount of buyer traffic in and out of an apartment, street sellers work outside. The individual who wants to buy a \$10 or \$20 amount of cocaine obtains 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 an apartment are able to sell other drugs. There is some indication that some cocaine sellers are also offering club drugs.

The majority of powder cocaine users are Hispanic and Black, but there is a sizeable 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.

According to street interviews, most powder cocaine users report that they only “snort” the drug. However, an increasing number report that they know people who have started to inject cocaine.

Crack users report that the drug is 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 the quality of crack since the last study period remains unchanged.

Crack is associated with three basic prices: \$5, \$10, and \$20. During the present study period, field researchers were unable to find any location offering crack in \$3-bags. The most common price continues to be \$10 for one-tenth gram. Interviews with several street sellers,

however, indicated that they want to make the \$20 for two-tenths gram amount the standard price to reduce the risk of exposure, since sellers are most vulnerable at the time of drug exchange.

There are three basic packaging materials used 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.

Street crack sellers are typically Black or Hispanic males. According to street contacts, the middle-level dealing operation that supplies the street sellers is dominated by Dominican drug gangs. 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. The entire outstanding balance is due the next time they need to replenish their inventory. Typically, the dealer starts the street seller with a \$100 supply of crack, or 10 packets. Before the seller can obtain a new supply, he needs to pay the dealer \$80. The seller is making approximately \$2 on each packet sold. Many of the heavy crack-selling locations around the city are found in or around public housing developments, followed by apartments. Usually these apartments are not the sellers’ homes, but are specifically established as selling locations that can 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. As a rule, street crack sellers do not sell other drugs. If they do offer another drug, it is likely to be marijuana, which many users smoke to reduce the “crash-effect” resulting from the prolonged use of crack.

The majority of crack users are Black and Hispanic males. Originally, crack had a strong appeal among young adults, but it appears that crack users are getting older. Field researchers report very few young users, and most buyers appear to be veteran users. Crack users interviewed by the SSU reported that they smoked crack, often using an old broken glass stem. There was some talk about injecting crack, but the field researchers could not find anyone using this method, or knowing anyone who had used this method.

The DEA reports that prices for powder cocaine are \$22,000–\$30,000 per kilogram and \$900–\$950 per ounce. To minimize conspicuous traffic, transactions are few but prices are high. According to the DEA, 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 392 in 1999) (exhibit 1).

The NYPD reports a decline in cocaine arrests since 1995, when they totaled 40,846 (exhibit 1). The number of cocaine arrests in 2000 was 31,919, essentially the same as in 1999, but a 22-percent decrease since 1995. Of the 13,956 cocaine arrests in the first half of 2001, 83 percent involved crack.

Another important indirect indicator of cocaine use 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 490 in 2000—an 85-percent decline over 11 years (exhibit 1).

## Heroin

Heroin trends, which had appeared to stabilize, are mixed for this CEWG reporting period (exhibit 3). The number of heroin ED mentions remained relatively stable from 11,129 to 10,644 between 1994 and 2001. Estimates for 2001 showed a nonsignificant increase from the year before. The rate in the New York metropolitan area was 127 heroin mentions per 100,000 population for 2001, almost the same as the rate for the year 2000, 128. The estimated national rate was 37 heroin mentions per 100,000 population.

Primary heroin treatment admissions to all treatment programs in New York City have been gradually increasing. Between 1991 and 2001, admissions rose from 15,085 to 22,779, a 51-percent increase over the 10-year period (exhibit 3). The number for the first half of 2002—10,838—was less than in either half of 2001. In the first half of 2002, primary heroin admissions constituted 32 percent of New York City's 33,437 drug and alcohol treatment admissions (excluding alcohol only).

Intranasal heroin use may have peaked in the second half of 1998, when 62 percent of heroin admissions to all New York City drug treatment programs reported this as their primary route of administration. Since then, the proportions reporting intranasal use declined slightly, to approximately 60 percent in 1999, 2000, 2001, and the first half of 2002. Meanwhile, heroin injection increased among heroin admissions, from 32 percent in the second half of 1998 to 37 percent in the second half of 2002.

Exhibit 4 highlights general demographic characteristics of heroin abusers admitted to all New York City treatment programs in the first half of 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 (35 percent). Compared with heroin injectors, intranasal users are more likely to be Hispanic (58 vs. 48 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. 31 percent), and to have started use before reaching age 20 (58 vs. 42 percent).

In addition to heroin admissions to traditional treatment programs, heroin admissions for detoxification or crisis services in New York City have become a sizable 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 2000, 15,040 comparable admissions were reported; and by 2001 that figure increased to 15,913. In the first half of 2002, the number of admissions to crisis services for heroin abuse was 7,250.

DAWN medical examiner (ME) figures for heroin-involved deaths in the New York City metropolitan area present an inconsistent picture over the last few years, with both increases and decreases. In 2000, there were 193 heroin-involved deaths (exhibit 1).

ADAM urinalysis data for 2001 show that 14 percent of females tested opiate-positive, as did 19 percent of males.

From 1992 to 2000, the DMP found average heroin purities to be generally above 60 percent. Preliminary findings for the first half of 2001 show an average purity of 55.7 percent, down from 62.9 percent in 2000. The associated price was \$0.61, 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 is moderately to highly available. As one informant's comment demonstrates, "Heroin is all over the place. I can be anywhere [in the city], I know I'm only 15 minutes away from a connection." By comparison, crack 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. Compared with crack sellers, heroin sellers tend to be less overt and less aggressive, and they usually do not operate on the street. The SSU, however, reports an increasing trend of heroin sellers working from the street or semi-public locations, such as hallways, restaurants, and cars. The areas in which heroin is most readily available are primarily low-income, Hispanic and Black communities with extensive public housing developments.

The word on the street is that Colombians, working through a distribution network controlled by Dominican gangs, dominate the heroin trade in the city. Heroin distribution in New York City functions according to a three-tier system, primarily controlled by Hispanic groups. The first tier is occupied by Colombians, who are the principal providers of heroin. The second tier is occupied by Dominican drug gangs, who dominate mid-level and local distribution. Below them are the street sellers. Most operate from indoor locations, affording them better security and cover. When the sellers operate out of an apartment, it is usually a location specifically for the purpose of dealing heroin, and not the seller's living quarters. The street sellers tend to be independent sellers working by themselves, or in concert with a partner or small crew (two to five individuals).

Although heroin is most often sold from indoor locations, one common street location is near drug treatment centers. Other locations are public housing developments, playgrounds, and parks. While heroin sellers do not tend to sell other drugs, the most common other drug they sell is cocaine, since many heroin users like to speedball.

While the majority of heroin users are Black and Hispanic males age 35–50, there appear to be many more young new buyers than were observed a year ago. The majority of buyers report that they are sniffers and only snort. Field researchers, however, report an apparent increase in the number of individuals offering needles for sale at or near heroin selling locations. 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 powder associated with the Colombians. The purity is reported to be of good “snortable” quality. Heroin has far less price variation than some of the other street drugs. The predominant price is \$10 per packet, and each contains approximately one-tenth gram of powder. There are five principal packaging materials: glassine bags, cellophane, light plastic wrap knotted at both ends,

folded paper, and balloons. Of these, the glassine bag is by far the most popular, followed by cellophane and plastic wrap. During this study period, observers reported a strong decline in the use of thumbnail-sized bags and aluminum foil.

The use of brand names is becoming less common. “Two-on-Two,” “Passion,” “Sleep Walker,” “Not Quite,” “XXL,” “Special,” “Cash Money,” “Blue-bay,” and “Badboy” are all current brand names. As with the other drugs discussed, brand names often reflect the color of the package. “Manteca,” Spanish for lard, is a common slang term for heroin.

Much like cocaine arrests, heroin arrests reached a high of 28,083 in 1989, declined for a few years, and then peaked in 1995 at 38,131 (exhibit 3). Heroin arrests increased slightly between 1999 and 2000 (from 32,949 to 33,665), a decline of approximately 12 percent from 1995. The number of heroin arrests for the first half of 2001 appears to be roughly at the same level as in the first half of 2000.

### **Other Opiates/Narcotics**

Although the numbers are small, ED mentions of hydrocodone and oxycodone combinations have shown increases. According to DAWN data, hydrocodone/combinations mentions 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 mentions, represented a significant increase of 58 percent. Mentions of oxycodone/combinations also showed an increase, rising 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.

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.

Users have told the SSU that injecting liquid morphine from patches of fentanyl (a synthetic opiate) produces an intense high. Street contacts report that users have searched the garbage of senior citizen housing and hospices for fentanyl patches that were not disposed of properly.

### **Marijuana**

In New York City, marijuana treatment admissions continued to increase steadily, while ED mentions

were stable (exhibit 5). The total number of marijuana ED mentions—estimated from the current sample of hospitals—rose from 2,578 in 1994 to 3,501 in 2001. This increase, however, was not significant. The rate of marijuana ED mentions for 2001 for the New York City metropolitan area was 42 per 100,000 population, suggesting stability in the rates since 1994. The comparable national estimate in 2001 was 44 per 100,000 population.

Primary marijuana admissions to all treatment programs have been increasing steadily over the past several years. The number increased more than eightfold between 1991 and 2001, from 1,374 to 13,270, the highest annual number (exhibit 1). That figure rose again in the first half of 2002 to 7,232, the highest half-year total for marijuana admissions ever recorded. In 1991, primary marijuana admissions represented less than 5 percent of all treatment admissions; by the first half of 2002, these admissions represented 22 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 the first half of 2002. The vast majority were male (82 percent); and 37 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 44 percent of the marijuana admissions, and most (72 percent) had some criminal justice status.

According to the SSU, marijuana continues to be the most widely available illicit drug in New York City. It continues to be of very good quality and potency. Street-level marijuana is available in three prices: \$10, \$20–\$25 (per one-half ounce), and \$50–\$60 (per ounce). During the study period, field researchers were unable to find any location offering marijuana in \$5 amounts or loose joints. The most common street price continues to be the \$10 amount. Typically, buyers interested in the \$20 and \$50 amounts have to obtain them through house connections.

There are several packaging materials used for marijuana street selling: nail-sized plastic bags, glassine bags, aluminum foil, and manila envelopes. Manila envelopes are rare and unpopular because the customer cannot see the product. Common slang terms for marijuana are “tree,” “weed,” and “bluwee.”

The majority of marijuana sellers are adolescents and young adults. The sellers tend to reflect the ethnic makeup of their community. As mentioned earlier, the techno method, in which a connection is made through

beeper, cell phone, or the Internet, has gained in popularity. The most common sales method is from a private residence. Marijuana sellers usually work out of their own apartments. This may constitute a part-time avocation that helps supplement their income and habit. Many of them develop a client list and require an introduction before selling to a stranger. The method associated with the highest risk is street selling, which is still quite common in certain communities.

The use of marijuana is evident across all social groups. However, the drug seems to be most popular among adolescents and young adults. Many of the buyers are in college or high school. While the majority of observed buyers were male, there were a substantial number of lone female buyers. One aspect about marijuana users, particularly young White males, is that they become fascinated with information about the various types and qualities of marijuana. It is similar to some people’s knowledge about wine; they in essence become “pot” connoisseurs.

Traditionally, marijuana was smoked in a joint. This method is now less common, and many stores do not even carry rolling paper. Currently, the most popular route of marijuana administration involves blunts, hollowed out cigars. Alternatively, the marijuana is wrapped in cigar leaves and smoked. Very often, the leaves are dipped in brandy or some other aromatic liquor. A popular cigar company is marketing two additional variations on the original Corona cigar—a green leaf cigar and a vanilla version. To facilitate smoking, a number of companies are marketing individually rolled cigar leaves (\$1 each), which come in various flavors, including brandy, honey, cognac, and vanilla.

Adult arrestees in the ADAM samples for 2001 were much more likely to test positive for marijuana than for opiates. Approximately 40 percent of male arrestees tested positive for marijuana, as did 32 percent of the females. For male arrestees, the number of marijuana-positive urinalyses approached that for cocaine-positive urinalyses.

According to the DEA, marijuana prices 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 following 9 years to 60,455 in 2000. Data from the first half of 2001 show arrestees at about the same level as in 2000. About 98 percent of these arrests

were for misdemeanors, and 32 percent involved persons age 20 or younger. Moreover, cannabis arrests accounted for 45 percent of all drug arrests in New York City in the first half of 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. In fact, there have been no ED mentions for methamphetamine, and in 2000, only three methamphetamine deaths were reported in the five boroughs of New York City. Use of methamphetamine, and perhaps ketamine as well, appears to be especially on the rise among young males in the gay community. Recently, the Gay Men's Health Crisis felt the need to double the number of methamphetamine anonymous meetings that their organization offers. Methamphetamine is available in powder, pill, or liquid form, with pill form being the most popular.

### Depressants

While some indicators of the nonmedical use of psychoactive prescription drugs 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 95 percent, from 323 in 1994 to 704 in 2001. Clonazepam mentions increased from 123 in 1994 to 328 in 2001, an increase of 167 percent. Conversely, diazepam mentions decreased from 459 in 1994 to 280 in 2001, a decrease of 39 percent. There continue to be few (about 1 percent) treatment admissions with a psychoactive prescription drug as a primary drug of abuse.

According to the SSU, the three most popular pills on the street are alprazolam (Xanax or "footballs"), selling for \$5 per pill; clonidine (Catapres), selling for \$1 per pill; and the antidepressant amitriptyline (Elavil or "sticks"), selling for \$1 per pill.

Many pill sellers obtain their inventory of pills by getting prescriptions (typically three per visit) from unscrupulous doctors. The doctor gets paid by Medicaid, and the pill seller may pay additional cash (usually \$100) for the prescriptions. The prescriptions are then taken to a pharmacy to be filled. The majority of pill selling locations are found within a two-block radius of treatment programs.

### Hallucinogens

The number of phencyclidine (PCP) ED mentions declined significantly, from 852 in 1994 to 203 in 2001, a decrease of 76 percent. ED mentions for lysergic acid diethylamide (LSD) also decreased, from 150 in 1994 to 62 in 2001, a change of nearly 59 percent. 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.

In Harlem, PCP sells for \$10 per bag and is packaged in small plastic bags. Although it is available as a bottled liquid, PCP is primarily sold in packets of marijuana, parsley, or mint leaves that have been soaked in the drug.

### 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 may be stabilizing. Although ED mentions increased significantly from 7 in 1994 to 172 in 2001, an increase of more than 2,000 percent, the number of mentions dropped (insignificantly) from 200 in 2000 to 172 in 2001.

The price for a single pill of ecstasy ranges from \$5 to \$30. Generally, the prices tend to run higher if these substances are purchased inside a club or rave. The most common sales unit for ecstasy is the single pill or tablet. The club drugs sellers are usually White, young, and male, and many are middle or upper class. This profile is beginning to expand across racial, ethnic, and social class boundaries, because ecstasy is also sold by sellers of other types of drugs.

Club drug users tend to be White and young males, although according to SSU, club drugs are also quite popular among 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 club drugs, particularly ecstasy, are making greater inroads among New York residents, especially 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.

Also 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 ketamine ED mentions has remained relatively stable for the last few years, numbering 24 in 2001.

Another club drug of concern is gamma hydroxybutyrate (GHB). While GHB ED mentions in New York City are very low and changes have not been significant, they increased to 31 in 2000, up from 16 in 1999 and 5 in 1998. In 2001, however, the number of GHB ED mentions dropped to 15, similar to the 1999 level.

#### 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 128,141 adult and pediatric AIDS cases reported in New York City through December 2001 represents a rate of more than 1,600 cases per 100,000 New Yorkers. Of New York City’s cumulative 126,130 adult AIDS cases, 55,161 (44 percent) involved heterosexual IDUs. Homosexual males accounted for 38,236 cases (30 percent). Among heterosexual IDUs who have contracted AIDS in New York City, 74 percent are male and 26 percent

are female. About 43 percent of these individuals are age 30–39. Blacks continue to be the modal group, accounting for 42 percent, followed by Hispanics (37 percent) and Whites (25 percent). Among female IDUs, Blacks remain the majority (53 percent), followed by Hispanics (34 percent) and Whites (13 percent). Female IDUs are also younger than their male counterparts: 63 percent are age 39 or younger, compared with 54 percent of the males.

Of the 2,011 pediatric AIDS cases (children age 12 or younger at time of diagnosis), 47 percent involve mothers who have injected drugs. An additional 16 percent involve 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 77,992 New Yorkers have died of AIDS, representing 61 percent of all those who have contracted the disease.

It should be noted that in June 2000, the New York State Department of Health implemented a law that mandates health care providers to report all cases of diagnosed HIV infection and HIV illness in addition to AIDS cases. This will ultimately result in improved data, providing information on the people more recently infected and those for whom prevention and planning are particularly important. However, it has resulted in a tremendous increase in the number of lab reports received by the New York City Health Department, and there is currently a backlog of information that the department is processing, leading to delays in reporting.

---

*For inquiries concerning this report, please contact Rozanne Marel, Ph.D., Director of Data Analysis, Applied Studies, New York State Office of Alcoholism and Substance Abuse Services, 501 7th Avenue, 9th Floor, New York, New York 10018, Phone: 646-728-4605, Fax: 646-728-4685, or E-mail: <RozanneMarel@oasas.state.ny.us>.*

**Exhibit 1. Semiannual Cocaine Trends for Selected Indicator Data in New York City by Number: 1991–First Half 2002**

Year	Semiannual/ Annual Periods	Deaths Involving Cocaine <sup>1</sup>	Cocaine Emergency Department Mentions <sup>2</sup>	Treatment Admissions: Cocaine as Primary Drug of Abuse <sup>3</sup>	Cocaine Arrests <sup>4</sup>	Births to Women Using Cocaine <sup>5</sup>
1991	1H		7,769	5,314		
	2H		8,330	7,232		
	Total	804	16,099	12,546	37,769	2,239
1992	1H		9,180	7,753		
	2H		11,233	7,224		
	Total	733	20,413	14,977	33,708	1,786
1993	1H		10,499	6,978		
	2H		10,586	7,219		
	Total	818	21,085	14,197	31,296	1,611
1994	1H		10,084	7,794		
	2H		10,130	7,613		
	Total	755	20,145 <sup>6</sup>	15,407	38,200	1,288
1995	1H		9,915	8,371		
	2H		9,808	7,836		
	Total	908	19,715 <sup>6</sup>	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	437	19,549	17,572	35,577	742
1999	1H		7,386	8,346		
	2H		7,413	7,567		
	Total	392	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	13,956	
2002	1H			7,453		
	2H					
	Total					

SOURCES: <sup>1</sup>DAWN, OAS, SAMHSA, including New York City, Long Island, and Putnam County through 1995. Starting with 1996 the data include New York City only.

<sup>2</sup>DAWN, OAS, SAMHSA, weighted data, based on a representative sample of hospitals for New York City and Westchester, Rockland, and Putnam Counties.

<sup>3</sup>New York State Office of Alcoholism and Substance Abuse Services (OASAS)-funded and nonfunded treatment admissions.

<sup>4</sup>New York City Police Department.

<sup>5</sup>New York City Department of Health.

<sup>6</sup>The total has been adjusted according to revised data, but the half-year totals have not been revised.

**Exhibit 2. Characteristics of Primary Cocaine Admissions<sup>1</sup> to State-Funded<sup>2</sup> and Nonfunded<sup>3</sup> Treatment Programs in New York City by Mode Of Administration: First Half of 2002**

<b>Demographic Characteristic</b>	<b>Total (N=7,453)</b>	<b>Smoking Crack (n = 4,681)</b>	<b>Using Cocaine Intranasally (n =2,541)</b>
Gender			
Male	68	63	76
Female	32	37	24
Age at Admission			
25 and younger	7	5	12
26–35	30	28	33
36 and older	63	67	56
(Average age)	(37.9 years)	(38.4 years)	(36.7 years)
Race/Ethnicity			
Black	57	66	43
Hispanic	28	23	38
White	13	10	18
No Source of Income <sup>4</sup>	35	39	27
Some Criminal Justice Status	45	42	51
Readmissions	75	78	70
Age of First Use			
14 and younger	7	5	8
15–19	28	23	37
20–29	44	48	38
30 and older	21	24	17
Secondary Drug of Abuse			
Alcohol	48	48	49
Marijuana	21	21	23
Heroin	6	6	4

<sup>1</sup>Figures 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.

<sup>2</sup>State-funded programs receive some or all funding through the New York State Office of Alcoholism and Substance Abuse Services (OASAS).

<sup>3</sup>Nonfunded programs receive funding through sources other than OASAS.

<sup>4</sup>Defined as not earning income, not receiving support from family or significant others, and not receiving any public assistance.

SOURCE: OASAS

**Exhibit 3. Semiannual Heroin Trends for Selected Indicator Data in New York City: 1991–First Half 2002**

Year	Semiannual/ Annual Period	Deaths Involving Heroin <sup>1</sup>	Heroin/Morphine Emergency Department Mentions <sup>2</sup>	Treatment Admissions: Heroin as Primary Drug of Abuse <sup>3</sup>	Heroin Arrests <sup>4</sup>	Average Purity of Street Heroin (%) <sup>5</sup>
1991	1H		2,684	7,180		
	2H		3,335	7,905		
	Total	582	6,019	15,085	23,622	(50.6)
1992	1H		3,879	8,219		
	2H		4,503	8,004		
	Total	681	8,382	16,223	23,509	(62.3)
1993	1H		5,131	8,369		
	2H		6,220	8,620		
	Total	796	11,351	16,989	24,595	(66.1)
1994	1H		5,561	9,070		
	2H		5,624	9,117		
	Total	612	11,129 <sup>6</sup>	18,187	33,206	(63.9)
1995	1H		5,288	9,286		
	2H		5,440	9,001		
	Total	751	10,706 <sup>6</sup>	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	269	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	171	9,302	20,879	32,949	(61.8)
2000	1H		5,378	10,944		
	2H	193	5,630	10,672		
	Total		11,009	21,616	33,665	(62.9)
2001	1H		5,428	11,324		
	2H		5,216	11,455		
	Total		10,644	22,779		
2002	1H			10,838		
	2H					
	Total					

SOURCES: <sup>1</sup> DAWN, 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.

<sup>2</sup> DAWN, OAS, SAMHSA, weighted data, based on a representative sample of hospitals for New York City and Westchester, Rockland, and Putnam Counties.

<sup>3</sup> New York State Office of Alcoholism and Substance Abuse Services (OASAS)-funded and nonfunded treatment admissions.

<sup>4</sup> New York City Police Department.

<sup>5</sup> U.S. Drug Enforcement Administration.

<sup>6</sup> The total has been adjusted according to revised data, but the half-year totals have not been revised.

**Exhibit 4. Characteristics of Primary Heroin Admissions<sup>1</sup> to State-Funded<sup>2</sup> And Nonfunded<sup>3</sup> Treatment Programs in New York City by Mode Of Administration: First Half of 2002**

<b>Demographic Characteristic</b>	<b>Total (N = 10,838)</b>	<b>Using Heroin Intranasally (n = 6,487)</b>	<b>Injecting Heroin (n = 3,990)</b>
Gender			
Male	74	74	75
Female	26	26	25
Age at Admission			
25 and younger	8	6	10
26–35	26	26	25
36 and older	67	68	65
(Average age)	(39.0 years)	(39.1 years)	(39.0 years)
Race			
Black	25	30	17
Hispanic	54	58	48
White	19	11	32
No source of income <sup>4</sup>	24	25	22
Some Criminal Justice Status	35	40	27
Readmissions	87	85	91
Age of First Use			
14 and younger	13	11	16
15–19	35	31	42
20–29	34	36	31
30 and older	18	22	11
Secondary Drug of Abuse			
Alcohol	12	12	11
Marijuana	8	9	5
Cocaine	35	31	43

<sup>1</sup> Figures 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.

<sup>2</sup> State-funded programs receive some or all funding through the New York State Office of Alcoholism and Substance Abuse Services (OASAS).

<sup>3</sup> Nonfunded programs receive funding through sources other than OASAS.

<sup>4</sup> Defined as not earning income, not receiving support from family or significant others, and not receiving any public assistance.

SOURCE: OASAS

**Exhibit 5. Semiannual Marijuana Trends for Selected Indicator Data in New York City by Number: 1991–First Half 2002**

Year	Semiannual/ Annual Period	Marijuana Emergency Department Mentions <sup>1</sup>	Treatment Admissions: Marijuana as Primary Drug of Abuse <sup>2</sup>	Cannabis Arrests <sup>3</sup>
1991	1H	605	687	4,762
	2H	591	687	
	Total	1,196	1,374	
1992	1H	896	953	5,078
	2H	1,134	1,003	
	Total	2,003	1,956	
1993	1H	1,011	1,207	6,145
	2H	1,081	1,497	
	Total	2,092	2,704	
1994	1H	1,181	2,031	8,815
	2H	1,408	1,793	
	Total	2,578 <sup>4</sup>	3,824	
1995	1H	1,516	2,171	12,357
	2H	1,460	2,159	
	Total	2,974 <sup>4</sup>	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	27,693
	2H	1,598	6,593	
	Total	3,501	13,270	
2002	1H		7,232	
	2H			
	Total			

SOURCES: <sup>1</sup> DAWN, OAS, SAMHSA, weighted data, based on a representative sample of hospitals for New York City and Westchester, Rockland, and Putnam Counties (2000 data are preliminary).  
<sup>2</sup> New York State Office of Alcoholism and Substance Abuse Services (OASAS)-funded and nonfunded treatment admissions.  
<sup>3</sup> New York City Police Department.  
<sup>4</sup> The total has been adjusted according to revised data, but the half-year totals have not been revised.

**Exhibit 6. Characteristics of Primary Marijuana Admissions<sup>1</sup> to State-Funded<sup>2</sup> and Nonfunded<sup>3</sup> Treatment Programs in New York City: First Half of 2002**

<b>Demographic Characteristic</b>	<b>Percent of All Treatment Programs (N = 7,232)</b>
Gender	
Male	82
Female	18
Age at Admission	
20 and younger	37
21–25	27
26–35	23
36 and older	13
(Average Age)	(24.9 years)
Race	
Black	53
Hispanic	34
White	10
No Source of Income <sup>4</sup>	21
Some Criminal Justice Status	72
Readmissions	49
Age of First Use	
14 and younger	48
15–19	41
20–29	9
30 and older	2
Secondary Drug of Abuse	
Alcohol	44
Cocaine	10

<sup>1</sup> Figures 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.

<sup>2</sup> State-funded programs receive some or all funding through the New York State Office of Alcoholism and Substance Abuse Services (OASAS).

<sup>3</sup> Nonfunded programs receive funding through sources other than OASAS.

<sup>4</sup> Defined as not earning income, not receiving support from family or significant others, and not receiving any public assistance.

SOURCE: OASAS

# Drug Use in Philadelphia, Pennsylvania

Samuel J. Cutler, and Mark R. Bencivengo, M.A.<sup>1</sup>

## ABSTRACT

*According to estimated rates of emergency department (ED) mentions per 100,000 population, cocaine was the most mentioned drug in Philadelphia EDs (n=252 in 2001). In the first half of 2002, 78 percent of male cocaine treatment admissions and 85 percent of female cocaine treatment admissions were crack smokers. In 2001, the rate of heroin ED mentions per 100,000 population (119) was the highest DAWN rate reported in Philadelphia in at least 12 years. The average number of drugs mentioned in ED cases did not continue to increase after doing so from 1998 through 2000. 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 2001, but it declined in the first half of 2002. Heroin/morphine detections in decedents exceeded cocaine detections from the second half of 1999 through the second half of 2001, but cocaine detections exceeded heroin/morphine detections in the first half of 2002. The preliminary rate of marijuana ED mentions in 2001 rose significantly from 1994 and was estimated at 122 per 100,000 population. Focus groups reported the increased availability and use of commercial blunt wrappers made of cigar tobacco leaves as an alternative to buying cigars for wrapping marijuana and other additives. Participants also reported increased use of oxycodone products and alprazolam.*

## 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 a 7-percent increase from the 1990 census count, despite interim estimates of population decline. The 2000 Philadelphia population was 45.0 percent White, 43.2 percent African-American, 0.3

percent American Indian and Alaska Native, 4.5 percent Asian, 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 1994–2001.
- **Drug treatment admissions data** for programs in Philadelphia County were provided by the Pennsylvania Department of Health, Client Information System, for July 1, 1995, through June 30, 2002. Data for FY 2002 are preliminary and subject to revision because of the treatment reporting schedule, which results in frequent delays of up to 1 year between a treatment admission and the reporting of that event.
- **Drug-related 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, 1995, through June 30, 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

<sup>1</sup> 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.

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 reports from the Arrestee Drug Abuse Monitoring (ADAM) program of the National Institute of Justice (NIJ) for 2001. Provisional unweighted data for the first three quarters of 2002 are also included.
- **Heroin purity and price data** were provided by the Drug Enforcement Administration (DEA), Domestic Monitor Program (DMP), through 2001.
- **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 June 30, 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 the human immunodeficiency virus (HIV) infection.

#### DRUG ABUSE PATTERNS AND TRENDS

Preliminary DAWN ED data for 2001 show the average number of drug abuse mentions per hospital episode remained relatively stable, at 1.87 drugs per episode (exhibit 1). The estimated growth of drug mentions from 1994 to 2001 (52 percent) has exceeded the estimated growth of ED episodes (45.5 percent).

The average number of drugs detected in decedents by the ME increased in the second half of 2001 for the eighth consecutive half-year, to 2.91, then declined to 2.60 in the first half of 2002 (exhibit 2). Mortality cases with positive toxicology reports decreased 13 percent, from 717 in FY 2001 to 623 in FY 2002. Of the 623 deaths in FY 2002, adverse reactions to drugs accounted for 57 percent, overdose for 3 percent, and violence for 18 percent; 22 percent of the deaths were attributed to other causes.

White males accounted for the largest proportion of drug-positive decedents in 11 consecutive half-year periods through December 2001, accounting for 34–44 percent of all cases. However, African-American males exceeded White males in the first half of 2002. Whites, as a group, constituted the plurality of ME drug-related cases from 1995 through June 2002, ranging from 45 to 54 percent. Males accounted for 77

percent of all deaths with positive toxicology reports in FY 1999, 73 percent in FY 2000, 75 percent in FY 2001, and 77 percent in FY 2002. In FY 2002, males accounted for 77 percent of drug-positive deaths among Whites, 77 percent among African-Americans, and 83 percent among Hispanics. Among females, Whites accounted for the largest number of drug deaths from 1996 through 2001 (45–55 percent), followed by African-Americans (34–55 percent). Hispanics accounted for 3–9 percent, and Asians for 0–2 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 phencyclidine [PCP]). The latter ranking is particularly remarkable, considering the lack of methamphetamine cases in this city. In the ADAM measurement of heavy use of a NIDA-5 drug, Philadelphia males were tied for fifth (45.1 percent within the past 30 days) among 33 cities (median=39.6 percent). In the measurement of risk for dependence, Philadelphia males were tied for fourth (45.7 percent) among 33 cities (median=38.6 percent). For the first three quarters of 2002, the provisional unweighted data for males indicated a range of 72.7 to 76.7 percent positive for the NIDA-5 drugs.

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 ( $n=2.06$ ). In the second half of 2001, the average was 1.96 drugs of abuse, and in the first half of 2002, the average was 1.85 drugs of abuse.

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.

#### Cocaine and Crack

Cocaine/crack remains the major drug of abuse in Philadelphia. The estimated rate of cocaine/crack ED mentions in the Philadelphia primary metropolitan statistical area (PMSA) was 252 per 100,000 population in 2001 (exhibit 1). From 1994 to 2001, the rate of cocaine ED mentions among females increased significantly (50.3 percent), from 111 in 1994 to 166 per 100,000 population in 2001. Rates continued to be higher among males than females and, by age group, were highest among persons age 26–44.

ME data show that cocaine was present in 14 percent fewer cases in FY 2002 than in FY 2001 (exhibit 2). Despite this decrease, the presence of cocaine in total drug-positive toxicology reports remained stable between 44 and 47 percent from FY 1998 through FY 2002.

Another drug(s) was found in 84 percent of all ME cocaine-positive cases in the second half of 2001 and 84 percent in the first 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. Cocaine in combination with alcohol remains a significant finding in cocaine-positive toxicology reports. In FY 2000, FY 2001, and FY 2002, alcohol was present in 44, 23, and 32 percent of cases in which cocaine was also detected. ME toxicology unit staff view alcohol as particularly dangerous when it is used in combination with substances that normally do not produce death.

Preliminary treatment data for FY 2002 show that cocaine, as a primary drug, accounted for 28 percent of all admissions, down from 31 percent in FY 2001 (exhibit 3). Cocaine treatment admissions peaked in 1991, at 63 percent.

In FY 2002, males accounted for 61 percent of primary cocaine treatment admissions (exhibit 4). This percentage has been increasing since FY 1999 (55 percent). In FY 2002, African-Americans accounted for 79 percent of primary cocaine treatment admissions, followed by Whites (14 percent), Hispanics (5 percent), and Asians and others (2 percent).

Since FY 1998, an average of 83 percent of primary cocaine admissions reported smoking the drug, 13 percent reported intranasal use, only 2 percent reported injecting, and 1 percent 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 FY 2002, nearly 78 percent reported smoking the drug; the comparable figure for females was 85 percent.

In the Philadelphia ADAM site in 2001, 21.9 percent of adult male arrestees reported using crack during the past 30 days, the fourth highest percentage among CEWG sites included in ADAM. In the same time period, 11.4 percent of the adult male arrestees reported using powder cocaine during the past 30 days, the fifth highest level among CEWG sites in the ADAM study. The provisional unweighted urinalysis data for males in the first three quarters of 2002

showed that a range of 37.3 to 41.7 percent were cocaine-positive; the urinalysis did not distinguish crack cocaine from cocaine powder.

During autumn 2002 focus group sessions, former drug users new to formal treatment indicated that they perceived the potency of crack to have diminished since the implementation of Safe Streets began on May 1, 2002. Safe Streets is a strategy of the Philadelphia Police Department that involves the stationing of 200–300 officers on corners where drug sales are known to be very active. The initiative is credited with disrupting sales and driving sales indoors, thereby reducing the flow of suburbanites into Philadelphia to buy drugs.

The predominant form of crack sold in Philadelphia is “ready rock,” which costs \$5. The \$5-rock ranged in size from 6 to 9 millimeters from 1996 until this year. 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 this year. Shapes of crack range from circular to bumpy circular to parallelogram. Powder cocaine is not as readily available in small (\$5) quantities, but \$10 and especially \$20 bags are quite common. Spring 2002 participants estimated that about 68 percent of powder cocaine buys are for intranasal use, 17 percent are injected straight, and 15 percent are injected in a “speedball.” The autumn 2002 participants made remarkably consistent estimates for the uses of cocaine in powder form: 65 percent for intranasal use, 21 percent for injection straight, and 14 percent for speedball injection.

Crack users continue to report frequent use in combination with 40-ounce bottles of malt liquor, beer, or other drugs, including alprazolam (Xanax), diazepam (Valium), marijuana, or cigarettes. Powder cocaine, oxycodone (Percocet or OxyContin), and methadone were less frequently mentioned as drugs used with crack. The autumn 2002 focus groups continued to report an aging crack-using population, mostly in their late twenties through thirties; the groups estimated the crack-using population as 54 percent African-American, 24 percent White, 20 percent Hispanic, and 2 percent Asian.

### **Heroin and Morphine**

According to preliminary DMP data, the street-level purity of heroin in Philadelphia was 73 percent in 2001, the highest of all cities in the program for the past 5 years. The national average for heroin purity ranged from 36 to 42 percent from 1997 through 2000

and was 34 percent in 2001. The average price per milligram pure in Philadelphia was 40 cents in 2001—the fourth least costly in the study—compared with the national average of \$1.30 per milligram pure.

From 1994 to 2001, the rate of heroin ED mentions per 100,000 population increased significantly, from 53 to 119 (exhibit 1). Significant increases occurred in all age groups (since 1994), except among those age 30–34 and 35–44. The largest significant increase from 1994 to 2001 occurred in the 12–17-year-old group (597.2 percent). The smallest significant increase from 1994 to 2001 occurred in the 35-and-older age group (80.0 percent).

For the 6 half-years ending in June 2002, positive heroin/morphine toxicology reports occurred in 46 to 51 percent of all deaths with the presence of drugs (exhibit 2). White males accounted for 54 percent of all positive heroin/morphine toxicology reports in the second half of 1999, 45 percent in each half of 2000 and in the first half of 2001, 50 percent in the second half of 2001, and 59 percent in the first half of 2002.

Toxicology reports detecting the presence of heroin/morphine do not indicate a disproportionate number of deaths among younger persons. Since the mid-1990s, fewer than 16 percent of the heroin-positive decedents have been age 25 or younger. In FY 2000, FY 2001, and FY 2002, 13 percent, 15 percent, and 12 percent of decedents, respectively, were in this young age group.

During the 5 half-years from January 2000 through June 2002, heroin/morphine alone was identified in 16, 12, 11, 11, and 10 percent of the respective heroin/morphine toxicology reports. Cocaine in addition to heroin/morphine accounted for 36, 45, 68, 35, and 38 percent, respectively, during these periods.

In FY 2002, heroin primary treatment admissions continued to rank third behind cocaine and alcohol (exhibit 3). Heroin admissions accounted for 24 percent of all admissions in FY 2001 and 25 percent in FY 2002. During FY 2002, 66 percent of all heroin treatment admissions were males (exhibit 5); 50 percent were White, 36 percent were African-American, 12 percent were Hispanic, and 2 percent were Asian/others.

As depicted in exhibit 5, the preferred routes of administration for heroin, illegal methadone, and other opiates have been relatively stable among heroin/other opiate treatment admissions. Within the “swallowed” route, the increasing numbers through FY 2001 could suggest that users of pharmaceutically produced synthetic opiates have been entering

treatment. (The preliminary data for FY 2002 does not bear out this hypothesis, but these data will be revised in the June 2003 CEWG report.)

In 2001, 12 percent of adult male arrestees in the Philadelphia ADAM study tested positive for opiates. This was the fourth highest percentage among CEWG sites included in ADAM. The provisional unweighted urinalysis data for males in the first three quarters of 2002 showed a range of 11.7 to 15.1 percent positive for opiates.

The autumn 2002 focus group participants continued to report that the \$10-bag remained the standard unit of purchase. The \$10-bag usually yields one hit; \$5- and \$20-bags reportedly remained 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. All groups since autumn 2000 have reported that the average heroin user injects the drug five times per day.

The autumn 2002 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. These groups also indicated that more than one-half of new users are female and White.

### Other Opiates

The nonmedical use of oxycodone products, including OxyContin, Percocet/Percodan, Roxicet, and Tylox, continued to be reported by individuals in treatment. Preliminary rates of DAWN ED mentions of narcotic analgesics/combinations increased significantly (147.7 percent) from 27 per 100,000 population in 1994 to 67 per 100,000 population in 2001 (exhibit 1). Oxycodone ED mentions in Philadelphia increased significantly from 3 in 1994 to 494 in 2001.

There were 10 positive toxicology ME reports involving oxycodone for the 2½ years from January 1995 through June 1997 (exhibit 2). In the subsequent 2½ years, ending December 31, 1999, there were 58 positive toxicology reports for oxycodone, followed by 135 positive toxicology reports for oxycodone in the subsequent 2½ years ending June 30, 2002. Spring and autumn 2002 focus groups reported the spread of oxycodone use to all racial/ethnic groups.

Hydrocodone mentions in mortality cases have also increased (exhibit 2). There were 13 positive toxicology ME reports for hydrocodone for the 2½ years

from January 1995 through June 1997. In the subsequent 2½ years ending December 31, 1999, there were 32 positive toxicology reports for hydrocodone, followed by 81 positive toxicology reports for the drug in the subsequent 2½ years ending June 30, 2002.

## Marijuana

The rate of marijuana ED DAWN mentions per 100,000 population in Philadelphia increased significantly (165.2 percent) from 46 in 1994 to 122 in 2001 (exhibit 1). The most dramatic (and significant) change within age groups was among 45–54-year-olds; the rate for this group in 1994 was 13 per 100,000 population, compared with 57 in 2001. The 18–19-year-old group, at 459 per 100,000 population, had the highest rate in 2001.

The proportion of those citing marijuana as the primary drug of abuse among clients entering treatment has increased, from 13 percent in FY 2000, to 15 percent in FY 2001, to 17 percent in FY 2002 (exhibit 3). Among all FY 2002 admissions, marijuana was mentioned by an additional 13 percent as a secondary drug and by 8 percent as a tertiary drug. Among primary marijuana admissions, males accounted for 78 percent and African-Americans for 63 percent. When marijuana was identified as the primary drug of abuse in FY 2002, the average number of drugs noted as problematic was 1.82.

The ADAM data on adult male arrestees for 2001 indicated that 49.8 percent reported marijuana use within the past 30 days. This was the third highest percentage among ADAM/CEWG sites. The provisional unweighted urinalysis data for males in the first three quarters of 2002 showed a range of 44.1 to 50 percent testing positive for marijuana.

Focus group participants and outreach workers continued to report that marijuana use is widespread throughout Philadelphia. Since 1992, focus groups have referred to marijuana use in the form of blunts, which are nicknamed “phillies” (after the most popular cigar brand used in making blunts) or “Ls” (more commonly used than phillies in the last year).

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; is less costly than cigars; and eliminates the effort of cutting off the ends of a cigar, splitting it open lengthwise, and emptying the contents.

Participants in the spring 2002 focus groups indicated that blunt wraps were far more available than they were in the previous autumn. Businesses that are open into the late evening have become increasingly popular as outlets for blunt wraps. The spring 2002 focus groups estimated that 40 percent of marijuana users smoke blunts made from cigars, 39 percent use blunt wraps, and 21 percent use cigarette-rolling papers and smoke joints. 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 combination of marijuana and PCP, frequently mixed in blunts, is commonly called a “love boat” or “wet” (which is also a term for PCP). Users who were new to treatment in autumn 2002 estimated that 37 percent of blunts are laced with PCP and 15 percent with crack (called “Turbos”). 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, and/or cough syrup.

## Other Drugs

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 DAWN ED rate for PCP was 17 per 100,000 population in 2001 (exhibit 1). This is a significant increase (83.3 percent) from the rate of 10 per 100,000 in 1994. Between 1994 and 2001, the rate of PCP ED mentions per 100,000 increased significantly (76 percent) among males (from 15 to 26) and among females (a 96.4 percent increase from 5 to 9). The 18–19-year-old age group had the highest ED rates by far in 2001, at 106 per 100,000 population. For this age group, there was a statistically significant increase of 140.1 percent from 1994 (with a rate of 44) to 2001 (with a rate of 106).

There were 56 PCP detections by the ME in decedents in FY 2001 and 59 in FY 2002 (exhibit 2). These totals constituted the highest annual totals for this drug on record. The ADAM data for 2001 indicated that 6.9 percent of adult male arrestees tested positive for PCP, the third highest percentage among ADAM/CEWG sites. The provisional unweighted urinalysis data for males in the first three quarters of 2002 indicated a range of 9.1 to 11.2 percent positive.

In FY 2002, PCP was mentioned as the primary, secondary, or tertiary drug by 2.5 percent of all

treatment admissions. When PCP was identified as the primary drug of abuse in FY 2002, the average number of drugs noted as problematic was 2.11. PCP has become easier to obtain than ever and is more commonly available on mint leaves for use in lacing blunts. Less commonly, PCP in liquid form is available and is used by having cigarettes dipped into the liquid. This method is referred to as “sherm” or “dip sticks.”

Methamphetamine/amphetamine abuse remains a relatively minor problem in Philadelphia. The DAWN ED rates per 100,000 population for methamphetamine in Philadelphia were 1 each in 1998, 1999, 2000, and 2001. DAWN ED amphetamine rates rose (significantly) from 3 mentions per 100,000 population in 1994 to 9 mentions in 2001. Methamphetamine or an amphetamine was present in a low of 4 decedents in FY 2000. The high of 19 decedents in FY 2002 is the highest total since 14 in FY 1999 (exhibit 2). Treatment admissions for methamphetamine/amphetamines as the primary drug of abuse from FY 1998 to FY 2002 were 25, 40, 26, 24, and 35, respectively (exhibit 3). Methamphetamine/amphetamines are rarely identified as a secondary or tertiary drug of choice. Focus group members indicated that methamphetamine is still difficult to obtain, is not sold outdoors, requires a connection, and is not very popular.

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 mentions for the most frequently detected prescription drugs among decedents declined from FY 2001 to FY 2002 (exhibit 2). Only oxazepam (Serax) mentions increased in this time period. However, since the spring of 2000, all focus groups have reported that alprazolam has overtaken diazepam as the “most popular pill” on the street.

DAWN ED mentions for methylenedioxyamphetamine (MDMA) numbered 19, 27, 89, 141, and 203 for the 5 years beginning with 1997, with statistically significant increases between 1999 and 2001 (by 128.1 percent) and 2000–2001 (by 44.0 percent). MDMA was present in 2 mortality cases in FY 1999 (the first year this drug was detected by the ME), then in 7 cases in FY 2000, 13 cases in FY 2001, and 13 cases in FY 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 users as evenly split by gender and as teenagers to people in their early twenties. MDMA usually sells for \$25 per dose in Philadelphia.

Hospital ED mentions of ketamine were extremely rare in the Philadelphia area from 1994 to 2001. Ketamine was detected in three decedents in the first half of 2000, the first time it appeared in Philadelphia mortality cases. No deaths with the presence of ketamine occurred in the second half of 2000, but there were two positive toxicology reports for the drug in the first half of 2001, one in the second half, and none in the first half of 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.

Gamma hydroxybutyrate (GHB) was mentioned in 53 DAWN ED cases in 1999, 79 cases in 2000, and 90 in 2001. Autumn 2002 focus group participants were unaware of this drug.

#### INFECTIOUS DISEASES RELATED TO DRUG ABUSE

As of June 30, 2002, Philadelphia recorded 15,120 cumulative AIDS cases among adults (exhibit 6). Among those cases, 5,518 involved injection drug users (IDUs). Another 829 were in the dual exposure category of IDUs who were also men who had sex with other men (MSM).

The Philadelphia AIDS Activities Coordinating Office reported a drop from the early 1990s through June 2002 in the percentage of AIDS cases involving the MSM category. From the early 1990s through June 30, 2002, there was a continual increase in the percentage of new cases among IDUs (with the only exception occurring in the second half of 2001). New cases with heterosexual contact as a risk factor continued to exceed the historical average. Heterosexual contact is the identified exposure category in almost one-sixth of all AIDS cases through June 2002, and it accounted for a little more than 37 percent of cases identified in FY 2002.

*For inquiries concerning this report, please contact Samuel Cutler, City of Philadelphia, Coordinating Office for Drug and Alcohol Abuse Programs, Philadelphia Behavioral Health System, 1101 Market Street, Suite 800, Philadelphia, Pennsylvania 19107-2908, Phone: (215) 685-5414, Fax: (215) 685-5427, E-mail: <sam.cutler@phila.gov>.*

**Exhibit 1. Rates of ED Mentions Per 100,000 Population in Philadelphia for Selected Drugs: 1994 to 2001<sup>1</sup>**

Major Drugs of Abuse	1994	1995	1996	1997	1998	1999	2000	2001 <sup>1</sup>	Percent Change	
									1994, 2001	2000, 2001
Total Major Substances of Abuse	441	536	549	602	666	675	617	736	67.1	
Alcohol-in-Combination	137	150	147	160	181	184	171	205	50.0	
Cocaine	187	208	224	239	275	260	216	252		
Heroin	53	84	83	79	73	85	96	119	126.3	
Marijuana	46	67	74	97	112	114	101	122	165.2	
Narcotic Analgesics/Combinations	27	31	33	48	49	47	55	67	147.7	
PCP/Combinations	10	13	8	10	12	12	12	17	83.3	
Benzodiazepines	58	69	71	90	88	82	84	95	63.3	40.5
<b>Average Number of Drug Mentions per Episode</b>	<b>1.79</b>	<b>1.80</b>	<b>1.79</b>	<b>1.84</b>	<b>1.83</b>	<b>1.87</b>	<b>1.89</b>	<b>1.87</b>		

<sup>1</sup> Estimates for 2001 are preliminary.

SOURCE: DAWN, OAS, SAMHSA

**Exhibit 2. Semiannual Mortality Data in Philadelphia with the Presence of Selected Drugs as Detected by the Medical Examiner: January 1, 1995–June 30, 2002**

ME Identified Drugs	1995		1996		1997		1998		1999		2000		2001		2002
	1H	2H	1H												
Cocaine	189	147	133	144	152	132	130	115	130	108	146	165	169	131	157
Heroin/Morphine	162	156	125	165	178	175	152	119	119	117	151	181	179	137	154
Phencyclidine (PCP)	21	23	20	9	23	23	9	10	26	9	14	34	22	23	36
Oxycodone	0	2	0	1	7	12	14	15	9	8	23	26	33	20	33
Propoxyphene	21	8	14	13	16	26	9	12	12	10	21	18	27	16	21
Hydrocodone	0	1	2	6	4	4	6	9	8	5	11	16	22	16	16
Amphetamine/Methamphetamine	6	4	7	4	5	7	1	5	9	3	1	4	8	4	15
Diazepam	15	18	18	13	21	28	22	17	24	17	18	16	28	28	13
Oxazepam	0	3	3	6	12	12	9	10	9	2	8	4	8	9	8
Alprazolam	5	3	11	6	9	8	9	10	3	5	9	7	18	13	7
Temazepam	4	1	11	10	14	11	10	9	15	3	13	5	13	10	7
Sertraline	2	0	2	2	5	6	3	4	9	7	7	11	7	11	6
Fluoxetine	4	3	6	3	5	10	12	12	6	8	8	13	9	8	6
MDMA	0	0	0	0	0	0	0	0	2	4	3	5	8	11	2
<b>Total Deaths with the Presence of Drugs (Toxicology Reports)</b>	<b>340</b>	<b>292</b>	<b>261</b>	<b>304</b>	<b>296</b>	<b>311</b>	<b>275</b>	<b>259</b>	<b>289</b>	<b>244</b>	<b>326</b>	<b>354</b>	<b>363</b>	<b>298</b>	<b>325</b>
<b>Total Drugs Mentioned</b>	<b>694</b>	<b>560</b>	<b>522</b>	<b>609</b>	<b>641</b>	<b>635</b>	<b>573</b>	<b>555</b>	<b>641</b>	<b>562</b>	<b>781</b>	<b>864</b>	<b>985</b>	<b>867</b>	<b>844</b>
<b>Average Number of Drugs per Death</b>	<b>2.04</b>	<b>1.92</b>	<b>2.00</b>	<b>2.00</b>	<b>2.17</b>	<b>2.04</b>	<b>2.08</b>	<b>2.14</b>	<b>2.22</b>	<b>2.30</b>	<b>2.40</b>	<b>2.44</b>	<b>2.71</b>	<b>2.91</b>	<b>2.60</b>

SOURCE: Philadelphia Medical Examiner's Office

**Exhibit 3. Treatment Admissions by Primary Drug of Abuse: FY 1996–FY 2002**

Primary Drug	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002 <sup>1</sup>
Cocaine	4,741	3,172	2,264	1,973	2,065	2,258	1,776
Alcohol	3,944	2,597	1,734	1,671	1,708	1,853	1,622
Heroin	2,584	2,026	1,486	1,041	1,077	1,779	1,573
Other Opiates	60	46	52	49	46	101	86
Marijuana	1,033	789	607	960	773	1,103	1,060
PCP	153	109	33	44	35	46	75
Other Hallucinogens	27	16	9	9	8	8	4
Methamphetamine/ Amphetamine	44	38	25	40	26	24	35
Benzodiazepines	35	33	29	49	28	34	30
Other Tranquilizers	16	20	8	6	2	5	1
Barbiturates	20	21	8	10	9	15	15
Other Sedatives/ Hypnotics	24	19	12	15	19	19	17
Inhalants	4	2	1	1	0	4	0
Over-the-Counter	1	4	3	8	25	3	3
Other (Not Listed)	197	105	28	8	26	92	92
<b>Total</b>	<b>12,892</b>	<b>8,997</b>	<b>6,299</b>	<b>5,884</b>	<b>5,847</b>	<b>7,344</b>	<b>6,389</b>
<b>Average Number of Drugs per Admission:</b>							<b>1.90</b>

<sup>1</sup>Subject to revision.

SOURCE: Pennsylvania Department of Health, Client Information System

**Exhibit 4. Cocaine Treatment Admissions by Route of Administration and Gender: FY 1998–FY 2002**

Route of Administration and Gender			FY 1998	FY 1999	FY 2000	FY 2001	FY 2002 <sup>1</sup>
Smoked	Male	<i>n</i>	1,018	882	1,162	1,171	844
		(%)	(45.0)	(43.0)	(46.5)	(46.1)	(47.5)
	Female	<i>n</i>	877	793	963	969	586
		(%)	(38.7)	(38.7)	(38.5)	(38.1)	(33.0)
Intranasal	Male	<i>n</i>	186	177	178	233	212
		(%)	(8.2)	(8.6)	(7.1)	(9.2)	(11.9)
	Female	<i>n</i>	74	111	115	99	88
		(%)	(3.3)	(5.4)	(4.6)	(3.9)	(5.0)
Injected	Male	<i>n</i>	56	55	40	36	12
		(%)	(2.5)	(2.7)	(1.6)	(1.4)	(0.7)
	Female	<i>n</i>	18	15	11	11	9
		(%)	(0.8)	(0.7)	(0.4)	(0.4)	(0.5)
Other/Unknown	Male	<i>n</i>	21	10	13	12	16
		(%)	(0.9)	(0.5)	(0.5)	(0.5)	(0.9)
	Female	<i>n</i>	14	7	18	11	9
		(%)	(0.6)	(0.3)	(0.7)	(0.4)	(0.5)
Total	Male	<i>N</i>	1,281	1,124	1,393	1,452	1,084
		(%)	(56.6)	(54.8)	(55.7)	(57.1)	(61.0)
	Female	<i>N</i>	983	926	1,107	1,090	692
		(%)	(43.4)	(45.2)	(44.3)	(42.9)	(39.0)
<b>Total</b>			<b>2,264</b>	<b>2,050</b>	<b>2,500</b>	<b>2,542</b>	<b>1,776</b>

<sup>1</sup> Subject to revision.

SOURCE: Pennsylvania Department of Health, Client Information System

**Exhibit 5. Heroin, Illegal Methadone, and Other Opiate Treatment Admissions by Route of Administration and Gender: FY 1998–FY 2002**

Route of Administration and Gender			FY 1998	FY 1999	FY 2000	FY 2001	FY 2002 <sup>1</sup>
Injected	Male	<i>n</i> (%)	655 (43.2)	761 (46.6)	966 (41.3)	953 (40.3)	672 (40.5)
	Female	<i>n</i> (%)	276 (18.2)	378 (23.2)	611 (26.1)	485 (20.5)	305 (18.4)
Intranasal	Male	<i>n</i> (%)	375 (24.7)	275 (16.9)	382 (16.3)	434 (18.4)	342 (20.6)
	Female	<i>n</i> (%)	166 (10.9)	165 (10.1)	247 (10.6)	274 (11.6)	191 (11.5)
Swallowed	Male	<i>n</i> (%)	9 (0.6)	17 (1.0)	30 (1.3)	76 (3.2)	49 (3.0)
	Female	<i>n</i> (%)	4 (0.3)	4 (0.2)	40 (1.7)	39 (1.6)	38 (2.3)
Smoked	Male	<i>n</i> (%)	19 (1.3)	15 (0.9)	33 (1.4)	46 (1.9)	23 (1.4)
	Female	<i>n</i> (%)	5 (0.3)	6 (0.4)	16 (0.7)	10 (0.4)	8 (0.5)
Other/Unknown	Male	<i>n</i> (%)	6 (0.4)	7 (0.4)	10 (0.4)	30 (1.3)	20 (1.2)
	Female	<i>n</i> (%)	1 ( $<0.1$ )	4 (0.2)	6 (0.3)	18 (0.8)	12 (0.7)
Total	Male	<i>N</i> (%)	1,064 (70.2)	1,075 (65.9)	1,421 (60.7)	1,539 (65.1)	1,106 (66.6)
	Female	<i>N</i> (%)	452 (29.8)	557 (34.1)	920 (39.3)	826 (34.9)	554 (33.4)
<b>Total</b>			<b>1,516</b>	<b>1,632</b>	<b>2,341</b>	<b>2,365</b>	<b>1,660</b>

<sup>1</sup> Subject to revision.

SOURCE: Pennsylvania Department of Health, Client Information System

**Exhibit 6. Adult AIDS Cases in Philadelphia by Exposure Category: July 1, 2001–June 30, 2002, and Cumulative Totals Through June 30, 2002**

Exposure Category	July 1, 2001–June 30, 2002		November 1, 1981–June 30, 2002	
	Number	Percent	Number	Percent
IDU	378	(32.8)	5,518	(36.5)
MSM and IDU	26	(2.3)	829	(5.5)
MSM	312	(27.0)	5,949	(39.3)
Heterosexual Contact	429	(37.2)	2,511	(16.6)
Blood Products	0	(0.0)	89	(0.6)
No Identified Risk Factor	9	(0.8)	224	(1.5)
<b>Total Adult Cases</b>	<b>1,154</b>	<b>(100.0)</b>	<b>15,120</b>	<b>(100.0)</b>

SOURCE: Philadelphia Department of Public Health, AIDS Activities Coordinating Office

# Drug Abuse Trends in Phoenix and Arizona

Ilene L. Dode, Ph.D.<sup>1</sup>

## ABSTRACT

*After a dramatic rise in the number of drug-related deaths in Maricopa County through 2000, deaths related to all of the major drugs, except methamphetamine, decreased 16 percent for 2001. Trends in methamphetamine use are among the most striking. The percentage of arrestees testing positive for methamphetamine increased by 5 percent from 2000 to 2001 for both males and females. Additionally, methamphetamine-related deaths have increased steadily since 1997. The indicators for cocaine/crack, heroin, marijuana, and other narcotic drugs remained unchanged or decreased slightly, except for hydrocodone, oxycodone, and the anxiolytics, sedatives, and hypnotics. Emergency department (ED) mentions for amphetamine and methamphetamine revealed significant change. In addition to methamphetamine, drugs of greatest concern in Arizona currently are MDMA, PCP, GHB, and various hallucinogens, including mushrooms. Prior to 1990, 6 percent of reported AIDS cases were female, compared with 11 percent of cases from 1990 through 2000. Prior to 1990, 10 percent of the AIDS cases were among Hispanics; from 1990 to the present, the percentage rose to 18 percent. Proposition 203, an initiative to decriminalize possession of small amounts of marijuana, failed in the November election.*

## INTRODUCTION

### Area Description

There is no place on earth quite like the Grand Canyon State. Central Arizona, comprised of Arizona's capital city of Phoenix and the 20 surrounding cities such as Chandler, Glendale, Mesa, Paradise Valley, Scottsdale, and Tempe, is a place of superlatives. With slightly more than 3 million residents, it is one of the country's largest metropolitan areas, encompassing more than 2,000 square miles.

In the past decade, Arizona's population increased three times faster than that of the rest of the Nation, becoming home to more than 5.1 million people. The official population count, 5,130,632 according to the U.S. Bureau of the Census, is nearly 1.5 million more

than in 1990. Racial and ethnic minorities were responsible for more than one-half of the State's total growth. Minorities now constitute 36 percent of the State's total population, a gain from 28 percent a decade ago.

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 State's Hispanic population has increased by 88 percent. Latinos now total 1.3 million, or the equivalent of the population within the city limits of Phoenix.

The population of Maricopa County (Phoenix) is 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:

- **Emergency department (ED) drug mentions data** were derived from the Drug Abuse Warning Network (DAWN), Office of Applied Studies, Substance Abuse and Mental Health Services Administration (SAMHSA), for 1994 through 2001.
- **Drug-related death data** were provided by the Maricopa County Medical Examiner (ME) Office for 1989 through 2001.
- **Treatment data** were provided by three sources: the Treatment and Assessment Screening Center (TASC) Juvenile Standard and Intensive Probation Program Report (April–October 2002); TASC Adult Deferred Prosecution Program cumulative report (March 1989–October 2002); Terros, Inc.'s data on admissions to outpatient detoxification treatment (May–October 2002); and the Arizona Department of Health Services (ADHS), Division of Behavioral Health Services, Bureau of Substance Abuse Treatment and Prevention, Statewide Treatment Profile, November 2002.

<sup>1</sup> The author is affiliated with EMPACT Suicide Prevention Center, Phoenix, Arizona.

- **Arrestee drug testing data** for Phoenix were derived from the Arrestee Drug Abuse Monitoring (ADAM) program, National Institute of Justice (NIJ), for 2000, 2001, and the third quarter of 2002; ADAM data for Tucson are also presented.
- **Drug price and purity data** were provided by the Phoenix Police Department Drug Enforcement Bureau and the Drug Enforcement Administration (DEA) for 2002.
- **Acquired immunodeficiency syndrome (AIDS) and human immunodeficiency virus (HIV) data** for Arizona were provided by ADHS, Division of Disease Prevention, Office of Chronic Infectious Disease, for January 1990 through June 2002.

#### DRUG ABUSE PATTERNS AND TRENDS

##### Cocaine and Crack

Cocaine-related deaths ( $n=136$ ) for 2001 reflect a decline of 18 percent in cocaine deaths compared with 2000, but cocaine/morphine deaths combined appear to have essentially stabilized for the third consecutive year, totaling 52 in 2001 (exhibit 1).

Cocaine ED mentions gradually rose from 1,057 in 1994 to a peak of 1,877 in 1999; however, estimates of rates of ED mentions per 100,000 population decreased from 2000 to 2001 (exhibit 2). The recent decline was not significant, but the increase of 65.8 percent between 1994 and 2001 was significant. The rate per 100,000 population for females in 2001 was 40, compared with 25 in 1994, a significant increase of 57.9 percent. Cocaine ED mentions also increased significantly for Hispanics, rising from 260 mentions in 1994 to 402 in 2001.

Cocaine treatment admissions to the TASC Adult Deferred Prosecution Program remain unchanged at 29.5 percent of cumulative treatment admissions since March 1989 (3,349 of 7,442), similar to the 3 previous reporting periods (exhibit 3). The Terros outpatient detoxification program reported that 13 percent of treatment admissions were for cocaine in 2000; the proportion declined slightly to 11 percent in 2002. As shown in exhibit 4, 6 percent of the juvenile admissions to the TASC Probation Program in the second quarter of 2002 were for cocaine abuse.

ADHS, Division of Behavioral Health Services (BHS), data revealed that 14 percent of all treatment admissions statewide for fiscal year (FY) 2002 were for cocaine abuse (exhibit 5).

The Phoenix ADAM data reveal that 32.5 percent of adult male arrestees in 2000 and 27.2 percent in 2001 tested positive for cocaine (exhibit 6). Also, 28 percent of adult female arrestees in Maricopa County in 2000 and 24.1 percent in 2001 tested cocaine-positive. Tucson ADAM data show that 38.5 and 39.8 percent of adult male arrestees and 48.4 and 36.3 percent of female arrestees tested positive for cocaine during the respective time periods. The proportion of Phoenix male arrestees testing positive for cocaine declined to 21.3 percent in the second quarter of 2002; however, by the third quarter, 28.3 percent tested cocaine-positive. A smaller proportion of female arrestees tested positive for cocaine in the second quarter of 2002.

Powder cocaine 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. Recently, wrappings have included Mylar material and black carbon paper. A kilogram of powder cocaine sells for \$14,500–\$17,500 in Phoenix and for \$10,000–\$15,000 in Yuma, a border city.

In the Phoenix area, an eightball of cocaine sells for \$120–\$150, and an ounce sells for \$400–\$800. In Tucson, an eightball of powder cocaine sells for \$80–\$130. An ounce of crack sells for \$500–\$600 in Phoenix, compared with \$400–\$800 for an ounce of powder cocaine.

The Arizona Department of Public Safety (DPS) reported 1,814 arrests in 1991 for the manufacture and sale of opiates/cocaine. Ten years later, in 2001, there were 1,602 arrests. Arrests for possession of cocaine (3,056) decreased in the past 3 years from a peak of 4,088 in 1998.

It has been reported that smugglers of illegal immigrants into Arizona are forcing the immigrants to take cocaine before they begin the journey through the desert. The traffickers tell the immigrants that the cocaine will help the body retain water needed for desert travel.

In August 2002, a highly publicized case involved the death of a 10-day-old baby who had been exposed to daily crack smoke while in vitro and after being taken home from the hospital. The death has been ruled a homicide. The County Prosecutor's office is pursuing prosecution of the mother and grandmother in the death.

## Heroin/Morphine

The Maricopa County ME reported 137 morphine-related deaths in 2000, compared with 44 in 1989 (exhibit 1). It appears that morphine deaths peaked during 1999 and 2000. Deaths for 2001 totaled 103, a 24.8-percent decrease from 2000. Deaths related to the combination of methamphetamine with heroin or cocaine decreased 27.1 percent.

The number of heroin ED mentions increased from 472 in 1994 to 777 in 2001, a significant change of 64.6 percent, but episodes remained stable for the past few years. The rate of heroin ED mentions per 100,000 population declined insignificantly from 40 in 2000 to 27 in 2001 (exhibit 2). Of the CEWG cities, only Minneapolis (13) and Dallas (14) have a lower rate per 100,000 population.

For the second half-year, the Terros, Inc., outpatient detoxification program presented an unusual data mix. Historically, detoxification for heroin represents 60–70 percent of the clients, but for the past year, 46 percent of those seeking services did so for heroin detoxification. Opiate admissions to the TASC Adult Deferred Prosecution Program remained stable at 5.6 percent of the cumulative total (635 of 7,442) from March 1989 to September 2002 (exhibit 3). TASC juvenile testing data showed that 1.3 percent tested positive for opiates. No juveniles admitted to the TASC Probation Program in the second quarter of 2002 reported opiate use (exhibit 4).

The ADAM data suggest that opiates are one of the least used drugs in Maricopa and Pima Counties. In Maricopa County, positive tests for opiates were nearly identical for males and females at 6 percent for 2000 and 2001 (exhibit 6). Third-quarter 2002 data reflect an 8.2-percent decrease for females, but the number tested was minuscule.

Black tar heroin remains the most frequently encountered form of heroin used by the well-established “traditional” community of heroin abusers in the Phoenix and Tucson metropolitan areas. Current street prices for heroin in the metropolitan areas are relatively unchanged from previous CEWG reporting periods. The price for a “paper” in Yuma dropped from \$25–\$40 to \$10, while the price for an ounce increased from \$700 to \$1,500–\$2,000. In 2001, the average price per milligram pure was \$0.36, with a purity of 40.6 percent. It has been reported that Mexican traffickers are increasing the purity in order to compete with Colombian heroin. Colombia and Mexico are the two major sources of heroin that enters Arizona. Mexico suffered from a severe drought for an extended time, which significantly

impacted heroin production. Rainfall has returned to normal, and opium poppy cultivation has also returned to normal.

## Other Opiates

The Phoenix DEA Diversion Group reports 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.

ED mentions for hydrocodone/combinations increased 395.9 percent from 1994 (74) to 2001 (367) (exhibit 7). Acetaminophen-hydrocodone mentions increased 582.6 percent between 1994 (46) and 2001 (314). ED mentions for oxycodone/combinations increased 262.9 percent, from 89 mentions in 1994 to 323 in 2001, while oxycodone mentions increased 1,450 percent, from 8 in 1994 to 124 in 2001. Narcotic analgesics/combinations showed a significant increase for the past 3 reporting years. ED mentions for narcotic analgesics increased 269.9 percent from 492 in 1994 to 1,820 in 2001, and also between 1999 and 2001, and 2000 and 2001.

Staff of methadone clinics reported a significant diversion of methadone tablets outside of the clinics. Reportedly, clients are selling methadone in 10-milligram tablets. Prices for the diverted pharmaceutical drugs are \$20–\$25 per 40-milligram OxyContin tablet; \$5 per tablet for Percocet; \$5 per tablet for Vicodin-ES; \$4 per 10-milligram Valium tablet; \$5–\$6 per tablet for 10 milligrams of Lortab; and \$2 per tablet for Soma.

## Marijuana

The number of marijuana ED mentions increased significantly between 1994 (451 mentions) and 2001 (1,284), up 184.7 percent. The rate per 100,000 population in 1994 was 23, compared with 45 in 2001, an increase of 95.8 percent (exhibit 2). The rate for 2001 (45) represented a decrease of 9.6 percent from the rate in 1999 (50).

Marijuana was reported as the primary drug of choice by 21.2 percent of clients in the TASC Adult Deferred Prosecution Program (exhibit 3). ADHS/BHS treatment data indicated that 19 percent of clients admitted to treatment statewide presented with marijuana as the primary drug of choice (exhibit 5).

