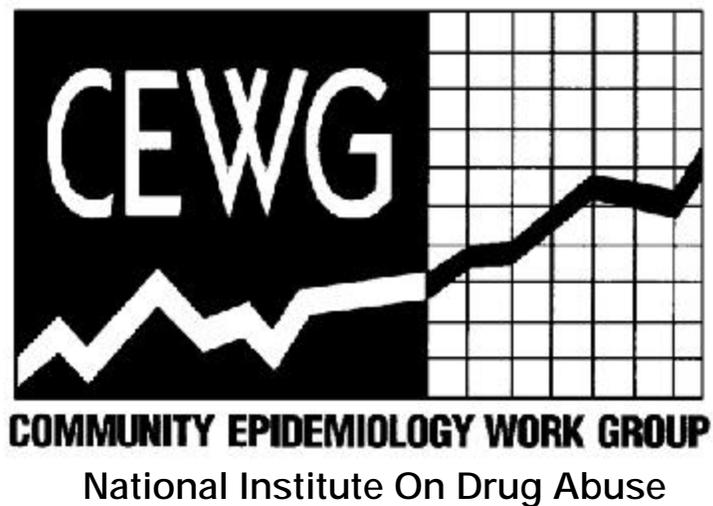


# EPIDEMIOLOGIC TRENDS IN DRUG ABUSE

Community Epidemiology Work Group

December 2001

Volume II: Proceedings



NATIONAL INSTITUTES OF HEALTH

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The National Institute on Drug Abuse (NIDA) acknowledges the contributions made by the members of the Community Epidemiology Work Group (CEWG) who voluntarily invested their time and resources in preparing the papers presented in this volume. Papers prepared and presented by researchers from Canada and Mexico also are included in this publication.

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includes highlights and an executive summary of the 21 city papers.

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## 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.

The 51st meeting of the CEWG, held in San Diego, California, on December 11–14, 2001, provided a forum for presentation and discussion of drug abuse data in the United States, Canada, and Mexico. The venue in San Diego afforded the opportunity for presentation and discussion of drug abuse-related issues of special concern to the local community. These included presentations on three local efforts to combat and treat methamphetamine abuse, a panel discussion by methamphetamine abusers on the problems associated with abuse of this drug, an effort to reduce teen drinking on both sides of the border

(San Diego and Tijuana), and the impact of California's Substance Abuse and Crime Prevention Act (Proposition 36) on the treatment system. An official of the Drug Enforcement Administration described data sources used by the agency to track seizures of MDMA and determine the quality of drugs. A member of the Substance Abuse and Mental Health Services Administration conducted a workshop on the Drug Abuse Warning Network's emergency department data collection methods, reporting procedures, and the new type of information that will be available in the near future.

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 San Diego. 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.

*Nicholas J. Kozel*  
*Division of Epidemiology, Services and Prevention Research*

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## Introduction

At the 51st meeting of the Community Epidemiology Work Group (CEWG), held in San Diego, California, on December 11–14, 2001, 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 special reports from Canada and Mexico.

### 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 datasets 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 representative sample of hospitals in the 21 areas in 48 States and the District of Columbia. 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 2000, 685 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,” “heroin/morphine,” “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.

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

#### **The Drug Abuse Warning Network Medical Examiner Data**

This dataset, maintained by OAS, SAMHSA, samples nearly 150 medical examiners (MEs) in more than 40 ME jurisdictions. Like the DAWN ED system, some drug categories are combined (e.g., “heroin/morphine”). A “drug death” may involve more than one drug “mention,” and some types of deaths are excluded from the count. The exclusions are homicides, deaths in which the acquired immunodeficiency syndrome (AIDS) was reported, and deaths in which “drug unknown” was the only substance reported. Deaths totalling three or less in a metropolitan area are not counted. Like DAWN ED data, the data cannot be used to estimate prevalence since a decedent may be found to have two or more drugs in his or her system. Some deaths are caused by a drug overdose; in other cases, a drug may be considered a contributory but not the major cause of a death.

#### **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 2000 analyses, data on adult males, collected in all 35 sites, were typically weighted.

Adult female data, collected in most sites, were unweighted. 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 provides confirmation of use of 10 drugs within a 2–3 day period prior to interview 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 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 23 cities, 18 of which are in CEWG areas.

The heroin buys provide information on type of heroin (Asian, Mexican, Columbian, 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:  
CITY PAPERS**

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## Metropolitan Atlanta Drug Use Trends

Katherine P. Theall, Claire E. Sterk, Tara McDonald<sup>1</sup>

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### ABSTRACT

*Cocaine and marijuana continue to dominate the Atlanta drug market according to epidemiologic indicators, with a possible increase in cocaine and a decline in marijuana suggested. According to some indicators, heroin use remains low, although emergency department rates of heroin mentions increased significantly from 1999 to 2000. Epidemiologic data indicate a possible increase in heroin use and a shift from crack smoking to heroin intranasal use by some users in the Atlanta area. The trend since 1998 of heroin purity increases in conjunction with price decreases appears to be shifting. The average level of heroin purity in 2000, as projected by the DEA's Domestic Monitor Program, was 48.6 percent, down from an overall average of almost 60.1 percent in 1999. The price jumped from \$0.30 to \$1.15 per milligram pure. The use of other opiates may be increasing, according to local ethnographic and DAWN data. MDMA ("ecstasy"), ketamine, methamphetamine, and gamma hydroxybutyrate (GHB) indicators are increasing, according to some sources. Quality of ecstasy in the Atlanta area remains questionable, and methamphetamine-OxyContin combinations have been reported. Similar to the figure reported last semester, approximately 24 percent of all AIDS cases in Georgia are related to injection drug use (18.1 percent to injection drug use alone and an additional 5.6 percent to the combination of male-male sex and injection drug use). Once again, injection-related AIDS cases in Atlanta account for a greater proportion of female than male cases (33 percent female and 16 percent male).*

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### INTRODUCTION

#### Area Description

The city of Atlanta and the Atlanta metropolitan area are very different. The city covers 131 square miles and had an estimated population of 416,474 in 2000 (according to the 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 comprise 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 45.2 percent were African-American, 49.1 percent White, 5.9 percent were Hispanic, and 3.5 percent were Asian. DeKalb 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, including 52.7 percent African-American, 39.2 percent White, 7.5 percent Hispanic, and 5.2 percent Asian. 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, 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 between 1990 and 2000 in Gwinnett (318.5 percent), 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); 32.6 percent are White, 4.5 percent are Hispanic, and 1.9 percent are Asian.

#### Data Sources and Time Periods

Principal data sources for this report include the following:

- Drug abuse treatment program data. The Georgia Department of Human Resources provided data on the primary drugs of abuse among the approximately 6,990 clients admitted to Atlanta's public drug treatment programs between January 1, 2000, and December 31, 2000. Data for the non-metropolitan Atlanta counties of Georgia were also reported (n = 14,638).

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<sup>1</sup> The authors are affiliated with the Rollins School of Public Health at Emory University, Atlanta, GA, and with the Department of Sociology at Georgia State University, Atlanta, GA.

- Emergency department (ED) data. Estimates of drug mentions among individuals admitted to participating metropolitan Atlanta emergency departments between January 1994 and December 2000 were provided by the Substance Abuse and Mental Health Services Administration (SAMHSA), Drug Abuse Warning Network (DAWN).
- Arrestee urinalysis data. The National Institute of Justice (NIJ) Arrestee Drug Abuse Monitoring (ADAM) program estimated drug use among recent arrestees in the local Atlanta pretrial detention center, local prisons, and jails. Data are available for all quarters of 2000, and the total sample size includes 1,115 men and 379 women. The findings for men are weighted and represent probability-based sampling; findings for women are not weighted.
- Price, purity, and trafficking data. The Drug Enforcement Administration (DEA)'s Domestic Monitor Program (DMP) provided preliminary information for 2000 on the price, purity, and source of heroin. The Atlanta High Intensity Drug Trafficking Area (HIDTA) Task Force is a coordinating unit for drug-related Federal, State, and local law enforcement agencies. Data from the Atlanta HIDTA 2002 Drug Threat Assessment provided information about the price and purity of drugs distributed in the metropolitan area, as well as information on trafficking trends.
- Ethnographic information. Ethnographic information collected from local drug use researchers 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). The Georgia Department of Human Resources provided information on AIDS cases in Georgia and the 20-county Atlanta metropolitan area from January 1981 through the third quarter of 2001 (September 30).

## DRUG ABUSE PATTERNS AND TRENDS

### *Cocaine and Crack*

Over the last several years there has been some fluctuation in the estimated rate of emergency department (ED) cocaine mentions per 100,000: 151 in 1997, 218 in 1998, 189 in 1999, and 221 in 2000 (exhibit 1). The increase comes after a period of steady, but rather slow growth. Cocaine mentions were more common among men than women in 2000 (male to female ratio of 2:1), remaining steady since 1999. The estimated rate of cocaine ED mentions was greatest among individuals age 26–34, followed by those age 35 or over. Cocaine mentions were greatest among individuals of African-American (73 percent) race/ethnicity, followed by Whites (21 percent) and Hispanics (1 percent). The most common route of cocaine administration among ED mentions in 2000 was smoking (54 percent), followed by intranasal use (3 percent). Injection related cocaine ED mentions were much greater among men than women (74 percent vs. 25 percent), and among those 35 and older.

As in the past, cocaine was reported as the primary drug of abuse for most public drug treatment admissions in metropolitan Atlanta. From the first half of 2000 to the second, cocaine admissions rose from 56 to 61 percent, an increase since the second half of 1999 (exhibit 2). During 2000, approximately 58 percent of those admitted to treatment facilities in Atlanta reported cocaine as their primary drug of abuse. The number of African-American cocaine treatment admissions is particularly high at 74 percent, while admissions for cocaine use among Whites are just under 27 percent. Hispanics accounted for less than 1 percent of the treatment population in 2000, which is comparable to their representation in 1999. The male to female ratio among cocaine users entering treatment narrowed from 1.5 in 1999 to 1.2 in 2000. At 81 percent of the total cocaine admissions, individuals 35 years and older are by far the largest age group represented, followed by 26–34-year-olds.

Smoking continues to be the most common route of cocaine administration among treatment admissions, but there has been a large drop in the percentage that may be due to changes in reporting procedures. With the addition of an “oral” route, the percentage of those smoking in 2000 (47 percent) fell from 1999 (72 percent). Those categorized as “oral” were at 39 percent, which would account for the discrepancy between the 1999 and 2000 “smoking” percentages, as the routes are presumably analogous. The number of those reporting intranasal use also dropped significantly, from 15 percent to just over 8 percent, which may also have to do with the addition of the new category.

The characteristics of clients admitted to public drug treatment programs with cocaine as the primary drug of choice in nonmetropolitan Atlanta (i.e., other counties in the State of Georgia) were similar to those reported among clients in Atlanta, with one exception—a smaller gap between the number of African-American (55.8 percent) and White (43.3 percent) users.

In the ADAM program, cocaine remains the most common drug found in positive urinalyses among adult arrestees, but particularly among female arrestees. In 2000, approximately 58 percent of adult female and 49 percent of male arrestees tested positive for cocaine (exhibit 3). Roughly 56 percent of African-American, 65 percent of White, and no Hispanic female arrestees tested positive for cocaine in 2000. Among male arrestees, approximately 51 percent of African-American, 29 percent of White, and 33 percent of Hispanic tested positive for cocaine. The largest proportion of cocaine positives among both male and female arrestees was reported among persons age 31–35 and 36 or older.

According to the Atlanta HIDTA, cocaine (in all forms) remains the most regularly encountered drug by local and Federal law enforcement. The Atlanta Police Department reported that approximately 75 percent of street seizures are crack cocaine related. Seizures of cocaine at Atlanta's Hartsfield Airport were more than double those of 1999, with 113.3 kilograms apprehended. The average price for a gram of powder cocaine and a gram of crack are both \$100, with purity levels ranging from 50 percent up to 80 percent. The most recent HIDTA Drug Threat Assessment reports the average price for a rock of crack to be approximately \$10–\$20, while ethnographic information suggests a continued prevalence of \$5 rocks, with \$3 and, at times \$1, rocks being sold to boost sales. Ethnographic research has also uncovered pockets of long-time crack cocaine smokers who are beginning to use heroin intranasally. It is primarily a means to manage their crack use, which remains the drug of choice, and is rarely seen by the users as an issue of dependence.

### *Heroin*

The estimated rate of heroin ED mentions increased slightly between 1999 and 2000, from 15 to 18 per 100,000 population, respectively (exhibit 1). From 1999 to 2000 the rate of heroin increased significantly, reaching its highest level in almost 10 years (and reflecting a 500-percent increase from 1990 to 2000). According to 2000 DAWN data, the rate of ED heroin mentions was highest among persons age 18–25 and 26–34 (26 and 24 per 100,000 population, respectively), followed by persons older than 35 (19 per 100,000). Mentions of heroin were greater among men than women (approximately 3:1), with the ratio of male to female mentions similar to that reported in 1999. The number of heroin ED mentions was greatest among African-Americans (55 percent), followed by Whites (34 percent) and Hispanics (1 percent).

Injection use continues to be the most cited route of heroin administration among ED mentions, with a slight decline between 1999 and 2000 (41 percent to 33 percent). Intranasal use remains low among ED mentions in 2000 (4 percent), as does smoking (1 percent). More men (71 percent) than women reported injection as the primary route of administration among ED mentions of heroin, and this distribution was similar to that reported in 1999. Among mentions with injection as the primary route, the greatest proportion was reported among those 35 years or older (57 percent), followed by those age 26–34 (24 percent) and 18–25 (16 percent).

The proportion of all individuals admitted to public drug treatment programs in metropolitan Atlanta from June to December 2000 with heroin as the primary drug of choice remained low (approximately 7 percent) and stable since the beginning of 2000 (exhibit 2). From 1999 to 2000, the proportion of clients with heroin as their primary drug increased (from 3 percent to 7 percent). Throughout 2000, more males (62 percent) than females were represented in the treatment population, similar to the proportion reported in 1999 (64 percent). Compared to 1999, the proportion of White and African-American clients in 2000 was nearly equivalent (48 percent and 47 percent in 2000, vs. 55 percent and 43 percent in 1999, respectively). Approximately 5 percent of the treatment population in metropolitan Atlanta in 2000 was Hispanic, compared with only 0.4 percent in 1999. In 2000, the majority of clients in Atlanta were age 35 or older (81 percent). Ethnographic reports continue to suggest the prevalence of both a young and an aging cohort of heroin users.

Among treatment clients in Atlanta, injection remains the most common route of administration. Snorting as a primary route of administration dropped from approximately 28 percent in 1999 to 18 percent in 2000, while the prevalence of smoking has slightly increased during that time.

The characteristics of clients admitted to public drug treatment programs with heroin as the primary drug of choice in nonmetropolitan Atlanta were similar to those reported among clients in Atlanta, with the exception of more White clients (81 percent) than of other racial/ethnic backgrounds. The proportion that reported heroin as a primary drug was also somewhat lower than that seen in Atlanta (1 percent vs. 7 percent).

According to ADAM data for 2000, the proportion of positive heroin results among arrestees was similar for both men and women (exhibit 3). The largest proportion of heroin positives among male arrestees occurred among those age 31–35 (4.4 percent) and those 36 or older (4.3 percent), as well as among African-American (3 percent) and White (2 percent) arrestees. Heroin positives were similarly distributed among female arrestees, with the majority of positives among women age 31–35 (6.3 percent) and 36 or older (5.5 percent), and in African-American (3.1 percent) and White (5.0 percent) arrestees.

The trend since 1998 of heroin purity increasing while the price decreases appears to be shifting. The average level of purity in 2000, as reported by the DEA, as projected by the DEA, was 48.6 percent, down from an overall average of almost 60.1 percent in 1999. Since 1999, when the average heroin price per milligram pure was \$0.85, the price has jumped from \$0.30 to \$1.15 per milligram pure. While Atlanta purity levels are dropping in comparison to previous years, they remain 10 percent above the national average. Price is also higher than the national average by about 8 percent. As has long been the case, the purity of heroin in Atlanta depends greatly on the neighborhood where it is purchased and the point of origin of the heroin. South American heroin remains the most dominant and accessible. In early July 2000, U.S. Customs Service officials seized, in two separate incidents, 3.4 kilograms of South American heroin from Venezuelan nationals on their way to Atlanta. In 2000, there was upwards of 39 kilograms of heroin seized at Hartsfield Airport, which is four times the amount seized in 1999.

Ethnographic data indicate a possible increase in heroin use during 2000. Data also suggest certain shifts in those who are using heroin. There is an increase in crack cocaine users who are both using intranasally and injecting heroin, in addition to an increase in long-time pill (primarily opiates) users, often young adult, White and middle-class, who experiment with heroin. There is also an increase among those moving on to heroin as their tolerance for pills goes up, along with the price of their habit. Ethnographers also noted hearing about a hard-packed, almost rock, form of heroin in certain areas that had not been seen previously. The theory among users was that the form was less indicative of quality as it was a form of denoting a certain “brand” without having to stamp the bags with a name.

#### *Other Opiates/Narcotics*

Although indicator data on other opiates and narcotics such as codeine, hydromorphone, oxycodone, hydrocodone, and fentanyl are limited, ethnographic reports suggest that the use of other opiates is prevalent in the metropolitan Atlanta area. Hydrocodone and oxycodone ED mentions represented only a small proportion of mentions in Atlanta, with estimated mentions of both drugs remaining relatively low from 1995 to 2000 (exhibit 4). ED mentions of oxycodone, however, have been increasing linearly over time, and there was a sharp increase in oxycodone mentions from 1999 to 2000.

Information on the price of opiates other than heroin also remains limited, but ethnographic reports indicate that hydrocodone and similar opiates often sell for \$5–\$10 on the street. Hydromorphone (Dilaudid) pills are more expensive, selling for \$40–\$80 per pill. OxyContin sells for approximately \$1 per milligram according to local users.

According to the Georgia Bureau of Investigation, there were 62 OxyContin-related deaths in 2000, and through June of 2001 45 had been reported. Reports of methamphetamine use in conjunction Oxycontin have also emerged according to local ethnographers. According to ethnographic reports, many heroin users prefer prescription opiates because they are “cleaner” and price and purity is consistent—especially with OxyContin.

#### *Marijuana*

The estimated rate of marijuana ED mentions per 100,000 population in 2000 was 86, a slight decrease from 1999 and 1998 (exhibit 1). A greater number of mentions occurred among men than women in 2000 (approximately 2:1), and the rate of marijuana mentions in 2000 among men (121 per 100,000) was more than twice that among women (52 per 100,000). The number and rate of ED mentions by gender for 1999 was similar to 2000. Marijuana ED mentions in 2000 were highest among African-Americans, followed by Whites. The rate of ED mentions was greatest among persons age 18–25 years, followed by those age 26–34 and 35 and older.

From the first half of 2000 to the second half, the proportion of clients reporting marijuana as their primary drug of choice declined from approximately 18 percent to approximately 15 percent (exhibit 2). Compared with 1999, the proportion reporting marijuana as their primary drug also decreased in 2000, from 23 percent to 16 percent. During 2000, more clients were White (52 percent) than African-American (45 percent), Hispanic (2 percent), or of another racial/ethnic background (1 percent). More males (67 percent) than females (33 percent) were in treatment for marijuana, but the gender gap has narrowed since 1999. The majority of clients reporting primary marijuana use in 2000 were age 35 or older.

Among publicly funded treatment admissions in the nonmetropolitan counties of Georgia, 24 percent of clients reported marijuana as their primary drug of choice. Characteristics of clients in the nonmetropolitan counties were similar to those reported for metropolitan Atlanta, with the exception of a larger proportion of White clients (65 percent) than clients of other racial/ethnic backgrounds.

Marijuana was slightly more common among male (38 percent positive) than female (26 percent positive) arrestees in 2000 (exhibit 3), and the percentage of positive drug screens for marijuana decreased with age among arrestees in both samples. In 2000, approximately 40 percent of African-American, 31 percent of White, and 5 percent of Hispanic male arrestees tested positive for marijuana. Twenty-eight percent of African-American, 23 percent of White, and no Hispanic female arrestees tested positive for the drug.

According to the Atlanta HIDTA, seizures of locally grown marijuana plants increased slightly in 2000, from 32,038 to 33,669. The largest percentage of the seizures occurred in northwest Georgia, less than 1 hour's driving distance from Atlanta. Importation of cannabis from outside of Georgia is still occurring, with most coming in from Mexico or Canada. In March of 2000 more than 170 pounds of Canadian marijuana and hash was seized, along with \$65,000. The imported marijuana continues to have a higher tetrahydrocannabinol (THC) level than locally grown, which averages 9.5 percent, but can go as high as 14 percent. The average price in the area is \$930 per pound.

### *Stimulants*

According to DAWN ED data for 2000, the rate per 100,000 population of methamphetamine/speed mentions increased slightly since 1999 (from 3 to 4 per 100,000 in 2000) (exhibit 1). Injection was the most common route of methamphetamine administration among ED mentions with known routes of administration for the drug, which is similar to that seen in 1999. Although no demographic information was available for methamphetamine mentions in 2000, ED mentions with injection as the reported route of administration were greater among men than women and greatest among those age 35 or older.

The proportion of clients in local metropolitan Atlanta drug treatment programs reporting stimulants as their primary drug of choice has remained relatively stable since last semester, rising from 1.3 percent in the first half of 2000 to 1.6 percent in the second half of 2000 (exhibit 2). Compared to 1999, the proportion of clients with stimulants as their primary drug also remained stable (1.7 percent in 1999 and 1.5 percent in 2000). The majority of treatment admissions in 2000 were white (98 percent), remaining stable since 1999. More men than women were among the treatment population in 2000, but the gender distribution in 2000 was nearly equivalent compared to 1999 (15 percent female in 1999 vs. 44 percent female in 2000).

Seventy-eight percent of individuals in treatment programs during 2000 were age 35 or older.

Among local treatment admissions in 2000, other routes (primarily oral, 35 percent) of stimulant administration were most common, followed by injection (27 percent), intranasal use (26 percent), and smoking (8 percent). Ethnographic data continue to reveal a wide variety of administration routes for methamphetamine and other stimulants, although intranasal use and injecting remain the most popular.

The proportion of persons who entered public drug treatment for stimulant use during 2000 in nonmetropolitan counties of Georgia also remained low (4 percent) but slightly higher than the proportion reported for Atlanta (1.5 percent). Characteristics of individuals in treatment in non-metropolitan counties were similar to those among Atlanta counties, although a slightly greater percentage reported smoking as their main route of stimulant administration than in metropolitan Atlanta (14 percent vs. 8 percent).

Methamphetamine use remains low among arrestees in 2000, with only 0.5 percent of adult male and no female arrestees testing positive for the drug (exhibit 3). Among male arrestees, methamphetamine positives were reported among white arrestees only, and the largest proportion of positives was reported among those age 26–30.

The DEA estimates that Mexican organizations control up to 80 percent of methamphetamine distribution in the United States, and, here in Atlanta, many law enforcement agencies directly link the continued rise of methamphetamine availability with a rise in the presence of migrant Hispanic workers. They also partially link the price of methamphetamine, which ranges from \$8,000 to \$20,000 per pound, to the size of the local Mexican population. Smaller quantities range cost \$100 per gram, \$200–\$275 per eightball (1/8 ounce), and \$1,500 per ounce. Along with methamphetamine imported from Mexico there has been an increase in the number of small local labs that tend to produce smaller but more potent quantities. The purity level for imported methamphetamine is around 11 percent, but locally made batches are generally not cut as often, so the levels tend to be higher. The increase in labs is reflected in an increase in lab seizures. In the first half of 2000, 27 labs were reported seized, which far surpasses the rate for 1999. Many of these local labs are run by White males and are set up in motel rooms, cars, or single-dwelling houses.

Numbers reflecting stimulant use remain low according to traditional indicators, but the increasing popularity of stimulants in Atlanta, as well as in other areas of Georgia, is quite evident according to ethnographic data and local reports. Ethnographic information suggests that among many of the younger new users, most of whom are White, the term of choice for methamphetamine is “shards.” There is also an apparent hierarchy (as with many other drugs) related to which kind of methamphetamine is used. Those who use shards, for example, scorn the use of crank and sometimes are seemingly unaware that the two are essentially the same drug. There is also an apparent trend

underway among “ravers” who previously were primarily methylenedioxymethamphetamine (MDMA) users and who have now switched over to methamphetamine.

### *Depressants*

The use of the prescription drugs diazepam (Valium) and alprazolam (Xanax) remain common as indicated by ethnographic reports, as do gamma hydroxybutrate (GHB) and flunitrazepam (Rohypnol). The price of GHB and Rohypnol have not changed since last semester, with the cost per dosage unit reported to be \$10–\$20 for GHB and \$5–\$10 for Rohypnol.