The TASC Juvenile Probation Program quarterly reports reveal that marijuana is consistently the drug of choice for about 40 percent of juveniles (exhibit 3b). The Client Drug Test Results Summary for Juvenile Services through TASC states that 1,780 (43.2 percent) of 4,122 individual juveniles tested between July 1, 2002, and September 30, 2002, were positive for one or more drugs. Seventy-three percent of juveniles tested positive for marijuana. Amphetamine was identified in 17.5 percent of juveniles, cocaine in 7.9 percent, and opiates in 1.3 percent.

Estimates for marijuana ED mentions by patient demographic characteristics reveal two separate, but noteworthy, significant increases. The number of mentions for youth age 12–17 indicated a continuing upward trend. In 1994, there were 105 mentions for youth age 12–17, compared with 295 in 2001, a 181-percent increase. The percentage of Hispanic ED marijuana mentions steadily increased from 74 in 1994 to 206 in 2001, a 178-percent increase.

The ADAM report reflects trends in marijuana use that differed between Maricopa and Pima Counties for 2000 and 2001. In Maricopa County, the proportion of arrestees testing positive for marijuana increased by approximately 5 percent among both males and females. In Pima County, the proportion of arrestees testing positive for marijuana decreased by approximately 3 percent. In Phoenix, 39.7 percent of males tested marijuana-positive in 2001 (exhibit 5). The proportion for females was 26.5 percent.

The price fluctuation of wholesale and retail quantities of marijuana is minimal because of the steady availability. Price depends on location in Arizona, the number of middlepersons, and the size of the purchase. There were no reported price changes during this past-6-month period, with the exception of the pound price in Phoenix, which was reported to range from \$500 to \$750, and the ounce price in Tucson, which was from \$40 to \$100.

The DPS reported that arrests for marijuana possession were stable for 2000 (14,947) and 2001 (15,097). Arrests for marijuana possession represented 59 percent of total arrests for possession.

Marijuana is readily available throughout the year, although there is a greater influx of marijuana along the border of Mexico and Arizona between July and September following the June–August harvest.

The Yuma DEA reports encountering a form of marijuana known as “chronic or purple kush.” The leaves and stalk of the plant have a purple-tinge

color. It is reported to sell for \$20 per gram and \$125 per quarter-ounce, compared with \$20–\$25 per quarter-ounce for traditional marijuana. It is believed that chronic or purple kush may be a type of marijuana grown hydroponically in the San Francisco Bay area where cooler weather might be a factor. The smoke is reported to be thick, musky, and spicy, and the high reportedly is immediate, almost opiate-like.

### Stimulants

Methamphetamine trends are the most prominent of all drug categories addressed in this report. Many of the indicators continue to increase and reflect an increase in female and juvenile involvement with this drug. The coordinator of the largest outpatient adolescent substance abuse treatment program reports anecdotally that the current reported drug of choice among clients is methamphetamine, followed by marijuana.

Methamphetamine-related deaths have steadily increased in Maricopa County for the past 4 years (51, 75, 105, and 159, respectively). These deaths increased 51.4 percent in 2001 compared to 2000 (exhibit 1).

The number of methamphetamine ED mentions increased 77.1 percent from 1999 (341) to 2001 (604), while the number of amphetamine ED mentions increased 120.9 percent from 1994 (402) to 2001 (888). The Phoenix rate of methamphetamine ED mentions per 100,000 population decreased from 29 in 2000 to 21 for 2001, or 28.2 percent (exhibit 2a). Of the CEWG cities, only San Francisco (39) and San Diego (27) continued to have higher methamphetamine ED rates per 100,000 population in 2001 than Phoenix. In 2001, amphetamine rates per 100,000 population for the same three cities, plus Seattle, were San Francisco (50), San Diego (37), Seattle (33), and Phoenix (31)—all representing the highest rates of amphetamine ED mentions in the DAWN system.

The number of amphetamine ED mentions increased significantly from 1994 to 2000, 1999 to 2000, and 2000 to 2001 among males and females; Whites, Blacks, and Hispanics; and in groups age 20–25, 26–34, and 35 and older.

A statistical summary of the TASC Adult Deferred Prosecution Program revealed that 26.7 percent ( $n=3,029$ ) of the March 1989 through September 2002 treatment admissions (7,442) were for methamphetamine abuse (exhibit 3a). Ten percent of admissions to the TASC Juvenile Standard and Intensive Program in the second quarter of 2002 were

for methamphetamine (exhibit 3b). The TASC Client Drug Test Results Quarterly Summary revealed that 17.5 percent of juveniles (4,127) tested positive for amphetamine and methamphetamine. Eight percent of clients admitted to the Terros Outpatient Detoxification Program were for methamphetamine treatment. ADHS statewide treatment admissions data indicate that 11 percent of clients reported methamphetamine as their primary drug (exhibit 4).

ADAM data for 2000, 2001, and two quarters of 2002 revealed a greater percentage of arrestees testing positive for methamphetamine in Maricopa County than in Pima County. Pima County showed little difference between 2000 and 2001. In Pima County, 7 percent of male arrestees tested positive in both years. The proportion of females testing methamphetamine-positive increased slightly from 8.4 percent in 2000 to 11.4 percent in 2001. In 2000 and 2001 in Maricopa County, 18.7 percent and 22 percent of males tested methamphetamine-positive; the respective figures for females were 24.5 and 29 percent. Second and third quarter data for 2002 reflect an even greater increase for females in Maricopa County. In the second quarter, 43.3 percent tested methamphetamine-positive, as did 50.6 percent in the third quarter.

Ongoing DEA investigations show no decrease in availability of methamphetamine in Arizona. Methamphetamine continues to be widely available throughout most of the State in the crude brownish Mexican form and the more pure crystallized form referred to as “ice” or “glass” that has a much higher purity level, 95–99. The crude methamphetamine has a purity range of 20 to 40 percent. The DEA estimates that approximately 30–40 percent of the methamphetamine purchased was ice, with the remainder being Mexican methamphetamine.

The DEA and Phoenix Police Department report the following methamphetamine prices, which vary depending on location in the State: a pound sells for \$5,000–\$6,000 in Phoenix and \$4,000–\$7,000 in Tucson. In Phoenix, ice sells for \$9,000 per pound and \$600 per ounce, and an ounce of methamphetamine sells for \$425. An ounce of methamphetamine sells for \$300–\$600, and an ounce of ice sells for \$900 in Tucson. Prices differ from the previous CEWG reporting period.

The DEA reports 145 clandestine methamphetamine labs were seized during the third and fourth quarters of 2002. The pseudoephedrine/red phosphorous/iodine method was the manufacturing process

reported in all seized labs. The cost of iodine crystals is \$40 per 2-ounce jar. It has been reported that it takes approximately 300 pseudoephedrine cold tablets to make an ounce of methamphetamine. It reportedly takes 2–4 pounds of iodine to make 1 pound of methamphetamine. Each pound of methamphetamine results in 5 pounds of toxic waste and costs approximately \$6,000 per lab to clean up.

### Other Drugs

Club drugs were reported to be readily available at raves, bars, and clubs that cater to the college-age population. According to a confidential source, there is a rumor in the rave community in Maricopa County that some of the ecstasy at raves is being laced with heroin and methamphetamine. The DEA reported that field drug tests on seized ecstasy might be valid. The seized ecstasy tablets have been embedded with logos of “flying white doves” and “HP,” for “Harry Potter.”

Ecstasy prices have increased from the previous report. One tablet sells for \$20–\$25. If 1,000 ecstasy tablets are purchased, the price is \$7–\$10 per tablet; if 10,000 or more are purchased, the price is \$5 per tablet.

The number of ED mentions for different types of club drugs in Phoenix varies widely. Despite being readily available, the number of lysergic acid diethylamide (LSD) ED mentions decreased 54.1 percent from 135 mentions in 2000 to 62 in 2001 (exhibit 8). MDMA mentions (20) in 1999 rose to 96 in 2001, a 380-percent increase. There were 16 ED mentions for phencyclidine (PCP) in 1994, compared with 61 in 2001, a 281-percent increase.

Several sources reported that various drugs with hallucinogenic properties are readily available throughout the State, including peyote, Psilocybin mushrooms, LSD, PCP, and ketamine. LSD hits reportedly sell for \$4 each if 1 blotter hit is purchased, \$3 each for 3 hits or more, and \$140–\$150 for 1 bottle (90 dosage units).

Reported prices for gamma hydroxybutyrate (GHB) were unchanged at \$5–\$10 for one dose (1 teaspoon); \$425 for 25 pounds; \$3,200 for a 55-gallon drum wholesale; and \$4,300 for a 55-gallon drum retail.

### INFECTIOUS DISEASES RELATED TO DRUG ABUSE<sup>2</sup>

Since 1981, there has been a total of 8,086 AIDS cases and 5,320 HIV, non-AIDS, cases reported to

<sup>2</sup> This section of the report represents an “Executive Summary,” prepared by Rick DeStephens, Arizona Department of Health Services, Office of HIV/AIDS, derived from the *HIV/AIDS Semiannual Report*, July 1, 2002.

the Arizona Department of Health Services. Of these AIDS cases, 4,333 (54 percent) are known to be deceased.

HIV disease is disproportionately distributed in Arizona. While Maricopa County has 60 percent of the State's population, it has 70 percent of the reported AIDS cases and 72 percent of reported HIV cases. Likewise, Pima County, the next most populous county, has 16 percent of the population, but 21 percent of AIDS cases and 19 percent of HIV cases.

Ninety-one percent of the total reported AIDS cases are male, but an increasing percentage of recently reported cases are female (6 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 in the White population, but recent trends show increasing numbers of AIDS and HIV cases within minority communities. For example, African-Americans represent 3 percent of the Arizona population, and, prior to 1990, 5 percent of the reported AIDS cases were in this group. From 1990 to the present, the percentage of African-American AIDS cases increased to 8 percent, with 13 percent of the reported AIDS cases being African-Americans in 1999 and 2000. For HIV only, African-Americans represent 11 percent of the total cases. The same pattern holds true for the Hispanic AIDS cases. Prior to 1990, 10 percent of the AIDS cases were Hispanic, while from 1990 to the present, the percentage rose to 18 percent. For the last 2 complete years (2000 and 2001), Hispanics accounted for 25 percent of the AIDS cases. Eighteen percent of the HIV cases are among Hispanics. While the percentage of Native Americans reported with AIDS has remained fairly constant (2–3 percent of reported cases), there has been an increase to 6 percent of reported cases in the past 2 years. Native Americans account for 3 percent of the HIV cases.

The predominant mode of transmission of AIDS and HIV reported throughout the course of the epidemic in Arizona has been male-to-male sexual contact, accounting for 61 percent of the AIDS cases and 50 percent of the HIV cases. Twelve percent of the AIDS cases and 14 percent of the HIV cases have been

linked to injection drug use. Additionally, another 11 percent of AIDS cases and 8 percent of HIV cases have been shown in men who engage in male-to-male sexual contact while also engaging in injection drug use. Heterosexual contact with an HIV-positive person or person known to have a risk factor for HIV (6 percent of AIDS cases and 8 percent of HIV cases) is a small but increasing proportion of Arizona's cases, particularly among females.

The majority of AIDS cases are diagnosed between the ages of 30 and 39 (45 percent). However, HIV cases are more evenly split between the age groups of 30–39 and 20–29 (40 percent and 34 percent, respectively). Arizona has been very fortunate in that there has consistently been a very low rate of pediatric HIV and AIDS cases.

#### ELECTION FOOTNOTE

The 2002 Arizona ballot included an initiative to decriminalize possession of small amounts of marijuana. Proposition 203 would have made possession of 2 ounces or less of marijuana a civil violation punishable by a fine of no more than \$250. The fine could be waived by taking a drug education class. Besides reducing penalties for marijuana possession from a low-level felony, the law would have allowed doctors to recommend, rather than prescribe, marijuana for qualifying patients. The Arizona DPS would have been required to distribute confiscated marijuana for free to those who receive doctors' recommendations. The initiative would have expanded existing laws that generally bar prison or jail sentences for nonviolent drug offenders. It would have barred judges from including jail time as a probation condition.

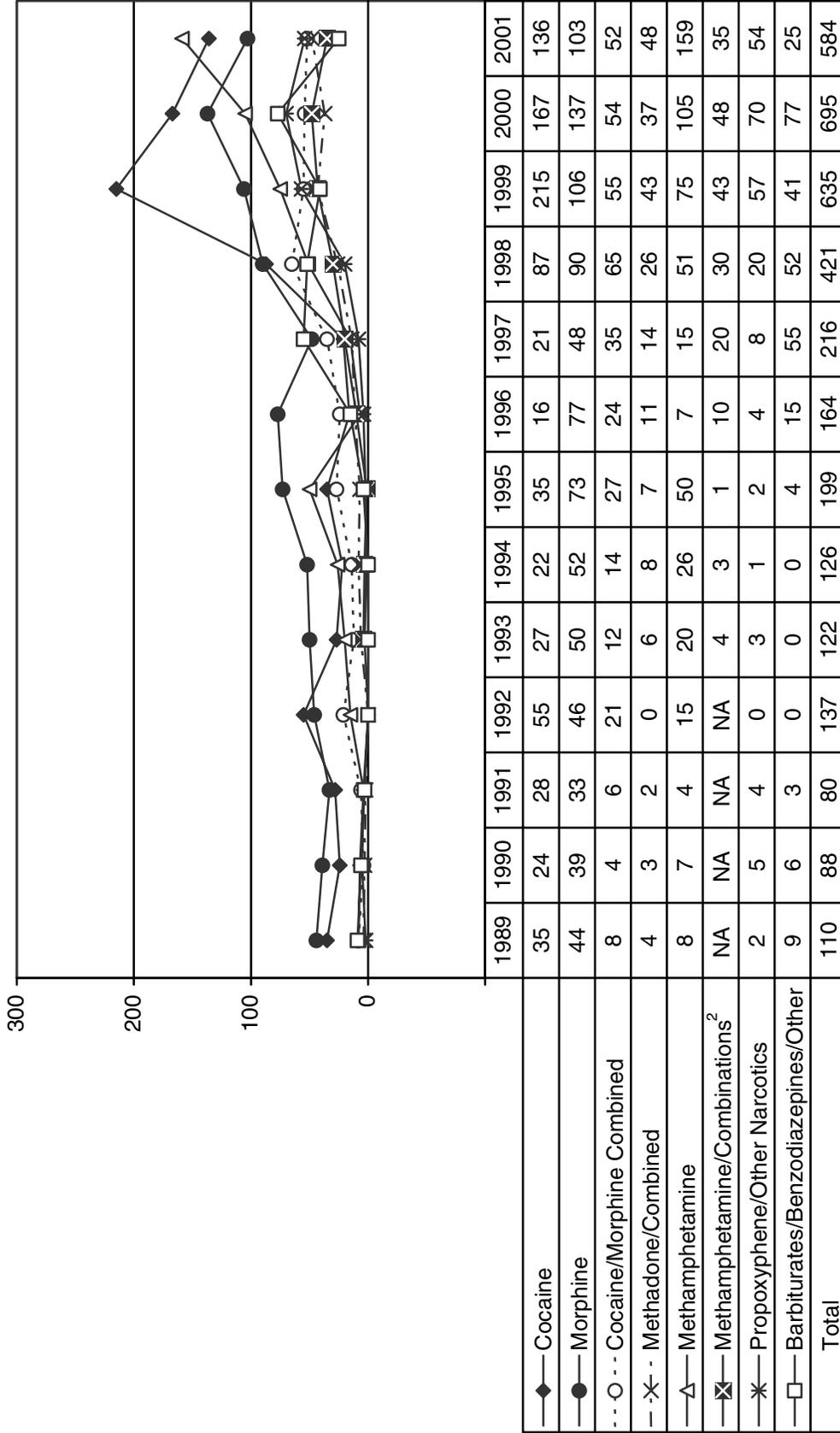
It would have also amended the State's existing medicinal marijuana law to allow State-registered patients or their caregivers to legally possess up to 2 ounces of medical "pot" and grow two marijuana plants. Nonregistered patients or those who possess greater quantities of medical pot would have been permitted to raise an affirmative defense of medical necessity in court.

Medical marijuana laws have twice been voted for in the affirmative, but this initiative was not supported by the Arizona voters in November 2002.

---

*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 Number of Drug-Related Deaths<sup>1</sup> in Phoenix by Drug: 1989–2001

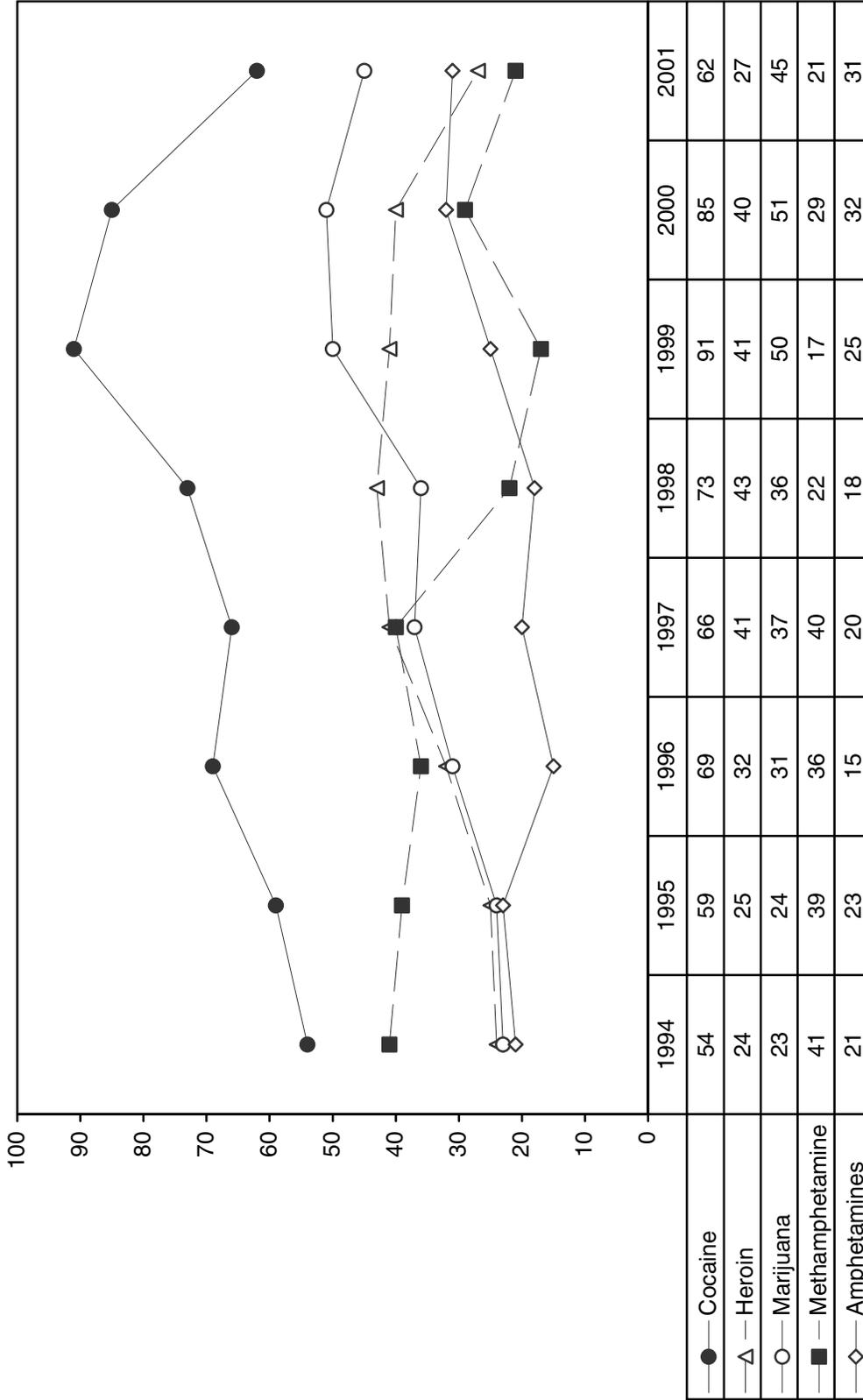


<sup>1</sup> Data for 1994 do not include April, but do include one propoxyphene/morphine death. Data for 1995 do not include September. Data for 2000 include one death each from PCP, isobutane and nitrous oxide.

<sup>2</sup> NA=Not available.

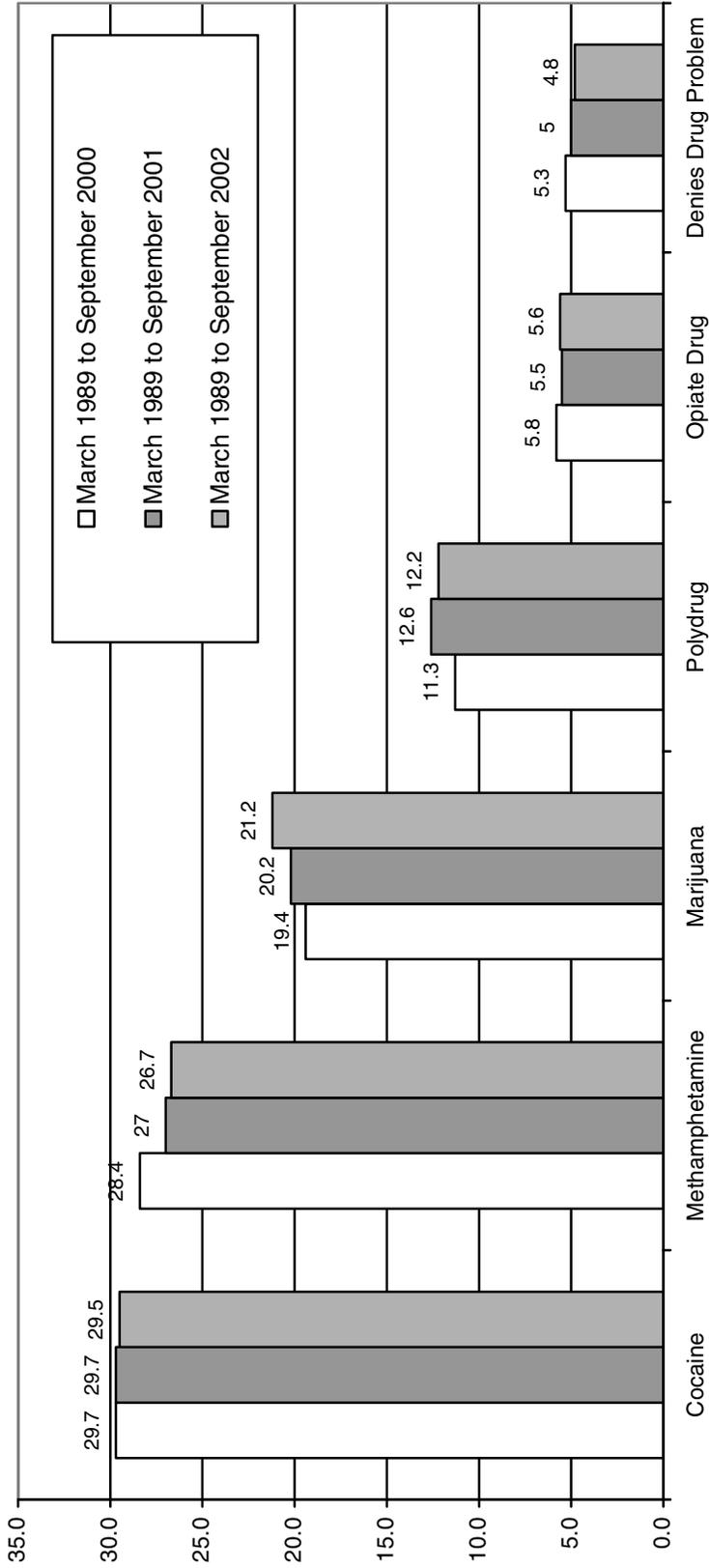
SOURCE: Maricopa County (Arizona) Medical Examiner's Office, December 2002

Exhibit 2. Rates of Selected Drug ED Mentions Per 100,000 Population in Phoenix by Type of Drug and Year: 1994–2001



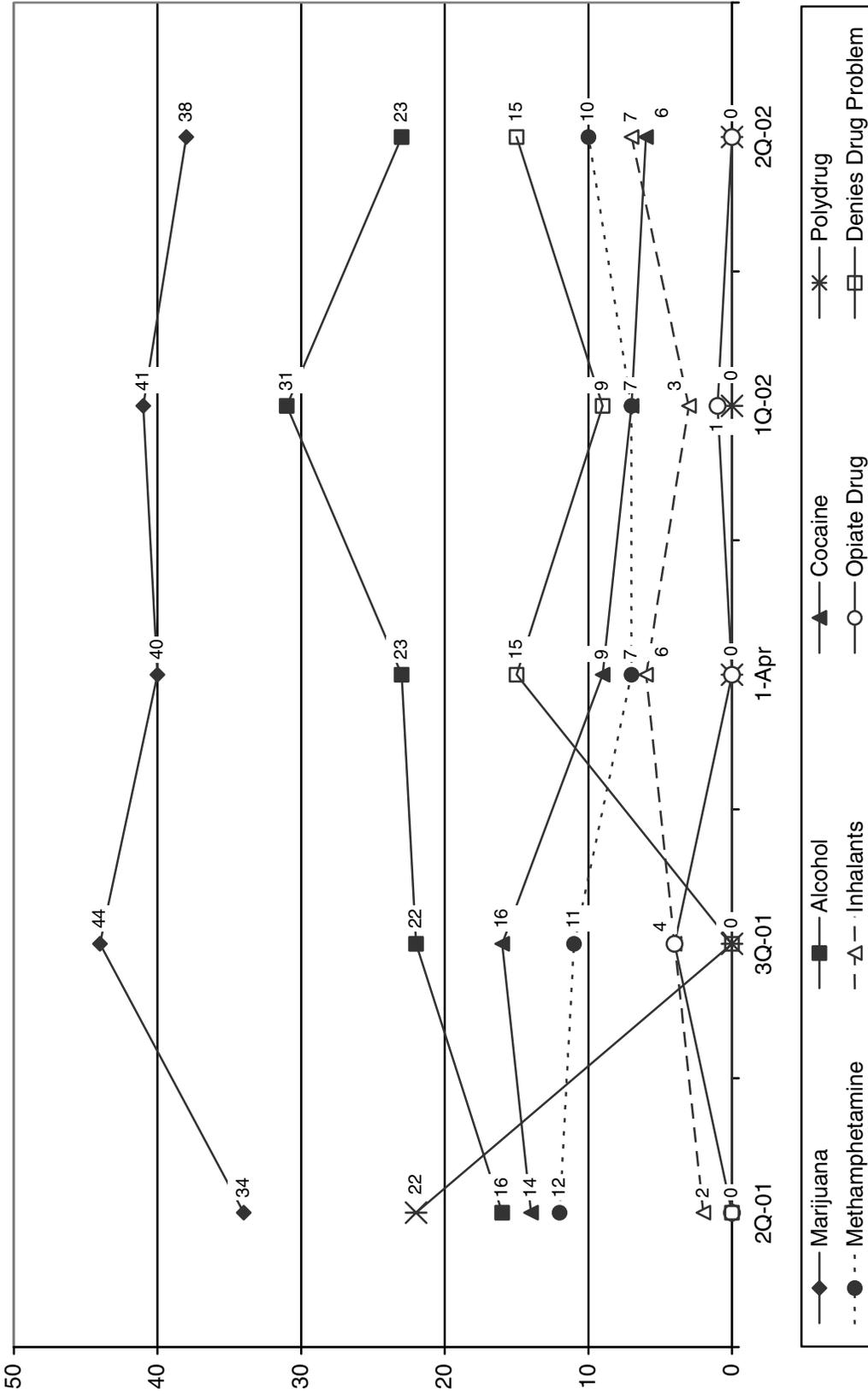
SOURCE: DAWN, OAS, SAMHSA

**Exhibit 3. Adult Deferred Prosecution Program Admissions for Selected Drugs**



SOURCE: Adult Treatment and Assessment Screening Center (TASC)-Deferred Prosecution Program Cumulative Statistical Report (March 1989–September 30, 2002)

Exhibit 4. Percentages of Juvenile Admissions to the TASC Probation Program in Phoenix by Quarter: 2Q 2001–2Q 2002



SOURCE: Adult Treatment and Assessment Screening Center (TASC)-Juvenile Probation Program

**Exhibit 5: Characteristics of Treatment Admissions in Arizona by Percent: 2002**

Characteristic	Percent
Substance of Abuse at Admission	
Alcohol	35
Marijuana	19
Cocaine	14
Methamphetamine	11
Heroin	9
All other	12
Age Group	
20–25	17
26–35	31
36–45	33
46 and older	19
Chronic Medical Disorder at Admission	
HIV/other disability	18
Headaches	8
Head injury	6
Arthritis	6
Asthma	6
Hypertension	5
Any medical disorder	57
Other Presenting Problem at Admission	
Suicidal	19
Victim of abuse	7
Co-occurring MH/SA	35
Criminal Justice Status at Admission	
Criminal	24
Driving under the influence (DUI)	8
Civil order	5
Any court order	37
Income Sources at Admission	
No income	50
Employed	35
TANF <sup>1</sup> /food stamps	5
SSI/SSDI <sup>2</sup>	10

<sup>1</sup> TANF=Temporary Assistance for Needy Families.

<sup>2</sup> SSI/SSDI=Supplemental Security Income and Social Security Disability Insurance.

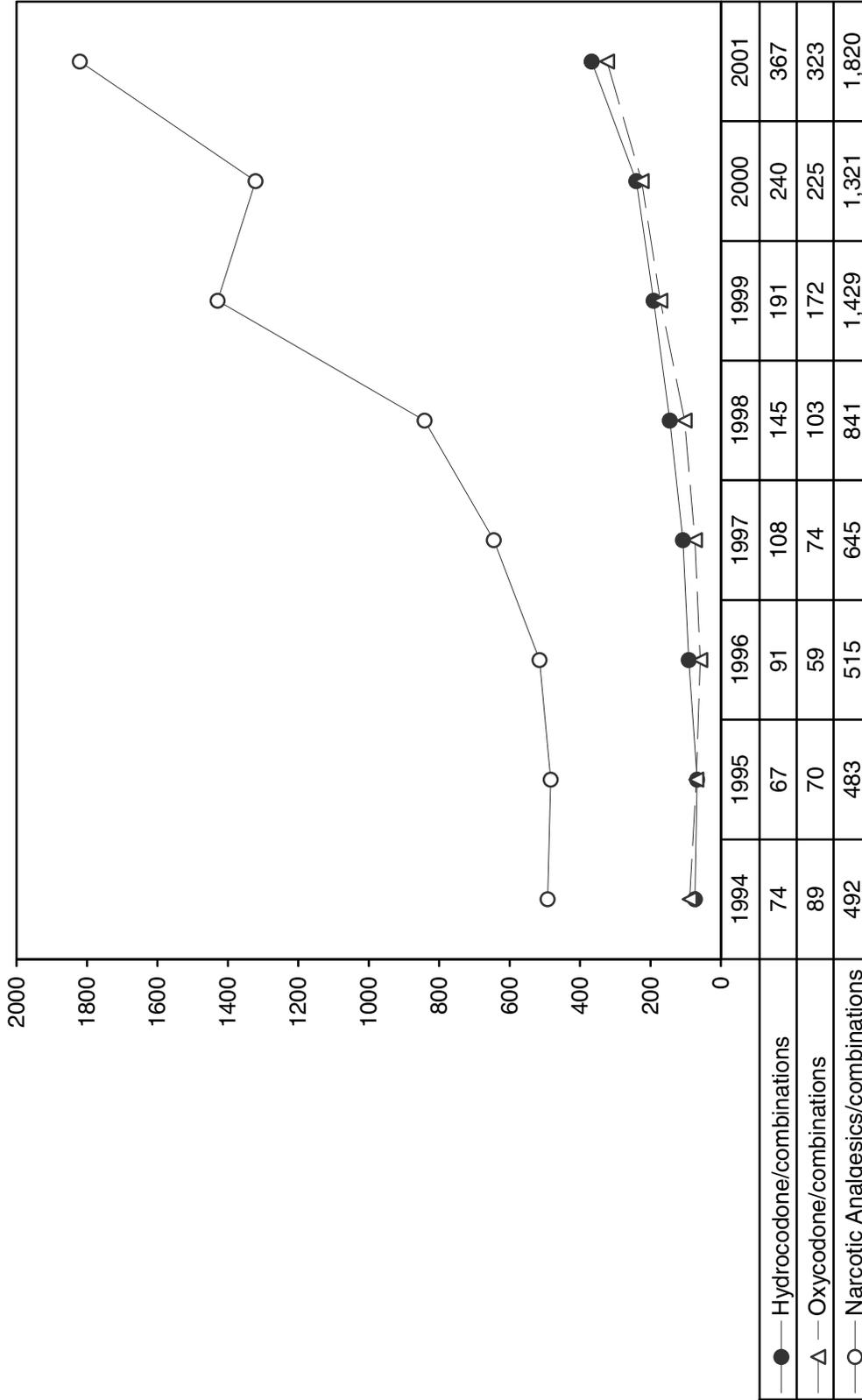
SOURCE: Arizona Department of Health Services, Division of Behavioral Health Services, Bureau of Substance Abuse and Prevention Services

**Exhibit 6. Percentages of Adult Male and Female Arrestees Testing Positive for Drugs in Phoenix: 2001**

Drug	Males	Females
Cocaine/Crack	27.2	31.6
Opiates	6.0	6.3
Marijuana	39.7	26.5
Methamphetamine	25.3	32.3

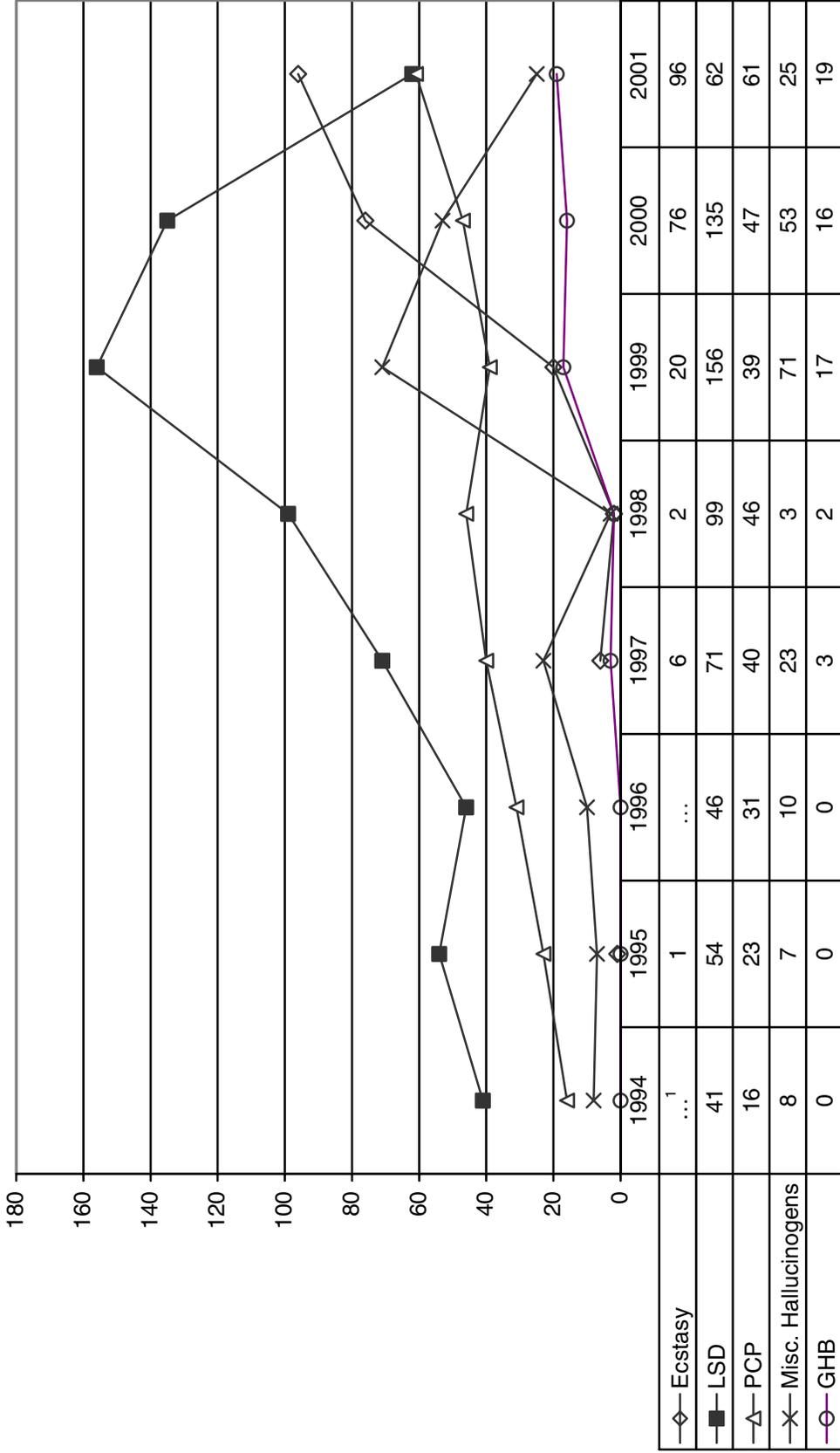
SOURCE: ADAM, NIJ

Exhibit 7. Number of ED Mentions of Narcotic Analgesics/Combinations in Phoenix by Type of Drug and Year: 1994–2001



SOURCE: DAWN, OAS, SAMHSA

Exhibit 8. Number of ED Mentions of Club Drugs in Phoenix by Type of Drug and Year: 1994–2001



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

SOURCE: DAWN, OAS, SAMHSA

# Patterns and Trends in Drug Abuse in St. Louis

Heidi Israel Adams, Ph.D., R.N., L.C.S.W.,<sup>1</sup> and Jim Topolski, Ph.D.<sup>2</sup>

## ABSTRACT

*Heroin indicators have increased slightly, while cocaine retains a strong presence in all urban indicators. Methamphetamine is increasingly prominent in St. Louis indicators. St. Louis and St. Charles County law enforcement personnel are concerned about methamphetamine use, and methamphetamine labs in rural areas continue to be a problem. Club drugs, such as MDMA and GHB, reportedly have an increasing presence in St. Louis and are the new prevention and law enforcement concern. 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 is again noted in ED admissions data. In the St. Louis area, 6,002 cases of HIV and AIDS have been identified through November 2001.*

## 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 contrasting drug use patterns.

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 treat-

ment 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, Substance Abuse and Mental Health Services Administration (SAMHSA), for 1994–2001.
- **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)'s Domestic Monitor Program (DMP).
- **Drug-related mortality data** were provided by the St. Louis City Medical Examiner's Office.
- **Intelligence data** were provided by the Missouri Highway Patrol and the DEA.
- **Human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS) data** were derived from the HIV Vaccine Trials Unit at St. Louis University and the St. Louis Metropolitan AIDS Program.

Linda Cottler, Ph.D., of Washington University, who has multiple behavioral research grants, provided additional data.

### DRUG ABUSE PATTERNS AND TRENDS

Cocaine indicators are 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 St. Louis urban area. Possible reasons for this situation are that methamphetamine is used primarily

<sup>1</sup> Dr. Israel Adams is affiliated with the Division of Infectious Diseases, Saint Louis University Medical School, St. Louis, Missouri.

<sup>2</sup> Dr. Topolski is affiliated with the Division of Evaluation, Policy, and Ethics, Missouri Institute of Mental Health, St. Louis, Missouri.

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. 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 is also quite expensive compared with other cities. This midwestern city is a destination market, with small entrepreneurial groups marketing the drug.

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. These groups are particularly active in the surrounding counties of St. Louis. The poor city economy continues to foster drug abuse and distribution. Marijuana continues to be a very popular drug of abuse among younger adults and may be a reflection of a high number of court referrals. 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 and Crack**

According to DAWN, the rate of cocaine ED mentions per 100,000 population increased dramatically in 1994, declined for several years, and recently peaked again in 2001 at 134 (exhibit 1a).

The St. Louis City/County medical examiner (ME) reported that cocaine-related deaths trended downward from 128 in 1994 to 66 in 2000. Many of the deaths in the late 1990s were overdoses. DAWN ME data corroborate a decreasing trend since 1994.

Cocaine treatment admissions and law enforcement data have stabilized over the past few years. However, treatment admissions decreased almost 20 percent between the first halves of 2001 and 2002. 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 1b). Crack prices have dropped to

between \$100 and \$250 per gram and \$20 per rock on the street corner. 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, particularly crack by urban women, has potentially severe long-term consequences by contributing to the spread of sexually transmitted diseases (STDs) through multiple partners. Numerous small behavioral studies of crack-abusing women have found that crack use is predictive of multiple partners and HIV risk exposure. The STD rate in St. Louis has decreased for men, but it remains high for women.

Most cocaine users smoke crack cocaine, though some use powder cocaine. Only injection drug users (IDUs) who combine cocaine and heroin (“speedball”) use cocaine intravenously. Younger users smoke cocaine exclusively. 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.

### **Heroin**

Heroin consistently appears in all indicators. Heroin ED mentions rose steadily through 2000 and increased more than 20 percent from 2000 to 2001. ED mentions for the 18–25 and 26–34 age groups had significantly increased in the recent reporting periods, while mentions dropped for 12–17-year-olds between 2000 and 2001, although not significantly. The increase in heroin mentions among all age groups indicates the wide availability of this drug in this MSA. The three top reasons for seeking medical intervention were overdose, withdrawal, and unexpected reaction.

Heroin-related deaths reported by the St. Louis City/County ME peaked in 1997 and leveled off in recent years. In 2000, there were 55 heroin-related deaths (exhibit 1a). Statewide heroin deaths due to overdose alone were not much higher, because heroin purity is higher in the St. Louis area than in other cities in Missouri. Many of these heroin deaths may have resulted from increased purity levels, although DMP data show a peak of 24 percent purity in 1998 and a drop to 13.4 percent in 2001. For the first time, more heroin deaths occurred in St. Louis County than

in the inner city; these deaths are interpreted to support the trend that heroin use is increasing in the suburbs.

While heroin treatment admissions increased dramatically between 1996 and 2000, admissions leveled off in 2001 and in the first half of 2002. Limited slots for admissions to State-funded methadone or modified medical detoxification programs exist in Missouri, which may influence this data. When queried, private treatment programs stated that 10–25 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. About 36 percent of heroin admissions were younger than 25. Of all heroin admissions, 42 percent reported smoking or intranasal use as the primary method of administration. Young users reported a fear of needles as a reason for alternative methods of administration. 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. If 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, indicating wider market availability. Historically, heroin purity has fluctuated by area and over time, with varying availability. In the past 2 years, purchase purities ranged from 4 to 70 percent, with an average of 15 percent (exhibit 1b).

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 1b). 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.

Heroin cost \$3.53 per milligram in the most recent DMP analysis, 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, heroin is sold by small distribution networks, as well as by many small entrepreneurs. Wide sampling of the available drug quality can be difficult because identification is more difficult in this compact, free enterprise distribution pattern.

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 has been consistent during the last 6 months, and a \$10-bag of heroin is 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 potential problem. It is the most frequently stolen drug in pharmacy robberies and costs \$40 for an 80-milligram tablet on the street (exhibit 1b). Although a small number of treatment admissions reflect other opiates, they continue to represent less than 1 percent of all treatment admissions. Oxycodone ED mentions have increased significantly between 2000 and 2001, as have methadone and morphine ED mentions.

The use of hydromorphone (Dilaudid) remains common among a small population of White chronic addicts. The drug costs \$45–\$75 per 4-milligram pill. Abuse of oxycodone (Percocet and Percodan) by prescription is growing in popularity.

### **Marijuana**

The rate of ED marijuana mentions per 100,000 population increased steadily from 37 in 1995 to 101 in 2001. ED marijuana mentions rose from 1,640 in 1999 to 2,311 in 2001 (exhibit 1a). St. Louis ranks third 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 in the first half of 2002.

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.

Marijuana is available from Mexico or domestic indoor growing operations. Indoor production makes it possible to produce marijuana throughout the year. Therefore, law enforcement officials have been focusing more attention on indoor growing operations. 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 rate of ED methamphetamine mentions was 5 per 100,000 population in St. Louis in 2001 (exhibit 1a). The number of ED methamphetamine mentions increased 56 percent, from 104 in 1999 to 162 in 2000, but dropped 29 percent to 115 in 2001. Most of the mentions in 2001 involved males (73 percent), and all were White.

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, but there are a limited number of admissions in St. Louis. 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 amphetamine use is not as widespread in the St. Louis area. Cocaine and methamphetamine use are split along racial lines in the State. While the number of methamphetamine treatment admissions was still relatively low in St. Louis (177 for 2000 and 430 in 2001), in rural treatment programs methamphetamine was the drug of choice after alcohol. To further support this difference between St. Louis and

the rest of the State, a Drug and Alcohol Services Information System (DASIS) report showed a statewide admissions rate change from 7.0 per 100,000 population in 1993 to 69.0 in 1999, an 873-percent increase.

In 2000, methamphetamine was also detected in a few ME cases in the St. Louis metropolitan area.

The Midwest Field Division of the DEA increased its cleanup of clandestine methamphetamine labs to about 200 in 1999 and 250 in 2000. 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 2001, the Missouri Highway Patrol reported 2,137 seizures of methamphetamine labs, dumpsites, and locations of inactive labs occurred in Missouri, ranking it ahead of California, Washington, and Kansas.

Locally produced methamphetamine purity fluctuated between 70 and 80 percent, while methamphetamine from Mexico was only 20 to 30 percent pure (exhibit 1b). In the new methamphetamine scene, Hispanic traffickers, rather than the old network of motorcycle gangs, are the predominant distributors, although individual entrepreneurs are also involved. Shipments from super labs in the Southwest are 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 \$37–\$100 per gram in some areas.

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. Competition between those who import methamphetamine from Mexico and those who locally produce it is likely to affect both price and purity.

### **Depressants**

DAWN ED data reflect few mentions in this category in 2001, except for diazepam ( $n=202$ ), lorazepam (119), and alprazolam (418). These rates are not significantly different from in prior years.

Private treatment programs often provide treatment for benzodiazepine, antidepressant, and alcohol abusers. Day hospital programs and 3-day detox-

ification 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–\$4 per 35-microgram dose (exhibit 1b). 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 in 2001.

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 increased significantly from 2000 to 2001 for females and for those age 18–25 and 35–44. However, the total number of mentions remains relatively low at 110.

### Club Drugs

DAWN ED data show few mentions of methylenedioxymethamphetamine (MDMA) (55 in 2001). Of these mentions, 55 percent were female and 78 percent were White. No mentions of ketamine or GHB were noted, although younger users report these drugs are available. Stimulants noted in the city have included methylenedioxyamphetamine (MDA) and MDMA (“ecstasy,” “XTC”). MDMA is readily available at raves and other dance parties and sells for \$20–\$30 per tablet. The rave scene has become quite popular in St. Louis. Most ecstasy users are teenagers or young adults. While reported use of MDMA or “X” in high school students is frequent, no indicator quantifies use in this age group.

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 or in less than 2 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 due 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. A survey of 1,250 students from one suburban St. Louis high school showed that 30 percent of the students stated someone had approached them offering ecstasy. Dr. Cottler’s research group is investigating use further and is using focus group interviews with users and professionals to gather data.

Gamma hydroxybutyrate (GHB) use has increased in the St. Louis area. Because it is a depressant, its use with alcohol and its unpredictable purity present users with major health risks. 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. An increase in ketamine robberies from veterinary offices has been reported. Use of ketamine has been acknowledged anecdotally.

### INFECTIOUS DISEASES RELATED TO DRUG ABUSE

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 2,028 HIV-positive cases identified through November 2001, 7 percent were IDUs and 4 percent involved men who have sex with men (MSM) and are also IDUs (exhibit 2).

Cumulative acquired immunodeficiency syndrome (AIDS) cases totaled 3,974 through November 2001 (exhibit 3). Of these cases, 2 percent were IDUs and 2 percent were MSM/IDUs. The reported AIDS and HIV-positive cases continued to be represented primarily by MSMs. The number of infected African-Americans was increasing disproportionately among males and females.

### SPECIAL PROJECTS AND RELATED HEALTH ISSUES

#### STD Rate

St. Louis had a syphilis epidemic in 1993 and 1994. In 2000, St. Louis ranked eighth in the Nation for syphilis cases. In 2001, the city dropped to 51st in the number of identified syphilis cases. 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 also focused on the attributes of the risk taker rather than the method of 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. Two Phase II trials using a mixture of HIV risk groups and one Phase III trial have been undertaken to date. Plans for another Phase III trial were scuttled after poor laboratory assay results made progression with the current vaccine not feasible.

### REFERENCES

Chris Herlig, Strategic Intelligence, St. Louis Office of the Drug Enforcement Administration.

Cottler, L.; Womack, S.B.; and Compton, W.M. *Ectasy Abuse and Dependence Among Adolescents and Young Adults: Applicability and Reliability of DSM-IV Criteria*. St. Louis, Missouri: Washington University, 2001 (in press).

---

*For inquires concerning this report, please contact Heidi Israel Adams Ph.D., R.N., L.C.S.W., St. Louis University School of Medicine, 1200 S. Grand Avenue, St. Louis, Mo. 63104, Phone: 314-268-5448, Fax: 314-268-5196, E-mail: <Israelha@slu.edu>.*

**Exhibit 1a. Combined Indicators for Cocaine, Heroin, Marijuana, and Methamphetamine in St. Louis: 1996–1H2002**

Indicator	Cocaine	Heroin	Marijuana	Methamphetamine
Deaths (M)				
1996	93	51	NA	9
1997	43	67	NA	11
1998	47	56	NA	9
1999	51	44	NA	4
2000	66	55	NA	4
DAWN ED Data				
Number of mentions (2001)	3,080	1,309	2,311	115
Percent change (2000–2001)	+28 <sup>1</sup>	+21 <sup>1</sup>	+31 <sup>1</sup>	-29 <sup>1</sup>
Rate per 100,000 pop. (2001)	134	57	101	5
5-year trend	Doubled	Tripled	Doubled	Almost doubled
Gender of mentions (%) (2001)				
• Male	62.2	54.8	61.7	73.0
• Female	37.2	41.2	37.6	27.0
Age (%) (2001)				
• 12–17	1.3	1.5	8.6	7.8
• 18–34	41.1	54.9	56.7	60.9
• 35 and older	57.6	43.5	34.7	30.4
Route of Administration (%) (2000)			NA	
• Smoking	62.3	6.4		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				
Illicit drug admissions (%) (2001)	36.5	12.4	27.7	7.5
Illicit drug admissions (%) (1H 2002)	33.6	10.8	29.6	4.2
Gender (%) (1H 2002)				
• Male	55.8	63.7	75.5	54.3
• Female	44.2	36.3	24.5	45.7
Age (%) (1H 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 (%) (1H 2002)				
• White	25.1	39.0	43.1	99.2
• African-American	74.1	59.9	56.0	0.4
• Hispanic	0.6	0.8	0.9	0.4
Route of Administration (%) (1H 2002)				
• Smoking	89.8	3.2	95.6	45.2
• Intranasal	5.6	37.4	0.3	18.7
• Injecting	1.6	54.8	0.1	30.0

<sup>1</sup> Not significant

SOURCES: SAMHSA Website, TEDS database, DEA, client ethnographic information

**Exhibit 1b. Combined Indicators for Cocaine, Heroin, Marijuana, and Methamphetamine in St. Louis: 1996–1H2002**

<b>Indicator</b>	<b>Cocaine</b>	<b>Heroin</b>	<b>Marijuana</b>	<b>Methamphetamine and Other Drugs</b>
Multisubstance Combinations	Older users combine with heroin, alcohol	Older users combine with cocaine, alcohol	Joints dipped in PCP	Marijuana commonly used in combination
Market Data (1H2002)	HCL \$100–\$125/g, 77% pure; Crack \$20/rock, 50–90% pure	\$10/cap, \$40/bundle, \$3.53/mg, \$250–\$600/g, 15% pure, Mexican heroin	Sinsemilla \$500–\$1,200/lb, 20% THC; Imported \$2,000–\$4,000/lb	Meth \$37–\$100/g, Mexican (20-30%) and local (70-80% purity); hydromorphone \$40–\$70/4-mg pill; LSD blotters \$2–\$4/35 microgram, oxycontin \$40/80 mg
Qualitative Data	Readily available, urban choice	Younger users, 1/3 <25	Readily available, 2/3 in Tx < 25	Club drug gaining presence, rural/suburban users—amphet.
Other Data of Note	NR	NR	NR	Meth lab seizures plateaued

SOURCE: SAMHSA Website, TEDS database, DEA, client ethnographic information

**Exhibit 2. 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 November 2001**

Category	HIV-Positive Test Results			
	Jan 2001–November 2001		Cumulative Through November 2001	
	Number	(Percent)	Number	(Percent)
Exposure category				
Men/sex/men (MSM)	56	(30.0)	1,272	(63.0)
Injection drug user (IDU)	6	(3.0)	137	(7.0)
IDU and MSM	1	(1.0)	74	(4.0)
Hemophilia	0	(0.0)	11	(1.0)
Heterosexual	28	(15.0)	320	(15.0)
Blood transfusion	1	(1.0)	5	(0.0)
Perinatal	0	(0.0)	12	(1.0)
Unknown	96	(50.0)	197	(9.0)
Gender and race/ethnicity				
Male				
• White	55	(29.0)	756	(38.0)
• African-American	77	(41.0)	880	(43.0)
• Hispanic	2	(1.0)	17	(1.0)
• Other	0	(0.0)	19	(1.0)
• Unknown	7	(4.0)	13	(1.0)
Female				
• White	7	(4.0)	65	(3.0)
• African-American	37	(19.0)	271	(13.0)
• Hispanic	0	(0.0)	2	(0.0)
• Other	3	(2.0)	5	(0.0)
Age				
<13	1	(1.0)	14	(1.0)
13–19	2	(1.0)	108	(5.0)
20–29	14	(7.0)	676	(33.0)
30–39	20	(11.0)	733	(36.0)
40–49	14	(7.0)	277	(14.0)
50+	2	(1.0)	71	(4.0)
Unknown	135	(72.0)	149	(7.0)
<b>Total</b>	<b>188</b>		<b>2,028</b>	

SOURCE: St. Louis Metropolitan AIDS Program

**Exhibit 3. AIDS Cases in the St. Louis Metropolitan Area by Exposure Category, Gender, Race/Ethnicity, and Age: Year-to-Date and Cumulative Totals Reported Through November 2001**

Category	AIDS Cases			
	Jan. 2001–Nov. 2001		Cumulative Through November 2001	
	Number	(Percent)	Number	(Percent)
Exposure category				
Men/sex/men (MSM)	65	(38.0)	1,040	(26.0)
Injection drug user (IDU)	12	(7.0)	85	(2.0)
IDU/MSM	4	(2.0)	61	(2.0)
Hemophilia	0	(0.0)	29	(1.0)
Heterosexual	27	(16.0)	151	(4.0)
Blood transfusion	0	(0.0)	20	(1.0)
Perinatal	0	(0.0)	0	(0.0)
Unknown	61	(37.0)	2,588	(65.0)
Gender and race/ethnicity				
Male				
• White	47	(28.0)	1,984	(50.0)
• African-American	88	(52.0)	1,531	(39.0)
• Hispanic	0	(0.0)	39	(1.0)
• Other	2	(1.0)	12	(0.0)
• Unknown	0	(0.0)	0	(0.0)
Female				
• White	7	(4.0)	95	(2.0)
• African-American	24	(14.0)	306	(8.0)
• Hispanic	0	(0.0)	4	(0.0)
• Other	1	(1.0)	3	(0.0)
Age				
<13	1	(1.0)	17	(0.0)
13–19	3	(2.0)	28	(1.0)
20–29	26	(15.0)	539	(14.0)
30–39	71	(42.0)	1,220	(31.0)
40–49	50	(30.0)	567	(14.0)
50+	17	(9.0)	200	(5.0)
Unknown	1	(1.0)	1,403	(35.0)
Total	169		3,974	

SOURCE: St. Louis Metropolitan AIDS Program

# Indicators of Drug Abuse in San Diego County

Michael Ann Haight, M.A.<sup>1</sup>

## ABSTRACT

*From 2000 to 2001, indicators of drug abuse were mixed. Total accidental overdose deaths declined slightly, from 237 to 220 during that period, and that decline was reflected in a decline in such deaths for cocaine, heroin, and methamphetamine. Total emergency department (ED) mentions also declined (from 1,002 in 2000 to 812 in 2001), and most of the individual drug mentions decreased as well. Marijuana ED mentions, however, increased significantly during that time period. Total treatment admissions increased by 17 percent between 2000 and 2001, and increased admissions were found among all major drug categories. Black tar continued to be the dominant form of heroin available in the county and it was widely available. Between 2000 and 2001, methamphetamine prices declined, while purity increased slightly. The use of club drugs, such as GHB, MDMA, and ketamine, continued to be reported by the media.*

## 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 a mountain range and a major military base to the north. Within San Diego County, there are many sparsely populated rural areas used for cultivating marijuana and manufacturing methamphetamine. Geographic conditions also contribute to illegal drug smuggling.

In 2001, there were an estimated 2.9 million inhabitants. At 60 percent, Whites still constitute the majority of the population, with Hispanics accounting for 25 percent, African-Americans 6 percent, and Asian minority groups 10 percent. The median age is 33.6 years, and the overall population is aging. Whites, with a median age of 38.1, are the oldest group. Hispanics have the lowest median age at 25.3 years, with African-Americans following closely at 27.3 years.

## Data Sources

This report presents available data from 1994 through 2001, unless otherwise noted.

Data compiled for this report are from the following sources:

- **Accidental overdose death data** were provided by the San Diego County Medical Examiner (ME) for 1994–2001. Limitation: Marijuana is not included.
- **Emergency department (ED) drug mentions data** were derived from the Drug Abuse Warning Network (DAWN), Office of Applied Studies, Substance Abuse and Mental Health Services Administration (SAMHSA), for 1994–2001.
- **Treatment admissions data** were provided by the San Diego County Alcohol and Drug Data System (SDCADDs), 1994–2001. Limitations: The system is an admission-based data set; individuals can account for multiple admissions; and local methadone programs under private administration are not included, deflating total opiate admissions.
- **Arrestee drug testing data** were derived from the Arrestee Drug Abuse Monitoring (ADAM) program, Criminal Justice Research Unit, San Diego Association of Governments (SANDAG), 1994–2001. Limitations: Alcohol is not included. Also, the adult male sample from 2000 onward was based on probability sampling and is not comparable to adult female or juvenile data, which are based on other sampling and data collection procedures.
- **Drug price and purity data** were provided by the Narcotics Information Network, March 2002.
- **Acquired immunodeficiency syndrome (AIDS) data** were derived from the San Diego County Health and Human Services Agency, “Definitive and Presumptive AIDS Cases Surveillance Survey,” October 30, 2002.

<sup>1</sup> The author is affiliated with Silver Gate Group, San Diego, California.

## DRUG ABUSE PATTERNS AND TRENDS

**Cocaine and Crack**

From 2000 to 2001, three indicators of cocaine use decreased or remained relatively stable, and one treatment admission increased. Over the 8-year span, 1994–2001, cocaine indicators tended to decrease. The exceptions were primary cocaine treatment admissions, which were unchanged, and ED mentions, which increased, but not significantly (exhibit 1).

In 2001, cocaine was detected in 28 of the 220 accidental overdose deaths, compared with 58 in 2000 and 54 in 1994. The 28 deaths in 2001 represented 13 percent of total accidental overdoses and a 52-percent decrease from 2000. Cocaine was rarely the only drug found in the decedent; common combinations were heroin and/or alcohol. The typical cocaine overdose case was male (86 percent), White (71 percent), and between the ages of 36 and 45 (82 percent). Although African-Americans represented only 18 percent of all cocaine overdose deaths, that proportion was much higher than African-American representation in the general population (6 percent). African-Americans continued to be overrepresented in all indicators for cocaine.

There were 812 cocaine ED mentions in 2001, compared with 1,002 in 2000, a 19-percent decrease. The 667 cocaine mentions in 1994 did not represent a significant difference from the 2001 figure. Cocaine mentions accounted for nearly 7 percent of total 2001 ED mentions, decreasing from 9 percent in 2000. Over the entire 8-year period under discussion, cocaine ranged from 7 to 9 percent of all ED mentions. In 2001, males accounted for 62 percent of cocaine mentions; Whites accounted for 52 percent, African-Americans for 27 percent, and Hispanics for 5 percent. When asked about motive for use, 43 percent cited dependence; 44 percent reported that the reason for the ED visit was chronic effects of cocaine. As with overdose deaths, cocaine ED mentions were seldom single-drug episodes: nearly three-quarters (72 percent) of these mentions were multiple drug episodes.

Within the treatment population, individuals reporting cocaine as the primary drug used increased from 1,300 in 2000 to 1,469 in 2001, a 13-percent increase. From 1994 to 2001, however, the number of admissions was unchanged. As a percentage of total admissions, cocaine was static at 9 percent in 2000 and 2001. A typical cocaine admission in 2001 was African-American (62 percent) and male (60 percent) with a mean age of 37.2. Eighty-five percent of the primary cocaine admissions in 2001 reported smoking as the preferred mode of use. Sixty-six percent used drugs

other than cocaine, primarily alcohol. Forty-four percent were referred by the criminal justice system, and 92 percent reported one or more past arrests.

Cocaine-positive adult arrestees in the ADAM program continued to decline in 2001. The proportion of males positive for cocaine use fell from 15 percent in 2000 to 13 percent in 2001. The proportion of adult females who showed recent use of cocaine fell from 26 percent in 2000 to 17 percent in 2001. One percent of juvenile arrestees tested positive for cocaine in 2001. In the first half of 2002, 11 percent of adult males, 23 percent of adult females and 3 percent of juveniles tested positive for cocaine. The 2002 data should be considered provisional.

Cocaine's price and availability remained unchanged from the June CEWG reporting period. Rock cocaine could be purchased for \$10 for one-tenth of a gram. The gram price ranged from \$40 to \$80, with purity levels ranging from 68 to 72 percent.

Seizures at the southwest border increased.

**Heroin**

Heroin indicators appeared to be mixed. From 2000 to 2001, there were minor increases in treatment admissions and opiate-positive tests among adult arrestees but decreases in deaths and ED mentions (exhibit 3).

In 2001, heroin was detected in less than one-half (47 percent) of accidental overdose deaths, the lowest level of any period since 1994. From 2000 to 2001, heroin's presence in accidental overdoses decreased 17 percent, and from 1994 to 2001, there was a 13-percent decrease. The majority of decedents in whom heroin was detected were White (63 percent), male (83 percent), and age 35 or older (77 percent).

There were 733 ED mentions of heroin in 2001, representing a 29-percent decrease from 2000. The 2001 mentions represented 6 percent of total ED mentions for that year, compared with 9 percent in 2000. The majority of ED patients who reported heroin were male (68 percent) and White (60 percent). Nearly one-third (31 percent) were age 45 or older. When asked the motive for using heroin, 80 percent cited dependence; 59 percent reported chronic effects as the reason for the visit to the ED. Surprisingly, 76 percent of the 2001 heroin ED mentions represented single-drug episodes.

Treatment admissions for heroin as the primary drug increased 3 percent from 2000 to 2001, when there were 1,493 such admissions. As a percent of total 2001 admissions, heroin accounted for 9 percent, 2 percent

less than in 2000. When total numbers for 1994 and 2001 are compared, heroin admissions decreased 17.5 percent, perhaps as the result of the closure of the only county-funded methadone program. In 2001, the typical heroin admission was White (54 percent) or Hispanic (34 percent), male (66 percent), had a median age of 35, and had been using heroin for 15 years. The majority of heroin users in treatment reported injection as the major means of use (88 percent). Another 8 percent reported smoking, and 2 percent reported snorting the drug. Two-thirds reported secondary drug use: 26 percent cited a preference for cocaine, 19 percent for methamphetamine, and 13 percent for alcohol. More than one-half were referred to treatment by the criminal justice system, and 67 percent entered treatment under some type of legal sanction. Ninety-four percent had at least one prior arrest; 41 percent reported having nine or more arrests.

Eight percent of adult male and 9 percent of adult female arrestees tested positive for opiates in 2001. Despite ongoing accounts of increased juvenile heroin use, few juvenile arrestees tested opiate-positive in the San Diego ADAM study. In 2001, opiates were detected in only 1 percent of the juvenile arrestees tested.

There was no new information on heroin price and purity. In March 2002, the Narcotics Information Network reported that black tar continued to be the dominant form of heroin in the county and was widely available. Purity levels ranged from 12 to 60 percent in gram quantities and were as high as 70 percent in larger quantities. Quantities as small as .02 to .05 grams could be purchased for \$5 to \$16.

### **Marijuana**

Most marijuana indicators increased in 2001. The only decrease was in marijuana-positive tests among adult males participating in the ADAM program (exhibit 3).

The ME does not routinely test for marijuana, so there are no data for that measure. However, there has been some discussion about the feasibility of including marijuana in the panel of tests.

In 2001, there were 1,107 marijuana ED mentions, compared with 955 in 2000, a 16-percent increase. From 1994 to 2001, marijuana mentions increased 116 percent, rising from 512 to 1,107. Since 1997, marijuana has accounted for 8 or 9 percent of total mentions in all time periods so, in that respect, there was remarkable stability. In 2001, the typical marijuana ED mention was White (62 percent), male (68 percent), and was likely to be between the ages of 18 and 34 (49 percent). Nearly one-half of the 2001 mentions involved psychic effects as the motive for using mari-

juana; one-third came to the ED because of unexpected reaction to the drug. Another 30 percent reported chronic effects as the reason for coming to the hospital.

Treatment admissions for primary marijuana use continued to increase within the county's treatment system. In 2001, there were 3,143 marijuana admissions, more than for heroin and cocaine combined. This number represented 19 percent of total admissions. From 1994 to 2001, primary marijuana admissions increased a remarkable 442 percent. As was reported earlier, most of the increase can be accounted for by the county's continued emphasis on treatment-on-demand for adolescents. Consequently, the majority of 2001 marijuana admissions were young. The majority of marijuana admissions in 2001 were male (68 percent), with Whites representing 43 percent of these admissions, African-Americans 16 percent, and Hispanics 32 percent. Slightly more than two-thirds were younger than 18 at admission. Another 10 percent were between the ages of 18 and 21. Sixty-eight percent of these clients reported secondary drug use; 43 percent cited secondary alcohol use, and 16 percent cited methamphetamine use. Nearly 75 percent were referred to treatment by the criminal justice system; only 13 percent reported no prior arrests. Marijuana use was a relatively recent activity for these admissions; the mean years of use reported was 6.9.

Within the arrestee population, marijuana was the most frequently detected drug among adult males and juveniles and was second only to methamphetamine for adult females. In 2001, 36 percent of adult males, 45 percent of juveniles, and 28 percent of adult females were positive for marijuana. Marijuana continued to be the drug most often detected among San Diego juveniles.

Marijuana pound prices decreased from 2000 to 2001, falling from a range of \$400 to \$310.

### **Stimulants**

Methamphetamine overdose deaths and ED mentions declined between 2000 and 2001, but treatment admissions increased during that period (exhibit 4). In 2001, methamphetamine was detected in only 48 (22 percent) accidental overdose deaths. The majority of these decedents in 2001 were White (65 percent) and male (78 percent). More than three-quarters (79 percent) were between the ages of 36 and 45.

ED mentions for methamphetamine and amphetamines combined were estimated at 1,641 in 2000 and 1,615 in 2001. Mentions for methamphetamine (and amphetamines) represented 14 percent of total ED mentions in 2001, as in 2000. The number of amphetamine ED

mentions increased significantly from 1994 to 2001 (from 381 to 942), while methamphetamine mentions increased significantly from 1999 to 2001 (from 584 to 673).

Treatment admissions for methamphetamine increased from 4,251 in 1999 to 4,507 in 2000, to 5,725 in 2001. Methamphetamine continued to be the most frequently reported primary drug among treatment admissions, with alcohol a close second. From 1994 to 2001, methamphetamine admissions increased 59 percent. In 2001, the typical primary methamphetamine admission was White (59 percent) and male (51 percent). Hispanics, at 25 percent, were overrepresented. Forty percent were between the ages of 26 and 35. More than one-half (57 percent) smoked the drug, 22 percent snorted, and 19 percent reported injection as the primary route of administration. Sixty-one percent reported secondary drug use, and the most common secondary drug was marijuana. More than one-half were referred by the criminal justice system, and 90 percent had been arrested at least one time. A majority (63 percent) reported prior experience with treatment.

Within the arrestee population, 32 percent of adult males, 37 percent of adult females, and 11 percent of juveniles tested positive for methamphetamine in 2001.

Methamphetamine prices rose slightly from March 2001 to March 2002. The price of an “eightball” (one-eighth ounce) increased from \$100 to \$110–\$130 during that period, while the price for one-quarter ounce increased from \$150–\$200 to \$150–\$400. Pound prices showed more variability, with the range changing from \$4,500–\$9,500 to \$3,500–\$11,500. Purity levels showed a wide variance, from 30–40 percent average purity at the gram level to as high as 93–97 percent for high-grade methamphetamine in pound quantities.

### **Alcohol and Other Drugs**

#### *Alcohol*

Indicators of alcohol problems were mixed in 2001. Alcohol was present in 96 of the 220 accidental overdose deaths, a 12-percent increase from 2000. ED mentions of alcohol combined with other drugs, however, did not change significantly from 2000 (1,622) to 2001 (1,660). As a proportion of total mentions, alcohol combinations were remarkably stable between 1997 and 2001, accounting for 15 percent in 1997, 1998, and 1999, and 14 percent in 2000 and 2001.

Primary alcohol treatment admissions were essentially stable from 1999 to 2001, rising from 3,915 to 4,013.

From 1994 to 2001, primary alcohol admissions increased nearly 33 percent, from 3,028 to 4,013. In 2001, the typical alcohol admission was White (66 percent), male (69 percent), and was 35 or older (63 percent). Nearly one-half (49 percent) reported no secondary drug use. Of those who did report secondary use, 18 percent reported marijuana and 17 percent reported methamphetamine. Slightly more than one-quarter were referred by the criminal justice system, and 19 percent reported nine or more arrests. Two thirds reported a prior treatment episode, and 59 percent had been drinking longer than 20 years. Most (83 percent) were unemployed.

#### *Other Drugs*

There continued to be media reports of the use of rave drugs, including gamma hydroxybutyrate (GHB), methylenedioxymethamphetamine (MDMA), and ketamine (“K,” “Special K”) in San Diego County. This was especially true for MDMA. Information from local members of the Narcotics Task Force supported the reports. Conversely, there was little hard evidence of the use of these drugs in data reports from the ME, ADAM, or the treatment centers, although MDMA ED mentions, while small in number, did increase significantly from 1994 to 2001 (from 6 to 52, a 767-percent increase). There were several arrests for MDMA possession and use in a Del Mar nightclub, but there has been little additional coverage of actual events since then. There can be little doubt that these drugs are widely available in San Diego, but information on who uses the drugs and where and how they are used will not be available until ethnographic studies are conducted.

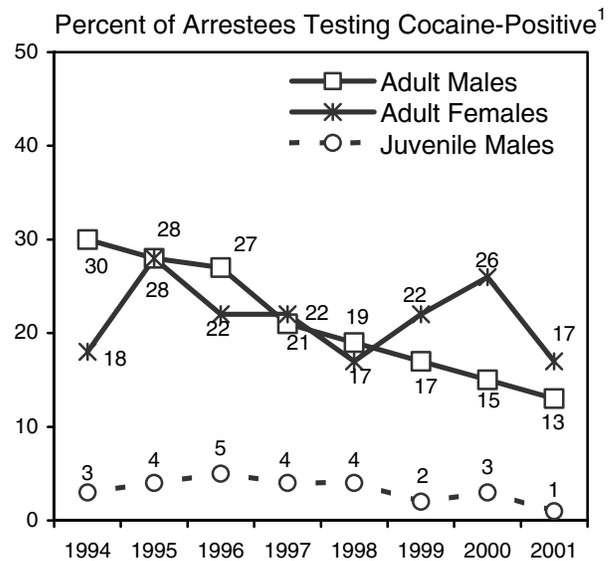
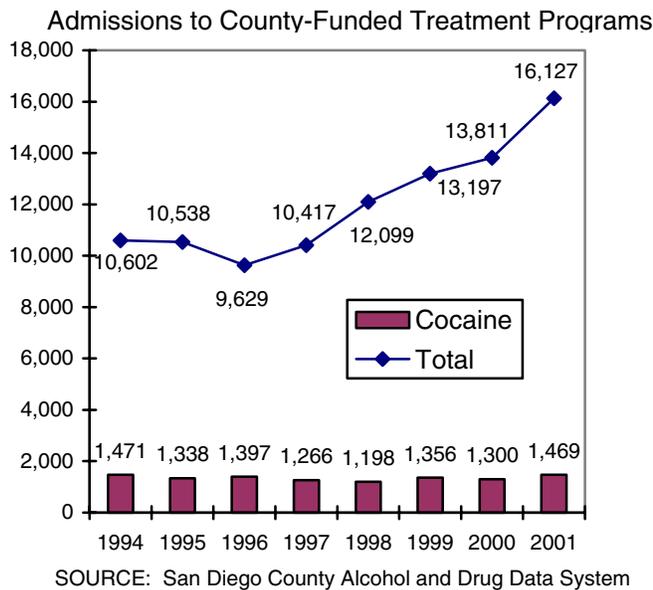
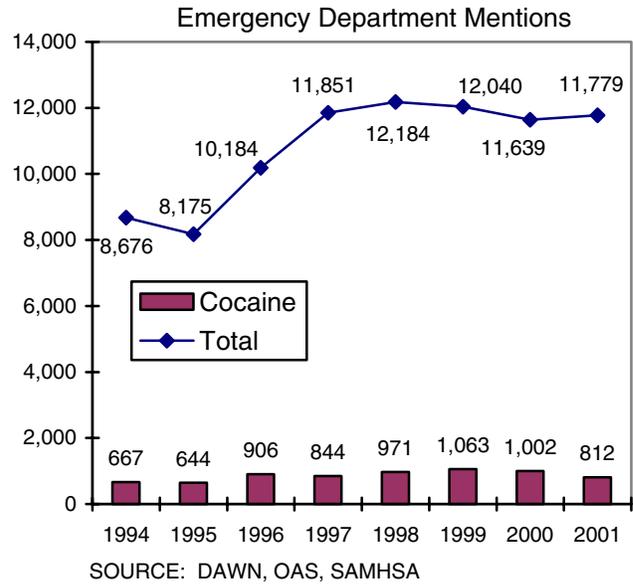
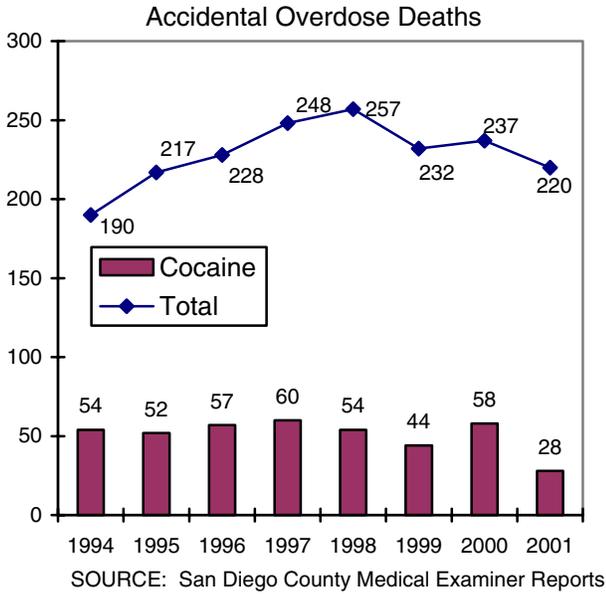
### **INFECTIOUS DISEASES RELATED TO DRUG ABUSE**

There were 10,612 adult, adolescent, and pediatric AIDS cases reported through November 30, 2000, in San Diego County. Of these, 54 were pediatric cases. Of the adult and adolescent cases, 76 percent occurred among men having sex with men (MSM), 9 percent occurred among injection drug users (IDUs), 9 percent occurred among the dual risk category of MSM/IDU, 4 percent were attributable to heterosexual contact, and 2 percent were attributable to all other causes. Transmission modes among women were very different from men. Most women (50 percent) acquired the disease through heterosexual contact, while 39 percent were IDUs and 11 percent acquired AIDS through other means. The majority of all cases were White (66 percent), followed by Hispanics (20 percent) and African-Americans (12 percent).

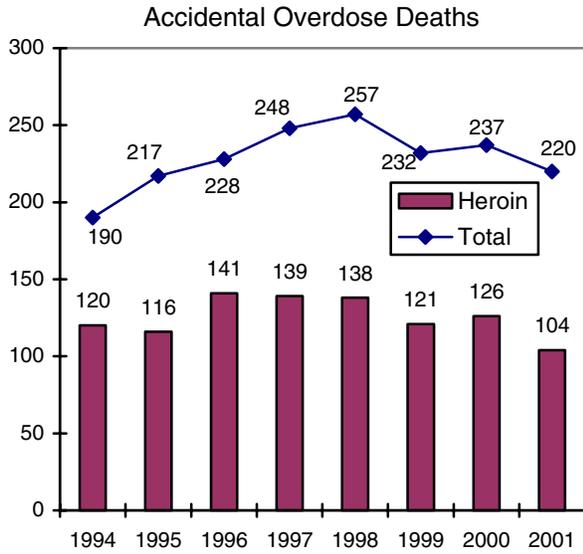
---

*For inquiries concerning this report, please contact Michael Ann Haight, E-mail: <michaelhaight@cox.net>.*

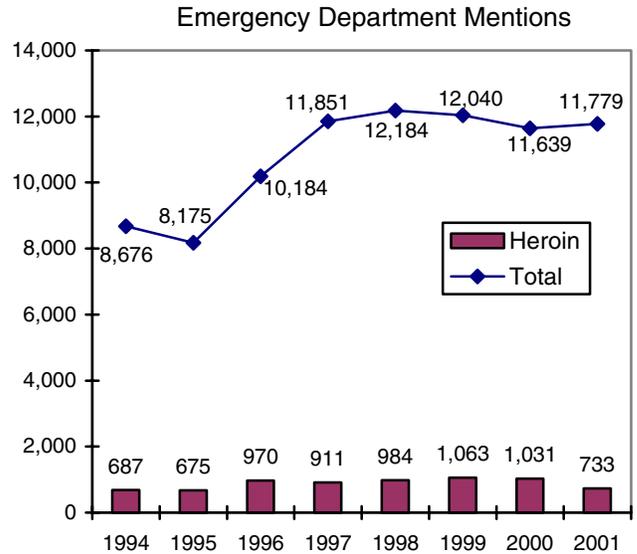
**Exhibit 1. Cocaine Indicators for San Diego County: 1994–2001**



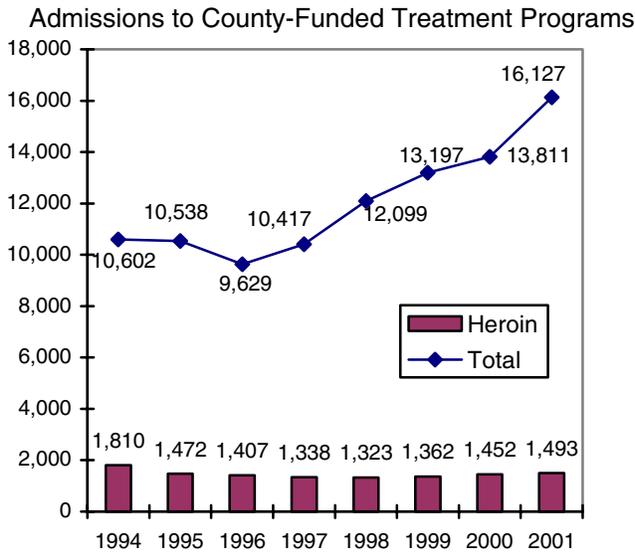
**Exhibit 2. Heroin Indicators for San Diego County: 1994–2001**



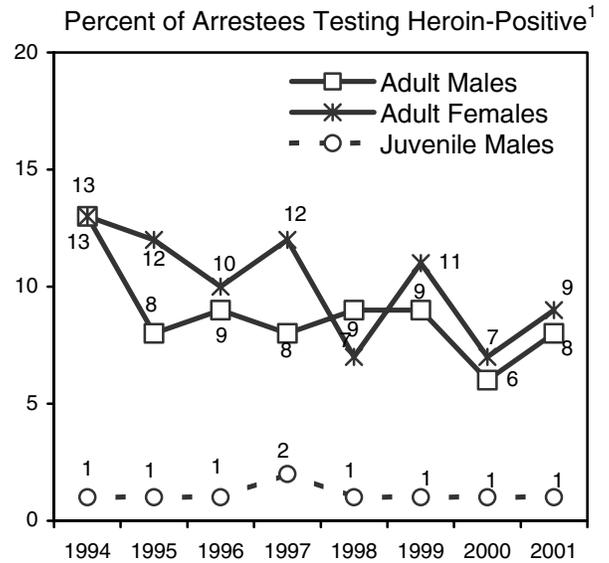
SOURCE: San Diego County Medical Examiner reports



SOURCE: DAWN, OAS, SAMHSA



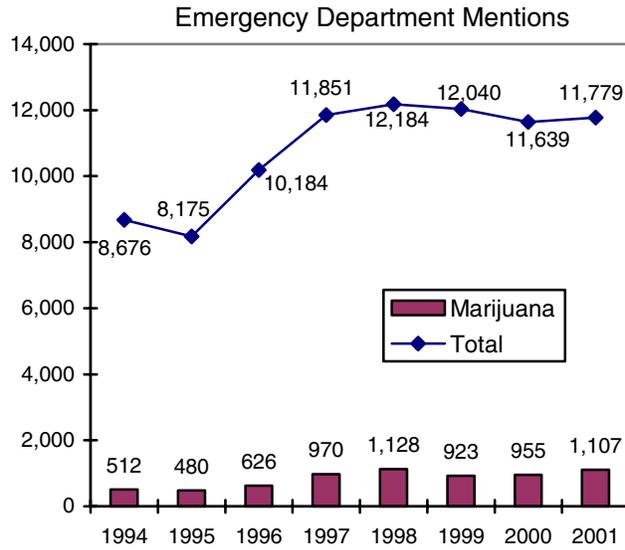
SOURCE: San Diego County Alcohol and Drug Data System



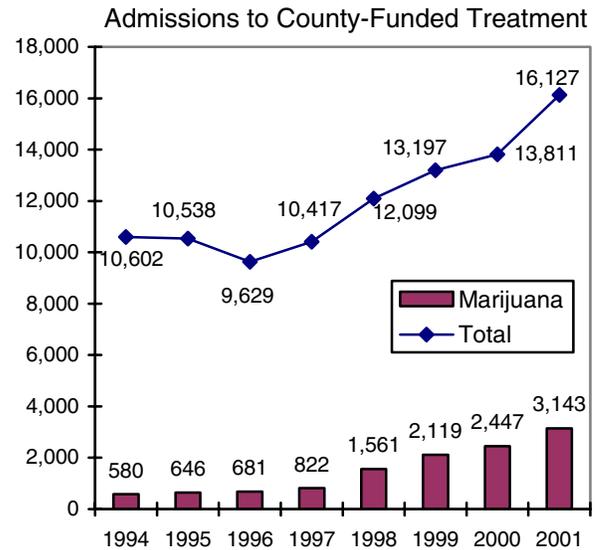
<sup>1</sup> Data from 2000–2001 are not comparable to prior to 2000.

SOURCE: San Diego Association of Governments, Criminal Justice Unit

**Exhibit 3. Marijuana Indicators for San Diego County: 1994–2001**

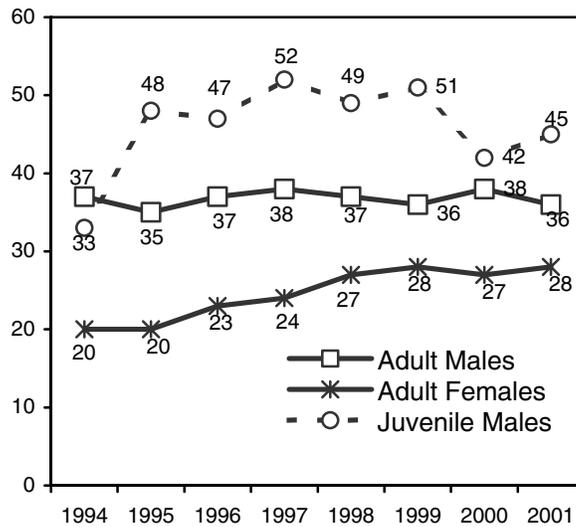


SOURCE: DAWN, OAS, SAMHSA



SOURCE: San Diego County Alcohol and Drug Data System

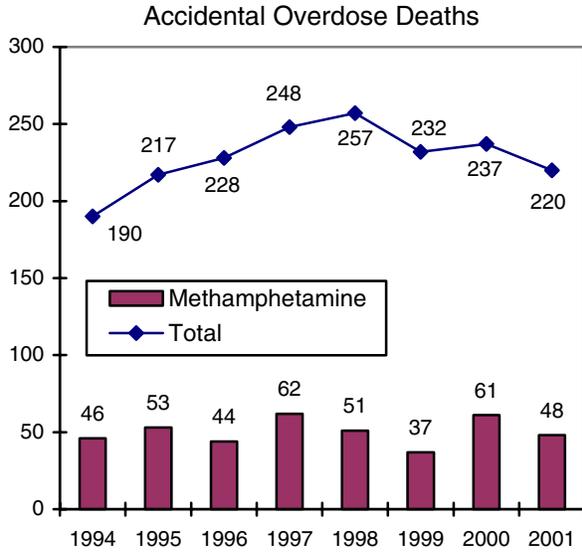
**Percent of Arrestees Testing Marijuana-Positive<sup>1</sup>**



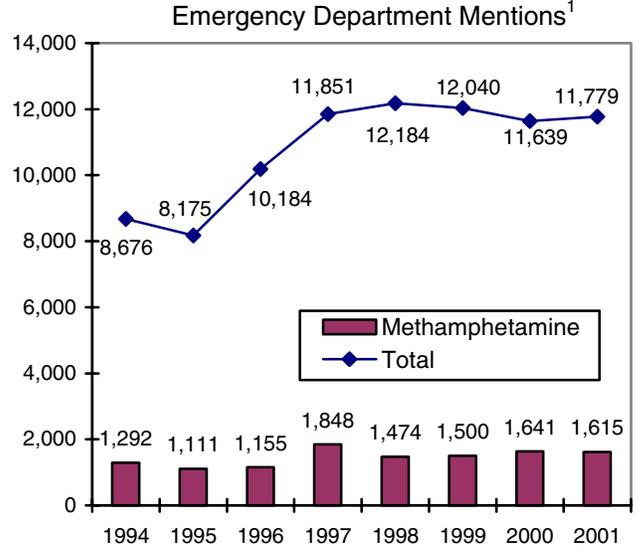
<sup>1</sup> Data from 2000–2001 are not comparable to data prior to 2000.

SOURCE: San Diego Association of Governments, Criminal Justice Unit

**Exhibit 4. Methamphetamine Indicators for San Diego County: 1994–2001**

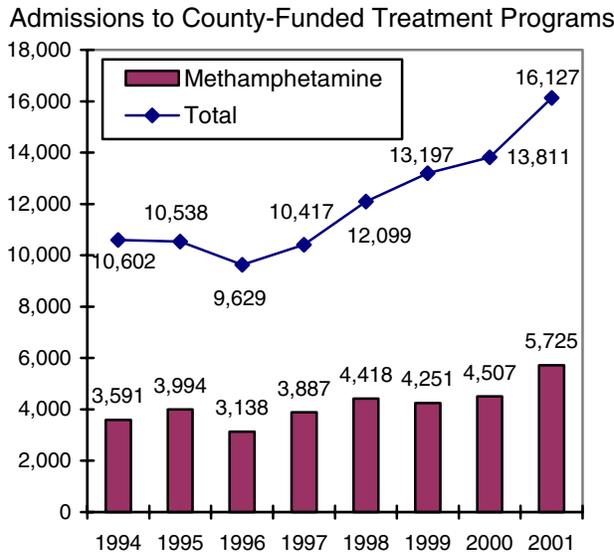


SOURCE: San Diego County Medical Examiner Reports

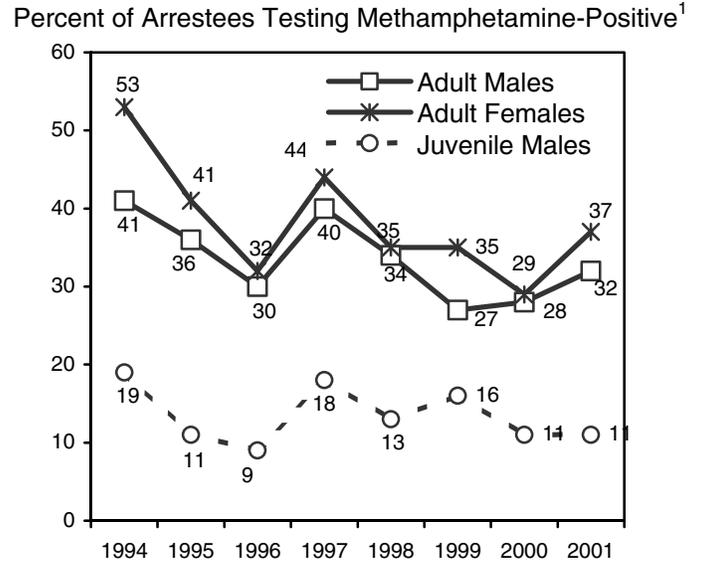


<sup>1</sup> Includes amphetamines.

SOURCE: DAWN, OAS, SAMHSA



SOURCE: San Diego County Alcohol and Drug Data System



<sup>1</sup> Data from 2000–2001 are not comparable to data prior to 2000.

SOURCE: San Diego Association of Governments, Criminal Justice Unit

# Patterns and Trends of Drug Use in the San Francisco Bay Area

John A. Newmeyer, Ph.D.<sup>1</sup>

## ABSTRACT

*Cocaine use prevalence appears to be rising again, after a significant decline in the late 1990s. The shift away from smoking crack and toward snorting powder persists. The former predominance of Blacks among users continues to ebb. Heroin use indicators showed a peak in 1999, followed by a significant decline. The average age of users continues to increase. Local street prices of heroin have risen considerably since 2001. Marijuana indicators suggest a continued increase in prevalence. Methamphetamine indicators are mixed. Usage is still widespread, and risky injection practices among gay/bisexual men remain a major factor for HIV incidence. Incidence of new HIV infection declined between 1997 and 2001 for heterosexual drug injectors, but increased for gay male and transsexual injectors.*

## 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 4,123,000 as of the 2000 census.

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 industries, such as software and biotechnology, have led to further expansion and to a highly diversified economy. 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.

Since 1994, there has been a steep rise in the cost 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 year and a half.

### Data Sources

The sources of data for the drug abuse indicators used in this report are described below:

- **Emergency department (ED) drug mentions data** were obtained from the Drug Abuse Warning Network (DAWN), Office of Applied Studies, Substance Abuse and Mental Health Services Administration (SAMHSA), for three counties of the San Francisco Bay area (San Francisco, Marin, and San Mateo) from 1996 through 2001.
- **Treatment admissions data** were available for all five bay area counties for calendar years (CYs) 1999–2001 and the first 8 months of CY 2002. These data were compiled by the California Department of Alcohol and Drug Programs (DADP). Treatment admissions data were also provided by the San Francisco Department of Public Health (SFDPH) for that county for fiscal years (FYs) 2001 and 2002.
- **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 CY 2000, along with comparable data for 1996–1999. Demographic data on decedents were available for San Francisco County for FY 2000. The DAWN system covered 100 percent of the metropolitan statistical area (MSA) jurisdiction and 100 percent of the MSA population in 2000.
- **Reports of arrests for drug-law violations and counts of reported burglaries** were provided by

<sup>1</sup> The author is affiliated with the Haight-Ashbury Free Clinics, Inc., San Francisco, California.

the San Francisco Police Department (SFPD) for 2001 and the first 10 months of 2002.

- **Arrestee drug testing data** on adult males are from the Arrestee Drug Abuse Monitoring (ADAM) program, National Institute of Justice (NIJ), for San Jose and Sacramento for the first three quarters of 2001.
- **Price and purity data** were obtained from the Drug Enforcement Administration (DEA), Domestic Monitor Program (DMP), and referenced heroin “buys,” mostly were made in San Francisco County. Data for 2001 were compared with those for 1994–2000. Data on trafficking in heroin and other drugs for the first quarter of 2002 were available from the National Drug Intelligence Center’s report, “California, Drug Threat Assessment Update.”
- **Ethnographic information** was obtained through interviews with treatment program staff and outreach workers in November 2002. Their observations were compared with those they made in November 2001 and May 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 SFDPH, Acquired Immuno-deficiency Syndrome (AIDS) Office. The sample consisted of 356 gay/bisexual men at “late night” venues.
- **Hepatitis B and C data** for San Francisco County were available for 1996 through 2001 and for the first 46 weeks of 2002. Hepatitis C virus (HCV) prevalence estimates were provided by the SFDPH.

#### DRUG ABUSE PATTERNS AND TRENDS

##### Cocaine and Crack

Cocaine use prevalence appears to be rising again, after a significant decline in the late 1990s. The shift away from smoking crack and toward snorting powder continues. The former predominance of Blacks among users continues to ebb.

ED mentions for cocaine declined from 1996 to 1998, but rose back above their 1996 level by 2001 (exhibit 1). The rate of cocaine/crack ED mentions for 2001 was 158 per 100,000 population, 36 percent higher than the rate for 1998.

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.

In San Francisco County during FY 2002, 2,503 persons were in treatment for primary cocaine problems. This total was 19 percent higher than in FY 2001, but still 8 percent lower than that for FY 1999.

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). Of the cocaine-related death mentions in 2000 in San Francisco, males accounted for 81 percent; the median age was just over 40.

San Jose, a nearby metropolis which is an ADAM site, may give some indication of cocaine use prevalence in San Francisco. During January–September 2001, 12 percent of adult male arrestees in San Jose tested positive for cocaine. This was the third lowest figure for cocaine among all 31 ADAM sites. The median cocaine-positive proportion for those sites was 30 percent.

According to the DEA, local kilogram prices for cocaine ranged from \$13,000 to \$21,000.

##### Heroin

According to ethnographic observers, there has been an increase in heroin use among younger Whites, most of whom do not inject. Older users still prefer the injection route. Prices increased in 2002, with half-grams of “street” heroin quoted at \$20, twice the price in 2001.

ED mentions of heroin reached a peak in 1999 and then dropped by 10 percent in 2000, remaining at that level in 2001 (exhibit 1).

The count of treatment admissions for primary heroin problems in the five-county bay area fell significantly between 1999 and 2002 (exhibit 2). As a proportion of all primary drug admissions excluding alcohol, heroin accounted for 64 percent in 1994, 55 percent in 1999, and only 41 percent in the first 8 months of 2002.

In San Francisco County, 4,164 persons were in public treatment for primary heroin abuse in FY 2002. This is down 20 percent from the count in FY 2001.

In the three-county bay area reporting to DAWN, ME death mentions involving heroin in 2000 were at their lowest level in 5 years (exhibit 3). The count for 2000 was 19 percent lower than the average for 1996–1999. Males accounted for 87 percent of the heroin-related death mentions in 2000. The median age of the decedents was 40.

Arrests for heroin-related offenses totaled 5,311 in 2001, a drop of 13 percent from the 5,981 recorded in 2000. However, the rate of arrests during the first 10 months of 2002 was 16 percent higher than during a similar period in 2001.

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). The count for 2001 was 18 percent above the 1999 level, but that for the first 10 months of 2002 was only 7 percent above a similar period for 1999. 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 15 percent pure and cost \$2.11 per pure milligram, compared with 16 percent and \$0.71 in 2000, 20 percent and \$0.47 in 1999, 26 percent and \$0.33 in 1998, 26 percent and \$0.63 in 1997, 24 percent and \$0.83 in 1996, 35 percent and \$0.83 in 1995, and 29 percent and \$0.95 in 1994. Local samples of heroin were thus generally "Mexican" and showed a very sharp increase in average price between 1998 and 2001.

Prices for kilograms of heroin ranged from \$15,000 (Mexican black tar) to \$75,000 (South American) in the first quarter of 2002. Purity ranged from 10 percent to 68 percent.

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 heroin use.

Indicators showed a peak in heroin use in 1999, followed by a significant decline. The average age of users continues to increase. Local street prices of heroin have risen considerably since 2001.

## Other Opiates

Ethnographic observers note a strong increase in the presence of oxycodone in the street scene. This is confirmed by ED data (exhibit 1). ME death mentions in the overall narcotic analgesics category fluctuated within a narrow range in 1996–2000, with no discernible trend (exhibit 3).

## Marijuana

Ethnographic observers note an increase in marijuana use among young people. The number of ED marijuana mentions nearly doubled between 1998 and 2001 (exhibit 1). The proportion of females among these mentions increased significantly between 2000 and 2001, although males accounted for more than two-thirds of the marijuana ED mentions.

In San Francisco County, the proportion of primary marijuana abusers among all persons in treatment increased from 6 percent in FY 2001 to 9 percent in FY 2002.

Arrests for marijuana-related offenses in San Francisco County were 1,364 in 2001, a decline of more than one-fifth from the 1,736 recorded in 2000. However, the rate of arrests in the first 10 months of 2002 was 5 percent higher than for a similar period in 2001.

In Northern California, California-produced marijuana sold for \$1,500 to \$4,000 per pound, while Mexico-produced marijuana sold for \$380 to \$1,400 per pound.

The indicators point to a continued increase in marijuana use prevalence.

## Stimulants

Ethnographic observers note that the speed scene in San Francisco remained active in 2002, but less so than during the peak years of activity around 1997. Gay men no longer predominate the user population.

The number of methamphetamine/speed ED mentions dropped sharply from 1997 to 1998, and then remained roughly the same through 2001 (exhibit 1). Between 1994 and 2001, methamphetamine ED mentions significantly decreased by 53 percent.

Treatment admissions for primary amphetamine problems in the five-county bay area increased somewhat between 2000 and 2002 (exhibit 2). The

proportion of primary amphetamine users among all nonalcohol drug admissions rose from 13 percent in 1999 to 20 percent in 2002. In San Francisco County, primary speed users increased among persons in treatment from 6 percent to 8 percent between FY 2001 and FY 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 45 in 2000 (exhibit 3). In San Francisco County during the 1990s, the highest annual count of deaths ascribed to amphetamines (alone or in combination) was 40 in 1995. The count in 2000 was down by 65 percent, to 14. 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 situation in San Francisco. In Sacramento and San Jose, respectively, 29 percent and 28 percent of male adult arrestees tested positive for methamphetamine in January–September 2001. These were two of the three highest figures for methamphetamine-positive findings among adult males in all 31 ADAM sites. Methamphetamine-positive results among males were 20 percent or higher in only eight sites, all in Pacific or Mountain States.

In California, the DEA reports that a pound of methamphetamine costs \$3,000–\$7,000 for “low-grade” and \$13,500–\$18,000 for “high-grade.”

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. Usage continues to be widespread, and risky injection practices among gay/bisexual men continue to be a major factor in HIV incidence.

### **Depressants**

The annual rate of ED mentions for the overall category of benzodiazepines varied in a narrow range between 1996 and 2000, then rose significantly between 2000 and 2001 (exhibit 1). However, ME death mentions of benzodiazepines decreased by 22 percent between 1997 and 2000 (exhibit 3).

### **Hallucinogens**

Lysergic acid diethylamide (LSD) ED mentions increased from 1998 to 2000, then returned nearly to the 1998 level in 2001. PCP mentions increased by a significant 23 percent between 1999 and 2001 (exhibit 1).

### **Club Drugs**

Ethnographic observers concur that methylenedioxy-methamphetamine (MDMA or “X”) is widely available, with a street price of \$20 and sometimes \$15 per pill. The annual count of ED mentions for this drug quadrupled in 4 years, from 38 in 1998 to 152 in 2001 (exhibit 1). Two other club drugs, gamma hydroxybutyrate (GHB) and ketamine, remained at elevated levels in 2001. Males accounted for about four-fifths of GHB mentions in 2001; the median age was about 31. 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 reported 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 28,159 AIDS cases through September 30, 2002, an increase of 389 (1.4 percent) from the total reported through September 30, 2001. Of these cases, 1,946 (6.9 percent) were heterosexual IDUs, an increase of 47 (2.5 percent) in a year. Another 3,557 AIDS cases (12.6 percent) were men who had sex with other men (MSM) and also injected drugs; this number increased by 120 (3.5 percent) in a year. The rate of cases reported has been decelerating for some time among heterosexual IDUs and lately has also been decelerating among MSM/IDUs. AIDS data among transgender San Franciscans have been collected only since 1996, but the cumulative total of cases—281—is a surprisingly large proportion of an overall transgender population, estimated at 3,000.

Among San Franciscans diagnosed in 2000 through 2002, heterosexual IDUs accounted for 15 percent, up from 10 percent among those diagnosed in 1994 through 1996, and 14 percent in 1997 through 1999. However, the overall case numbers in 2000–2002 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 11 years. This caseload is 69 percent male, 50 percent Black, 35 percent White, 12 percent Hispanic, and 1 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 overrepresentation 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 HIV-positive prevalence of heterosexual IDUs not in treatment. Prevalence figures were generally in the 9 to 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 1997–99; 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 1997–99; prevalence was only 6 percent in 2001.

By means of a consensus of experts, San Francisco County 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, to about one case every 11 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.

---

*For inquiries concerning this report, please contact John A. Newmeyer, Ph.D., Haight-Ashbury Free Clinics, Inc., 612 Clayton Street, 2nd Floor, San Francisco, California 94117, Phone: (415) 931-5420, Fax: (415) 864-6162, <E-mail: jnewmeyer@aol.com>.*

**Exhibit 1. Number of ED Mentions in San Francisco for Selected Drugs: 1996–2001**

<b>Drug Mentioned</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>Percent Change 2000–2001</b>
Cocaine	2,310	1,979	1,843	1,935	2,054	2,482	20.8
Heroin	3,132	2,719	2,360	3,050	2,756	2,790	1.2
Marijuana	424	388	391	469	627	704	12.3
Methamphetamine	934	1,012	616	554	591	611	3.4
Oxycodone/ Combinations	20	20	26	17	31	54	74.2
PCP/Combinations	158	122	67	62	70	76	8.6
LSD	104	73	43	55	67	46	-31.3
MDMA	32	35	38	47	107	152	42.1
GHB	78	83	102	138	151	158	4.6
Ketamine	4	1	2	4	14	11	-21.4
Benzodiazepines	730	727	619	665	664	825	24.2
<b>Total Mentions</b>	<b>14,213</b>	<b>13,491</b>	<b>12,525</b>	<b>12,702</b>	<b>12,171</b>	<b>13,743</b>	<b>12.9</b>

SOURCE: DAWN, OAS, SAMHSA

**Exhibit 2. Admissions to Drug Treatment Programs in the San Francisco Bay Area by Primary Drug of Abuse: 1999–2001 and January–August 2002**

<b>Drug</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>Jan–Aug 2002</b>
Cocaine	8,727	7,718	7,428	4,547
Heroin	19,763	17,416	14,673	7,679
Amphetamine	4,595	4,469	5,073	3,679
All drugs (excluding alcohol)	36,069	32,034	30,920	18,855

SOURCE: California Department of Alcohol and Drug Programs (DADP)

**Exhibit 3. Medical Examiner Drug Mentions in Three Counties (Including San Francisco): 1996–2000**

<b>Drug</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>
Cocaine	155	127	158	158	146
Heroin/Morphine	212	159	164	192	148
Methamphetamine	44	49	45	58	45
Narcotic Analgesics	175	156	185	198	164
Benzodiazepines	66	71	62	50	55

SOURCE: DAWN, OAS, SAMHSA

# Recent Drug Abuse Trends in the Seattle-King County Area

Caleb Banta-Green,<sup>1</sup> Ellen Silverman,<sup>2</sup> Susan Kingston,<sup>3</sup> Steve Freng,<sup>4</sup> Michael Hanrahan,<sup>5</sup> Geoff Miller,<sup>6</sup> T. Ron Jackson,<sup>7</sup> Kris Nyrop,<sup>8</sup> Arnold F. Wrede,<sup>2</sup> Mark McBride,<sup>9</sup> Richard Harruff,<sup>10</sup> Greg Hewett,<sup>10</sup> Ann Forbes,<sup>11</sup> Joe Kabel,<sup>12</sup> and Hanne Thiede<sup>13</sup>

## ABSTRACT

*Cocaine-related deaths increased to previous high levels in 2002, following a decline in 2001, while cocaine emergency department (ED) mentions remained flat from 2000 to 2001. The number of heroin-related deaths also increased, following sharp declines observed from mid-2000 through 2001, while ED mentions were significantly lower in 2001. Overall, drug-related deaths and ED mentions for most other opiates/narcotics were at their highest levels, with ED mentions for narcotic analgesics/combinations surpassing those for heroin for the first time. Marijuana use was widespread, with recent increases in ED mentions and treatment admissions. Indicators of methamphetamine use plateaued, including treatment admissions and manufacturing site seizures. PCP ED mentions remained at new higher levels; MDMA and GHB indicators remained elevated, and LSD use continued its long downward trend. All of these ED mentions for club drugs accounted for only about 5 percent of ED mentions. Treatment admissions for hallucinogens and club drugs remained at very low levels. Indicators of depressant use remained fairly steady, with relatively high levels of ED mentions and low levels of treatment admissions. Among men who have sex with men who were recently treated at the county sexually transmitted disease (STD) clinic, the use of either MDMA or methamphetamine was significantly associated with risky sexual behaviors and contracting STDs. Injection drug users (IDUs), including those who also engage in male-to-male sex, have constituted 14 percent of newly diagnosed HIV*

*infections in recent years. Hepatitis C may infect up to 85 percent of IDUs in King County.*

## 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, to 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 is the 12th largest county 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

The authors' affiliations at the time of writing were as follows:

<sup>1</sup> Alcohol and Drug Abuse Institute, University of Washington, funded by the Washington State Division of Alcohol and Substance Abuse

<sup>2</sup> Division of Alcohol and Substance Abuse, Washington State Department of Social and Health Services

<sup>3</sup> Project NEON Public Health – Seattle & King County

<sup>4</sup> Northwest High Intensity Drug Trafficking Area

<sup>5</sup> HIV/AIDS Program Public Health – Seattle & King County

<sup>6</sup> King County Mental Health, Chemical Abuse and Dependency Services Division

<sup>7</sup> Evergreen Treatment Services

<sup>8</sup> Street Outreach Services

<sup>9</sup> U.S. Customs Service

<sup>10</sup> Medical Examiner's Office, Public Health – Seattle & King County

<sup>11</sup> Washington State Alcohol and Drug Help Line

<sup>12</sup> Northwest Crime and Social Research, Inc.

<sup>13</sup> Epidemiology Research Unit, Public Health – Seattle & King County

Hawaiian and Other Pacific Islander, and 2.6 “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 live below the Federal poverty level, lower than the State averages of 10.2 percent and 15.2 percent, respectively.

### Data Sources

- **Emergency department (ED) drug mentions data** were derived from Drug Abuse Warning Network (DAWN), Office of Applied Studies, Substance Abuse and Mental Health Services Administration (SAMHSA), for 1994 through 2001. 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, 1999, through June 30, 2002. Data for all substance abuse-related treatment admissions are included; this contrasts with previous CEWG reports, when admissions for alcohol-only were excluded. Only the primary drug at the time of treatment admission is available. Data on private pay and Department of Corrections clients, as well as those receiving detoxification services, are excluded.
- **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 June 30, 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 ADAM program, King County’s urinalysis results for January through December 2001 are included in the narratives for cocaine, heroin, marijuana, stimulants (methamphetamine), and phencyclidine (PCP). Provisional, unweighted data for males in the first half of 2002 are provided as well; note that this data will change some when sampling weights are applied. 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 June 30, 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 2001 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 June 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. In the first half of 2002, there were 2,724 calls, of which 86 percent concerned adults.
- **The Washington State Poison Center** operates a 24-hour hotline. Data are presented for King County. Multiple substances may be recorded for each call. Many of the calls are related to serious or unusual situations reported by health care facilities. Only a small amount of all poisonings or exposures are reported to the Poison Center; these data do not approximate prevalence data. Calls requesting only general information are not included in these data.
- **Key informant interview data** are obtained from discussions with treatment center staff, street outreach workers, and drug users.

#### DRUG ABUSE PATTERNS AND TRENDS

##### Cocaine and Crack

There were an estimated 3,409 cocaine mentions in 2001 (exhibit 1), a 35 percent increase from 1999. In 2001, 62 percent of ED mentions were male. Nearly

one-half of the mentions involved Whites, nearly one-third Blacks, and nearly 5 percent Hispanics, consistent with most previous years. The majority ranged in age from 26 to 44. From 1999 to 2001 significant increases occurred in mentions across all age categories 18 and older. Over the 8-year period from 1994 to 2001, significant increases were seen for those age 45–54 (168 percent) and among those age 55 and older (163 percent). This corresponds with anecdotal reports that cocaine users represent an aging cohort. In 2001, dependence was cited most often by those whose reasons for using the drug were known. Only 30 percent of visits to the ED involving cocaine were for cocaine alone. Of these single drug episodes, the most common reasons for the visit included chronic effects (23 percent), unexpected reaction (16 percent), and accident/injury (16 percent).

In the first half of 2002, cocaine admissions represented 12 percent of total treatment admissions. The number of cocaine admissions in the first half of 2002 was virtually identical to those in the preceding half-year period. Admissions to drug treatment for adults reporting cocaine as their primary drug have declined by approximately 1 percentage point each year since 1999 (exhibit 2).

There were 49 mentions of cocaine in drug-involved deaths in the first half of 2002 (exhibit 3), accounting for 48 percent of all drug-related deaths. This is the second highest number of deaths since 1994; in the first half of 2000 there were 51 cocaine-related deaths. Thirteen of the 102 reported drug-related deaths were for cocaine alone. The drugs most commonly seen in combination with cocaine were heroin, other opiates, and alcohol, consistent with previous years. The average age of the decedents was 42, with a range of 25–57 years of age. Seventy-one percent ( $n=35$ ) of the decedents whose deaths were cocaine-related were White, 18 percent (9) were African-American, 6 percent (3) were Native American, and the remaining 2 deaths were coded as “other.” Eighty-one percent of decedents with cocaine identified were male, similar to previous years.

In the first half of 2002, there were 13 reports of cocaine seizures by the U.S. Customs Service, totaling 36.8 pounds (16.7 kilograms). The number of seizures is down slightly, with many fewer pounds seized. A single seizure of more than two tons was made in the first half of 2001.

In Seattle, as noted earlier, ADAM data are only available for adult, male arrestees. Provisional data are available for the first two quarters of 2002. For this time period, 36 percent of male arrestees tested positive

for cocaine, a possible increase in cocaine-positives from 2000 (31 percent) and 2001 (31 percent).

The NW HIDTA reports that the street cost of cocaine is roughly \$30 per gram, \$500–\$900 per ounce, and \$14,000–\$24,000 per kilogram. Intelligence reports indicate that powder cocaine is increasingly more available in King County and other areas of the State.

Of the 535 exposures to street drugs reported to the Washington State Poison Center for King County in 2001, 54 were exposures to cocaine. Trend data are not yet available.

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 the first half of 2002, the same as for all of 2001. For teenagers, cocaine is the fourth most common drug mentioned, with 37 calls, representing 10 percent of all calls, in the first half of 2002.

### Heroin

The estimated number of heroin ED mentions decreased significantly from 2000 to 2001, dropping from 2,490 to 1,927 (exhibit 1). The ages of those reporting heroin have generally remained constant since 1994, with those under 18 representing less than 1 percent of ED visits, those 18–25 representing 11 percent, those 26–34 representing 26 percent, and those over 35 constituting 62 percent. The only significant long-term trend was an increase in mentions among those age 45–54, up 92 percent since 1994. Heroin is the only major drug for which the majority of ED visits are related to use of a single drug. In 2001, 61 percent of the heroin mentions involved use of only that drug. The main reasons for these single drug visits were chronic effects (53 percent), followed by overdose (16 percent) and withdrawal (11 percent). The vast majority reported dependence as their motivation for using. Heroin was the second most commonly cited illegal drug, following cocaine.

The number and proportion of primary treatment admissions for heroin increased in the first half of 2002 to 661, 16 percent of all admissions in the county, up from 606 admissions (14 percent) in the previous half-year (exhibit 2). Admissions were down overall from a recent peak in the second half of 1999 through 2000, which was related primarily to the utilization of public funding that had been underexpended.

Forty-eight heroin-related deaths were reported in the first half of 2002, a substantial increase from the 27 and 34 deaths in the second and first halves of 2001,

respectively (exhibit 3). The age range of these decedents was 21 to 73, with an average of 41, similar to previous years. The race/ethnicity of decedents were as follows: 37 Caucasians, 6 African-Americans, 3 Native Americans, and 2 “other.” This racial distribution has been relatively constant since 1999, with the exception of 2001, when only one African-American died from heroin-related causes. The proportion of heroin-only deaths declined from 1999 to 2001 and remained steady into the first half of 2002. There were 49 deaths from heroin alone in 1999, accounting for 42 percent of heroin-involved deaths. There were 41 heroin-alone deaths (41 percent) in 2000, 16 (26 percent) in 2001, and 13 (of 48) in the first half of 2002 (27 percent). In 2001, the rate of heroin-involved deaths per 100,000 population in Seattle was 3.5, a sharp drop from the rate of 5.7 in 2000 (exhibit 4).

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.

Provisional ADAM data for the first half of 2002 appear to show a slight decline in the proportion of new arrestees testing positive for heroin, 8 percent. The proportion was 10 percent in both 2001 and 2000.

Calls to the ADHL in the first half of 2002 for heroin represented 9.6 percent of all drug-related calls, unchanged from 2001. Teens were less likely to call about heroin: only 2 percent of calls by teens were related to heroin, compared with 11 percent for adults. These proportions have been consistent for the past 1½ years.

Data for heroin seizures by the U.S. Customs Service were unavailable for 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. This relative consistency in purity is supported by anecdotal

information from HIDTA, although there are occasional reports of high quality heroin at local needle exchanges. Of the samples tested, 11 were identified as Mexican; the origins of 2 samples were unidentifiable, and 1 sample was insufficient to test. According to the DMP, the average price per milligram pure was \$2.69 during the first half of 2001, compared with \$1.15 for 2000. Local informants noted that the DMP-reported prices appear higher and the purity lower than what they are seeing on the streets.

The most current data from the Seattle DEA for the first half of 2001 are that a gram of black tar heroin sells for \$50–\$100, with one-tenth gram selling for \$20–\$50. Local informants report that heroin is selling for \$20 for one-fifth of a gram in the downtown core. In the Capitol Hill neighborhood, a densely populated neighborhood adjacent to downtown, a gram sells for \$50. Buying larger quantities has become less expensive over the last several years. In 1998 an “eightball” (equivalent to one-eighth of an ounce or approximately 3.5 grams) sold for \$175, whereas in 2001 it sold for between \$100 and \$125.

### Other Opiates/Narcotics

For the purposes of this report, “other opiates/ narcotics” include codeine, dihydrocodeine, fentanyl, hydrocodone, methadone, oxycodone, propoxyphene, and the narcotic analgesics/combinations reported in the DAWN ED data.

In 2001, there were an estimated 2,560 ED mentions of narcotic analgesics/combinations (exhibit 1), ranking such mentions ahead of those for heroin for the first time. Oxycodone/combinations mentions increased significantly in recent years, more than doubling from 1999 to 2000 and increasing another 52 percent from 2000 to 2001 (to 254 mentions). Methadone followed a similar trend, with a significant increase from 1999 to 2000 (77 percent), followed by a 92-percent increase the following year. Mentions for hydrocodone and its combinations (e.g., Vicodin and Percocet) increased significantly between 1999 and 2000, with similar levels in 2001. However, mentions of codeine/ combinations decreased 74 percent from 1994 to 2001, with steady levels from 1999 through 2001. (Data note: The “narcotic analgesic not otherwise specified” subcategory includes more than one-half of the mentions, limiting the accuracy of this data.)

The category of “narcotic analgesics, not otherwise specified” was the fifth most common single-drug-only ED visit type, with 354 such visits estimated for 2001. The most common reasons for visiting the emergency department among these single drug users

included chronic effects (22 percent), accident/injury (15 percent), withdrawal (13 percent), unexpected reaction (11 percent), and overdose (10 percent). The primary reasons for using were dependence (58 percent) and suicide (7 percent).

Treatment data point to low levels of treatment demand for other opiates, with such admissions representing approximately 1 percent of all primary treatment admissions (exhibit 2). There was a decrease from 54 to 29 clients admitted to treatment for other opiates from the second half of 2001 to the first half of 2002.

Deaths involving other opiates reached their highest level in at least the past 9 years, with a total of 31 mentions of other opiates associated with 29 deaths in the first half of 2002 (exhibit 3). Decedents ranged in age from 19 to 75, with an average age of 41. 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 2001. In the first half of 2002, oxycodone was identified 13 times, and methadone was identified 14 times; combined, these represented 87 percent of all other opiates identified. Two deaths involved both oxycodone and methadone. The 2002 data reflect a continued increase of oxycodone-associated deaths, from 4 in 1999 to 18 in 2001. Deaths in which methadone is identified continued at a relatively constant rate. What constitutes a methadone-related death is unclear, however, particularly among methadone-tolerant individuals. Efforts are underway to better understand the role of methadone in deaths. It is unknown how many deaths are among those receiving methadone for opiate substitution treatment, compared with those who have obtained either a legal prescription or have illegally obtained the drug. Of the four other cases involving prescription opiates, two involved codeine, one fentanyl, and one hydrocodone (e.g., Vicodin).

The ADHL reported 38 calls related to methadone for the first half of 2002, representing less than 2 percent of the calls. The proportion of calls was similar to the previous year. In 2002, all of the calls were from adults; in the prior year, six calls were from teens.

According to the local DEA, hydrocodone is the most commonly diverted narcotic. This is related in large part to its status as a Schedule III drug under the Controlled Substances Act, as opposed to oxycodone, which is a more tightly restricted Schedule II narcotic. Note that hydrocodone in its pure form is Schedule II, but in combination with other medi-

cations, for example when combined with acetaminophen (Vicodin), it is Schedule III.

Washington State was well above the national average in hospital purchases of hydrocodone, oxycodone, OxyContin, methadone, codeine, morphine, and hydromorphone during 2001, according to the DEA. Pharmacy purchases were well above average for morphine, oxycodone, and OxyContin. King County is above the State average in hospital purchases for oxycodone, OxyContin, morphine, and hydromorphone, not surprising since King County is also the location of the Pacific Northwest's regional trauma center and most major hospitals, where these drugs are likely to be administered and prescribed. The drug with the highest rate of purchases was oxycodone. Hospital purchases averaged 455 grams per 100,000 residents in Washington, compared with 217 grams per 100,000 residents nationally. Pharmacy purchases were 473 grams per 100,000 in the State, compared with 333 per 100,000 nationally. Data are available from the DEA on the amount of OxyContin distributed in Washington State, primarily to hospitals and pharmacies, from January 1997 through March 2001. These data point to a roughly 1,600-percent increase in Washington and a 1,300-percent increase in the Nation during this timeframe.

Methadone was also dispensed at higher levels in the State than in the Nation, with an average of 118 grams per 100,000 residents for Washington hospitals, compared with 49 grams per 100,000 population nationally in 2001. Methadone dispensed through opiate substitution clinics is not included in this DEA data, indicating that virtually all of this methadone is being prescribed for pain management. Almost all methadone dispensed for "take home" dosing by opiate substitution treatment centers is in liquid form, as opposed to the tablet form prescribed for pain management.

Informants report that most methadone sold on the street in the Seattle area is in tablet form, suggesting that its source may be prescriptions for pain management. The street cost of methadone in this form is approximately \$0.50 per milligram.

An issue that will continue to be explored is to what degree recent indicator data point to abuse of other opiate medications versus an increase in their legitimate prescription by physicians in an attempt to better manage pain, a condition that has historically been undermedicated.

## Marijuana

Marijuana continues to be one of the most widely used illicit substances in the area. Provisional ADAM data for the first half of 2002 show that 43 percent of the male arrestees tested positive for marijuana. This compares with 35 percent for 2001 and 38 percent during 2000. Marijuana remains the drug most commonly identified in urinalysis tests of arrestees in King County. This points to its popularity as well as the fact that marijuana can be detected in urine tests far longer than other drugs.

Marijuana remained the third most common single illegal substance mentioned in DAWN data (exhibit 1). A surge in marijuana mentions that has been evident since the first half of 2000 was maintained through 2001. The number of marijuana ED mentions significantly increased by 98 percent from 1999 to 2001 when there were 1,596 mentions (exhibit 1). Seventy-one percent of the marijuana mentions were part of multidrug episodes. Reasons for using cited by those who had used only marijuana included psychic effects (33 percent) and dependence (20 percent). Reasons for visiting the ED included chronic effects (29 percent) and unexpected reaction (21 percent).

Between 1994 and 2001 and 1999 and 2001, marijuana mentions increased significantly for all major age categories, except for mentions by 26–34-year-olds from 1994 to 2001. In the short term, during 2001, ED mentions declined by 42 percent for those age 12–17; for ages 18–25 the decline was 21 percent; and for ages 26–29 years, the decline was 31 percent. For the first time since at least 1994, the 35–and-older age group was the most likely to mention marijuana during an ED visit, accounting for 34 percent of the ED mentions during this period. Young adults were no longer the age group most likely to mention marijuana use, with approximately 32 percent of marijuana mentions occurring among those age 18–25. Teenagers constituted approximately 12 percent of marijuana ED mentions.

Treatment admissions for marijuana increased from 819 (19.5 percent) in the second half of 2001 to 845 (20.5 percent) in the first half of 2002 (exhibit 2). This continues a trend that began in 1996. Marijuana continued to be the second most common reason for drug treatment in the first half of 2002, with alcohol representing nearly 40 percent of admissions. Approximately two-thirds of youth treatment admissions have been for marijuana in recent years.

Marijuana continued 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; 49 percent of teen calls concerned marijuana, compared with 21 percent of adult calls.

HIDTA data collected from local, State, and Federal law enforcement sources show the following prices for various types and sources of marijuana: 1 pound of Mexican sells for \$500–\$700; 1 pound of domestic sells for \$2,400–\$3,200; 1 pound of “BC Bud” from British Columbia, Canada, sells for \$2,800–\$3,000; and 100 starter plants sell for \$1,500. Cultivation seizures reported to HIDTA for Washington State totaled 317 in 2000 and 401 in 2001; in King County there were 24 seizures in 2000 and 12 in 2001.

The U.S. Customs Service reported continued large increases in marijuana seizures, principally at the U.S.-Canadian border crossing at Blaine, where Interstate 5 crosses into Canada near Vancouver. In the first half of 2002 there were 408 seizures, compared with 301 and 268 for the second and first halves of 2001, respectively. A substantial increase in the quantity seized occurred between the first and second halves of 2001, from 3,432 to 7,519 pounds, largely because of the increased border security following the terrorist attacks of September 2001. This increase continued in the first half of 2002, when 9,811 pounds was seized as the heightened border security continued. The number of large seizures increased substantially following the terrorist attacks and continued into 2002, with 19 seizures of more than 100 pounds from January to June. The largest seizure, 1,475 pounds, was identified in January 2002 from a commercial truck.

### **Stimulants**

DAWN ED mentions for amphetamines in Seattle-King County increased significantly from 1999 to 2001, while ED methamphetamine mentions decreased significantly from 2000 to 2001. Methamphetamine ED mentions in 2001 totaled 395 (exhibit 1). Overall, amphetamines and methamphetamine rank fifth and sixth, respectively, among all illegal drugs in the DAWN ED system. (Note: A categorization problem is suspected because of the high levels of amphetamine mentions that do not correspond to other indicator data or anecdotal reports. Miscategorization of methamphetamine as amphetamine is suspected in other data sources as well, as noted in DAWN reports.)

Almost one-half (47 percent) of the 395 methamphetamine-related ED mentions in 2001 involved methamphetamine alone. The primary reasons for using

among this group included dependence (40 percent) and psychic effects (38 percent). Reasons for the ED visit included unexpected reactions (32 percent) and chronic effects (24 percent).

The numbers of King County treatment admissions for primary amphetamine and methamphetamine abuse remained stable during the first half of 2002, continuing at levels similar to those in 2001. Methamphetamine admissions accounted for 8.9 percent of the total King County treatment admissions in the first half of 2002, compared with 8.7 percent in 2001, 6.8 percent in 2000, and 4.9 percent in 1999 (exhibit 2). They 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. Persons reporting amphetamine as their primary substance have consistently accounted for 0.7–1.0 percent of the total King County treatment admissions.

The majority of calls to the poison center related to street drugs were for amphetamines and methamphetamine (59 percent). A specific category for methamphetamine was added 2 years ago, but it is rarely used.

Data from PHSKC’s STD clinic indicate that among men who have sex with men (MSM), methamphetamine use is significantly associated with increased numbers of sexual partners, contracting gonorrhea, having a new HIV diagnosis, having preexisting HIV, transmitting HIV, and acquiring HIV. Overall, lifetime methamphetamine use among those seen at the clinic was reported by 8.7 percent of MSMs, compared with 1.7 percent of heterosexual men ( $p < 0.0001$ ). Use of methamphetamine by MSM injection drug users (IDUs) has been noted for over a decade in the Seattle area.

The proportion of calls to the ADHL that originated in King County regarding methamphetamine decreased from 18.9 percent for the first half of 2001 to 14.9 percent in the first half of 2002. Methamphetamine was the third most common illegal drug mentioned by those calling about both teenagers and adults.

The percentage of male arrestees in the Seattle-King County ADAM program who tested positive for methamphetamine continued to increase, according to provisional data available for 2002. Data for the first half of 2002 showed that 14.4 percent of the arrestees tested positive for methamphetamine (60 of the 416 tested). This compares to 11 percent in 2001 and 9 percent in 2000.

Four deaths involving methamphetamine and one involving amphetamine were recorded in King County for the first half of 2002, equaling the number reported for all of 2001. This may represent a return to the levels reported for 2000 (11) and 1999 (14), although the total remains relatively small and has not changed much since 1995. In 2002, the decedents' ages ranged from 26 to 40, with an average age of 34. This is similar to the average age of 36 during 1999 to 2001 and lower than the average age of those who died of heroin- and cocaine-related causes, which was 41–42 in recent years.

Local street prices of methamphetamine in Seattle-King County and throughout the State of Washington have remained stable in spite of increasing availability. Methamphetamine sells for \$20–\$60 per gram, \$350–\$650 per ounce, and \$4,250–\$6,000 per pound in Seattle-King County.

Similar to previous years, law enforcement sources estimate that 65–75 percent of the methamphetamine available in Washington State is transported from Oregon, California, and Mexico. The quantities involved in this commerce are suggested by a recent investigation in Pierce County, directly south of King County, in which an organization that was trafficking approximately 100 kilograms of methamphetamine per month was dismantled. Further indication of the level of this activity is provided by the U.S. Customs Service, which reported the seizure of 8.45 pounds of methamphetamine at five land, maritime, and commercial air ports of entry during the first half of 2002, compared with the seizure of approximately 1 pound of methamphetamine during the first half of 2001.

Nonetheless, ease of access to precursor ingredients (increasingly imported from Canada); the availability of equipment, recipes, and locations; and the purity of methamphetamine produced by local clandestine labs continued to sustain methamphetamine's prevalence in Washington State and King County. Because of State and national changes in reporting protocols, the source and scope of the data quantifying clandestine labs changed in 2002. The most comprehensive and current source of this data is now 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. DOE data for the period of January through October 2002 suggests that the proliferation of clandestine labs in Washington State stabilized in 2002 at a level that indicates a slight decrease from 2001. A total of 1,567 methamphetamine incidents were reported during January through November 2002, compared with 1,886 for all of 2001, 1,449 for

2000, and 789 in 1999. Although 2002 would thus be the first period in 7 years to show a decrease in methamphetamine incidents, it will likely exceed the 2000 total and will continue to rank Washington State third in the Nation for methamphetamine manufacturing activity, as measured by the number of labs and dump sites seized. It is important to note that this measurement does not account for the amount of methamphetamine manufactured, a more difficult indicator to measure.

Similarly, the number of methamphetamine incidents reported in King County appears to have stabilized in 2002. DOE reported a total of 223 incidents for the period of January through November 2002 (14 percent of the statewide total), compared with 271 in 2001 (9 percent of the statewide total), 231 in 2000 (16 percent of the statewide total), and 107 in 1999 (13 percent of the statewide total), suggesting a return to the level reported in King County during 2000 and sustaining King County's ranking second in the State for the number of activities associated with methamphetamine manufacturing. However, the rate of incidents per capita in King County was half the State's average in 2001.

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.

### 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 "anxiolytics, sedatives and hypnotics" were at a low point in 1999 and have since returned to previous higher levels. In 2001, the 1,845 mentions placed these depressants below cocaine, heroin, and narcotic analgesics/combinations, and just above marijuana in terms of the rate of mentions (exhibit 1). The majority of mentions were for benzodiazepines (73 percent).

In the first half of 2002, there were 20 deaths in which depressants were identified, with a total of 26 depressants identified among these decedents.

Depressant-related deaths have varied greatly over time, with a gradual trend upward over the past 7 years. All deaths in the first half of 2002 involved multiple substances, with other opiates, identified in 11 of the 20 deaths, the most common. Sixty percent of the decedents were female and 80 percent were Caucasian; the average age was 45. This is similar to demographics over the past 3 years, when 57 percent were female, the average age was 43, and 87 percent were Caucasian. Depressants are the only drug for which the majority of decedents are female.

The ADHL reported data on adult calls related to benzodiazepines, barbiturates, and tranquilizers, which combined represented less than 1 percent of drugs mentioned by callers.

Treatment data point to relatively few admissions for tranquilizers, barbiturates, benzodiazepines, and other sedatives or hypnotics. Combined, these substances accounted for 24 admissions in the first half of 2002, 37 admissions in 2001, 12 in 2000, and 24 in 1999, never constituting more than 0.5 percent of all admissions. Of this group, tranquilizers have shown the only substantial change; there were 32 treatment admissions for tranquilizer use between July 2001 and June 2002, compared to 9 for the prior 2½ years.

### Hallucinogens and Club Drugs

Hallucinogens include lysergic acid diethylamide (LSD), mescaline, peyote, psilocybin (mushrooms), and PCP. “Club drugs” is a general term used for drugs that are popular at nightclubs and raves, including the hallucinogens, methylenedioxymethamphetamine (MDMA or ecstasy), gamma hydroxybutyrate (GHB), gamma butyrolactone (GBL, a precursor to GHB) ketamine, and nitrous oxide.

Recent short-term trends point to a slight decline in ED mentions of MDMA, with a statistically significant decrease of 20 percent between the first and second halves of 2001. Longer-term trends reveal a significant increase in MDMA mentions from 1999 to 2001, from 32 to 115 (exhibit 1). In 1994, there were only 2 mentions of MDMA across the two-county reporting area, compared with 115 in 2001. In 2001, 59 percent of MDMA mentions were among males, similar to 2000. Whites represented the majority of MDMA mentions, though missing data were substantial for race/ethnicity. The largest proportion of mentions involved those age 18–25, followed by 12–17-year-olds and 26–34-year-olds. In 2001, nearly two-thirds of the mentions involving MDMA also involved other drugs. The most common reason for visiting the ED among those who had used only MDMA was an unexpected reaction,

with the most common reason mentioned for taking the drug being psychic effects.

GHB mentions have shown a pattern similar to MDMA mentions, with a peak in 2000 and a significantly lower number, 39 mentions, in 2001. The age distribution of GHB mentions is different than that for MDMA, with GHB mentions most common among those age 18–24 and 26–34, with no mentions among those younger than 18. The majority were White and male. A majority, 55 percent, of GHB-related ED visits were single drug episodes.

PCP mentions increased 78 percent from the first half to the second half of 2001, to 82 mentions. The number of PCP ED mentions ALSO INCREASED SIGNIFICANTLY FROM 1994 TO 2001 (exhibit 1). Slang terms for various combinations of PCP with other drugs, often combined with marijuana cigarettes, include “shermans,” “wet,” “fry,” and “embalming fluid” (embalming fluid refers to the use of embalming fluid to dissolve the PCP; no psychoactive effects are known to be caused by the embalming fluid itself). During 2001, 25 percent of those who mentioned using PCP also mentioned using marijuana; this is lower than the 43 percent reported nationally. Twenty-three percent of 128 PCP ED mentions were for PCP used alone.

DAWN ED data indicate a 71-percent decrease in the number of LSD mentions from 1994 to 2001, from 212 to 62 (exhibit 1). Forty-five percent of the 67 LSD mentions were single drug episodes. ED mentions of psychedelic mushrooms increased 50 percent from 1999 to 2001, returning to levels not seen since 1996. (Note that psychedelic mushrooms constituted all of the “miscellaneous hallucinogen” category in 2001 and the majority of such mentions for all available data.) In 2001, 42 percent of ED visits for psychedelic mushrooms involved no other drugs. There was only one mention of ketamine in 2001.

While there have been some significant changes in the ED mentions for club drugs, it is important to remember that MDMA, GHB, PCP, ketamine, psychedelic mushrooms, and LSD combined only constitute 5 percent of all ED drug mentions for 2001.

The King County ME reported one club drug death during the first half of 2002, that of a 29-year-old Caucasian male caused by acute GHB intoxication. GHB was the only substance identified, and it was the first time that GHB was identified in a death in King County. Between 1999 and 2001, there were five club drug-related deaths, all involving MDMA. Of these MDMA-related deaths, three involved only

MDMA; one also involved methamphetamine and the other cocaine.

ADAM data for drugs in this category are limited to PCP. Provisional data for the first half of 2002 shows 2 percent ( $n=9$ ) of male arrestees tested positive for PCP. Two percent of adult male arrestees also tested positive in 2001 for PCP, similar to the 1 percent reported in 2000.

Treatment admissions for hallucinogens, inhalants, and PCP during the first half of 2002 ( $n=15$ ) remained consistent with previous 6-month periods according to TARGET data. Anecdotal reports from treatment professionals indicate increasing numbers of youth and adult clients who report histories of hallucinogen and club drug use at assessment, but they rarely characterize this use as problematic.

Calls to the ADHL regarding club drugs made up 4 percent of all calls regarding illegal drugs in the first half of 2002 ( $n=102$ ), with 70 calls about MDMA specifically. A higher proportion of youth called about ecstasy; 7 percent of youth calls were about ecstasy, compared with 2 percent of adult calls.

Other sources of information concerning patterns of club drug use are mostly anecdotal. Prices for ecstasy, GHB, PCP, and LSD have remained stable over the last year (e.g., a 150–250-milligram tablet of MDMA sells for \$20–\$30). The injection of pure MDMA powder (as opposed to dissolved ecstasy tablets) is becoming more popular among methamphetamine and cocaine injectors, although product availability is inconsistent. In April 2002, managers of two gay sex clubs in Seattle reported an unusual spike in near-fatal drug interactions and overdoses among customers. Ten incidents involving combinations of GHB, alcohol, methamphetamine, and nitrous oxide were reported; normally, one incident per month is the average for both clubs combined.

A number of massive raves are produced in Seattle every year. The Seattle Fire Department reported 6 large raves in the last 2 years, with attendance ranging from 5,400 to 12,500 people. According to the Seattle Police Department, 8,700 people attended a June 2002 rave at which 29 people were arrested and 864 MDMA pills were seized. Other drugs seized at that rave included mushrooms, diazepam/Valium, and marijuana.

The U.S. Customs Service made 11 MDMA seizures totaling 132 pounds, with 1 seizure of 110 pounds from a commercial flight. This is first year that data on MDMA seizures were available.

The DEA reports no significant cases involving trafficking or manufacturing in club drugs in Washington State. GHB manufacturing labs have been found in Oregon, often in combination with methamphetamine labs. In September 2002, arrests were made in a case involving Internet sales of GBL from Canada to the United States, including locations in Oregon and Seattle. GBL is metabolized by the body and converted into GHB.

A significant relationship between MDMA use and increased risk for STDs in MSMs was seen among clients at PHSKC's STD clinic. MSMs reported using MDMA at almost double the rate of heterosexual men (15.8 percent compared with 8.2 percent) during the period of October 2001 to September 2002 ( $p<0.0001$ ). Among MSMs, there are significant associations between MDMA use and a higher number of sexual partners, contracting gonorrhea, and engaging in behaviors that increase the risk of contracting HIV.

#### INFECTIOUS DISEASES RELATED TO DRUG ABUSE

There are an estimated 12,000–15,000 injection drug users who live in Seattle and King County. While there are distinct differences among races, the overall prevalence of HIV among non-MSM/IDU cases in King County appears to have 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. Treatment-based surveys, conducted from 1988 through 1999, indicate significant variance in HIV-infection rates among IDUs of color compared to Whites. The infection rate among African-American and Hispanic IDUs was 2–3 times higher, and the rate among American Indian and Alaska Native IDU was 5–6 times higher, than that observed among White IDUs. No positive cases were found among Asian or Pacific Islander IDUs who entered treatment. Treatment clients who did not have permanent housing were significantly more likely to be HIV positive than those who were stably housed (3.4 percent vs. 1.6 percent;  $p<0.5$ ).