According to DAWN emergency department data for 2000, GHB mentions in Atlanta were among the highest among DAWN reporting areas. The estimated rate of GHB mentions in Atlanta per 100,000 population has increased steadily since 1994, but fell slightly from 1999 to 2000 (exhibit 1). The rate of flunitrazepam ED mentions has remained at very low levels since 1994.

### *Hallucinogens*

According to DAWN emergency department data for 2000, the rate of mentions per 100,000 population for lysergic acid diethylamide (LSD) fell slightly from 3.1 to 2.5 from 1999 to 2000 (exhibit 1). The rate of LSD ED mentions has declined steadily since 1996, although LSD remains popular according to ethnographic reports. According to the Atlanta HIDTA, the cost of LSD has not changed much over time, with dosage units costing \$4–\$10 retail and approximately \$1 wholesale. Much of the LSD that comes to Atlanta is mailed in from the western United States.

The rate of ED mentions for phencyclidine (PCP) and PCP combinations in 2000 was 0 per 100,000 population, compared with 1 per 100,000 in 1999 (exhibit 1). No PCP-positive tests were reported among the male or female arrestee population in 2000.

### *Other Drugs (Club)*

Drugs such as MDMA (“ecstasy”) and ketamine remain prevalent in Atlanta according to local ethnographers. The rate of DAWN ED mentions of ecstasy has increased steadily since 1997 (exhibit 1), with a reported rate of 2.4 per 100,000 population in 2000. Rates of ketamine ED mentions remain very low according to DAWN 2000 data.

According to the Atlanta HIDTA, the major source of MDMA in Atlanta and Georgia continues to be Europe, specifically countries like Belgium and The Netherlands. As has happened across the Nation, the HIDTA Task Force Airport Group at Hartsfield seized large amounts of MDMA last year, with more than 9,000 tablets confiscated in March 2000 alone. Notably, in February 2000 U.S. Customs Service officers intercepted a courier at Hartsfield who had swallowed 1,600 tablets in a number of balloons. This was the first time they had observed smuggling of MDMA in this manner, which is more closely associated with cocaine and heroin. The average price of a dose of MDMA remains steady at about \$20.

According to local ethnographic reports, ecstasy use is common among both men and women and among persons younger than 35. Local reports indicate an increase in the use of ecstasy among certain African-American social networks, particularly those connected to a music scene (i.e., clubs). There are a wider variety of settings where MDMA is being used, with people no longer exclusively using in clubs or at raves. Reports also suggest variable content of ecstasy pills or tablets, with reports of other substances being sold as ecstasy. Ethnographers have come across some dealers and users who have had their MDMA tested to determine the contents. Many contained cocaine, while a few had small amounts of heroin in them. Others are reporting that they are locally cutting their own MDMA with OxyContin.

## INFECTIOUS DISEASES RELATED TO DRUG ABUSE

Based on reported cases of AIDS through December 2000, Georgia remains 9th in the Nation in the cumulative number of cases, and Atlanta is 10<sup>th</sup> among selected metropolitan areas. From 1981 through the end of the third quarter of 2001 (September 30), the Georgia Department of Human Resources reported 23,628 cumulative adult and pediatric AIDS cases. Similar to that reported last semester, approximately 24 percent of all AIDS cases in Georgia are related to injection drug use: 18.1 percent are among injecting drug users (IDUs) and an additional 5.6 percent are among those in the dual risk category of men who have sex with men (MSM) and (IDU). Through the third quarter of 2001, the proportion of IDU-related AIDS cases among women is roughly 28 percent, whereas among men, only 16 percent of cases are attributable to IDU, with an additional 7 percent attributable to the dual risk

category of MSM/IDU. The proportion of cases related to heterosexual exposure is approximately 45 percent among women and 7 percent among men.

Through September 2001, 16,555 cumulative adult and pediatric AIDS cases were reported to the Georgia Department of Human Resources for the 20-county metropolitan Atlanta area. Approximately 18 percent of adult cases were directly attributable to injection drug use, a stable proportion since last semester. Men who have sex with men and inject drugs account for an additional six percent. Once again, IDU related AIDS cases account for a greater proportion of female than male cases (33 percent of female and 16 percent of male). Forty-one percent of women have been infected through heterosexual contact, and women account for approximately 14 percent of persons age 13 and over reported with AIDS in the Atlanta metropolitan area.

#### REFERENCES

Centers for Disease Control and Prevention (CDC) (2001). *Basic Statistics—Ten States/Territories and Cities Reporting Highest Number of AIDS Cases*. Data from the semi-annual *HIV/AIDS Surveillance Report*. Atlanta, GA. Retrieved November 20, 2001, from the World Wide Web: <http://www.cdc.gov/hiv/stats/top10.htm>

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EPIDEMIOLOGIC TRENDS IN DRUG ABUSE

**Exhibit 1. Estimated Rate per 100,000 Population of ED Mentions in Atlanta: 1994–2000**

Drug	1994	1995	1996	1997	1998	1999	2000
Cocaine	234	245	202	151	218	189	221
Marijuana	58.6	62.8	57.5	58	96	90.7	86
Heroin	17	15	14	14	17	15	18
Methamphetamine	3.6	5.5	5	7.9	5.9	3	4
GHB	0.0	0.5	1.4	2	2.9	5.1	4.6
Ecstasy	0.0	0.0	0.0	0.7	1.2	2.2	2.4
LSD	8.2	6.1	4.3	4.1	3.9	3.1	2.5
Ketamine	0.0	0.0	0.0	0.2	0.1	0.5	0
PCP	1.3	0.5	0.9	1.0	0.0	1.0	0

SOURCE: Drug Abuse Warning Network

**Exhibit 2. Primary Drug of Treatment Among Public Drug Treatment Admissions in Atlanta, by Percent: 1997–2000**

Drug	1H 1997	2H 1997	1H 1998	2H 1998	1H 1999	2H 1999	1H 2000	2H 2000
Cocaine	57.4	57.5	56.9	60.2	51.8	51.1	56.0	60.5
Marijuana	15.2	14.8	15.5	15.3	20.3	24.9	17.5	14.7
Heroin	4.3	5.2	5.9	5.8	4.1	1.9	6.6	6.6
Stimulants	1.7	1.9	2.0	1.7	1.7	1.7	1.3	1.6

SOURCE: Georgia Department of Human Resources

**Exhibit 3. Percentage of Adult Arrestees Testing Positive for Various Drugs: 2000**

Drug	Male	Female
Cocaine	48.5 percent	57.6 percent
Marijuana	38.2 percent	26.3 percent
Heroin	2.8 percent	3.4 percent
Methamphetamine	0.5 percent	0.0 percent

SOURCE: Arrestee Drug Abuse Monitoring Program

**Exhibit 4. Number of ED Mentions of Hydrocodone and Oxycodone in Atlanta: 1994–2000**

Drug	1994	1995	1996	1997	1998	1999	2000
Hydrocodone	0	59	14	45	58	38	40
Oxycodone	10	2	11	11	15	20	43

SOURCE: Drug Abuse Warning Network

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## Drug Use in the Baltimore Metropolitan Area: Epidemiology and Trends, 1996–2000

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

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### ABSTRACT

*Heroin treatment admissions continued to increase, with a rising number of young White heroin injectors. In the metropolitan area as a whole, heroin treatment admissions were more or less equally divided between intranasal users and injectors. In Baltimore city, the treatment admission rate for intranasal heroin use was 25 percent higher than for injection; the reverse was true in the suburban counties. Declines were seen in emergency department (ED) mention rates for all major illicit drugs (heroin, cocaine, and marijuana), but this may be related to changes in DAWN reporting in 2000. The population in treatment for smoked cocaine (crack) continued to age: in 2000, 59 percent were older than 35, compared with 54 percent in 1999. Almost one-half (48 percent) of marijuana treatment admissions were younger than 18, and 65 percent entered treatment as the result of a judicial process. Stimulants represented insignificant proportions of ED and treatment admissions.*

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### INTRODUCTION

#### Area Description

The Baltimore primary metropolitan statistical area (PMSA) was home to some 2.5 million persons in 2000. 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 has risen to 651,000 in 2000. The population of the surrounding counties has grown steadily, from approximately 1.7 million in 1990 to 1.9 million in 2000.

The city and the suburban counties represent distinctly different socioeconomic groups. In 1997, median household income in the city was \$28,000, and 24 percent of the population lived in poverty. In the suburban counties, however, median household income ranged from \$45,000 to \$68,000 and the poverty rate ranged from 4 to 8 percent. The 2000 population composition of the city differed markedly from that of the surrounding counties: 32 percent White and 64 percent African-American versus 80 percent White and 15 percent African-American, respectively. There were few persons of Hispanic or other ethnic origins in the area.

The Baltimore area is a major node on the north-south drug trafficking route. It has facilities for entry of drugs into the country by road, rail, air, and sea. Baltimore is located on Interstate 95, which continues north to Philadelphia, New York, and Boston, and south to Washington, D.C., 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, D.C. (approximately 50 miles from the Baltimore city center). Baltimore is also a significant active seaport. The area has numerous colleges and universities and several military bases.

#### Data Sources

Data sources for this report are detailed below:

- Population and Demographic Data. Population estimates for 2000 and model-based income and poverty estimates for 1997 for Maryland counties were derived from U.S. Bureau of the Census data (electronic access: <<http://factfinder.census.gov>> and <<http://quickfacts.census.gov>>).
- Emergency Department (ED) Data. These data were provided by the Drug Abuse Warning Network (DAWN), Substance Abuse and Mental Health Services Administration (SAMHSA), for the Baltimore PMSA for 1994 to 2000 (exhibits 1 and 2).
- Treatment Admissions Data. These data were provided by the Maryland Alcohol and Drug Abuse Administration, Department of Health and Mental Hygiene, for 1996 to 2000. 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

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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.

- Maryland Drug Early Warning System (DEWS) Data. Data were used from various reports available at <http://www.cesar.umd.edu/dews.htm>.
- Heroin Price and Purity Data. Preliminary data for 2000 were provided by the Drug Enforcement Administration (DEA)'s Domestic Monitor Program (DMP).
- Acquired Immunodeficiency Syndrome (AIDS) Data. Data were provided by the Maryland Department of Health and Mental Hygiene, AIDS Administration, "The Maryland 2000 HIV/AIDS Annual Report" (1998 demographic and risk category data for Baltimore); <<http://www.dhnh.state.md.us/AIDS/epictr.htm>> (2000 data for Maryland and Baltimore).

## DRUG ABUSE PATTERNS AND TRENDS

In the 1990s, heroin and marijuana indicators showed net increases, while cocaine indicators decreased. Heroin was the predominant illicit drug responsible for treatment admissions throughout the decade. While the treatment admission rate for cocaine abuse was almost as high as for heroin in the early 1990s, it declined with the waning popularity of crack cocaine. In the second half of the decade, abuse of both heroin and cocaine emerged as the dominant pattern. Emergency department rates for heroin and cocaine were virtually identical; cocaine was cited as a secondary substance by a majority of heroin treatment admissions.

The trends below are reported separately by drug. However, most admissions to treatment and to emergency departments are polydrug users. An average of 1.7 drugs was mentioned per ED visit. Only 26 percent of treatment admissions failed to report problems with a secondary substance (exhibit 3).

The abuse of both heroin and cocaine by the same individuals appears to be a dominant pattern of abuse. Heroin and cocaine ED rates have been parallel and at similar levels since 1995. More than one-half of all drug-related treatment admissions during 2000 were for heroin, but 59 percent of heroin injectors admitted to treatment in 2000 also used cocaine. Cocaine was reported as the primary substance by 13 percent of drug-related treatment admissions, and an additional 36 percent reported it as a secondary substance.

### *Cocaine and Crack*

Indicators of cocaine abuse have generally declined since 1994 (exhibit 1). As the cocaine/crack epidemic continued to wane, both treatment admission and ED rates declined in 2000. The cocaine and heroin ED rates and patterns have been similar since 1995, probably because of the concurrent use of the two drugs.

The rate of cocaine-related ED episodes for 2000 (208 per 100,000 population) represented a significant decline, and the decline occurred among all age groups (exhibit 2). Eighty-one percent of cocaine-related ED episodes involved another drug as well as cocaine.

Cocaine remained highly prevalent among treatment admissions, although the treatment admission rate for cocaine continued to decline (exhibit 3). The admission rate for primary cocaine use remained well below that for heroin use. However, while cocaine was reported as a primary substance by 13 percent of treatment admissions in the Baltimore PSMA in 2000, it was reported as a secondary substance by an additional 36 percent. The population in treatment for cocaine smoking has aged; 59 percent were age 35 or older in 2000. Crack cocaine represented 75 percent of the admissions for primary cocaine use. Smokers of crack cocaine included a significant proportion of women (45 percent) (exhibit 4). Sixty-seven percent were African-American, and the average age at admission to treatment was 36. Less than one-half (42 percent) of the crack smokers were entering treatment for the first time, and 60 percent were likely to be referred through sources outside the criminal justice system. Daily crack use was reported by 35 percent, and use of other drugs was reported by more than two-thirds (69 percent). Alcohol was the most commonly used secondary drug (48 percent), followed by marijuana (29 percent) and heroin used intranasally (13 percent). Only 2 percent of crack smokers reported heroin injection.

### *Heroin*

Indicators of heroin abuse were mixed between 1994 and 2000 (exhibit 1). There are different populations of heroin users in Baltimore (urban versus suburban, intranasal users versus injectors), and indicators for some of these groups increased in 2000. Treatment admissions increased over that period, while ED mentions decreased. Treatment admission rates for heroin intranasal use and injection have been at fairly similar levels since 1995. In the

city, heroin treatment admission rates for intranasal use have increased every year since 1997 and have been higher than the rate for heroin injection since 1998 (exhibit 3).

The rate of heroin ED mentions in 2000 (227 per 100,000 population) represented a significant decline from 357 in 1994, and the decline occurred among all age groups except those age 12 to 17 (exhibit 2). However, Baltimore had the second-highest rate of heroin ED mentions among all DAWN cities. Fifty-three percent of heroin-related ED episodes involved other drugs as well heroin.

Heroin remained the leading primary illicit drug among treatment admissions through 2000, at a rate of 674 admissions per 100,000 population age 12 and older in the total PSMA (exhibit 3). The admission rate was five times higher in Baltimore city than in the suburban counties. Just as heroin has historically dominated the Baltimore city treatment system, it surpassed alcohol as the dominant primary drug in the suburban counties in 1997. Primary heroin users constituted 53 percent of all drug-related treatment admissions in the PMSA.

Exhibit 5 compares the number of treatment admissions in 2000 by age and race for heroin injection and heroin inhalation. Baltimore has a core of older African-American heroin injectors, but the city also has a substantial number of slightly younger African-American heroin inhalers. White users entering treatment for heroin are younger and are predominantly injectors.

In the total PMSA, the proportion of White heroin injectors entering treatment increased dramatically, from 33 percent in 1996 to 45 percent in 2000 (exhibit 6). The proportion of admissions younger than 25 also increased, from 11 percent in 1996 to 19 percent in 2000. In the suburban counties, youth younger than 25 increased from 20 percent in 1996 to 32 percent in 2000. For the total PMSA, the average age at admission was 36, and women accounted for 42 percent of admissions. 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 39.1 percent in 1997 to 33 percent in 2000. Use of other drugs was reported by 72 percent of heroin injectors entering treatment: 50 percent used cocaine by routes other than smoking, 9 percent smoked cocaine, 23 percent had an alcohol problem, and 12 percent used marijuana.

Among heroin intranasal users, most admissions were African-Americans (82 percent), age 26 and older (91 percent), and, on average, first used heroin 10 years prior to admission (exhibit 7). The new cohort of White suburban youth that reportedly began to emerge in the early 1990s is now appearing in the treatment system. In the suburban counties, White admissions increased from 30 percent in 1996 to 41 percent in 2000, reaching 54 percent in 1998. Nearly one-half of all total PMSA admissions for heroin intranasal use (47 percent) occurred among women. The proportion of intranasal users younger than 25 has decreased, from 21 percent in 1996 to 9 percent in 2000. The average 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 percent) and to be receiving treatment for the first time (39 percent). Heroin intranasal users were less likely than injectors to report use of other drugs (65 percent), and the drugs used were different. Cocaine smoking was much greater among heroin intranasal users (29 percent), and 17 percent reported using cocaine by other routes. Alcohol use, at 24 percent, was similar in the two groups, but marijuana use was somewhat higher among intranasal users (17 percent).

Heroin purity remained low in 2000, at 24 percent, below the national metropolitan average of 36 percent. Price also remained low, at \$0.39 per milligram pure, compared with \$0.97 per milligram pure as the national metropolitan average.

### *Other Opiates and Narcotics*

According to some youth offenders, oxycodone (Percocet) is crushed and inhaled or injected. They reported taking hydrocodone with beer to enhance its effects.

### *Marijuana*

Indicators of marijuana use remained fairly stable (exhibit 1).

The marijuana ED rate per 100,000 population declined among all age groups, except those age 12 to 17; the rate was highest among those age 18 to 25 (exhibit 2). Sixty-three percent of marijuana-related ED episodes involved other drugs as well.

In the total PSMA, primary marijuana use represented 16 percent of treatment admissions in 2000, and marijuana was reported as a secondary substance by an additional 23 percent of all admissions (exhibit 3). The marijuana admission rate per 100,000 population increased slightly, to 200. The proportion of marijuana treatment admissions was higher in the suburban counties than in Baltimore city, but the admission rate per 100,000 population was higher in the city.

Persons entering treatment for marijuana use were young: in the total PMSA, 48 percent were younger than 18, and the average age at admission to treatment was 21 (exhibit 8). 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 (51 percent White and 46 percent African-American). Admissions were likely to be experiencing their first treatment episode (71 percent), and almost one-third (29 percent) reported daily marijuana use. More than two-thirds (71 percent) of marijuana admissions reported using additional substances: 62 percent reported alcohol use, 11 percent reported cocaine use, and 6 percent reported use of heroin or other opiates. Some 8 percent of admissions used other secondary substances, primarily hallucinogens and inhalants.

A large proportion of marijuana treatment admissions (65 percent) represented referrals through the criminal justice system, compared with a smaller percentage (24 percent) for heroin injectors. Maryland instituted a Drug Court in 1994, and it is possible that the high marijuana treatment admission rate is related to this policy. Treatment admission rates for both criminal justice and noncriminal justice referrals increased from 1992 to 1995. While rates from noncriminal justice referrals stabilized in 1995 and declined from 1997 to 2000, those for criminal justice referrals continued to increase through 1996. Admission rates for criminal justice referrals were 70 percent higher than those for other referrals in 1999.

#### *Stimulants*

Methamphetamine/speed is rarely reported in emergency departments. However, DAWN amphetamine emergency departments rates have more than tripled from 2 per 100,000 population in 1996 to 7 per 100,000 population in 2000.

As has been the case previously in Baltimore, virtually no stimulant treatment admissions were reported in 2000.

Youth offenders indicated that methylphenidate (Ritalin) is crushed and inhaled or injected. They reported taking Ritalin with beer to enhance its effects.

#### *Depressants*

Youth offenders reported taking diazepam (Valium) with beer to enhance its effects.

#### *Hallucinogens*

DAWN lysergic acid diethylamide (LSD) mentions have remained in the range of 40 to 50 since 1997. Phencyclidine (PCP) mentions increased significantly, from 45 in 1999 to 73 in 2000.

#### *Club Drugs*

DEWS reported that methylenedioxymethamphetamine (MDMA or "ecstasy") was an emerging drug (i.e., moving from the club scene to the broader population) in Baltimore's suburban counties, but not in Baltimore city. DAWN ED mentions rose from 35 in 1999 to 64 in 2000. Street names tend to feature colors, cartoon characters, or expensive cars and other status symbols. Youth offenders indicate that there is a widespread belief that ecstasy is adulterated with heroin, cocaine, mescaline, or speed. They report "candy flipping" (mixing MDMA with LSD) and "speedballing" (mixing MDMA with ketamine). "Parachuting" was reported—crushing a pill in a napkin and swallowing it to achieve more rapid effects.

Gamma hydroxybutyrate (GHB), flunitrazepam (Rohypnol), and ketamine were not seen as emerging drugs in the Baltimore area. ED mentions remained low, at 3, 0, and 4, respectively. GHB was involved in the highly publicized death of a University of Maryland student in the fall of 2001. The Office of the Chief Medical Examiner will begin testing for GHB in a case-by-case basis in early 2002.

#### INFECTIOUS DISEASES RELATED TO DRUG ABUSE

The Baltimore metropolitan area had the eighth highest AIDS incidence rate among major metropolitan areas, at 38 per 100,000 in 2000. In the year ending June 30, 2000, the Baltimore metropolitan area accounted for 64 percent of Maryland's incident human immunodeficiency virus (HIV) infections, 61 percent of its incident AIDS cases, and 63 percent of the 22,183 persons in Maryland living with HIV/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 in injecting drug users (IDUs), 21 percent involved non-IDU men who had sex with men, and 16 percent involved heterosexual transmission.

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EPIDEMIOLOGIC TRENDS IN DRUG ABUSE

**Exhibit 1. Rate of Drug-Related Treatment Admissions and Emergency Department Mentions Per 100,000 Population in Baltimore (PMSA) Age 12 and Older: 1994–2000**

Year	Cocaine ED Mentions	Cocaine Treatment Admissions	Heroin ED Mentions	Heroin Treatment Admissions	Marijuana ED Mentions	Marijuana Treatment Admissions
1994	400	322	337	524	35	123
1995	384	313	366	606	42	175
1996	376	281	357	584	53	205
1997	273	233	256	608	61	199
1998	296	202	289	610	65	190
1999	296	193	299	653	72	190
2000	208	162	227	674	68	200

SOURCES: Alcohol and Drug Abuse Administration, Maryland Department of Health and Mental Hygiene; Office of Applied Studies, SAMHSA, Drug Abuse Warning Network (DAWN) 2000, (03/2001 update)

**Exhibit 2. Cocaine, Heroin, and Marijuana Emergency Department Mentions in Baltimore PMSA by Demographic Characteristic: 1996–2000**

Characteristic	Cocaine					Heroin					Marijuana				
	1996	1997	1998	1999	2000	1996	1997	1998	1999	2000	1996	1997	1998	1999	2000
(Number of mentions)	(8,515)	(6,253)	(6,871)	(6,921)	(4,943)	(8,093)	(5,863)	(6,711)	(6,999)	(5,405)	(1,194)	(1,402)	(1,495)	(1,679)	(1,620)
Percent of all episodes	53.2	49.0	50.0	48.8	43.0	50.6	46.0	48.9	49.4	47.0	7.5	11.0	10.9	11.8	14.1
Percent of all mentions	31.4	28.4	29.2	27.9	24.9	29.9	26.6	28.5	28.3	27.2	4.4	6.4	6.4	6.8	8.2
Rate of mentions per 100,000 population															
Total	376	273	296	296	208	357	256	289	299	227	53	61	65	72	68
12-17	14	22	41	27	20	11	25	42	35	24	94	164	146	159	169
18-25	372	261	300	285	216	349	302	378	379	330	141	149	174	206	185
26-34	904	627	667	651	442	796	527	579	628	469	98	97	107	115	109
35+	336	255	278	290	206	340	245	274	282	210	24	28	29	32	31
Percentage distributions															
Multiple-drug episode	73.8	77.4	79.9	80.6	81.3	62.3	62.7	57.8	60.0	53.1	72.3	66.8	67.6	66.8	63.3
Sex															
Male	63.2	63.7	63.0	61.2	61.6	62.4	61.8	61.9	60.2	62.1	71.8	68.4	65.8	66.2	64.2
Female	36.8	36.3	37.0	38.8	38.4	37.6	38.2	38.1	39.8	37.9	28.2	31.6	34.2	33.8	35.8
Race/ethnicity															
White	17.9	24.1	26.1	28.1	32.3	14.9	22.5	26.4	27.1	37.0	45.1	53.2	50.1	52.2	56.9
African-American	79.0	72.9	70.7	68.9	64.2	82.3	73.9	70.9	70.3	61.0	51.8	43.9	42.9	38.5	30.7
Hispanic	0.8	0.4	0.4	0.3	0.3	0.6	0.4	0.4	0.3	0.3	0.8	0.8	0.3	0.5	0.4
Other/Unknown	2.3	2.6	2.8	2.7	3.2	2.3	3.3	2.3	2.3	1.6	2.2	2.1	6.7	8.8	12.1
Age at admission															
12-17	0.3	0.7	1.2	0.8	0.8	0.3	0.8	1.2	1.0	0.9	15.1	22.6	19.1	18.7	20.8
18-25	11.1	10.6	11.2	10.7	11.7	10.9	13.1	14.5	14.1	16.3	29.9	26.9	29.8	31.9	30.4
26-34	39.3	36.7	34.8	33.1	31.1	36.4	32.8	31.0	31.5	30.1	30.3	25.3	25.6	24.1	23.3
35+	49.2	52.1	52.8	55.5	56.4	52.4	53.3	53.3	53.4	52.6	24.7	25.2	25.5	25.3	25.4
Reason for use															
Psychic effects	8.7	5.7	6.9	6.9	10.0	7.6	5.2	6.0	4.5	5.4	24.2	24.8	33.6	28.3	30.4
Dependence	63.9	59.0	59.3	68.1	73.5	65.9	65.6	64.8	77.2	83.4	49.5	36.7	35.2	42.8	30.1
Suicide	9.7	13.7	8.1	7.4	5.7	6.8	9.8	5.9	4.3	3.3	8.9	9.3	11.2	9.6	8.0
Other	0.1	0.3	0.4	0.2	0.2	0.0	0.2	0.4	0.1	0.1	0.5	0.8	0.5	0.3	0.6
Unknown	17.7	21.3	25.3	17.4	10.7	19.7	19.2	22.9	13.8	7.8	16.9	28.4	19.6	19.0	30.8
Reason for ED visit															
Unexpected reaction	8.0	6.8	10.9	10.9	8.1	4.6	4.2	7.4	10.5	4.8	15.1	14.8	18.7	19.0	18.8
Overdose	6.8	8.1	9.9	9.7	11.2	6.8	9.5	11.7	10.2	14.0	7.4	7.6	11.4	11.0	11.6
Chronic effects	31.4	30.5	30.6	27.6	22.8	36.6	34.2	34.4	29.1	27.7	10.2	12.1	12.6	10.1	5.4
Withdrawal	9.3	12.3	5.8	4.4	5.1	13.1	18.6	13.2	10.7	14.1	4.7	4.6	2.2	1.6	3.0
Seeking detox	6.7	7.9	11.2	13.6	16.3	4.0	7.1	9.4	10.9	9.8	10.0	8.3	11.6	14.5	15.5
Accident/injury	7.2	3.1	3.3	3.6	2.8	10.2	3.3	4.6	4.4	2.6	3.0	3.9	7.6	7.4	3.9
Other	16.3	11.8	11.9	24.0	29.3	10.1	8.9	7.4	18.3	24.9	31.5	14.4	19.9	30.2	31.5
Unknown	14.3	19.5	16.3	6.2	4.3	14.7	14.2	11.8	5.9	2.1	18.1	34.3	16.0	6.3	10.3

Note: A small number of unknowns are excluded from percentage calculations for sex and age.