The rate of HIV infection among the roughly 3,000 male IDUs in King County who have the dual risk of same sex encounters is estimated at 47 percent for those who primarily inject methamphetamine and 14 percent for those who primarily inject other drugs. The infection rate among MSM/IDUs who do not inject methamphetamine is comparable to the HIV

prevalence estimate for all MSMs in the Seattle area. As noted in other sections of this report, PHSKC STD clinic data point to a significant increased risk among MSMs of contracting STDs, including HIV, among those who use methamphetamine or MDMA compared to those MSMs who report never having used these drugs.

Although overall HIV prevalence among IDUs in King County is relatively low, a high proportion of this population shows evidence of previous exposure to other blood-borne viruses. Epidemiologic studies conducted among more than 4,000 IDUs by Public Health's HIV/AIDS Epidemiology Research Unit since 1994 reveal that 85 percent of King County IDUs may be infected with hepatitis C (HCV), and

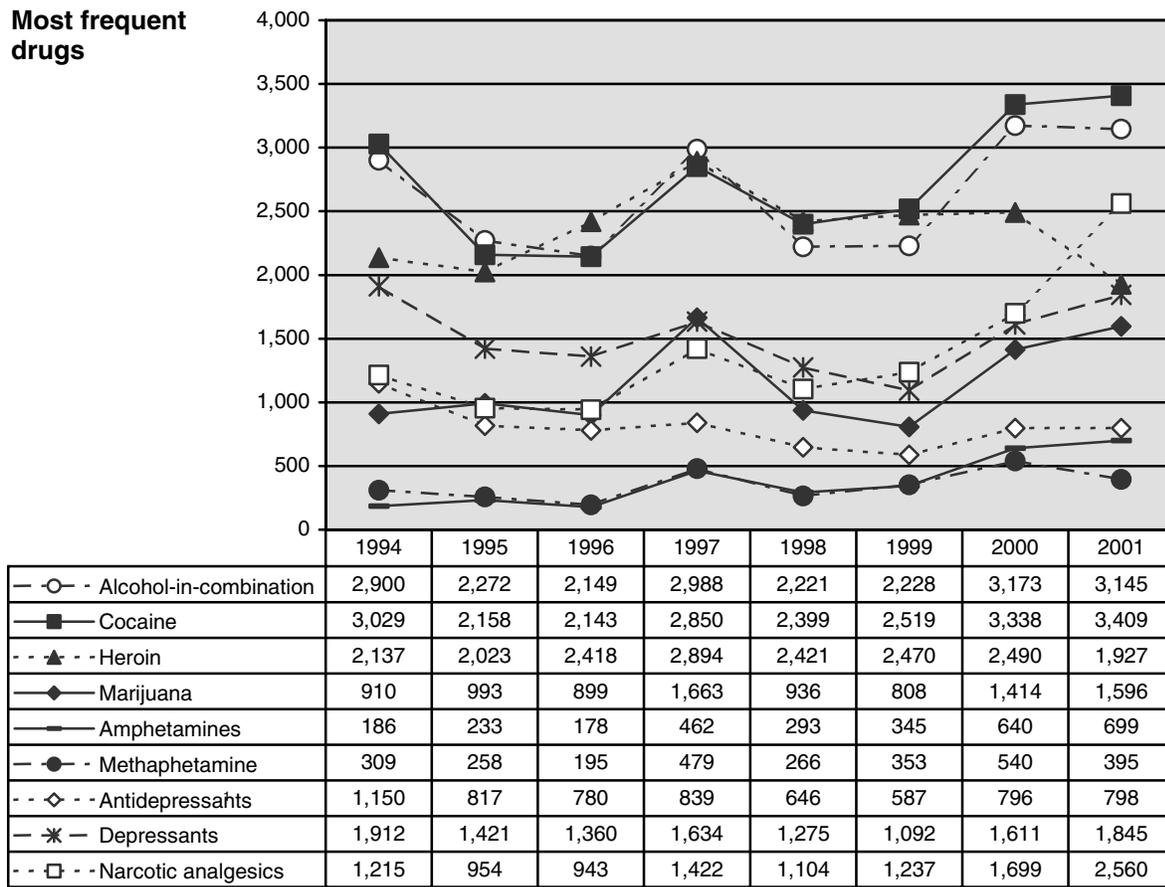
70 percent show markers of prior infection with hepatitis B (HBV). Incidence studies indicate that 21 percent of noninfected Seattle-area IDUs acquire HCV each year, and 10 percent of IDUs who have not had hepatitis B acquire HBV. The HIV incidence rate among IDUs in these studies was estimated to be less than 0.5 percent per year. High prevalence and alarming transmission rates for HBV and HCV suggest that injection risk behaviors persist, creating potential for the future spread of HIV among IDUs in King County.

More detailed information on HIV/AIDS in King County and other counties in the State is presented in exhibit 5.

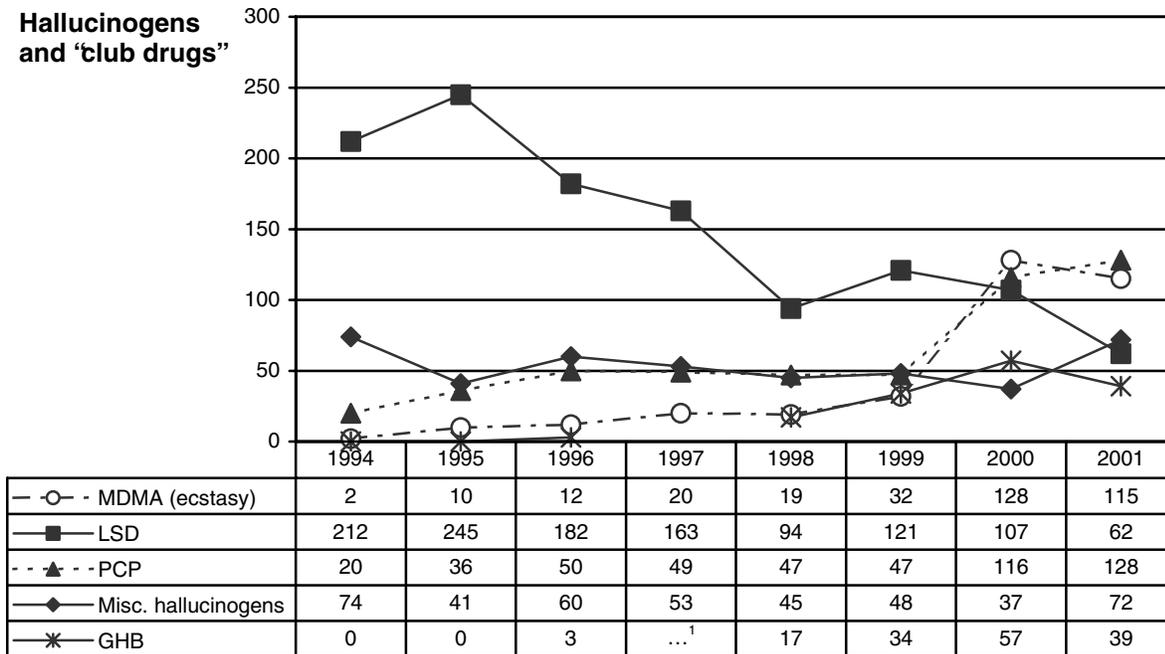
---

*For inquiries concerning this report, please contact Caleb Banta-Green, MPH, MSW, Alcohol and Drug Abuse Institute, University of Washington, 1107 NE 45th St, Suite 120; Seattle, WA 98105, Phone: (206) 685-3919, Fax: (206) 543-5473, E-mail: <calebbg@u.washington.edu>, Web: <<http://adai.washington.edu>>.*

**Exhibit 1. Estimated Number of DAWN ED Mentions in the Seattle Area: 1994–2001**



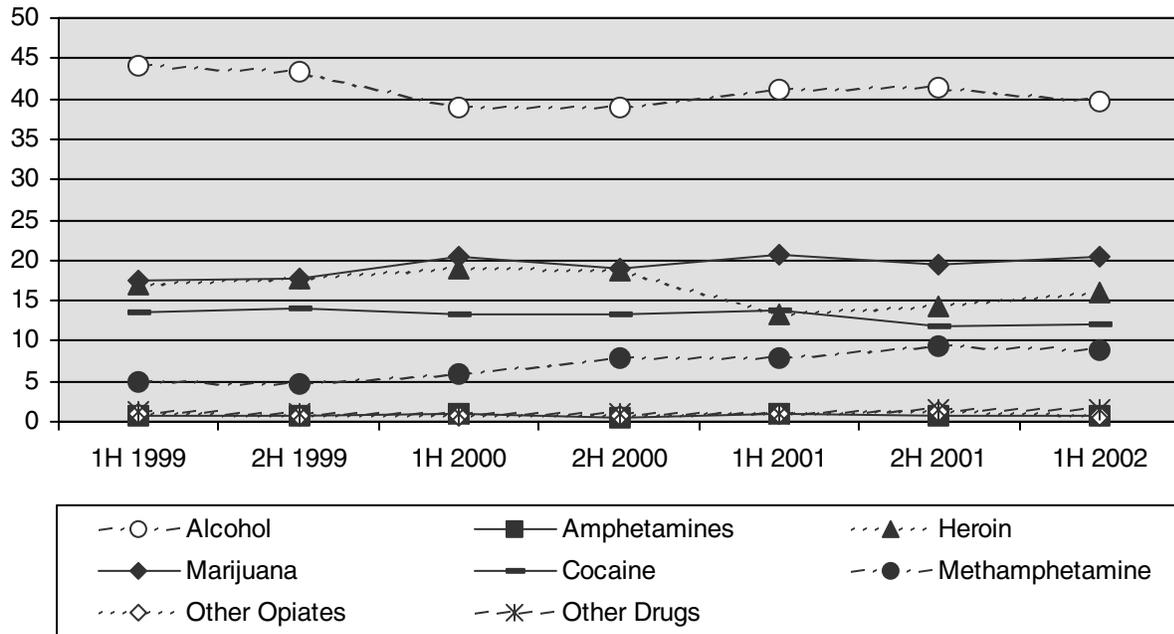
<sup>1</sup> Barbiturates, benzodiazepines, misc. anxiolytics, sedatives, and hypnotics.



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

SOURCE: DAWN, OAS, SAMHSA

**Exhibit 2. Half-Yearly Trends in Primary<sup>1</sup> Alcohol/Drug Treatment Admissions in Seattle-King County by Drug and Percent: January 1999–June 2002**



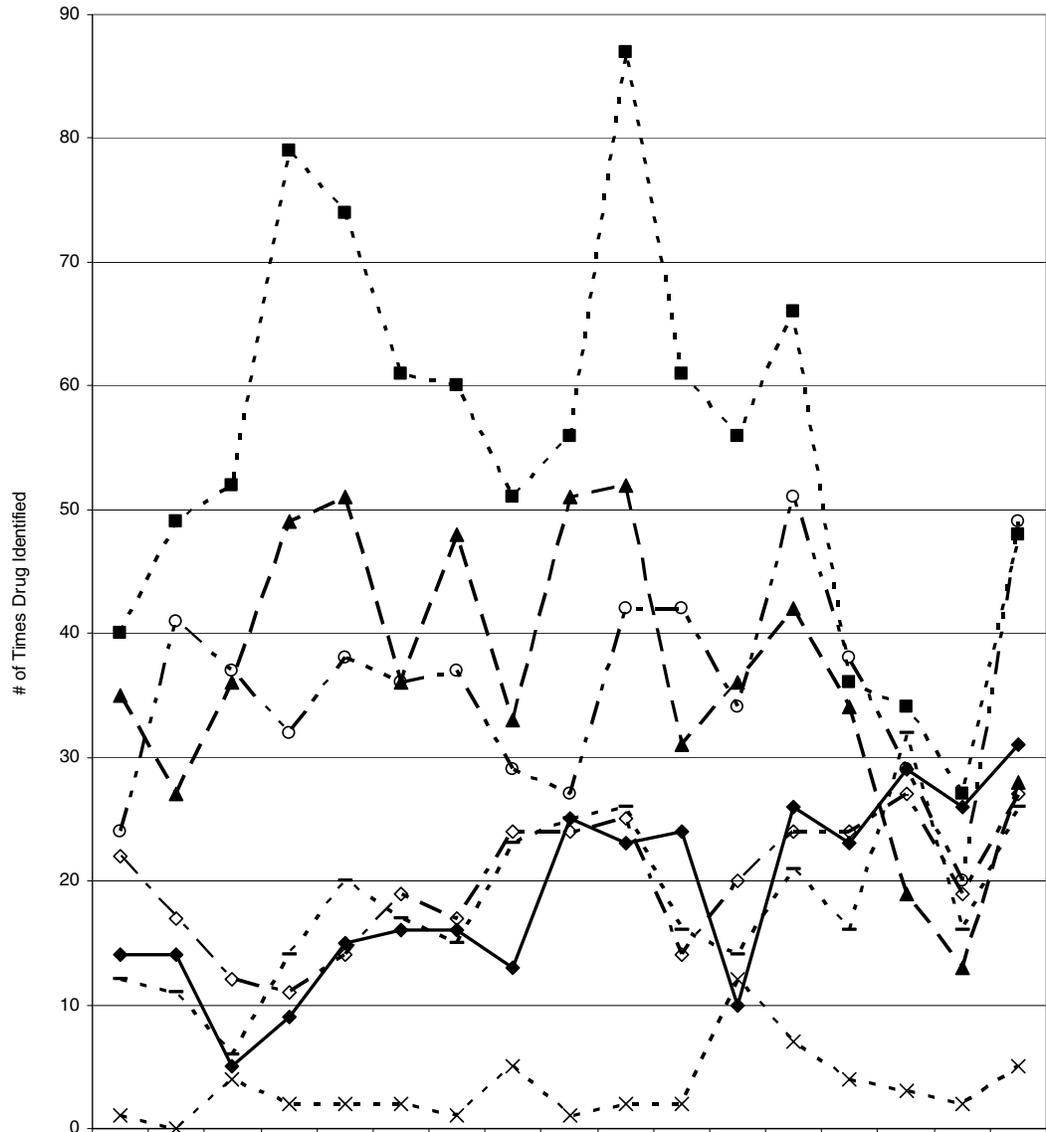
Description	1H 1999		2H 1999		1H 2000		2H 2000		1H 2001		2H 2001		1H 2002	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Alcohol <sup>2</sup>	1,910	44.2	2,331	43.3	2,130	38.9	1,935	38.8	1,951	41.2	1,745	41.5	1,635	39.7
Amphetamines	28	0.7	39	0.7	52	1.0	30	0.6	46	1.0	28	0.7	28	0.7
Heroin	732	216.9	956	17.8	1,032	18.9	929	18.6	636	13.4	606	14.4	661	16.0
Marijuana	763	17.6	958	17.8	1,119	20.4	948	19.0	986	20.8	819	19.5	845	20.5
Cocaine	583	13.5	752	14.0	731	13.4	666	13.4	649	13.7	501	11.9	495	12.0
Methamphetamine	212	4.9	260	4.8	317	5.8	392	7.9	379	8.0	394	9.4	366	8.9
Other Opiates	43	1.0	40	0.7	36	0.7	40	0.8	41	0.9	54	1.3	29	0.7
Other Drugs	55	1.3	46	0.9	58	1.1	46	0.9	50	1.0	61	1.4	61	1.5
<b>Total</b>	<b>4,326</b>	<b>100</b>	<b>5,382</b>	<b>100</b>	<b>5,475</b>	<b>100</b>	<b>4,986</b>	<b>100</b>	<b>4,738</b>	<b>100</b>	<b>4,208</b>	<b>100</b>	<b>4,120</b>	<b>100</b>

<sup>1</sup> Primary substances include duplicated admissions to treatment. Counts for the first half of 2002 are preliminary because of delays in data entry.

<sup>2</sup> Alcohol includes alcohol alone and in combination with other drugs

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–June 2002<sup>1</sup>**



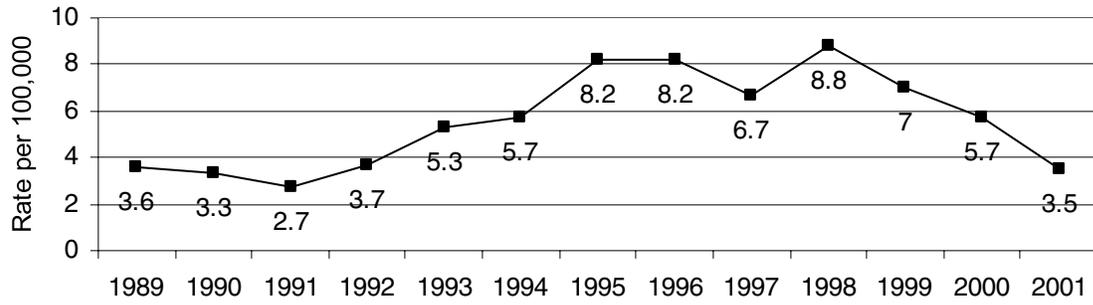
	1994 H1	1994 H2	1995 H1	1995 H2	1996 H1	1996 H2	1997 H1	1997 H2	1998 H1	1998 H2	1999 H1	1999 H2	2000 H1	2000 H2	2001 H1	2001 H2	2002 H1
-■- Heroin	40	49	52	79	74	61	60	51	56	87	61	56	66	36	34	27	48
-○- Cocaine	24	41	37	32	38	36	37	29	27	42	42	34	51	38	29	20	49
-▲- Alcohol	35	27	36	49	51	36	48	33	51	52	31	36	42	34	19	13	28
-◆- Other Opiates	14	14	5	9	15	16	16	13	25	23	24	10	26	23	29	26	31
-▤- Depressants	12	11	6	14	20	17	15	23	25	26	16	14	21	16	32	16	26
-◇- Antidepressants	22	17	12	11	14	19	17	24	24	25	14	20	24	24	27	19	27
-x- Amphetamines <sup>2</sup>	1	0	4	2	2	2	1	5	1	2	2	12	7	4	3	2	5
Total Deaths	75	83	81	102	112	106	103	76	102	120	103	102	130	89	86	67	102

<sup>1</sup> More than one drug is often identified per individual drug overdose death; table excludes poison-related deaths.

<sup>2</sup> The amphetamines identification category includes methamphetamine but does not include MDMA.

SOURCE: Medical Examiner, PHSKC

**Exhibit 4: Rate of Heroin-Involved Deaths Per 100,000 Population in Seattle-King County: 1989–2001**



\*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 & King County

**Exhibit 5. Demographic Characteristics of HIV Diagnoses, Including AIDS, in Seattle-King County, Other Washington Counties, Washington State, and the United States: Cumulative Through June 30, 2002, Data Reported as of October 31, 2002**

Case Numbers & Deaths	King County HIV Including AIDS		Other WA Counties HIV Including AIDS		Washington State HIV Including AIDS		United States <sup>1</sup> AIDS Only	
Cumulative Diagnoses	8,632		4,599		1,3231		816,149	
Cumulative Deaths	3,774		1,939		5,713		467,910	
Currently Living	4,858		2,660		7,518		348,239	
Case Demographics (Last 3 Years)	King County <sup>2</sup> Number Percent		Other WA Counties <sup>2</sup> Number Percent		Washington State <sup>2</sup> Number Percent		United States <sup>3</sup> Number Percent	
Gender								
Male	934	88	516	80	1,450	85	92,041	74
Female	123	12	126	20	249	15	31,601	26
Age								
12 and younger	4	0	1	0	5	0	—	
13–19	12	1	12	2	24	1	—	
20–29	219	21	123	19	342	20	—	
30–39	496	47	270	42	766	45	—	
40–49	249	24	162	25	411	24	—	
50–59	65	6	52	8	117	7	—	
60 and older	12	1	22	3	34	2	—	
Race/Ethnicity								
White	673	64	423	66	1,096	65	36,363	29
Black	234	22	85	13	319	19	60,980	49
Hispanic	107	10	84	13	191	11	24,456	20
Asian	29	3	18	3	47	3	1,197	1
Native American	8	1	21	3	29	2	537	0
Unknown	6	1	11	2	17	1	109	0
Exposure Category								
Male-male sex	672	64	285	44	957	56	48,835	39
Injection drug user	78	7	115	18	193	11	33,534	27
IDU & male-male sex	74	7	38	6	112	7	5,789	5
Heterosexual contact	121	11	94	15	215	13	33,027	27
Hemophilia	2	0	—	0	2	0	481	0
Transfusion	5	0	1	0	6	0	1,029	1
Mother at risk/has AIDS	3	0	1	0	4	0	400	0
Undetermined/other	102	10	108	17	210	12	547	0
Total HIV Cases Diagnosed in Last 3 Years	1,057		642		1699		123,642	

Technical Note: The US data do not show specific incidence estimates for hemophilia or transfusion cases for 2000 and 2001, these numbers were interpolated from earlier incidence data. Also, 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.

<sup>1</sup> U.S. data are limited to AIDS cases only, reported through 12/31/2001; age distribution by year is not available for U.S. AIDS cases.

<sup>2</sup> Diagnosed between 7/1/1999 and 6/30/2002, reported through 10/31/2002.

<sup>3</sup> AIDS cases only, diagnosed between 1/1/1999 and 12/31/2002, reported through 12/31/2002.

SOURCES: PHSKC, WA State Department of Health, Centers for Disease Control and Prevention

# Substance Abuse Trends in Texas—December 2002

Jane Carlisle Maxwell, Ph.D.<sup>1</sup>

## ABSTRACT

*Crack cocaine is the illicit drug for which 21 percent of adult clients enter treatment. The proportion of Anglo and Hispanic admissions for crack now totals 48 percent as African-American crack admissions decline. Powder cocaine inhalers tend to be Hispanic, and injectors tend to be Anglo. The rate of emergency department (ED) mentions of cocaine in Dallas has declined. Cocaine is a significant problem on the border. Alcohol is the primary drug of abuse in Texas in terms of dependence, deaths, treatment admissions, and arrests. Alcohol use among Texas secondary school students between 2000 and 2002 was stable. Heroin addicts entering treatment are primarily injectors and are most likely to be Hispanic or Anglo males. ED mentions of heroin in Dallas have declined. Mexican heroin is more available and purer, with several recent samples at 60–70 percent. There are reports of efforts to begin marketing South American heroin in the Dallas area. Hydrocodone is a much larger problem in Texas than oxycodone. Codeine cough syrup continues to be abused. Seventy-five percent of youths entering treatment report marijuana as their primary problem drug. Dallas ED mentions of marijuana have declined. The 2002 school survey found that student use in grades 7 and 8 continues to decline, but those in higher grades has increased since 2000. Methamphetamine and amphetamines are widely available and are a problem, particularly in the northern part of the State. Alprazolam (Xanax) mentions are increasing in ED and Department of Public Safety lab reports. Club drug use continues to spread, with those who began using these drugs several years ago now appearing in treatment. Ecstasy ED cases and treatment admissions continue to rise, and the 2002 secondary school survey showed that student 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 Metroplex area, with a high rate of ED mentions. Rohypnol remains a problem along the border. Ketamine continues as a problem, with the Dallas ED rate above the national level. Use of marijuana joints dipped in embalming fluid that can contain PCP (‘fry’) continues, with*

*cases seen in the poison control centers, emergency rooms, and treatment. DXM continues to be a problem with adolescents. The proportions of AIDS cases related to injection drug use and to the heterosexual route of transmission are increasing, as are the proportions of females and persons of color. The proportion of needle users entering treatment continues to decrease.*

## INTRODUCTION

### Area Description

The population of Texas in 2001 was 21,175,281, with 52 percent being Anglo, 11 percent African-American, 32 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. The 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 U.S. citizens, who can legally bring up to 50 dosage units into the United States. The use of private and express mail companies to traffic narcotics and smuggle money continues to increase. Seaports are used to import heroin and cocaine via commercial cargo vessels. 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. To compare December 2002 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/subabusetrends.html>> and at the Web page of the Gulf

<sup>1</sup> The author is affiliated with the Center for Excellence in Drug Epidemiology, Gulf Coast Addiction Technology Transfer Center, The Center for Social Work Research, The University of Texas at Austin.

Coast Addiction Technology Transfer Center at <<http://www.utattc.net>>.

Data for this report were obtained from the following sources:

- **Price, purity, trafficking, distribution, and supply** information was provided by quarterly 2002 reports on trends in trafficking from the Dallas, El Paso, and Houston Field Divisions of the Drug Enforcement Administration (DEA).
- **Treatment data** are from the Texas Commission on Alcohol and Drug Abuse (TCADA) Client Oriented Data Acquisition Process (CODAP). The data cover clients at admission to treatment in TCADA-funded facilities from the first quarter of 1983 through December 31, 2002; however, 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.
- **Overdose death data** on drug overdose deaths statewide through 2001 came from death certificates from the Bureau of Vital Statistics of the Texas Department of Health. Data on the Dallas and San Antonio metropolitan areas came from the mortality data from the Drug Abuse Warning Network (DAWN), 2000, published by the Substance Abuse and Mental Health Services Administration (SAMHSA).
- **Emergency department drug mentions data** in the Dallas area emergency departments (EDs) through 2001 came from DAWN, Office of Applied Studies, SAMHSA.
- **Drug use by arrestees data** are from the Arrestee Drug Abuse Monitoring Program (ADAM) of the National Institute of Justice (NIJ) through the third quarter of 2002 for Laredo and San Antonio. Note that, because of changes in methodology, data prior to 2000 are not comparable to data after 2000, and that data on male and female arrestees are not comparable. The 2000 and 2001 data on adult male arrestees represent weighted data; all other data are unweighted or provisional.
- **Arrest data** are from the Uniform Crime Report (UCR) collected by the Texas Department of Public Safety (DPS).
- **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*.
- **Poison control center data** are from the Texas Poison Control Centers for 1998, 1999, 2000, 2001, and 2002.
- **Drugs identified by laboratory tests** are from the National Forensic Laboratory Information System (NFLIS), which reported data collected by all of the Texas Department of Public Safety (DPS) laboratories for 1998 through August 2002.
- **Acquired immunodeficiency syndrome (AIDS) data** are from the Texas Department of Health (TDH), which provided annual and year-to-date AIDS data for the period ending September 30, 2002.
- **Street outreach reports** provided drug trends for June–August 2002 and were reported to TCADA by the human immunodeficiency virus (HIV) street outreach workers.

## DRUG ABUSE PATTERNS AND TRENDS

### Cocaine and 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 non-border 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. Lifetime use by grade is shown in exhibit 1.

TCADA's *2000 Texas Survey of Substance Use Among Adults* reported 12 percent of Texas adults had ever used powder cocaine and 1 percent had used it in the past month, up from 10 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 percent lifetime and 0.1 percent past month).

Texas Poison Control Centers reported 497 confirmed cocaine exposure cases in 1998, 498 misuse or abuse

cases involving cocaine in 1999, 874 in 2000, 1,024 in 2001, and 1,195 in 2002.

Exhibit 2 shows that the rate of cocaine ED mentions per 100,000 population in the Dallas DAWN data continued to decrease from the peak period in 1998. The decreases in rates between 2000 and 2001 were statistically significant for both genders and for all age groups except those under age 18.

Cocaine (crack and powder) accounted for 29 percent of all adult admissions to TCADA-funded treatment programs in 2002. Crack cocaine is the primary illicit drug abused by adult clients admitted to publicly funded treatment programs throughout Texas, although it dropped from 28 percent of all adult admissions in 1993 to 21 percent in 2002.

Abusers of powder cocaine constitute 8 percent of all admissions to treatment. Cocaine inhalers are the youngest and the most likely to be Hispanic and involved in the criminal justice or legal system. Cocaine injectors are older than inhalers but younger than crack smokers and are more likely to be Anglo (exhibit 3).

The term “lag” refers to the period from first consistent or regular use of a drug to date of admission to treatment. Powder cocaine inhalers average 9 years between first regular use and entrance to treatment, while injectors average 13 years of use before they enter treatment.

Between 1987 and 2002, the percentage of treatment admissions using powder cocaine who are Hispanic increased from 23 percent to 45 percent, while for Anglos, the proportion dropped from 48 percent to 44 percent. The proportion of African-Americans also dropped, from 28 percent to 10 percent. Exhibit 4 not only shows this increase by Anglos and Hispanics in the use of powder cocaine, but it also shows that the proportion of crack cocaine admissions who are African-American dropped from 75 percent in 1993 to 51 percent in 2002, while the proportion of Anglos increased from 20 percent in 1993 to 33 percent in 2002. The percentage of Hispanic admissions increased from 5 to 14 percent in the same time period.

Powder cocaine was the primary drug of abuse for 6 percent of youths entering treatment during 2002. Crack cocaine accounted for 1 percent of all youth admissions. Of the powder cocaine admissions, 73 percent were Hispanic and 21 percent were Anglo. Of the crack cocaine admissions, 55 percent were Hispanic and 35 percent were Anglo.

The number of deaths in which cocaine was mentioned increased to a high of 491 in 2001 (exhibit 5). The average age of the decedents continued to

increase to 38.7 years in 2001. Of these 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 area involving a mention of cocaine increased from 134 in 1996 to 157 in 2000, while in San Antonio, the number of deaths with a mention of cocaine increased from 63 in 1996 to 126 in 2000.

The proportion of arrestees testing positive for cocaine has 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 which were cocaine. In 2002, cocaine accounted for 35 percent of all items examined by the labs.

In the second half of 2002, powder cocaine was reported by the DEA as being abundant, especially at the retail level in ounce and gram quantities. Intelligence suggests that kilogram quantities of cocaine are available and that the major trafficking organizations in Houston, El Paso, and Laredo have multiple sources of supply from Mexico. Intelligence also indicates that drug trafficking organizations on the east coast are interested in obtaining supplies of cocaine through Dallas, where prices are lower than on the east coast.

The DEA also reports that crack cocaine is readily available. Normally, powder cocaine is transported to Dallas and then cooked locally for sale. However, since the penalties for crack are more severe, some dealers are opting not to convert powder to crack. Crack is the most common illicit drug in the Tyler area, and runners from Northeast Texas travel to Dallas and Houston to obtain pound and kilogram amounts of crack for sale.

A rock of crack costs between \$10 and \$100, with \$10 being the most common price. An ounce of crack cocaine costs \$375–\$900 in Houston, \$500–\$800 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, and \$700–\$750 in Fort Worth.

Depending on location in the State, a gram of powder cocaine sells for \$40–\$100. A gram costs \$50–\$100 in Dallas, \$50–\$60 in El Paso, \$70–\$90 in Midland, \$80–\$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, \$500–\$1,200 in Dallas, \$600 in Alpine, \$600–\$800 in McAllen, \$400–\$600 in San Antonio, \$650–\$850 in Amarillo and Lubbock, \$700–\$1,000 in Tyler, and \$750 in Fort Worth. A kilogram sells for \$11,000–\$23,000 (exhibit 8).

In Austin, according to street outreach workers, crack cocaine is plentiful but the quality is poor. The prices on the street range from \$5 to \$20; three \$20 rocks can be purchased for \$40. Crack users who want to inject crack are now using citric acid, rather than lemon juice, since it is less harmful to the veins. In El Paso, the number of crack users is reportedly increasing, particularly among the older adolescent and young adult populations on the west side of the city.

### Alcohol

Alcohol is the primary drug of abuse in Texas. The 1998 secondary school survey found that 72 percent of the students had ever drunk alcohol and 38 percent had drunk in the past month; in 2000, 71 percent had ever drunk alcohol and 36 percent used it in the past month; in 2002, 71 percent had ever used alcohol and 35 percent had used in the past month.

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 number of mentions per 100,000 population of alcohol in combination with other drugs in Dallas EDs peaked in 1998 (exhibit 9).

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. The majority (71 percent) were male.

Among adolescents, alcohol constituted 9 percent of all treatment admissions. Some 65 percent were male; 64 percent were Hispanic, 28 percent were Anglo,

and 6 percent were African-American. Eighty percent were involved with the juvenile justice or legal systems.

Far more persons die as an indirect result of alcohol than from the direct result of alcohol, as exhibit 10 shows. 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 due to another reason, such as a car wreck or a violent crime, but alcohol or drugs were involved.

More Texans are arrested for public intoxication (PI) than for any other substance abuse offense, although the arrest rate for PI per 100,000 is decreasing; the rates for the other substance abuse offenses are fairly level (exhibit 11).

### 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. 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, to 295 in 2000, to 241 in 2001, to 221 in 2002.

The rate of Dallas ED mentions of heroin per 100,000 population has dropped since the peaks in 1997 and 1998 (exhibit 12).

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 13 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 to seeking treatment is 10 rather than 15 years for injectors. This shorter lag period means that contrary to street rumors that “sniffing or inhaling is not addictive,” inhalers will need treatment much more quickly than needle users.

Exhibit 14 shows that over time, African-Americans have been much less likely to enter treatment for heroin abuse than Anglos or Hispanics.

Only 1.4 percent of all adolescents admitted to TCADA-funded treatment programs reported a primary problem of heroin. Of these youths, 92 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 15). 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 involving a mention of heroin or morphine in the Dallas area increased from 66 in 1996 to 94 in 2000, while in the San Antonio area, the number of deaths involving a mention of heroin or morphine increased from 51 in 1996 to 90 in 2000.

The results for arrestees testing positive for opiates between 1991 and 2002 have remained mixed, except for the increase by Laredo females (exhibit 16).

Exhibit 7 shows that the proportion of items identified as heroin by DPS labs remained consistent at 1 to 2 percent over the years.

According to the DEA, heroin is more available, and heroin from Mexico is increasing in purity. The decline in availability in 2000 was caused by a drought in Mexico in 1999–2000. Heroin is reported as readily available in El Paso. In the Houston DEA Division, the availability and purity fluctuates from stable to increasing, even though the division experienced an unprecedented number of high volume heroin seizures, which reflects increasing availability and purity along the border. While purity in Houston was lower in 2000 and 2001, the purity for the first half of 2002 averaged 28 percent. Large seizures are being made. A seizure of 33.5 kilograms of Mexican heroin at a purity of 70 percent was made in April 2002 near San Antonio. In Laredo, a free sample of white heroin at 95 percent pure was obtained in the summer of 2002. In mid-August 2002, four individuals died from heroin overdoses in Laredo, and another 25 nonfatal overdoses have been reported. Street-level samples obtained in Laredo during this period showed purities of 60 percent, 63 percent, and 67.7 percent. In the Dallas Field Division, purity for 2002 averaged 30 percent, with a range of 4.6 to 67 percent. In the Houston Field Division, the average purity was 28 percent.

At the same time, intelligence indicates that South American heroin is more available in the Dallas area, and that this heroin is intended not only for

distribution and transshipment but also for consumption by local users. Heroin traffickers are reportedly interested in expanding operations in and around Dallas for greater distribution of heroin in the Metroplex. In addition, reports have been received of white heroin now being produced in Mexico.

The predominant form of heroin in Texas is black tar, which has a dark gummy, oily texture. In the Austin area, a hit is referred to as a “balloon.” The piece of black tar is placed in a small piece of plastic and then placed in a small balloon. The cost of an ounce of black tar heroin has decreased (exhibit 17). Depending on the location, black tar heroin sells on the street for \$10–\$20 per capsule, \$50–\$350 per gram, \$500–\$4,500 per ounce, and \$35,000–\$60,000 per kilogram. In the Dallas area, heroin costs \$10–\$20 per capsule, \$1,600–\$2,800 per ounce, and \$35,000–\$60,000 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, \$1,000–\$1,500 per ounce, and \$31,300 per kilogram. In Alpine, heroin costs \$20 per bag, \$125 per gram, and \$2,100–\$2,200 per ounce; in Midland, an ounce costs between \$2,300 and \$4,800. An ounce costs \$1,000–\$2,000 in Houston, \$1,200–\$1,400 in Laredo, \$2,500–\$3,000 in McAllen, and \$1,800–\$3,100 in San Antonio.

Mexican brown heroin, which is black tar that has been cut with lactose, manitol, baby laxative, coffee creamer, Benadryl, vitamin B, or another substance and then turned into a powder, costs \$10 per capsule, \$110–\$300 per gram, and \$700–\$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.

Brown heroin can be injected or inhaled. Black tar can be diluted with water and either injected or inhaled (“shebang,” “waterloo,” “monkey water,” “aqua de chango”) by squirting the liquefied heroin solution up the nose using a syringe with the needle broken off, with a nasal sprayer, medicine dropper, or cotton swab that has been soaked in the solution.

Colombian heroin sells for \$2,000 per ounce and \$60,000–\$70,000 per kilogram in the Dallas area. Southwest Asian heroin costs \$70,000 per kilogram in Dallas.

The Domestic Monitor Program (DMP) 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 18 shows, over time, the purity and price varies, although it is purer and cheaper in El Paso as compared to farther from the border. The DMP also reports that heroin from sources other than Mexico was found 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.

AIDS outreach workers in Austin report that the quality of heroin is very good and availability is plentiful. In June, it was reported that “pure” heroin was being brought to Austin straight from Mexico, but no specifics were given about what was considered “pure.” Heroin drug dealers were reportedly giving out “hot shots”—a mix of heroin and rat poison—to people on a hit list whom they wanted to kill. Some eight deaths were reported within the community within about three months, but they were not publicized. One veteran heroin addict who has been consistently using over a 20-year period reported that he injected one \$20 hit of heroin and nodded out in the bathroom for over 4 hours because of the high quality of the heroin. Also, there have been reports that heroin is being cut with an unknown substance that causes boils and/or big lumps on the site of injection. Some of the Hispanic males in their fifties and older who had not been using heroin in years began to use again because of the high quality of the drug.

Outreach workers in El Paso report that purity of black tar is up, and there were eight fatal overdoses in a period of 2 weeks.

In the Lower Rio Grande Valley, outreach workers reported seeing an increase of young persons age 16–21 injecting heroin. For several years there was 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

This group excludes heroin but includes opiates such as methadone, codeine, hydrocodone (Vicodin, Tus-sionex), 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 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 429 abuse or misuse calls concerning hydrocodone in 2002. In comparison, there were 68 calls about misuse or abuse of OxyContin or oxycodone reported in same period. There were also 19 cases involving methadone in 1999, 32 cases in 2000, 28 in 2001, and 54 in 2002.

Dallas area ED mentions of hydrocodone and hydrocodone in combination with other substances have increased over the years; the increase between 1994 and 2001 was statistically significant, as was the increase in mentions of oxycodone and oxycodone in combination (exhibit 19).

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), 36 years old, 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.

In 1999, there were 8 deaths with a mention of oxycodone, compared with 20 in 2000 and 40 in 2001. In 1999, there were 25 deaths involving hydrocodone; in 2000, there were 52, and in 2001, 107. There were also 36 deaths involving methadone in 1999, compared with 62 in 2000 and 93 in 2001. There were nine deaths in 2001 involving fentanyl.

In the Dallas-Fort Worth DEA Field Division, Dilaudid sells for \$20–\$80 per tablet, Soma sells for \$2–\$5 per tablet, and hydrocodone sells for \$3–\$10 per tablet. OxyContin sells for \$15–\$30 per tablet. Methadone sells for \$10 per tablet. In Houston, promethazine or phenergan with codeine sells for \$100–\$125 for 8 ounces, and hydrocodone sells for \$3–\$5 per pill.

DPS labs reported examining 479 hydrocodone exhibits in 1999, 629 in 2000, 771 in 2001, and 262 through August 2002. In comparison, the number of exhibits involving oxycodone was 36 in 1999, 72 in 2000, 115 in 2001, and 35 through August 2002.

In Tyler, OxyContin is reported to be more popular than hydrocodone as a drug of choice for narcotic addicts.

In Austin, “Lean” or “Drank” is promethazine (phenergan) with codeine. It is usually sold in baby bottles and measured out in ounces and is readily available. Texas rappers are singing about it, and older adolescents and younger adults (16–25-year-olds) 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 \$30–\$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.

OxyContin is reported as selling for \$35–\$60 per tablet in Austin, and Vicodin costs \$1–\$2 per tablet; 20 tablets sell for \$15 in some areas.

### **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 past school year dropped from 2.1 percent to 1.7 percent. Among Texas secondary students, 32 percent had ever tried marijuana, and 14 percent had used in the past month, levels identical to 2000. While past-month use by students in grades 7 and 8 continued to drop, use by students in grades 9 and 10 increased from 2000; use by 11th and 12th students remained stable (exhibit 20).

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 age 35 and over. The increase in past-year use between 1996 and 2000 (6 to 7 percent) was statistically significant.

There were 360 marijuana cases reported to the Texas Poison Control Centers in 2000, 358 in 2001, and 412 in 2002. The average age of the cases in 2002 was 23.6. There were another 201 cases in 2000, 206 in 2001, and 263 in 2002 in which terms such as “formaldehyde,” “fry,” “amp,” or “PCP” were also mentioned.

Mentions of marijuana per 100,000 population in EDs in Dallas have declined since the peak levels in 1998 (exhibit 21). The decline in the rate for those age 12–17 between 2000 and 2001 was statistically significant.

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: in 1985, the average age was 24; in 2002, it was 27.

Seventy-five percent of all adolescent admissions in 2002 had a primary problem with marijuana, compared with 35 percent in 1987. In 2002, 57 percent of these adolescents were Hispanic, 24 percent were Anglo, and 17 percent were African-American (in 1987, 7 percent were African-American).

The percentage of arrestees testing positive for marijuana continues to vary by city (exhibit 22). It has dropped from its peak levels in Dallas and Laredo, but the percentage remains high in San Antonio.

Cannabis was identified in 35 to 36 percent of all the exhibits analyzed by DPS laboratories in 1999 and 2000, but the proportion dropped to 31 percent in 2001 and 32 percent in 2002 (exhibit 7).

The Houston DEA Field Division reports that marijuana is readily available. The Dallas DEA Field Division likewise reports that it readily available. Much of the marijuana is smuggled in from Mexico. However, marijuana grown outdoors locally is available, and there is significant indoor hydroponic growing, with tetrahydrocannabinol (THC) contents up to 15 percent. Sinsemilla sells for \$750–\$1,200 a pound in the Dallas-Fort Worth area. The average price for a pound of commercial grade marijuana is \$200–\$250 in Laredo, \$180–\$250 in McAllen, \$400–\$700 in San Antonio, \$300–\$600 in Houston, \$250–\$500 in El Paso, \$500–\$700 north of the Border Patrol checkpoints in the Alpine area, \$500–\$600 in Midland, \$450–\$700 in the Dallas and Fort Worth areas, and \$500 in Lubbock. Exhibit 23 shows the range of prices across the State since 1992.

Exhibit 24 plots the trends in lifetime use of marijuana as reported in the secondary school surveys, adolescent admissions to treatment for a primary problem of marijuana, the proportion of adolescent drug arrests for marijuana, and adolescent marijuana ED mentions in Dallas. As this exhibit shows, all the indicators have risen since 1992, although there was a slight decline in lifetime use as reported in the statewide school surveys since 1998.

### **Stimulants**

Uppers in this report 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 among students 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 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 percent to 1.9 percent) was statistically significant.

In 2000, there were 393 cases of abuse or misuse of amphetamines, methamphetamines, speed, etc., reported to Texas Poison Control Centers. There were 451 in 2001 and 392 in 2002.

Exhibit 25 shows the number of mentions of methamphetamine and amphetamines in Dallas EDs. The decrease in the number of mentions for methamphetamine between 1994 and 2001 was statistically significant, as was the increase in mentions for amphetamines. The rate of mentions for amphetamines in the Dallas emergency rooms in 2001 was higher than the national rate (12.2 per 100,000 in Dallas vs. 7.3 per 100,000 nationally), while the rate for methamphetamines was 3.6 per 100,000 in Dallas and 5.9 per 100,000 in the Nation.

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 to 6 percent and the proportion of African-Americans dropped from 9 to 1 percent. Unlike the other drug categories, more than one-half of these clients entering treatment were women (54 percent) in 2002. Most stimulant users were injectors, with differences seen among the clients based on route of administration (exhibit 26). Only 2 percent of adolescent admissions were for stimulants.

Methamphetamine and amphetamine injectors were 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).

There were 17 deaths in which amphetamines or methamphetamines 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 proportion of arrestees testing positive for amphetamines in the ADAM program is low, as exhibit 27 shows.

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 constituted between 12 and 18 percent of all items examined by DPS laboratories between 1998 and 2002 (exhibit 7), and they continue to increase. In 2002, 17.2 percent were methamphetamine and 0.59 percent were amphetamines.

Notice that while the Dallas DAWN mentions in exhibit 27 are more likely to be amphetamines, the DPS laboratory report for the Dallas area indicated that 32.0 percent of the exhibits were methamphetamine and 0.68 percent were amphetamine. There is no explanation for these differences.

Stimulants are more of a problem in the northern half of the State, as exhibit 28 shows. In Amarillo in the Texas panhandle, 41 percent of all the drug items examined by the DPS laboratory were either methamphetamine or amphetamines, while in McAllen, 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 DEA, both Mexican and locally produced methamphetamine are available. “Ice” is being sold in Houston by Mexican traffickers. Mexican methamphetamine is the primary type in Texas, while domestically produced methamphetamine is manufactured by motorcycle gangs and independent producers in small batches. Most of these labs are small and mobile and produce for local distribution. Because of difficulties in obtaining precursor chemicals in Texas, lab operators travel to Louisiana and Oklahoma 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, \$1,200–\$1,300 in McAllen, \$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. Mexican methamphetamine sells for \$5,800–\$9,000 per pound and \$400 per ounce in Dallas. In San Antonio, an ounce costs \$700–\$1,000.

According to street outreach workers in Austin, methamphetamine is \$60–\$90 per gram and readily available; one-half ounce costs \$300. Many younger adults (age 25–30) are smoking methamphetamine; most of the older adults are injecting. Street outreach workers in Fort Worth report “ice” is on the streets.

### 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 showed that reported lifetime use of downers increased from 5.8 percent among students 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 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 number of mentions of alprazolam (Xanax), diazepam (Valium), and clonazepam (Klonopin) in the Dallas EDs is rising (exhibit 29).

About 1.2 percent (545 clients) of the adults entering treatment in 2002 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.

Alprazolam, clonazepam, and diazepam are among the 10 most commonly identified substances

according to DPS lab reports, although none of these drugs accounted for more than 2 percent of all items examined in a year. The proportion of Xanax exhibits is increasing (exhibit 30).

Both Houston and Dallas DEA Field Divisions report Xanax to be one of the most commonly abused diverted drugs. Xanax sells for \$3–\$10 per tablet, and Valium sells for \$1–\$10 per tablet. In Austin, street outreach workers report Klonopin costs \$2–\$3 each. Valium 10-milligram or 20-milligram pills can be purchased for \$1–\$2, and the blue 1-milligram football-shaped Xanax pills cost \$2 each. The 2-milligram “white bars” or “handle bars” Xanax pills are scored and can be broken into four small pieces; they sell for \$4–\$5 a pill and are very popular and 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

#### *Methylenedioxymethamphetamine (MDMA or Ecstasy)*

The 2002 secondary school survey reported that lifetime ecstasy use among students was 8.6 percent, up from 4.5 percent in 2000. Student past-month use in 2002 was 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 cases of ecstasy in 1998, 45 in 1999, 116 in 2000, 155 in 2001, and 172 in 2002.

The rate of mentions of ecstasy per 100,000 in Dallas EDs in 2001 was 2.5; the national rate was 2.2. The change in the rates in Dallas between 1994 and 2001 was statistically significant. Exhibit 31 shows the number of ED mentions of ecstasy. Notice that while ecstasy users were among the youngest, there was a larger racial/ethnic diversity than seen with other club drugs (exhibit 32). MDMA patients were not likely to just use MDMA: only 6 percent of the episodes mentioned MDMA alone. Some 41 percent mentioned alcohol and MDMA; 26 percent mentioned cocaine and MDMA; 21 percent mentioned marijuana and MDMA; 14 percent mentioned amphetamines or methamphetamine and MDMA; 9 percent mentioned LSD and MDMA; and 4 percent mentioned heroin and MDMA.

Adult admissions for a primary, secondary, or tertiary problem with ecstasy increased from 63 in 1998, to 97

in 1999, to 141 in 2000, to 252 in 2001, and to 329 in 2002. Of the 2002 admissions, the average age was 24; 70 percent were Anglo, 14 percent were African-American, and 13 percent were Hispanic. Sixty-one percent were male; 44 percent were referred by the criminal justice or legal system; and 21 percent were employed. While 23 percent of these clients in 2002 listed ecstasy as their primary drug of abuse, another 20 percent reported marijuana as their primary drug, 16 percent reported amphetamines or methamphetamine as their primary drug, 13 percent reported powder cocaine, and 12 percent reported alcohol as their primary problem drug.

Among adolescents, there were 18 admissions in 1998, 17 admissions in 1999, 58 in 2000, 97 in 2001, and 189 in 2002 who had a primary, secondary, or tertiary problem with ecstasy. The average age of the 2002 admissions was 15.9; 68 percent were male; 81 percent were referred from the juvenile justice system; 46 percent were Anglo, 39 percent were Hispanic, and 13 percent were African-American. Of these 2002 admissions, 54 percent reported a primary problem with marijuana and 25 percent reported a primary problem with ecstasy.

In 1999, there were two deaths in Texas that involved MDMA. There was one death in 2000 and five in 2001. Of those in 2001, the average age was 24.6; 80 percent were Anglo and 60 percent were male.

Exhibit 33 shows the increases in “club drug” substances identified by DPS labs. The labs identified MDMA as the substance in 102 exhibits in 1999, 373 in 2000, 675 in 2001, and 222 through August 2002. Methylenedioxyamphetamine (MDA) was identified in 31 exhibits in 1999, 27 in 2000, 48 in 2001, and 52 in 2002.

According to the DEA, MDMA is becoming even more available. Single-dosage units of MDMA sell for \$7.50–\$15 in Dallas, \$10–\$30 in Houston, \$7–\$20 in McAllen, and \$15–\$25 in San Antonio. The number of raves is reportedly increasing in the Houston area. In Dallas, MDMA is increasing in popularity at nightclubs that have a predominantly young African-American clientele, and Hispanic organizations are now distributing ecstasy. Most MDMA in Texas comes from Europe, although some may be originating in Mexico.

In Austin, ecstasy sells for \$20–\$30 per pill; the cost to the dealers is reportedly \$15–\$19 per pill. Ecstasy is increasing in availability and popularity in El Paso, according to street outreach workers.

Viagra is being sold on the streets in Tyler in combination with ecstasy, and the pills are referred to as “Blue Boys.”

*Gamma Hydroxybutyrate (GHB), Gamma Butyrate Lactone (GBL), 1,4 Butanediol (1,4 BD)*

The 2000 Texas adult survey reported that 0.4 percent of respondents had ever used GHB and 0.1 percent had used in the past year.

Texas Poison Control Centers reported 110 cases of exposure to GHB in 1998, 153 in 1999, 108 in 2000, 113 in 2001, and 100 in 2002.

Exhibit 31 shows the overall increases in the mentions of GHB in the EDs in the Dallas area. In 2001, the rate of mentions per 100,000 for GHB was 4.1; only San Francisco had a higher rate at 10.1 per 100,000. The national average was 1.3 per 100,000. As shown in exhibit 32, patients mentioning GHB were more likely to be older than patients mentioning other club drugs. In addition, only 15 percent of the patients mentioned only having used GHB during the episode; 60 percent had also used alcohol, 14 percent mentioned cocaine, 10 percent mentioned methamphetamine or amphetamines, and 7 percent mentioned MDMA. In some instances they had used three or four drugs in combination.

Clients with a primary, secondary, or tertiary problem with GHB, GBL, or 1,4 BD are continuing to be seen in treatment. In 1998, 2 adults were admitted, compared with 17 in 1999, 12 in 2000, 19 in 2001, and 34 in 2002. In 2002, the average age was 32; 53 percent were male and 91 percent were Anglo. Twenty-nine percent were employed, and 59 percent were involved with the criminal justice or legal system. Fifty-six percent had a history of injection drug use. GHB clients seem to have problems with the so-called “harder drugs.” While 35 percent had a primary problem with GHB, 21 percent had a problem with amphetamines or methamphetamine, 18 percent had a primary problem with crack cocaine, and 9 percent had a primary problem with heroin. One adolescent was admitted to treatment in 2002 for a problem with GHB.

In 1999, there were three deaths that involved GHB, in 2000 there were five deaths, and in 2001 there were three.

In 1999, 133 items were identified by DPS labs as being GHB or GBL and 4 were 1,4 BD; in 2000, 52 were GHB or GBL and 4 were 1,4 BD; in 2001, 34 were GHB or GBL and 17 were 1,4 BD. Through August 2002, 26 were GHB or GBL and 4 were 1,4 BD. Eighty-eight percent of the GHB, GBL, and 1,4 BD items were identified in the DPS lab in the Dallas area, which shows use of GHB seems to be 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; in the fourth quarter of 2002, it sold for \$100–\$200. In Houston, a dose of GHB costs \$5–\$10 and a gallon costs \$725–\$1,000.

*Ketamine*

The 2000 adult survey reported that 0.3 percent of respondents had ever used ketamine and 0.1 percent had used in the last year.

Seven cases of misuse of ketamine were reported to Texas Poison Control Centers in 1999, 15 were reported in 2000, 14 in 2001, and 10 in 2002. The average age of these cases in 2002 was 19.8.

In the Dallas EDs in 2001, the rate of ketamine mentions per 100,000 population was 0.35, above the national average of 0.27. There were 11 mentions in 2001 (exhibit 31). Forty-five percent of the patients mentioning ketamine also mentioned alcohol, while 27 percent also mentioned GHB, and 9 percent also mentioned amphetamine, marijuana, or cocaine, respectively. None of the patients in 2001 only took ketamine.

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 cocaine.

There were also two deaths in 1999 that involved the use of ketamine, none in 2000, and one in 2001.

In 1999, 25 substances were identified as ketamine by DPS labs, compared with 29 in 2000, 31 in 2001, and 38 in 2002, to date.

Two significant seizures of ketamine in the third quarter and the seizure of 120 vials of ketamine in the fourth quarter with local destinations were made at Dallas-Fort Worth in 2002, which indicates the demand in the area. GHB sells in Fort Worth for \$2,200–\$2,500 per liter.

*LSD*

The secondary school survey shows that use of hallucinogens (defined as lysergic acid diethylamide [LSD], phencyclidine [PCP], etc.) 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 in the past year.

Texas Poison Control Centers reported 64 mentions of LSD in 1998, 101 in 1999, 82 in 2000, 43 in 2001, and 9 in 2002. The average age of cases in 2002 was 19.8 years. There were also 110 cases of intentional misuse or abuse of hallucinogenic mushrooms reported in 2000, compared with 94 in 2001 and 151 in 2002; the average age in 2002 was 21.7.

There were 43 mentions of LSD in the Dallas DAWN ED data in 2001 (exhibit 31). The rate of mentions per 100,000 in Dallas in 2001 was 1.4, which was above the national average of 1.1. The decline in the rate per 100,000 population in Dallas between 1994 and 2001 was statistically significant. As exhibit 33 shows, patients mentioning LSD tended to be younger than users of GHB or MDMA. In addition, 28 percent mentioned no other drug during this episode—a proportion higher than users of other club drugs. Some 33 percent also mentioned marijuana, 13 percent mentioned alcohol, 8 percent mentioned MDMA, and 7 percent mentioned cocaine.

In 2002, there were 250 adults with a primary, secondary, or tertiary problem with hallucinogens, compared with 303 in 2001 and 316 in 2000. The average age of these individuals in 2002 was 27; 64 percent were male; 64 percent were Anglo, 19 percent were African-American, and 17 percent were Hispanic. Twenty percent were employed, and 54 percent were in the criminal justice or legal system. Twenty-five percent of these adult clients had a primary problem with a hallucinogen; another 23 percent had a primary problem with marijuana, 12 percent had a problem with either amphetamines/methamphetamine or alcohol or crack, respectively.

There were 320 youths with a primary, secondary, or tertiary problem with hallucinogens admitted to treatment in 2000, compared with 183 in 2001 and 185 in 2002. The average age was 15.9; 84 percent were male; 50 percent were Anglo, 34 percent were Hispanic, and 12 percent were African-American. Eighty-six percent were involved in the juvenile justice system, and marijuana was the primary drug used by 64 percent, followed by hallucinogens at 14 percent.

There were two deaths in 1999 that involved LSD. There were no deaths with a mention of LSD reported in 2000 or 2001.

In 1999, DPS labs identified 405 substances as LSD; they identified 234 as LSD in 2000 and 119 in 2001.

LSD data for 2002 to date have not been reported (exhibit 33).

A dosage unit of LSD is selling for \$1–\$10 in Dallas, \$5–\$10 in Tyler, \$6–\$10 in Fort Worth, and \$7 in Lubbock. In McAllen, it sells for \$8, and an ounce sells for \$450.

*Phencyclidine (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 in the past year.

Texas Poison Control Centers cases in which terms such as “fry,” “amp,” or “PCP” were mentioned, or abuse of formaldehyde was mentioned, increased from 175 in 2000 to 195 in 2001 and to 237 in 2002. The average age in 2002 was 21.8.

The rate of ED mentions of PCP in the Dallas was 3.1 per 100,000 in 2001, above the national rate of 2.4 per 100,000. As exhibit 31 shows, the number of mentions of PCP in Dallas peaked in 2000. However, the increase between 1994 and 2001 was statistically significant.

Because of the tendency of some users to strip off their clothes while under its influence, PCP has a nickname of “buck naked.”

Adult admissions to treatment with a primary, secondary, or tertiary problem with PCP are increasing. In 1998, 102 were admitted, compared with 125 in 1999, 174 in 2000, 178 in 2001, and 269 in 2002. Of these clients in 2002, 83 percent were African-American and 69 percent were male. The average age was 25, 41 percent were involved in the criminal justice system; 16 percent were employed; and 20 percent were homeless. While 49 percent reported a primary problem with PCP, another 22 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.

Among adolescent clients, there were 62 admissions for a primary, secondary, or tertiary problem with PCP in 1998, 118 in 1999, 76 in 2000, 67 in 2001, and 52 in 2002. Of the 2002 admissions, 87 percent were male; 48 percent were African-American, 37 percent were Hispanic, and 12 percent were Anglo; the average age was 15.6 years. Ninety-six percent had been referred to treatment or were involved in the juvenile justice system. Marijuana was the primary drug of abuse for 64 percent of the clients, and PCP was the primary drug for 21 percent.

There were three deaths in 1999, three in 2000, and five in 2001 in Texas which 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 these cities were not reported in 2001 (exhibit 34).

DPS labs identified 77 substances as PCP in 1999, 100 in 2000, 144 in 2001, and 39 through August 2002. Exhibit 33 shows an increase in the proportion of all exhibits which were identified as PCP by DPS. Until the complete 2002 data are received, it will be impossible to determine if the previous increase in the number of PCP exhibits will continue.

DEA reports that PCP sells for \$100 per gram in McAllen; in Dallas it sells for \$10–\$25 per “Sherm” stick or cigarette, \$350–\$500 per ounce, and \$3,800 for a pint bottle.

According to the HIV intervention workers in Houston, use of “Water,” which is a cigarette or marijuana joint dipped in embalming fluid, is growing.

*Rohypnol (Flunitrazepam)*

Rohypnol use in Texas first began along the Texas-Mexico border and then spread northward. 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). Use by grade is shown in exhibit 35.

The 2000 Texas adult survey found that 0.8 percent of adults 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 was 101 in 1998, 77 in 1999, 88 in 2000, 65 in 2001, and 73 in 2002. Of the 2002 cases, the average age was 17.1; 61 percent of the cases were reported in counties that border Mexico.

In 2001, the rate of ED mentions for Rohypnol in Dallas was 0.26 per 100,000; only Miami had a higher rate at 0.29. As exhibit 32 shows, the number of mentions of Rohypnol increased between 2000 and 2001; the increase between 1994 and 2001 was statistically significant.

Of all the adult and youth Rohypnol treatment admissions, 82 percent in 2002 were primarily located on the Texas border. In 1998, 87 adults were admitted

into treatment with a primary, secondary, or tertiary problem with Rohypnol. In 1999, 130 were admitted, compared with 74 in 2000, 78 in 2001, and 90 in 2002. Of the adult clients in 2002, 90 percent were Hispanic and 7 percent were Anglo; 74 percent were male. The average age was 26, which is much younger than most adult clients entering treatment (overall average age is 35 years). Only 14 percent were employed, and 48 percent were involved with the criminal justice or legal system. While 16 percent of these clients said that Rohypnol was their primary problem drug, 28 percent reported marijuana, 17 percent reported heroin, 14 percent reported crack, and 12 percent reported alcohol.

In 1998, there were 160 youths admitted to treatment with a primary, secondary, or tertiary problem with Rohypnol. In 1999, 234 were admitted; in 2000, 250 were; in 2001, 319 were; and in 2002, 275 were. Of the 2002 admissions, 74 percent were male; the average age was 15.5 years and 96 percent were Hispanic. Some 76 percent were involved in the juvenile justice system. Fourteen percent of these youths listed Rohypnol as their primary drug; marijuana was the primary drug for 56 percent and cocaine for 15 percent.

DPS lab exhibits for Rohypnol numbered 54 in 1999, 32 in 2000, 31 in 2001, and 7 through August 2002.

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 being produced, and the blue dye added to the Rohypnol tablet is not in the generic version. 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.

#### *Dextromethorphan (DXM)*

School personnel in Texas have been reporting problems with the abuse of DXM, especially the use of Robitussin-DM, Tussin, and Coricidin Cough and Cold Tablets HBP. 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 145 intentional abuse or misuse cases of Coricidin in 2000, 236 in 2001, and 266 in 2002. The average age of the cases in 2002 was 17.6 years.

DPS labs examined 12 substances in 1999 that were DXM, 35 in 2000, 12 in 2001, and 26 through August 2002.

Outreach workers in El Paso report use of “Skittles” is increasing in popularity.

#### **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 of students 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 Hispanic, 17.9 percent of Anglo, 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 36). This decrease in inhalant use as students age may be partially due 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 in the first three quarters of 2002 reported 12 cases of intentional misuse or abuse of Freon (average age 19.2 years). There were three cases of misuse of whiteout. Products used with automobiles are also misused, with 41 cases of intentional misuse or abuse of gasoline (average age of 22.1) and 21 cases of misuse of carburetor cleaner, starter, or transmission fluid, etc. (average age of 20.8). There were 38 cases of intentional misuse or abuse of paint (average age 22.2), 14 cases of intentional misuse or abuse of aerosols (average age 26.6), 8 cases of misuse or abuse of glue (average age 27.2), 9 cases of misuse or abuse of propane or lighter fluid (average age 23.8), and 4 cases of intentional abuse of nitrous oxide (average age 31.3).

Exhibit 37 summarizes the Dallas ED DAWN mentions for the major inhalant categories for 1994–2001. As shown, volatile agents accounted for most mentions each year.

Exhibit 38 shows the characteristics of patients who enter the EDs in the Dallas area with a mention of inhalants. Just as the number entering for different substances changes over the years, so do the characteristics of the patients. However, in 2000 and 2001, more of the patients were older than 17, and more were Hispanic.

Inhalant abusers represented 1.7 percent of the admissions to adolescent treatment programs in 2002. The youths entering treatment tended to be male (72 percent) and Hispanic (77 percent). The over-

representation 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 (64 clients) of adult admissions were for a primary problem with inhalants; the average age was 29, 64 percent were male, and 70 percent were Hispanic.

In 2000, there were 12 deaths involving misuse of inhalants and in 2001, 15. Six deaths involved Freon and two involved nitrous oxide (exhibit 39). The average age 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 gone from 16 percent in 1987 to 27 percent through September 2002. In 1987, 4 percent of the cases were injection drug users (IDUs), and 12 percent were exposed through male-to-male sex and injection drug use. In 2002, of the cases where mode of exposure was known, 21 percent of the cases were IDUs, and 6 percent were men who have sex with men (MSM) and also were IDUs (exhibit 40). The proportion of cases resulting from heterosexual contact has risen from 1 percent in 1987 to 19 percent in 2002.

In 1987, 3 percent of the AIDS cases were females older than 12; in 2002, 21 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 41 shows, the proportion of Anglo males has dropped, while the proportion of African-Americans and Hispanics has increased.

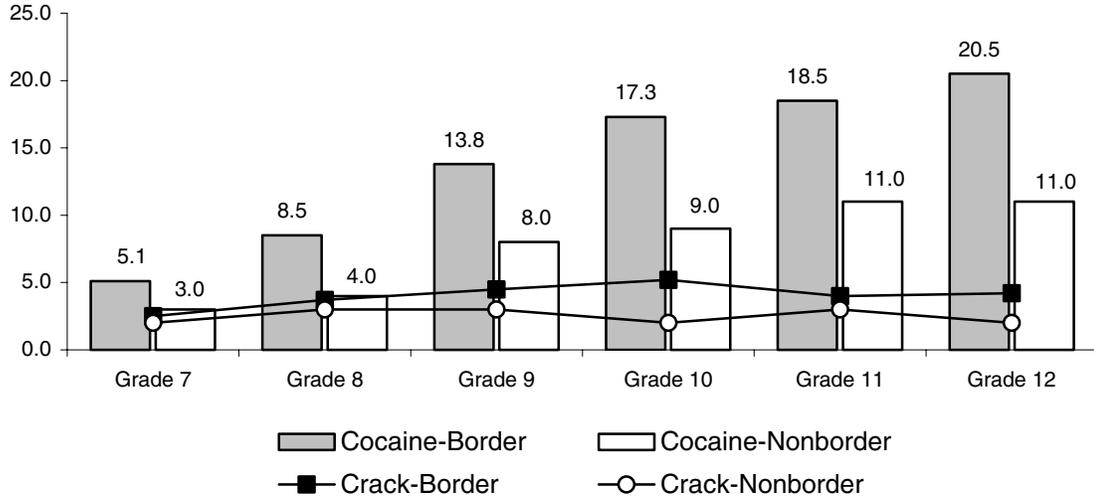
In Austin, AIDS intervention clients report that water and bleach kits are selling for \$2 when syringes are not available; new syringes can be purchased in the late evenings for \$2 on the streets in certain areas. Some sex industry workers report that the quality of crack cocaine has not been good and they have resorted to shooting heroin after many years of not using needles. There has been about a 10–20 percent increase in the number of male sex industry workers; many who had been incarcerated have been released and they have returned to active addiction. The program also reports that as the drugs become more available, the sex industry business increases. Sex industry workers reported they were offered about twice the amount of money for unprotected sex than for protected sex.

Hepatitis C is rampant in all communities and people have little or no education about the disease. In the African-American community, many people are not willing to get medical help because of a distrust of the system and also a lack of services available.

---

*For inquiries concerning this report, please contact Jane Maxwell, Ph.D., Center for Social Work Research, The University of Texas at Austin, 1717 West 6th Street, Suite 335, Austin, TX 78703, Phone: 512-232-0610, Fax: 512-232-0613, E-mail: <jcmaxwell@sbcglobal.net>.*

**Exhibit 1. Percentage of Border and Nonborder Secondary Students Who Had Ever Used Powder Cocaine and Crack, by Grade: 2002**



SOURCE: TCADA

**Exhibit 2. Dallas DAWN Mentions of Cocaine Per 100,000 Population by Age and Gender: 1989–2001**

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Total	59.1	45.4	56.9	52.9	57.7	61.5	61.6	58.3	73.6	106.0	85.6	87.3	57.1
Age Group													
12–17	33.3	20.9	20.2	16.0	21.2	18.8	20.6	35.0	33.7	65.8	45.3	36.4	23.2
18–25	140.9	102.5	116.9	106.3	109.1	100.5	105.5	92.0	155.5	192.3	139.9	130.4	67.9
26–34	115.1	94.9	119.7	106.2	112.2	141.6	121.9	117.1	132.8	192.4	152.9	171.7	109.7
35 and older	24.7	19.4	30.3	32.9	39.3	39.3	46.9	43.2	54.7	83.7	74.7	75.8	56.2
Gender													
Male	76.6	58.0	69.0	69.1	72.4	75.2	79.3	77.8	97.1	142.2	112.0	114.9	73.8
Female	42.3	32.8	45.3	37.3	43.1	48.4	44.0	38.8	51.1	70.9	60.5	60.5	39.6

SOURCE: DAWN, OAS, SAMHSA

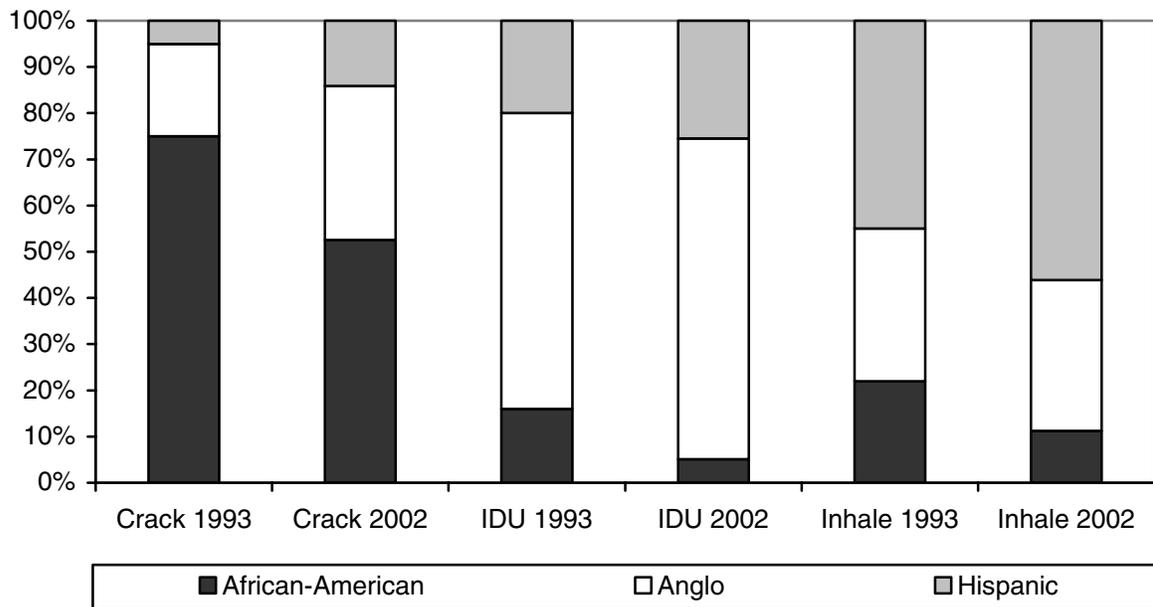
**Exhibit 3. Characteristics of Adult Clients Admitted to TCADA-Funded Treatment with a Primary Problem with Cocaine by Route of Administration: 2002**

Characteristic	Crack Cocaine Smoke	Powder Cocaine Inject	Powder Cocaine Inhale	Cocaine All <sup>1</sup>
Admissions (N)	9,073	1,062	2,075	12,666
Percent of Cocaine Admissions	72	8	16	100
Lag-First Use to Treatment (Years)	11	13	9	11
Average Age	37	34	31	35
Percent Male	56	66	62	58
Percent African-American	51	5	11	39
Percent Anglo	33	68	32	36
Percent Hispanic	14	25	55	24
Percent CJ Involved	35	40	51	39
Percent Employed	14	16	29	18
Percent Homeless	19	15	6	16

<sup>1</sup> Total includes clients with "other" routes of administration.

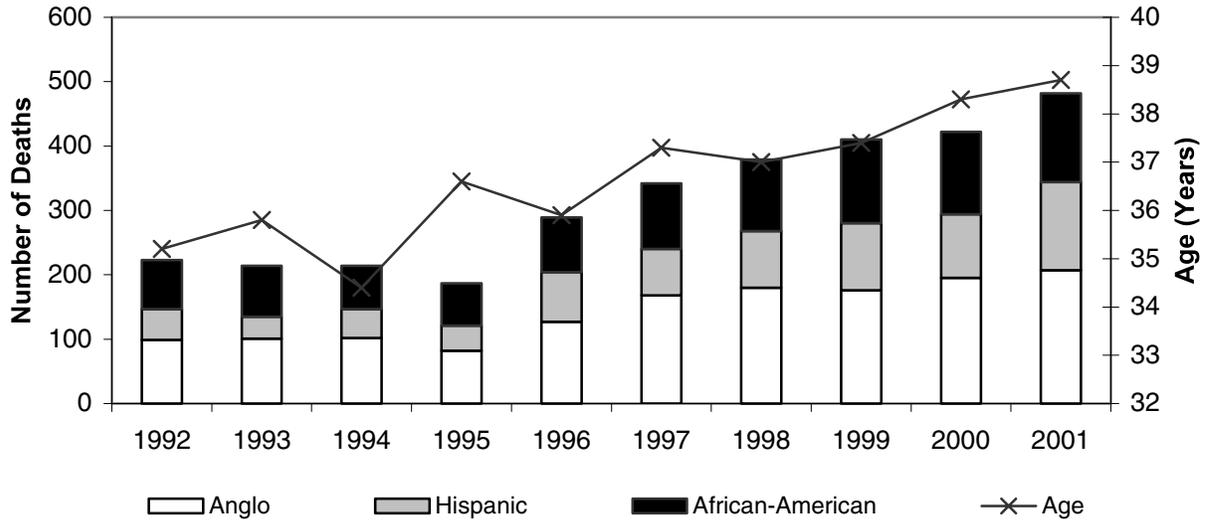
SOURCE: TCADA

**Exhibit 4. Routes of Administration of Cocaine by Race/Ethnicity of Treatment Admissions: 1993–2002**



SOURCE: TCADA

**Exhibit 5. Age and Race/Ethnicity of Persons Who Died with a Mention of Cocaine: 1992–2001**



SOURCE: TDH, Analysis by Jane Maxwell

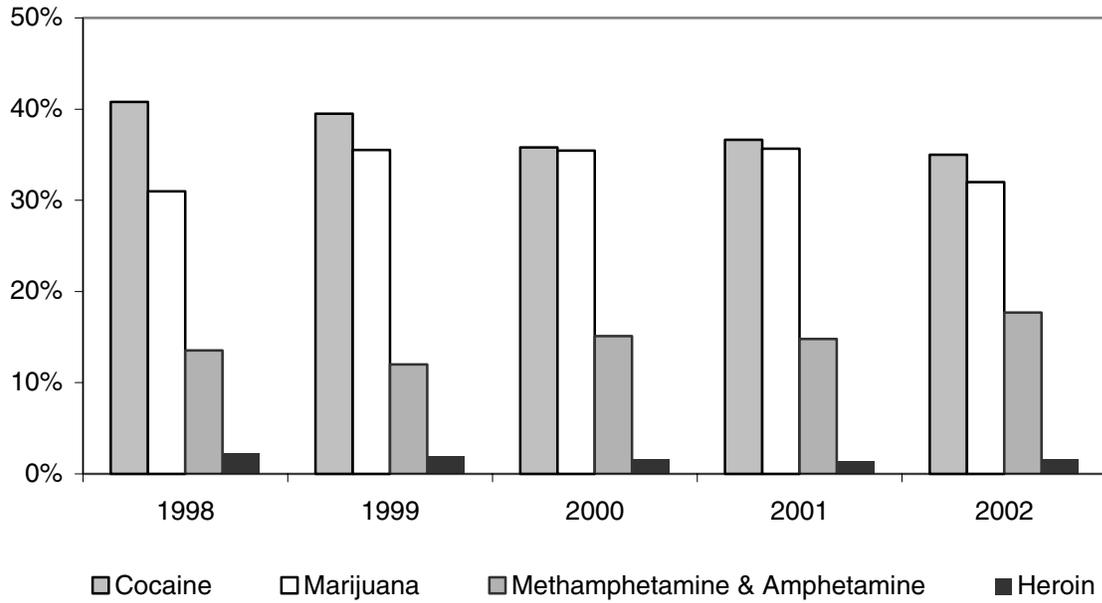
**Exhibit 6. Percentages of Arrestees Testing Positive for Cocaine: 1991–2002**

Arrestees	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
<b>Males</b>												
Dallas	43	41	45	35	31	32	32	29	34	28	30	NR
Houston	56	41	41	28	40	39	39	36	36	32	NR	NR
Laredo	NR <sup>1</sup>	NR	NR	NR	NR	NR	NR	37	42	45	35	38
San Antonio	29	31	31	31	24	28	26	27	23	20	30	33
<b>Females</b>												
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

<sup>1</sup> NR=Not reported.

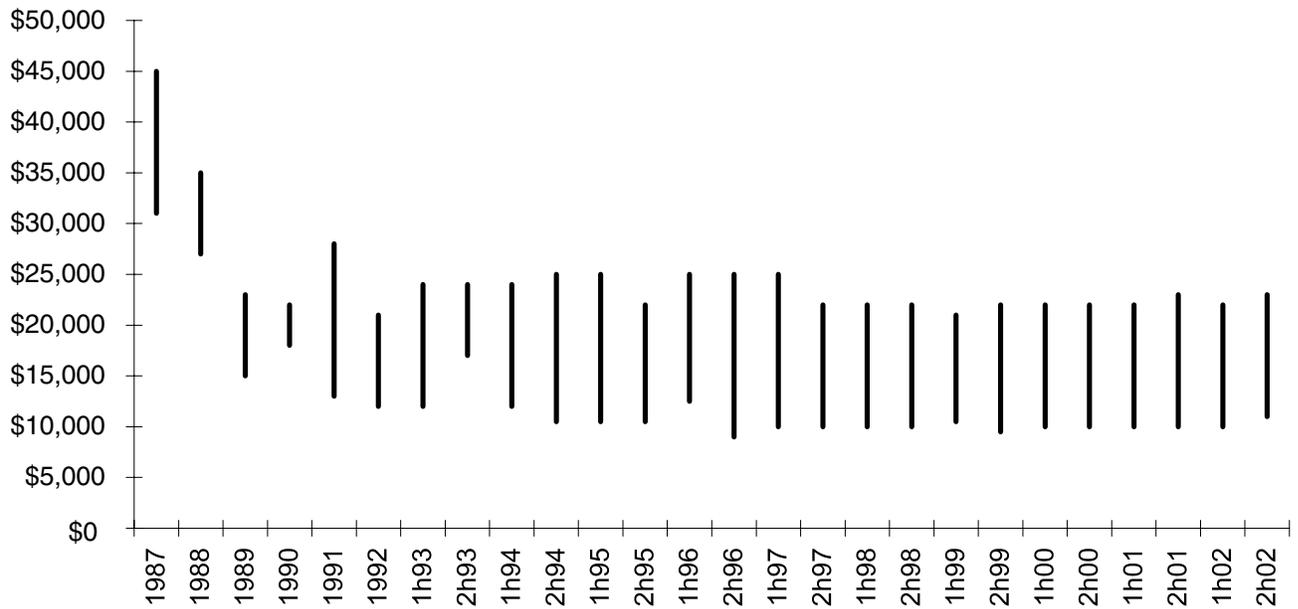
SOURCE: ADAM, NIJ

**Exhibit 7. Percent of Substances Identified by DPS Labs: 1998–August 2002**



SOURCE: NFLIS

**Exhibit 8. Price of a Kilogram of Cocaine in Texas: 1987–2002**



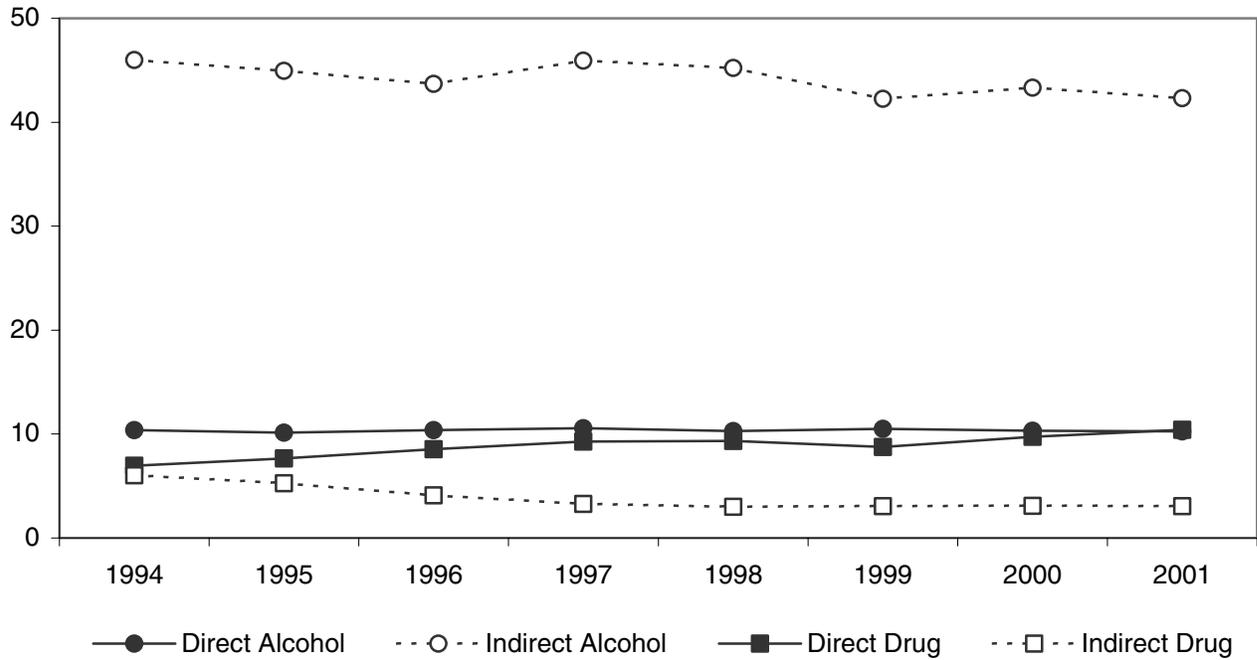
SOURCE: DEA

**Exhibit 9. Rate of ED Mentions in Dallas of Alcohol-in-Combination with Other Drugs Per 100,000 Population: 1992–2001**

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Total Rate	50.4	60.6	57.9	57.6	57.9	65.7	83.0	68.0	74.8	57.6

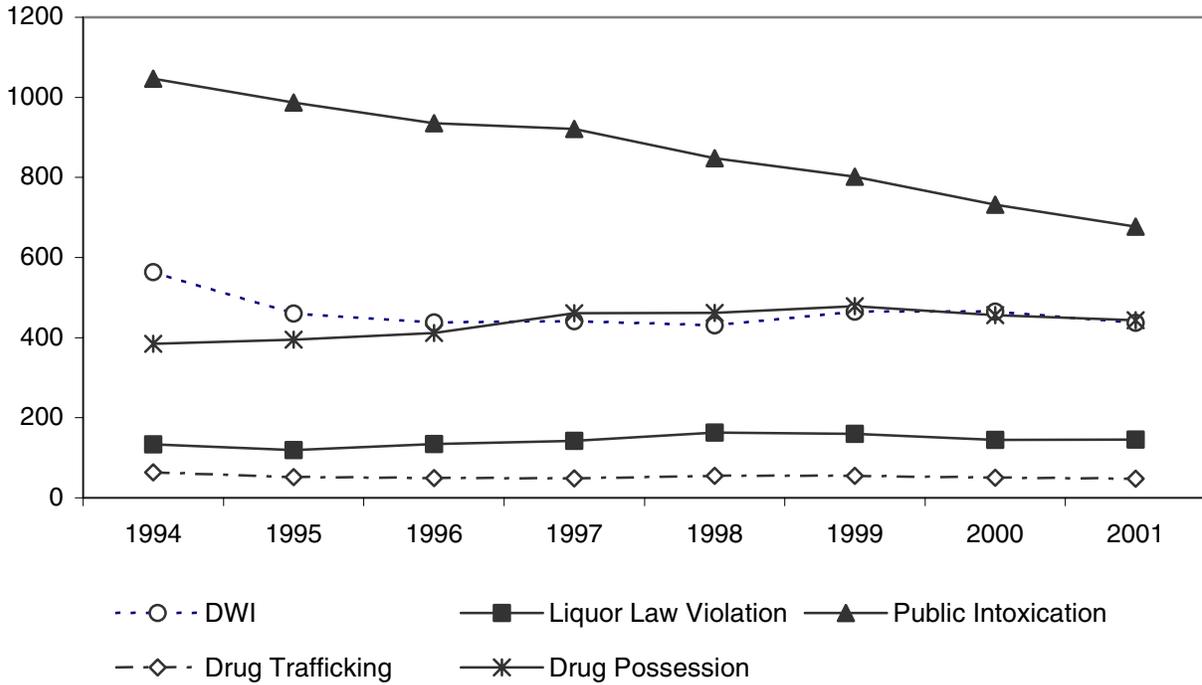
SOURCE: DAWN, OAS, SAMHSA

**Exhibit 10. Direct and Indirect Alcohol and Drug Deaths Per 100,000 Population: 1994–2001**



SOURCE: TDH, Analyses by TCADA

**Exhibit 11. Substance Abuse Arrests Per 100,000 Population: 1994–2001**



SOURCE: UCR

**Exhibit 12. Dallas ED Mentions of Heroin Per 100,000 Population by Age and Gender: 1989–2001**

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Total	14.1	14.0	10.2	11.9	12.7	10.3	11.2	13.8	20.9	20.5	17.4	19.1	14.3
Age Group													
12–17	–	–	–	1.0	2.0	2.7	–	9.9	–	6.8	7.1	5.8	5.2
18–25	18.6	15.8	12.8	11.9	13.1	14.3	16.2	30.8	60.4	55.0	45.3	49.1	23.0
26–34	27.2	26.1	16.8	22.9	15.9	13.2	15.8	17.3	24.7	24.0	19.4	22.9	20.3
35 and older	11.6	13.0	10.4	11.8	16.0	11.9	12.2	11.8	15.0	18.0	15.6	17.2	14.4
Gender													
Male	19.4	19.0	12.4	18.1	16.9	14.7	15.1	19.0	33.3	27.4	22.4	27.1	19.3
Female	8.9	9.2	8.2	5.8	8.8	5.7	7.4	8.9	9.0	13.9	12.4	11.4	9.0

SOURCE: DAWN, OAS, SAMHSA

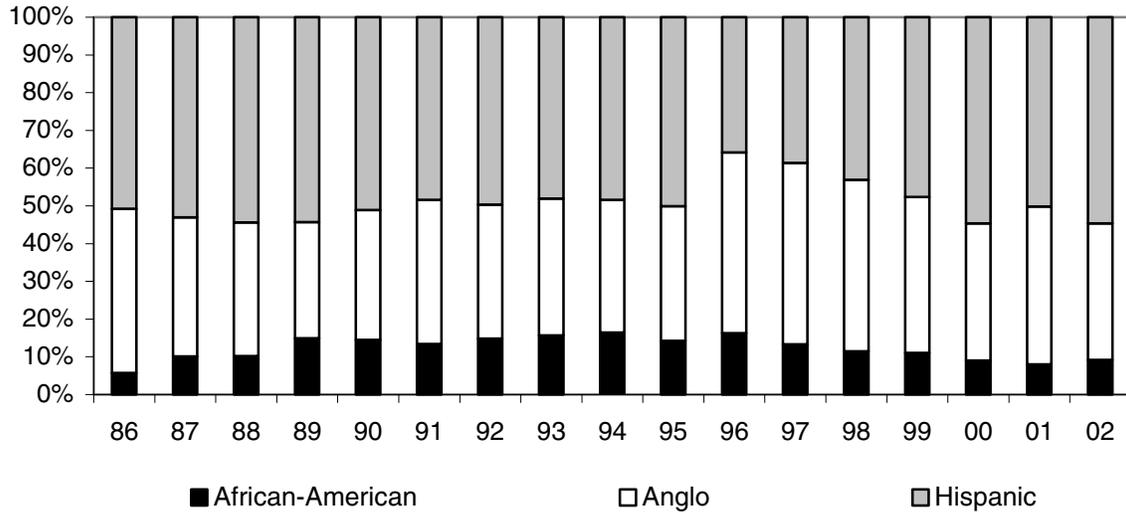
**Exhibit 13. Characteristics of Adult Clients Admitted to TCADA-Funded Treatment with a Primary Problem With Heroin by Route of Administration: 2002**

Characteristic	Inject	Inhale	All <sup>1</sup>
Admissions (N)	4,645	313	5,149
Percent of Heroin Admits	90%	6%	100%
Lag-1st Use to Treatment-Years	15	10	15
Average Age	37	32	36
Percent Male	71%	67%	70%
Percent African American	6%	47%	9%
Percent Anglo	36%	20%	36%
Percent Hispanic	56%	31%	54%
Percent CJ Involved	33%	36%	33%
Percent Employed	12%	17%	13%
Percent Homeless	14%	11%	14%

<sup>1</sup> Total includes clients with other routes of administration.

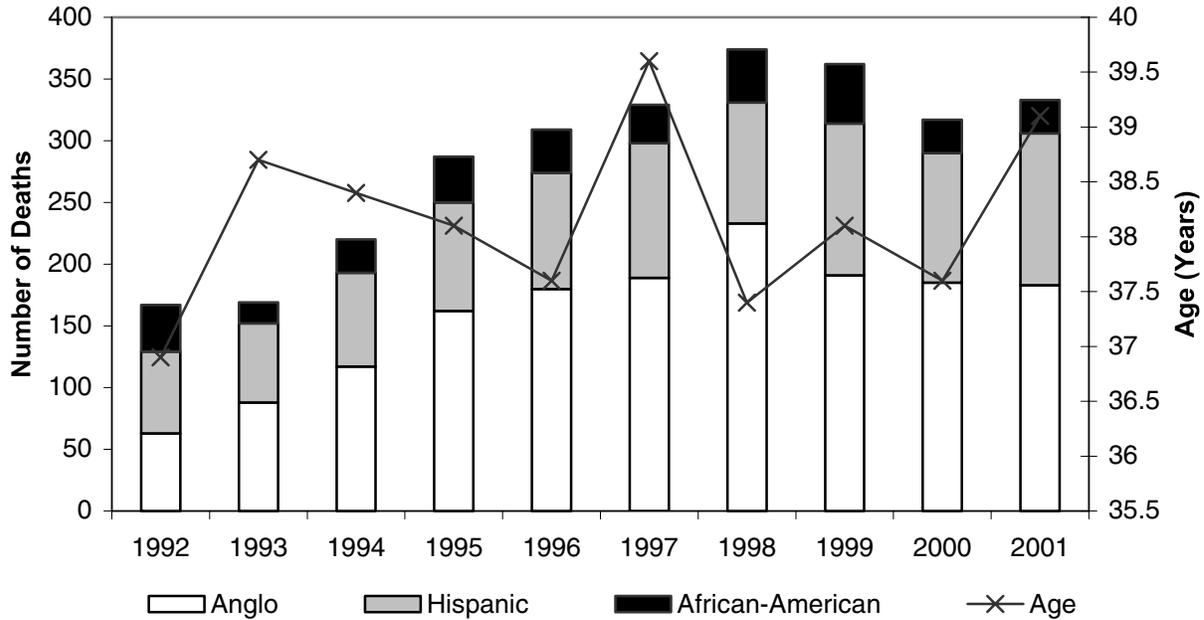
SOURCE: TCADA

**Exhibit 14. Percent of Heroin Admissions to Treatment by Race/Ethnicity: 1986–2002**



SOURCE: TCADA

**Exhibit 15. Age and Race/Ethnicity of Persons Who Died with a Mention of Heroin: 1992–2001**



SOURCE: TDH, Analyses by Jane Maxwell

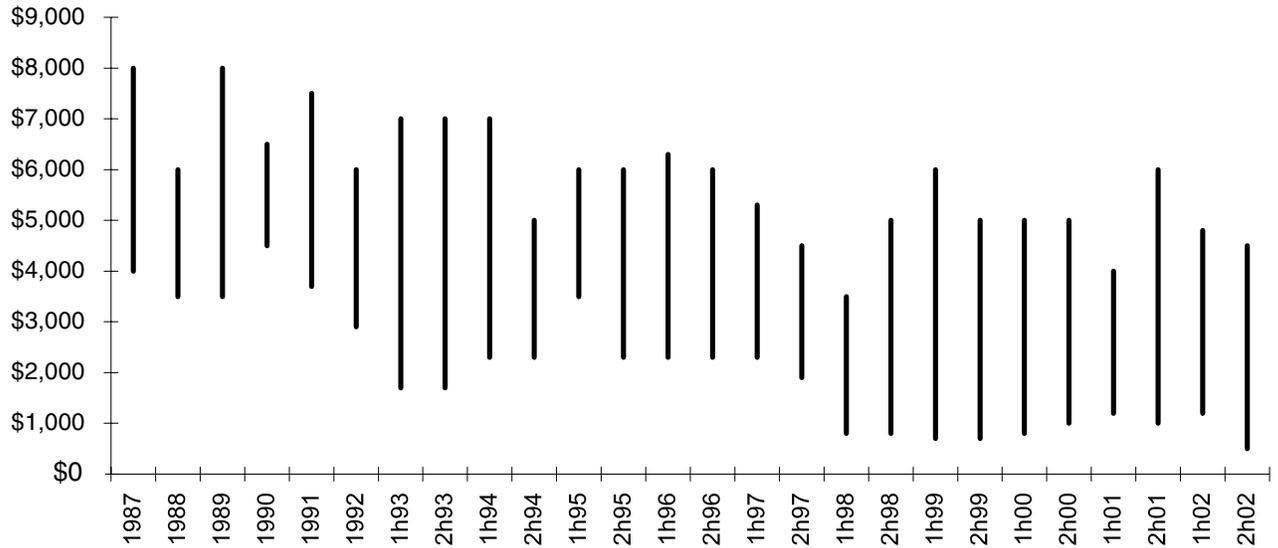
**Exhibit 16. Percentages of Arrestees Testing Positive for Opiates: 1991–2002**

Arrestees	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
<b>Males</b>												
Dallas	4%	4%	5%	3%	5%	5%	4%	2%	5%	3%	5%	NR
Houston	3%	3%	2%	3%	5%	8%	10%	8%	6%	7%	NR	NR
Laredo	NR <sup>1</sup>	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%
<b>Females</b>												
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

<sup>1</sup> NR=Not reported.

SOURCE: ADAM, NIJ

**Exhibit 17. Price of an Ounce of Mexican Black Tar Heroin in Texas: 1987–2002**



SOURCE: DEA

**Exhibit 18. Price and Purity of Heroin Purchased in Dallas, El Paso, and Houston by DEA: 1995–2001**

Site/Price/Purity	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 Purity <sup>1</sup>					56.7%	50.8%	41.8%
Price/Milligram Pure					\$0.49	\$0.34	\$0.44

<sup>1</sup> El Paso began reporting in mid-1999.

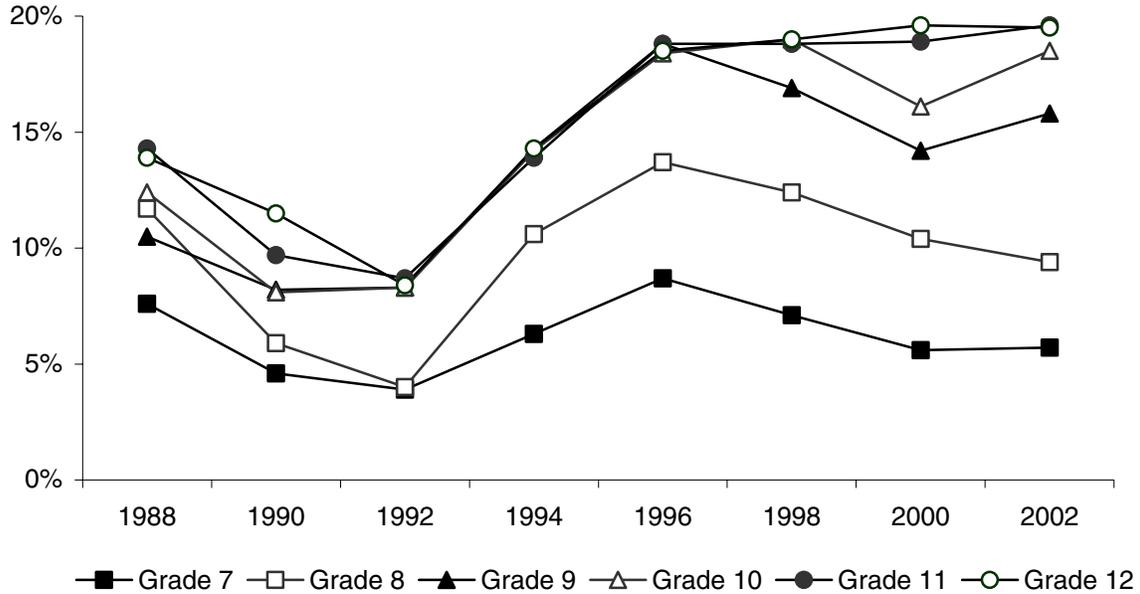
SOURCE: DMP, DEA

**Exhibit 19. Dallas ED Mentions of Hydrocodone and Oxycodone Combinations: 1994–2001**

Mentions	1994	1995	1996	1997	1998	1999	2000	2001
Hydrocodone/Combinations	214	189	211	310	276	245	303	375
Oxycodone/Combinations	8	4	15	6	13	8	27	42

SOURCE: DAWN, OAS, SAMHSA

**Exhibit 20. Percentage of Texas Secondary Students Who Had Used Marijuana in the Past Month, By Grade: 1988–2002**



SOURCE: TCADA

**Exhibit 21. ED Mentions in Dallas of Marijuana Per 100,000 Population by Age and Gender: 1989–2001**

Mentions	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Total	23.8	15.6	11.1	14.8	15.7	20.0	23.2	23.1	37.9	61.9	47.6	49.0	33.8
Age Group													
12–17	38.7	23.8	13.0	24.9	34.5	38.0	45.6	56.1	70.0	123.6	94.3	117.4	70.0
18–25	69.5	44.5	30.9	40.6	46.1	54.2	69.4	58.1	118.4	170.4	140.6	127.8	72.1
26–34	35.2	26.1	18.8	24.5	19.9	31.5	32.9	29.4	44.7	85.2	65.7	66.0	53.2
35 and older	6.5	4.0	3.9	4.4	5.3	6.8	7.5	10.2	17.3	28.3	19.9	20.9	15.8
Gender													
Male	32.7	21.6	14.8	20.0	20.1	24.7	32.7	33.3	51.7	84.8	64.0	65.2	43.5
Female	15.2	9.9	7.4	9.6	11.1	15.3	13.9	13.3	24.7	39.8	32.1	33.0	23.7

SOURCE: DAWN, OAS, SAMHSA

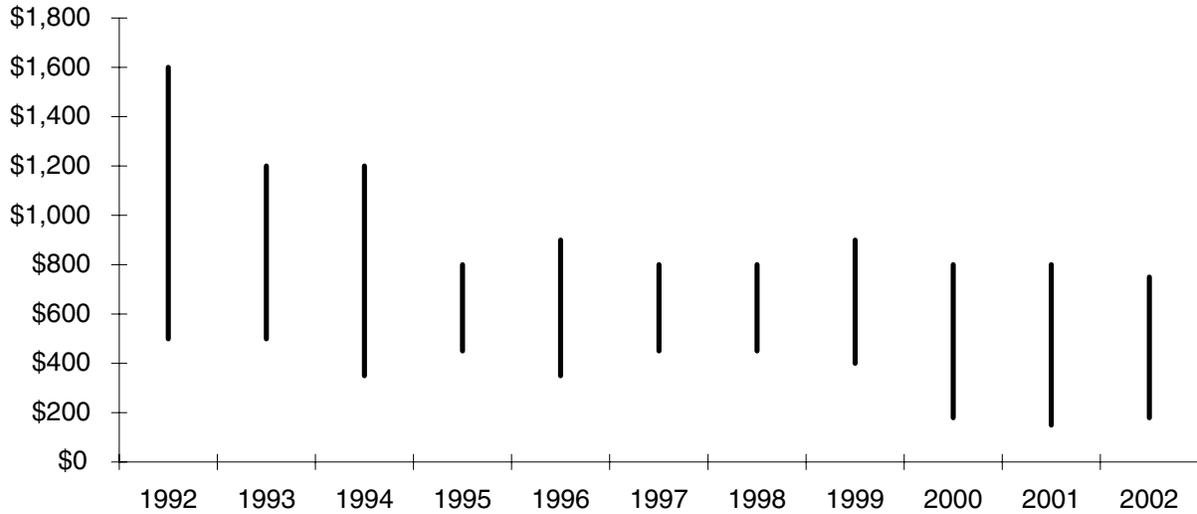
**Exhibit 22. Percentage of Arrestees Testing Positive for Marijuana: 1991–2002**

Arrestees	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
<b>Males</b>												
Dallas	19%	28%	27%	33%	39%	43%	44%	43%	39%	36%	33%	NR
Houston	17%	24%	24%	23%	30%	28%	23%	36%	38%	36%	NR	NR
Laredo	NR <sup>1</sup>	NR	NR	NR	NR	NR	NR	39%	33%	29%	26%	28%
San Antonio	19%	28%	32%	30%	34%	38%	34%	41%	36%	41%	41%	39%
<b>Females</b>												
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

<sup>1</sup> NR=Not reported.

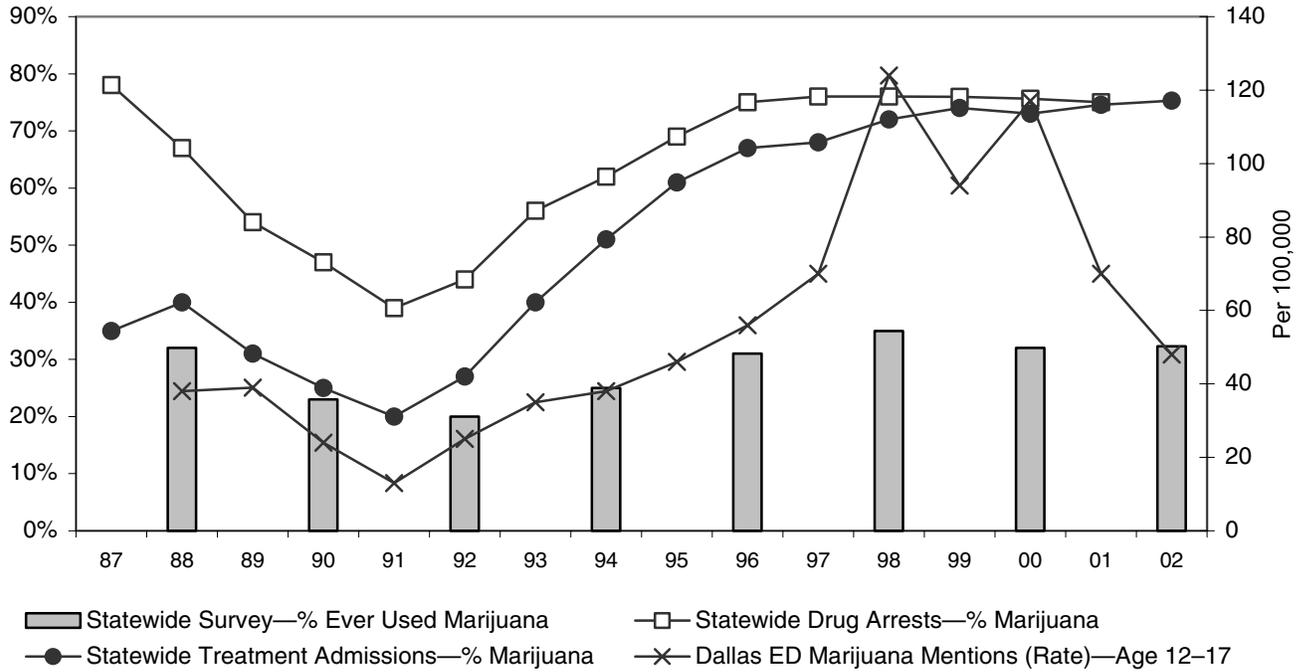
SOURCE: ADAM, NIJ

**Exhibit 23. Price of a Pound of Commercial Grade Marijuana in Texas: 1992–2002**



SOURCE: DEA

**Exhibit 24. Indicators of Adolescent Marijuana Use: 1987–2002**



SOURCES: TCADA, DAWN, UCR

**Exhibit 25. ED Mentions in Dallas of Stimulants: 1994–2001**

Stimulant	1994	1995	1996	1997	1998	1999	2000	2001
Methamphetamines	152	203	115	159	186	100	135	111
Amphetamines	92	133	120	263	336	307	351	378

SOURCE: DAWN, OAS, SAMHSA

**Exhibit 26. Characteristics of Adult Clients to TCADA-Funded Treatment with a Primary Problem of Amphetamines or Methamphetamine by Route of Administration: 2002**

Characteristic	Smoke	Inject	Inhale	Oral	All
Admissions (N)	752	1,771	382	232	3,183
Percent of Stimulant Admits	37%	23%	19%	11%	100%
Lag-1st Use to Tmt-Yrs.	9	13	10	11	11
Average Age-Yrs.	29	31	30	32	31
Percent Male	47%	46%	53%	37%	46%
Percent African American	1%	1%	1%	3%	1%
Percent Anglo	90%	95%	87%	88%	92%
Percent Hispanic	7%	4%	9%	8%	6%
Percent CJ Involved	47%	49%	52%	43%	48%
Percent Employed	25%	48%	29%	19%	19%
Percent Homeless	7%	11%	5%	10%	9%

SOURCE: TCADA

**Exhibit 27. Percentages of Arrestees Testing Positive for Amphetamines: 1991–2002**

Arrestees	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
<b>Males</b>												
Dallas	1%	1%	4%	2%	2%	1%	4%	3%	3%	2%	2%	NR
Houston	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	NR	NR
Laredo	NR <sup>1</sup>	NR	NR	NR	NR	NR	NR	0%	0%	0%	0%	0%
San Antonio	1%	0%	0%	0%	1%	1%	2%	0%	0%	0%	3%	2%
<b>Females</b>												
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
Laredo	NR	NR	NR	NR	NR	NR	NR	0%	0%	0%	0%	0%
San Antonio	2%	1%	2%	0%	3%	2%	4%	2%	2%	NR	NR	NR

<sup>1</sup> NR=Not reported.

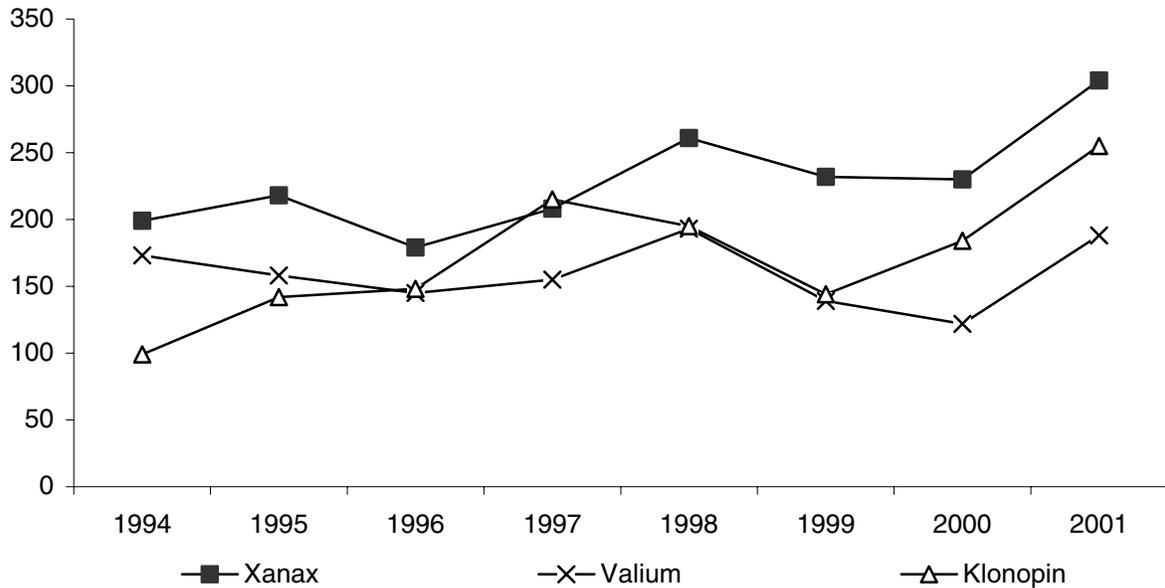
SOURCE: ADAM, NIJ

**Exhibit 28. Percent of Items Analyzed by DPS Labs in January–August 2002 That Were Methamphetamine or Amphetamines**

Lab Site	Percent
El Paso (El Paso)	0
Hidalgo (McAllen)	0.34
Webb (Laredo)	0.72
El Paso (El Paso)	3.74
Nueces (Corpus Christi)	7.94
Harris (Houston)	6.73
Travis (Austin)	18.73
McLennan (Waco)	18.67
Smith (Tyler)	10.13
Dallas (Dallas)	33.03
Midland (Odessa)	16.29
Taylor (Abilene)	45.99
Lubbock (Lubbock)	25.95
Potter (Amarillo)	41.48

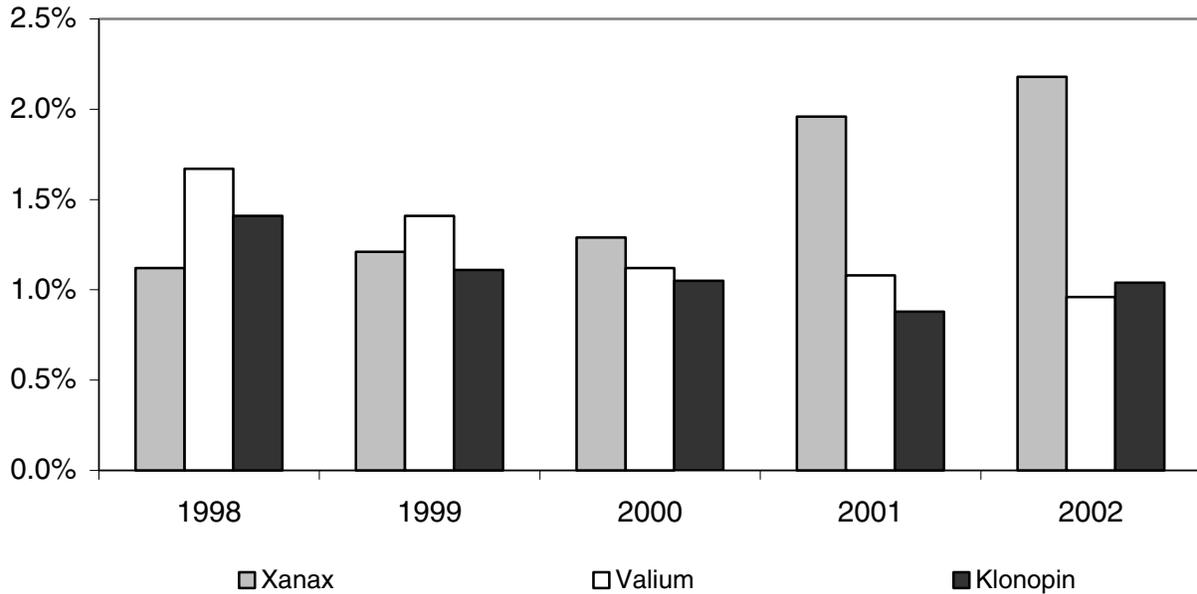
SOURCE: NFLIS

**Exhibit 29. Number of ED Mentions of Selected Benzodiazepines in the Dallas Area: 1994–2001**



SOURCE: DAWN, OAS, SAMHSA

**Exhibit 30. Benzodiazepines Identified by DPS Labs: 1998–2002**



SOURCE: NFLIS

**Exhibit 31. Number of ED Mentions of Selected “Club Drugs” and Hallucinogens in Dallas: 1994–2001**

Club Drug	1994	1995	1996	1997	1998	1999	2000	2001
GHB	11	37	60	72	160	156	169	128
Ketamine	2	1	4	3	0	3	10	11
LSD	107	133	84	77	93	105	64	43
Ecstasy	21	57	20	17	15	24	71	77
PCP	27	65	26	36	62	95	120	96
Rohypnol	1	14	...	13	7	5	4	8

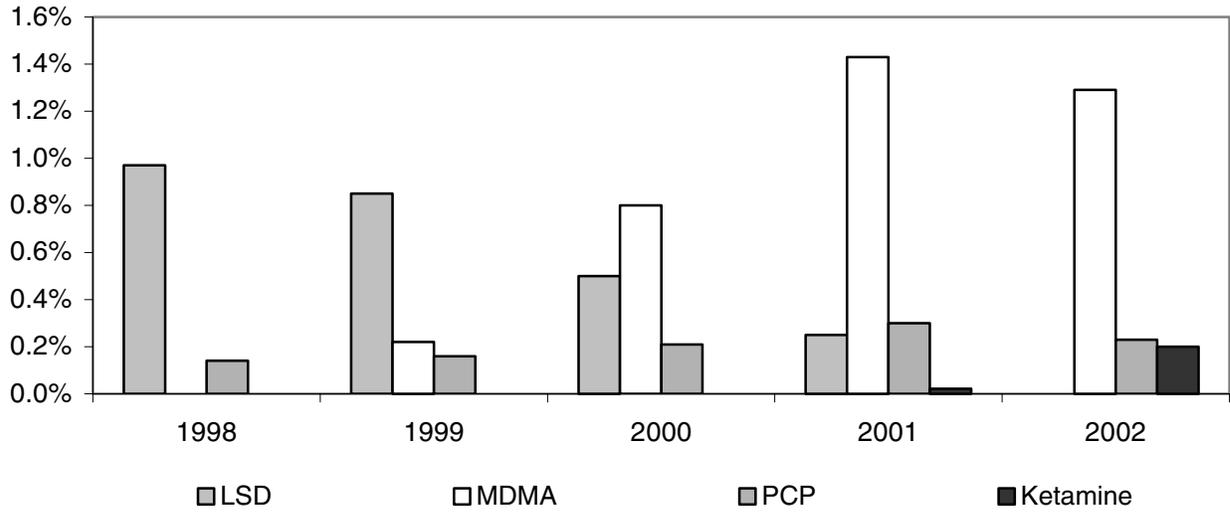
SOURCE: DAWN, OAS, SAMHSA

**Exhibit 32. Characteristics of Patients Entering Dallas EDs With Mentions of Club Drugs by Percent: 2001**

Characteristic	GHB	LSD	MDMA	PCP	Ketamine
% Male	66%	79%	62%	86%	91%
% Anglo	77%	79%	60%	9%	64%
% Hispanic	9%	...	9%	...	18%
% African-American	0%	0%	13%	80%	0%
12–17	2%	33%	25%	8%	27%
18–25	56%	63%	55%	57%	45%
26–34	35%	2%	14%	30%	18%
35 and older	7%	2%	6%	2%	9%

SOURCE: DAWN, OAS, SAMHSA

**Exhibit 33. Club Drugs Identified by DPS Labs by Percentage of All Drugs Identified: 1998–2002**



SOURCE: NFLIS

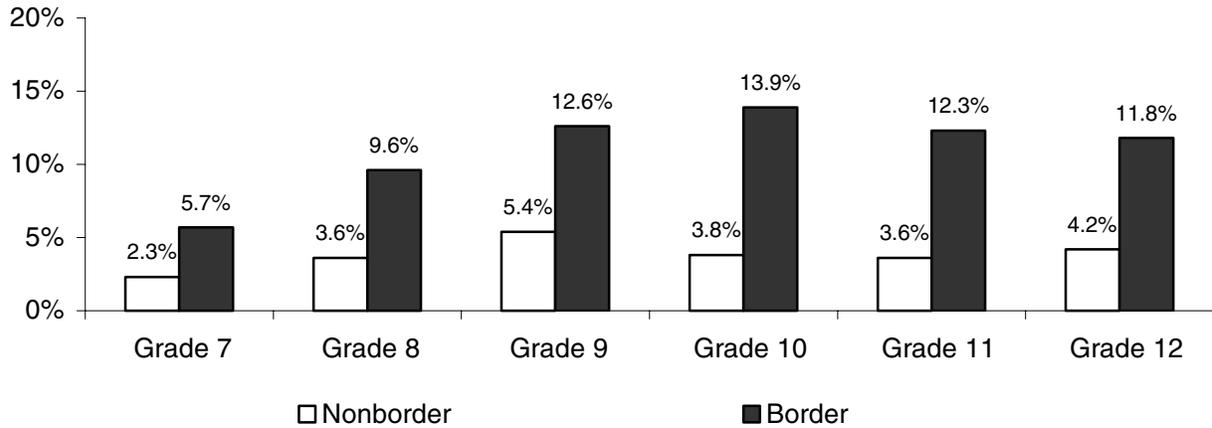
**Exhibit 34. Percentage of Arrestees Testing Positive for PCP: 1991–2001**

Arrestees	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2000	2001
<b>Males</b>												
Dallas	0%	3%	3%	5%	8%	4%	3%	4%	5%	4%	2%	NR
Houston	0%	0%	1%	3%	4%	3%	3%	6%	7%	5%	NR	NR
Laredo	NR <sup>1</sup>	NR	NR	NR	NR	NR	NR	0%	0%	0%	0%	0%
San Antonio	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>Females</b>												
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
Laredo	NR	NR	NR	NR	NR	NR	NR	0%	0%	0%	0%	0%
San Antonio	0%	0%	0%	0%	0%	0%	0%	0%	0%	NR	NR	0%

<sup>1</sup> NR=Not reported

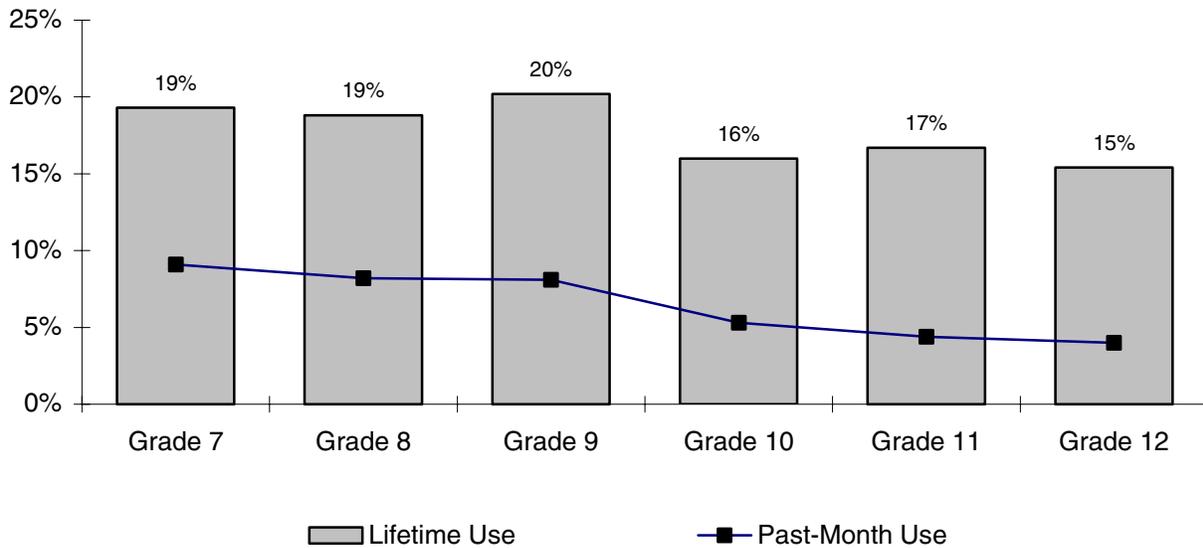
SOURCE: ADAM, NIJ

**Exhibit 35. Percentage of Border and Nonborder Secondary Students Who Had Ever Used Rohypnol by Grade: 2002**



SOURCE: TCADA

**Exhibit 36. Percentage of Texas Secondary Students Who Had Used Inhalants Ever or in the Past Month by Grade**



SOURCE: TCADA

**Exhibit 37. Dallas ED Mentions of Various Inhalants: 1994–2001**

Inhalant	1994	1995	1996	1997	1998	1999	2000	2001
Volatile Agent	65	29	52	59	41	51	44	40
Paint	7		3	1	3	13	8	6
Toluene Glue	28	4	17	19	10	5	13	9
Other Volatile Agents	30	24	32	39	28	33	23	25
Nitrites	0	0	0	0	0	0	1	0
Chloro-fluoro-hydrocarbons	1	8	0		3		1	
General Anesthetics	0	1		0	1	0		0

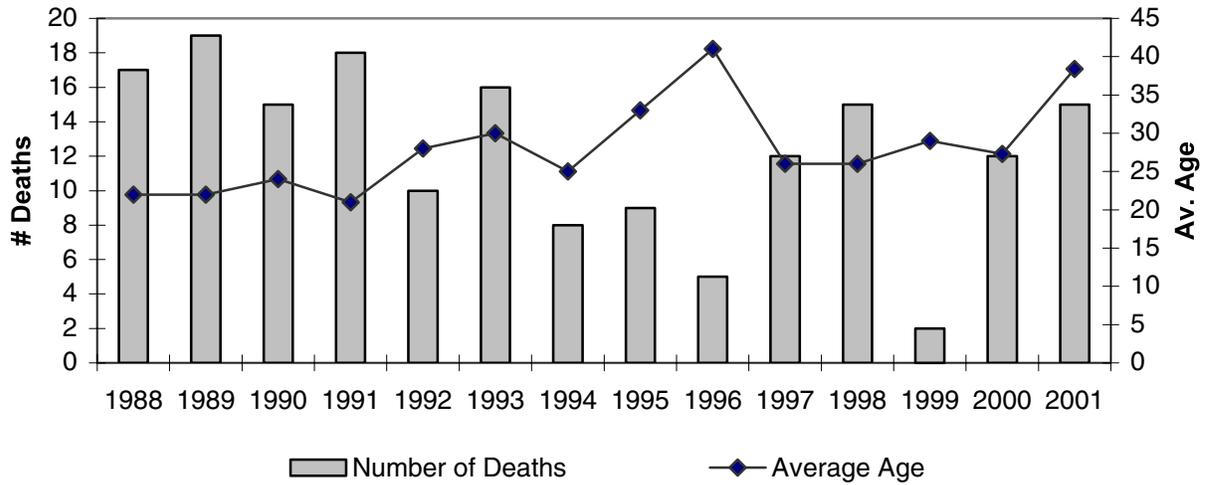
SOURCE: DAWN, OAS< SAMHSA

**Exhibit 38. ED Mentions in Dallas of Inhalants by Patient Demographic Characteristics and Percent: 1994–2001**

Characteristic	1994	1995	1996	1997	1998	1999	2000	2001
Age 12–17	56%	33%	46%	37%	48%	30%	20%	29%
Age 18–25	27%	28%	37%	30%	27%	34%	35%	27%
Age 26–34	8%	5%	9%	22%	11%	21%	27%	27%
Age 35 and older	9%	13%	5%	11%	14%	13%	14%	...
Male	70%	54%	60%	84%	70%	68%	67%	64%
Anglo	50%	59%	19%	40%	41%	23%	24%	38%
Hispanic	41%	26%	68%	44%	36%	36%	45%	49%
<b>Total (N)</b>	<b>66</b>	<b>39</b>	<b>57</b>	<b>63</b>	<b>44</b>	<b>53</b>	<b>49</b>	<b>45</b>

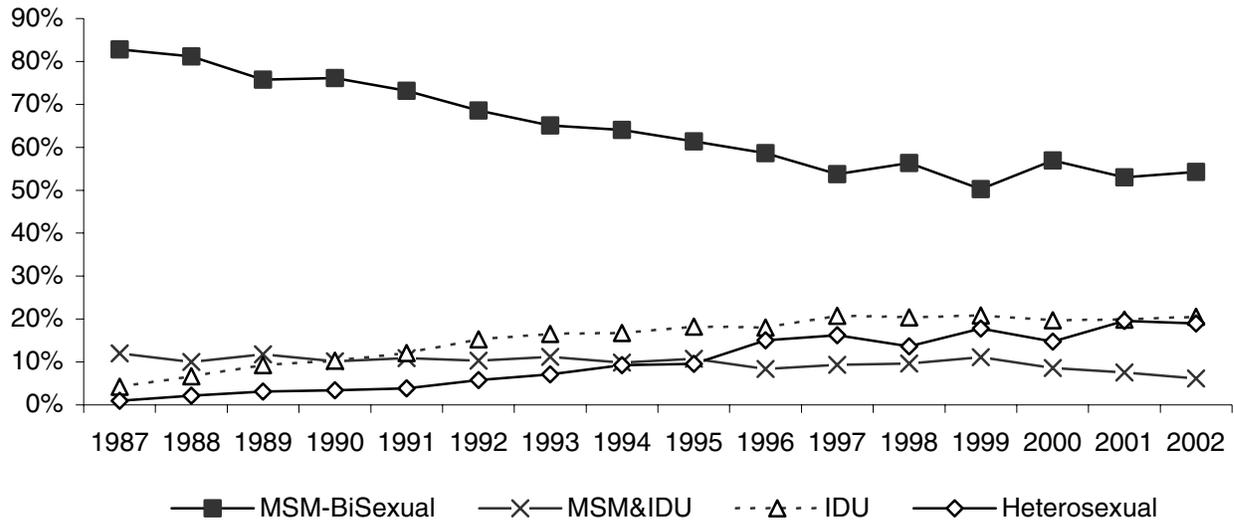
SOURCE: DAWN, OAS, SAMHSA

**Exhibit 39. Texas Deaths With Mention of Inhalants: 1988–2001**



SOURCE: TDH, Analysis by Jane Maxwell

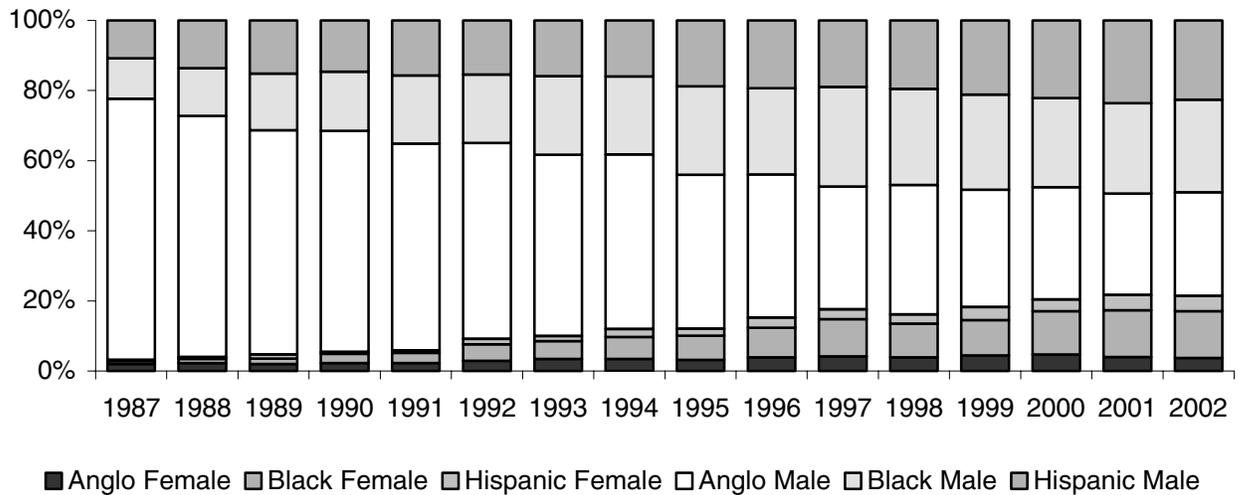
**Exhibit 40. AIDS Cases in Texas by Route of Transmission<sup>1</sup> and Percent: 1987–3Q 2002**



<sup>1</sup> Cases with risk not reported are excluded.

SOURCE: TDH

**Exhibit 41. Percentage of Male and Female AIDS Cases by Race/Ethnicity: 1987–3Q 2002**



SOURCE: TDH

# Patterns and Trends of Drug Abuse in Washington, DC

Susanna Nemes, Anna Carin Johansson, Lauren Hess, Jennifer Weil,<sup>1</sup> and Alfred Pach<sup>2</sup>

## ABSTRACT

*This report documents drug abuse patterns and trends for Washington, DC. It mainly focuses on changes between 2000 and 2001 and includes some 2002 data. Cocaine indicators were mostly steady, while a number of marijuana indicators showed signs of decline. Heroin emergency department (ED) mentions decreased slightly, whereas treatment admissions increased. Heroin purity levels remained steady, prices decreased, and ethnographic sources reported that the drug is readily available throughout the city. Cocaine and heroin continued to account for the greatest proportion of treatment admissions. OxyContin use increased. Indicators of PCP use showed increases, with a major increase in ED mentions between 2000 and 2001. The use of MDMA continued to grow. Although most methamphetamine indicators were low, there was a nonsignificant decrease in ED mentions between 2000 and 2001, while treatment admissions increased. The proportion of HIV/AIDS cases attributable to injection drug use continued to increase, disproportionately affecting African-American males. Immediately following the terrorist attacks of September 11, 2001, heroin and cocaine, as well as marijuana and MDMA became less available in certain markets in the District. However, the diversion of police to other areas for surveillance in the initial weeks following the attacks led to heightened activity in drug markets, while some drug trafficking processes were disrupted.*

## INTRODUCTION

### Area Description

The Nation's Capital is divided into eight wards distinguishable by race and economic status. A majority of Washington's White and wealthier residents live in the northwest part of the city, while most of the poorer African-American populations reside in the eastern quadrants of the city. The District retained its majority African-American population in 2002. African-American residents accounted for 60 percent of the total population and Whites for 31 percent; the remainder were primarily Hispanic and/or Pacific Islanders (U.S. Bureau of the

Census, 2002). In the first half of 2001, the District remained a city divided by race and geography. However, data from the 2000 census indicate significant demographic changes in the last decade. The District's population fell by 5.7 percent during the 1990s, to 572,059 in 2000. The number of African-Americans decreased by 14.1 percent. Conversely, 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 modest 2 percent during this time period.

The population of the District continues to reflect an older demographic profile than the general U.S. population. In 2000, of the eight age categories reported by the DC Office of Planning, residents age 65 and older represented the fifth largest segment of the population, at 12.2 percent.

Despite a nationwide economic recession, wealth distributions 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 increased in the DC metropolitan region, while the percentage of persons in poverty increased in many localities in and around Washington.

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.

Washington, DC, plays an important role in the drug transportation network along the eastern seaboard of the United States. 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.

<sup>1</sup> Susanna Nemes, Anna Carin Johansson, Lauren Hess, and Jennifer Weil are affiliated with Danya International, Inc., Silver Spring, Maryland.

<sup>2</sup> Alfred Pach is affiliated with The CDM Group, Inc., Rockville, Maryland.

Although this overall pattern has remained consistent in recent months, ethnographic data and news reports suggest that higher security at airports has shifted smuggling activities to rail, bus, and commercial package delivery networks. Availability of marijuana, methamphetamine, methylenedioxymethamphetamine (MDMA), heroin, and crack decreased after September 11, 2001, perhaps because of transporting difficulties related to increased airport security. Information from the NDIC suggests that Colombian drug trafficking organizations (DTOs) continue to play a major role in supplying opiates and cocaine to DC criminal groups of Colombian and Dominican descent. In addition, increasing involvement among Hispanic gangs and Asian traffickers has been noted, as has decreasing violence by Jamaican organized criminal groups.

### Data Sources

A number of sources were used to obtain comprehensive information regarding the drug use patterns and trends in Washington, DC. Data for this report were obtained from the sources shown below.

- **Emergency department (ED) drug mentions data** were derived through 2001 from the Drug Abuse Warning Network (DAWN), Office of Applied Studies (OAS), Substance Abuse and Mental Health Services Administration (SAMHSA).
- **Drug-related death data** were derived from the Drug Abuse Warning Network (DAWN) annual medical examiner (ME) data for 2000.
- **Drug treatment data** were obtained through 2001 on characteristics of admissions to publicly funded treatment programs in Washington, DC, and from the Office of Applied Studies, SAMHSA, Treatment Episode Data Set (TEDS), based on administrative data reported to TEDS through September 30, 2002. The 2000 and 2001 TEDS data used in this report are not comparable to prior-year data that were derived from local sources.
- **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.mpd.dc.gov](http://www.mpd.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 provided by the District of Columbia Pretrial Services Agency and included data on adult and juvenile arrestee urinalysis results through April 2002. For the third quarter of 2002, data were derived from the 2002 provisional unweighted ADAM urine data in Washington, DC, and represent small numbers of adult male and female arrestees.
- **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, 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. Other information was provided by the Federal Bureau of Investigation (FBI) and District narcotics officers. Still other trafficking data were derived from the Washington-Baltimore High Intensity Drug Trafficking Area (HIDTA) "District of Columbia Threat Assessment," available at <<http://www.whitehousedrugpolicy.gov>>; "Washington, DC, Threat Assessment," January 2002. Other trafficking data were derived from NDIC, "District of Columbia Drug Threat Assessment," January 2002 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), "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, "Ecstasy in Maryland," August 2001.
- **Acquired immunodeficiency syndrome (AIDS) data** were provided by the District of Columbia Department of Health, Administration for HIV/AIDS, "District of Columbia AIDS Surveillance Report," Volume 21, No. 1, September 30, 2002, the "District of Columbia HIV/AIDS Epidemiological Profile 2001," available at <[http://dchealth.dc.gov/services/administration\\_of\\_fices/hiv\\_aids/pdf/epiprofile2001.pdf](http://dchealth.dc.gov/services/administration_of_fices/hiv_aids/pdf/epiprofile2001.pdf)>, and by the HIV/AIDS Surveillance Report, September 25, 2002, available at <<http://www.cdc.gov/hiv/stats/hasrlink.htm>>.
- **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/single\\_race.shtm](http://www.planning.dc.gov/documents/single_race.shtm)>.

Ethnographic research provided qualitative data on price, purity, and social aspects of drug use through interviews with law enforcement officers, DC city administration officials, and local experts.

Media reports used included those from the *Washington Post*, <<http://www.washingtonpost.com>>, 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

This section presents data from drug-related incidents, such as ED episodes, arrests, and other data sources described above.

For 2000 and 2001, the number of DAWN ED episodes and mentions combined for the major substances of abuse increased slightly in the District. The number of combined drug episodes rose slightly but insignificantly, from 10,303 to 10,566. ED mentions per 100,000 population decreased from 262 to 254.

The rates of DAWN ED mentions per 100,000 population for 2001 in the District are as follows: 69 for cocaine, 45 for heroin, and 51 for marijuana. Several other metropolitan areas in the northeastern, southeastern, and mid-Atlantic States had higher ED rates of cocaine and heroin mentions than the District. Among the 20 CEWG cities reporting DAWN ED rates in 2001, DC ranked 15th for cocaine, 13th for heroin, and 12th for marijuana.

Between 2000 and 2001, the number of admissions to publicly funded drug treatment providers in the District of Columbia decreased, from 6,025 to 5,736. There were small increases in the number of admissions for primary abuse of heroin, cocaine, amphetamines, and phencyclidine (PCP). The number of primary marijuana admissions declined from 484 in 2000 to 367 in 2001, accounting for 6 percent of the 5,736 admissions in 2001. Primary cocaine admissions for smoking crack also declined, from 1,626 to 1,450; nevertheless, crack still accounted for 25 percent of all admissions in 2001. Heroin admissions, however, increased slightly, from 2,121 to 2,181, accounting for 37.9 percent of all 2001 admissions. Primary admissions for intranasal use of cocaine rose from 448 to 474, a 6-percent

increase. Likewise, admissions for amphetamines increased from 14 to 33, and PCP admissions increased from 43 to 105.

According to DAWN ME data, total drug abuse-related deaths in the Washington, DC, metropolitan statistical area (MSA) rose from 215 to 235 between 1996 and 2000, a 9-percent increase. Within the District in 2000, there were 100 drug-related deaths. The number of cocaine-related death mentions in the MSA increased slightly, from 101 in 1996 to 107 in 2000. However, during this same time period, the number of heroin-related death mentions decreased 8 percent, from 91 to 84. In 2000, 69 percent of the cocaine mentions involved more than one drug, as did 75 percent of the heroin mentions. Sixty-eight percent of the decedents in 2000 were male, 52 percent were African-American, and 76 percent were age 35 and older. However, as the demographic makeup of the District continues to change, the number of White decedents associated with drug abuse is beginning to show a slight increase.

Threat assessment data gleaned from ethnographers and law enforcement agencies show stability in prices for illicit drugs and an increase in drug purity.

District of Columbia arrest data indicate a 16-percent increase in the number of drug-related arrests among adults between the first halves of 2000 and 2001. However, the District of Columbia Pretrial Services Agency, which tests adult arrestees for cocaine, opiates, and PCP, reported little change through these reporting periods and the first quarter of 2002, when the proportion of adult arrestees testing positive for any drug typically fell between 43 and 46 percent.

The following sections will present data on specific drugs of abuse in the District.

#### Cocaine and Crack

Cocaine remains the most widely abused drug in the District of Columbia, based on a number of indicators. ME data from DAWN suggest that the number of deaths associated with cocaine in Washington, DC, remained steady between 1996 and 2000. In 1996, a total of 57 cocaine-related deaths were reported; in 2000, the figure remained nearly level, at 54.