SOURCE: Office of Applied Studies, SAMHSA, DAWN, 2000 (03/2001 update)

EPIDEMIOLOGIC TRENDS IN DRUG ABUSE

**Exhibit 3. Characteristics of All Drug-Related Treatment Admissions in Baltimore: 1996–2000**

Characteristic	Total PMSA					Baltimore City					PMSA Excluding Baltimore City				
	1996	1997	1998	1999	2000	1996	1997	1998	1999	2000	1996	1997	1998	1999	2000
(Number of admissions)	(28,282)	(27,279)	(26,303)	(26,856)	(27,104)	(14,751)	(13,280)	(12,593)	(13,314)	(13,514)	(13,531)	(13,999)	(13,710)	(13,542)	(13,590)
Primary substance (%)															
Alcohol with secondary drug	20.9	20.0	20.4	19.2	17.9	11.5	10.7	10.7	10.0	8.8	31.2	28.8	29.3	28.2	26.9
Cocaine	20.3	17.5	15.9	14.9	12.7	21.2	18.5	15.6	14.8	12.8	19.3	16.6	16.1	15.0	12.7
Smoked	15.4	12.7	11.7	10.8	9.5	16.2	13.3	11.4	10.8	9.8	14.4	12.1	11.9	10.9	9.2
Injected	1.8	1.7	1.4	1.3	1.0	2.2	2.2	1.8	1.7	1.2	1.5	1.3	1.0	1.0	0.8
Other	3.1	3.1	2.8	2.8	2.2	2.8	3.0	2.5	2.3	1.8	3.5	3.2	3.2	3.2	2.7
Marijuana/hashish	14.8	15.0	14.9	14.7	15.6	11.5	10.9	11.2	10.3	11.5	18.5	18.9	18.4	19.0	19.7
Heroin/other opiates	42.3	45.8	47.8	50.3	52.8	55.2	59.1	62.0	64.5	66.5	28.2	33.1	34.7	36.4	39.2
Injected	20.2	22.8	22.7	23.6	23.9	25.8	28.8	27.4	28.4	27.9	14.2	17.0	18.4	18.9	19.8
Snorted	19.6	20.3	20.8	21.7	24.7	27.7	27.9	30.1	30.5	34.9	10.8	13.0	12.3	13.1	14.6
Other	2.4	2.8	4.3	5.0	4.2	1.6	2.4	4.5	5.6	3.7	3.2	3.1	4.0	4.4	4.8
Stimulants	0.2	0.3	0.0	0.0	0.0	0.0	0.2	0.0	-	0.0	0.3	0.4	0.1	0.0	0.0
All other	1.5	1.5	1.0	0.9	0.9	0.6	0.6	0.5	0.5	0.4	2.5	2.4	1.5	1.4	1.4
Primary substance (annual admissions per 100,000 population aged 12+)															
Alcohol with secondary drug	289	265	260	249	228	306	263	253	256	222	282	266	262	246	230
Cocaine	281	233	202	193	162	567	454	370	377	322	175	153	144	131	109
Smoked	212	168	149	140	122	434	327	270	275	248	130	111	107	95	79
Injected	26	23	18	17	12	58	54	42	42	29	13	12	9	9	7
Other	43	41	36	36	28	75	73	58	60	45	31	30	28	28	23
Marijuana/hashish	205	199	190	190	200	308	266	265	264	290	167	174	165	166	169
Heroin/other opiates	584	608	610	653	674	1,474	1,452	1,470	1,649	1,677	256	306	311	318	336
Injected	280	302	290	306	305	689	707	650	727	704	128	158	165	165	170
Snorted	272	269	266	282	316	741	685	713	779	880	98	120	110	114	125
Other	33	37	54	65	54	43	60	107	143	93	29	28	36	39	41
Stimulants	2	4	1	0	0	1	6	0	-	0	2	3	1	0	0
All other	21	20	13	12	12	16	14	13	12	11	23	22	13	12	12
Secondary substance (%)															
None	24.6	25.5	23.9	23.8	25.6	27.9	27.7	25.4	25.4	28.7	21.0	23.5	22.5	22.2	22.5
Alcohol	27.7	27.0	27.9	28.1	28.7	26.4	26.2	27.5	27.4	28.1	29.1	27.8	28.2	28.9	29.3
Cocaine	37.0	36.4	37.7	37.9	36.1	42.2	43.2	45.3	45.5	42.9	31.3	29.9	30.8	30.4	29.3
Marijuana/hashish	25.5	25.2	25.2	23.7	23.2	19.0	17.4	17.0	15.9	15.0	32.6	32.6	32.7	31.5	31.4
Heroin/other opiates	10.1	9.2	8.7	8.9	8.4	10.9	9.8	8.9	9.1	8.4	9.3	8.6	8.6	8.7	8.4
All other	6.6	6.6	5.2	5.3	5.6	3.2	3.4	2.7	2.9	2.3	10.3	9.5	7.6	7.6	8.9

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

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

EPIDEMIOLOGIC TRENDS IN DRUG ABUSE

**Exhibit 4. Characteristics of Primary Crack Cocaine Treatment Admissions in Baltimore: 1996–2000**

Characteristic	Total PMSA					Baltimore City					PMSA Excluding Baltimore City				
	1996	1997	1998	1999	2000	1996	1997	1998	1999	2000	1996	1997	1998	1999	2000
(Number of admissions)	(4,343)	(3,458)	(3,066)	(2,903)	(2,585)	(2,396)	(1,771)	(1,432)	(1,432)	(1,330)	(1,947)	(1,687)	(1,634)	(1,471)	(1,255)
Primary use of substance (%)	15.4	12.7	11.7	10.8	9.5	16.2	13.3	11.4	10.8	9.8	14.4	12.1	11.9	10.9	9.2
Sex (%)															
Male	55.2	55.2	56.6	55.4	55.4	47.9	51.0	49.5	45.5	46.4	64.2	59.6	62.9	65.0	64.9
Female	44.8	44.8	43.4	44.6	44.6	52.1	49.0	50.5	54.5	53.6	35.8	40.4	37.1	35.0	35.1
Race/ethnicity (%)															
White	35.0	35.7	39.3	37.0	31.6	15.5	17.2	18.6	16.1	13.2	59.0	55.2	57.4	57.3	51.1
African-American	64.0	62.9	59.2	61.5	67.0	83.8	82.0	80.3	82.8	85.9	39.6	42.9	40.7	40.8	47.0
Hispanic	0.5	0.8	0.8	0.8	0.7	0.4	0.6	0.3	0.4	0.4	0.5	1.1	1.2	1.2	1.1
Other	0.6	0.5	0.8	0.7	0.7	0.3	0.2	0.8	0.7	0.5	0.9	0.8	0.7	0.7	0.8
Age at admission (%)															
< 18	1.4	1.3	1.6	0.6	0.5	0.5	0.5	1.2	0.4	0.3	2.6	2.1	1.9	0.8	0.7
18-25	12.5	9.5	8.7	8.3	6.6	9.6	6.7	6.0	4.7	4.4	16.1	12.5	11.0	11.8	8.8
26-34	45.8	45.0	40.8	36.8	33.9	47.2	45.1	38.1	34.8	31.5	44.2	44.8	43.2	38.7	36.5
35+	40.2	44.2	48.9	54.4	59.0	42.7	47.7	54.7	60.1	63.8	37.1	40.6	43.9	48.8	53.9
Avg. age at admission	33 yrs	34 yrs	34 yrs	35 yrs	36 yrs	34 yrs	35 yrs	35 yrs	36 yrs	37 yrs	32 yrs	33 yrs	33 yrs	34 yrs	35 yrs
Daily use (%)	44.2	37.5	35.9	35.4	35.1	44.2	40.3	41.7	43.2	44.1	44.1	34.6	30.8	27.9	25.6
First treatment episode (%)	49.1	48.7	41.9	42.9	42.4	46.2	48.4	43.0	43.0	38.8	52.5	48.9	40.9	42.9	46.1
Avg. duration of use <sup>a</sup>	7 yrs	8 yrs	9 yrs	10 yrs	11 yrs	8 yrs	9 yrs	10 yrs	10 yrs	11 yrs	8 yrs	9 yrs	9 yrs	10 yrs	11 yrs
Criminal justice referral (%)	24.8	32.2	36.1	37.3	40.5	24.3	28.7	33.1	30.9	32.7	25.3	35.9	38.7	43.6	48.8
Secondary substance (%) <sup>b</sup>															
None	36.1	34.8	32.9	30.0	31.1	42.4	39.5	36.7	32.5	35.0	28.5	29.9	29.6	27.5	27.0
Alcohol	44.4	46.6	48.3	47.8	47.8	37.2	39.9	43.5	42.7	41.4	53.2	53.7	52.4	52.8	54.6
Cocaine	0.1	0.2	0.2	0.1	0.1	0.0	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1
Smoked cocaine (crack)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other cocaine	0.1	0.2	0.2	0.1	0.1	0.0	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1
Marijuana/hashish/THC	27.5	28.2	29.6	29.7	28.5	23.5	23.6	25.0	24.7	23.3	32.5	33.0	33.7	34.6	34.1
Heroin/other opiates	15.7	13.9	15.5	18.5	18.5	19.8	17.3	21.0	24.2	23.8	10.7	10.3	10.6	13.0	12.7
Injected	2.2	2.1	2.3	2.5	2.0	2.3	1.8	2.7	2.8	2.1	2.1	2.3	2.0	2.3	1.9
Snorted	11.9	10.1	11.1	13.3	13.2	16.2	13.3	16.2	18.9	19.2	6.7	6.8	6.7	8.0	6.9
All other	3.5	3.7	2.2	2.4	2.9	1.6	2.1	0.9	1.3	1.1	5.8	5.3	3.4	3.5	4.8

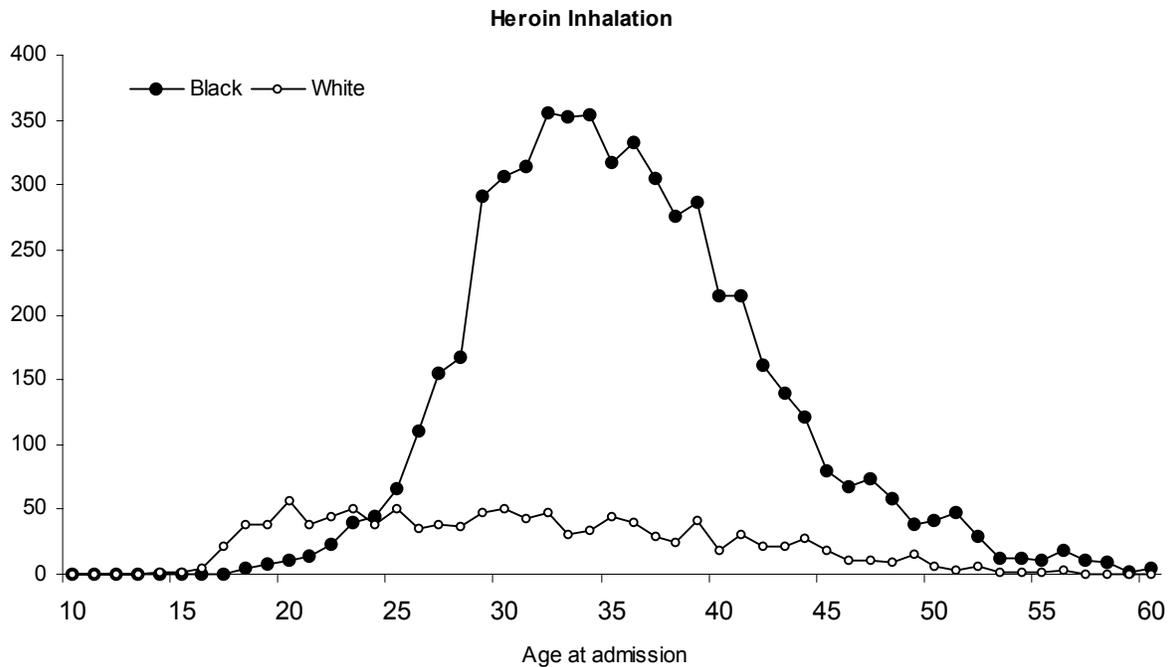
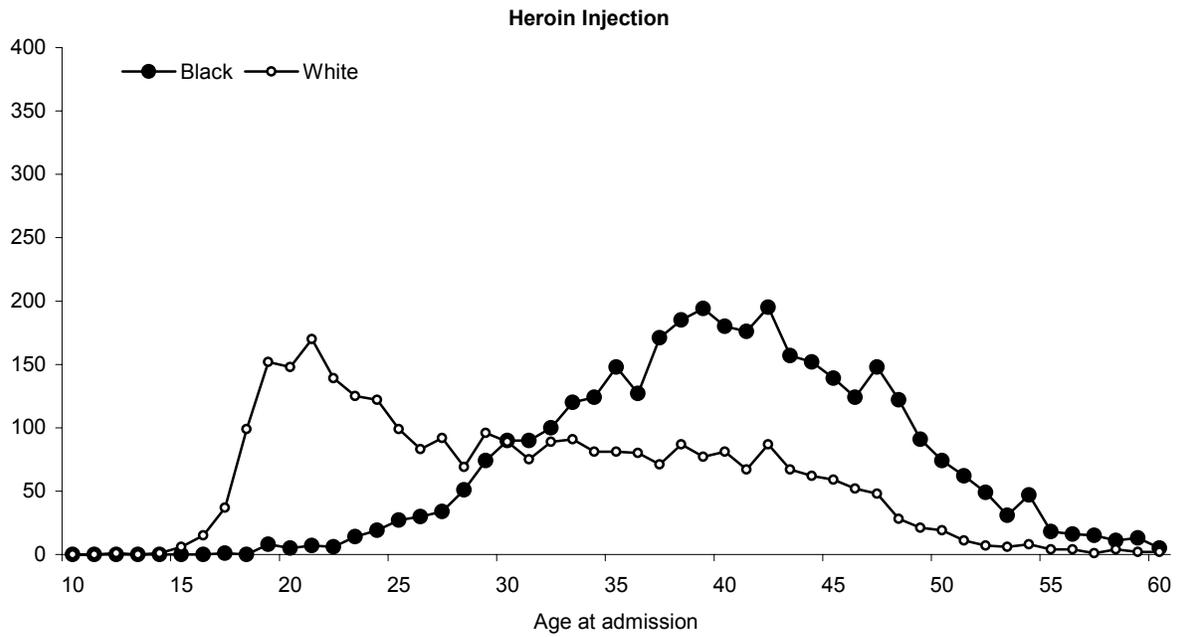
<sup>a</sup> For first-time treatment admissions.

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

- Quantity is zero.

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

**Exhibit 5. Number of Primary Treatment Admissions for Heroin in Baltimore PMSA by Selected Route of Administration, Age, and Race: 2000**



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

EPIDEMIOLOGIC TRENDS IN DRUG ABUSE

**Exhibit 6. Characteristics of Primary Heroin Injector Treatment Admissions in Baltimore: 1996–2000**

Characteristic	Total PMSA					Baltimore City					PMSA Excluding Baltimore City				
	1996	1997	1998	1999	2000	1996	1997	1998	1999	2000	1996	1997	1998	1999	2000
(Number of admissions)	(5,727)	(6,208)	(5,976)	(6,344)	(6,466)	(3,807)	(3,822)	(3,452)	(3,783)	(3,771)	(1,920)	(2,386)	(2,524)	(2,561)	(2,695)
Primary use of substance (%)	20.2	22.8	22.7	23.6	23.9	25.8	28.8	27.4	28.4	27.9	14.2	17.0	18.4	18.9	19.8
Sex (%)															
Male	58.7	58.5	58.6	59.6	58.0	56.2	56.0	56.2	56.8	54.3	63.6	62.5	62.0	63.8	63.2
Female	41.3	41.5	41.4	40.4	42.0	43.8	44.0	43.8	43.2	45.7	36.4	37.5	38.0	36.2	36.8
Race/ethnicity (%)															
White	32.5	42.0	45.8	44.7	45.0	20.5	23.8	24.4	24.6	25.2	56.3	71.3	75.0	74.4	72.6
African-American	66.6	56.5	52.8	53.4	53.6	78.7	75.2	74.6	74.3	73.9	42.5	26.6	23.1	22.5	25.2
Hispanic	0.5	0.7	0.7	1.1	0.8	0.5	0.4	0.5	0.3	0.5	0.5	1.2	0.9	2.1	1.2
Other	0.4	0.7	0.7	0.8	0.7	0.3	0.6	0.5	0.7	0.5	0.7	1.0	0.9	0.9	1.0
Age at admission (%)															
< 18	1.1	1.4	2.0	1.4	1.0	0.4	0.5	1.0	0.6	0.5	2.3	3.0	3.3	2.6	1.6
18-25	9.9	13.2	17.1	17.2	17.9	5.8	6.8	9.6	8.2	8.7	18.1	23.5	27.4	30.6	30.8
26-34	27.3	26.8	24.5	22.7	23.3	28.1	27.3	23.9	22.3	22.1	25.8	26.1	25.3	23.3	25.1
35+	61.6	58.5	56.4	58.7	57.9	65.6	65.4	65.5	68.8	68.7	53.8	47.5	44.0	43.6	42.6
Avg. age at admission	36 yrs	36 yrs	35 yrs	36 yrs	36 yrs	37 yrs	37 yrs	37 yrs	38 yrs	38 yrs	34 yrs	33 yrs	32 yrs	32 yrs	32 yrs
Daily use (%)	72.3	73.4	74.9	72.6	74.8	69.9	73.0	77.6	75.7	79.7	77.1	74.0	71.3	68.2	67.9
First treatment episode (%)	35.7	39.1	34.1	37.1	32.7	34.2	38.5	32.0	34.5	30.8	38.6	40.2	36.9	41.0	35.0
Avg. duration of use <sup>a</sup>	13 yrs	14 yrs	13 yrs	13 yrs	14 yrs	15 yrs	16 yrs	15 yrs	16 yrs	16 yrs	12 yrs	10 yrs	11 yrs	10 yrs	10 yrs
Criminal justice referral (%)	22.2	22.0	24.3	22.9	24.1	23.6	23.7	25.6	23.2	22.4	19.5	19.4	22.6	22.5	26.5
Secondary substance (%) <sup>b</sup>															
None	22.5	26.1	23.5	27.2	28.2	18.8	20.8	17.8	23.4	25.9	29.8	34.5	31.4	32.8	31.5
Alcohol	26.1	23.5	23.1	22.8	23.0	25.9	25.2	23.1	23.6	24.2	26.3	20.7	23.0	21.7	21.4
Cocaine	66.7	62.1	64.2	61.0	58.5	72.6	71.0	74.0	68.6	64.7	55.1	47.8	50.8	49.8	49.9
Smoked cocaine (crack)	6.6	7.2	8.5	8.6	8.9	5.6	7.0	7.9	8.6	9.1	8.4	7.6	9.3	8.7	8.7
Other cocaine	60.2	54.9	55.9	52.3	49.6	66.9	64.1	66.2	60.0	55.5	46.7	40.3	41.8	41.0	41.3
Marijuana/hashish/THC	10.4	11.6	12.5	11.5	12.2	9.5	8.4	8.3	7.3	7.9	12.2	16.9	18.2	17.8	18.3
Heroin/other opiates	4.3	3.7	3.1	2.8	3.3	3.2	2.5	1.6	1.7	1.6	6.5	5.5	5.2	4.4	5.7
Injected	0.8	0.8	0.5	0.4	0.4	0.5	0.5	0.1	0.2	0.1	1.5	1.4	0.9	0.8	0.8
Snorted	0.1	0.1	0.2	0.0	0.2	-	0.1	-	0.0	0.0	0.3	0.2	0.4	0.1	0.4
All other	4.2	4.9	4.1	4.0	4.0	4.1	3.8	2.7	2.9	2.4	4.6	6.6	6.0	5.5	6.3

<sup>a</sup> For first-time treatment admissions.

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

- Quantity is zero.

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

**Exhibit 7. Characteristics of Primary Intra-nasal Heroin Treatment Admissions in Baltimore: 1996–2000**

Characteristic	Total PMSA					Baltimore City					PMSA Excluding Baltimore City				
	1996	1997	1998	1999	2000	1996	1997	1998	1999	2000	1996	1997	1998	1999	2000
(Number of admissions)	(5,557)	(5,526)	(5,476)	(5,831)	(6,701)	(4,092)	(3,707)	(3,788)	(4,056)	(4,715)	(1,465)	(1,819)	(1,688)	(1,775)	(1,986)
Primary use of substance (%)	19.6	20.3	20.8	21.7	24.7	27.7	27.9	30.1	30.5	34.9	10.8	13.0	12.3	13.1	14.6
Sex (%)															
Male	52.8	54.5	51.7	52.6	52.9	50.3	51.1	45.9	46.2	47.6	59.5	61.4	64.8	67.3	65.5
Female	47.2	45.5	48.3	47.4	47.1	49.7	48.9	54.1	53.8	52.4	40.5	38.6	35.2	32.7	34.5
Race/ethnicity (%)															
White	11.9	20.4	23.2	19.2	17.0	5.3	8.3	9.7	8.1	7.0	30.2	45.1	53.6	44.7	40.7
African-American	87.6	78.6	75.7	79.6	82.0	94.3	91.0	89.7	91.3	92.3	68.9	53.4	44.4	53.1	57.8
Hispanic	0.3	0.4	0.5	0.7	0.5	0.2	0.4	0.3	0.3	0.3	0.4	0.5	1.1	1.5	0.8
Other	0.3	0.6	0.5	0.5	0.5	0.2	0.4	0.3	0.3	0.4	0.5	1.0	0.8	0.7	0.8
Age at admission (%)															
< 18	1.1	2.2	2.5	2.0	0.4	0.2	0.8	1.5	1.3	0.1	3.7	5.2	4.6	3.7	1.2
18-25	20.1	19.0	15.4	11.0	8.6	18.0	15.2	10.0	7.2	4.9	26.0	26.7	27.6	19.7	17.5
26-34	52.0	49.8	46.7	46.5	41.7	55.1	54.4	51.3	48.9	41.6	43.6	40.3	36.4	41.1	42.1
35+	26.7	29.0	35.4	40.5	49.2	26.7	29.6	37.2	42.7	53.4	26.7	27.8	31.4	35.5	39.3
Avg. age at admission	31 yrs	31 yrs	32 yrs	33 yrs	35 yrs	31 yrs	32 yrs	33 yrs	34 yrs	36 yrs	30 yrs	30 yrs	30 yrs	32 yrs	33 yrs
Daily use (%)	67.9	70.0	70.3	65.5	71.0	64.1	68.2	72.8	68.0	76.6	78.5	73.8	64.8	59.5	57.7
First treatment episode (%)	48.5	48.0	41.9	42.8	38.6	46.2	46.8	40.3	40.2	34.9	54.9	50.4	45.5	48.6	47.5
Avg. duration of use <sup>a</sup>	7 yrs	8 yrs	8 yrs	9 yrs	10 yrs	8 yrs	9 yrs	9 yrs	10 yrs	11 yrs	7 yrs	7 yrs	7 yrs	8 yrs	9 yrs
Criminal justice referral (%)	32.3	31.1	33.6	34.6	31.5	33.7	31.8	33.5	34.3	29.3	28.5	29.9	33.7	35.2	37.0
Secondary substance (%) <sup>b</sup>															
None	31.9	34.4	33.4	32.7	35.5	33.4	35.4	33.7	32.1	35.5	27.8	32.3	32.9	34.0	35.6
Alcohol	24.6	22.0	24.2	24.3	24.4	22.3	20.3	22.8	24.4	24.0	30.9	25.2	27.3	24.0	25.5
Cocaine	50.4	47.4	47.4	48.8	45.8	51.6	49.8	50.1	51.9	48.5	47.0	42.4	41.2	41.7	39.3
Smoked cocaine (crack)	31.4	28.6	29.2	30.1	29.3	33.0	31.4	33.2	34.8	33.7	26.9	22.8	20.1	19.5	18.7
Other cocaine	19.0	18.9	18.2	18.7	16.5	18.6	18.4	16.9	17.2	14.8	20.1	19.7	21.1	22.1	20.5
Marijuana/hashish/THC	20.3	20.6	19.2	17.5	17.1	19.1	17.2	16.4	15.1	14.2	23.9	27.6	25.5	23.0	24.0
Heroin/other opiates	2.7	2.5	2.1	2.5	2.4	2.1	1.6	1.3	1.5	1.3	4.4	4.2	3.9	4.7	4.9
Injected	-	0.1	0.0	0.0	0.1	-	-	0.0	0.0	0.0	-	0.2	0.1	-	0.2
Snorted	0.8	0.6	0.2	0.2	0.2	0.7	0.3	0.1	0.1	0.1	1.0	1.1	0.5	0.6	0.4
All other	1.6	2.3	2.3	2.0	1.9	1.2	1.4	1.6	1.4	1.3	2.7	4.1	3.9	3.4	3.5

<sup>a</sup> For first-time treatment admissions.

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

- Quantity is zero.

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

EPIDEMIOLOGIC TRENDS IN DRUG ABUSE

**Exhibit 8. Characteristics of Primary Marijuana Treatment Admissions in Baltimore: 1996–2000**

Characteristic	Total PMSA					Baltimore City					PMSA Excluding Baltimore City				
	1996	1997	1998	1999	2000	1996	1997	1998	1999	2000	1996	1997	1998	1999	2000
(Number of admissions)	(4,198)	(4,082)	(3,923)	(3,940)	(4,240)	(1,699)	(1,441)	(1,405)	(1,373)	(1,556)	(2,499)	(2,641)	(2,518)	(2,567)	(2,684)
Primary use of substance (%)	14.8	15.0	14.9	14.7	15.6	11.5	10.9	11.2	10.3	11.5	18.5	18.9	18.4	19.0	19.7
Sex (%)															
Male	83.2	83.1	83.9	82.9	81.9	85.9	86.5	84.2	80.6	79.0	81.3	81.2	83.8	84.1	83.6
Female	16.8	16.9	16.1	17.1	18.1	14.1	13.5	15.8	19.4	21.0	18.7	18.8	16.2	15.9	16.4
Race/ethnicity (%)															
White	49.2	53.0	53.8	52.0	50.6	21.0	23.5	25.8	32.5	29.3	68.4	69.0	69.3	62.5	62.9
African-American	47.9	44.2	43.1	44.8	46.2	76.5	74.7	71.4	65.9	68.7	28.4	27.5	27.3	33.5	33.2
Hispanic	1.7	1.7	2.0	1.8	1.6	1.5	1.0	1.7	0.9	1.0	1.8	2.0	2.1	2.2	1.9
Other	1.2	1.2	1.1	1.4	1.7	0.9	0.7	1.1	0.7	1.0	1.4	1.4	1.2	1.9	2.1
Age at admission (%)															
< 18	49.9	48.3	49.3	47.4	47.9	45.7	45.6	51.8	54.6	56.6	52.8	49.8	47.9	43.6	42.9
18-25	30.2	30.1	32.2	32.2	30.9	32.1	29.2	29.1	26.7	23.3	28.9	30.6	33.9	35.2	35.3
26-34	11.9	13.3	10.5	11.9	11.6	13.8	15.9	11.1	10.9	10.9	10.6	11.9	10.2	12.4	12.0
35+	8.0	8.3	8.0	8.5	9.6	8.5	9.3	8.0	7.9	9.2	7.7	7.7	8.1	8.9	9.8
Avg. age at admission	21 yrs	21 yrs	21 yrs	21 yrs	21 yrs	21 yrs	22 yrs	21 yrs	21 yrs	21 yrs	20 yrs	21 yrs	21 yrs	21 yrs	22 yrs
Daily use (%)	32.7	30.8	26.7	23.4	29.3	30.4	33.0	31.4	25.0	44.1	34.2	29.6	24.0	22.5	20.6
First treatment episode (%)	76.2	71.5	71.5	68.4	71.0	82.5	77.7	75.4	70.8	72.7	71.9	68.0	69.2	67.1	70.0
Avg. duration of use <sup>a</sup>	6 yrs	6 yrs	5 yrs	6 yrs	6 yrs	6 yrs	6 yrs	5 yrs	5 yrs	6 yrs	5 yrs	6 yrs	6 yrs	6 yrs	7 yrs
Criminal justice referral (%)	59.9	56.8	59.6	63.0	64.9	71.7	68.4	67.0	64.4	62.9	51.9	50.4	55.6	62.3	66.1
Secondary substance (%) <sup>b</sup>															
None	36.3	34.1	32.7	28.8	28.8	40.8	36.2	33.5	29.0	29.2	33.2	32.9	32.3	28.7	28.6
Alcohol	50.0	53.8	57.5	60.4	62.4	43.7	49.1	56.1	55.6	59.8	54.2	56.3	58.2	63.0	63.9
Cocaine	13.7	12.7	11.6	11.0	11.0	14.3	13.0	10.9	11.5	12.6	13.2	12.5	12.0	10.8	10.1
Smoked cocaine (crack)	6.5	6.1	5.6	5.5	4.8	6.0	6.0	4.7	5.1	5.7	6.8	6.2	6.1	5.6	4.3
Other cocaine	7.2	6.6	6.1	5.6	6.2	8.3	7.0	6.2	6.4	6.9	6.4	6.3	6.0	5.2	5.8
Marijuana/hashish/THC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Heroin/other opiates	6.4	7.7	6.5	5.8	6.4	7.7	9.2	7.8	7.3	9.0	5.6	6.9	5.7	5.1	5.0
Injected	1.3	1.9	1.1	0.9	1.2	1.9	1.9	1.2	1.0	1.7	0.9	1.9	1.1	0.9	0.9
Snorted	4.2	4.5	3.8	3.5	3.3	5.1	6.2	5.4	4.7	4.9	3.6	3.6	2.9	2.8	2.3
All other	12.3	11.9	8.0	9.6	8.0	6.8	6.6	5.1	9.1	4.8	16.1	14.8	9.5	9.8	9.8

<sup>a</sup> For first-time treatment admissions.

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

- Quantity is zero.

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

## Drug Use Trends in Greater Boston and Massachusetts

Thomas W. Clark, B.A., and Elsa A. Elliott, M.S.<sup>1</sup>

### ABSTRACT

*Most indicators for cocaine in Boston continue to decline, while rising for heroin and staying level for marijuana. Heroin now rivals cocaine as the street drug of choice in Boston. However, both crack and cocaine drug lab submissions have risen recently, suggesting that the declining trend for cocaine may be ending. Among diverted prescription medications, oxycodone (Percocet and OxyContin) and clonazepam (Klonopin) are most frequently mentioned. Many pharmacy thefts targeting OxyContin have occurred in Greater Boston. Marijuana remains widely available, and seasonal use of psychedelics such as LSD and psilocybin mushrooms continues among youth. Club drugs such as MDMA (ecstasy), gamma hydroxybutyrate (GHB), and ketamine are still commonly reported in the club and rave scenes. MDMA in particular remains very popular among youth and young adults. Methamphetamine use is rare. Through November 1, 2001, a cumulative total of 16,629 adult/adolescent AIDS/HIV cases were reported in Massachusetts. Of these, injecting drug use accounted for 35 percent, while male-to-male sexual exposure accounted for 38 percent.*

### INTRODUCTION

#### Area Description

According to the 2000 U.S. census, Massachusetts ranks 13<sup>th</sup> in population (6,349, 097 people). The 746,914 people in Boston represent 12 percent of the total Massachusetts population. In Boston, 54 percent of residents are White, 20 percent are Black, 14 percent are Hispanic, and 12 percent are of other or multiple racial/ethnic backgrounds.

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:

\$ The Substance Abuse and Mental Health Services Administration (SAMHSA), Drug Abuse Warning Network (DAWN)—This source provided data on drug mentions in admissions to participating emergency departments (EDs) in the Boston metropolitan statistical area (MSA) from January 1996 through December 2000, and drug mentions in drug-abuse related deaths from participating medical examiners from 1996 through 1999.

\$ The Massachusetts Department of Public Health (DPH), Bureau of Substance Abuse Services—DPH provided data on State-funded substance abuse treatment admission data from fiscal year (FY) 1994 (starting July 1993) through FY 2001 (ending June 30, 2001).

\$ DPH Drug Analysis Laboratory—Data from analysis of drug samples were provided by DPH, 1993 through June 30, 2001.

\$ DPH, AIDS Surveillance Program—Acquired immunodeficiency syndrome (AIDS) data by year between 1993 and 2000, and cumulative data through November 1, 2001, were provided by DPH.

- Massachusetts Substance Abuse Information and Education Helpline—Drug mentions in helpline calls from January through September 2001 were provided by this source.

- The Boston Police Department, Drug Control Unit and Office of Research and Evaluation; the Massachusetts State Police; and the Drug Enforcement Administration (DEA)—Drug arrests; availability, price, and purity; and distribution patterns were derived from these sources.

<sup>1</sup> Health and Addictions Research, Inc., Boston Massachusetts

\$ Massachusetts Poison Control Center—The PCC provided data on substance abuse-related calls, 2000.

\$ Focus groups with adult clients in treatment and with adolescents in youth and treatment programs provided more in-depth information on drug use and availability.

\$ Structured interviews with needle exchange personnel, treatment providers, and law enforcement officials provided additional information on drug injecting practices.

## Drug Abuse Trends

### *Cocaine and Crack*

Most cocaine indicators continue a decline that first became apparent in 1995, but a rise in drug lab submissions and emergency department (ED) mentions may signal a reversal of this trend. Although cocaine still ranks highest in Boston drug arrests, just 9 percent of those in publicly funded treatment in FY 2001 reported crack or cocaine as their drug of choice, compared with 27 percent in FY 1994.

Cocaine ED mentions have wavered around 30 percent since 1996, reaching 36 percent in the last half of 1998, falling to 26 percent in the first half of 2000, and rising to 29 percent in the second half (exhibit 1). The proportion of Greater Boston treatment admissions reporting past-month cocaine use dropped from 40 percent in FY 1995 to 25 percent in FY 2001 (exhibit 2). Data on drug samples analyzed by the Massachusetts DPH Drug Analysis Laboratory show that cocaine and crack submissions for Greater Boston constituted 51 percent of all drugs analyzed in calendar year (CY) 1993, fell to 26 percent in 2000, and then rose to 31 percent in the first half of 2001.

Arrests by Boston police for Class B substances (cocaine and derivatives) continued to drop, from 45 percent of all drug-related arrests in 1999 to 41 percent in 2000. This is well below the all-time high of 66 percent in 1992 (exhibit 3). Boston police, outreach workers, and treatment providers all agreed that crack remains the predominant form of cocaine in the inner city although some thought cocaine powder had become more available.

In the first three quarters of 2001, cocaine or crack was mentioned in 15 percent of the Massachusetts Substance Abuse Information and Education Helpline calls for Boston in which drugs were specified, level with 2000. By contrast, alcohol was mentioned in 40 percent and heroin in 26 percent of calls. In 1999, cocaine was mentioned in 34 percent of drug-related deaths reported by DAWN medical examiners in the Boston area, down from 51 percent in 1996.

Women and Blacks continue to be disproportionately represented among Greater Boston cocaine clients, compared with the treatment population as a whole or other primary drug groups (exhibits 4, 5-1, and 5-2). In FY 2001, 38 percent of all admissions

who reported cocaine as their primary drug were female.

Of cocaine admissions, Blacks constituted 60 percent, while White admissions were 26 percent. Cocaine admissions continue to age: Those 30 or older increased from 65 percent in FY 1996 to 85 percent in FY 2001, compared with 70 percent for heroin admissions. A higher proportion of cocaine admissions had some involvement with the criminal justice system in FY 2001 (35 percent) compared with FY 1996 admissions (25 percent), and more reported a mental health problem: 32 percent in FY 2001 compared with 24 percent in FY 1996.

The DEA reported steady and wide availability of cocaine powder and crack cocaine. During April through September 2001, the DEA reported cocaine powder selling for \$50–\$90 per gram (40–65 percent pure), \$880–\$1,100 per ounce (40–90 percent pure), and \$24,000–\$32,000 per kilogram (70–90 percent pure), prices close to those in the previous half-year period. Crack, most of which is converted locally, is being sold at \$10–\$20 per rock, with purity ranging from 35 to 90 percent. The preferred variety of crack, described as hard, white, and pure, is called “mighty white.” The DEA reported that cocaine availability declined in the wake of the World Trade Center attack in New York, with dealers reluctant to enter the city.

State police reported that recent cocaine samples have been increasingly adulterated with caffeine, as well as standard adulterants such as procaine, lidocaine, benzocaine, and boric acid. The primary source for cocaine continues to be Colombia, with trafficking via California, the Dominican Republic, Florida, New Jersey, New York, Puerto Rico, and Texas.

### *Heroin*

Most heroin indicators continue to rise. The impact of widely available, low-cost, and very pure heroin is reported by treatment providers, who continue to see more heroin users seeking services. Heroin may have surpassed cocaine as the drug of choice in Boston and other areas in Massachusetts. Primary heroin admissions now constitute the largest percentage of illicit drug admissions in Greater Boston’s publicly funded treatment programs (42 percent).

The proportion of heroin mentions in Boston ED drug-related episodes rose from 20 percent in 1998 to 27 percent in the second half of 2000 (exhibit 1). The proportion of State-funded treatment admissions in Greater Boston who reported using heroin in the month before entering treatment increased steadily from 23 percent in FY 1994 to 39 percent in FY 2001 (exhibit 2). Those admissions reporting heroin as their primary drug rose from 31 percent in FY 1996 to 42 percent in FY 2001. In CY 2000, heroin arrests accounted for 27 percent of all drug arrests in Boston, up from 24 percent in 1999 and 13 percent in 1992 (exhibit 3). Heroin mentions in drug-related deaths reported in Boston by DAWN medical examiners in 1999 were

unchanged at 56 percent, compared with 34 percent for cocaine.

Data from DPH's Drug Analysis Laboratory show that heroin submissions stayed level at 17 percent of all submissions in 1999, 2000, and the first half of 2001.

In the first three quarters of 2001, heroin was mentioned in 26 percent of the Massachusetts Substance Abuse Information and Education Helpline calls that identified particular substances, similar to earlier periods.

Among primary heroin users admitted to State-funded treatment programs in FY 2001 in the Greater Boston area, the majority were male (76 percent), with Whites the largest racial/ethnic group (50 percent) (exhibit 5-1). The average age was 35, 73 percent had an annual income less than \$1,000, and 29 percent were homeless. Compared with primary cocaine users, primary heroin users in FY 2001 had the smallest proportion of Blacks (21 percent) and the lowest percentage of clients involved with the criminal justice system (22 percent) or with mental health problems (18 percent).

Injection remained the preferred route of administration for most heroin admissions in FY 2001 (65 percent), while intranasal use was reported by 29 percent, a drop from 33 percent in FY 1999.

Police contacts and the DEA continue to report wide availability, low prices, and high purity for heroin. The ounce price reported by the New England DEA for the April–September 2001 period was \$3,100–\$5,000, while a kilogram sold for \$75,000–\$120,000, both comparable to earlier periods.

Purities averaged 60 percent, with maximum purity reaching 95 percent, and bag prices ranged from \$6 to \$20. Needle exchange contacts reported that heroin quality is relatively low in Boston, so users who encounter higher-purity heroin from other cities are at risk of overdose.

According to the DEA, most heroin is transported from New York to be distributed in Providence, Rhode Island, and major Massachusetts cities including Boston, Brockton, Fall River, Holyoke, Lowell, Lynn, Lowell, Springfield, Lawrence, and Worcester. Colombia remains the main heroin source for New England, and trafficking is dominated by Dominican nationals. Boston contacts reported that heroin (“diesel”) now often comes in brown, granular chunks of compressed powder, which is bought by the gram and then resold in dose amounts in small, folded glassine bags.

#### *Other Opiates/Narcotics*

Of note is the significant rise in hydrocodone and oxycodone mentions in Boston ED data. Mentions of hydrocodone-acetaminophen (Vicodin) rose from 94 in 1999 to 196 in 2000, while mentions of oxycodone (OxyContin) and oxycodone-acetaminophen (Percocet) rose from 290 in 1999 to 590 in 2000. The DPH drug lab also reported a doubling of oxycodone samples

from 1999 (178) to 2000 (374) statewide, with 145 samples confirmed for Greater Boston alone in 2000.

State police reported well-organized trafficking in Percocet from New York, with distribution points in several Massachusetts cities. Many sources, including the State police drug lab, Boston police, treatment providers, and outreach workers, continued to report increasing seizures and mentions of OxyContin, a high-dose, time-release formulation of oxycodone. Users most often crush the drug and use it intranasally. Pharmacy thefts targeting OxyContin have been common, especially in the Boston metropolitan area.

As described by police and treatment contacts, users are primarily White, consistent with the higher involvement of Whites with prescription drug abuse overall. Some individuals who develop an OxyContin habit reportedly shift to heroin as a much cheaper and more widely available alternative.

Teenage focus groups reported that opium was occasionally available, and opium was mentioned in a small number of calls to the Helpline. However, State police have not confirmed any analyses of true opium in their submissions.

#### *Marijuana*

Marijuana remains widely available in the Boston metropolitan statistical area (MSA) and throughout Massachusetts, with indicators level or up slightly. Marijuana was mentioned in 20 percent of all ED drug episodes in both halves of 2000, up from 17 percent in 1999 (exhibit 1).

The proportion of State-funded Greater Boston treatment admissions reporting past-month marijuana use has been steady over the last three years at around 13 to 14 percent (exhibit 2). The proportion of Boston police arrests for marijuana rose slightly from 28 percent of all drug-related arrests in 1999 to 29 percent in 2000, the highest level for marijuana arrests yet recorded in these data (exhibit 3). According to police contacts, most arrests are for small quantities and involve juveniles and young adults.

As in prior years, primary marijuana users constituted only a small proportion (4 percent) of those in treatment. Compared with primary cocaine and heroin admissions, they were more likely to be young (average age 24), male (78 percent), and have criminal justice system involvement (55 percent) (exhibits 5-1 and 5-2). The percentage of Whites among marijuana clients declined and leveled off, from 35 percent in FY 1996 to 28 percent in FY 1999, while the proportion of Hispanic clients rose from 18 to 23 percent. Primary marijuana admissions were most likely to use alcohol as a secondary drug.

Police department marijuana submissions to DPH's Drug Analysis Laboratory for the first half of 2001 stayed level with those of recent years at 36 percent of all drugs analyzed, the highest for any drug.

In the first three quarters of 2001, marijuana was mentioned in 4 percent of all Massachusetts Substance

Abuse Information and Education Helpline calls specifying particular drugs, level with prior periods.

According to the DEA, marijuana continues to be readily available. Prices for marijuana held steady, with commercial grade marijuana costing \$200–\$250 per ounce and \$800–\$1,500 per pound, and sinsemilla costing \$200–\$300 per ounce and \$2,500–\$3,000 per pound. Some local grows continue, but most marijuana seems to be shipped overland or via delivery services from Mexico and the U.S. Southwest, as well as from Jamaica and Colombia. Good profit margins and relatively weak penalties are incentives to traffic in marijuana, according to police contacts.

According to focus groups with teens, blunts remain the most popular means of smoking cannabis, followed by bong, pipes, and hand rolled-joints. However, one contact reported that tobacco control efforts in Boston are reducing the availability of cigars for making blunts, prompting more use of rolling papers. Teens generally regard marijuana use as uncontroversial and involving far less risk than using other substances, including tobacco.

#### *Stimulants*

Stimulant indicators remain very low in the Boston area, but reports continue to suggest that amphetamine and methamphetamine are available, if not widely used. Fewer than 10 methamphetamine ED mentions have been reported each year in Boston between 1996 and 2000 (exhibit 1). Fewer than 1 percent of all Greater Boston area treatment admissions in FY 2001 had used amphetamine in the month before admission. Similarly, amphetamine submissions to the DPH Drug Analysis Laboratory remain infrequent, and Boston police contacts reported few, if any, cases involving amphetamines or methamphetamine. However, ED mentions for amphetamine have risen from less than 10 in 1997 to 369 in 2000, suggesting that availability of amphetamines has increased on the street.

State Police indicated that methamphetamine seizures remain infrequent in Massachusetts, with most methamphetamine encountered in the State shipped from California. Users are generally students and young adults, especially those who frequent raves or have recently arrived from the west coast, where crystal methamphetamine (“ice”) is common. Biker gangs also remain among the traditional methamphetamine users. Given the popularity and availability of cocaine and heroin, it seems unlikely that methamphetamine will become a street drug of choice in Boston, as it has in some west coast cities. According to the DEA, methamphetamine prices have held steady at \$8,000–\$24,000 per pound, \$800–\$1,900 per ounce, and \$70–\$200 per gram.

#### *Depressants*

Boston ED data show that benzodiazepines were mentioned in 20 percent of drug-related episodes in 2000, down from 23 percent in 1999. Among clients entering treatment in Boston, 7 percent reported using tranquilizers in the past month. Class E substance (prescription drug) arrests in Boston in 2000 accounted for less than 1 percent of all drug arrests (exhibit 3). Prescription drugs such as clonazepam (Klonopin), diazepam (Valium), alprazolam (Xanax), and lorazepam (Ativan) were mentioned in 3 percent of all calls to the Massachusetts Substance Abuse Information and Education Helpline that specified particular drugs, with clonazepam most frequently mentioned. Poison Control reported that calls related to clonazepam were an everyday occurrence. Treatment contacts continued to report that abuse of benzodiazepines is common among illicit drug users.

#### *Hallucinogens*

Phencyclidine (PCP) and lysergic acid diethylamide (LSD) ED mentions remain quite low (exhibit 1). Fewer than 1 percent of Boston area admissions to State-funded treatment programs during FY 2001 reported past-month use of hallucinogens. Since 1993, hallucinogens have accounted for less than 1 percent of drug samples analyzed statewide by the DPH Drug Analysis Laboratory. The DEA reported that PCP was rare in most of New England, except for metropolitan areas in Connecticut.

Despite the low treatment and ED indicators for hallucinogens, use of LSD, psilocybin mushrooms (“shrooms”), and mescaline among adolescents and young adults is not uncommon, as indicated by focus groups. State Police reported that seizures of these drugs are highly variable, and typically increase around the time of large outdoor rock concerts in the spring and summer. LSD prices reported by the DEA were steady at \$5 per street dosage unit and \$300 per 100 dosage units.