Although ME numbers remained relatively stable throughout the 1990s and 2000, DAWN ED mentions for cocaine for 2000 and 2001 were at a 4–5-year low. From 1996 onward, ED mentions peaked at 3,718 in 1998. The number dropped to 2,894 in 2001, an insignificant increase from 2000 ( $n=2,830$ ).

Between 1998 and 2001, rates per 100,000 population declined from 97 to 69, and no significant rate change occurred from 2000 to 2001 (exhibit 1). Earlier tests on annual ED cocaine rates per 100,000 from 1998 (97) to 2000 (72) do show a significant decrease (a 23.9-percent change).

Treatment admissions data suggest that abuse of powder cocaine remained at high levels between 2000 and 2001. The number of persons entering treatment for smoked cocaine (i.e., crack) decreased by approximately 11 percent, from 1,626 in 2000 to 1,450 in 2001. Crack admissions accounted for 75.4 percent of all cocaine admissions in 2001. Reports of intranasal cocaine use remained at similarly high levels between 2000 and 2001. For intranasal cocaine administration, District treatment facilities reported 448 admissions in 2000 and 474 in 2001. Excluding alcohol, primary cocaine admissions accounted for more than 41 percent of admissions for abuse of an illicit drug in 2001, down slightly from 2000 (exhibit 2).

Information from the District of Columbia Pretrial Services Agency shows that cocaine-positive urinalysis results among juvenile arrestees remained steady between the first quarters of 2001 and 2002, at less than 10 percent (exhibit 3). The percentage of adult arrestees testing cocaine-positive also remained stable between April 2001 and March 2002, at approximately 34 percent (exhibit 4).

Among the small samples of adult arrestees tested in the third quarter of 2002, provisional unweighted ADAM urine data for Washington, DC, showed that 27.3 percent of the men were cocaine-positive. More than one-half (52.9 percent) of the women also tested cocaine-positive.

Prices for crack cocaine began at a low of \$10–\$20 for a “bag” or loose “rock” of crack cocaine. In the second quarter of 2002, grams of crack sold for \$80–\$100. An ounce of crack sold for \$900–\$1,750, and a “31” (grams) and a “62” (grams) sold for \$1,000–\$1,300 and \$1,500–\$2,600, respectively. Kilograms of crack sold for \$30,000 during this reporting period.

Prices for powder cocaine varied greatly according to the level of purity. Grams of powder cocaine during the second quarter of 2002 sold for \$50–\$100, which was the same price as in fiscal year (FY) 2001; this price was cheaper than for grams of crack. An ounce of powder cocaine sold for \$600–\$2,000, depending on purity. A “31” and a “62” sold for \$1,100–\$1,200 and \$1,450–\$3,500, respectively. Kilograms of powder cocaine likewise ranged widely in price, from \$17,500 to \$35,000.

Trafficking patterns remained steady between 2001 and 2002. Often, a courier will travel to the source city, obtain a quantity of cocaine, and then return to Washington. Alternatively, a supplier will travel to Washington and set up a temporary shop for distribution. Traffickers utilize a variety of methods to transport powder cocaine, including rail, bus, and commercial package delivery. A common method of transporting drugs is the use of motor vehicles equipped with sophisticated secret compartments. At least two major seizures of multikilogram amounts of powder cocaine were made in 2001. In each of the two seizures, more than 30 kilograms of powder cocaine were found in a private motor vehicle equipped with false compartments. Law enforcement sources report that members of Dominican criminal groups are the most prominent distributors of wholesale powder cocaine in the District of Columbia. Mexican criminal organizations have also begun to distribute wholesale quantities of powder cocaine.

Trafficking patterns of powder cocaine and crack differ in the DC area, because penalties are greater for the possession and distribution of large amounts of crack than for powder cocaine. Thus, the bulk of crack cocaine consumed in the metropolitan area is brought in from Philadelphia or New York City as powder cocaine and is converted into crack. In DC, crack cocaine is most commonly distributed by “crews,” or loosely affiliated individuals from particular neighborhoods who organize themselves for the purposes of selling cocaine or other drugs. Crews are often known by the neighborhood in which they operate (e.g., “Hobart Stars” or “6200 Crew”), and they tend to control small areas of the District and sell crack on street corners and in various neighborhoods and public housing projects. The crews are also known for their violence.

Law enforcement sources suggest that involvement of senior citizens in the cocaine trade is increasing in the District. Individuals age 60 and older are reportedly being recruited as cocaine couriers, and a small minority began selling crack cocaine from their residences in public housing projects.

### Heroin

In Washington, DC, and 16 other major U.S. cities, heroin has surpassed crack as the drug associated with the most serious consequences—medically, legally, and socially (Pulse Check: Trends in Drug Abuse, April 2002).

DAWN data show 1,888 heroin ED mentions in Washington, DC, in 2001. This represents an insignificant decrease from 2000 ( $n=1,946$ ). Annual

rates per 100,000 population were steady between 2000 (49) and 2001 (45). In 2001, men continued to outnumber women by nearly twofold in the rate of ED heroin mentions per 100,000 population for the District. The increase in the rate of heroin ED mentions among those age 18–25 from 2000 (40 per 100,000) to 2001 (45) was statistically insignificant. The 35–44 age group continues to have the highest rate of heroin ED mentions, at 87 in 2001, compared with 102 in the first half of 2000.

The District reported 2,181 primary heroin admissions to publicly funded treatment programs during 2001, up from 2,121 for 2000. Heroin admissions for 2001 represented 37.9 percent of all treatment admissions and, as shown in exhibit 2, for 47.0 percent of all admissions for illicit drug abuse. As in 2000, heroin treatment admissions continued to outnumber those for cocaine. The vast majority of the heroin admissions in 2001 were African-American, male, and age 35 or older.

DAWN ME data for Washington, DC, heroin-related mentions increased between 1996 ( $n=35$ ) and 1998 (53), and decreased from 1998 to 2000 (36).

Urinalysis results from the District of Columbia Pretrial Services Agency indicate that the percentage of adult arrestees testing positive for opiates through 2001 has remained relatively steady since 1992. In the first halves of 2000 and 2001, respectively, 13 and 15 percent of adult arrestees tested opiate-positive. However, in the first quarter of 2002, opiate-positive tests hovered at 11 percent of all adult arrestees testing positive for any drug (exhibit 4). Possession with intent to distribute was the most commonly reported charge.

Data from the DMP indicate that the average purity level of heroin in the city remained steady at around 24 percent in 2000 and 2001. The 2001 figure is substantially lower than the national average of 34 percent. The national DMP price per milligram of pure heroin in 2001 averaged \$1.30, which is slightly higher than the \$1.05 per milligram of pure heroin price in Washington, DC. Across the District, street-level heroin is packaged in small, plastic, zip-lock bags; paper packets; or capsules (a recent trend) and sold for \$8, \$10, or \$20 per bag. The price of heroin depends on its purity, the number of bags purchased, and the amount of heroin in each bag. Also available are grams at \$120–\$150 (40–90 percent purity). Heroin that is reputedly unaltered with quinine and called “bone,” typically favored by intranasal users, can be purchased for \$30–\$70 per bag; purity levels of these bags fluctuate from 40 to 70 percent. Finally,

there were 771 heroin seizures (totaling 1,227 grams) in the first 11 months of 2000.

Data from the Washington/Baltimore HIDTA and ethnographic sources continue to suggest that overall use of heroin in the region has increased in the past several years. Alarming trends have developed among younger addicts, especially the use of heroin in combination with other drugs (polydrug use). A growing heroin addict population has led to a massive increase in methylenedioxymethamphetamine (MDMA or “ecstasy”) use.

Heroin remains readily available throughout the city, even as purity fluctuates from week to week. As in 2000, the scope and characteristics of individual users continue to broaden. Health educators and outreach workers report an increase in use among suburban and inner-city adults between the ages of 22 and 27. Among these young users, inhaling remains the primary route of administration.

Despite the booming real estate market and gentrification currently impacting the whole city, street-level heroin continues to be marketed and distributed in open-air drug markets. According to District narcotics officers, the traditional heroin markets still operate in the city, but recently younger persons (age 16–18) have begun selling the drug and establishing new locations throughout the city. An estimated 25–30 of these markets exist in the District, with some located along the Maryland/DC border to make heroin more accessible to suburban users. However, the great majority of the city’s heroin distribution groups are crews of young men ranging in age from their early twenties to midthirties. Because of competition for buyers, dealers continue to label their packages in order to distinguish their products (e.g., “Bin Laden,” “Holy Terror,” and “No Limit”). According to the DEA, most of the heroin sold in the District originates in South America. Also, HIDTA reports a relatively new and significant phenomenon in the District of Columbia—the emergence of Asian groups operating in the heroin market.

### Other Opiates/Narcotics

Opiates such as oxycodone (Percocet, Percodan), Tylenol with codeine, and occasionally hydro-morphone (Dilaudid) can be purchased near methadone clinics throughout the city. Addicts misuse these and other pharmaceuticals to ease the symptoms of opiate withdrawal and to heighten the effects of heroin. There were no arrests related to Dilaudid in the first half of 2001; in the first half of 2000, two arrests for possession with intent to distribute this drug were reported.

The illegal use of OxyContin, the time-release version of the painkiller oxycodone, has emerged as a substantial threat to the residents of the Washington/Baltimore region. According to the HIDTA 2001 OxyContin Report, the illegal use of this drug is both a “substantial threat” to Washington, DC, residents and a “major concern to law enforcement and health care professionals.” An official of the DEA’s regional drug diversion program notes that OxyContin abuse has increased dramatically and the drug continues to be very accessible. According to HIDTA, OxyContin has no common user demographics. DC and Maryland authorities reported users as young as 15. In the District, police officials have observed OxyContin (“OC”) sales conducted outside heroin addiction treatment facilities in the northeast area of the District. It can also be found where heroin is sold or where heroin addicts congregate, especially at the street level. Since 1998, this synthetic opiate has been linked to at least 43 deaths in southwest Virginia. Within the Baltimore/DC region, two confirmed deaths have been related to OxyContin since 2000.

According to HIDTA, after the OxyContin pill is crushed, the powder can be snorted, chewed, or dissolved and injected. The drug has also been reported to mix well in alcohol. The Prince William County, Virginia, Police Department reported addicts using a rare liquid form of the drug called Oxyfast.

HIDTA reports indicate that the majority of dealers distributing OxyContin in the region are independent, street-level pushers. The FBI has identified the District as the only area where many of the distributors are older African-American males in their fifties. According to District narcotics officers, 40-milligram tablets of OxyContin sell for \$20, and 20-milligram tablets cost \$10. While 80- and 160-milligram tablets are available, they are much harder to obtain in the District. Current OxyContin prices represent a 50-percent reduction from the previous price of \$1 per milligram. The 40-milligram tablet, which is affordable at \$20, is considered the most popular dosage unit sold in the region.

DAWN data show a total of 1,098 ED mentions of narcotic analgesics/combinations for 2001. This is a significant increase from the 672 mentions reported in 2000. ED mentions for the overall category of analgesics in 2001 totaled 2,596, a nonsignificant change from the 2,094 mentions in 2000.

The rate of analgesics ED mentions per 100,000 population remained relatively stable between 2000 (at 53) and 2001 (at 62); however, the rate for narcotic analgesics/combinations increased signifi-

cantly, from 17 in 2000 to 26 in 2001, a 54-percent change (exhibit 1).

### **Marijuana**

In 2001, marijuana ED mentions in the District totaled 2,135, compared with 2,510 in 2000. This decrease was not significant. The rate of ED marijuana mentions per 100,000 population for 2001 was 51 (exhibit 1). As in previous years, African-Americans continued to predominate among marijuana ED mentions. Rates of ED marijuana mentions per 100,000 population by age group were highest for persons age 18–19 in 2000 (204) and 2001 (223).

According to DAWN ME data, one marijuana-related drug abuse death occurred in 2000. In 2001, the ME reported no marijuana-related deaths.

Between 2000 and 2001, the total number of marijuana admissions to publicly funded treatment facilities declined 24 percent, from 484 to 367. For this time period, primary marijuana as a percentage of admissions for illicit drug abuse decreased, from 10.2 to 7.9 percent (exhibit 2). A growing concern in the District is the increasing number of Hispanic residents who cite marijuana as their drug of choice. In 2000, Hispanics accounted for only 6 percent of the admissions for marijuana abuse; this figure rose to 12 percent by 2001. Cocaine remains the most frequently mentioned secondary drug among primary marijuana treatment admissions. One-fifth of the marijuana admissions reported cocaine/crack as their secondary drug in the first half of 2001, up from 11 percent in 2000.

Data from the District of Columbia Pretrial Services Agency Urinalysis Division show a 16.4-percent decrease in marijuana-positive tests among juvenile arrestees from the first quarter of 2001 to the first quarter of 2002, when 51 percent of the juveniles tested marijuana-positive (exhibit 3). The data indicate that marijuana is the most common drug for which juvenile arrestees test positive; rarely is the presence of cocaine or phencyclidine (PCP) detected without a positive result for tetrahydrocannabinol (THC).

For the third quarter of 2002, provisional unweighted ADAM urine data for Washington, DC, showed that 28.2 percent of the men tested marijuana positive, as did 17.6 percent of the women.

According to ethnographic data, HIDTA, District of Columbia police officials, and DEA sources, marijuana continues to be abundant and easily obtained throughout the Washington, DC, metropoli-

tan region. There are reports that hydroponic marijuana is now prevalent in the District and is “extremely potent.” According to District narcotics officers, “blunts (marijuana rolled in cigar paper) are not as common” in the District as they once were. Flavored cigar papers are now the favorite for younger marijuana smokers in their early teens through midtwenties. Since 1992, adolescents and young adults in the District have been lacing marijuana cigarettes with PCP and small rocks of crack cocaine. Law enforcement sources report that clubgoers favor the more potent types of marijuana for use, together with drugs such as MDMA, lysergic acid diethylamide (LSD), and methamphetamine. Preventive efforts to reduce marijuana abuse among youth have been particularly difficult, primarily because the drug is celebrated in a manner far less frequently demonstrated in the adult world. In fact, data from a number of Federal law enforcement agencies indicate that on any given day, T-shirts, hats, and even bumper stickers adorned with marijuana leaves, and/or words such as “blunt” or “chronic” (popular street slang across the country for high-grade marijuana) can be purchased at a variety of locations in the District.

District law enforcement sources indicate that marijuana users tend to be young, African-American, male, and from lower socioeconomic groups. Of note, the District’s local child welfare and juvenile justice agencies report an increase in young female marijuana users over the past 7 years. As is the case in most metropolitan areas, marijuana use among young females is often underrepresented and/or underdiagnosed, primarily because youth courts, lockup facilities, detention centers, and the like are often ill equipped to address the needs of adolescent females. National data show that many of these females are not accorded an opportunity to participate in age-appropriate drug treatment interventions until well into their late twenties and thirties.

According to the Washington DEA Field Division, the pound price of commercial grade marijuana ranged from \$700 to \$1,400 in the first and second quarters of 2001; these prices were higher than the \$600–\$1,300 per pound reported in the third quarter of 2000. Currently, a pound of “hydro” or “kind bud” (the most potent form) sells for \$1,200–\$6,000. Smaller bags, called “dimes,” of kind bud and hydro sell for \$10–\$20 per gram, and commercial grade marijuana sells for \$5–\$10 per bag. An ounce of commercial grade sells for \$100, and an ounce of hydro or kind bud sells for approximately \$480. Marijuana prices in the District are generally thought to be the highest in the metropolitan region. This may reflect the fact that about 12 or more branches of

Federal and local law enforcement agencies patrol the District independently and in tandem.

Marijuana appears to pose a lower threat of violent crimes than other illicit drugs (e.g., cocaine and heroin). However, as local traditional dealers of cocaine and heroin continue to augment their distribution stock and pile of illicit drugs, the association of marijuana with violent crimes is increasing.

Reports indicate that much of the marijuana in Washington, DC, is grown locally (e.g., on Maryland’s Eastern Shore). However, the majority of marijuana found in the District results from commercial and Postal Service trafficking. Commonly referred to as “drip trafficking,” Postal Service conveying involves mass mailing of small amounts of marijuana in numerous packages. “Drip trafficking” offers the distinct benefit of avoiding stiff penalties and significantly reducing financial liability in the wake of aggressive legislation passed in 2000 and 2001 in the District that made distribution, intent to distribute, and possession of more than one-half pound of marijuana a felony carrying a 5-year sentence. DEA data show that Jamaican drug trafficking groups represent one of the largest subgroups involved in the importation and distribution of marijuana to the area. The two most common types of indoor-grown marijuana are hydro, which refers to plants grown in water (hydroponically), and kind bud (“bud,” or “KB”), which is grown with enhanced soil and lighting. Both hydro and kind bud are considered high-potency types of marijuana. Although they are not new types of marijuana, they have only recently become visible in the District. These types of marijuana are frequently grown in, and imported from, Canada and transported to the District via New York for wholesale distribution.

Marijuana seizure data from FY 1999 to FY 2000 show a substantial decline in the amount of the drug seized. According to the Washington Field Division of the DEA, preliminary data for December 2000 through March 2001 indicate that 19.5 kilograms of marijuana and 4.5 grams of hashish were seized during these months.

### Stimulants

The use of amphetamine-type substances, such as methamphetamine, does not appear to be a serious problem in Washington, DC, according to most data sources. However, institutional and surveillance reports from 1999 to 2002 suggest the growing use and availability of these substances. Ethnographic reports indicate that methamphetamine is used alone or in combination with alcohol, marijuana, powder

cocaine, and MDMA. User groups include homosexual men, club attendees, white-collar professionals, business owners, teenagers, and young adults. Ethnographic reports indicate that methamphetamine is used at dance and music venues that are part of the rave/club subculture. There are a few users among some lower socioeconomic groups and outlaw motorcycle groups, although most motorcycle groups in the region have been disbanded. An ethnographic respondent observed that greater numbers of users in the club scene are injecting methamphetamine, a phenomenon known locally as “pointing.” Indicator data support this claim.

For a number of years, most methamphetamine indicators have shown few problems associated with this drug in the District. ED methamphetamine mentions are so low as to often lack standard precision. There were only 24 ED methamphetamine mentions in 2001, an insignificant decrease compared with 62 in 2000. The rates per 100,000 population were as low as 2 for 2000 and 1 for 2001. The ME data show one methamphetamine-related death in 1998 and one in 2000.

There were 33 primary methamphetamine treatment admissions during 2001, compared with only 14 in 2000, more than a twofold increase over the 1-year period. In 2001, 79 percent of methamphetamine admissions were White, 14 percent were Hispanic, and 7 percent were African-American, suggesting an expanding ethnographic context of users. Nearly three-quarters (71 percent) were male. One-half of the methamphetamine admissions were age 35 and older. Another 28 percent were age 25–34, an increase in treatment cases for this age group. While it is too early to tell whether this shift is an artifact of small numbers, the ethnographic data suggest an increase in methamphetamine use in the younger rave/club subculture. Nevertheless, those entering treatment are still dominated by an older cohort of users. Corroborating ethnographic reports, more than one-quarter (28.6 percent) of methamphetamine treatment admissions reported injecting as their main route of administration, although intranasal use remained the main mode of ingesting methamphetamine.

DEA reports for the second quarter of 2002 indicate that prices for methamphetamine have varied over the past few years. During the recent reporting period, methamphetamine continued to be sold for \$100 per gram, which is similar to gram prices in 2001, but lower than the gram price in 2000 (\$150). Ounce prices in the second quarter of 2002 in the District ranged from \$1,100 to \$2,900, which is a much wider range and is less expensive than the ounce prices of \$2,700 in 2001 and \$2,400–\$2,800 in 2000. Pounds

of methamphetamine sold for \$13,000 in the District. In Virginia, pounds sold for \$10,000–\$12,500 in Richmond and \$11,500–\$17,000 in Roanoke, approximately one-half of the cost (i.e., \$25,000–\$28,000, respectively) in these areas during 2001. This may be a troublesome development. However, most methamphetamine is sold in DC in smaller quantities and at higher retail prices for users: one-half gram may cost \$60–\$140, and one-half ounce may cost \$1,000.

There are a number of gradations in the quality of methamphetamine, largely related to the substances and techniques used in the manufacturing process. The DEA reports that most methamphetamine available in DC is of 70-percent purity and is produced through the hydriodic acid/red phosphorus method that yields high-quality methamphetamine. This type of methamphetamine is sent from the Southwest and California through Mexican drug trafficking organizations. Methamphetamine of lower quality produced by the phenyl-2-propanone (p2p) method can be found, though in lesser quantities, and it is associated with distribution by motorcycle gangs.

The DEA reports that Washington, DC, is a transshipment center for trafficking methamphetamine by Mexican drug trafficking organizations. It arrives by automobile; with couriers who body-carry the drug on planes, trains, and buses; and through express mail services. During the first quarter of 2001, police seized 70 grams in a package mailed from California, and couriers have been identified by the DEA as carrying several pounds on commercial airlines from California to the DC metropolitan area.

### Hallucinogens

LSD continues to be used in the District of Columbia, although its use appears to be decreasing. Ethnographic reports suggest that its popularity has not waned as much as its availability. According to the DEA, LSD is sold in the form of blotter sheets of paper soaked in the drug, as a liquid placed on sugar cubes or candy or dropped directly on the tongue from breath-drop and eye-drop bottles, and in larger multigram quantities as crystal LSD. When diluted or dissolved, 1 gram of crystal LSD yields 10,000 dosage units. Blotter sheets, which are perforated into one-quarter inch-square individual doses, are the most common form of LSD available. They are sold by the tab, in “sheets” (100 tabs), and in “cubes” (10 sheets).

LSD is used largely by high school- and college-age individuals at area raves, concerts, and nightclubs. LSD is commonly sold and used alongside various

club drugs. DEA investigations also cite accounts of young adults and clubgoers practicing “candy flipping,” or mixing ecstasy and LSD.

The total number of LSD-related ED mentions in the District decreased significantly between 2001 (45 mentions) and 2000 (25). There has been a general drop in ED mentions since 1995 (176). The reported LSD-related mentions per 100,000 population were 1 for both 2000 and 2001.

The DEA quotes LSD prices during the second quarter of FY 2002 at approximately \$2–\$5 per dose, which is \$2–\$3 less than the cost of individual doses in FY 2000. A sheet of 100 blotter doses sold for \$200–\$300, as opposed to \$800 in 2001. A book of LSD, which is 1,000 dosage units, sold for \$1,300–\$1,750. Three LSD seizures were reported in the District during 1999, and four were reported during the first 10 months of 2000. The DEA has identified California-based suppliers of the drug who ship it to the DC area in private automobiles and through express mail services.

PCP ED mentions increased significantly from 2000 (317) to 2001, when there were 525 mentions. In 2000, the annual rate increased significantly from 1999, rising from 5 to 8 mentions per 100,000 population. In 2001, the number increased significantly to 13 mentions per 100,000 population. Much of this increase is associated with an increase in younger users age 18–25.

Treatment admissions to publicly funded programs for primary abuse of PCP increased from 43 admissions in 2000 to 105 in 2001, a 144-percent increase. The proportion of PCP admissions to total admissions also increased, from 0.7 percent in 2000 to 1.8 percent in 2001. These admissions showed a strong demographic pattern: the majority were male (84 percent), age 25–34 (91 percent), and African-American (100 percent). PCP and PCP-combination ME mentions have varied from 1 to 2 between 1996 and 2000. There was only one 1 mention in 2000.

The District of Columbia Pretrial Services Agency data for juveniles reveal PCP trends similar to those for adults. Between 1998 and 2000, PCP-positive tests increased from 3 to 10 percent, a decrease from 18 percent in 1995 (exhibit 3). However, the data by quarter for 2001 may reveal an alarming trend. During the first quarter of 2001, 11 percent of juveniles tested PCP-positive, nearly double the 6 percent level in the first quarter of 2000. During the second and third quarters of 2001, 15 percent of juveniles tested PCP-positive. From February to

April 2002, the rate of juveniles testing positive was more volatile, fluctuating from 12 to 9 to 15 percent.

According to District of Columbia Pretrial Services urinalysis data, the percentage of adult arrestees testing PCP-positive increased markedly during the first half of the 1990s, peaking at 14 percent in 1995. The percentage then declined until 1998, dipping to only 2 percent (exhibit 4). More recently, the percentage of adult arrestees testing PCP-positive has been steadily increasing. During 2000, the percentage of adult arrestees testing PCP-positive (9 percent) was nearly back to the 1994 level. For more recent time periods, the percentage of positive arrestees increased from 9 percent in the first half of 2000 to 13 percent in the first quarter of 2002.

For the third quarter of 2002, provisional unweighted ADAM urine data for Washington, DC, showed that 29.4 percent of the men tested PCP-positive, as did 12.7 percent of the women.

DEA investigations corroborated ethnographic reports that users generally combine PCP with marijuana. Within the District, PCP is used primarily by young African-American males and lower income to lower middle-income Whites, some of whom have ties to motorcycle gangs. However, recent DEA intelligence indicates an expanding interest in the drug among participants in the city’s club/rave scene. Club/rave attendees have shown a growing interest in PCP because its effects are similar to, though stronger than, those of ketamine, which is also a popular drug in the club/rave scene. It should be noted, however, that many manufacturers of ecstasy will use PCP as a cheap adulterant or even substitute it in their tablets, which the user unknowingly ingests.

According to the DEA, PCP prices dropped markedly to \$300–\$600 per ounce during the second quarter of 2002, compared with \$700–\$950 per ounce during the second and third quarters of FY 2001. These current prices are a return to the prices of the past few years: during 1998, 1999, and the fourth quarter of FY 2000, PCP was available for approximately \$350 per ounce. Government reports indicate that PCP is being sold in gallons for \$18,000–\$22,000. Ethnographic data indicate that PCP is often marketed on the street as a marijuana-PCP combination, which is sold in aluminum foil packages for \$15–\$25. “Dippers,” or tobacco cigarettes dipped in liquid PCP, sell on the street for \$25 each. Dippers are so potent that more than one person can get high from one cigarette. They are used primarily by persons in their late teens and early twenties and use is most prevalent in the southeast quadrant of the District. The MPD Narcotics

Unit reports that some dealers are putting ether on marijuana to make it smell like PCP.

DEA data indicate that the number of PCP seizures rose from 39 in 1999 to 74 in the first 10 months of 2000. PCP is imported to the District from surrounding suburbs, as well as from Cleveland, Newark, Philadelphia, and New York. Sources of supply differ somewhat by user group. Young African-American males continue to have connections to southern California-based manufacturers, while other user groups (motorcycle gangs, rave/club attendees) tend to have more local sources of supply.

### Club Drugs

MDMA (ecstasy) continues to be the most prominently abused club drug in the Washington, DC, metropolitan area. Although MDMA indicators are very low, ED mentions have been increasing. There were 110 mentions in 2001, an insignificant increase from 78 mentions in 2000. The rate of ED mentions per 100,000 population for 2001 was 3, compared with 2 in 2000.

Ethnographic reports suggest that MDMA remained prevalent in the District's gay and nightclub scenes in 2002. Law enforcement reports show that MDMA trafficking increased dangerously in 2002. Interview and official information from the NDIC suggests that wholesale trafficking in MDMA increased among organized criminal groups, Asian groups in particular. At the same time, retail trafficking remained steady among middle- and upper middle-class college-age Whites who are not part of an organized criminal group. However, law enforcement officials have noted that crews who sell drugs in street drug markets have started distributing MDMA and have introduced a new level of violence associated with it. Involvement of military personnel in shipping MDMA from overseas and from bases in the United States became apparent in 2002.

Law enforcement data also suggest that in 2002, use of MDMA spread beyond the rave scene into more established drug markets and was adopted by users of other drugs such as powder cocaine. MDMA-related crimes are increasing at festive nightclub and rave venues as drug trafficking organizations become increasingly involved in the MDMA trade. In 2000 and 2001, a number of large MDMA seizures occurred in the DC area. In one instance, a suburban ring that had sold 200,000 tablets of MDMA was dismantled.

Often, what is sold as MDMA or ecstasy is adulterated with PCP, methamphetamine, and other drugs, or it

may contain only these other drugs. The price remains at \$25–\$30 per tablet, and the tablets often contain 1 of nearly 100 different logos (e.g., “smiley faces,” the “Mitsubishi” label, “four-leaf clover,” and others).

While not as common as use of MDMA, use of the surgical anesthetic ketamine remained common in nightclub and dance scenes in DC during 2002. Ketamine ED mentions remained low, but increased from one in 1995 to seven in 2000. Ketamine ED mentions for 2001 were too low for precision estimates. Ketamine ED mentions per 100,000 population were zero for 2000.

Law enforcement officials claim that ketamine is smuggled into the District from Miami by Israeli and Russian distributors, or it may be obtained from break-ins at veterinary clinics. It is sold at nightclubs and dances. The price of a bottle of liquid ketamine declined from \$100 in FY 2000 to \$60–\$89 in FY 2001.

Gamma hydroxybutyrate (GHB) remained a drug of abuse in the District in 2002, although its use appears limited. GHB ED mentions increased steadily from 1998 to 2000, but decreased insignificantly between 2000 and 2001 (from 24 to 15 mentions). ED mentions per 100,000 remained low, at 1 in 2000 and zero in 2001. At least one fatality in the DC metropolitan area directly involved GHB in 2001. GHB retailed at \$10–\$25 per dosage unit (a capful) in 2002.

### INFECTIOUS DISEASES RELATED TO DRUG ABUSE

Washington, DC, remains a major AIDS epicenter. As of December 2001, 13,796 AIDS cases had been reported in the District of Columbia and 24,549 cases of AIDS had been reported in the greater metropolitan region. Washington, DC, reported the highest rates in the Nation of AIDS per 100,000 people among adults and adolescents, at 275.7 and 92.0, respectively.

In DC, AIDS disproportionately affects Black males. The percentage of both reported and diagnosed cases in this group is considerable higher than those reported for Whites, Hispanics, and Asian/Pacific Islanders and Native Americans. AIDS cases are on the rise among women in DC. The annual AIDS rate for women in the District of Columbia is 92.0 per 100,000 population, compared with 9.1 per 100,000 the United States.

The individuals who are at risk for contracting HIV/AIDS are those who participate in risky behaviors in communities where there is a high

prevalence of HIV infection. Risky behaviors include having unprotected sex, having sex with multiple partners, and injection drug use. When an individual's judgment is impaired by injection drug use, or the use of any drug for that matter, he or she is at risk for HIV infection. That risk is then compounded by the prevalence of infection in the community.

The proportion of cases attributable to injection drug use continues to grow. Among cases reported as of December 31, 2001, 26.6 percent were attributed to injection drug use. Data for 2001 indicate that while only 9 percent of White males with AIDS reported injection drug use as their primary exposure mode, more than 30 percent of Black and Hispanic males reported this mode of exposure. Diagnosed AIDS cases

among Black injection drug users (IDUs) have also been increasing faster among men than among women.

Between 1998 and 2001, injection drug use among males and females accounted for 17 percent and 10 percent, respectively, of total diagnosed AIDS cases in the District of Columbia (exhibit 5). Furthermore, the shift in the epidemic toward non-White people and IDUs is reflected in cases from 1998 through 2000, in which Blacks constituted nearly 100 percent of male and female cases involving injection drug use. Additional information on reported and diagnosed AIDS cases from 1998 to 2001 is presented in exhibit 5. As shown, one-third of the diagnosed cases are attributable to men who have sex with men (MSM), with another 2 percent involving MSM/IDUs.

---

*For inquiries concerning this report, please contact Susanna Nemes, Ph.D., c/o Danya International Inc., 8737 Colesville Road, Suite 1200, Silver Spring, Maryland 20910, Phone: 240-645-1137, Fax: 301-565-3710, E-mail: <snemes@danya.com>.*

**Exhibit 1. Rate of DAWN ED Mentions Per 100,000 Population for Selected Drugs in Washington, DC: 1996–2001**

Drug	1996	1997	1998	1999	2000	2001
Cocaine/Crack	104	85	97	81	72	69
Heroin	41	45	55	46	49	45
Marijuana/Hashish	58	63	62	65	64	51
PCP/PCP Combinations	9	6	4	5	8	13
Benzodiazepines	32	29	28	23	21	22
Narcotic Analgesics/ Combinations	20	21	19	18	17	26

SOURCE: DAWN, OAS, SAMHSA

**Exhibit 2. Percentage of Primary Treatment Admissions for Major Illicit Drugs (Excluding Alcohol) in Washington, DC: 1997–2001**

Drug	1997	1998	1999	2000	2001
Cocaine/Crack	37.0	46.0	47.0	43.6	41.4
Heroin	32.0	35.0	37.0	44.6	47.0
Marijuana	12.0	18.0	16.0	10.2	7.9
Stimulants	0.0	0.0	0.0	0.3	0.7

SOURCES: Publicly funded treatment centers and, for 2000 and 2001, TEDS, SAMHSA

**Exhibit 3. Percentage of Juvenile Arrestees Testing Positive for Selected Drugs in Washington, DC: 1995–1st Quarter 2002**

Drug	1995	1996	1997	1998	1999	2000	1st Quarter 2001	1st Quarter 2002
Marijuana	58	62	63	63	64	61	61	51
PCP	18	7	7	3	7	10	11	12
Cocaine	4	6	6	8	7	6	4	7

SOURCE: District of Columbia Pretrial Services Agency

**Exhibit 4: Percentage of Adult Arrestees Testing Positive for Selected Drugs in Washington, DC: 1996–1st Quarter 2002**

Drug	1996	1997	1998	1999	2000	1st Half 2001	1st Quarter 2002
Cocaine	41	39	43	39	34	34	33
Opiates	11	11	11	12	10	15	11
PCP	5	4	2	6	9	13	13

SOURCE: District of Columbia Pretrial Services Agency

**Exhibit 5. District of Columbia Reported and Diagnosed AIDS Cases by Gender, Race/Ethnicity, Age, and Exposure: 1998–2001**

Characteristic	Reported		Diagnosed	
	Number	Percent	Number	Percent
Gender				
Adult male	1,954	73	1,590	71
Adult female	735	27	624	28
Pediatric	16	1	13	1
Total	2,705	100	2,227	100
Race/Ethnicity				
White	353	13	242	11
Black	2,231	82	1,880	84
Hispanic	103	4	90	4
Asian/Pacific Islander	14	1	11	1
Undisclosed/Unknown	4	0	4	0
Total	2,705	100	2,227	100
Age Group				
0–12	15	1	12	1
13–19	15	1	15	1
20–29	370	14	274	12
30–39	1,050	39	846	38
40–49	898	33	767	34
50 and older	357	13	313	14
Total	2,705	100	2,227	100
Mode of Exposure				
MSM	983	36	740	33
IDU/MSM	54	2	40	2
Male IDU	478	18	389	17
Female IDU	290	11	228	10
Male/heterosexual contact	219	8	201	9
Female/heterosexual contact	335	12	287	13
Perinatal	15	1	12	1
Unknown/other	331	12	330	15
Total	2,705	100	2,227	100

SOURCE: District of Columbia Department of Health, Division of Epidemiology, Administration for HIV/AIDS

---

Epidemiology of Drug Abuse:

Area Papers

---



## Drug Abuse Warning Network Update

Judy Ball, Ph.D., M.P.A.,<sup>1</sup> and Lori Ducharme, Ph.D.<sup>2</sup>

CEWG members were provided with an overview of the redesign of DAWN emergency department and mortality systems, inviting support of CEWG members in the effort. The process has begun through recruitment of communities and building on community leadership. The initiatives will be launched on January 1, 2003, and phased in through 2006. The new DAWN emergency department (ED) system will cover the entire Nation by 2006, adding at least 27 metropolitan statistical areas (MSAs) to the current 21. Proposed areas are listed in exhibit 1. The stratified probability sample will include about 900 short-term, general, non-Federal hospitals that operate 24-hour emergency departments. New data collection forms have been approved, the definition of a “case” has been expanded, all ages will be covered, and mentions will be expanded to include six drugs and alcohol. Health information currently lacking in DAWN will be gathered. New cases will include, for example, presenting complaint, diagnoses, case narrative, underage drinking, drug misuse, malicious poisoning, and adverse effects associated with prescription and over-the-counter drugs. Data will continue to be collected from retrospective review of medical charts. Trained reporters

will submit data electronically; the system will alert them if any entries represent inconsistent data. Electronic reporting is expected to be fully implemented by February 2004. These and other changes will improve the quality of DAWN data. Improvements in precision of the ED estimates are expected, based on the expanded sample. ED data prior to 2002 will not be comparable to the new data; thus, new trends will begin in 2003.

The DAWN mortality system will also be revised. All jurisdictions—approximately 300—in the 48 target areas will be recruited, rather than a nonrandom subset (as is currently the case). New mortality data items will include cause of death and place of death. Selected statewide systems may also be added.

More timely and complete reporting of more descriptive data—by more facilities in more metropolitan areas—will improve the utility of DAWN for the CEWG and other audiences. Of additional note, for the first time, the DAWN mortality and morbidity systems will be able to be linked, through special analyses of data collected in metropolitan areas with full ED and ME participation.

---

*For inquiries concerning this report, please contact Judy K. Ball, Ph.D., M.P.A., Office of Applied Studies, Substance Abuse and Mental Health Services Administration, 5600 Fishers Lane, Room 16-105, Rockville, MD 20857, Phone: 301-443-1437, Fax: 301-443-9847, E-mail: <jball@samhsa.gov>.*

---

<sup>1</sup> Judy Ball is affiliated with the Office of Applied Studies (OAS), Substance Abuse and Mental Health Services Administration (SAMHSA), Rockville, Maryland.

<sup>2</sup> Lori Ducharme is affiliated with the DAWN Facility Relations team, Westat, Rockville, Maryland.

**Exhibit 1. DAWN ED Sites in the Proposed Design<sup>1</sup>**

**Northeast**

Boston  
Buffalo  
**Hartford**  
**Nassau-Suffolk**  
**New Haven**  
New York  
Newark  
Philadelphia  
**Pittsburgh**  
**Providence**  
**Springfield (MA)**

**South**

Atlanta  
Baltimore  
**Birmingham**  
Dallas  
**Forth Worth**  
**Houston**  
**Knoxville**  
**Louisville**  
Miami  
**Mobile**  
**Nashville**  
New Orleans  
**San Antonio**  
**Tampa**  
Washington, DC

**Midwest**

Chicago  
**Cincinnati**  
**Cleveland**  
Detroit  
**Indianapolis**  
**Kansas City**  
Minneapolis/St. Paul  
**Omaha**  
St. Louis  
**Wichita**

**West**

Denver  
**Honolulu**  
**Las Vegas**  
Los Angeles  
**Orange County**  
Phoenix  
**Riverside/San Bernardino**  
**Salt Lake City**  
**San Diego**  
San Francisco  
Seattle  
**Tucson**

<sup>1</sup> Sites in boldface type are proposed new sites.

SOURCE: DAWN, presentation at the December 2002 CEWG meeting

---

Epidemiology of Drug Abuse:

Area Papers

---



# American-Canadian Differences in Illicit Drug Use Among College Students: Some Preliminary Findings

Edward M. Adlaf,<sup>1</sup> Meichun Kuo,<sup>2</sup> Louis Gliksman,<sup>1</sup> Andree Demers,<sup>3</sup> Henry Wechsler<sup>2</sup>

## ABSTRACT

*Comparisons between the American 1999 College Alcohol Survey and the 1998 Canadian Campus Survey show that use of methamphetamine, cocaine, crack, and MDMA is higher in the United States than in Canada, while cannabis use is similar in the two countries. These differences are generally true, regardless of age, gender, or residential status of student, although some cross-national interactions require further investigation.*

## INTRODUCTION

Although the United States conducts several surveys to estimate illicit drug use among college students (Gledhill-Hoyt et al. 2000; O'Malley and Johnston 2002), such national data were not available in Canada until the 1998 Canadian Campus Survey (Gliksman et al. 2000). Thus, for the first time, there is the opportunity to compare directly the extent and nature of cross-national differences in illicit drug use. To this end, beginning in 2000, an informal program of collaborative work was begun by Henry Wechsler and his colleagues at the Harvard School of Public Health, colleagues at the Centre for Addiction and Mental Health, and those at the University of Montreal.

Although both samples represent similarly aged undergraduates in each country, there are some important differences in the two post-secondary educational systems. First, although participation in higher education has historically been higher in the United States than in Canada, higher education graduation rates, based on the proportion of 22-year-olds graduating with a university degree, are similar between the two countries, with 26 percent of Americans and 25 percent of Canadians graduating. Second, in contrast to the United States, where there are many well-known, large private universities, in Canada, universities are publicly funded and regulated by provincial governments. Thus, while Canadian universities share many political and

economic attributes with State universities in the United States, they also have characteristics in common with the large private institutions. This paper presents preliminary data comparing illicit drug use between the 1998 Canadian Campus Survey (CCS) and the 1999 College Alcohol Study (CAS) in the United States.

## HIGHLIGHTS OF THE STUDY

### Data

To fully evaluate cross-national differences, the two surveys were pooled into a single data file containing 19,078 students under age 25 (12,344 U.S. and 6,734 Canadian) from 135 universities (119 U.S. and 16 Canadian). The two samples did not differ significantly regarding gender or age group. However, the samples did differ significantly regarding the three categories of residence status. American undergraduates were significantly more likely than Canadian undergraduates to reside on campus (41.3 percent vs. 16.5 percent) and, consequently, were less likely to reside with parents off campus (11.9 percent vs. 51.0 percent). American students were also more likely to reside off campus without family than were Canadian students (46.8 percent vs. 32.5 percent) (see Kuo et al., 2002, for further details). Specific details of the two surveys are as follows.

### College Alcohol Study

For this analysis, the 1999 CAS data are based on a nationally representative sample of 119 4-year colleges located in 40 States and the District of Columbia. Two-thirds of the colleges sampled are public institutions, while one-third are private. Forty-four percent of the schools have an enrollment of over 10,000 students, while 23 percent enroll 5,001–10,000 students and 34 percent have fewer than 5,000 students. About two-thirds are located in an urban or suburban setting, and one-third are situated in small towns or rural settings. Fifteen percent have a

<sup>1</sup> Edward M. Adlaf and Louis Gliksman are affiliated with the Centre for Addiction and Mental Health, Toronto, Ontario.

<sup>2</sup> Meichun Kuo and Henry Wechsler are affiliated with the Harvard School of Public Health, Boston, Massachusetts.

<sup>3</sup> Andree Demers is affiliated with the University of Montreal, Montreal, Quebec.

religious affiliation. Five percent enroll only females. Between February and April 1999, 26,775 questionnaires were mailed, of which 23,751 were deemed eligible. A total of 14,138 students returned questionnaires (a 60-percent response rate). The response rate varied between 40 and 83 percent among the 119 colleges.

#### *Canadian Campus Survey*

The Canadian university system, which represents approximately 474,000 students, comprises about 50 institutions. Universities are generally publicly funded and have no restrictions based on gender or religious affiliation; Greek organizations are rare (less than 2 percent of students reside in fraternities or sororities). The postsecondary education system in Canada includes universities, typically degree-granting institutions, and colleges or community colleges, typically nondegree-granting institutions. With the exception of Ontario and Quebec, Canadians typically matriculate into a university after 12 years of schooling, at about age 18. In Ontario and Quebec, students typically enter a university after an additional year of secondary school, at age 19.

The 1998 CCS employed a stratified two-stage cluster selection of students enrolled in full-time, undergraduate studies at accredited universities during the 1998–99 academic year. The sample was stratified according to five regions: British Columbia; the prairie provinces (Manitoba, Saskatchewan, and Alberta); Ontario; Quebec; and the Atlantic provinces (Newfoundland, Prince Edward Island, Nova Scotia, and New Brunswick). Four universities per region were initially selected, with probability proportional to size. In total, 23 universities were approached to participate (including 3 replacements), of which 16 participated. Within each university, 1,000 students were randomly selected with equal probability, regardless of year and field of study. The sample of 16 universities represents a national sample of all Canadian universities offering undergraduate degrees. Eight of the 16 universities have enrollments of 10,000 or more students, 6 have enrollments of between 5,000 and 10,000, and 2 have enrollments of less than 5,000 students. Eleven are English institutions, 3 are Francophone, and 2 are bilingual. As is the case for Canadian universities, none restrict attendance according to religion or gender (the proportion of males at the campus level varies between 30 percent and 45 percent). Sixteen thousand questionnaires were mailed, of which 15,188 were deemed eligible mailings. Four mailings were employed during a 5-week period, beginning October 30, 1998. A total of 7,800 eligible and usable

completions were returned, for a 51-percent student completion rate.

#### **Measures**

Assessed were the lifetime and past-12-month prevalence of several drug-use measures: cannabis (CAS: “marijuana [or hashish]”; CCS “cannabis [marijuana, grass, pot, hash, hash oil, etc.]”), methamphetamine (CAS: “amphetamines [prescription-type stimulant like speed, uppers, ups]”; CCS: “methamphetamines [speed, etc.]”), cocaine (CAS: “other forms of cocaine [other than crack]”; CCS: “powder cocaine [coke, snow, blow, etc.]”), LSD (CAS: “LSD”; CCS: “LSD [acid, barrels, blotters, etc.]”), other hallucinogens (CAS: “other psychedelics or hallucinogens like mushrooms, mescaline or PCP”; CCS “hallucinogens [mescaline, magic mushrooms, mesc, etc.]”), and ecstasy (CAS: “Ecstasy [MDMA]”; CAS “Ecstasy”). In the CAS sample, original responses were as follows: (1) never used, (2) used, but not in past 12 months, (3) used, but not in past 30 days, (4) used in past 30 days. Lifetime use was coded as values 2 to 4 to represent “yes,” and past-12-month use was coded as values 3 and 4 to represent “yes.” In the CAS sample, original responses were as follows: (1) never used, (2) used in life, but not in past 12 months, (3) used in past 12 months, but not since September, (4) used since September. Lifetime use was coded as values 2 to 4 to represent “yes” and past-12-month use was coded as values 3 and 4 to represent “yes.”

#### **Results**

Exhibit 1 shows lifetime and past-year prevalence of the six drug use measures. Ignoring other factors, lifetime prevalence is significantly higher in the United States than in Canada for methamphetamine (8.1 vs. 5.2 percent), cocaine (6.7 vs. 3.8 percent), crack (2.2 vs. 0.7 percent), and ecstasy (8.9 vs. 4.2 percent), while use is higher in Canada for hallucinogens (18.4 vs. 13.3 percent). Lifetime use does not vary between the two samples for cannabis. A similar pattern emerges for past-year use: rates are higher in the United States than in Canada for methamphetamine (3.9 vs. 1.8 percent), cocaine (3.8 vs. 1.6 percent), crack (0.9 vs. 0.2 percent), LSD (4.0 vs. 2.0 percent), and ecstasy (5.6 vs. 2.5 percent), and lower for hallucinogens (6.2 vs. 8.7 percent). Again, past-year use of cannabis was similar between the two samples.

Briefly, the univariate subgroup estimates in exhibit 2 show the following. Generally, there are similar gender differences between the two countries, al-

though the U.S. differences are more significant (for 5 of 6 drugs), largely because of the larger sample size. Still, the Canadian gender differences appear weaker. Age differences are stronger in the United States than in Canada (for 5 of 6 drugs). Notably, hallucinogen use is higher in Canada than in the United States for both age groups. The residence effect is similar in significance for both countries, with all six drugs varying by residence status. The association here becomes more involved. Most notably, although use of cannabis does not differ substantially between countries, gender, or age, residence differences emerged. For cannabis use, Canadian students living on campus appear to report greater use than their American counterparts (36.2 vs. 29.6 percent), and this difference holds for those living with parents as well (24.8 vs. 16.1 percent). Those living off-campus with family show no difference in use between the two countries.

#### CONCLUSIONS

Many of the cross-national differences noted among college students have also been observed among younger students. Most notably, rates of cannabis use have been shown to be similar between American and Canadian 10th- and 12th-graders, while rates of hallucinogen use were higher among Canadian students (Adlaf 2002). Still, unlike the college comparison, lifetime differences in the use of methamphetamine, cocaine, crack, and ecstasy were not evident among 10th- and 12th-graders in 2001. Possibilities for cross-national differences varying across populations may be related to methodological differences (e.g., mail vs. classroom administration, reporting differences) or to cohort differences (e.g., the college samples were born between 1978 and 1981, whereas the school sample was born between 1984 and

1986). Future research needs to further evaluate the nature of cross-national differences in the association between residence and illicit drug use and assess whether cross-national differences in drug-related attitudes and beliefs and availability of drugs explain some of these differences.

#### REFERENCES

- Adlaf, E.M. Highlights from the 2001 Ontario Student Drug Use Survey, *Epidemiological Trends in Drug Abuse. Community Epidemiological Work Group, December 2001: Volume II: Proceedings* (NIH Publication No. 02-5110. Bethesda: National Institutes of Health, 2002, pp. 213–217.
- Gledhill-Hoyt, J.; Lee, H.; Strote, J.; and Wechsler, H. Increased use of marijuana and other illicit drugs at U.S. colleges in the 1990s: Results of three national surveys. *Addiction* 95(11):1655–1667 (2000).
- Glikzman, L.; Demers, A.; Adlaf, E.M.; Newton-Taylor, B.; and Schmidt, K. *Canadian Campus Survey 1998*. Toronto: Centre for Addiction and Mental Health, 2000.
- Kuo, M.; Adlaf, E.M.; Lee, H.; Glikzman, L.; Demers, A.; and Wechsler, H. More Canadian students drink but American students drink more: Comparing college alcohol use in two countries. *Addiction* 97(12): 1583–1592 (2002).
- O'Malley, P.M., and Johnston, L.D. Epidemiology of alcohol and other drug use among American college students. *Journal of Studies on Alcohol, Supplement No. 14*: 23–39 2002.

---

*For inquiries concerning this report, please contact Edward M. Adlaf, Ph.D., Research Scientist and Head, Life Course Studies Centre for Addiction and Mental Health, 33 Russell Street, Toronto, Ontario, M5S 2S1 Canada, Phone: 416-535-8501 ext. 4506, Fax: 416-595-6899, E-mail: <edward\_adlaf@camh.net>.*

**Exhibit 1. Lifetime and Past-Year Prevalence of Illicit Drug Use Among United States and Canadian Undergraduates**

Drug		U.S. (N=12,344)		Canada (N=6,734)		Wald p
		Percent	CI	Percent	CI	
Cannabis	Lifetime	45.6	42.5–48.7	45.6	40.9–50.4	.995
	Past 12 months	29.5	26.8–32.3	29.9	26.5–33.6	.835
Methamphetamine	Lifetime	8.1	7.1–9.2	5.2	4.3–6.2	<.001
	Past 12 months	3.9	3.2–4.7	1.8	1.5–2.3	<.001
Cocaine HCl	Lifetime	6.7	5.8–7.6	3.8	2.9–5.0	<.001
	Past 12 months	3.8	3.2–4.5	1.6	1.3–2.0	<.001
Crack	Lifetime	2.2	1.8–2.6	0.7	0.5–1.0	<.001
	Past 12 months	0.9	0.7–1.1	0.2	0.2–0.3	<.001
LSD	Lifetime	10.6	9.3–12.1	11.4	9.2–14.2	.574
	Past 12 months	4.0	3.3–4.8	2.0	1.4–2.8	<.001
Hallucinogens	Lifetime	13.3	11.7–15.0	18.4	15.7–21.5	.002
	Past 12 months	6.2	5.3–7.3	8.7	7.2–10.4	.009
Ecstasy	Lifetime	8.9	7.6–10.4	4.2	3.3–5.4	<.001
	Past 12 months	5.6	4.5–6.9	2.5	1.8–3.6	<.001

SOURCE: 1999 College Alcohol Survey and 1998 Canadian Campus Survey

**Exhibit 2. Past-Year Prevalence of Illicit Drug by Gender, Age, and Residence Among United States and Canadian Undergraduates**

Variable	Cannabis		Meth		Cocaine		LSD		Hallucino-gens		MDMA	
	U.S.	Can.	U.S.	Can.	U.S.	Can.	U.S.	Can.	U.S.	Can.	U.S.	Can.
Gender	***	ns	***	ns	***	ns	***	ns	***	ns	ns	ns
Male	31.8	31.3	4.5	2.3	4.8	1.6	5.2	2.5	8.3	9.7	6.0	2.8
Female	27.7	28.8	3.4	1.5	3.1	1.6	3.1	1.5	4.8	7.9	5.3	2.3
Age	**	ns	ns	ns	***	ns	***	ns	*	ns	***	ns
Age <21	31.2	29.4	4.1	1.8	3.1	1.4	4.7	2.4	6.9	9.1	6.3	2.4
Age 21+	27.1	30.4	3.6	1.9	4.8	1.8	3.0	1.6	5.3	8.3	4.5	2.6
Residence	***	***	**	***	***	***	***	***	***	***	***	**
On-campus	29.6	36.2	3.8	2.4	2.4	1.9	4.2	3.8	6.2	11.8	5.2	2.4
Parents	16.1	24.8	2.0	1.0	2.7	0.6	1.8	1.0	3.1	5.6	3.2	1.5
Off-campus	34.2	35.2	4.7	3.0	5.6	3.1	4.6	2.6	7.4	12.1	6.8	4.3

Notes: \* p<.05; \*\* p<.01; \*\*\* p<.001; ns=not significant at p<.05

SOURCE: 1999 College Alcohol Survey and 1998 Canadian Campus Survey

# Drug Use and Abuse in Canada: Review of National Data and Update on the Canadian Community Epidemiology Network on Drug Use (CCENDU)

Colleen Anne Dell, Ph.D.<sup>1</sup>

## 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. One of the data sources, the 2001 Uniform Crime Report Survey, showed relative stability in the rate of total drug offenses, from 19.8 per 10,000 population in 2000 to 19.7 in 2001. In 2001, cannabis charges represented the majority of drug offenses for adult males (71 percent) and adult females (62 percent). More than one-quarter (27 percent) of the female offenders and 21 percent of the male offenders involved (or were associated with) cocaine. Indicators showed that drug abuse patterns differed by area. For example, based on indicators, crack (injection and smoking) was the illicit drug of choice on the street in Toronto. An increase in methamphetamine indicators in Vancouver may be related to the methamphetamine problem in the United States in Washington and California. In Halifax, 80 percent of the treatment clients in a 2001 survey reported using cocaine, benzodiazepines, and/or opiates. It was reported that there was a strong presence of rave drugs in St. John's, compared with 3 years ago.*

Twelve urban centers currently participate in CCENDU to varying degrees, and additional sites are under development. Despite ongoing funding concerns, site reports were prepared in 2002 for Ottawa, Winnipeg, Fredericton, Vancouver, Toronto, and Regina (interim report). (The reports are available at <<http://www.ccsa.ca/ccendu/index.htm>>.) The objective of this report is twofold: to provide an update on the CCENDU network and to provide the most current national data and select site-level data available. The report concludes with a description of plans being undertaken to improve the network's monitoring capabilities.

## Data Sources

Each CCENDU site collects, collates, and interprets data and information in eight major drug use areas (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] and acquired immunodeficiency syndrome [AIDS] and hepatitis C, which includes injection drug use and needle exchange information). National data, including survey data, is accessed and disaggregated in the six indicator areas to the local sites when possible.

## INTRODUCTION

### Area Description

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, 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."

### National Surveys

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 1994 Canada's Alcohol and Other Drugs Survey (Statistics Canada); 1994-95 National Longitudinal Survey of Children and Youth (Statistics Canada); 1994-95/1996-97/1998-99 National Population Health Survey; 1998 Canadian Campus Survey; and 2000 Canadian Community Health Survey.

<sup>1</sup> The author is affiliated with the Canadian Centre on Substance Abuse and the Department of Sociology and Anthropology, Carleton University. The CCENDU's Research Officer, Karan Garabedian, assisted with the data collection and analysis in this report.

*Other National Data Sources*

Following CCENDU's data categorization system by indicator type, several key national data sources are used in this report. They are prevalence sources (national surveys identified above); treatment sources (Residential Care Facilities Survey, Statistics Canada); law enforcement sources (Uniform Crime Report Survey, Statistics Canada; Adult Criminal Court Survey, Statistics Canada; Drug Seizures, Canada Customs and Revenue Agency); mortality sources (Health Statistics Division, Statistics Canada); morbidity sources (Canadian Institute for Health Information); and HIV/AIDS and hepatitis C sources (Health Canada Surveillance Reports).

## NETWORK UPDATE

Several advancements in the CCENDU network have occurred since the 2000 national report. CCENDU has continued to establish its national framework. This includes the creation of a strategic vision, expansion of the steering committee, design and distribution of a network pamphlet, and continued communication with the well established Community Epidemiology Work Group in the United States. CCENDU has also continued to facilitate data analysis. Two key efforts have been capitalizing on the CCSA's "Memorandum of Understanding" with Carleton University, which allows access to data sets, and CCSA's undertaking of a systematic review of national data sources and their disaggregation to the local site level.

Through CCSA's systematic review of available national data sources, existing data limitations have also been addressed. In addition, licit drugs have been included as a major data collection area; solvent data from the national Youth Solvent Abuse Committee will be included soon; hepatitis C has been included as an indicator; and the feasibility of on-reserve data collection is being explored. Methodological inconsistencies have similarly been addressed (i.e., standardization of the International Classification of Disease, Ninth Edition [ICD-9] codes). This will assist with data comparisons across the sites and in the establishment of new sites. Because timeliness of reporting has been a continuous obstacle, a Web-based format for regular report updates is in the development phase. Finally, linkages between researchers and program planners is being attained through such activities as the development of a joint quarterly newsletter with the Health, Education and Enforcement in Partnership (HEP) network (available on the Web at <<http://www.ccsa.ca/HEP/index.htm>>) and the design of a joint funding proposal that was submitted to

and funded by the National Crime Prevention Strategy.

The project, entitled "Establishing a Proactive Model for Identifying and Developing Community Specific Responses to Substance Abuse" has been funded in the amount of \$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 project are as follows:

- 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 that it may be applied to other communities across Canada, both within and outside the realm of substance abuse

## DRUG ABUSE TRENDS—NATIONAL LEVEL

The 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 beneficial, comparisons are made between females and males. To provide consistency with other published reports, the data is weighted. Although this report focuses almost exclusively on national data sources, when 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 <<http://www.ccsa.ca/ccendu/index.htm>>.

**Prevalence***Alcohol*

According to the 1998–99 National Population Health Survey, 78.0 percent of Canadians age 15 and older used alcohol at least once in the past year (82.2

percent of males and 74.0 percent of females), 12.6 percent used during their lifetime but not in the past year, and 9.5 percent had never used. These findings are similar although slightly higher to those from the 1996 and 1994 surveys. The more recent 2000–01 Canadian Community Health Survey reported that among those who drank 5 or more drinks on 1 occasion less than 12 times per year, there was similarity between the sexes, with females at 21.3 percent and males at 25.9 percent. By age, the smallest variation occurred in the 20–34 age category (30.7 percent male and 32.8 percent female), and the greatest variation occurred in the 45–64 age category (13.6 percent female and 23.1 percent male). For those who drank 5 or more drinks on 1 occasion in excess of 12 times in the past year, there was great variation between the sexes, with 29.0 percent of males and 11.4 percent of females reporting such drinking 12 or more times in the past year.

According to the 1998 Canadian Campus Survey, 85.4 percent of undergraduate males and 87.5 percent of females reported alcohol use in the past 12 months. There was a slightly higher finding with regard to lifetime use, averaging 92 percent for both sexes (90.6 percent for males and 92.4 percent for females). Women’s alcohol intake per week was nearly one-half that of men’s (females averaged 3.9 drinks and males averaged 7.5). Some 41.1 percent of females reported harmful drinking (i.e., missed a class), and 29.3 percent reported hazardous drinking (i.e., drinking and driving) in the past 12 months. Slightly higher, 45.2 percent of males reported harmful drinking, and 31.8 percent reported hazardous drinking.

*Illicit Drugs*

Canada’s Alcohol and Other Drugs Survey (1994) revealed that the percentages of females age 15 and older who reported use of selected illicit drugs in the past year were as follows: 5.1 percent for cannabis; 0.7 percent for lysergic acid diethylamide (LSD), speed or heroin; and 0.5 percent for cocaine. Figures for males were as follows: 10.1 percent for cannabis; 1.5 percent for LSD, speed or heroin; and 0.8 percent for cocaine. The 1998 Canadian Campus Survey reported that 8.9 percent of female and 11.7 percent of male undergraduate students had used illicit drugs (not including cannabis) in the past 12 months, and 28.0 percent of females and 29.6 percent of males had used cannabis.

*Licit Drugs*

The 2000–01 Canadian Community Health Survey found that females reported higher use within the past month of all licit drugs compared with males:

Drug	Females	Males
Opiate analgesics	2.1	1.7
Anti-depressants	2.1	0.9
Sleeping pills	1.7	1.2
Tranquilizers	1.1	0.6
Diet pills	0.4	0.1
Pain relievers	23.7	19.8

The most recent national data on solvent use collected through Canada’s Alcohol and Other Drugs Survey (1994) revealed that 0.3 percent of females and 1.2 percent of males age 15 and older had used a solvent(s) in their lifetime. The 1998–99 National Longitudinal Survey of Children and Youth found that 89.7 percent of 12 and 13 year old youth claimed that none of their friends had tried glue or solvents, 9.5 percent had a few friends who had tried them, 0.6 percent reported most of their friends had tried them, and 0.2 percent indicated that all of their friends had tried solvents. Current rates of inhalant abuse among Canada’s aboriginal youth population are unknown, although the media regularly depicts the rates as higher in this group than in the general population. There was, however, a 1993 national survey entitled *First Nations and Inuit Community Youth Solvent Abuse Survey and Study*<sup>2</sup> that surveyed all bands or reserves in Canada with the goal of identifying the treatment needs of First Nations youth across the country, including information on the numbers and characteristics of youth abusing solvents.<sup>3</sup> It was reported that more than one-half of all solvent-abusing youth respondents began to abuse solvents when they were age 11 or younger. The largest group of respondents were experimental users (43.3 percent), followed by social users (37.5 percent) and chronic (19.2 percent) users.

**Enforcement**

*Alcohol*

In 2001, CCSA and the Correctional Service of Canada commissioned a study, entitled *Proportion of Crimes Associated with Alcohol and Other Drugs in*

<sup>2</sup> Kaweionnehta Human Resource Group. *First Nations and Inuit Community Youth Solvent Abuse Survey and Study*. Ottawa: National Native Alcohol and Drug Abuse Program/Addictions and Community Funded Programs, 1993.

<sup>3</sup> Solvent abuse included in this study is confined to volatile solvents, which are the most common inhaled by First Nations and Inuit youth. These include glues, adhesives and cements, nail polish remover, paint remover and thinner, correction fluid and thinner, fuel gas, lighter fluid, dry cleaning agents and spot removers, and aerosol propellants, in addition to other products.

*Canada*, and concluded that there is a strong association between crime and alcohol and illicit drug use. The study found that 24 percent of females were thought to be under the influence of alcohol and 9 percent were thought to be under the influence of alcohol and drugs combined at time of their arrest. More than one-third (35 percent) of males were thought to be under the influence of alcohol and 10 percent were thought to be under the influence of drugs and alcohol at time of their arrest. The study can be accessed at <<http://www.ccsa.ca/docs/crime2002.pdf>>. In addition, 3 percent of males and 1 percent of females reportedly had committed a crime to attain alcohol for personal use, and 1 percent of males and 2 percent of females had committed a crime to attain alcohol and drugs.

### *Illicit Drugs*

The 2001 Uniform Crime Report Survey revealed relative stability in the rate of total drug offenses, from 19.8 per 10,000 in 2000 to 19.7 per 10,000 in 2001. In 2001, cannabis charges represented the majority of drug offenses/charges among adult males (71 percent,  $n=28,906$ ), followed by cocaine (21 percent,  $n=8,375$ ), other drugs (7 percent,  $n=2,911$ ), and heroin (1 percent,  $n=553$ ). In comparison, there were proportionally fewer adult females charged for cannabis (62 percent,  $n=3,948$ ), and a greater proportion charged for cocaine (27 percent,  $n=1,689$ ), other drugs (9 percent,  $n=562$ ), and heroin (2 percent,  $n=131$ ). In 2001, the greatest difference in charges between adult males and females was for cannabis, with 63 percent (18,267) of males charged with possession, 25 percent (7,114) for trafficking, 12 percent (3,342) for production, and 1 percent (183) for importation. For females, 44 percent (1,724) were charged with possession, 33 percent (1,321) for trafficking, 22 percent (870) for production, and 1 percent (33) for importation.

In 2000 and 2001, the majority of youth charged were male (86 percent and 87 percent, respectively). In 2001, cannabis charges represented the vast majority of drug offenses for which male youth were charged (89 percent,  $n=6,436$ ), followed by other drugs (6 percent,  $n=408$ ), and cocaine (5 percent,  $n=398$ ). Charges for female youth were similar to those for the adult population. Compared to male youth, there were proportionally fewer charges for cannabis (79 percent,  $n=863$ ), and proportionately greater charges for other drugs (10 percent,  $n=114$ ), cocaine (9 percent,  $n=101$ ), and heroin (1 percent,  $n=8$ ). For cannabis charges, 75 percent (4,785) of

male youth were charged with possession, 24 percent (1,554) with trafficking, and 1 percent (91) with production. Similar to their male counterparts, 72 percent (622) of female youth were charged with possession, 25 percent (215) with trafficking, and 3 percent (26) with production.

From April 1 to June 30, 2002, the Canada Customs and Revenue Agency made 240 significant drug seizures, with a total value more than \$36.7 million. Steroids represented the majority of seizures (102) (\$374 thousand value), followed by khat (51) (\$1.3 million), and cocaine (41) (\$17.8 million).

According to the Canada Customs and Revenue Agency, the number of Canadian drug seizures has remained constant (242 significant drug seizures from April 1 to June 20, 2001), but the value of drugs seized has declined considerably. A contributing factor has been a decline in the quantities of cocaine, ecstasy, and heroin seized, as well as a decline in the street value of cocaine. Over 40 percent of all seizures took place in the postal mode, 37 percent in the air mode, 18 percent in the courier mode, and less than 2 percent in both land and marine modes.

A Correctional Service of Canada study found that from 1994 to 2001, there was a continuous albeit nominal increase in the number of individuals incarcerated for a drug offense, from 5,117 to 5,761. The majority of incarcerated drug offenders in 2001 were male (94.1 percent). While female involvement in drug offenses is limited (5.9 percent in 2001), it steadily increased over the 6-year period (from 3 percent or 163 females in 1994 to 6 percent or 342 females in 2001).

### **Treatment**

According to the 1998–99 Residential Care Facilities Survey,<sup>4</sup> there were a total of 4,752 beds licensed or approved for people with alcohol/drug addiction problems in Canada; 4,361 beds were available for use in 183 facilities, with an 88.8-percent occupancy rate. A comparable 1993/94 survey revealed a total of 6,185 beds available in 262 facilities. There was little change, and in fact a slight decrease, in the number of beds available and a greater decrease in the number of facilities, over the 6-year period (6,019 beds in 238 facilities).

### **Morbidity**

Morbidity is defined as the burden of disease related to alcohol and other drug-related selected (illicit and

<sup>4</sup> There are 238 facilities and 6,019 beds in total, but only 183 facilities (4,752 beds) reported in the 1998–99 survey.

licit) injuries based on diagnosis at the time of hospital separation.<sup>5</sup> Based on data tabulated from the 2000–01 Hospital Morbidity Database (Canadian Institute for Health Information), it is estimated that 58,542 hospital separations in Canada (alive or dead) for individuals 15 years of age and older were attributable to alcohol and drug use as the most responsible diagnosis. Just over one-half of the separations were for males (51.5 percent or 30,149 vs. 48.5 percent or 28,393 for females).

Alcoholic dependence syndrome accounted for the highest number of alcohol separations for females (2,378), followed by non-dependent alcohol abuse (854 separations), and other alcoholic psychoses (828 separations). Among males, alcohol dependence syndrome also represented the leading cause of alcohol-related morbidity (5,742 separations), followed by other alcoholic psychoses (2,461 separations) and alcoholic cirrhosis of the liver (1,972 separations).

“All other” diagnoses refer to cases in which a selected cause of disease is not considered the primary cause of illness by a physician. It is estimated that 137,429 hospital separations (both alive and dead) were attributable to alcohol and drug use in Canada during 2000–2001. Males accounted for over half of the separations (84,991 for males vs. 52,438 for females). The leading cause of alcohol-related morbidity for females was alcohol dependence syndrome, representing 11,212 hospital separations, followed by nondependent abuse of alcohol (5,158 separations) and mental disorders related to alcohol and pregnancy (3,208 separations). A large proportion of alcohol-related morbidity among males was similarly for alcohol dependence syndrome (with 29,285 hospital separations), followed by nondependent abuse of alcohol (9,770 separations) and alcoholic cirrhosis of the liver (4,199 separations).