#### *Club Drugs*

Although MDMA, known popularly as ecstasy or “E,” has not appeared in treatment or arrest indicators, other sources indicate that ecstasy availability and use may still be increasing. ED mentions of ecstasy rose from 16 in 1997 to 125 in 2000. The DEA, State Police, DPH Drug Analysis Laboratory, and Massachusetts Poison Control Center all continued to report many seizures, lab submissions, or calls involving MDMA. MDMA use was characterized by most contacts as still primarily a White, middle-class phenomenon, partially because of its relatively high cost. However, two sources in Boston reported that its use and distribution were increasing among non-White city youth. The rise in MDMA use is being driven by its wide availability, primarily from Europe via New York City (according to the DEA), and by its reputation as a relatively benign, mood-enhancing

substance. However, teens in focus groups reported that some users become psychologically dependent on MDMA, and “chase” the first ecstatic experience by taking more and more of the drug. Depression was reported as a consequence of frequent MDMA use.

The DEA reported that MDMA availability has continued to increase, with the retail price holding at \$20–\$30 per tablet. Similarly, the State Police lab reported that MDMA seizures continue to climb, and DPH drug lab samples of MDMA both statewide and in Boston have risen sharply from 1998 to 2000. MDMA purity reported by the State Police lab remains high, with caffeine the most common adulterant.

Significant among club drugs is gamma hydroxybutyrate (GHB), which is now controlled as a date-rape drug in Massachusetts, along with ketamine and flunitrazepam (Rohypnol or “roofies”). The Massachusetts Poison Control Center continued to report many calls concerning GHB and its precursor gamma butyrolactone (GBL), involving mostly adolescent and young adult males. Use of the anesthetic ketamine (“Special K”), a drug also popular in the club and rave scenes, continues to be reported, although less frequently than MDMA and GHB use.

The State police lab reported an increase in the number and size of recent ketamine submissions. Flunitrazepam remains rare, according to most sources.

#### *Other Drugs*

Needle exchange personnel in Northampton in western Massachusetts reported increases in steroid-injecting clients, who request extra-large needles for intramuscular injection. These clients tend to be young, straight, male bodybuilders seeking a quick increase in muscle mass reputedly made possible by steroids, which are widely available via the Internet and connections at gyms. The needle exchange in Boston reported injection of illicitly purchased hormones by transgendered youth. The State police lab reported an increase in steroid submissions, some originating from Russia and Eastern Europe.

The recreational, nonprescription use of sildenafil citrate (Viagra), especially in combination with MDMA, continued to be reported by police contacts.

#### HIV/AIDS CASES

Through November 1, 2001, a cumulative total of 16,629 adult/adolescent HIV/AIDS cases were reported in Massachusetts (exhibit 6). Of these, injecting drug use (IDU) accounted for 35 percent, while male-to-male exposure accounted for 38 percent. During 2000, 639 new adult/adolescent HIV/AIDS cases were reported in the State, down from 1999 (877 cases). Preliminary data show that IDUs accounted for 32 percent of these cases, down from 38 percent in 1999. Injecting drug use has been the greatest single factor in HIV/AIDS incidence in Massachusetts since 1993.

**Exhibit 1. Biannual Estimated Emergency Department Mentions for Selected Drugs as a Percentage of Total Drug Episodes<sup>a</sup> in Boston: January 1996–December 2000**

Drug	1996			1997			1998			1999			2000					
	IH		2H	IH		2H	IH		2H	IH		2H	IH		2H			
	No.	(%)																
Alcohol-in-combination	2,791	(39)	2,559	(40)	2,575	(41)	2,315	(38)	2,585	(38)	2,229	(38)	2,211	(38)	2,361	(33)	2,615	(34)
Cocaine	2,165	(30)	1,941	(30)	1,660	(26)	1,672	(28)	2,475	(36)	1,722	(30)	1,838	(31)	1,883	(26)	2,217	(29)
Heroin/morphine	1,327	(19)	1,402	(22)	1,271	(20)	1,229	(21)	1,380	(20)	1,360	(24)	1,500	(26)	1,820	(25)	2,048	(27)
PCP	10	<1	...	...	11	<1	12	<1	11	<1	5	<1	2	<1	4	<1	7	<1
LSD	60	(1)	22	<1	27	<1	10	<1	35	<1	25	<1	19	<1	11	<1	31	<1
Amphetamine	71	(1)	45	(1)	...	...	...	...	95	(1)	85	(1)	115	(2)	196	(3)	173	(2)
Methamphetamine	...	...	...	...	4	<1	9	<1	3	<1	3	<1	...	...	7	<1	...	...
Marijuana/hashish	1,091	(15)	1,036	(16)	921	(14)	847	(14)	1,423	(21)	1,484	(22)	1,423	(17)	1,425	(20)	1,520	(20)
Total drug episodes	7,109		6,427		6,357		5,868		6,739		6,784		5,885		7,230		7,672	
Total drug mentions	13,137		11,775		11,738		10,654		12,236		10,504		10,715		12,511		13,352	

<sup>a</sup> Percentage of episodes for which each drug was mentioned (mentions/total drug episodes).  
<sup>b</sup> Estimate does not meet standard of precision or is less than 10.

SOURCE: Office of Applied Studies, SAMHSA, Drug Abuse Warning Network, 2000 (March 2001 update)

**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>a</sup>: July 1, 1993–June 30, 2001**

Drug Used Past Month	FY <sup>b</sup> 1994		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Greater Boston																
Alcohol	62		59		58		60		58		59		58		56	
Heroin/other opiates	23		28		29		28		32		34		35		39	
Cocaine/crack	39		40		37		34		29		30		28		25	
Marijuana	16		16		16		16		14		14		13		13	
Other	7		7		8		8		9		9		10		10	
Total (N)	(20,968)		(23,282)		(24,363)		(25,470)		(26,505)		(24,653)		(24,478)		(25,269)	
Remainder of Massachusetts																
Alcohol	62		60		60		59		57		56		54		51	
Heroin/other opiates	21		23		25		25		29		31		33		34	
Cocaine/crack	25		26		25		27		20		21		20		19	
Marijuana	16		16		18		17		18		18		17		16	
Other	8		10		10		10		10		10		11		11	
Total (N)	(72,846)		(76,414)		(73,801)		(77,673)		(86,297)		(87,848)		(90,919)		(91,852)	

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

<sup>b</sup> Fiscal years begin July 1 and end June 30.

<sup>c</sup> Includes barbiturates, other sedatives, tranquilizers, hallucinogens, amphetamine, over-the-counter, and other drugs.

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

Class	1990		1991		1992		1993		1994		1995	
	No.	(%)										
A—Heroin and other opiates	1,153	(17)	924	(14)	803	(13)	1,050	(16)	1,428	(21)	1,419	(22)
B—Cocaine and derivatives	4,008	(59)	4,360	(64)	4,195	(66)	4,066	(62)	3,679	(54)	3,333	(51)
C—Hashish	56	(1)	49	(1)	28	(1)	35	(1)	17	(1)	21	(1)
D—Marijuana	1,171	(17)	979	(14)	1,021	(16)	1,053	(16)	1,315	(19)	1,404	(22)
E—Prescription drugs	1,36	(1)	40	(1)	32	(1)	42	(1)	48	(1)	46	(1)
All others <sup>b</sup>	413	(6)	436	(6)	312	(5)	296	(5)	327	(5)	266	(4)
Total (N)	6,837		6,788		6,391		6,542		6,814		6,489	

Exhibit 3. Boston Police Department Arrests by Class of Substance<sup>a</sup>: January 1990–December 2000

Class	1996		1997		1998		1999		2000	
	No.	(%)								
A—Heroin and other opiates	1,148	(22)	1,508	(23)	1,061	(23)	984	(24)	1,022	(27)
B—Cocaine and derivatives	2,791	(53)	3,122	(47)	2,225	(48)	1,847	(45)	1,532	(41)
C—Hashish	37	(1)	61	(1)	81	(2)	57	(1)	50	(1)
D—Marijuana	1,127	(21)	1,745	(26)	1,211	(26)	1,133	(28)	1,093	(29)
E—Prescription drugs	34	(1)	50	(1)	38	(1)	26	(1)	20	(1)
All others <sup>b</sup>	147	(3)	122	(2)	48	(1)	50	(1)	53	(1)
Total (N)	5,284		6,608		4,664		4,097		3,770	

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

<sup>b</sup> Includes possession of hypodermic needles, conspiracy to violate false substance acts, and forging prescriptions.

SOURCE: Boston Police Department, Office of Planning and Research.

Exhibit 4. Characteristics of Admissions to Greater Boston State-funded Substance Abuse Treatment Programs<sup>a</sup> by Percentage: July 1, 1994–June 30, 2001

Characteristic	FY 1995 <sup>b</sup>	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001
Gender							
Male	73	72	72	75	74	76	77
Female	27	28	28	25	26	24	23
Race							
White	44	45	47	47	48	48	48
Black	39	38	35	33	32	33	30
Hispanic	13	14	14	15	16	16	18
Other	4	4	3	4	4	4	4
Age at admission (Average age)	(34.2)	(34.6)	(35.1)	(35.5)	(36.5)	(36.7)	(36.5)
19-29	31	2	2	2	2	2	2
30-39	42	26	25	24	22	21	22
40-49	19	42	43	42	41	40	36
50+	6	20	22	23	21	29	29
Marital status							
Married	12	11	10	10	10	10	10
Separated/divorced	22	22	22	22	21	18	18
Never married	66	68	68	68	69	71	72
Annual income							
<\$1,000	55	56	59	58	58	62	64
\$1,000-\$9,999	28	29	26	26	26	21	19
\$10,000-\$19,999	10	9	9	9	8	9	8
\$19,999+	7	7	7	7	8	8	9
Homeless	20	24	32	31	31	30	34
Criminal justice system involvement							
Mental health	25	27	26	26	28	27	26
No prior treatment	78	77	79	77	76	78	78
No treatment but has problem	6	5	3	3	3	3	2
Prior treatment (counseling or hospitalization)	16	18	18	21	21	20	19
Needle use in past year	21	21	22	25	26	26	27
Total (N)	23,282	24,363	25,470	26,505	24,653	24,478	25,269

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

<sup>b</sup> Fiscal years begin July 1 and end June 30.

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

Exhibit 5-1. Client Characteristics in Greater Boston State-funded Substance Abuse Treatment Programs by Drug of

Demographic Characteristic	Cocaine/Crack					Heroin/Opiates						
	FY <sup>a</sup> 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001
Gender	59	60	60	59	59	62	70	69	72	72	75	76
Male	41	40	40	41	41	38	30	31	28	28	25	24
Female												
Race/Ethnicity												
White	25	24	23	22	22	26	50	49	47	49	51	50
Black	64	63	64	63	60	60	25	25	24	24	25	21
Hispanic	9	10	10	11	10	12	21	21	23	22	23	25
Other	3	2	3	3	3	3	4	4	6	5	5	5
Age at admission (Average age)	(32.6)	(32.8)	(33.7)	(35.2)	(35.5)	(36.0)	(34.0)	(34.5)	(34.6)	(35.2)	(35.3)	(35.1)
<19	1	1	1	1	<1	1	1	1	1	1	<1	1
19-29	35	31	28	19	18	15	30	28	29	27	27	29
30-39	50	53	53	56	55	55	45	45	42	42	40	39
40-49	13	13	16	21	23	26	21	24	24	25	27	25
50+	2	2	2	4	4	4	3	3	4	6	5	6
Marital status	10	9	10	11	10	11	12	11	10	10	11	10
Married	17	16	19	18	16	17	22	22	21	22	19	17
Separated/divorced	73	75	71	71	74	72	66	68	69	70	70	73
Never married												
Annual income												
<\$1,000	59	59	56	56	59	58	61	67	67	67	72	73
\$1,000-\$9,999	29	28	28	28	24	22	29	23	23	23	16	15
\$10,000-\$19,999	7	8	11	10	10	11	7	6	6	7	7	6
\$20,000+	5	5	5	6	7	9	4	4	4	4	5	6
Homeless	24	28	27	23	21	24	19	28	26	26	22	29
Criminal justice involvement												
Mental health problem	25	25	29	34	34	35	23	20	19	22	22	22
Needle use in past year	24	23	26	29	30	32	24	19	20	21	18	18
Total (N)	6	5	5	6	5	7	61	64	63	63	63	58
	(5,526)	(4,920)	(3,869)	(3,165)	(2,837)	(2,283)	(7,079)	(7,359)	(9,240)	(9,915)	(9,137)	(10,553)

Choice<sup>a</sup> and Percentage: July 1, 1995–June 30, 2001

<sup>a</sup> Excludes prisoners and out-of-state admissions  
<sup>b</sup> Fiscal years begin July 1 and end June 30.

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

Exhibit 5-2. Client Characteristics in Greater Boston State-funded Substance Abuse Treatment Programs by Drug of Choice<sup>a</sup> and Percentage: July 1, 1995–June 30, 2001

Demographic Characteristic	Marjjuana						Alcohol					
	FY <sup>b</sup> 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001
Gender												
Male	82	76	79	76	73	78	79	80	81	81	82	82
Female	18	24	21	24	27	22	21	20	19	19	18	18
Race/Ethnicity												
White	35	37	30	28	28	28	52	55	56	55	55	51
Black	43	39	45	44	47	46	33	30	30	30	31	32
Hispanic	18	20	22	23	21	22	12	12	11	12	12	14
Other	3	4	4	4	4	3	4	3	3	3	3	3
Age at admission (Average age)												
<19	(24.3)	(24.0)	(23.8)	(25.1)	(25.4)	(24.2)	(36.9)	(37.5)	(38.1)	(39.1)	(39.4)	(39.2)
19-29	26	33	34	24	19	27	2	2	2	1	1	1
30-39	53	43	44	50	56	51	22	19	17	15	14	14
40-49	16	18	17	17	18	16	40	40	41	39	38	36
50+	4	5	5	6	5	6	24	26	27	32	34	35
50+	1	1	1	2	2	1	12	13	13	14	14	14
Marital status												
Married	6	6	6	4	5	5	11	10	10	10	10	10
Separated/divorced	6	5	5	6	7	6	25	25	26	24	22	21
Never married	88	89	89	90	88	89	64	65	64	66	68	69
Annual income												
<\$1,000	60	58	55	59	55	57	51	54	53	51	55	57
\$1,000-\$9,999	26	28	28	26	27	22	29	27	27	28	27	22
\$10,000-\$19,999	9	10	11	10	12	13	11	10	10	10	10	9
\$20,000+	5	5	6	4	6	8	10	9	10	11	11	12
Homeless	9	8	7	9	10	11	30	38	40	40	41	43
Criminal justice system involvement	55	47	55	62	57	55	29	27	28	28	26	25
Mental health problem	31	41	32	28	31	29	21	20	23	24	23	22
Needle use in past year	2	1	2	2	2	2	4	4	4	4	5	4
Total (N)	(995)	(1,119)	(1,143)	(1,125)	(1,109)	(1,098)	(10,490)	(11,833)	(11,980)	(11,154)	(11,099)	(11,025)

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

<sup>b</sup> Fiscal years begin July 1 and end June 30.

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

Exhibit 6. Biannual Incidence of Massachusetts Adult/Adolescent AIDS Cases by Exposure Category by Percentage:  
January 1993 to December 2000, and Cumulative Through November 1, 2001

Mode(s) of Exposure	Reporting Period										Cumulative as of 11/1/01
	1993	1994	1995	1996	1997	1998	1999	2000			
Men/sex/men	(36)	(32)	(31)	(30)	(27)	(26)	(23)	(22)	(22)	(38)	
Injecting drug user (IDU)	(40)	(39)	(42)	(39)	(40)	(34)	(38)	(32)	(32)	(35)	
Men/sex/men/IDU	(4)	(4)	(4)	(3)	(3)	(2)	(2)	(1)	(1)	(4)	
Transfusion/blood components	(2)	(1)	(2)	(2)	(1)	(1)	>1	(1)	(1)	(2)	
Heterosexual <sup>a</sup>	(10)	(13)	(12)	(15)	(13)	(13)	(12)	(15)	(15)	(10)	
Undetermined/Other	(8)	(10)	(9)	(11)	(16)	(23)	(24)	(28)	(28)	(11)	
Total Adult/Adolescent Cases (N)	1,733	1,459	1,365	1,126	883	906	877	639	16,629		

<sup>a</sup> Includes persons who have had heterosexual contact with high-risk individuals (e.g., IDUs); as of 4/1/96, heterosexual cases formerly based on Pattern II criteria are classified as undetermined.

SOURCE: Massachusetts Department of Public Health, AIDS Surveillance Program

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## Patterns and Trends of Drug Abuse in Chicago

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### ABSTRACT

*Emergency department mentions, treatment admissions, and population-based survey data show continued increases in heroin use in Chicago during 2000. While heroin emergency department mentions remained stable nationwide, they increased by 90 percent in Chicago from 1996 to 2000. This increase was especially dramatic among Hispanics. Indicators of cocaine use have leveled off from previous increases, and some are beginning to show a slight decline. Many cocaine indicators, however, remain the highest for all substances except alcohol. Cocaine purity continued to decrease from 1998 levels. Marijuana use, alone and in combination with other drugs, appears to be increasing throughout the Chicago metropolitan area. Most indicators of ecstasy and other types of club drugs continue to increase and remain highest among White youth. Methamphetamine indicators suggest continuing low levels of use in Chicago. The proportion of new AIDS cases attributed to drug injection continues to increase, especially among women.*

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### 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 7 percent in the 1980s. Based on 2000 census data, the city population increased about 4 percent during the 1990s.

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; however, 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 following sources:

- Illinois Office of Alcoholism and Substance Abuse (OASA). OASA provided annual treatment admission data for the State of Illinois for fiscal years (FYs) 1988–2000 (July 1–June 30) and the first half of FY 2001 (July 1–December 31, 2000); 1993 statewide household survey to determine need for alcohol and other drug treatment services, funded by the Center for Substance Abuse Treatment (CSAT); and Illinois Youth Surveys among junior and senior high school students (1990, 1993, 1995, 1997, 1998, and 2000.) (The 2000 Youth Survey does not include figures for heroin or amphetamine use.)
- Arrestee Drug Abuse Monitoring (ADAM) Program, National Institute of Justice. Male and female arrestee urine toxicology results were available from Treatment Alternatives for Special Clients (TASC) through 2000.
- Drug Enforcement Administration (DEA), Domestic Monitor Program (DMP). DEA provided information on heroin price and purity data through 2000. (The 2000 DMP data are preliminary and subject to updating.)
- Substance Abuse and Mental Health Services Administration (SAMHSA), Drug Abuse Warning Network (DAWN). DAWN provided emergency department (ED) mentions for 1988–2000 (2000 figures are unavailable for methamphetamine); medical examiner (ME) cases, 1988–1999; and 1998 National Household Survey on Drug Abuse data.
- Illinois and Chicago Departments of Public Health (IDPH and CDPH). These surveys report statistics on the human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS) through 2000, and on deaths related to accidental drug poisonings based on International Classification of Disease, Ninth Revision (ICD–9) codes on death certificates of Chicago residents 1980–98. (See the June 1997 Chicago Community

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Epidemiology Work Group (CEWG) report for an introduction to this indicator.) (The report on deaths related to accidental drug poisonings has not been updated since the Chicago CEWG June 2000 report was completed.)

- IDPH. The Adverse Pregnancy Outcomes Reporting System (APORS) produced pediatric toxicity reports through March 1999. (This report has not been updated since the June 2000 Chicago CEWG report was completed.)
- Centers for Disease Control and Prevention (CDC). CDC's "HIV/AIDS Surveillance Report," December 2000, provided additional data on HIV and AIDS.
- National Institute on Drug Abuse (NIDA) and the University of Michigan, Institute for Social Research. Data on student drug use were derived from the "Monitoring the Future" study, a national survey of American high school seniors and college students, 1975–2000, conducted by the Institute for Social Research, University of Michigan, through support from NIDA.
- Chicago Youth Risk Behavior Survey (YRBS), CDC Youth Risk Behavior Surveillance System. Data from a representative sample of Chicago public school students in grades 9–12 are derived from this survey. This survey 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 from 1993–99.
- Illinois State Police (ISP) Division of Forensic Services. ISP provided price and purity data on drug samples from August 1989 to September 2001.
- Census 2000 Demographic Data. These data were used to describe the area population.
- NIDA-funded AIDS Intervention Study. These data represent findings from analyses of a 1988–1996 panel study of injecting drug users (IDUs) conducted by the Community Outreach Intervention Projects, School of Public Health, University of Illinois at Chicago.
- CDC-funded HIV Incidence Study (CIDUS I and II). The reported data are from analyses of a 1994–1996 study of 794 IDUs age 18–50 in Chicago (Ouellet, et al. 2000) and analyses of data from a 1997–1999 study of 700 young age IDUs (18–30) in Chicago and its suburbs (Thorpe, et al. 2000, 2001; Bailey et al. 2001) (Both studies were conducted by the Community Outreach Intervention Projects, School of Public Health, University of Illinois at Chicago.)
- Qualitative Data. Ethnographic data presented on availability, price, and purity of drugs are from observations, interviews, and focus groups conducted by the Community Outreach Intervention Projects, School of Public Health, University of Illinois at Chicago.
- 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. Since 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 23 percent of all reported drug mentions in Chicago between January and December of 2000 are alcohol-in-combination ED mentions, similar to proportions in nationwide reports.

In terms of public health impact, drug abuse causes significant morbidity and mortality. 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 1989–98. 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 increased 10 percent from 1998 to 1999. The total number of 1999 drug abuse deaths reported to DAWN ME sites was 879, compared with 803 drug abuse cases in 1998.

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 below 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 was mixed but suggest that use has declined slightly or remained stable from peak use in the mid-1990s. While cocaine is still very prevalent in all indicator data sources, slight declines in reported use were noted in 1999 and 2000 indicators, after use appeared to stabilize at peak levels in 1997.

Cocaine ED mentions began to decline in the first half of 1998. The number of ED mentions decreased slightly, from 13,642 in 1998 to 13,399 in 1999, but increased to 14,879 in 2000. In terms of rates per 100,000 population, mentions decreased 3 percent between 1998 and 1999, from 232 to 226 (exhibit 1), and increased 9.1 percent to 247 in 2000. Chicago is second to New York City for having had the most cocaine ED mentions in DAWN sites in 2000.

Cocaine ED mentions declined slightly across nearly every demographic group. Between 1998 and 1999, mentions decreased 3 percent among African-Americans, 10 percent among Hispanics, and 9 percent among Whites. In 2000, Cocaine ED mentions increased 4 percent among African-Americans, decreased 1 percent among Whites, and increased 16 percent among Hispanics. African-Americans continued to have the highest number of cocaine ED mentions, followed by Whites and Hispanics. Mentions increased for all age categories except the 26–34 group, with the 18–25 group experiencing the largest increase (20 percent) in 2000. Males continued to account for more cocaine ED mentions than females, but increases were twice as high for females (15 percent) as for males (7 percent).

According to DAWN medical examiner data, deaths associated with cocaine increased 9 percent, from 468 in 1998 to 511 in 1999. Of the 879 total drug abuse deaths in 2000, 511 (58 percent) had a mention of cocaine.

State-supported drug treatment programs report that cocaine abuse is still the most frequent reason for entering treatment (excluding primary alcohol abuse only) (exhibit 2). A total of 31,468 cocaine-related admissions to treatment were reported in FY 2000. More than one-half of this number (16,967) was reported in the first 6 months of FY 2001. Between 1999 and 2000, cocaine-related admissions decreased 4 percent among African-Americans and 2 percent among Whites, but increased 17 percent among Hispanics. Cocaine-related admissions increased 2 percent for males, from 16,893 in 1999 to 17,282 in 2000; among females, cocaine-related admissions decreased 6 percent, from 15,085 in 1999 to 14,186 in 2000. Since 1995, the number of cocaine treatment admissions has remained relatively stable.

According to the 2000 ADAM report, 59 percent of adult female arrestees tested positive for cocaine, and 42 percent reported using crack in the previous 30 days—the highest levels on both measures for any CEWG area (exhibits 3a and 3b). Of adult male arrestees, 37 percent tested positive for cocaine.

Based on analyses of drug seizures, the Illinois State Police crime labs indicate that cocaine purity remained relatively stable over the past decade until 2000. The average purity of samples weighing 2–25 grams across the State was 60–70 percent during 1991–99. As of September 2000, the average purity of 2–25-gram samples was significantly lower, at 39 percent among Cook County seizures and 23 percent in Chicago.

Cocaine prices and availability have historically been subject to wide variability (\$18,000–\$36,000 per kilogram). In November 2001, cocaine was widely available, but kilogram prices appeared to have increased slightly since 2000 to a range of about \$20,000–\$24,000. Ounce prices were reportedly about \$700–\$1,200, with a few reports as high as \$2,800. A gram of cocaine typically is sold for \$50–\$140. Ounces of crack cocaine (“rock”) sell for about the same price as ounces of powdered cocaine, and individual rocks generally sell for \$5, \$10, or \$20.

The Illinois Youth Survey indicates 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.

The 1999 Chicago Youth Risk Behavior Survey of public school students in grades 8–12, part of the CDC Youth Risk Behavior Surveillance System, showed similar levels of cocaine use between students in Chicago and nationwide. This finding parallels the downward trend reported among young people in the 1998 National Household Survey on Drug Abuse. Findings from the 1998 Illinois YRBS were discussed in the Chicago CEWG June 2000 report.

### *Heroin*

Overall, the rate of heroin/morphine ED mentions per 100,000 population increased nearly 400 percent over an 8-year period, from 53 in 1992 to 206 in 2000, with a nearly 90-percent increase since 1996 (exhibit 1). This

increase in Chicago contrasted with an observed stabilization of rates nationwide for the same time period. Chicago ranks third in heroin ED rates nationwide.

Within Chicago, heroin ED mentions were highest among African-Americans, followed by Whites and Hispanics. Recent increases, however, have been greatest among Hispanics. Between 1999 and 2000, heroin ED mentions increased 13 percent among Whites, 23 percent among African-Americans, and 20 percent among Hispanics. In 2000, rates of ED mentions for heroin were higher among males than among females (242 vs. 169 per 100,000 population). In this last reporting period, an increase of 21 percent was noted among males, while the female rate increased by 34 percent.

In 1998, 404 heroin deaths were reported from sentinel DAWN medical examiner sites in the six-county Chicago area. This represents a 13-percent increase from the previous year, when 359 heroin deaths were recorded. Heroin-related deaths have increased by more than twofold from the late 1980s, when less than 200 per year were reported. Of the 879 total drug abuse deaths in 1999, 457 (52 percent) had a mention of heroin.

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. Death certificate mentions of heroin declined to 92 in 1996, but this amount 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 2000 was 19,854, but an additional 70 percent of this number was reported in just the first 6 months of FY 2001 (13,745) (exhibit 1). The mode of heroin administration among those admitted to treatment has changed over the past 4 years. The proportion of treatment admissions reporting intranasal use of heroin as the primary drug and method of use has risen dramatically in the last few years, from about 60 percent in FY 1998 to 72 percent in FY 2000.

Between 1999 and 2000, heroin-related admissions increased 5 percent among African-Americans, 28 percent among Whites, and 21 percent among Hispanics. Heroin-related admissions have increased 10 percent for males, from 10,044 in 1999 to 11,041 in 2000; among females, heroin-related admissions increased 14 percent, from 7,767 in 1999 to 8,813 in 2000.

According to 2000 ADAM data, 27 percent of adult male and 40 percent of female arrestees in Chicago tested positive for opiates, the highest figures for any CEWG area (exhibits 3a and 3b).

The DEA's DMP conducts street-level purchases of heroin that are analyzed 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 more than 30 percent in the late 1990s. Heroin purity averaged 31 percent in 1997, but then declined to 25 percent in 1998 and 24 percent in 1999 (exhibit 4). In 2000, heroin purity in these samples averaged 23 percent. The price per pure milligram of heroin reached a low for the decade at \$0.58 in 1998, but increased to \$0.70 in 1999. In 2000, the price per milligram decreased to \$0.54.

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 the past year, tends to have the highest purity levels on average. It seems likely, therefore, that there may be an increase in purity during 2001. Nearly 65 percent of the heroin in Chicago is from South America.

On the street, heroin is commonly sold in \$10 and \$20 units (bags). 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. The range in gram prices was greater this reporting period: \$60-\$275, compared with \$100-\$200 last period. Kilogram prices reported for brown Mexican heroin ranged from about \$17,000 to \$20,000, while prices for "China white" were reported between \$21,000 and \$36,000. On the street, China white (Southeast Asian heroin) is available for \$1,000-\$2,500 per ounce. Prices for an ounce of brown or tar heroin generally ranged from \$600 to \$1,400.

Nationwide, between 1991 and 1996, there was a large proportional increase in heroin use among school students (grades 8, 10, and 12), as reported in the Monitoring the Future Study (Johnston, et al. 2001). Heroin use in the MTF peaked in 1996 among 8th graders and a year later in the upper two grades. Student usage rates remained stable through 1999, before rising significantly among 12th graders in 2000.

However, increases in heroin use among youth have not yet been evidenced in periodic representative surveys conducted among Illinois high school students. The Illinois Youth Survey shows 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 use had changed to White males (2.6 percent), followed by African-American males (1.8 percent) and Hispanic males (1.5 percent).

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*

The abuse of hydromorphone (Dilaudid), the pharmaceutical opiate preferred by many Chicago IDUs, has diminished considerably since 1987 because of decreased street availability. When available, most often on the North Side, it sells for \$10 per 4 milligrams. Also available in certain locations is methadone, priced at about \$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 103 in 1998, continuing a downward trend from 247 in 1990, and representing a 40-percent decrease from 1997. This decline continued in 1999, when 61 codeine ED mentions were reported, a 41-percent decline from 1998. In 2000, 103 codeine-related deaths were reported from sentinel DAWN medical examiner sites in the six-county Chicago area. This represents a 4-percent increase from the previous year, when 99 codeine-related deaths were observed. On the street, codeine pills are available for \$1–\$3, and some dealers on the South Side specialize in their sale. These pills are used primarily by heroin users to moderate withdrawal symptoms or to help kick a drug habit.

Between 1999 and 2000, treatment admissions related to “other” opiate use increased 638 percent among African-Americans, 36 percent among Whites, and 240 percent among Hispanics. Admissions have increased 159 percent for males, from 313 in 1999 to 810 in 2000; among females, admissions increased 98 percent, from 446 in 1999 to 883 in 2000.

### *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 using a razor, remove the tobacco, and replace it with marijuana. Cigars without tobacco are reported to be 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 increased 19 percent between 1999 and 2000, after an increase of 266 percent between 1993 and 1998 (exhibit 1). Marijuana ED mentions in Chicago have been higher among African-Americans and Whites than among Hispanics since 1990. Between 1999 and 2000, increases were noted among Whites (7 percent), Hispanics (29 percent), and African-Americans (3 percent).

Between 1999 and 2000, marijuana ED mentions increased for all age groups. The percentage increase was largest (36 percent) for the 18–25 group. Males tended to have more than twice as many mentions as females, but the percentage increase from 1999 to 2000 was slightly higher for females (21 percent) than for males (16 percent).

Marijuana users represented approximately 17 percent of all treatment admissions (excluding those for primary alcohol abuse only) in FY 2000, down from the 25 percent observed in FY 1999. However, total marijuana admissions increased from 18,842 in FY 1999 to 20,773 in FY 2000, and 14,253 admissions were reported in the first half of FY 2001 (exhibit 2).

Between 1999 and 2000, marijuana-related treatment admissions increased 12 percent among African-Americans, 6 percent among Whites, and 24 percent among Hispanics. Marijuana-related admissions increased 9 percent for males, from 14,682 in 1999 to 16,053 in 2000; among females, marijuana-related admissions increased 14 percent, from 4,160 in 1999 to 4,720 in 2000.

According to 2000 ADAM data, 45 percent of adult male and 25 percent of adult female arrestees tested positive for marijuana (exhibit 3a, 3b). Among CEWG areas, these levels were the highest for women and among the highest for men.

APORS data also show increases in marijuana use. Among the 2,249 Illinois infants who tested positive for controlled substances in 1995, 96 (4 percent) tested positive for marijuana. Positive tests increased to 5 percent in 1996, 7 percent in 1997, and 8 percent in 1998, evidencing a slow, continued upward trend. Data from the first quarter of 1999 show 11 percent of all infants testing 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 continues with a 38 percent prevalence in 2000.

The 1995 Chicago Youth Risk Behavior Survey showed that the proportion of high school respondents who reported ever using marijuana increased from 27 to 34 percent between 1993 and 1995. Similarly, the proportion who reported current marijuana use increased between those 2 years (from 14 to 19 percent). One in 12 respondents reported current use on school property. Compared with the Chicago-area sample polled in the Illinois Youth Survey, the Chicago Youth Risk Behavior Survey reveals 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. Prices appear to have declined recently. 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 \$100–\$200. On the street, marijuana is most often sold in \$5, \$10, and \$20 bags.

### *Stimulants*

Methamphetamine 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. The most recent data from the Illinois State Police indicate that in September 2001, more methamphetamine was seized than was cocaine or heroin in almost 40 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 the June 2001 report 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 to sites where methamphetamine is 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. However, it is too soon to determine whether the change in 1999 marks the beginning of a downward trend.

Amphetamine ED mentions have been increasing since 1994. Between 1999 and 2000, mentions increased 76 percent, from 204 in 1999 to 360 in 2000.

Stimulants account for 2 percent of all treatment admissions (excluding primary alcohol abuse only) in FY 2000, up from 1 percent in FY 1999. Total stimulant admissions increased from 684 in FY 1999 to 1,270 in FY 2000 (exhibit 2). In just the first half of 2001, stimulant admissions were at 1,969. Between 1999 and 2000, stimulant/methamphetamine-related treatment admissions increased 234 percent among African-Americans, 68 percent among Whites, and 93 percent among Hispanics. Admissions increased 88 percent for males, from 586 in 1999 to 987 in 2000; among females, stimulant-related admissions increased 83 percent, from 289 in 1999 to 528 in 2000.

Based on the 1998 National Household Survey on Drug Abuse, annual prevalence of overall stimulant use in the U.S. population during the previous year was estimated at 0.7 percent. The 1997 Illinois Youth Survey shows that 6 percent of all Chicago-area students reported using stimulants in the previous year.

Methamphetamine prices have not changed significantly from previous reports, with bags costing \$20, but 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, generically known in the streets as "beans," 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 22 percent between 1999 and 2000, after an increase of 10 percent between 1994 and 1998.

Despite a steady decrease in diazepam (Valium) ED mentions in the past decade, mentions increased 18 percent, from 157 in 1999 to 186 in 2000. On the street, diazepam is the most readily available and frequently used pharmaceutical depressant.

In 1999, 11 diazepam-related deaths were reported from sentinel DAWN medical examiner sites in the six-county Chicago area. This represents a 35-percent decrease from the previous year, when 17 diazepam-related deaths were observed. Of the 879 total drug abuse deaths, 11 (1 percent) had a mention of diazepam.

Treatment admission data confirm that depressants are not the primary drugs of choice for most users. From FY 1985 to FY 1996, primary depressant admissions represented less than 3 percent of all those seeking drug treatment. Even though FY 2000 treatment admissions numbered 1,693, more than double the 759 figure for FY 1999, depressant users still represented only about 2 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. Data for the first quarter of 1999 indicate that approximately 2 percent tested positive for these drugs.

Tablets of 5 and 10 milligrams are easily obtained throughout the city for between \$1 and \$4, depending on whether they are generic or name brands.

### *Hallucinogens*

Following a 15-percent increase in lysergic acid diethylamide (LSD) ED mentions between 1998 and 1999, a 17-percent decrease was seen from 1999 to 2000. It is too soon, however, to interpret this change as indicating a decrease in LSD use.

Recent ED mentions for PCP and its combinations increased 59 percent, from 631 in 1999 to 1,003 in 2000. This trend of increasing PCP-related ED mentions comes after a short-lived decline between 1996 and 1998, suggesting that current trends in PCP use are unstable. Another hallucinogen mentioned in ethnographic reports is nitrous oxide, which is usually inhaled from balloons. The effects of the drug are immediate and typically include auditory hallucinations. Nitrous oxide is typically used in combination with other drugs.

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.

According to the 2000 ADAM report, 4 percent of adult male arrestees and 3 percent of adult female arrestees tested positive for PCP.

The 2001 Illinois Youth Survey of high school students showed that 6 percent of respondents 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 can be found in all areas of the city. Users are easily able to identify drug-dealing locales in the city where PCP is readily available. The demographic characteristics of users vary widely and include suburban youth. On the West side, 2–3 “sticks” about the size of toothpicks can be purchased for as little as \$10. PCP is typically smoked and is sold in three forms: “mint leaf,” “sherm sticks,” and “happy sticks.” Mint 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, while still others say it is parsley and point to the availability and frequent sales of bags of this herb in local stores. Sherm sticks typically are cigarettes dipped in PCP, drained, and dried. The cigarettes are sold for \$20 each and are mainly available on the far South Side.

LSD hits are most commonly sold for \$5 and are available in both the city and most suburbs.

### *Club Drugs*

In the Chicago area, 3,4-methylenedioxymethamphetamine (MDMA or “ecstasy”) is the most prominently identified of the club drugs used. In May 2001, 118,000 MDMA tablets (54 pounds), valued at \$3.5 million, were seized at O’Hare International Airport.

Recent ED mentions for MDMA increased 109 percent, from 103 in 1999 to 215 in 2000. ED mentions per 100,000 population increased 111 percent between 1999 and 2000, from 1.7 to 3.6.

Ecstasy, once limited to the rave scene, can be found in most mainstream dance clubs and many house parties, according to ethnographic reports. It continues to be sold in pill or capsule form, and the price range remains the same as in previous reports: \$20 to \$40 per pill. Individuals with connections to suppliers or producers report prices as low as \$12 to \$15 per pill. Ecstasy is usually sold at dance clubs, rave parties, house parties, or through individual dealers, and it is typically used in social settings. Along with other club drugs, it continues to be used predominantly by White youth. (For more information on ecstasy in Chicago, see the June 2000 report.)

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 increased 3 percent, from

135 in 1999 to 139 in 2000. ED mentions per 100,000 population increased 92 percent between 1998 and 1999, from 1.2 to 2.3, but remained unchanged in 2000 (2.3).

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 \$5–\$10. 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, another depressant with hallucinogenic properties, is an animal tranquilizer often referred to as “Special K.” Ketamine ED mentions 2000 were virtually unchanged from 1997 (from 16 to 17). ED mentions per 100,000 population also remained unchanged since 1997, at 0.3.

Ketamine is usually sold in \$20 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 INJECTING DRUG USE

Through February 2001, 25,159 diagnosed AIDS cases were reported to the State. More than one-quarter of adult AIDS cases occurred among IDUs, while an additional 5 percent involved male IDUs who had sex with other men. Within Illinois, 85 percent of the cumulative AIDS cases reported to date come from the Chicago metropolitan area.

Chicago’s proportion of AIDS cases in Illinois increased since the December CEWG 2000 report. By September 2000, 17,076 AIDS cases were reported to the Chicago Department of Public Health. 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 37 percent of the Chicago population. Of the remaining new cases, 19 percent were among Whites and 12 percent among Hispanics.

Between 1988 and 1999, IDUs as a proportion of AIDS cases increased from 16 to 24 percent, while the proportion among men who have sex with men 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 percent per person-year to 2 percent per person-year observed) over a 4-year time period.

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.

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. 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.

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.

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## REFERENCES

Bailey, S.L.; Huo, D.; and Ouellet, L.J. "Needle exchange as a harm reduction strategy for young IDUs." Paper presented at the 128th annual meeting of the American Public Health Association Conference, Boston, November 12–16, 2000.

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.; 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.

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**Exhibit 1. Estimated Rate of Emergency Department Mentions per 100,000 Population in Chicago for Selected Drugs, by Half-Year: FY 1992–2000**

Year	Cocaine	Heroin/Morphine	Marijuana	Methamphetamine
1992				
1H	75	26	14	-
2H	73	27	12	-
1993				
1H	67	26	11	0.2
2H	87	37	14	-
1994				
1H	86	41	18	-
2H	105	44	22	0.2
1995				
1H	106	40	27	0.5
2H	82	44	24	-
1996				
1H	100	46	29	0.3
2H	120	63	33	0.2
1997				
1H	122	68	36	0.2
2H	125	80	41	0.3
1998				
1H	117	77	44	0.3
2H	115	82	41	0.3
1999				
1H	104	79	38	0.2
2H	122	84	38	0.2
2000				
1H	122	102	42	0.1
2H	125	104	48	-

SOURCE: Drug Abuse Warning Network, SAMHSA

**Exhibit 2. Yearly Illinois Treatment Admissions to Publicly Funded Programs by Primary Drug of Abuse by Half-Year: December 1998–December 2000**

Primary Drug	December 1998	June 1999	December 1999	June 2000	December 2000
Cocaine	18,631	13,347	18,531	12,937	13,354
Heroin	10,047	7,764	11,733	8,121	10,301
Cannabinoids	11,235	7,607	12,484	8,289	11,231
Hallucinogens	260	141	290	227	255
Stimulants	348	336	577	693	1,701

SOURCE: Illinois Office of Alcoholism and Substance Abuse

**Exhibit 3a. Percentage of ADAM Adult Male Arrestees Testing Positive in Chicago for Selected Drugs by Year: 1991–2000**

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*	45	37	27

\*Figures for 2000 are based on a new method of data collection and cannot be compared with those from previous years; data are weighted.

SOURCE: Arrestee Drug Abuse Monitoring program, NIJ

**Exhibit 3b. Percentage of ADAM Adult Female Arrestees Testing Positive in Chicago for Selected Drugs by Year: 1998–2000**

Year	Marijuana	Cocaine	Opiates
1998	19.7	55.5	27.0
1999	26.5	64.3	32.4
2000*	25.4	59.2	40.0

\*Figures for 2000 are based on a new method of data collection and cannot be compared with those from previous years; female findings are unweighted and not based on probability sampling.

SOURCE: Arrestee Drug Abuse Monitoring program, NIJ

**Exhibit 4. Domestic Monitor Program Trends for Chicago Heroin Purity (Percent) and Price Per Milligram Pure: 1993–2000**

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

SOURCE: Drug Enforcement Administration (DEA), Domestic Monitor Program (DMP)

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## Patterns and Trends in Drug Abuse: Denver and Colorado

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### ABSTRACT

*Marijuana continues to be a major problem in Colorado, accounting for the largest proportion of drug-related treatment admissions in the first half of 2001. Also, marijuana emergency department (ED) mentions increased by 89 percent from 1994 to 2000, with large increases also seen in marijuana-related hospital discharges. Almost all ethnographic reports indicate availability of very potent marijuana. Cocaine indicators are mixed, with ED mentions, hospital discharges, and deaths showing increases, treatment admissions declining, and new users in treatment remaining stable. Cocaine inhalers have been entering treatment in greater numbers, while smokers have been declining. Denver Police Department and Drug Enforcement Administration reports of greater cocaine hydrochloride availability at high purity may be driving some of these changes. Heroin indicators are mostly increasing, with ED mentions, hospital discharges, and deaths climbing over the past 5 years. Treatment admissions and new users in treatment had been climbing, but showed slight decreases in the first half of 2001. Also, heroin treatment client demographic proportions 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. Methamphetamine indicators, which increased from 1993 through 1997, mostly declined in 1998 and 1999, but seem to have started climbing again in 2000 and 2001. Finally, limited indicator data, a recent treatment study, and most anecdotal data point to an increasing club drug problem in Colorado, mostly among adolescents and young adults.*

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### 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 (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 five fastest growing States in the country, increasing from 3,294,394 in 1990 to 4,301,261 in 2000, or by 31 percent. The Denver metro area accounts for a large percentage of Colorado's total population.

Several considerations may influence drug use in Denver and Colorado:

- Two major interstate highways intersect in Denver.
- The area's major international airport is nearly at the midpoint of the continental United States.
- Its remote rural areas are ideal for the undetected manufacture, cultivation, and transport of illicit drugs.
- A young citizenry is drawn to the recreational lifestyle available in Colorado.
- The large tourism industry draws millions of people to the State each year.
- Several major universities and small colleges are in the area.
- Colorado and the Denver metro area, though prospering economically, have seen small increases in unemployment rates. Colorado's unemployment rate for August 2001 was 3.6 percent, up from 2.8 percent in the same time period in 2000. Likewise, Denver's unadjusted unemployment rate for August 2001 was 3.5 percent, compared with 2.4 percent a year ago.

#### Data Sources and Time Periods

Data presented in this report were collected and analyzed in October and November 2001. Although these indicators reflect trends throughout Colorado, they are dominated by the Denver metro area.

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- **Qualitative and Ethnographic Data**— These data were available mainly from clinicians from treatment programs across the State, local researchers, and street outreach workers.
- **Drug-related emergency department (ED) mentions**—ED data for the Denver metro area for 1994 through 2000 are provided by the Substance Abuse and Mental Health Services Administration (SAMHSA) through its Drug Abuse Warning Network (DAWN).
- **Hospital discharge data**—Statewide data for 1994–2000 are available from the Colorado Hospital Association through the Colorado Department of Public Health and Environment, Health Statistics Section. Data included are diagnoses (ICD-9-CM codes) for inpatient clients at discharge for all acute care hospitals and some rehabilitation and psychiatric hospitals. These data do not include ED care.
- **Drug/Alcohol Coordinated Data System (DACODS)**—These reports are completed on clients at admission and discharge from all Colorado alcohol and drug treatment agencies receiving public monies. Annual figures for the State are given for 1995– 2000; 2001 data are for the first half. The data presented exclude admissions for alcohol abuse, selected admissions data for Denver County, 200, are also provided and also exclude “alcohol only” admissions. DACODS data are collected and analyzed by the Alcohol and Drug Abuse Division (ADAD), Colorado Department of Human Services.
- **Drug Availability, price, and distribution**—These data are available from local Drug Enforcement Administration (DEA) Denver Division officials, Denver Police Department Vice/Drug Control Bureau for the winter of 2000 and the Rocky Mountain High Intensity Drug Trafficking Area (HIDJA) Task Force reports for calendar year (CY) 2001.
- **Death statistics and communicable disease data**—These are available from the Colorado Department of Public Health and Environment (CDPHE). Data are presented for 1993–2000.
- **Rocky Mountain Poison and Drug Center (RMPDC)**—These data, are presented for Colorado, represent the number of calls to the center regarding street drugs from 1994 through 2000.
- **The Arrestee Drug Abuse Monitoring (ADAM) program**—ADAM reports arrestee urinalysis results 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 CY 2000, NIJ changed its procedures from a convenience to a probability sample. Thus, no ADAM data trend analysis is presented. Rather, CY 2000 use percentages by drug type are indicated.

#### DRUG ABUSE TRENDS

##### *Cocaine and Crack*

Cocaine indicator patterns are mixed, with some increasing and some declining. In general, cocaine use remains a major concern throughout Denver and Colorado. Denver metro cocaine ED mentions per 100,000 population, after declining from 86 to 53 from 1994 to 1996, increased steadily to 87 in 1999, and declined only slightly to 83 in 2000 (exhibit 1).

Also, statewide hospital discharge data (exhibit 2) showed that cocaine occurrences per 100,000 increased from 60.1 in 1994 to 62.8 in 1998, declined slightly to 62.3 in 1999, but then displayed a small increase to 63.5 in 2000.

In 1994 there were 71 calls to the RMPDC concerning cocaine. Calls dropped to 49 in 1995, remained at about that level through 1999, but increased to 59 in 2000. However, the proportion of cocaine treatment admissions in the State has declined considerably over the past 6-1/2 years (exhibit 3). In 1995, primary cocaine abuse accounted for 31.0 percent of all drug abuse treatment admissions, compared with only 21.3 percent for the first half of 2001.

Treatment admission data for Colorado indicate that cocaine injecting declined from 1995 (12.4 percent) through 1998 (10.6 percent), but increased slightly to 13.7 percent through the first half of 2001. Smoking percentages, though level at 67.2 percent in 1995 and 1996, have since declined steadily to a low of 56.7 percent in the first half of 2001. Conversely, inhalation has been steadily increasing, from 17.6 percent in 1995 to 26.3 percent in the first half of 2001. These changes are probably associated with the increased availability of powder cocaine.

Of the cocaine users entering treatment in Colorado, the proportion of “new” cocaine users, defined as those admitted to treatment within 3 years of initial cocaine use, has remained relatively level from 15.8 percent to 14.6 percent in the first half of 2001 (exhibit 4).

Race/ethnicity proportions for total cocaine treatment admissions in Colorado have been changing. In the first half of 2001, Whites accounted for the largest percentage of cocaine admissions (48.1 percent), up moderately from 41.5 percent in 1995. In addition, Hispanic cocaine admissions have increased dramatically, from only 17.4 percent in 1995 to nearly 28 percent in the first half of 2001. Conversely, African-American cocaine admissions have declined by almost one-half from 39 percent in 1995 to only 21 percent in the first half of 2001.