### Mortality

According to the 1999 Statistics Canada Causes of Death Shelf Tables, 4,723 deaths were attributable to selected alcohol and illicit and licit drug-related mortality for all ages.<sup>5</sup> This is an approximate 2-percent decrease from 1998 (4,820). Regarding alcohol, in 1999 the leading causes of death for women were cirrhosis of the liver without mention of alcohol (409), alcoholic cirrhosis of the liver (172), acute pancreatitis (142), and alcohol dependence syndrome (125). For men, the leading causes were alcoholic cirrhosis of the liver (609), cirrhosis of the liver without mention

of alcohol (597), alcoholic dependence syndrome (427), and acute pancreatic (145).

The proportion of fatally injured drivers in Canada with positive blood-alcohol levels declined from 48 percent in 1992 to 33 percent in 1999. In 1998, alcohol was involved in 38 percent (1,245 people) of all motor vehicle fatalities in Canada, compared with 34 percent (1,134 people) in 1999.

### HIV/AIDS/Hepatitis C

According to 2002 Health Canada Laboratory Centre for Disease Control data, cumulative through December 31, 2001, there were a total of 1,123 positive HIV cases in which injection drug use was identified as the risk factor among women and 2,768 among men. For both females and males, there has been a decrease over time in absolute numbers of injection drug use as a risk factor for HIV. However, in examination of all risk factors for HIV, 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.

### DRUG ABUSE TRENDS—LOCAL SITE LEVEL

Deaths from illicit drug use continue to be high in both the city of Vancouver and the province of British Columbia (BC). However, since reaching a peak in 1998, the number of deaths has decreased. In 2001, there were 222 illicit drug deaths in the province of British Columbia, of which 90 were in Vancouver. Also of heightened importance in Vancouver is the increase in methamphetamine use, which may reflect the problem Washington State in the United States has been experiencing. The Vancouver CCENDU committee held discussions regarding the development of an action team to address the problem of methamphetamine use. Consequently, a crystal methamphetamine environmental scan summit was held in November 2002. The report can be accessed at <<http://www.ccsa.ca/ccendu/Reports/20033Reports.asp>>.

Whitehorse, Yukon, has one of the highest alcohol consumption rates in Canada, with reports of the injection of alcohol. Also, there is a high rate of Fetal Alcohol Syndrome (FAS) and Fetal Alcohol Effects (FAE) reported by educational institutions in some Yukon communities.

The Alberta Alcohol Survey reported that 78.1 percent of respondents are current drinkers and 13.9

<sup>5</sup> The ICD-9 classifications used in this report were identified based on commonality of codes used among CCENDU site coordinators and local experts.

percent consider themselves problem drinkers in Edmonton, Alberta. There are similar rates at the provincial level (78.2 percent current drinkers and 15.2 percent problem drinkers). An ethnographic study of injection drug users (IDUs) in Edmonton found that the first drug injected was overwhelmingly cocaine (31 percent), followed by methadone/speed (27 percent). Current drugs injected were opiates (33 percent) and Talwin and Ritalin (25 percent). Among IDUs in the study, 72 percent were infected with hepatitis C, and 53 percent were not currently seeking treatment. Reasons given for not seeking treatment included fear of being judged, long waiting lists, the bureaucratic system, and painful and stressful treatment.

Alcohol was the substance most used among adults and youth in Winnipeg, Manitoba. In 2001, there was an increase in drinking and driving charges. Thirty percent of high school students reported using marijuana in the past year, and 40 percent have used it at some point in their life.

Crack (injection and smoking) continues to be the illicit drug of choice in Toronto, Ontario. Harm reduction measures have been taken (e.g., distribution of crack pipes, implementation of needle exchange programs). Cannabis and designer drug use has remained high. There has been an increase in solvent and polydrug use. Crack users do not traditionally use needle exchange sites as readily as heroin users or other drug users.

Alcohol was the licit substance most often used by both youth and adults in Ottawa, Ontario, whereas cannabis was the illicit substance most often used. According to a study on injection drug use, in 1996 the median age of IDUs in the Ottawa region was 33 for women and 36 for men. In the Outaouais region in 1997, the median age was 32 for women and 38 for men.

Alcohol was the substance most often used in Fredericton, New Brunswick. There has also been an increase in the injection of Dilaudid. Additionally, there has been an increase in alcohol and cannabis use among students.

A 2001 client drug-use study in Halifax, Nova Scotia, conducted with 5,262 male and 2,590 female treatment clients, reported that 80 percent of respondents were using cocaine, benzodiazepines, and/or opiates. Cannabis use was just below 80 percent. The 1998 Student Drug Use Survey examined trends between 1991 and 1998 and found that the use of alcohol, nicotine, and cannabis more than once a month increased by 30 percent, 40 percent, and 9 percent, respectively. The rate of cannabis use tripled from 4.4 percent in 1991 to 13.5 percent in 1998.

In St. John's, Newfoundland, there is a strong presence of rave drugs compared with 3 years ago. There is also an increase in pharmacy break and enters where OxyContin was sought.

#### FUTURE ACTIVITIES

Several other activities have been taken on by the network to contribute to strengthening the capacity of the national network and local sites. An online community is currently being established for the CCENDU site coordinators and committee members to facilitate information sharing. Additionally, the online discussion facilities of the Virtual Clearing House on Alcohol, Tobacco and Other Drugs are planned to be used to discuss and take action on timely issues among the network members. The first moderated online discussion is set to focus on prescription drug use. Lastly, contact with and presentations to the Federation of Canadian Municipalities drug strategy pilot sites have been made to foster involvement in local CCENDU site activities.

---

*For inquiries concerning this report, please contact Colleen Anne Dell, Ph.D., National Research Advisor, CCENDU, Canadian Centre on Substance Abuse, 75 Albert Street, Suite 3000, Ottawa, Ontario, Canada K1P 5E7, Phone: (613) 235-4048 ext. 235, Fax: (613) 235-8101, E-mail: <cdell@ccsa.ca>.*

# Extent and Nature of Illicit Drug Use in Central Asia

Kamran Niaz,<sup>1</sup> Janusz Sieroslawski,<sup>2</sup> Mirzakhid Sultanov,<sup>3</sup> Sagat Altynbekov,<sup>4</sup> Altynai Kudaikulova,<sup>5</sup> Nazire Dodkhudoeva,<sup>6</sup> and Oleg Mustafin<sup>7</sup>

## ABSTRACT

*Since the breakdown of the Soviet Union, the newly independent countries of Central Asia have experienced major economic, social, and political transitions to open societies. Also, with the increasing use of Central Asia as a transit point for trafficking of heroin from Afghanistan to European markets, these countries have also experienced an increasing local epidemic of drug use. All indicators of drug use in these countries—the number of people registered for drug use treatment admissions, the number of people arrested for drug-related crimes, drug seizures, and increased availability of drugs in local markets accompanied by falling prices—have shown dramatic increases, especially since the mid-nineties. The main transition has been from traditional smoking of opium or cannabis to injecting heroin and other opiates among younger age groups. The practice of sharing injections between drug users has also contributed in a significant manner to the spread of HIV and other blood-borne infections in the countries.*

## INTRODUCTION

Central Asia comprises the former Soviet republics of Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan, all of which gained independence in 1991 (exhibit 1). During the Soviet era, these former republics shared common systems of government, economics, and social setup, in addition to a common religion and history. Today, however, these countries exhibit diversity in culture, climate, and language, as well as different economic, political, and social development. A comparison of some key demographic, health, and economic indicators for the countries is shown in exhibit 2.

Since the breakup of the former Soviet Union, the Central Asian States have been undergoing difficult economic, social, and political transitions. Because

they are no longer integrated within the Soviet economy and therefore have lost subsidies from Moscow, the young countries have been fighting with the severe consequences of budgetary deficits, high inflation, negative industrial growth, and rising unemployment. Moreover, the nation-building process has been draining most of the resources, leaving little room for social services.

Also, in the last decade, the Central Asian States have been affected by an increasing influx of drugs from neighboring Afghanistan on their way to the profitable Russian and Western European markets. Evidence from elsewhere in Asia has shown that when a country is on a trafficking route, a considerable potential exists for the development of local drug abuse problems. Until the middle of the 1990s, the drug issue was perceived by the Central Asian States as a problem affecting other countries, and the local authorities mainly relied on international assistance to address drug trafficking issues with law enforcement interceptions. Since 1995, when heroin started being processed within Afghanistan and shipped across Central Asia, the burgeoning local drug markets brought a considerable change in the perceptions of drug problems in the regional countries. The Central Asian countries have been prompted to address the issue of increasing drug problems among the local population and combat drug trafficking within and across their territories.

## National Assessments of Drug Problems in Central Asia

During 2000 and 2001, the United Nations International Drug Control Programme's regional office in Central Asia, with technical support from the Global Assessment Programme on Drug Abuse, implemented a regional project to assist the Central Asian nations in assessing the nature and extent of drug problems in each country and in developing evidence-based policies and interventions to address

<sup>1</sup> Dr. Niaz is affiliated with the Global Assessment Programme on Drug Abuse, UNODCCP, Ankara, Turkey.

<sup>2</sup> Janusz Sieroslawski is affiliated with the Institute of Psychiatry and Neurology, Warsaw, Poland.

<sup>3</sup> Mirzakhid Sultanov is affiliated with the UNODC, Regional Office for Central Asia, Tashkent, Uzbekistan.

<sup>4</sup> Sagat Altynbekov is affiliated with the Republican Scientific Centre on Medical and Social Problems of Drug Abuse under the Agency for Health Issues of the Republic of Kazakhstan.

<sup>5</sup> Altynai Kudaikulova is affiliated with the State Commission on Drug Control under the Government of Kyrgyz Republic.

<sup>6</sup> Nazire Dodkhudoeva is affiliated with the Drug Control Agency under the President of the Republic of Tajikistan.

<sup>7</sup> Oleg Mustafin is affiliated with the Tashkent City Narcological Dispensary, Tashkent, Uzbekistan.

growing illicit drug use in the region. The project also aimed to help develop a sustainable data collection and monitoring system at the national and regional levels.

### Methodology

The extensive national assessment studies conducted under the project utilized many methods and data sources to build up a comprehensive picture of the nature and extent of problem drug use in each country. The data sources and methods are described below:

- An initial information needs and resource analysis was conducted based on existing data from treatment, health, and law enforcement sources to assess existing databases and sources of information on drug abuse in the countries and to identify the needs for developing drug use information and monitoring systems. The secondary data were also used as proxy indicators for time series analyses of changing trends of drug use.
- Interviews with more than 100 key informants (e.g., doctors, nongovernmental organization [NGO] workers, law enforcement officials, local community leaders, teachers, and former drug users) were held in 5 urban and rural geographical locations in each country. The informants were interviewed to present their perspective on the extent and nature of problem drug use in their area. These interviews with diverse occupational groups helped develop local and national profiles of problem drug use in each country.
- Using snowball techniques, about 100 problem drug users were interviewed in community settings in at least 2 locations in each country. The problem drug users were defined as persons who took drugs regularly and suffered from health and social consequences of drug use, with drugs being the most significant element of their lifestyle.
- Interviews with drug users helped define the current patterns and trends of drug use among active drug users and assess the health and social consequences of drug use from the respondents' perspective.
- Additional in-depth interviews were done with about 200 injection drug users in the same locations. They answered questions regarding their initiation of injection drug use, current

patterns of use, needle sharing, and sexual risk behaviors.

- Interviews were also held with approximately 60 drug users in each country in prison settings with the objective of assessing the drug use situation in prisons and to determine whether their patterns differed in any way from those in community settings.
- As a final outcome of these studies, the prevalence of problem drug use in each country was estimated using multiplier techniques. During the interviews, drug users were asked questions to determine the proportion of them and their friends who had been in treatment or registered in the past 12 months. Based on this information, proportional multipliers were calculated and applied to treatment and registered data for the year 2000, initially for the two main cities where interviews with drug users were conducted. Later, a national-level multiplier was developed, and national estimates of problem drug use were calculated. Prevalence estimates for each country are presented in exhibit 3.

### CURRENT PATTERNS AND TRENDS IN DRUG USE

Using information from the different sources and methodologies used in the assessment studies, brief descriptions of the current patterns and trends of drug use in four of the five countries are presented in this section.

#### Kazakhstan

The prevalence estimate rate of problem drug users in Kazakhstan per 100,000 population ranges between 1,110 and 1,255 (exhibit 3). Kazakhstan reportedly has the highest rate of new drug users registered among all countries in the region. Whereas the rate of newly registered drug users was 5 per 100,000 population in 1992, this has consistently increased, with a sharp increase between 1996 and 1998 (exhibit 4). In 2000, the rate was reported as 77 per 100,000 population. The rate of drug users treated each year has been increasing in a similar fashion, from 8.9 per 100,000 population in 1992 to 37.8 per 100,000 in 2000 (exhibit 5). Heroin is ranked as the first drug of abuse, followed by cannabis and opium. Almost two-thirds of the drug users registered in 2000 were registered for opiates. In terms of age and gender, more than 20 percent of drug users were estimated to be younger than 19, and about one-third were estimated to be female. According to information from the Joint United Nations Programme on HIV/

AIDS, there has been a rapid and significant growth of human immunodeficiency virus (HIV)-infected persons in the country. About 95 percent of HIV-infected persons are injection drug users. Exhibit 6 shows HIV and acquired immunodeficiency syndrome (AIDS) data for Central Asian countries. According to sources, between 50 and 80 percent of all drug injectors are also infected with either the hepatitis B or C viruses. While opium seizures in the country have shown a decline, there has been a sharp increase in heroin seizures (262 kilograms in 2000) and a steady increase in cannabis seizures (15,465 kilograms in 2000) since 1997 (exhibit 7). Similarly, the rate of drug-related crimes, the highest in the region, also increased more than threefold from 1993 to 2000, from 45 to 145 per 100,000 population.

### **Kyrgyzstan**

The estimated number of problem drug users in Kyrgyzstan ranges from 80,000 to 100,000, and the rate per 100,000 population (1,644–2,054) is reportedly the highest of all the Central Asian countries (exhibit 3). The rate of drug users registered for the first time has shown a fivefold increase since 1992, to 15 per 100,000 population in 2000, while the rate of drug users treated per 100,000 population increased from 2.6 in 1992 to 7.7 in 2000 (exhibits 4 and 5). In 1992, opiate users accounted for 10 percent of the drug users registered, while in 2000, they accounted for more than 80 percent of newly registered drug users. In 2000, more than 80 percent of drug users were registered for heroin, and more than 65 percent were injecting drugs. The percentage of females among registered drug users is less than 5 percent. More than one-half of the drug users were estimated to be younger than 35, and 15 percent were younger than 19. Among the reported HIV infection cases in the country, 60–80 percent of the infection cases are among injection drug users (exhibit 6). According to court data, the number of drug-related crimes has increased by 3.5 times over the past decade. In addition to the increase in the absolute number of such crimes, their share of the total number of criminal cases in the country also increased. In 1990, the proportion of drug-related crimes among all crimes totaled 8 percent; in 2000 the share had risen to 15 percent. Drug-related crimes have thus become a significant component of overall criminality and have brought an additional burden for law enforcement agencies and, indirectly, for the whole society. While the prices of heroin (U.S.\$10,500 per kilogram) and opium (U.S.\$2,000 per kilogram) have remained steady in the past few years, there has been a sharp increase in the total number of opiates, especially heroin, seized in the country (exhibits 8 and 9).

### **Tajikistan**

The prevalence rate per 100,000 population of problem drug users in Tajikistan is estimated to range from 734 to 897 (exhibit 3). The reported rate of newly registered drug users per 100,000 population increased from 2 in 1992 to 28 in 2000 (exhibit 4). This rate of increase in Tajikistan is the second highest in the region. The rate per 100,000 population of drug users treated in 2000 was 4 times the rate in 1992 (exhibit 5). Heroin users accounted for two-thirds of the registered drug users in 2000, with one-third of them being injection drug users. The majority of drug users (more than 50 percent) are younger than 30, and one-quarter of the drug users are younger than 24. Females accounted for only 6 percent of the total registered drug users; however, an alarming 120-times increase was noted in the rate of newly registered female drug users in 2000. According to the statistical data provided by the Ministry of Justice, the number of drug-related crimes has increased by more than 2 times in 1996–2000. In addition to increases in the absolute number of such crimes, their share of the total number of criminal cases in the country increased as well. In 1996, the proportion of drug-related crimes totaled 13 percent of all criminal cases; in 2000 the share rose to 21 percent. Since 1998, opiate seizures (heroin and opium) have increased, while cannabis seizures have declined (exhibit 10). The street prices of heroin and opium have declined during the same period, with 2000 prices reported of U.S.\$4,000 per kilogram of heroin and U.S.\$18 per kilogram of opium (exhibit 11). The reported rate of drug-related offenses has remained stable since 1993.

### **Uzbekistan**

The estimated prevalence rate of problem drug users in Uzbekistan ranges from 262 to 367 per 100,000 population (exhibit 3). With a sevenfold increase since 1992, the rate of new drug users registered was reported at 22 per 100,000 population in 2000 (exhibit 4). The rate of drug users treated per 100,000 population has also shown a sharp increase since 1998. From 1992 to 1998, this rate was less than 5 per 100,000 population, but in 2000 the rate increased to more than 24 per 100,000 population (exhibit 5). An increasing number of these drug users are using opiates, especially heroin, with injection drug use reported as the method of use for up to 60 percent of these drug users. Injection drug use is also reported as the predominant mode of transmission for HIV infection in the country (exhibit 6). More than one-half of drug users are reportedly younger than 30, and one-quarter are younger than 25. Males constitute the majority (80 percent) of drug users.

While drug seizures for cannabis have been on the decline, the reported seizures of opiates, especially of heroin, have increased tremendously since 1997 (exhibit 12). The wholesale prices of heroin and opium have decreased considerably since 1998 (exhibit 13). The rate of drug-related crimes reported in the country has remained stable in the past 8 years.

#### CONCLUSIONS

All the Central Asian countries are experiencing a rapidly increasing drug use problem. The main transition has been from traditional use of cannabis and opium to increasing use of heroin and increasing cases of injection drug use, especially among the younger age groups. The majority of drug users are reported to be male, but a considerable proportion of drug users are female. The situation is compounded by the lack of resources available within the countries to address the healthcare and social needs of the population. Therefore, there is a strong need to build capacity among professionals to address the needs of both this younger age group and females for the treatment and prevention of drug use.

While a system to report drug use in each of the countries exists, there are some methodological issues that need to be addressed. One issue is the anonymity of drug users, since all the information of registered drug users has to be reported to the police. Consequently, drug users feel hesitant to seek help from the State-run narcology centers. The second major issue is reporting of the aggregate data. Depending upon the country, aggregate data is not presented by gender, age, type of drug use, and/or preferred method of drug use. Having this useful information would no doubt enable policymakers and service providers to monitor the patterns and trends of illicit drug use in their areas and design interventions accordingly. Finally, there is the issue of data management (the entry, analysis, and sharing of information among stakeholders in each of the countries). The countries in the region have lacked the capabilities to address these issues, especially with regard to data analysis and its dissemination. The Global Assessment Programme on Drug Abuse aims to help the member countries in the region to adequately address these shortcomings.

---

*For inquiries concerning this report, please contact Dr. Kamran Niaz, Regional Epidemiology Advisor, Southwest and Central Asia, Global Assessment Programme on Drug Abuse, UNODCCP, UN House Birlik Mahalessi, 2 Cadd, No. 11, Cankaya, 06610 Ankara, Turkey, Phone: 90-312-454-1086, Fax: 90-312-496-1463, E-mail: <kamran.niaz@un.org.tr>.*

**Exhibit 1. The Countries of Central Asia**



**Exhibit 2. Health and Social Indicators in Central Asian Countries: 2000**

Indicator	Kazakhstan	Kyrgyzstan	Tajikistan	Turkmenistan	Uzbekistan
Size (thousand square kilometers)	2,717	198.5	143.1	488.1	447.4
Population (million)	15.4	4.7	6.2	4.8	24.4
Population Density (per square kilometer)	5.9	24.2	42.8	9.9	57.1
Rural Population (as percentage of total)	44	65	73	55	63
Annual Population Growth Rate	-1	1	1.7	1.3	1.8
Life Expectancy at Birth	65	67	68	66	70
GDP Per Capita (U.S.\$)					
1988	2,310	1,240	910	1,490	1,000
1999	1,290	300	290	660	720
UNDP HDI <sup>1</sup> Rank	73	97	110	100	106

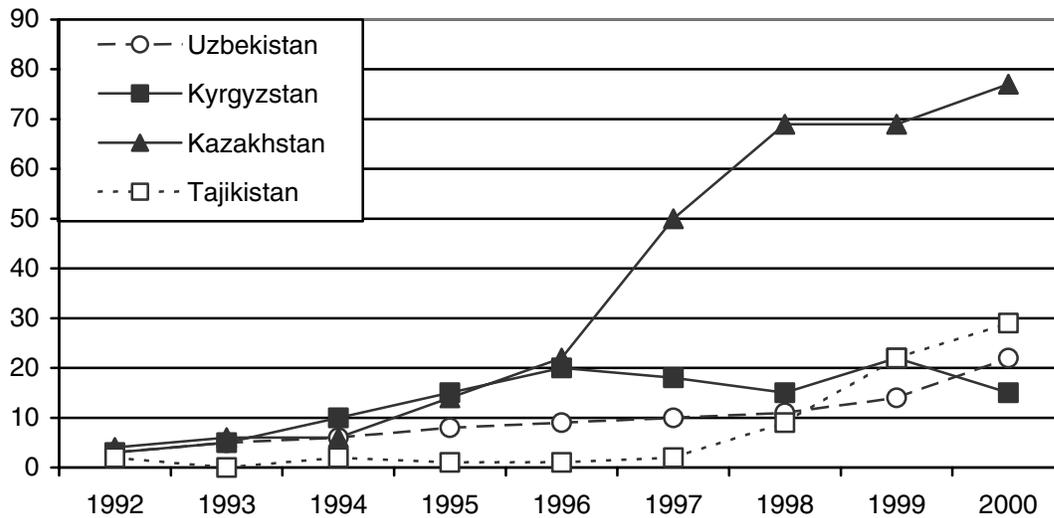
<sup>1</sup> United Nations Development Programme Human Development Index.

SOURCE: World Development Indicators Database, Washington: World Bank, 2000

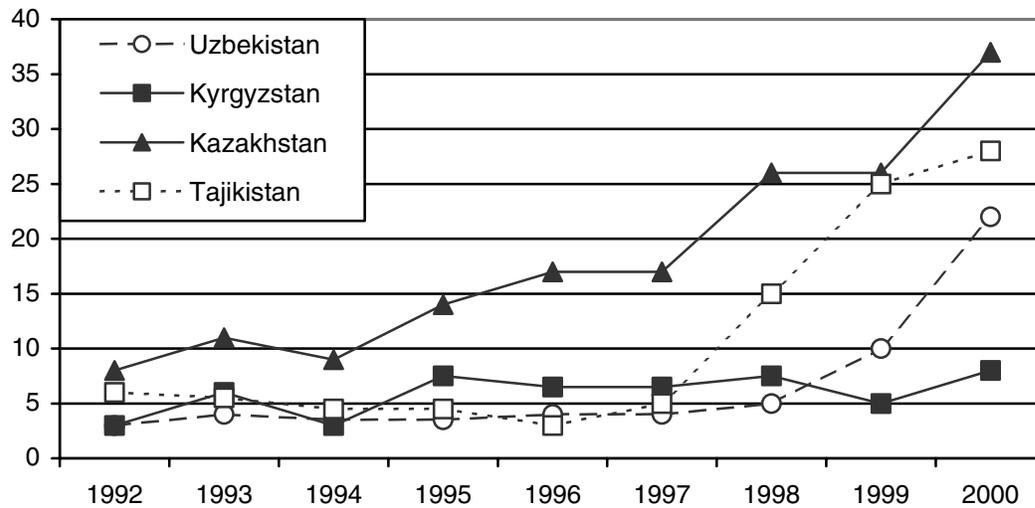
**Exhibit 3. Prevalence Estimates of Problem Drug Users in Selected Central Asian Countries: 2000**

Country	General Population	Estimated Number of Problem Drug Users	Rate Per 100,000 Population
Kazakhstan	14,869,021	165,000–186,000	1,110–1,255
Kyrgyzstan	4,867,481	80,000–100,000	1,644–2,054
Tajikistan	6,131,000	45,000–55,000	734–897
Uzbekistan	24,813,109	65,000–91,000	262–367

**Exhibit 4. Rate of Drug Users Registered for the First Time Per 100,000 Population in Selected Central Asian Countries: 1992–2000**



**Exhibit 5. Rate of Drug Users Treated Per 100,000 Population in Selected Central Asian Countries: 1992–2000**

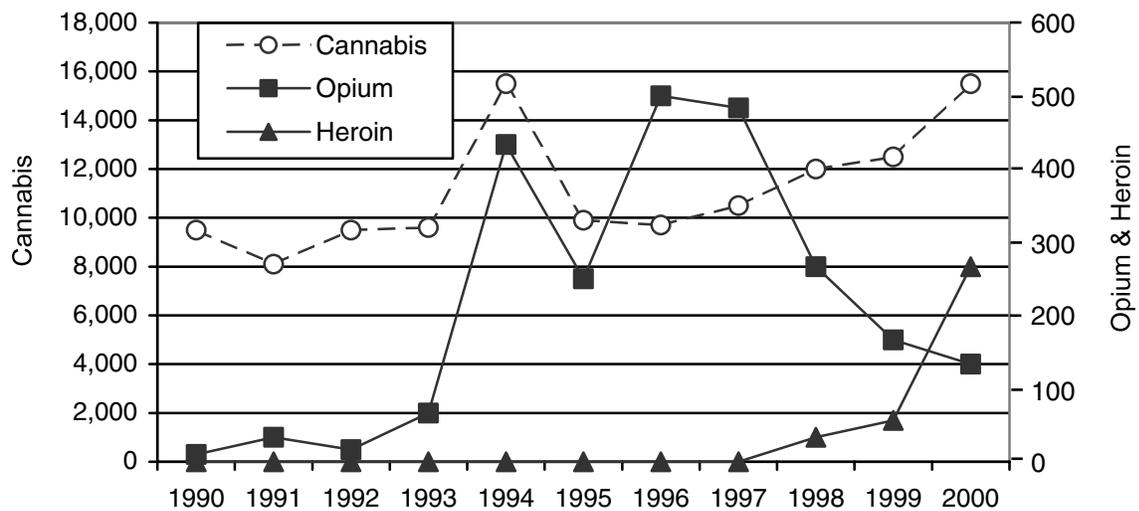


**Exhibit 6. HIV/AIDS Case Data for Central Asian Countries**

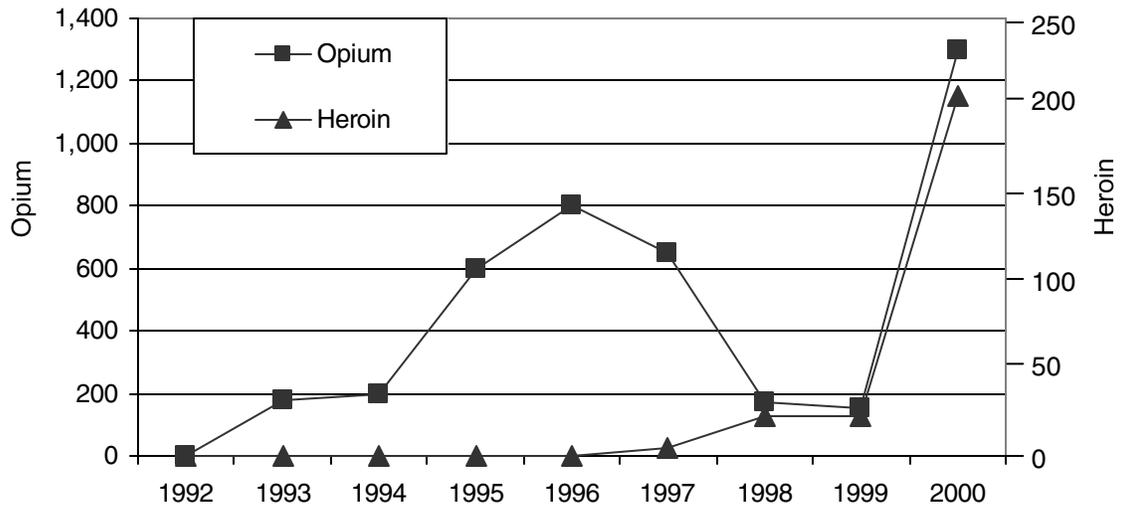
Country	Year of First HIV Case	Cumulative HIV Cases to Date	Cumulative AIDS Cases to Date	Predominant Mode of Transmission
Kazakhstan	1989	1,300	34	IDU
Kyrgyzstan	1987	53	1	IDU/Heterosexual
Tajikistan	1991	11		Heterosexual
Turkmenistan	1997	4		Heterosexual
Uzbekistan	1992	228	10	IDU

SOURCE: Joint United Nations Programme on HIV/AIDS

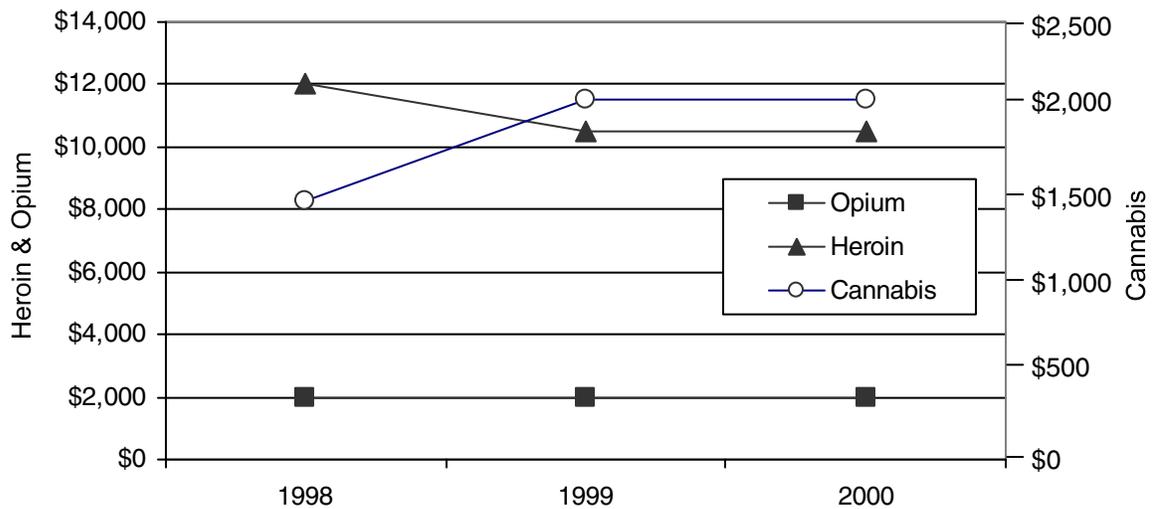
**Exhibit 7. Number of Drug Seizures in Kazakhstan in Kilograms: 1990–2000**



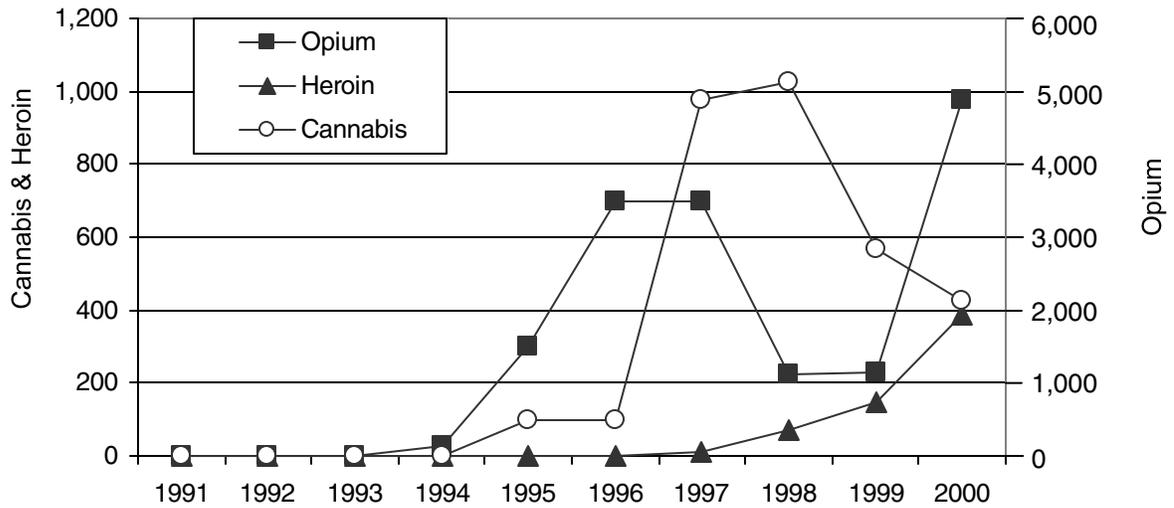
**Exhibit 8. Drug Seizures in Kyrgyzstan in Kilograms: 1992–2000**



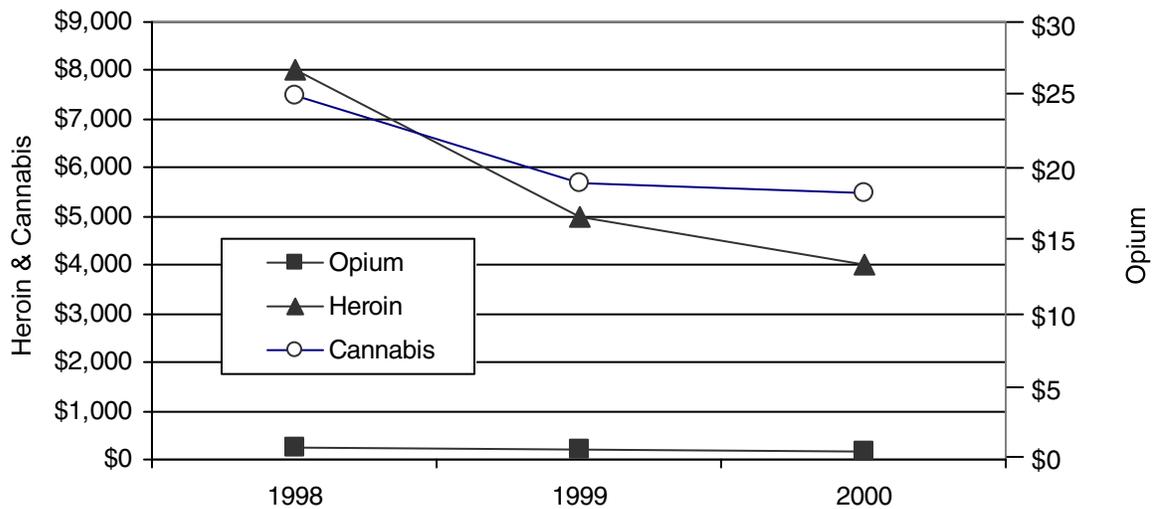
**Exhibit 9. Retail Drug Prices in Kyrgyzstan in U.S. Dollars: 1998–2000**



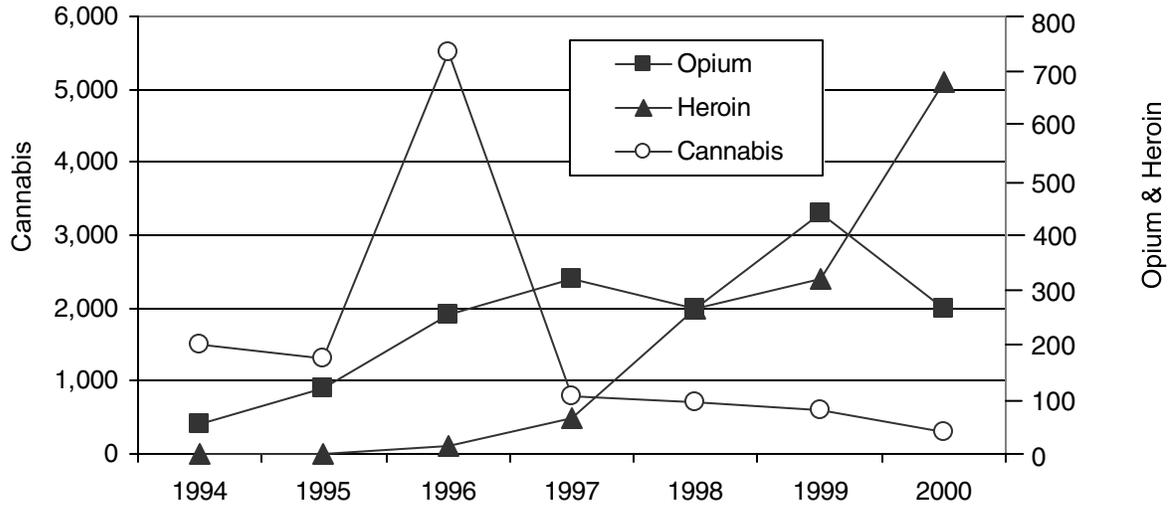
**Exhibit 10. Drug Seizures in Tajikistan in Kilograms: 1991–2000**



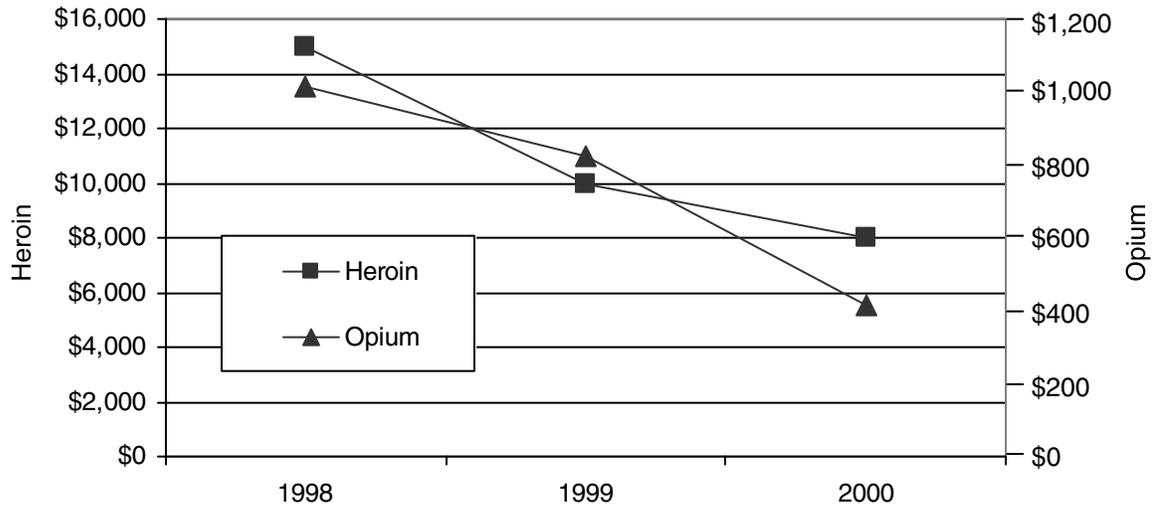
**Exhibit 11. Retail Drug Prices in Tajikistan in U.S. Dollars: 1998–2000**



**Exhibit 12. Drug Seizures in Uzbekistan in Kilograms: 1994–2000**



**Exhibit 13. Wholesale Drug Prices in Uzbekistan in U.S. Dollars: 1998–2000**



# Study of Juvenile Offenders in Israel

Richard Isralowitz

---

ABSTRACT

*The Israeli representative presented information on the CEWG approach being developed to monitor youth who have a high risk for drug use. The focus is on youth who have been referred by the juvenile justice system for supervisory services provided by the national office of Youth Probation Services. Funding support for this initiative was obtained from the U.S. Agency for International Development, Middle East Regional Cooperation Program. The monitoring approach includes efforts to gather prevalence data from youth workers and youth.*

*The findings presented were based on information collected from 89 youth workers who work with more than 7,000 youth. Results show that 32 percent of the youth had no connection with school; for those who had a connection, 85 percent had school attendance problems. A majority of the youth (69 percent) spent*

*their evenings hanging around in the streets, playgrounds, parks, and shopping malls. Approximately 37 percent were considered to be abusing alcohol, 56 percent experienced binge drinking, and 47 percent used alcohol in a car either as a passenger or driver of the vehicle. On average, youth spent about \$100 each month on cigarettes, alcohol, and illegal drugs. Among the substances considered to be most problematic and accessible to the youth were alcohol, marijuana, ecstasy, and inhalants. Those youth who used and abused harmful substances tended to engage in stealing, property damage, and violent behavior. Also, the youth were victims of property theft and/or damage and beatings. Correlation analyses show that youth who use drugs have problem behaviors in terms of theft, vandalism, and causing fights; are the victims of theft, vandalism, and violence; and tend to have little or no positive experience with school.*

---

*For inquiries concerning this report, please contact Richard Isralowitz, Ph.D., Spitzer Department of Social Work, Ben Gurion University, P.O. Box 653, Be'er Sheva 84105 Israel, Phone: 972-7-647-2328, Fax: 972-8-647-2933, E-mail: <Richard@bgumail.bgu.ac.il>.*

# Update of the Epidemiologic Surveillance System of Addictions (SISVEA) in Mexico: January–June 2002

Roberto Tapia-Conyer, Patricia Cravioto, Pablo Kuri, Fernando Galván, and Blanca de la Rosa<sup>1</sup>

## ABSTRACT

*Mexico's Epidemiologic Surveillance System of Addictions, operating in 31 Mexican cities, gathered data on 5,412 patients in government treatment centers (GTCs) and 13,488 patients in nongovernment treatment centers (NGCs) during the first half of 2002. Information on drug use among 3,779 juvenile arrestees was also collected, as was data on drug-involved deaths. The GTC data show that cocaine ranked first as the main drug abused by patients, followed by marijuana, alcohol, and inhalants. At NGCs, heroin ranked first as the current drug of abuse, followed by cocaine and alcohol. Most patients were polydrug users. Cocaine and heroin use increased among juvenile arrestees, although marijuana was the most frequently reported drug of use. Alcohol continued to be the substance most commonly involved in drug-related deaths.*

## INTRODUCTION

The Epidemiologic Surveillance System of Addictions of Mexico (SISVEA), established in 1990, involves the collaboration of different government and nongovernment agencies. SISVEA has provided periodic and timely information on tobacco, alcohol, and medical and illegal drug use that identifies risk groups, emerging drugs, changes in consumption patterns, and risk factors associated with morbidity and mortality of use and abuse of alcohol, tobacco, marijuana, cocaine, heroin, and other drugs. SISVEA began 12 years ago with only 8 cities, which were mainly at the northern border of Mexico. Currently, SISVEA gathers information from 51 cities; one-quarter are located in the 6 States at the border, and the rest are in the other 26 States of the country. The information represents direct and indirect indicator data from different sources.

## Data Sources

This report updates the activities of SISVEA during first half of 2002. The sources of data that are used to construct different indicators are described below:

- **Drug 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 (Centers of Juvenile Integration, referred to hereafter as GTCs) 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.
- **Data on drug use among juvenile arrestees** were gathered from Juvenile Detention Centers and are based on 3,779 youth arrested during the first half of 2002. Information collected includes demographic characteristics of the youth and the types of offenses committed.
- **Medical examiner (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

#### GTCs

According to government treatment centers, marijuana-abusing patients in the first half of 2002 were mostly male (91.6 percent); 31.9 percent were between the ages of 15 and 19, 45.7 percent had only a middle school education, 62.1 percent were single, and 51.1 percent came from a middle-low socioeconomic background (exhibit 1). The age of onset for 92.2 percent of marijuana users was between 10 and 19 years; 61.8 percent of GTC clients reported daily use.

Marijuana was the second most common drug of first use (13.0 percent) and the second most common primary current drug (17.6 percent) (exhibit 2).

<sup>1</sup> The authors are affiliated with the Ministry of Health of Mexico.

During the first half of 2002, natural history data on marijuana use among this patient group showed 10.3 percent were monodrug users at treatment entry. The rest (89.7 percent) were already using a second drug, usually alcohol (27.9 percent), followed by cocaine (24.3 percent) (exhibit 3). Of the multiple-drug users, 83.0 percent advanced to a third drug, usually cocaine (22.3 percent), alcohol (18.8 percent), tobacco (15.2 percent), or inhalants (11.8 percent).

#### *NGCs*

According to data gathered from nongovernment treatment centers, marijuana-abusing patients in the first half of 2002 were mostly male (95.6 percent); 25.5 percent were age 35 and older; 41.4 percent had a middle school education; and more than one-half were single (55.4 percent) (exhibit 4). The age of onset for marijuana use among these patients was between 10 and 14 for 48.4 percent of them; 79.9 percent reported daily use.

Marijuana was the first drug of use for 28.7 percent of NGC treatment admissions in the first half of 2002; as a primary current drug, it ranked fourth (9.8 percent) (exhibit 5).

Natural history data on marijuana use reported by NGCs during 2002 show that 11.3 percent used only marijuana at first admission of treatment (exhibit 3). The remaining 88.7 percent had progressed to using a second drug, which in order of prevalence were cocaine (23.6 percent) and alcohol (15.3 percent). Of this group, 77.0 percent were already using a third drug, mainly heroin (25.3 percent), cocaine (24.5 percent), and alcohol (10.6 percent).

#### *Juvenile Arrestees*

The Juvenile Detention Centers reported that 39.5 percent of the 3,779 juveniles arrested during the first half of 2002 used marijuana (exhibit 6). Most were male (95.4 percent); 58.1 percent had an elementary school education, 37.5 percent were subemployed, 38.6 percent had a tattoo, and 30.0 percent were gang members. More than one-third (33.5 percent) of the offenses were committed under intoxication, and 46.3 percent of the offenses were robberies.

#### *ME Data*

Medical examiner data indicated that 10.8 percent of deaths reported in the first half of 2002 were associated with marijuana (exhibit 7). All were male; 19.7 percent were between the ages of 30 and 34, 18.0 percent were age 25–29, and 14.8 percent were age 40 and older. The main cause of death in these cases was a firearm (31.1 percent), followed by

intoxication (21.3 percent). Most deaths occurred on the street (69.5 percent) or at home (23.7 percent).

### **Inhalants**

#### *GTCs*

Inhalant users attending government treatment centers in the first half of 2002 were mostly male (85.7 percent) and age 15–19 (34.7 percent). More than one-half (51.9 percent) had only a middle school education, 75.3 percent were single, and 53.5 percent were from a middle-low socioeconomic background (exhibit 1). Most began using inhalants between the ages of 10 and 14 (67.8 percent); 42.1 percent used inhalants daily, and 38.6 percent used them once a week.

During 2002, inhalants ranked third as drug of first use (10.3 percent) and fourth as primary current drug (11.2 percent) among GTC patients (exhibit 2).

GTC data on the natural history of inhalant use show that 26.6 percent were still monodrug users when entering treatment, while 73.4 percent were already using a second drug, mainly marijuana (34.7 percent), alcohol (21.5 percent), and tobacco (17.1 percent) (exhibit 8). Of these multiple-drug users, 79.9 percent used a third drug, mainly marijuana (26.0 percent), alcohol (21.1 percent), cocaine (13.7 percent), or tobacco (12.9 percent) (exhibit 3).

#### *NGCs*

In the first half of 2002, NGCs reported that of the 1,580 patients who used inhalants, most were male (93.8 percent); 28.3 percent were age 15–19, 55.2 percent had an elementary school education, and 69.6 percent were single (exhibit 4). More than one-half started using inhalants at age 10–14 (57.3 percent), and 81.8 percent reported daily use.

Inhalants ranked third (11.7 percent) as a drug of first use and fifth (8.0 percent) as a primary current drug among NGC clients (exhibit 5).

Data on the natural history of inhalant users at NGCs show that 65.0 percent of this patient group had progressed to using a second drug, mainly marijuana (52.4 percent), alcohol (17.7 percent), and tranquilizers (6.6 percent) (exhibit 8). Of the 73.6 percent who used a third drug, most used cocaine (27.3 percent), marijuana (17.0 percent), tranquilizers (15.6 percent), or heroin (13.7 percent).

#### *Juvenile Arrestees*

According to Juvenile Detention Centers, 19.4 percent of the youth arrested in the first half of 2002

used inhalants (exhibit 6). Most were male (94.4 percent), had an elementary school education (66.9 percent), and were subemployed (41.1 percent). Sizable proportions had tattoos (42.8 percent) and belonged to a gang (34.6 percent). More than one-third (38.4 percent) committed the offense while intoxicated. Robbery was the most common offense (46.9 percent).

## Alcohol

### *GTCs*

According to government treatment centers during the first half of 2002, 1,662 (30.7 percent) of the 5,412 patients were abusing alcohol (exhibit 1). Of these, 85.1 percent were male, 26.6 percent were age 15–19, and 20.2 percent were age 20–24. Nearly 44.0 percent had a middle school education, 58.5 percent were single, and more than one-half (57.3 percent) were from a middle-low socioeconomic background. More than 45 percent began using alcohol between the ages of 15 and 19. Nearly one-half (49.7 percent) reported weekly use, and 26.8 percent reported using 1–3 times per month.

Alcohol was the first most commonly reported drug of first use (30.8 percent) among GTC patients, but it ranked third (13.1 percent) as primary current drug (exhibit 2).

Among those for whom alcohol was the drug of first use, 92.6 percent progressed to a second drug, usually tobacco (47.0 percent), marijuana (22.6 percent), and cocaine (16.6 percent) (exhibit 9). Of this multiple-drug user group, 77.2 percent reported using a third drug, usually cocaine (31.6 percent), marijuana (30.8 percent), or inhalants (11.4 percent) (exhibit 3b).

### *NGCs*

Nongovernment treatment centers reported that most of the 3,395 patients in the first half of 2002 who abused alcohol were male (93.3 percent) (exhibit 4). Forty-two percent were age 35 or older; 33.4 percent had only an elementary school education; 43.4 percent were single, and nearly one-half (44.8 percent) started using alcohol between the ages of 15 and 19. Nearly one-half reported daily use, and 39.1 percent used once a week.

Alcohol ranked second as the drug of first use (25.2 percent) among NGC patients and third as a current primary drug (15.2 percent) (exhibit 5).

Natural history data on alcohol abuse among NGC patients in the first half of 2002 show that 25.1

percent were monodrug users; the remaining 74.9 percent progressed to a second drug, typically marijuana (36.3 percent), cocaine (23.8 percent), and tobacco (18.2 percent). Of the 66.2 percent who progressed to a third drug, most used cocaine (31.5 percent), marijuana (20.8 percent), or inhalants (9.1 percent) (exhibit 9).

### *Juvenile Arrestees*

Among juvenile arrestees in the first half of 2002, 11.1 percent reported alcohol abuse (exhibit 6). Most (92.9 percent) were male; 48.5 percent had an elementary school education, 33.0 percent were employed, 25.4 percent had tattoos, and 25.7 percent were gang members. More than one-third of the juveniles (36.8 percent) committed the offense while intoxicated. Robbery (44.4 percent) was the most common offense.

### *ME Data*

According to medical examiners, the abuse of alcohol was associated with 78.1 percent of the deaths reported in the first half of 2002. Most decedents were male (95.0 percent), and 42.1 percent were age 40 or older (exhibit 7). The main cause of death was asphyxia (17.8 percent), followed by traffic accident (16.2 percent). The most common place where these deaths occurred was on the street (33.8 percent) or at home (31.3 percent).

## Cocaine

### *GTCs*

Government treatment centers report that cocaine users in the first half of 2002 were mostly male (88.5 percent); 28.9 percent were age 20–24, 47.6 percent were middle school graduates, 57.6 percent were single, and 23.6 percent were married (exhibit 1). More than one-half (51.2 percent) were from a middle-low socioeconomic level, 40.5 percent initiated cocaine use between the ages of 15 and 19, and more than 86 percent used cocaine once a week (47.6 percent) or daily (38.5 percent).

Among GTC patients, cocaine ranked fourth as the first drug of use (6.4 percent) and first as primary current drug (31.1 percent) (exhibit 2).

Natural history data on cocaine abuse show that 41.8 percent of those whose first drug of use was cocaine were still monodrug users when entering treatment; the rest were already using a second drug, usually marijuana (28.8 percent), alcohol (24.2 percent), or tobacco (17.4 percent). Of these multiple-drug users,

57.5 percent had started using a third drug and changed or combined it with alcohol (34.1 percent), tobacco (23.0 percent), or marijuana (20.6 percent) (exhibit 10).

*NGCs*

Among the cocaine abusers who attended nongovernment treatment centers in the first half of 2002, 88.9 percent were male; 23.5 percent were age 25–29; 40.3 percent had a middle school education, and 50.3 percent were single (exhibit 4). Data show that 38.4 percent started using cocaine between the ages of 15 and 19; 62.0 percent reported daily use, and 30.1 percent reported weekly use.

Cocaine ranked fourth as the drug of first use in 6.1 percent of the NGC patients and second as current primary drug (19.9 percent) (exhibit 5).

Natural history data on cocaine abuse show that 40.2 percent of these NGC patients were monodrug users upon treatment entry (exhibit 10). Nearly 60 percent used a second drug, usually marijuana (26.8 percent), heroin (20.3 percent), alcohol (19.5 percent), or crystal methamphetamine (13.9 percent). Of the multiple-drug users, 43.4 percent used a third drug, usually marijuana or alcohol (17.1 percent each) or heroin (11.1 percent).

*Juvenile Arrestees*

Juvenile Detention Centers reported cocaine use among 24.1 percent of the juvenile arrestees in the first half of 2002 (exhibit 6). Most were male (95.0 percent); more than one-half had an elementary school education (58.3 percent) and were subemployed (38.5 percent). Also, 39.1 percent had tattoos, but only 28.1 percent were gang members. One-third of the juvenile arrestees (32.4 percent) committed the offense under intoxication. Robbery was the most common offense (48.7 percent).

**Heroin**

*GTCs*

Heroin users at GTCs in the first half of 2002 were mostly male (88.9 percent). Nearly 89 percent were age 30 or older, 77.8 percent had an elementary school education, 33.3 percent were single, and another 33.3 percent were living with someone. Nearly 56 percent came from a low socioeconomic background, and 44.4 were from a middle-low socioeconomic background (exhibit 1). The age of onset for 66.7 percent of heroin users was between 15 and 19. All reported daily use.

Of the 5,412 patients attending treatment during first half of 2002, only 0.2 percent reported heroin as drug of first use; as primary current drug, heroin ranked fifth (4.5 percent) (exhibit 2).

*NGCs*

At the nongovernment treatment centers in the first half of 2002, most heroin-abusing patients were male (92.0 percent); 39.7 percent were age 35 and older, 44.8 percent had only an elementary school education, and 49.1 percent were single (exhibit 4). The age of first use of heroin among these patients was between 15 and 19 (37.7 percent); 97.1 percent reported daily use.

Since 1994, heroin as drug of first use has been increasing (4.3 percent) (exhibit 5). As the primary current drug, heroin patients ranked first as the cause of treatment demand (28.0 percent) among NGC clients, a substantial increase from the approximately 24 percent in 2001.

*Juvenile Arrestees*

The Juvenile Detention Centers reported that 0.7 percent of the 3,779 juveniles arrested during first half of 2002 used heroin (exhibit 6). Most were male (88.9 percent); 48.1 percent had an elementary school education, and the same percentage was subemployed. Nearly 52 percent were gang members, and the same percentage had tattoos. More than 44 percent of the offenses were committed under intoxication. Robbery was the most common offense (70.4 percent).

CONCLUSIONS

The SISVEA system has been strengthened and expanded to include at least one city in each State; the cities now total 51. Also, the system is being evaluated each trimester as part of the National Systems of Surveillance of Mexico.

The types of drugs mentioned have varied across the different information sources:

- Cocaine and heroin mentions have increased in Juvenile Detention Centers.
- The abuse of alcohol remains the drug most related to deaths.
- In government treatment centers, marijuana and inhalants have decreased as drugs of onset, while alcohol as the first drug of use continues to

increase. The most prevalent current drug in the first half of 2002 was cocaine, although it showed a decrease compared with the previous year.

- In nongovernment treatment centers, cocaine decreased slightly as drug of onset. As a current

drug, cocaine ranked first, with 23.8 percent seeking treatment for cocaine abuse. On the other hand, there was an increase in heroin as the drug of first use and as the current drug of use.

---

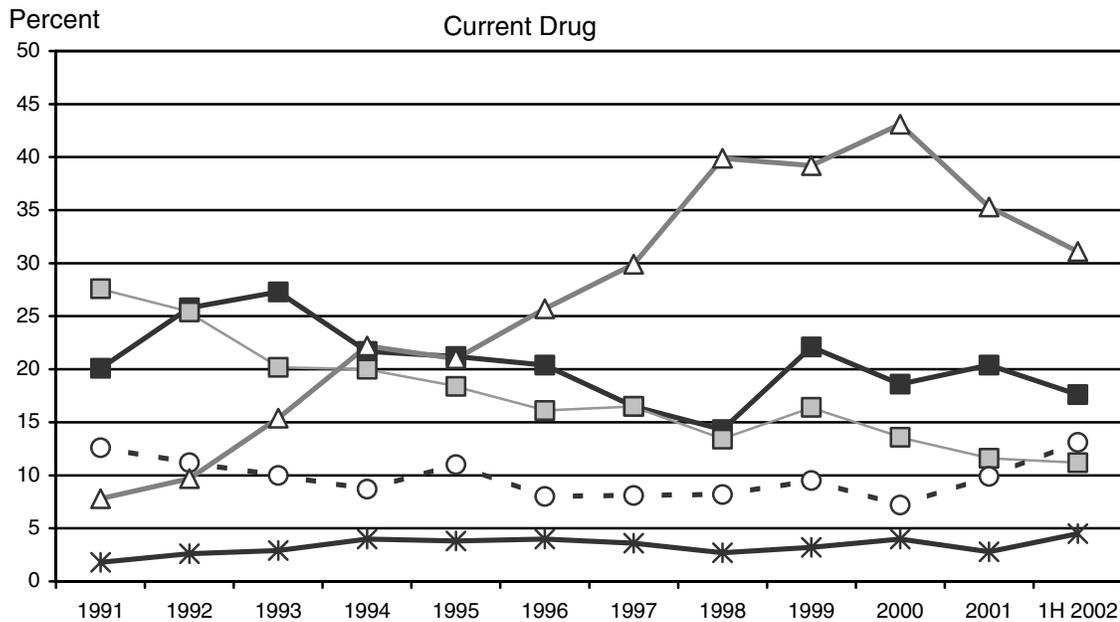
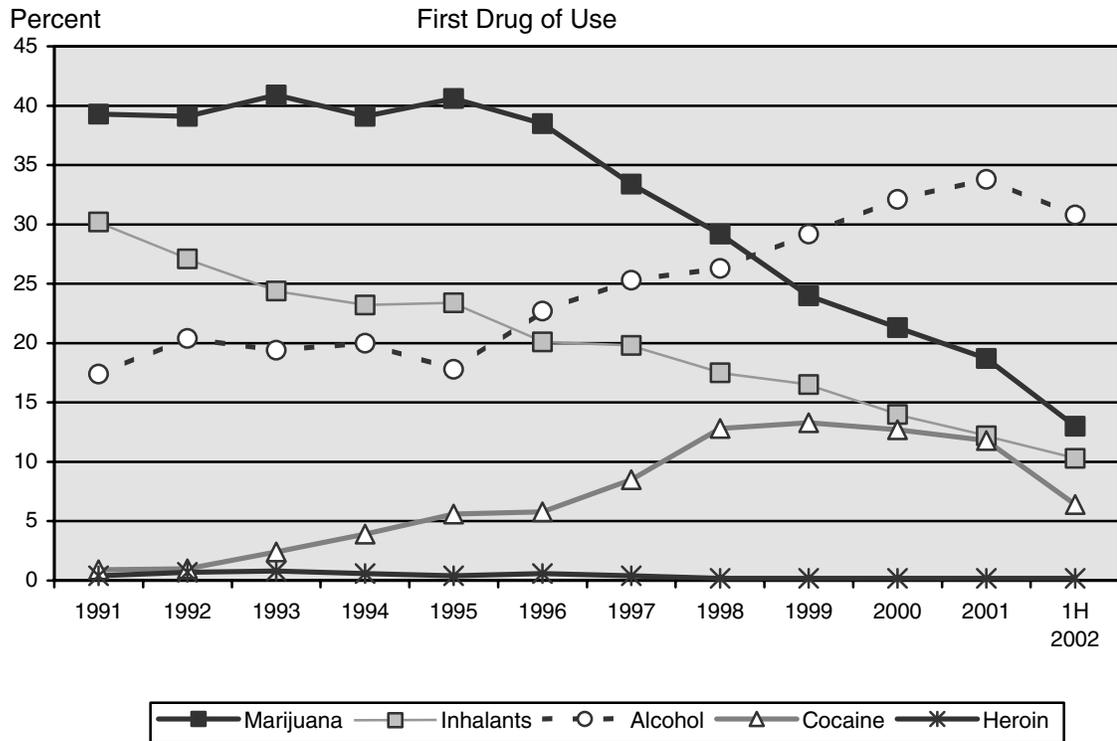
*For inquiries concerning this report, please contact Roberto Tapia-Conyer, Ministry of Health of Mexico, Cerro de Maculitepec #83, Col. Campestre Churubusco, 04200, Delegacion Coyoacan, D.F., Mexico City, Mexico 04200, Phone: 525-55-53-71-45, Fax: 525-55-53-72-92, E-mail: <rtapia@mail.ssa.gob.mx>.*

**Exhibit 1. Demographic Characteristics of GTC Patients in Mexico by First Drug of Use and Percent: January–June 2002**

Characteristic	Total (N=5,412)	Marijuana (n=699)	Inhalants (n=554)	Alcohol (n=1,662)	Cocaine (n=347)	Heroin (n=9)
Gender						
Male	85.1	91.6	85.7	85.1	88.5	88.9
Female	14.9	8.4	14.3	14.9	11.5	11.1
Age						
5–14	9.6	5.6	26.9	7.3	5.8	0.0
15–19	30.0	31.9	34.7	26.6	26.6	0.0
20–24	19.6	19.9	14.1	20.2	28.9	11.1
25–29	15.7	15.7	11.0	17.6	20.8	0.0
30–34	10.6	11.4	6.0	13.1	11.6	44.4
35 and older	14.5	15.5	7.4	15.2	6.4	44.4
Schooling						
Elementary	19.7	20.1	36.8	16.5	12.9	77.8
Middle	45.7	45.7	51.9	43.9	47.6	11.1
High	21.4	23.1	7.7	24.4	25.3	0.0
College	6.9	6.1	0.7	8.0	8.8	0.0
No formal education	0.4	0.6	0.7	0.4	0.3	0.0
Other	5.8	4.4	2.2	6.9	5.0	11.1
Marital Status						
Single	61.6	62.1	75.3	58.5	57.6	33.3
Married	21.7	18.9	11.2	23.9	23.6	11.1
Living together	9.8	12.4	8.3	10.1	10.1	33.3
Divorced	1.9	1.9	1.1	2.2	2.6	0.0
Widowed	0.1	0.1	0.2	0.0	0.3	0.0
Other	4.9	4.6	4.0	5.2	5.7	22.2
Socioeconomic Level						
High, middle-high	12.9	12.6	6.0	14.3	7.5	0.0
Middle	8.5	8.0	5.4	7.7	16.1	0.0
Middle-low	56.5	51.1	53.5	57.3	51.2	44.4
Low	22.1	28.3	35.0	20.7	25.2	55.6
Age of Onset						
Younger than 10	4.1	2.1	4.6	5.0	0.6	0.0
10–14	50.4	48.7	67.8	43.2	21.0	22.2
15–19	38.3	43.5	25.1	45.4	40.5	66.7
20–24	4.7	4.6	1.3	5.0	19.8	0.0
25–29	1.6	0.7	0.9	0.9	11.9	0.0
30–34	0.5	0.4	0.2	0.4	3.0	0.0
35 and older	0.4	0.0	0.2	0.1	3.0	11.1
Frequency of Use						
Daily	53.8	61.8	42.1	21.6	38.5	100.0
Once a week	20.9	25.9	38.6	49.7	47.6	0.0
1–3 times per month	14.1	11.4	17.0	26.8	13.4	0.0
1–11 times per year	1.1	0.8	2.3	1.8	0.4	0.0

SOURCE: SISVEA—Government treatment centers

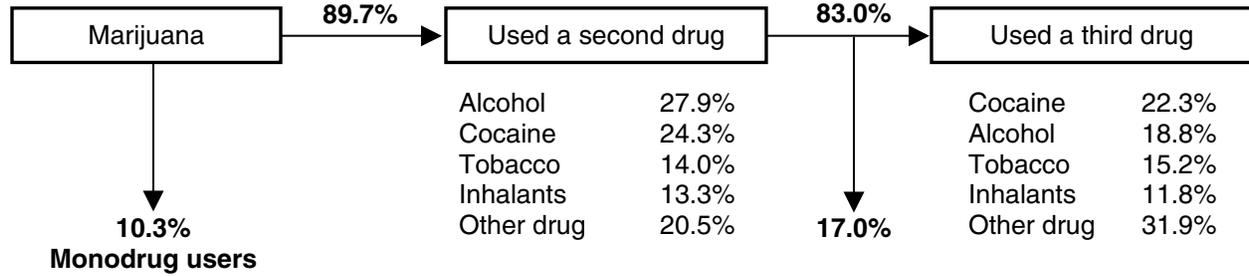
**Exhibit 2. Comparison Between Drug of First Use and Current Drug of Use Among GTC Patients in Mexico by Percent: 1991–June 2002**



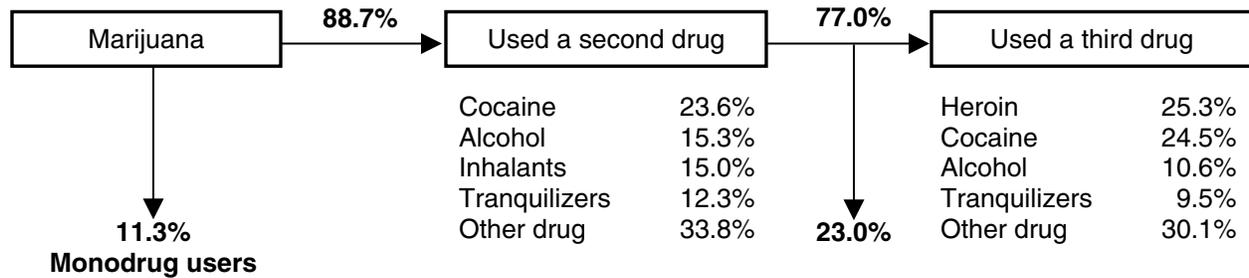
SOURCE: SISVEA—Government treatment centers

**Exhibit 3. Natural History of Marijuana Use Among Treatment Patients in Mexico: January–June 2002**

**Government Treatment Centers**



**Nongovernment Treatment Centers**



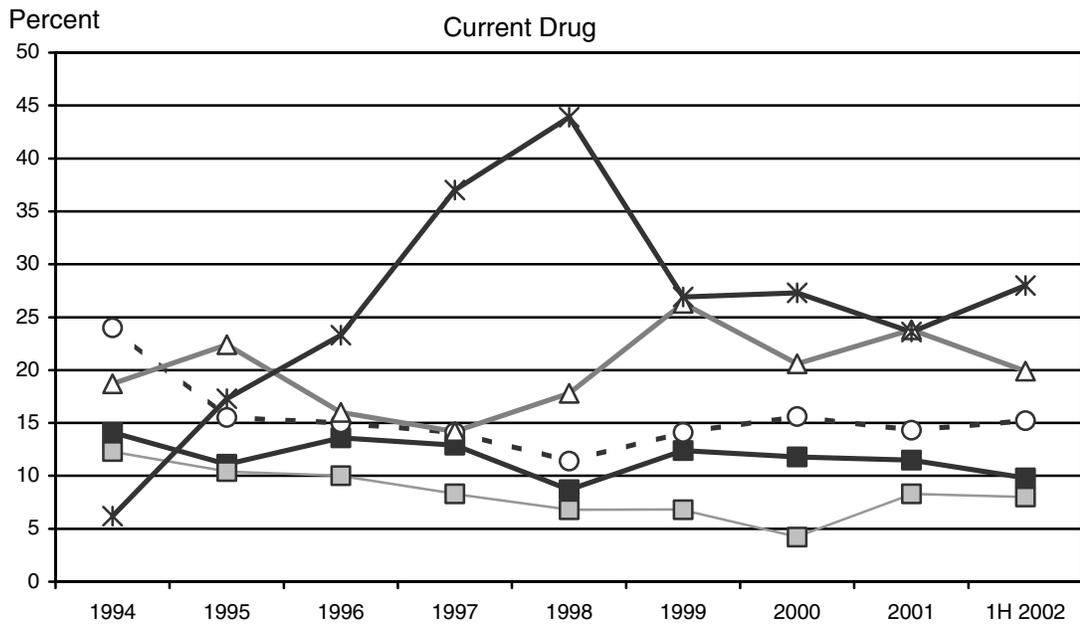
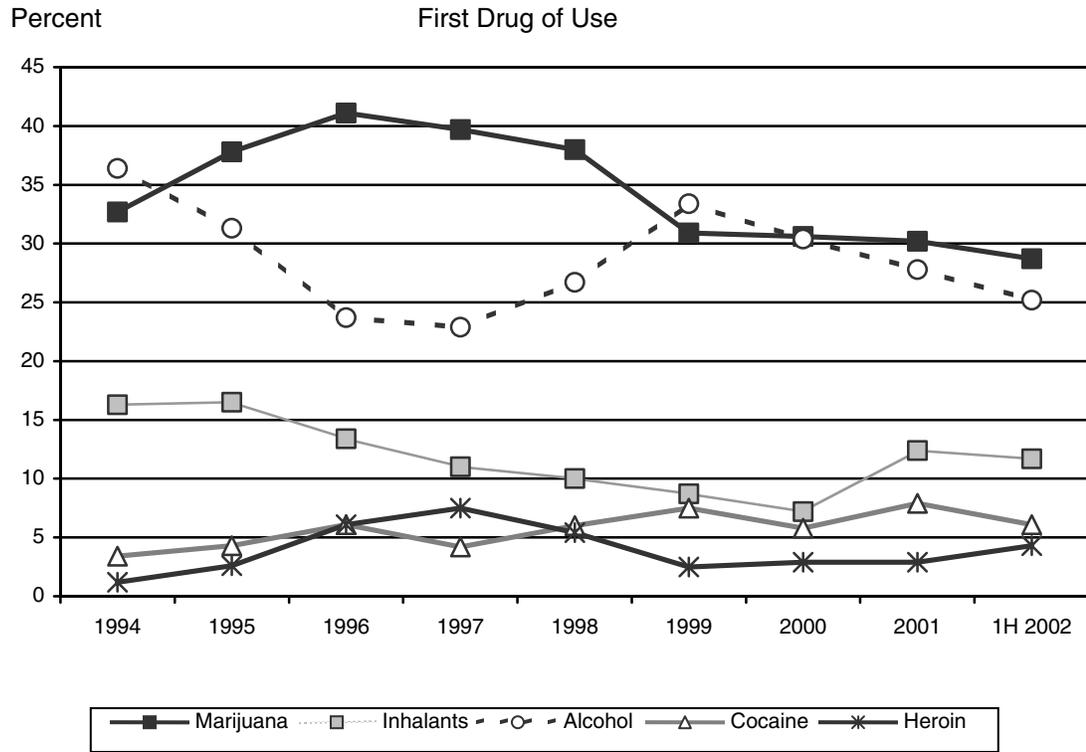
SOURCE: SISVEA—Government and nongovernment treatment centers

**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	95.6	93.8	93.3	88.9	92.0
Female	7.5	4.4	6.2	6.7	11.1	8.0
Age						
5–14	2.0	1.2	5.4	1.2	1.3	0.4
15–19	15.1	14.3	28.3	9.3	19.4	3.4
20–24	20.3	22.6	24.8	14.4	22.6	19.7
25–29	19.4	20.0	17.6	17.3	23.5	20.0
30–34	15.2	16.4	10.4	15.8	16.2	16.9
35 and older	28.0	25.5	13.4	42.0	17.0	39.7
Schooling						
Elementary	38.0	37.1	55.2	33.4	27.2	44.8
Middle	36.0	41.4	27.8	31.1	40.3	37.5
High	15.3	14.8	4.8	19.5	22.3	11.7
College	4.0	2.1	0.4	8.7	4.5	0.6
No formal education	13.5	2.6	6.5	3.6	2.3	3.5
Other	3.1	2.0	5.4	3.8	3.3	1.9
Marital Status						
Single	52.7	55.4	69.6	43.4	50.3	49.1
Married	22.7	17.7	12.1	30.8	30.0	24.1
Living together	12.9	14.8	10.9	10.2	11.1	14.2
Divorced	4.4	3.9	2.1	6.6	3.3	5.9
Widowed	1.0	0.9	0.8	1.6	0.1	0.3
Other	6.4	7.3	4.5	7.3	5.2	6.3
Age of Onset						
Younger than 10	5.1	4.6	8.8	4.5	0.7	0.7
10–14	43.2	48.4	57.3	37.3	20.7	13.2
15–19	38.2	40.1	30.2	44.8	38.4	37.7
20–24	7.4	4.4	2.5	8.6	19.6	19.8
25–29	3.2	1.7	0.5	2.7	9.3	13.5
30–34	1.5	0.5	0.3	0.7	6.1	8.2
35 and older	1.5	0.3	0.4	1.2	5.1	6.9
Frequency of Use						
Daily	73.6	79.9	81.8	49.5	62.0	97.1
Once a week	20.9	15.6	15.1	39.1	30.1	2.6
1–3 times per month	4.3	3.1	2.0	9.6	6.0	0.2
1–11 times per year	1.3	1.3	1.1	1.7	1.8	0.2

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: January–June 2002**

<b>Total</b> (N=3,779)		<b>Marijuana</b> (n=1,494)	<b>Inhalants</b> (n=734)	<b>Alcohol</b> (n=421)	<b>Cocaine</b> (n=911)	<b>Heroin</b> (n=27)
Male	92.1	Male 95.4	Male 94.4	Male 92.9	Male 95.0	Male 88.9
Elementary school	50.0	Elementary school 58.1	Elementary school 66.9	Elementary school 48.5	Elementary school 58.3	Elementary school 48.1
Employed	28.5	Subemployed 37.5	Subemployed 41.1	Employed 33.0	Subemployed 38.5	Subemployed 48.1
Tattoo	24.0	Tattoo 38.6	Tattoo 42.8	Tattoo 25.4	Tattoo 39.1	Tattoo 51.9
Belong to a gang	19.1	Belong to a gang 30.0	Belong to a gang 34.6	Belong to a gang 25.7	Belong to a gang 28.1	Belong to a gang 51.9
Offense under intoxication	20.7	Offense under intoxication 33.5	Offense under intoxication 38.4	Offense under intoxication 36.8	Offense under intoxication 32.4	Offense under intoxication 44.4
<b>Frequent Offenses</b>						
Robbery	45.3	Robbery 46.3	Robbery 46.9	Robbery 44.4	Robbery 48.7	Robbery 70.4
Against health	15.0	Against health 27.8	Against health 24.4	Injuries 11.9	Against health 28.1	Against health 11.1
Damages	8.2	Drugs/ consumption 10.2	Drugs/ consumption 14.7	Damages 10.9	Drugs/ consumption 7.4	Injuries 7.4
Injuries	8.0	Arms bearing 6.1	Arm bearing 6.5	Against health 7.1	Arms bearing 7.8	Damages 3.7
Others	23.5	Others 9.6	Others 7.5	Others 25.7	Others 8.0	Others 7.4

SOURCE: SISVEA–Juvenile Detention Centers

**Exhibit 7. Types of Death Under Intoxication of Selected Drugs<sup>1</sup> in Mexico by Percent:  
January–June 2002**

Characteristic	Total (N=567)	Alcohol (n=443)	Marijuana (n=61)	Opioid <sup>2</sup> (n=42)
Gender				
Male	94.1	95.0	100.0	95.2
Female	5.9	5.0	0.0	4.8
Age				
10–14	0.9	1.1	1.6	0.0
15–19	7.6	5.9	13.1	4.8
20–24	12.5	11.8	14.8	11.9
25–29	15.5	15.2	18.0	16.7
30–34	12.4	11.3	19.7	26.2
35–39	13.8	12.7	18.0	23.8
40 and older	37.3	42.1	14.8	16.7
Cause of Death				
Run over	12.0	15.1	1.6	0.0
Traffic accident	12.9	16.2	3.3	0.0
Fall	3.9	5.0	0.0	0.0
Electrocuted	0.4	0.2	1.6	0.0
Burned	0.5	0.7	0.0	0.0
Beaten	7.1	7.8	6.6	4.8
Asphyxia	17.0	17.8	11.5	7.1
Crushed	0.0	0.0	0.0	0.0
Firearm	15.7	11.4	31.1	9.5
Steel knife	5.0	4.6	13.1	2.4
Intoxicated	11.4	5.9	21.3	73.8
Other	14.1	15.3	9.8	2.4
Place of Death				
Traffic	20.3	25.7	1.7	0.0
Home	28.9	31.3	23.7	14.3
Street	41.4	33.8	69.5	85.7
Public baths	0.5	0.5	0.0	0.0
Recreational areas	0.9	1.2	0.0	0.0
At work	1.1	1.2	0.0	0.0
Service areas	1.1	0.9	1.7	0.0
Other	5.8	5.6	3.4	0.0

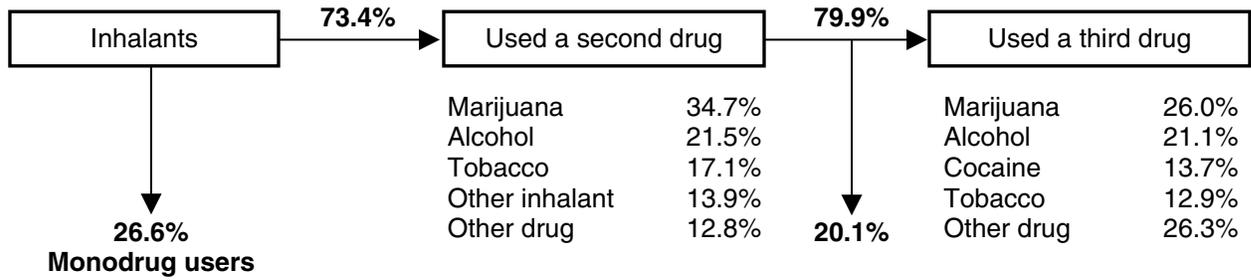
<sup>1</sup> Deaths from all causes totaled 3,869.