Likewise, age categories for Colorado’s treatment admissions have been changing since 1995. In 1995, 63.2 percent of cocaine admissions were under 35, decreasing to 47.3 percent in the first half of 2001. Conversely,

cocaine admissions age 35 and older have climbed steadily during the same time period, from 36.8 to 52.7 percent. Cocaine admissions continue to be predominantly male, with the proportion remaining relatively constant from 1995 (59.3 percent) through the first half of 2001 (58 percent). As mentioned above, the increased availability of cocaine powder may have brought about changes in the cocaine user groups, and thus, in the population entering treatment.

Among 2,538 treatment admissions in Denver County in 2,000, 17.9 percent were for primary abuse of cocaine. Most (13.1

Among 2,538 treatment admissions in Denver County in 2,000, 17.9 percent were for primary abuse of cocaine. Most (13.1 percent) were crack admissions.

Also, cocaine deaths in the State climbed from 73 in 1993 (21 per million) to a peak of 146 in 1999 (36 per million). While they declined to 116 in 2000 (27 per million), this was still the second highest number of deaths in the 8 year time period.

The to CY 2000 ADAM data for a sample of Denver arrestees shows that 35.4 percent of males and 46.5 percent of females had cocaine-positive urine samples.

The Denver Field Division of the DEA reports the substantial availability of cocaine powder across the State in ounce, pound, and kilogram quantities. Mexican polydrug trafficking groups control the majority of cocaine distribution in the Denver metro area through Hispanic, White, and African-American distributors. The DEA also indicates that, despite declining use, crack cocaine supplies continue to come from street gangs in Los Angeles and Chicago. 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: \$18,000–20,000 per kilogram and \$800–1,000 per ounce in the Denver metro area with purity in the 50– 90 percent range; \$15,000-25,000 per kilogram, and \$500– \$1,100 per ounce in Colorado Springs (south of Denver on the Front Range); and \$20,000-22,000 per kilo and \$700–\$1000 per ounce in Grand Junction (Western Slope of Colorado). These prices show only small changes from the prior reporting period.

The DEA also reports that crack cocaine use has been declining, but there is still substantial availability in larger metro areas. The major suppliers are street gangs in Los Angeles and Chicago. Crack prices remain relatively stable at \$800–\$1,200 per ounce and \$20–30 per rock in Denver.

The Denver Police Department (DPD)'s, Vice/ Drug Control Bureau also reports substantial availability of powder cocaine, with seizures of 526 pounds in 1999 and 244 pounds in 2000.

In addition to the DEA and DPD, HIDTA collects reports from drug task forces throughout the State. The Front Range Task Force reports that cocaine investigations consume 40 percent of its time. It has found that cocaine distribution organizations are transporting multi-kilogram quantities of cocaine into Colorado in vehicles with traps and compartments built into the vehicle bodies.

Reports from clinicians, researchers, and street outreach workers around the State substantiate the continuing cocaine problems reflected in the indicator data. Clients in one Denver-area treatment program say that powder cocaine is cheap, pure, and available. This is corroborated by young clients in another program who say the cocaine on the street is “the best they have ever had.” Also, many programs feel that an increase in Hispanics using powder cocaine is due in part to greater accessibility related to Hispanic gangs involved in distribution. Boulder treatment programs, however, are still seeing mainly injectors or smokers and increasing younger users and women. Some programs in the northeast, too, are seeing more adolescents but they are also describing continuing use among people who started using in the 1970's and 1980's.

Accounts from the Southeast indicate that cocaine is cheaper and again the “in thing.” They also talk about it being popular with blue-collar workers who work long hours. On the other hand, some clinicians from the southeast area say their clients describe the prohibitive cost of cocaine, with methamphetamine being more affordable. A West Slope program reports seeing Anglo clients under age 40 who are smoking cocaine, as well as clients under 21 who say they can make money-dealing cocaine, but are also getting addicted.

As to the increase in cocaine snorting, programs across the State mention the decline in crack use as an outgrowth of information about its addictive nature and its connection to more severe legal penalties.

### *Heroin*

Most heroin indicators are increasing. DAWN data show that heroin ED mentions (exhibit 1) declined from 1994 (31 per 100,000) through 1996 (22 per 100,000). However, from 1996 to 2000 they nearly doubled (41 per 100,000).

Similarly, hospital discharge data (exhibit 2) indicate that opiate occurrences per 100,000 population, after dropping from 29.8 to 19.9 from 1994 to 1996, have climbed steadily to 47.7 by 2000 (a 60-percent increase) over the 6-year period.

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

Among Colorado treatment admissions (exhibit 3), the proportion and number of heroin admissions remained fairly stable from 1995 (15.4 percent) through 2000 (14.5 percent), with a slight decline to 12.1 percent in the first half of 2001. Likewise, the proportion and number of new heroin users entering treatment, after increasing from 14.9 percent in 1995 to 18.6 percent in 2000, declined to the 1995 level in the first half of 2001 (exhibit 4).

Like those of cocaine users, some of the demographic proportions of heroin users entering treatment in Colorado have changed. The proportion of female heroin admissions has remained stable from 1995 (33.1 percent) through the first half of 2001 (31.8 percent). However, race/ethnicity proportions have changed during this same time period. Whites have increased as a percentage of the total, from 56 percent in 1995 to 65.7 percent in the first half of 2001, while Hispanics have decreased from 29.8 to 22.4 percent. Also, the 25 and younger age group has increased as a percentage of heroin admissions, from only 10.2 percent in 1995 to 18.1 percent in 2000.

Accompanying the heroin client demographic realignments are small changes in route of administration, with heroin smoking and inhalation becoming more common among Colorado's treatment admissions. In 1995, only 3.5 percent of treatment admissions reportedly smoked or inhaled heroin, compared with 5.9 percent in 1996, 7.3 percent in 1997, 8.9 percent in 1998, 8.3 percent in 1999, 10.1 percent in 2000, and 9.7 percent in the first half of 2001.

Among treatment admissions in Denver County in 2000, 22.2 percent were for primary abuse of heroin – nearly 8 percent points higher than in the State overall in 2000. Opiate-related deaths more than doubled from 81 (23 per million) in 1993 to 182 (46 per million) in 1998, but declined somewhat to 142 in 1999 (35 per million) and to 147 in 2000 (34 per million). Nonetheless, the 612 opiate deaths from 1997 through 2000 represent a 26-percent increase over the 484 deaths from 1993 through 1996.

Interestingly, CY 2000 ADAM data indicate that, as was the case with cocaine screens, the sample of Denver-area female arrestees had positive heroin urine screens at a slightly higher rate (5.8 percent) than their male counterparts (3.4 percent).

The Denver DEA reports that heroin grams and ounces are readily obtainable in the Denver metro area, with the majority of heroin sales taking place in the lower downtown area. Marketing is controlled by Mexican nationals.

Interestingly, the DEA asserts that “street-level weight is usually sold in the form of black tar, whereas ounce or heavier weights are primarily Mexican brown heroin.” Sometimes black tar and Mexican brown are combined to make up negotiated weight.

The DEA Domestic Monitor Program buys reveal that of black tar heroin ranges from 10 to 65 percent in purity and retails for \$50–\$100 per gram on the street. On the other hand, the DEA reports that ounce purchases of Mexican brown heroin have an average purity of 67 percent (with ounce purchases of black tar at 36 percent). Tar and brown both sell for \$1,300– \$2,000 per ounce in the metro area. In Colorado Springs, tar sells for \$1,800 to \$3,500 per ounce and \$75–\$300 per gram, with an average purity of 40 percent.

The Denver Police Department (DPD)'s, Vice/ Drug Control Bureau also reports substantial availability of heroin in the metro area, with seizures of 25 and 24 pounds in 1999 and 2000, respectively.

Recent HIDTA Front Range and Colorado Springs Task Force reports describe the increasing availability of black tar heroin from Mexican traffickers.

Reports from clinicians, researchers, and street outreach workers around the State indicate that a lot of heroin is available at higher purity and, for the most part, decreased prices. Denver-area treatment programs indicate that the awareness of human immunodeficiency virus (HIV), infection, hepatitis C, and the fear and stigma of injection use is bringing about an increase in heroin smoking and inhalation. They are also seeing an increase in younger users. This same pattern is described in the Central Mountain region, Northeast, Boulder area, and Southeast parts of the State.

### *Other Opiates*

Opiates other than heroin (i.e., narcotic analgesics) include hydrocodone, hydromorphone, codeine, and oxycodone. Denver metro ED mentions per 100,000 population for “narcotic analgesics” (other than heroin) remained relatively flat from 1994 (10.3) through 1998 (12.7), but increased dramatically in 1999 (18.7) and 2000 (24.5). Also, as discussed above, opiate-related hospital discharges have increased 60 percent from 1994 to 2000.

As to treatment admissions, other opiates remained relatively stable from 1995 (2.5 percent) to 1999 (2.7 percent), but increased to 3.2 percent and 3.7 percent in 2000 and the first half of 2001, respectively.

The DEA reports that diversion of OxyContin is a “major problem” in the Rocky Mountain west with a \$4 prescription dose selling for as much as \$40 on the street.

*Marijuana*

Data from the 1999 National Household Survey on Drug Abuse placed Colorado first among the 50 states in past-month marijuana use (8.1 percent of the 12-and older population). Similarly, most marijuana indicators in the State are increasing.

From 1994 to 2000, the rate per 100,000 population of marijuana ED mentions increased by 89 percent from 27 to 51 (exhibit 1). Likewise, marijuana hospital discharge occurrences per 100,000 (exhibit 2) rose dramatically from 41.9 in 1994 to 57.1 in 2000.

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

Marijuana treatment admissions increased from 35.2 percent in 1995 to 43.7 percent in 1999. However, since that time they have declined slightly, to 40.4 percent through the first half of 2001. In general, marijuana users have accounted for the largest proportion of all Colorado drug treatment clients since 1995 (exhibit 3). These increases may be partly related to user accounts of increased drug potency.

The proportion of new users entering treatment for marijuana use had been declining steadily from 1995 (36.6 percent) through 1999 (25.4 percent) (exhibit 4). However, in 2000 this proportion climbed slightly to 28.9 percent, with a small decline to 27.4 percent during the first half of 2001.

Data indicate only slight changes in the demographics of marijuana treatment clients in the State. Race proportions remained relatively stable from 1995 to 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. However, they declined back to 31.3 percent by the first half of 2001. Likewise, Whites declined from 57.1 percent to 52.4 percent of marijuana admissions during the 1995–99 but increased to the 1995 level in both 2000 and the first half of 2001. Male-to-female marijuana admission ratios remained at 3 to 1 during the 1995–2001. Moreover, there were only small changes in the ages of marijuana admissions from 1995 to the first half of 2001. Those age 12–17 decreased slightly from 42.1 percent in 1995 to 37.4 percent in the first half of 2001, but remained the largest group in treatment for marijuana use.

In Denver County in 2000, the proportion of primary marijuana treatment admissions (16.5 percent) was considerably lower than the figure statewide (42.4) percent.

Also, CY 2000 ADAM data indicate that 40.9 percent of the male arrestee sample and 38.5 percent of the female arrestee sample had positive marijuana urine screens.

The Denver DEA states that the most “abundant supply of marijuana is Mexican grown and is trafficked into the area from the border areas of Texas, New Mexico, and Arizona by Mexican polydrug trafficking organizations. Vehicles with hidden compartments are used to transport shipments weighing from pound to multi-pound quantities”. Mexican marijuana sells at a price range of \$500–\$1,000 per pound. They also indicate that high tetrahydrocannabinol (THC), seedless marijuana from British Columbia, known as “BC bud” or “triple A,” continues to be available in Colorado at prices of \$600 per ounce and \$3,000-\$5,000 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 \$1,500 per pound and from \$200 to \$400 per ounce.

The DPD’s Vice/Drug Control Bureau also reports substantial availability of marijuana in the metro area, with seizures of 8,227 and 2,683 pounds in 1999 and 2000, respectively.

Similar to DEA and DPD information, HIDTA reports from around the State indicate substantial marijuana availability and use. Among these, the Gunnison County authorities have seized indoor-marijuana grows ranging from 50 to 200 plants. This locally grown marijuana is called “kind bud.” El Paso County and Teller County law enforcement officers report that marijuana investigations consume 10 percent of their Drug Units’ time. Also, Jefferson County authorities report recent seizures of 280 pounds of Mexican marijuana and 10 pounds of “BC bud.”

Uniformly across the State, reports from clinicians, researchers and street outreach workers indicate that marijuana is potent and in abundance. Denver and Boulder area programs describe an overall “increased tolerance” for marijuana use in families and, seemingly, in society in general. Availability is across the spectrum from low-quality “swag” at \$15 per bag or \$50 per ounce to high quality “chronic” at \$80– \$100 per bag and \$400 per ounce. One program in the metro area said that some clients are getting “marijuana cravings” because of the increased potency.

Northeast, Central Mountain, Southeast and West Slope programs also report the ready availability and potency of marijuana, in addition to the circumstance of increased family acceptance and general public apathy about pot use.

## Stimulants

Indicator data show substantial fluctuation in methamphetamine and other stimulant use in Denver and across Colorado from 1994 to 2001.

Methamphetamine ED mentions per 100,000 in Denver increased from 10 in 1994 to 12 in 1995, but declined to only 7 in 2000 (exhibit 1). Conversely, *amphetamine* ED mentions per 100,000, after dropping from 14 to 7 from 1997 to 1998, rose to 21 in 2000. Amphetamine-related hospital discharge occurrences per 100,000 (exhibit 4) have also shown a fluctuating pattern from 1994 to 2000. However, overall they have increased during that time period, from 16.3 to 21.9 per 100,000.

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

Methamphetamine treatment admissions in Colorado have shown a fluctuating pattern over the past 6-1/2 years. However, in the first half of 2001 they constituted 14.8 percent of drug admissions, the highest proportion since 1997 (14.9 percent) (exhibit 1). Amphetamine admissions are typically only a fraction of those for methamphetamine. However, from 1995 to 2000 they increased from 111 to 168, or from 0.9 percent to 1.3 percent of all drug treatment admissions, but declined slightly to 62 admissions (1 percent) during the first half of 2001. In 1995, 29.6 percent of primary methamphetamine users entering treatment in Colorado were new users (exhibit 4). By 1997, new users accounted for 30.5 percent of primary methamphetamine treatment admissions. However, by the first half of 2001, the proportion of new users had declined to only 16.2 percent.

Injecting had been the most common route of administration for methamphetamine. However, the IDU proportion has been declining from 1995 (41 percent) to the first half of 2001 (34 percent), while smoking has become increasingly common in the last 6 and one half years. In the first half of 2001, about 40 percent of methamphetamine treatment admissions smoked the drug, compared with only 16 percent in 1995.

Methamphetamine treatment admissions in Colorado for the first half of 2001 remain predominately White (87.1 percent) and male (54.9 percent). However, from 1995 to 2001, those age 25 and younger have remained at about one-third of admissions, those 26 to 34 have declined from 39 percent to 31 percent of admissions, and those over 35 have increased from about one-fourth to one-third of methamphetamine admissions.

In Denver County in 2000, 3.9 percent of treatment admissions were for primary methamphetamine abuse.

Though amphetamine-related deaths in Colorado are far fewer than for opiates or cocaine, the number has increased sharply from only 12 between 1993 and 1996 to 31 between 1997 and 2000.

According to ADAM data, only a small percentage of positive amphetamine urine screens were reported in CY 2000: 2.6 percent of the male arrestee sample and 5.3 percent of the female arrestee sample.

The DEA describes widespread methamphetamine availability, with a majority of the drug originating in Mexico or in large-scale laboratories in California. However, the DEA is making extensive laboratory seizures. During July through September 2001, 152 methamphetamine laboratories were seized in the Rocky Mountain west. These laboratories, generally capable of manufacturing an ounce or less per "cook," varied from being primitive to quite sophisticated. The average purity for Mexican methamphetamine is 10 to 20 percent. The DEA reports that Denver methamphetamine street prices are stable at \$90-\$110 per gram and \$750-\$1,200 per ounce. The DPD, Vice/ Drug Control Bureau also reports substantial availability of methamphetamine in the metro area. In 1999 the bureau seized 111 pounds. However, in 2000, methamphetamine seizures nearly doubled to 212 pounds.

Agencies reporting to HIDTA statewide describe extensive amounts of time spent on methamphetamine investigations. For example, the West Metro Task Force, including Jefferson County, reports that 70 percent of its drug investigation time involves methamphetamine. It has seized 44 "box labs" (producing small quantities) so far in 2001. Similarly, the Colorado Springs Task Force reports that methamphetamine investigations consume 25 percent of its time. It has seized 50 laboratories so far in 2001, which primarily use the "Nazi" production method.

Anecdotal reports from clinicians, researchers, and street outreach workers around the State confirm the up-and-down pattern for methamphetamine availability illustrated in the indicator data. Treatment programs in Denver, Boulder, the northeast, southeast, Central Mountain, and Western Slope all talk about off-and-on "lab busts" that diminish supply for a while, but with an inevitable return to larger supplies because of demand for this relatively cheap and potent stimulant. Reports of younger users come from across the State. In the Denver area and in the southeast, several programs spoke of young male clients in the labor trade using stimulants to be more productive and to feel more focused. They also spoke of the tendency of methamphetamine users to binge for days without sleeping, culminating in a sense of loss of control. Programs in the northeast spoke of women using methamphetamine because the highs last longer and it is good for weight control. A number of programs talked of the relationship between methamphetamine and club drug users. A Western Slope program described easy access to the drug, with difficulty in treating long-time users.

### *Club Drugs*

Club drugs are a group of synthetic drugs commonly associated with all-night dance clubs called “raves.” These drugs include methylenedioxymethamphetamine (MDMA, or ecstasy), gamma hydroxybutyrate (GHB), flunitrazepam Rohypnol or “roofies” and ketamine “special K.” Information on use of these drugs in Colorado is limited. Treatment, hospital discharge, and ADAM data do not have separate breakouts for these drugs. The only sources of institutional indicator data have been DAWN and RMPDC.

In 2001, however, ADAD conducted a survey on club drug use among young adults and adolescents admitted to selected treatment programs across the State ( $n=764$ ). Some results of this study are presented in this section along with DAWN and RMPDC data. In addition, some anecdotal information on club drugs is provided from the DEA, the Denver Police Department, HIDTA Task Force reports, and from clinicians in a number of treatment programs across the State. MDMA, or ecstasy, originally developed as an appetite suppressant, is chemically similar to the stimulant amphetamine and the hallucinogen mescaline, and thus produces both stimulant and psychedelic effects. The handful of MDMA-related calls to the RMPDC ranged from only 3 to 11 during the 1994–99. However, ED mentions jumped from 6 in 1998 to 15 in 1999 to 57 in 2000. In ADAD’s treatment survey sample of 764, 266 (34.8 percent) reported lifetime use of ecstasy, with 4.6 percent having used in the past 30 days. The average age of the users was 17.3 years.

The above information still does not come close to providing a complete view of MDMA prevalence in Colorado. The DEA reports that MDMA has emerged as a popular drug in the Rocky Mountain region. It is readily obtainable by individuals at raves, nightclubs, strip clubs, or private parties. The traffickers are typically, who White and in their late teens or twenties, get their MDMA from Las Vegas, Nevada, and various cities in California, with source connections in Europe. They report 2 prices of \$10–\$30 per table or capsule. Likewise, MDMA is prominently mentioned in HIDTA Task Force reports. For example, the Front Range Task Force states that MDMA investigations are presently consuming 50 percent of task force resources. The Jefferson County Task Force reports increasing availability, with seizures of 500 dosage units a common occurrence.

Denver-area programs are beginning to report a few young clients coming into treatment for MDMA as a primary drug. Whether it is their primary drug or they are using it on an experimental basis, young adults talk about using MDMA in social settings like clubs, bars, concerts, and raves, and talk about increased energy and euphoria associated with its use. Several programs across the State mention that many of their MDMA users experience depression. Also, MDMA users in treatment programs say it is difficult to stay away from drugs at raves.

GHB is a central nervous system depressant that can sedate the body, and at higher doses it can slow breathing and heart rate dangerously. It can be produced in clear liquid, white powder, tablet, and capsule forms, and is often used in combination with alcohol, making it even more dangerous. During 1994–98 the RMPDC reported only one to six calls about GHB. However, in 1999 the number of GHB calls jumped to 92. GHB ED mentions have also increased, from 7 in 1997 to 13 in 1998 to 70 in 1999. However, such mentions dropped to 43 in 2000. In ADAD’s treatment survey sample of 764, 73 (9.6 percent) reported lifetime use of GHB, with 0.5 percent having used in the past 30 days. The average age of the users was 17.8 years.

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).

A Denver-area program reported that a young client overdosed on GHB while in treatment, passing out in group therapy with a bottle of GHB found on him. A northeast program stated that some of its young clients have said they think GHB is dangerous and can “kill them.”

Flunitrazepam is a benzodiazepine sedative (others include diazepam) [Valium] and alprazolam [Xanax] approved as a treatment for insomnia in over 60 countries, but not in the United States. Flunitrazepam is tasteless, odorless, dissolves easily in carbonated beverages, and its effects are aggravated by alcohol use. Use of this drug does not appear to be widespread in either the general population or 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 7 in 1999. Also, there has been only one Flunitrazepam ED mention from 1994 through 2000.

In ADAD’s treatment survey sample of 764, only 14 (1.8 percent) reported lifetime use of Flunitrazepam with 0.3 percent having used in the past 30 days. The average age of the users was 19 years.

Ketamine, is an injectable anesthetic that has been approved for both human and animal use in medical settings. However, about 90 percent of the ketamine legally sold today is intended for veterinary use. Produced in liquid form or white powder, it can be injected, inhaled, or swallowed. Similar to phencyclidine (PCP) in its effects, it can bring about dreamlike states and hallucinations. The RMPDC did not report any ketamine calls from 1994 to 2000. There were only three ketamine ED mentions from 1994 to 1999. However, there were 12 such mentions in 2000.

In ADAD's treatment survey sample of 764, 138 (18.1 percent) reported lifetime use of ketamine, with 2.2 percent having used in the past 30 days. The average age of the users was 17 years.

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

In ADAD's treatment survey sample of 764, 78 (10.2 percent) reported lifetime use of DXM, with 2.2 percent having used in the past 30 days. The average age of the users was 16 years.

A Denver area program reported that its younger clients say DXM is very popular, but it has not yet shown up as a primary drug of abuse. They stated that adolescents steal Coricidin HBP from pharmacies and "eat 6 to 12 pills" at a time.

#### AIDS

Of the 7,272 AIDS cases reported in Colorado through September 30, 2001, 8.9 percent were classified as IDUs, and 11.0 percent were classified as homosexual or bisexual males and IDUs (exhibit 5).

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EPIDEMIOLOGIC TRENDS IN DRUG ABUSE

Exhibit 1. Rates of Emergency Department Mentions for Selected Drugs in the Denver Metropolitan Area: 1994-2000

Year	1994	1995	1996	1997	1998	1999	2000
Cocaine	86	75	53	69	73	87	83
Heroin	33	33	22	32	32	40	41
Marijuana	27	31	19	31	37	43	51
Methamphetamine	10	12	7	19	8	6	7

SOURCE: Substance Abuse and Mental Health Service Administration, Drug Abuse Warning Network

Exhibit 2. Number of Hospital Discharge Mentions per 100,000 in Colorado for Selected Drugs: 1994-2000

Drug	1994	1995	1996	1997	1998	1999	2000
Amphetamines	598	728	532	959	815	682	942
Rate per 100,000	16.3	19.4	13.9	24.6	20.5	16.9	21.9
Cocaine	2,200	2,070	2,255	2,245	2,492	2,517	2,732
Rate per 100,000	60.1	55.3	59.0	57.7	62.8	62.3	63.5
Marijuana	1,533	1,708	1,740	2,118	2,227	2,204	2,455
Rate per 100,000	41.9	45.6	45.6	54.4	56.1	54.6	57.1
Narcotic Analgesics	1,093	1,103	760	1,458	1,566	1,639	2,053
Rate per 100,000	29.8	29.4	19.9	37.5	39.5	40.6	47.7
Population	3,661,665	3,746,585	3,819,789	3,892,996	3,966,198	4,039,402	4,301,261

SOURCE: Colorado Hospital Association and Colorado Department of Public Health and Environment

Exhibit 3. Treatment Admissions<sup>1</sup> in Denver by Drug Type and Percent: 1995-2001

Drug	1995	1996	1997	1998	1999	2000	2001 <sup>2</sup>
Total (N)	12,599	12,988	11,754	14,294	14,450	13,046	6,117
Heroin	15.4	15.1	13.7	13.2	14.3	14.5	12.1
Non-Rx Methadone	0.3	0.3	0.1	0.2	0.2	0.2	0.2
Other Opiates	2.5	2.2	2.2	2.3	2.7	3.2	3.7
Methamphetamine	11.2	8.9	14.9	13.5	10.7	13.0	14.8
Other Stimulants	1.1	8.9	14.9	13.5	10.7	13.0	14.8
Cocaine	31.0	30.6	27.1	26.6	23.6	21.2	21.3
Marijuana	35.2	38.8	37.9	39.8	43.7	42.4	40.4
Hallucinogens	0.6	0.7	0.6	0.7	0.7	0.8	0.6
Barbiturates	0.1	0.1	0.1	0.2	0.4	0.1	0.0
Seditives	0.2	0.1	0.2	0.2	0.2	0.3	0.1
Tranquilizers	0.7	0.7	0.7	0.7	0.9	0.6	0.6
Inhalents	1.4	1.0	0.9	0.8	0.5	0.5	0.7
Other	0.4	0.7	0.7	1.2	1.1	1.7	3.8

<sup>1</sup> Data for 2001 are for the first 6 months only.