<sup>2</sup> Includes opium, morphine, and heroin.

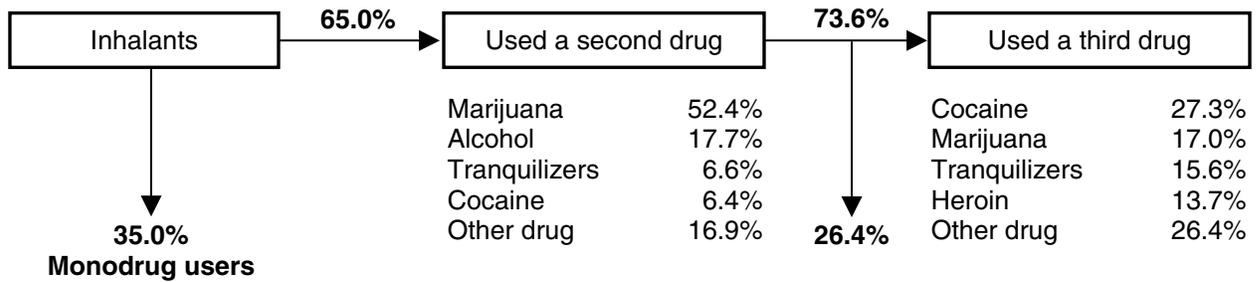
SOURCE: Medical examiners

**Exhibit 8. Natural History of Inhalant Use Among Treatment Patients in Mexico:  
January–June 2002**

**Government Treatment Centers**



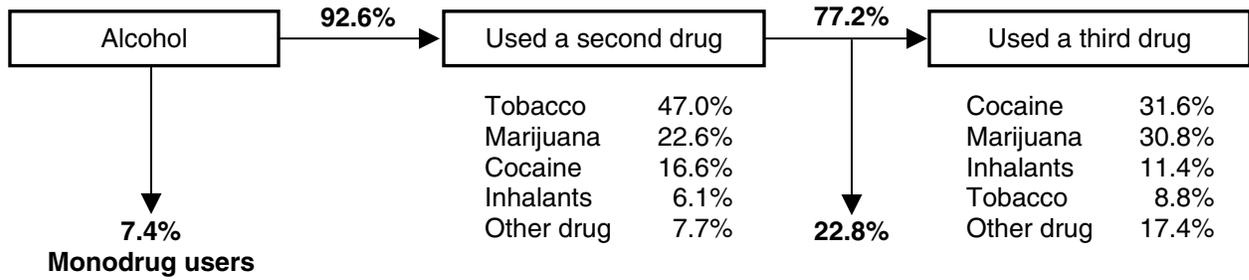
**Nongovernment Treatment Centers**



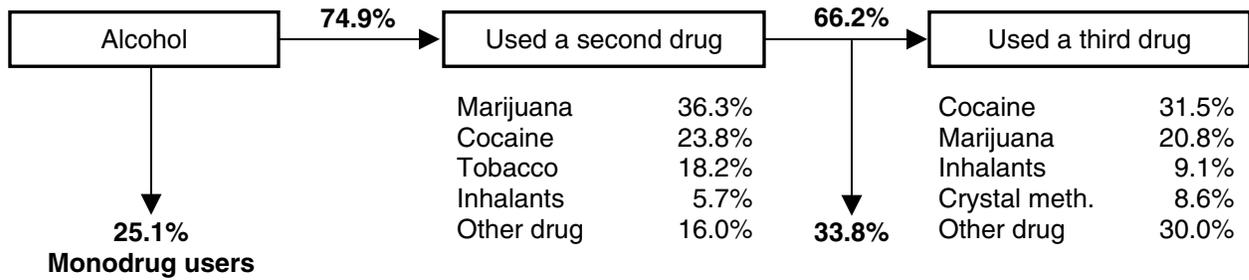
SOURCE: SISVEA—Government and nongovernment treatment centers

**Exhibit 9. Natural History of Alcohol Use Among Treatment Patients in Mexico:  
January–June 2002**

**Government Treatment Centers**



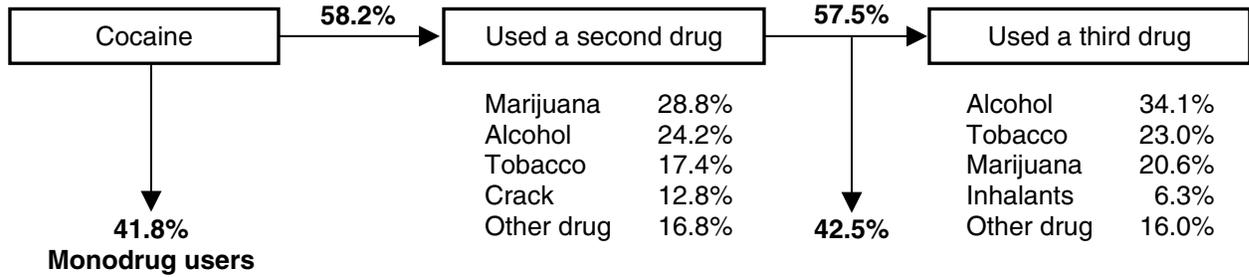
**Nongovernment Treatment Centers**



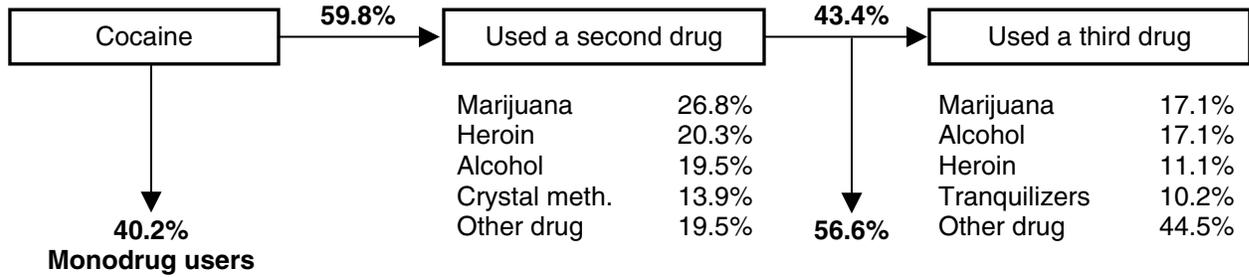
SOURCE: SISVEA—Government and nongovernment treatment centers

**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

# Prevalence of Risk Factors and Substance Abuse Among Adolescents Age 12–17 in the Gaza Strip, Palestine

M. Afifi, M.D., M.Sc.,<sup>1</sup> S. Sousi, Ph.D.,<sup>2</sup> and Z. Abu Rsas, M.P.H.<sup>1</sup>

## ABSTRACT

*The Palestinian representative presented preliminary data from the high school survey of students age 15–17. This survey is the first study based on the CEWG approach to establish a monitoring and information system for substance abuse in Palestine. Funding support for this initiative was obtained from U.S. Agency for International Development (USAID), Middle East Regional Cooperation Program. The information system will use regular school and university surveys, data collected from informants (community experts) through focus groups, Ministry of Health (MOH) reports, and the Anti-Narcotics General Administration (P-ANGA) reports. The preliminary findings presented represent data collected from 26 of the 70 high schools in Gaza Strip (1,034 of 54,695 students). Results show that 4.6–13.9 percent of boys and 2.1–10.3 percent of girls believe that using substances (including tobacco, alcohol, psychoactive tablets, inhalants, marijuana, and heroin) have little harmful effects, and 15.2–46.5 percent of boys and 8.4–46.2 percent of girls would have little or no objection to a friend using such substances. Thirty-four percent of boys and 5.5 percent of girls had observed one or more friends smoking in the school; these figures increase to 46 and 37.5 percent, respectively, in districts. Among groups, 0.6–3.6 percent of boys and 0.0–3.9 percent of girls were frequently observed using alcohol or substances other than tobacco. Across districts, the figures were 3.5–5.2 percent of boys and 0.5–5.2 percent of girls. The prevalence of use of different substances varied: 17.2 percent of boys and 7.9 percent of girls smoked cigarettes daily; 2.5 percent of boys and 5.6 percent of girls used tranquilizers, hypnotics, and central nervous system (CNS) stimulants frequently; 6.4 percent of boys and 2.6 percent of girls used inhalants (use of nail polish was common among girls); 3.0 percent of boys and 1.1 percent of girls used marijuana; and 1.7 percent of boys and 0.8 percent of girls used heroin mixtures.*

## INTRODUCTION

### Area Description

The Gaza Strip is located in the southern part of Palestine. It is heavily populated (1.2 million inhabitants live in 362 square kilometers). Sixty-five percent of the population are refugees who live in nine camps. Approximately one-half of the population are between the ages of 10 and 25, and the population growth rate is 3.5 percent per year. Unemployment exceeds 60 percent, and 80 percent of families live below the poverty line. Security and economic situations have been very bad in the last 2 years (2000–2002) because of the uprisings (Intifada) and Israeli military activities.

Previously, there has been no reliable information system for monitoring and reporting on the use and abuse of the addicting substances in Palestine and in the Gaza Strip specifically. The major source of information has been the annual report of the Anti-Drug General Administration (P-ANGA), which describes police activities related to reducing drug supply. There is an urgent need to create a solid and reliable information system that deals with the different aspects of addiction, including supply and demand, drug-related morbidity and deaths, the extent of spread and the types of drugs as they emerge, and the risk factors that can be used to monitor and predict the future of the addiction phenomena. Such a system will be very helpful for policymakers in planning activities to control drugs.

### The MERC Project

During 1997–2000, regional and international activities were conducted to increase the knowledge about the size of the drug problem in the Middle East region, including Palestine, and to shed light on possible approaches to controlling the drug problems. From those efforts, it was concluded that there was a

<sup>1</sup> M. Afifi, M.D., M.Sc. and Z. Abu Rsas, M.P.H., are affiliated with the Substance Abuse and Addiction Research Center (SARC), Gaza.

<sup>2</sup> S. Sousi, Ph.D., is affiliated with Al-Azhar University, Gaza.

real need to develop an efficient information and monitoring system on substance misuse and the related phenomena. This conclusion was supported by a project financed by the Middle East Regional Cooperation (MERC) program by the U.S. Agency for International Development. NIDA's CEWG approach was adopted for the proposed project.

The first stage of the project was to create the proper tools to collect the basic data for the planned database. Two main tools were developed for the adolescent survey and for the experts (informants).

The main sources of data for building the database included the following:

- Data from high school surveys
- Data from university surveys
- Data from experts (informants)
- Data compiled from the reports of the P-ANGA and the Ministry of Health (MOH)
- Other data from cross-sectional studies carried locally

This presentation is focused on preliminary data from the high school survey.

#### THE HIGH SCHOOL SURVEY: PRELIMINARY DATA

By December 2002, investigators had developed survey methods and collected data from several schools. The study population included 54,695 students (27,015 boys and 27,680 girls) attending 70 schools (33 schools for boys and 37 schools for girls). The study sample reported on here includes 1,034 students randomly selected from 26 classes in 26 high schools (14 boys' schools, and 12 girls' schools).

The major themes of the survey and the preliminary results are as follows:

- The survey measured the knowledge/beliefs about the effects of using tobacco, alcohol, psychoactive drugs, inhalants, marijuana, and heroin. Preliminary findings based on this theme include the following:
  - Between 5.7 and 11.2 percent of boys and 4.5 to 9.3 percent of girls believe that smoking tobacco, taking psychoactive tablets, using inhalants, and drinking beer have little or no harmful effects.

- Between 4.6 and 13.9 percent of boys and 2.1 to 10.3 percent of girls considered frequent use of marijuana and occasional use of heroin to have little or no risk of addiction.
- The survey measured students' attitudes toward a friend using the various substances. Preliminary findings based on this theme include the following:
  - Between 41.4 and 46.5 percent of boys and 23.3 to 46.2 percent of girls had little or no objection to a friend smoking, taking tablets, or using inhalants.
  - Slightly more than 17 percent of boys and 10.0 percent of girls had little or no objection to a friend drinking beer or other alcoholic beverages.
  - Between 15.2 and 15.9 percent of boys and 8.4 to 9.2 percent of girls had little or no objection to a friend using substances like marijuana or heroin.
- The study measured daily observations by the students in the schools and districts. Preliminary findings include the following:
  - Thirty-four percent of boys and 5.5 percent of girls had observed one or more schoolmates smoking at school. By district, these figures increase to 46 and 37.5 percent, respectively, among boys and girls.
  - Daily observations of schoolmates using tablets at school were reported by 3.2 percent of boys and 3.9 percent of girls; this increased to 5.2 percent in districts.
  - Since alcoholic drinks in Gaza are generally not available in stores, use of alcohol in school was rarely observed (0.6 percent of boys and none of the girls); in districts, 4.5 percent of boys and 1.9 percent of girls reported such observations.
  - Observation of substance use (marijuana and heroin) was reported by 1.1 percent of boys but none of the girls; in the districts, 3.5 percent of boys and 0.5 percent of girls reported observing schoolmates using marijuana or heroin at school.
- The survey measured ease of obtaining substances. Findings from this theme include the following:

- 
- Most students—96.6 percent of boys and 95.9 percent of girls—believe that tobacco and cigarettes are easy to obtain.
  - Also, 43.3 percent of boys and 57.9 percent of girls believe that stimulants and tranquilizers are easy to obtain.
  - Fewer students—13.8 percent of boys and 6.1 percent of girls—believe that obtaining marijuana is easy; 9.1 percent of boys and 5.2 percent of girls believe heroin is easy to obtain.
- The survey measured personal experience in use of substances. Findings from this theme include the following:
    - Daily cigarette smoking was reported by 17.2 percent of the boys and 7.9 percent of the girls.
    - Psychoactive tablets were used by 2.5 percent of the boys and 5.6 percent of the girls.
    - Inhalant use was reported by 6.4 percent of the boys and 2.6 percent of the girls (for girls, the most common inhaled substance was nail polish).
    - Three percent of the boys and 1.1 percent of the girls used marijuana.
    - Heroin mixtures were used by 1.7 percent of the boys and 0.8 percent of the girls.

---

*For inquiries concerning this report, please contact Mohamed F. Al-Ajifi, M.D., Substance Abuse and Addiction Research Center (SARC), P.O. Box 1137, Rimal, Gaza, Palestinian Authority, Phone: 972-59-410251, Fax: 972-82-860013, E-mail: <m\_alajifi@hotmail.com>.*

# Southern African Development Community Epidemiology Network on Drug Use (SENDU): Findings July 2001—June 2002

Charles D.H. Parry, Ph.D., and Andreas Plüddemann, M.A.<sup>1</sup>

## ABSTRACT

*The Southern African Development Community (SADC) Regional Drug Control Program provides for the establishment of a regional drug surveillance network (SADC Epidemiology Network on Drug Use—SENDU) in the 14 SADC member States. At the end of June 2002, data were available from six countries: Botswana (Phase 1), Lesotho (Phase 2), Mauritius (Phase 2), Namibia (Phase 1), the Seychelles (Phase 2), and South Africa (Phase 12). The findings indicate that while cannabis and alcohol dominate treatment demand, arrests, and community concern, there is an increase in harder drug use in some countries, especially heroin. Indicators also point to an increase in drug use among younger persons. In addition, an emergence of intravenous drug use in some countries and the spread of drugs historically confined to one particular area has been noted. Among the policy implications raised in the country reports for January to June 2002 were the following: there is a need to increase interventions aimed at youth; multifaceted strategies are needed to decrease the tolerance of alcohol abuse in society; attention should be given to addressing the danger of substance use in HIV prevention messages; and health workers need to be trained to identify drug abuse. Across countries, various issues requiring further research were raised, and suggestions were made for how data collection could be strengthened. Next steps include forwarding a summary of the findings and recommendations to the SADC Council of Ministers and expanding the project to three more countries in 2003.*

## INTRODUCTION

### Project Overview

The South African Community Epidemiology Network on Drug Use (SACENDU) is an alcohol and other drug (AOD) surveillance system comprising

a network of researchers, practitioners, and policy-makers from five sites in South Africa. The network, managed by the Medical Research Council (MRC) of South Africa, has been operational since July 1996. In 2000, with funding from the South African Development Community (SADC) via the European Commission, the MRC was contracted to establish surveillance systems in the 13 other SADC member States.

The project forms part of the 5-year SADC Drug Control Program. The broader (regional) network has been named the SADC Epidemiology Network on Drug Use. This initiative has been driven by several factors: the view that the burden of harm from AOD use in Southern Africa is likely to increase with development; the realization that various global, regional, and local factors have highlighted the need for monitoring substance use in Southern Africa at this time; and the SADC Drug Protocol, signed in 1996, which highlights the importance of information and research to develop interdiction and demand reduction activities.

The overall goal of the SADC Epidemiology Network on Drug Use (SENDU) is to improve the information base for policymakers in SADC member States in order to address the health and socio-economic burden caused by misuse of AODs. SENDU's immediate purpose is to develop, establish, and evaluate a substance abuse surveillance system in each of the SADC member States, building on the SACENDU model operational in three cities and two provinces in South Africa. The initiative is supported logistically by the SADC Drug Control Officer and technically by the United Nations Office for Drugs and Crime (Global Assessment Program on Drug Abuse) and the National Institute on Drug Abuse (Division of Epidemiology, Services and Prevention Research) in the United States.

The SENDU initiative has the following core components:

- Ongoing training and technical support.

<sup>1</sup> The authors are affiliated with the Medical Research Council (Cape Town), Tygerberg, South Africa.

- Establishment of site- or country-specific networks and the implementation of a “basic” surveillance system in each site, and if possible, additional components in some sites. The basic system is comprised of treatment demand data from specialist substance abuse treatment facilities (if available) and psychiatric hospitals, as well as information from police on arrests, seizures, and drug prices. Additional components might include school studies and mortuary or trauma unit studies.
- Validation and collation of data during and after 6-month country and regional report-back meetings.
- Dissemination of findings via newsletters and reports, press briefings, and a Web site.

A budget of \$390,000 over 5 years has been provided to “kick-start” the process. The funds are being used for training/consultation meetings, technical support visits, and transportation for country representatives to semiannual regional meetings, as well as to facilitate report writing and information dissemination.

During 2001 and 2002, technical support visits were undertaken to Botswana, Lesotho, Malawi, Mauritius, Mozambique, Namibia, the Seychelles, and Tanzania. The foci of these visits was to learn more about patterns of AOD use in the countries; inform government officials about the SENDU initiative; assist countries in developing instruments to collect and collate secondary data on AOD use and associated consequences; provide technical support in other areas related to establishing and maintaining an AOD surveillance system; support country coordinators in running an initial meeting of potential members of an AOD surveillance network; conduct visits to agencies where data are to be collected; and identify other areas requiring technical or other forms of support.

### Area Description

The Southern African Development Community was established in 1992 and comprises 14 member States (exhibit 1). These countries differ greatly in land area, population, income levels, and official languages. The region has a population of more than 200 million persons, with a landmass equal to that of the United States. Poverty reduction, drought, the human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS), and political instability are among the key issues currently facing SADC.

Lesotho has a population of 2.1 million, and the island States of Mauritius and the Seychelles have populations of 1.2 million and nearly 80,000, respectively. The populations of Botswana and Namibia are 1.5 and 1.8 million persons, respectively. SACENDU comprises five sentinel sites, three of which are large port cities (Cape Town, Durban, and Port Elizabeth [PE]) and the other two are provinces: Gauteng, a largely urban province that includes the cities of Pretoria and Johannesburg, and Mpumalanga, a largely rural province bordered by Swaziland and Mozambique. The South African sites include about 36 percent of the country’s population. In contrast to South Africa, the surveillance systems in the five other countries referred to above focus on country-level data.

### Data Sources

The following data sources are accessed in most countries:

- Primary and secondary drugs of abuse reported by clients at specialist AOD treatment centers
- Substance abuse-related diagnoses at acute psychiatric treatment facilities
- Police arrests, seizures, and price data
- Alcohol-related deaths reported by mortuaries

In addition, in selected countries the following information is accessed:

- AOD-related trauma unit/ER admissions
- Case records (from nongovernment organizations [NGOs], probation services)
- Prison data (AOD-related offenses and AOD use prior to the crime for which individuals were incarcerated)
- Alcohol-related traffic offense data
- Household, school, and rave surveys
- Key informant interviews (school counselors, youth)
- Alcohol production and licensing information

The focus of this report is on the findings of Phase 1 (January–June 2002) for Botswana and Namibia,

Phases 1 (July–December 2001) and 2 (January–June 2002) for Lesotho, Mauritius, and the Seychelles, and Phases 11 (July–December 2001) and 12 (January–June 2002) of the SACENDU Project.

## DRUG ABUSE PATTERNS AND TRENDS

### Treatment Demand Data

Information on the primary drug of abuse reported at specialist AOD treatment centers<sup>2</sup> is provided in exhibits 2–5. Unless otherwise stated, data relate to January to June 2002. To facilitate country comparisons, data for South Africa are averaged over the five sentinel sites in the country.

In Botswana, Mauritius, Namibia, and South Africa, there appears to be demand for treatment for a greater range of substances of abuse than in Lesotho and the Seychelles, where alcohol and cannabis are the only primary drugs of abuse reported (exhibit 2a). Based on treatment demand data, South Africa appears to have a greater range of available substances than other SADC countries for which SENDU data are available. Mauritius has by far the greatest proportion of patients in treatment whose primary drug of abuse is heroin (nearly 50 percent). The only other country reporting patients with heroin as the primary drug was South Africa. Differences by country for the major primary or secondary drugs of abuse are graphically depicted in exhibit 2b.

South Africa is the only country with treatment patients reporting ecstasy as the primary drug of abuse (exhibit 2a). Methaqualone (Mandrax) and cocaine were only reported as a primary substances of abuse in treatment centers in Botswana, Namibia, and South Africa.

The major changes noted between July–December 2001 and January–June 2002 were as follows: an increase in the proportion of patients seeking treatment for primary abuse of alcohol for all four sites for which comparative data were available; a decrease in the proportion of treatment patients whose primary drug of abuse was cannabis for all four sites for which comparative data were available; and a decrease in the proportion of patients in Mauritius whose primary drug of abuse was heroin.

Across countries and sites, the proportion of patients in treatment who were younger than 20 ranged from just over 3 percent in Mauritius to nearly one-quarter in South Africa (exhibit 3). Except for Lesotho, where the number of patients in treatment for

substance abuse is low and appears to have decreased, these percentages have remained fairly stable over the two data collection periods.

Across sites, with the exception of Mauritius, the predominant mode of ingesting substances is by swallowing or smoking (exhibit 4). In Mauritius, however, more than one-half of persons in treatment in the first half of 2002 injected their primary drug of abuse. In Mauritius, heroin is primarily used intravenously. In contrast, in South Africa heroin is mostly smoked (“chasing the dragon”), but an increasing proportion of patients with heroin as their primary drug of abuse report *some* injection use (more than 40 percent in Gauteng and Cape Town).

In all sites reporting age, patients in treatment whose primary drug of abuse was alcohol were older than those reporting other primary drugs of abuse (exhibit 5). The mean age of patients whose primary drug of abuse was cannabis ranged from 19 in Cape Town to 32 in Mauritius. Patients whose primary drug of abuse was cannabis or ecstasy in South Africa generally appeared to be younger than persons reporting other primary drugs of abuse. Between the second half of 2001 and the first half of 2002 in Mauritius, there was a dramatic decrease in the age of patients whose primary drug of abuse was heroin.

The proportion of persons in psychiatric treatment centers with an alcohol- or drug-related admission/discharge diagnosis ranged from a low of 19 percent in Port Elizabeth (South Africa) to nearly 50 percent in Mauritius, with the predominant substance being alcohol. Of the drugs, by far the most common substance was cannabis (in Namibia, the Seychelles, and South Africa) and heroin (in Mauritius).

### Law Enforcement Data

Information on the proportion of police arrests for dealing in different drugs is shown in exhibit 6. In Botswana, Lesotho, and the Seychelles in the first half of 2002, all arrests for drug dealing involved cannabis. In Mauritius, more than one-half of arrests for drug dealing involved heroin. Heroin arrests were substantially greater in Mauritius than in South Africa, the only other SADC country (in the SENDU project) where police arrests for dealing in heroin were reported. In contrast to Botswana, Lesotho, Mauritius, and the Seychelles, in the four South African sites for which arrest data were available and in Namibia, persons were arrested for dealing in a much greater spectrum of substances.

<sup>2</sup> In the case of Lesotho, this also includes four psychiatric hospitals/clinics that also provide substance abuse treatment services. For Botswana, information comes from nine psychiatric hospitals.

Police seizures are indicated in exhibit 7. In the first half of 2002, the highest seizures of cannabis were noted in Botswana and South Africa (147,067 and 707,444 kilograms, respectively), while the greatest amount of heroin was seized in South Africa (6.1 kilograms) and Mauritius (5.0 kilograms). In the first half of 2002, seizures of cocaine, lysergic acid diethylamide (LSD), and speed only occurred in South Africa. Methaqualone, crack and ecstasy seizures were only reported in Namibia and South Africa.

Information on drug prices is provided in exhibit 8. Cannabis is clearly very inexpensive in South Africa, at about U.S.\$0.10 per gram. One explanation for this is that cannabis is widely cultivated in certain parts of South Africa. Heroin is also significantly cheaper in South Africa than in Mauritius. One gram of heroin in Mauritius costs approximately U.S.\$267, compared with only U.S.\$12 in Cape Town, South Africa. Information on drug purity is generally not available. No major changes in drug prices were noted over the two periods for the countries where comparative data were available.

#### CONCLUSION

This report aims to summarize the situation with regard to the nature and extent of AOD abuse and associated consequences in the six SADC member States that are fully participating in the SENDU project. In 2003, data from Malawi are expected to be available for the period July to December 2002, and from Mozambique and Tanzania for the period January to June 2003.

The findings to date indicate that while cannabis and alcohol dominate treatment demand, arrests, and community concern, there is an increase in harder drug use, especially heroin, in some countries. Indicators also point to an increase in drug use among younger persons. In addition, an emergence of intravenous drug use has been noted in some countries, as has the spread of drugs historically confined to particular areas (e.g., the spread of methaqualone use from South Africa to Botswana and Namibia).

Among the policy implications raised in the country reports for January to June 2002 were the following:

- There is a need to increase interventions aimed at youth, including early intervention programs designed to delay the onset of AOD use and sustained use of drugs among experimental users; access to quality school-based prevention programs; programs specifically focusing on

reducing cannabis use among youth (in Lesotho and South Africa) and heroin use among youth in certain urban areas (Mauritius [Port Louis], South Africa [Cape Town, Gauteng]); and treatment options for young people in general.

- Multifaceted strategies to decrease the tolerance of alcohol abuse in society are required in most SADC member States.
- Specific attention should be given to addressing the danger of AOD abuse in HIV prevention messages (Mauritius and South Africa), as well as in addressing the risk associated with intravenous drug use (Mauritius, Namibia, and South Africa).
- Training should be conducted with nurses and other health workers in how to identify drug abuse problems that may be manifested as a physical problem (Botswana).

Across the countries, various issues requiring further research were raised, including the following:

- The extent of female use of cannabis.
- The link between AOD use and traffic collisions.
- The relationship between AOD use and psychiatric problems.
- Comparison of crimes committed under the influence of substances like alcohol, cocaine, and heroin.
- The link between substance use and HIV/AIDS.
- The incidence of HIV and hepatitis C and B among injection and non-injection drug users in Mauritius.
- Reasons for the non-use of rehabilitation services by young girls and women.
- The effect of a change in cannabis policy in Europe on cannabis trafficking and use in Southern Africa.

At the SENDU regional meeting held in Luanda (Angola) in November 2002, various suggestions were put forward for how data collection could be strengthened. Among other things, the need for computerization of certain data sources was stressed, as was the need to increase access to other data sources. In particular, sources other than treatment settings and law enforcement agencies need to be

accessed, especially those that will be useful in determining whether there are other drugs that are being used (e.g., ecstasy). The following sources specifically were mentioned: private hospital casualty departments; military hospitals; surveys of youth in schools and universities; mine workers; primary health care clinic attendees; and prisoners.

Next steps include analysis of the first phase of data collected in Malawi (July–December 2002); data collection in Mozambique and Tanzania beginning January 2003; technical support visits to Swaziland, Zambia, and Zimbabwe in 2003; continued support to and communication with member States; hosting the third SENDU Report Back Meeting in Johannesburg in the first half of 2003; ongoing advocacy for the project and dissemination of existing data; and working on a proposal to ensure continuation of the project after June 2004. The latest findings of SENDU, plus the policy recommendations, have been included in a short report that will be delivered

to the next meeting of the SADC Council of Ministers.

#### ACKNOWLEDGEMENTS

The authors acknowledge the contributions of the community epidemiology networks in Botswana, Lesotho, Mauritius, Namibia, the Seychelles, and South Africa, and in particular the country coordinators in those SADC member States. Technical support to the project has been provided by Matthew Warner-Smith (U.N. Office of Drugs and Crime, Pretoria), Nick Kozel (Division of Epidemiology, Services and Prevention Research at NIDA, Bethesda, Maryland), and Dr. Johnny Strijdom (SADC Drug Control Officer, Gaborone). The SENDU Project is funded by the European Union. The SACENDU Project receives funding from the Department of Health (South Africa) and the Gauteng Provincial Department of Social Services.

---

*For inquiries concerning this report, please contact Charles D.H. Parry, Ph.D., Medical Research Council (Cape Town), Alcohol and Drug Abuse Research Group, P.O. Box 19070, 7505 Tygerberg, South Africa, Phone: 27-21-938-0419, Fax: 27-21-938-0342, E-mail: <cparry@mrc.ac.za>.*

**Exhibit 1. Description of SADC Member States on Selected Indicators**



SADC Member State	Land Area (Square Kilometers)	Population (2001 Estimates)	GDP per Capita <sup>1</sup> (\$)	Official Language
Angola	1,246,700	10,366,031	1,000	Portuguese
Botswana	600,370	1,586,119	6,600	English
Democratic Republic of the Congo	2,345,410	53,624,718	600	French
Lesotho	30,355	2,177,062	2,400	English
Malawi	118,480	10,548,250	900	English, Chichewa
Mauritius	1,860	1,189,825	10,400	English
Mozambique	801,590	19,371,057	1,000	Portuguese
Namibia	825,418	1,797,677	4,300	English
Seychelles	455	79,715	7,700	English, French
South Africa	1,219,919	43,586,097	8,500	11 official languages <sup>2</sup>
Swaziland	17,363	1,104,343	4,000	English, siSwati
Tanzania	945,087	36,232,074	710	English, Swahili
Zambia	752,614	9,770,199	880	English
Zimbabwe	390,580	11,365,366	2,500	English
	9,296,201	202,789,533		

<sup>1</sup> Purchasing power parity (2000 estimate).

<sup>2</sup> English predominates.

SOURCE: *World Factbook 2001*. Washington, DC: Central Intelligence Agency, 2001

Exhibit 2a. Treatment Demand Data: Primary Drug of Abuse by Percent:<sup>1</sup> July 2001–June 2002

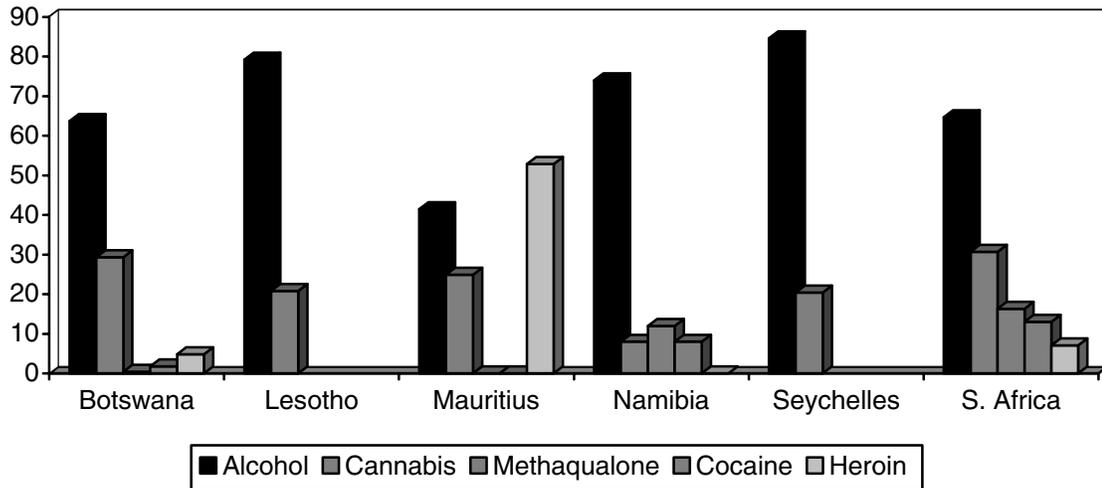
Country	Period	Alcohol	Cannabis	Metha-qualone (Mtg)	Cocaine	Heroin	Ecstasy	OTC/Pre <sup>2</sup>	Other	Patients (M)	Treatment Centers (M)
Botswana	Jan–Jun '02	70.3	23.8	0.5	0.5	0.0	0.0	0.0	4.9	(188)	(9)
	Jul–Dec '01	54.3	45.7	0.0	0.0	0.0	0.0	0.0	0.0	(45)	(6)
Lesotho	Jan–Jun '02	85.0	15.0	0.0	0.0	0.0	0.0	0.0	0.0	(20)	(5)
	Jul–Dec '01	21.8	14.1	0.0	0.0	58.7	0.0	1.3	4.1	(467)	(8)
Mauritius	Jan–Jun '02	32.7	6.6	0.0	0.0	48.2	0.0	1.1	11.3	(452)	(8)
	Jan–Jun '02	74.0	8.0	12.0	6.0	0.0	0.0	0.0	0.0	(50)	(2)
Seychelles	Jul–Dec '01	69.8	30.2	0.0	0.0	0.0	0.0	0.0	0.0	(53)	(1)
	Jan–Jun '02	81.5	18.5	0.0	0.0	0.0	0.0	0.0	0.0	(65)	(1)
South Africa	Jul–Dec '01	52.2	21.4	10.1	5.1	5.1	1.1	3.1	1.6	(5,667)	(48)
	Jan–Jun '02	54.0	19.3	10.3	5.7	5.3	1.0	3.1	1.2	(6,108)	(50)

<sup>1</sup> Row percentages total 100.

<sup>2</sup> Includes psychotropic medicines.

SOURCES: Specialist AOD Treatment Centers

**Exhibit 2b. Treatment Demand Data for Selected Substances: Primary or Secondary Drugs of Abuse: January–June 2002**



SOURCES: Specialist AOD Treatment Centers

**Exhibit 3. Percentage of the Treatment Population Younger Than 20: July 2001–June 2002**

Country	Period	Percent
Botswana	Jan–Jun '02	11.8
Lesotho	Jul–Dec '01 <sup>1</sup>	40.0
	Jan–Jun '02	15.0
Mauritius	Jul–Dec '01	2.4
	Jan–Jun '02	3.1
Namibia	Jan–Jun '02	10.0
Seychelles	Jul–Dec '01	13.2
	Jan–Jun '02	9.2
South Africa	Jul–Dec '01	22.7
	Jan–Jun '02	22.6

<sup>1</sup> Younger than 23.

SOURCES: Specialist AOD Treatment Centers

**Exhibit 4. Primary Mode of Drug Use by Primary Substance of Abuse and Percent: July 2001–June 2002**

Country	Period	Swallow	Smoke	Inject	Snort	Other
Botswana	Jan–Jun '02	70.4	24.7	0.0	4.8	0.0
Lesotho	Jul–Dec '01	52.1	47.9	0.0	0.0	0.0
	Jan–Jun '02	85.0	15.0	0.0	0.0	0.0
Mauritius	Jul–Dec '01	22.7	24.6	51.2	1.5	0.0
	Jan–Jun '02	31.3	15.1	52.6	1.0	0.0
Namibia	Jan–Jun '02	84.0	16.0	0.0	0.0	0.0
Seychelles	Jul–Dec '01	71.7	28.3	0.0	0.0	0.0
	Jan–Jun '02	81.5	18.5	0.0	0.0	0.0
South Africa	Jul–Dec '01	56.5	38.0	2.1	2.6	0.7
	Jan–Jun '02	58.0	35.9	2.4	3.1	0.7

SOURCES: Specialist AOD Treatment Centers

**Exhibit 5. Mean Age of Persons in Treatment by Primary Drug of Abuse: July 2001–June 2002**

Country	Period	Primary Drug of Abuse						
		Alcohol	Cannabis	Metha-qualone	Cocaine	Heroin	Ecstasy	OTC/Pre <sup>1</sup>
Mauritius	Jul–Dec '01	38.2	31.4	–	–	32.7	–	26–28
	Jan–Jun '02	41.0	31.9	–	–	24.9	–	24.6–31.2
Seychelles	Jul–Dec '01	41.3	19.1	–	–	–	–	–
	Jan–Jun '02	40.0	25.0	–	–	–	–	–
South Africa	Jul–Dec '01	37–41	19–23	20–30	29–30	23–24	17–22	30–37
	Jan–Jun '02	37–41	19–23	21–28	27–36	23–25	20–23	35–41

<sup>1</sup> Includes psychotropic medicines.

SOURCES: Specialist AOD Treatment Centers

**Exhibit 6. Police Arrests for Drug Dealing by Percent<sup>1</sup>: July 2001–June 2002**

Country/Site	Period	Cannabis or Hashish	Metha-qualone	Cocaine or Crack	Ecstasy	Heroin	LSD	Speed	Other	Total (N)
Botswana <sup>2</sup>	Jan–Jun '02	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(226)
Lesotho	Jul–Dec '01	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(108)
	Jan–Jun '02	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(87)
Mauritius	Jan–Jun '02	47.0	0.0	0.0	0.0	53.0	0.0	0.0	0.0	(156)
	Jan–Jun '02	37.0	0.0	0.0	0.0	63.0	0.0	0.0	0.0	(125)
Namibia <sup>2</sup>	Jan–Jun '02	84.4	14.1	1.0	0.5	0.0	0.0	0.0	0.0	TBA
Seychelles	Jan–Jun '02	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(16)
	Jan–Jun '02	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(5)
South Africa	Jan–Jun '02	27.2	23.3	24.0	19.7	2.8	1.7	0.3	1.0	(937)
	Jan–Jun '02	31.1	30.3	20.0	12.0	3.3	1.0	0.3	2.1	(1,007)

<sup>1</sup> Row percentages total 100.

<sup>2</sup> Includes possession.

SOURCES: Police departments

**Exhibit 7. Police Seizures: July 2001–June 2002**

Country/Site	Period	Cannabis (kilograms)	Metha-qualone (tablets)	Cocaine (grams)	Crack (rocks)	Ecstasy (tablets)	Heroin (grams)	LSD (units)	Speed (units)
Botswana	Jan–Jun '02	147,067.3	0	0	0	0	0	0	0
Lesotho	Jul–Dec '01	19,671	0	0	0	10,045	0	0	0
	Jan–Jun '02	4,153.7	0	0	0	0	0	0	0
Mauritius	Jul–Dec '01	30	0	0	0	0	22,441	0	0
	Jan–Jun '02	22,735	0	0	0	0	4,995	0	0
Namibia	Jan–Jun '02	774.6	9,179	0	78	10	0	0	0
	Jul–Dec '01	10.2	0	0	0	0	0	0	0
Seychelles	Jan–Jun '02	1,353	0	0	0	0	0	0	0
	Jul–Dec '01	32,177	73,678	73,831	3,063	45,257	1,189	5,534	168
South Africa	Jan–Jun '02	707,444	1,839,929	139,429	2,259	266,260	6,062	386	36

SOURCES: Police departments

**Exhibit 8. Drug Prices: January–June 2002 (or Latest Available)**

Country/Site	Currency	Cannabis (joint)	Mandrax (tablet)	Cocaine (gram)	Crack (rock)	Ecstasy (tablet)	Heroin (gram)	LSD (unit)	Speed (unit)	Approx. local currency to U.S. \$1
Lesotho	Maloti	6-8 <sup>1</sup>	N/A <sup>2</sup>	N/A	N/A	N/A	N/A	N/A	N/A	10
Mauritius	Rupees	300	N/A	N/A	N/A	N/A	10,000	N/A	N/A	37.5
Namibia	Dollar	3	50	450	120	120	N/A	N/A	N/A	10
Seychelles	Rupees	25	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.7
South Africa	Rands	1–1.30	21–45	200–300	35–250	50–120	120–350	65–90	35–60	10

<sup>1</sup> Per small plastic bank bag.

<sup>2</sup> NA=Not applicable.

SOURCES: Police departments



---

Epidemiology of Drug Abuse:

Area Papers

---



## Participants List

*National Institute on Drug Abuse  
Community Epidemiology Work Group Meeting  
December 10-13, 2002, Miami, Florida*

### **Edward M. Adlaf, Ph.D.**

Research Scientist and Head,  
Life Course Studies Centre for Addiction  
and Mental Health  
33 Russell Street  
Toronto, Ontario  
M5S 2S1 Canada  
Phone: 416-535-8501 ext. 4506  
Fax: 416-595-6899  
E-mail: edward\_adlaf@camh.net

### **Mohamed F. Al-Afifi, M.D.**

Substance Abuse and Addiction  
Research Center (SARC)  
P.O. Box 1137  
Rimal, Gaza, Palestinian Authority  
Phone: 972-59-410251  
972-82-843435  
Fax: 972-82-860013  
E-mail: m\_alafifi@hotmail.com

### **Omar Aleman**

Special Agent/Demand Reduction Coordinator  
Miami Field Division  
U.S. Drug Enforcement Administration  
8400 NW 53<sup>rd</sup> Street  
Miami, FL 33166  
Phone: 305-590-4604  
Fax: 305-590-4437  
E-mail: aleman@bellsouth.net

### **Norman Altman**

University of Illinois at Chicago  
School of Public Health  
Community Outreach and Intervention  
Projects (MC 923)  
1603 W. Taylor Street  
Chicago, IL 60612-4394  
Phone: 312-996-4680  
Fax: 312-996-1450  
E-mail: normana@uic.edu

### **Cynthia L. Arfken**

Wayne State University  
2761 East Jefferson  
Detroit, MI 48202  
Phone: 313-993-3490  
Fax: 313-993-1372  
E-mail: carfken@med.wayne.edu

### **Leslie Armstrong**

Psychotherapist  
1000 Quayside Terrace, #1802  
Miami, FL 33138  
Phone: 305-895-5339  
E-mail: Sobertalk@aol.com

### **Judy K. Ball, Ph.D., M.P.A.**

Office of Applied Studies  
Substance Abuse and Mental Health  
Services Administration  
5600 Fishers Lane, Room 16-105  
Rockville, MD 20857  
Phone: 301-443-1437  
Fax: 301-443-9847  
E-mail: jball@samhsa.gov

### **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

### **Gail Bassin**

Johnson, Bassin & Shaw, Inc.  
8630 Fenton Street, 12th Floor  
Silver Spring, MD 20910  
Phone: 301-495-1080  
Fax: 301-587-4352  
E-mail: gbassin@jbs1.com

### **George Beschner**

MasiMax Resources, Inc.  
1375 Piccard Drive, Suite 175  
Rockville, MD 20850  
Phone: 301-881-9896  
Fax: 301-468-6711  
E-mail: gbeschner@masimax.com

### **Carol J. Boyd, Ph.D.**

Professor, Nursing and Women's Studies and  
Director, Substance Abuse Research Center  
University of Michigan  
475 Market Place, Suite D  
Ann Arbor, MI 48108-1649  
Phone: 734-998-6500  
Fax: 734-998-6508  
E-mail: caroboyd@umich.edu

**Richard F. Calkins**

Research Consultant  
Office of Drug Control Policy  
Michigan Department of Community Health  
Lewis Cass Bldg. 2<sup>nd</sup> Floor  
320 South Walnut Street  
Lansing, MI 48913-2014  
Phone: 517-335-5388  
Fax : 517-373-2963  
E-mail: calkinsr@michigan.gov

**Usha Charya**

MasiMax Resources, Inc.  
1375 Piccard Drive, Suite 175  
Rockville, MD 20850  
Phone: 240-683-1746  
Fax: 240-632-0519  
E-mail: ucharya@masimax.com

**Michelle L.H. Chase**

Intelligence Analyst  
National Drug Intelligence Center  
319 Washington Street, 5<sup>th</sup> Floor  
Johnstown, PA 15901-1622  
Phone: 814-532-4858  
Fax: 814-532-4690  
E-mail: Michelle.L.Chase@usdoj.gov

**Howard Chilcoat, Sc.D.**

National Institute on Drug Abuse, NIH  
6001 Executive Boulevard, Room 5153  
MSC 9589  
Bethesda, MD 20892-9589  
Phone: 301-402-1850  
Fax: 301-480-2543  
E-mail: hc161@nih.gov

**Marc E. Cohen**

President, United Foundation For AIDS  
600 Alton Road  
Miami Beach, FL 33139  
Phone: 305-531-1711  
Fax: 305-673-9026  
E-mail: MarcECohen@aol.com

**Wilson M. Compton, M.D., M.P.E.**

Director, Division of Epidemiology,  
Services and Prevention Research  
National Institute on Drug Abuse  
6001 Executive Boulevard, Room 5153  
Bethesda, MD 20892-9589  
Phone: 301-443-6504  
Fax: 301-443-2636  
E-mail: wcompton@nida.nih.gov

**Samuel J. Cutler**

Program Manager, CODAAP  
City of Philadelphia Behavioral Health System  
1101 Market Street, Suite 800  
Philadelphia, PA 19107-2908  
Phone: 215-685-5414  
Fax: 215-685-5427  
E-mail: sam.cutler@phila.gov

**Janie B. Dargan**

Office of National Drug Control Policy (ONDCP)  
Executive Office of the President  
750 17<sup>th</sup> Street, NW, 5<sup>th</sup> Floor  
Washington, DC 20503  
Phone: 202-395-6714  
Fax: 202-395-6729  
E-mail: jdargan@ondcp.eop.gov

**Dita Davis**

University of Illinois at Chicago  
School of Public Health (MC 923)  
Epidemiology & Biostatistics - COIP  
1603 W. Taylor  
Chicago, IL 60612-4394  
Phone: 312-355-4753  
Fax: 312-996-1450  
E-mail: d-davis7@md.northwestern.edu

**Blanca de la Rosa, M.D.**

Ministry of Health of Mexico  
Francisco P. Miranda 177  
Unidad Lomas de Plateros  
C.P. 01480 Mexico, D.F.  
Phone: 5651-8338  
Fax: 5651-8338  
E-mail: delarosabm@hotmail.com  
rblanca@epi.org.mx

**Colleen Anne Dell, Ph.D.**

National Research Advisor  
CCENDU and HEP  
Canadian Centre on Substance Abuse  
75 Albert Street, Suite 300  
Ottawa, Ontario, Canada K1P 5E7  
Phone: 613-235-4048 ext. 235  
Fax: 613-235-8101  
E-mail: cdell@ccsa.ca

**Ilene L. Dode, Ph.D.**

EMPACT-Suicide Prevention Center, Inc.  
1232 East Broadway, Suite 120  
Tempe, AZ 85282  
Phone: 480-784-1514 ext. 1116  
Fax: 480-967-3528  
E-mail: idode@aol.com

**Daniel P. Dooley**

Boston Public Health Commission  
1010 Massachusetts Avenue  
Boston, MA 02118  
Phone: 617-534-2360  
Fax: 617-534-2422  
E-mail: Ddooley@bphc.org

**Lori Ducharme, Ph.D.**

Drug Abuse Warning Network  
Westat  
1650 Research Boulevard, RA 1402  
Rockville, MD 20850  
Phone: 240-453-2743  
Fax: 301-610-5140  
E-mail: loriducharme@westat.com

**Ahmed EL-Dosoky, Ph.D.**

The Behman Hospital  
32 EL-Marsad Street  
Helwan, Cairo, Egypt  
Phone: 202-555-75-51  
Fax: 202-555-22-03  
E-mail: eldosoky@hotmail.com

**Ahmed Elkashef, M.D.**

National Institute on Drug Abuse/DTRD  
6001 Executive Boulevard  
Bethesda, MD 20892  
Phone: 301-443-5055  
Fax: 301-443-2599  
E-mail: ae8a@nih.gov

**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

**Beth A. Finnerty**

Epidemiologist  
UCLA Integrated Substance Abuse Programs  
11075 Santa Monica Boulevard  
Suite 200  
Los Angeles, CA 90025  
Phone: 310-312-0500 ext. 376  
Fax: 310-312-0552  
E-mail: finnerty@ucla.edu

**Steve Gust, Ph.D.**

National Institute on Drug Abuse, NIH  
6001 Executive Boulevard, Room 5274  
Bethesda, MD 20892-9561  
Phone: 301-443-6480  
E-mail: sg84q@nih.gov

**Joseph Haddock**

Intelligence Analyst  
National Drug Intelligence Center  
319 Washington Street, 5<sup>th</sup> Floor  
Johnstown, PA 15901-1622  
Phone: 814-532-4080  
Fax: 814-532-4690  
E-mail: joseph.s.haddock@usdoj.gov

**Michael Ann Haight**

Silver Gate Group  
San Diego, California  
E-mail: michaelhaight@cox.net

**James N. Hall**

Up Front Drug Information Center  
12360 Southwest 132nd Court  
Suite 215  
Miami, FL 33186  
Phone: 786-242-8222  
Fax: 786-242-8759  
E-mail: upfrontin@aol.com

**Albert L. Hasson**

Friends Research Institute, Inc.  
UCLA Integrated Substance Abuse Programs  
5220 W. Washington Boulevard  
Suite 101  
Los Angeles, CA 90016  
Phone: 323-933-9186  
Fax: 323-933-7146  
E-mail: alberthasson@earthlink.net

**Bruce Hayden**

President, Spectrum Programs  
11031 NE 6<sup>th</sup> Avenue  
Miami, FL 33161  
Phone: 305-757-0602  
Fax: 305-757-2387  
E-mail: bhayden@Spectrumprogrmas.com

**William Lee Hearn, Ph.D.**

Director, Toxicology Office  
Miami-Dade County Medical  
Examiner's Department  
Number One Bob Hope Road  
Miami, FL 33129-1133  
Phone: 305-545-2450  
Fax: 305-545-2452  
E-mail: wlh@miamidade.gov

**Leigh A. Henderson, Ph.D.**

Synectics for Management Decisions, Inc.  
3001 Guilford Avenue  
Baltimore, MD 21218-3926  
Phone: 410-235-3096  
Fax: 703-528-6421  
E-mail: leighh@smdi.com

**Jose Hernandez, M.D.**

Medical Director  
 South Beach Medical Associates and  
 Principal Investigator South Beach Medical  
 Research Foundation  
 333 41st Street  
 Suite 310  
 Miami Beach, FL 33140  
 Phone: 305-534-1448  
 Fax: 305-534-8105

**Richard Isralowitz, Ph.D.**

Spitzer Department of Social Work  
 Ben Gurion University  
 P.O. Box 653  
 Be'er Sheva 84105 Israel  
 Phone: 972-7-6472328  
 Fax: 972-8-6472933  
 E-mail: richard@bgumail.bgu.ac.il

**Nicholas J. Kozel**

National Institute on Drug Abuse  
 Division of Epidemiology, Services,  
 and Prevention Research  
 National Institutes of Health  
 6001 Executive Boulevard, MSC 9589  
 Bethesda, MD 20892-9589  
 Phone: 301-443-6543  
 Fax: 301-443-2636  
 E-mail: nk10a@nih.gov

**Nasser Loza, Ph.D.**

The Behman Hospital  
 32 EL-Marsad Street  
 Helwan, Cairo, Egypt  
 Phone: 202-555-75-51  
 Fax: 202-555-22-03  
 E-mail: nloza@hotmail.com

**Abate Mammo, Ph.D.**

New Jersey Department of Health and  
 Senior Services  
 120 S. Stockton Street  
 P.O. Box 362  
 Trenton, NJ 08625  
 Phone: 609-292-8930  
 Fax: 609-292-1045  
 E-mail: abate.mammo@doh.state.nj.us

**Rozanne Marel, Ph.D.**

New York State Office of Alcoholism  
 and Substance Abuse Services  
 501 7th Avenue, 9th Floor  
 New York, NY 10018  
 Phone: 646-728-4605  
 Fax: 646-728-4685  
 E-mail: rozannemarel@oasas.state.ny.us

**Marilyn Massey-Ball**

President and CEO  
 MasiMax Resources, Inc.  
 1375 Piccard Drive, Suite 175  
 Rockville, MD 20850  
 Phone: 240-632-5616  
 Fax: 240-632-0519  
 E-mail: mmassey@masimax.com

**Jane C. Maxwell, Ph.D.**

Center for Social Work Research  
 The University of Texas at Austin  
 1717 West 6th Street  
 Suite 335  
 Austin, TX 78703  
 Phone: 512-232-0610  
 Fax: 512-232-0613  
 E-mail: jcm Maxwell@sbcglobal.net

**Robert H. McCabe**

President Emeritus  
 Miami-Dade Community College  
 Chair, The Miami Coalition For A Safe  
 and Drug-Free Community  
 1601 South Miami Avenue  
 Miami, FL 33129  
 Phone: 305-854-4428  
 Fax: 305-858-5874  
 E-mail: rmccabe@bellsouth.net

**Tara McDonald**

Administrative Coordinator  
 Department of Sociology  
 Georgia State University  
 203 Melrose Avenue  
 Atlanta, GA 30030  
 Phone: 404-651-1855  
 Fax: 404-651-1712  
 E-mail: taramcdonald@gsu.edu

**Lisa McElhaney**

Detective  
 Broward Sheriff's Office  
 Strategic Investigation Division  
 2601 W. Broward Boulevard  
 Ft. Lauderdale, FL 33312  
 Phone: 954-926-2475  
 Fax: 954-920-0964  
 E-mail: lmackftl@aol.com

**Bruce D. Mendelson**

Colorado Department of Human Services  
 Alcohol and Drug Abuse Division  
 4055 S. Lowell Boulevard  
 Denver, CO 80236-3120  
 Phone: 303-866-7497  
 Fax: 303-866-7481  
 E-mail: bruce.mendelson@state.co.us

**Marcia Meth**

Johnson, Bassin & Shaw, Inc.  
8630 Fenton Street, Suite 1200  
Silver Spring, MD 20910  
Phone: 301-495-1080  
Fax: 301-587-4352  
E-mail: mmeth@jbs1.com

**Corrine P. Moody**

Science Policy Analyst  
Controlled Substance Staff, HFD-009  
U.S. Food and Drug Administration  
5600 Fishers Lane, Room 9C-15  
Rockville, MD 20857  
Phone: 301-827-1999  
Fax: 301-443-9222  
E-mail: moody@cder.fda.gov

**Stephanie Murphy**

U.S. Drug Enforcement Administration  
Washington, DC 20537  
Phone: 202-307-8126  
Fax: 202-307-8719

**Susanna Nemes, Ph.D.**

Danya International, Inc.  
8737 Colesville Road, Suite 1200  
Silver Spring, MD 20910  
Phone: 240-645-1137  
Fax: 301-565-3710  
E-mail: snemes@danya.com

**John A. Newmeyer, Ph.D.**

Haight-Ashbury Free Clinics, Inc.  
612 Clayton Street, 2nd Floor  
San Francisco, CA 94117  
Phone: 415-931-5420  
Fax: 415-864-6162  
E-mail: jnewmeyer@aol.com

**Dr. Kamran Niaz**

Regional Epidemiology Advisor  
Southwest and Central Asia  
Global Assessment Programme on  
Drug Abuse, UNODCCP  
UN House Birlik Mahalessi, 2 Cadd  
No. 11, Cankaya  
06610 Ankara  
Turkey  
Phone: 90-312-454-1086  
Fax: 90-312-496-1463  
E-mail: kamran.niaz@un.org.tr

**Diana C. Noone**

National Institute of Justice  
810 Seventh Street, NW  
Washington, DC 20531  
Phone: 202-616-4786  
Fax: 202-514-8200  
E-mail: nooned@ojp.usdoj.gov

**Lawrence Ouellet, Ph.D.**

University of Illinois at Chicago  
Community Outreach and Intervention Projects  
1603 West Taylor Street  
Chicago, IL 60612-4394  
Phone: 312-996-5523  
Fax: 312-996-1450  
E-mail: ljo@uic.edu

**Charles D.H. Parry, Ph.D.**

Medical Research Council (Cape Town)  
Alcohol and Drug Abuse Research Group  
P.O. Box 19070  
7505 Tygerberg, South Africa  
Phone: 27-21-938-0419  
Fax: 27-21-938-0342  
E-mail: cparry@mrc.ac.za

**Patrice Pettinato**

Masimax Resources, Inc.  
1375 Piccard Drive, Suite 175  
Rockville, MD 20850  
Phone: 240-632-8813  
Fax: 240-632-0519  
E-mail: ppettinato@masimax.com

**Richard A. Rawson, Ph.D.**

Friends Research Institute, Inc.  
UCLA Integrated Substance Abuse Programs  
11050 Santa Monica Boulevard  
Suite 100  
Los Angeles, CA 90025  
Phone: 310-312-0500  
Fax: 310-312-0538  
E-mail: RickRawson@earthlink.net

**Gordon Skead**

Canadian Center on Substance Abuse  
323 Douglas Avenue  
Ottawa, Ontario, Canada K1P 5E7  
Phone: 506-452-5554  
Fax: 506-452-5533  
E-mail: r3gskead@health.nb.ca

**Barbara Sowder, Ph.D.**

The CDM Group, Inc.  
5640 Nicholson Lane, Suite 218  
Rockville, MD 20852  
Phone: 301-460-9329  
E-mail: bges@starpower.net

**Richard T. Spence, Ph.D.**

Research Scientist and Director  
Gulf Coast Addiction Technology Transfer Center  
University of Texas at Austin  
1717 West 6<sup>th</sup> Street, #335  
Austin, TX 78703  
Phone: 512-232-0608  
Fax: 512-232-0613  
E-mail: rtspace@mail.utexas.edu

**Joe Spillane, Pharm. D., ABAT**

Nova Southeastern University  
College of Pharmacy  
3200 University Drive  
Ft. Lauderdale, FL 33328  
Phone: 954-459-2083 or 954-262-1372  
Fax: 954-355-4792  
E-mail: jspillane@nbhd.org

**Gail Thornton-Collins**

New Orleans Health Department  
2025 Canal Street  
Suite 200  
New Orleans, LA 70112  
Phone: 504-528-1912  
E-mail: gaily47@hotmail.com

**James M. Topolski, Ph.D.**

University of Missouri  
5400 Arsenal Street  
St. Louis, MO 63139  
Phone: 314-644-8574  
Fax: 314-644-7934  
E-mail: topolski@mimh.edu

**Eric D. 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

**D. William Wood, Ph.D.**

University of Hawaii at Manoa  
Department of Sociology  
265 N. Kalaheo Avenue  
Honolulu, HI 96822  
Phone: 250-384-3748  
Fax: 808-956-3707  
E-mail: dwwood@hawaii.rr.edu