<sup>2</sup> Excludes "alcohol only."

SOURCE: Drug/Alcohol Coordinated Data System

Exhibit 4. Annual Percentage of Heroin, Methamphetamine, Cocaine, and Marijuana Users Entering Treatment within 3 Years of Initial Use: 1995-2001<sup>1</sup>

Drug	1995	1996	1997	1998	1999	2000	2001 <sup>1</sup>
Heroin							
(N)	(280)	(328)	(262)	(362)	(354)	(336)	(109)
Percent	14.9	17.1	16.6	19.6	17.6	18.6	14.9
Methamphetamine							
(N)	(412)	(296)	(514)	(517)	(312)	(340)	(142)
Percent	29.6	25.8	30.5	27.3	20.6	20.4	16.2
Cocaine							
(N)	(607)	(599)	(433)	(587)	(515)	(445)	(188)
Percent	15.8	15.3	14.0	15.8	15.5	16.5	14.6
Marijuana							
(N)	(1,601)	(1,783)	(1,429)	(1,669)	(1,540)	(1,541)	(661)
Percent	36.6	35.8	33.1	30.5	25.4	28.9	27.4

<sup>1</sup> Data for 2001 are for the first 6 months only.

SOURCE: Drug/Alcohol Coordinated Data System

EPIDEMIOLOGIC TRENDS IN DRUG ABUSE

Exhibit 5. Number and Percent of Colorado Cumulative AIDS Cases by Demographic Category: Through September 30, 2001

Category	Number of Confirmed Cases	Percent
Total	7,272	100
Gender		
Male	6,748	92.8
Female	524	7.2
Race/Ethnicity		
White	5,342	73.5
African-American	794	10.9
Hispanic	1,060	14.6
Asian	29	.4
Native American	47	.6
Age at Diagnosis (Years)		
< 13	29	.4
13-19	28	.4
20-29	1,213	16.6
30-39	3,548	48.8
40-49	1,788	24.6
50+	666	9.2
Exposure Category		
Men/sex/men (MSM)	4,985	68.6
Injecting drug user (IDU)	645	8.9
MSM and IDU	797	11.0
Heterosexual contact	395	5.4
Other	183	2.4
Risk not identified	267	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

*Overall, cocaine indicators were stable, with increases in deaths in Detroit/Wayne County (6 percent for 2001 to date) and hospital emergency department (ED) mentions (2 percent in 2000) for southeast Michigan. Cocaine (primarily crack) remains the most frequently reported illicit primary drug among treatment admissions statewide, but it is now exceeded by heroin among Detroit/Wayne County admissions in fiscal year (FY) 2001. In 2000, 24 percent of male adult arrestees and 42 percent of female adult arrestees in Wayne County tested positive for cocaine. Availability and prices are stable, with some possible declines in prices at wholesale levels. Almost all heroin indicators increased. It is estimated that in Wayne County, deaths with positive toxicology for heroin will increase 3.6 percent in 2001, to a total of just under 500 cases. ED mentions for heroin increased 25 percent from 1999 to 2000 in southeast Michigan. Heroin accounted for an increasing proportion of treatment admissions. In Detroit/Wayne County in FY 2001, it ranked first among drugs of abuse (34 percent of cases), while statewide heroin ranked third among admissions (13 percent). After a steady rise in purity and a decline in price per pure milligram from the early 1990s until 1999, purity declined and price almost doubled in 2000. Nevertheless, purity remains far higher than levels in the 1980s, and prices are much cheaper than they were 10 or more years ago. In 2000, only 7.8 percent of male adult arrestees in ADAM tested positive for opiates, as did 24.2 percent of females, but the number of female arrestees was small (n = 107). Data for other opiates reflect increasing abuse of some drugs in this group. Codeine abuse remains predominant and stable. ED mentions for hydrocodone continue to increase sharply in southeast Michigan. Other opiates accounted for an increasing proportion of treatment admissions statewide (yet not in Detroit/Wayne County) during FY 2001. Oxycodone (OxyContin) is beginning to appear in indicator data. There were a growing number of reports of abuse of this drug in early 2001. Marijuana remains the top illicit drug of abuse both in Detroit/Wayne County and across Michigan. Indicators are relatively stable. Indicators for stimulants are increasing. Methamphetamine lab seizures continue to steadily increase. In 2000, 40 labs were seized in Michigan. By the end of 2001, it is estimated that there will be 100 such seizures. More methamphetamine users are entering treatment, yet their numbers remain relatively low (in proportion to marijuana, cocaine, and heroin admissions). There continue to be few mentions of methamphetamine in southeast Michigan EDs. However, there are indicators of methamphetamine abuse in many parts of Michigan outside of metropolitan Detroit. Depressants and hallucinogen indicators remain low and stable across the State. In 2001, there are indicators of increasing abuse in Michigan of club drugs such as MDMA and ketamine. Seizures are up sharply, mentions are now being reported in emergency departments in southeast Michigan, and cases are appearing among statewide treatment admissions. Abuse of GHB or GBL appears to be on the decline. Abuse of over-the-counter Coricidin HBP (used for coughs and flu) containing dextromethorphan continues to be encountered by Children's Hospital of Michigan Poison Control Center, which covers eastern parts of Michigan. Users are virtually all teens. Through July 1, 2001, Michigan has a cumulative total of 11,577 AIDS cases; 30 percent of these cases are injecting drug users.*

### INTRODUCTION

#### Area Description

Detroit and surrounding Wayne County, located in the southeast corner of Michigan's lower peninsula, had a population of 2.1 million residents in 2000, representing 21 percent of Michigan's 9.9 million population. Michigan is the eighth largest State in the United States. The Detroit metropolitan area ranks 10th among the major U.S. population centers. The city of Detroit's population was 951,000 in 2000. Michigan's population increased by 6.9 percent between 1990 and 2000. Population growth above the statewide average occurred in those age 10–14 (12 percent), 15–17 (8.5 percent), and 5–9 (7.6 percent). There was net population loss among those under 5 years of age (4.3 percent) by 2000 due to declining birth rates since the mid-1990s. Several factors contribute to probabilities of substance abuse in the State:

- Michigan is home to a major international airport (in 2000 there were 277,688 flights) and numerous large (the 10 other Michigan airports which also have international flights totaled more than 200,000 flights in 2000) and small airports (Michigan has 235 public and private airports).

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- Michigan 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 there are many places along the 85 miles of heavily developed waterway that are less than one-half mile away from Canada. Michigan has 940,000 registered boats. Two major bridge crossings between Michigan and Canada (Windsor Tunnel and Ambassador Bridge) in 2000 had 8.4 million cars, 1.8 million trucks, and 41,000 buses cross over into or out of Detroit. Southeast Michigan, the busiest port on the northern U.S. border, had about 21 million vehicle crossings with Canada in 2000.
- Numerous colleges and universities are located in Michigan.
- There is a large population of skilled workers with relatively high income (especially in the auto industry), as well as a large population with low or marginal employment skills.
- Chronic structural unemployment problems exist. Michigan has prospered in recent economic periods, with low unemployment. In July 2001, statewide unemployment was 5.3 percent, while in Detroit the unemployment rate was 10.1 percent.

### Data Sources and Time Periods

Data for this report were drawn from the following sources:

- Drug Abuse Warning Network (DAWN) Hospital Emergency Department (ED) Data—These data were provided by the Office of Applied Studies, Substance Abuse and Mental Health Services Administration (OAS/SAMHSA) through 2000.
- Michigan and Detroit/Wayne County Treatment Admissions Data—These data were provided by the Division of Mental Health Performance, Michigan Department of Community Health and by State- and federally funded programs. Reporting practices, which changed on October 1, 1998, impact on capability to reliably track trends in client characteristics, drugs of abuse, and other data reported in admissions records. During fiscal year (FY) 2001 there were revisions in State reporting requirements that also challenged reporting continuity. The reported admissions volume has been declining over the past several years; it is difficult to identify whether changes in data are due to reporting practices or reflect actual changes in the populations entering treatment. This report will not examine trends over time, but will focus on data for FY 2001 (October 2000–September 2001).
- Drug-related Death Data—The Wayne County Office of the Medical Examiner (ME) provided data on deaths with positive drug toxicology from 1993 through September 2001. Drug tests are routine when the decedent had a known drug use history, was younger than age 50, died of natural causes or homicide, was a motor vehicle accident victim, or if there was no other clear cause of death.
- National Institute of Justice (N.J.) Arrestee Drug Abuse Monitoring (ADAM) Program Data—ADAM data, based on a sample of arrestees in Detroit/Wayne County, were 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. The ADAM sampling plan was revised in 1999 and 2000 as directed by NIJ in an effort to gain data that would statistically be representative of Wayne County arrestees. Earlier data were for city of Detroit arrestees only. Caution is suggested in examining comparisons between 1999 and 2000 findings.
- Intelligence Data—Both the Michigan State Police (MSP) and the Drug Enforcement Administration (DEA) provided intelligence data.
- Threat Assessment Data—These data were provided by the High Intensity Drug Trafficking Area Investigative Support and Deconfliction Center of Southeast Michigan for FY 2001.
- Poison Control Data—Contact data were provided by the Children’s Hospital of Michigan Poison Control Center on cases of intentional abuse of substances for 2001 through October. This center is one of two in Michigan; their catchment area is primarily eastern Michigan, yet contacts can originate from anywhere. Changes in case data coding and systems affect capabilities to merge some of the data for the full period in 2001 to date.
- Acquired Immunodeficiency Syndrom (AIDS) and Human Immunodeficiency Syndrome (HIV) Data—The Michigan Department of Community Health provided case data and prevalence estimates for AIDS and HIV.

### DRUG ABUSE PATTERNS AND TRENDS

#### *Cocaine and Crack*

Between 1994 and 1999, cocaine was the most frequent ED drug mention in the Detroit metropolitan area (exhibit 1). The area rate of cocaine/crack mentions per 100,000 was stable in 1999 (178 cases) and 2000 (179 cases). There were 7,870 cocaine/crack ED mentions in 2000, an increase of 2 percent over 1999. The typical cocaine emergency room cases continued to be males age 35 or older who came to the emergency room seeking help for chronic effects of cocaine dependence.

Cocaine (including crack) has been the foremost primary illicit drug of abuse among admissions to State-funded treatment programs in Detroit/Wayne County and statewide since FY 1986. During FY 2001, cocaine/crack remained

the top illicit drug among statewide (18 percent of total) admissions. In Detroit/Wayne County, however, cocaine represented 28 percent of total admissions, but less than the percentage of heroin admissions (34 percent).

In Detroit/Wayne County, there were 3,678 cocaine and crack primary drug admissions in FY 2001, 3,001 as secondary drug, and 751 as tertiary drug. Statewide cocaine and crack admissions for this same time period totaled 10,330 as primary drug, 7,699 as secondary drug, and 2,541 as tertiary drug. Crack users continue to outnumber cocaine powder users entering treatment by a wide margin, both in Detroit/Wayne County and statewide. Crack accounted for 94 percent of Detroit/Wayne County cocaine primary drug admissions in FY 2001 and 83 percent of statewide cocaine admissions. Females made up 42 percent of crack admissions in Detroit/Wayne County in FY 2001, while on a statewide basis females represented 48 percent of crack admissions. Among cocaine powder admissions, females represented 39 percent of both Detroit/Wayne County and statewide admissions during FY 2001.

In Detroit/Wayne County, abusers age 36–44 accounted for 49 percent of crack and powder cocaine admissions in FY 2001. Statewide, this age group accounted for 32 percent of admissions. The next most frequent age group among admissions was 30–35-year-olds, at 25 percent in Detroit/Wayne County and 24 percent statewide. Admissions younger than 21 accounted for less than 1 percent of cocaine/crack admissions in Detroit/Wayne County and 2 percent statewide in FY 2001.

Virtually all (95 percent) of Detroit/Wayne County cocaine admissions in FY 2001 reported smoking as their route of administration, while 88 percent of statewide admissions reported smoking the drug. Intranasal use was reported by 9 percent of statewide admissions. Injecting was reported by 0.1 percent (111 cases) among statewide admissions, with 10 of these cases in Detroit/Wayne County.

Deaths with positive drug toxicology for cocaine in Detroit/Wayne County were stable between 1994 and 1999, with positive or negative 12 percent fluctuations year to year (exhibit 2). In 2000 there was a 16-percent increase in cocaine deaths over 1999. For 2001, cocaine deaths are expected to increase by 6 percent over 2000, based on 316 cocaine deaths during the first 9 of the year.

Cocaine use among city of Detroit arrestees has been generally declining since the peak of 53 percent testing positive in 1987, with year-to-year fluctuations between 25 and 30 percent since that year (exhibit 3). In 1999, 27 percent of adult male arrestees and 46 percent of adult female arrestees tested positive for cocaine. For 2000, 24 percent of male arrestees (weighted Wayne County sample) and 42 percent of female arrestees (unweighted Wayne County sample) tested positive for cocaine. In 2000, 15 percent of male adult arrestees self-reported using crack in the past 30 days, and 4 percent reported using cocaine powder. Among females, 32 percent reported crack use and 4 percent reported powder cocaine use during the past 30 days.

Availability, prices, and purity for cocaine powder and crack remain relatively stable. Ounce and kilogram prices have been stable for at least the past 6 years. Wholesale prices for larger quantities of cocaine have been declining over the past several years. Crack rocks now typically cost \$10–20, with \$10 being the most common unit price in Detroit neighborhoods. Higher priced units are more typical outside Detroit. Small plastic bags or aluminum foil are now the most common packaging.

Numerous organizations distribute cocaine in the metropolitan area and statewide, according to the FY 2001 Threat Assessment produced by the Southeast Michigan High Intensity Drug Trafficking Area Center. The Detroit metropolitan area remains a source hub for other areas of the midwest. Gangs control a number of distribution points and are major suppliers to many markets.

### *Heroin*

ED mentions for heroin have trended gradually upward since 1992 (exhibit 1). In 1999, the Detroit metropolitan area rate of heroin mentions was 61.5 per 100,000 population, while in 2000 this rate was 75.8. Heroin ED mentions increased by 25 percent in 2000 compared to 1999. The typical heroin ED case continues to be 45–54-year-old males seeking help in emergency rooms for chronic effects of heroin dependence.

Heroin accounted for 34 percent of all primary drug admissions in Detroit/Wayne County and 13 percent of admissions statewide in FY 2001. In Detroit/Wayne County during FY 2001, heroin was reported as primary drug for 4,461 admissions, as secondary drug for 519 admissions, and as tertiary drug for 290 admissions. On a statewide basis, heroin was reported as the primary drug for 7,857 admissions, as secondary drug for 1,026 admissions, and as tertiary drug for 511 admissions. Statewide, heroin primary drug admissions in FY 2001 resided in 62 of Michigan's 83 counties.

Females accounted for 40 percent of both Detroit/Wayne County and statewide primary drug heroin admissions in FY 2001. Among Detroit/Wayne County heroin primary drug admissions in FY 2001, the largest age group was 45–54-year-olds (49 percent of all cases), while on a statewide basis this age group made up 38 percent of all heroin primary drug admissions. Fewer than 1 percent of heroin primary drug admissions were younger than 21 in Detroit/Wayne County and statewide.

In FY 2001, injecting was reported as the route of administration by 49 percent of primary drug heroin admissions in Detroit/Wayne County. Intranasal use was reported by 50 percent, and smoking accounted for the remaining 1 percent of these admissions. On a statewide basis, injecting was reported by 60 percent of heroin primary drug admissions,

while 37 percent reported intranasal use; 1.5 percent reported smoking.

Heroin deaths have been steadily increasing in Detroit/Wayne County since 1992 (exhibit 2). In 1996 there were 240 heroin-related deaths; by 2000 the annual number of such deaths nearly doubled. The 383 deaths with heroin metabolites present in 1999 reflect a 24-percent increase over 1998. During 2000, heroin deaths increased again by 23 percent over the 1999 total. During the first 9 months of 2001, there have been 368 heroin-present deaths; at this rate there will be about 490 such deaths by year end. The expected annual increase of heroin deaths in 2001 is 3.6 percent.

Findings of 6-monoacetylmorphine (or 6-AM, tested for since 1996 by the Wayne County ME lab) among decedents also parallel increases in heroin (morphine) positivity over time. About one-half of heroin decedents also were positive for this drug, which is reflective of the more acute effects of heroin use. There were 109 cases positive for 6-AM found between April and September 2001.

Since 1995, 5–10 percent of adult males and 9–24 percent of adult females in Detroit (relatively small samples likely impact year-to-year fluctuations) have tested positive for heroin metabolites (exhibit 3). In 1999, 9 percent of a sample of male arrestees in Detroit were found to be heroin positive, while in 2000 some 8 percent of a weighted sample of Wayne County male arrestees were found positive. Among females, in the 1999 sample of Detroit arrestees, 16 percent were found positive, while in 2000, 24 percent of the unweighted Wayne County female sample were found heroin-positive. In 2000 self-reported interview data from these samples, 7 percent of males and 13 percent of females reported use of heroin in the past 30 days.

Nearly all available heroin in Detroit continues to be white powder. South America (Colombia) remains the dominant source, although in the past year or so heroin samples originating from both Southeast Asia and the Middle East have been identified. Heroin from these latter two sources had not been very common since the mid-1990s. Heroin originating in Mexico is available in some parts of Michigan outside of the Detroit metropolitan area.

Heroin street prices have remained stable and relatively low in Detroit. Packets or hits available in Detroit are typically sold in \$10 units, while outside of this area individual units sometimes cost \$15. Bundles of 10 hits cost \$75–\$125.

The most recent information from the DEA indicates the average price per pure milligram in 2000 was \$1.07. Heroin purity, which had been increasing since the early 1990s to a peak of almost 50 percent in 1999, was about 20 percent in 2000 per preliminary DEA information.

### *Other Opiates*

Indicators for “other opiates” remain relatively low. Codeine and its prescription compounds (Schedule III and IV drugs) remain the most widely abused “other opiates,” although codeine indicators have been stable. Indicators of other opiate drugs, such as hydrocodone (Vicodin, Lortab, or Lorcet), carisoprodal (Soma), and oxycodone (OxyContin) have been increasing, but the numbers are still small.

Toxicology findings from the Wayne County ME lab show 126 cases of codeine positivity between April and September 2001, compared with 139 cases in the prior 6 months and 107 cases in the April–September 2000 period.

“Other opiates” were reported as primary drugs by 131 treatment admissions in FY 2001 in Detroit/Wayne County and by 1,633 admissions statewide. Statewide, 875 admissions reported “other opiates” as the secondary drug, and 457 admissions reported them as tertiary drug. More than one-half (55 percent) of the statewide admissions were females; 32 percent were age 36–44, 21 percent were age 30–35, and 19 percent were age 45–54.

Hydrocodone began to appear in southeast Michigan hospital ED drug mentions in 1994, with sharp increases in 1998 (175 mentions), 1999 (235 mentions), and 2000 (369 mentions) (exhibit 1). This drug was identified by the Wayne County ME lab in 60 decedents in 2000 and in 62 decedents in the first 9 months of 2001. Children’s Hospital of Michigan Poison Control reported 40 cases of intentional abuse of “other opiates” in 2001; about one-half were females, about one-half were age 30–40, 30 percent were younger than 20 years old, and 20 percent were age 20–30 years.

Carisoprodal was identified in 20 Wayne County decedents in 2000 and in 25 cases during the first 9 months of 2001.

In southeast Michigan, there were 24 DAWN ED oxycodone mentions in 2000 and none in prior years. However, oxycodone (OxyContin) abuse arrests have been increasingly reported by law enforcement agencies in western and northern lower Michigan. Michigan State Police reported 33 arrests during the first 9 months of 2001, with more than 400 pills involved. It has been reported that persons treated in some emergency rooms have asked specifically for this drug for various ailments. Pharmacy break-ins specifically seeking this drug have also been reported. Oxycodone was found in 10 decedents in Wayne County in 2000, and through the first 9 months of 2001 another 10 cases have been identified. Five oxycodone drug abuse cases were reported to Children’s Hospital of Michigan Poison Control between July and October 2001; four of these were female teens.

Methadone was found among 35 decedents in Wayne County between April and September 2001. In the past 2 years the Child Death Review Panel for Wayne County identified seven hospitalizations of young children due to accidental methadone ingestion. Treatment admissions data suggest that methadone diversion may be increasing statewide, with more people seeking treatment as a result of using methadone purchased illicitly. These admissions

are not included in the total “other opiate” admissions due to concerns about coding accuracy.

### *Marijuana*

Mexican marijuana continues to be the dominant type available, with indicators stable or increasing. Detroit metropolitan area ED data show a steady upward trend since 1990, with some fluctuations (exhibit 1). In 1999 the rate of marijuana mentions per 100,000 population was 95, while in 2000 it increased slightly to 99. Typical cases involved males age 20–25.

During FY 2001 in Detroit/Wayne County, marijuana accounted for 985 treatment admissions as primary drug, 1,579 admissions as secondary drug, and 1,240 admissions as tertiary drug. For this same period statewide there were 8,528 marijuana admissions as primary drug, 10,002 as secondary drug, and 3,420 as tertiary drug.

In FY 2001, more than one-quarter (26 percent) of the marijuana primary drug admissions in Detroit/Wayne County were under 21. Among statewide marijuana admissions for this same time period, 36 percent were under 21. Females represented 27 percent of statewide marijuana primary drug admissions and 31 percent of Detroit/Wayne County marijuana admissions for this same time period.

The percentages of Detroit adult arrestees testing positive for marijuana have been relatively stable since 1995 (exhibit 3). Between 1995 and 2000, 42–50 percent of adult males tested marijuana-positive, while the percentages for adult females ranged between 16 and 28 percent. In 1999, 48 percent of male arrestees tested positive. In 2000, 50 percent of the Wayne County weighted sample of male arrestees tested positive for marijuana. In 1999, 26 percent of Detroit female arrestees were found to be marijuana-positive. In 2000, 24 percent of the Wayne County unweighted sample of females were marijuana-positive. Almost one-half (49 percent) of the 2000 weighted arrestee male sample self-reported marijuana use in the past 30 days. In the 2000 unweighted sample of females, 33 percent self-reported using marijuana in the past 30 days.

The majority of marijuana seizures in Michigan originate in Mexico. Notable seizures include those by the Michigan State Police of more than 42,000 plants and a total of more than 15,000 pounds in the first 9 months of 2001. The DEA reported a large seizure of a trailer with more than 1,700 kilograms of marijuana.

### *Stimulants*

Indicator data show low but increasing levels of methamphetamine abuse in Michigan, mostly outside the Detroit metropolitan area.

Southeast Michigan ED methamphetamine mentions have declined to virtually none in 2000 (exhibit 1). Between 1992 and 1996 there were increases in amphetamine mentions, but they have declined since that period.

Methcathinone (cat), an easily manufactured stimulant, was identified in Michigan’s Upper Peninsula around 1990, and an epidemic ensued until about 1994 when no further labs were found and seized. A trickle of reported admissions to treatment involving this drug continues; there were nine primary methcathinone admissions statewide in FY 2000 and four in FY 2001.

During FY 2001, among statewide treatment admissions there were 277 primary drug stimulant admissions reported; 11 of these cases occurred in Detroit/Wayne County. This compares to 189 such admissions in FY 2000. Methamphetamine accounted for 60 percent of statewide primary stimulant admissions, followed by other amphetamines (39 percent) and methcathinone (1 percent). Among stimulant admissions, males were more likely to report methamphetamine (58 percent), while females were more likely to report other amphetamines (67 percent). Among methamphetamine admissions, 27 percent were age 30–35, followed by 19 percent in the 36–44 age group, and 15 percent among 21–25-year-olds. Among other amphetamine admissions, the top age group was 36–44-year-olds (25 percent), followed by 21–25-year-olds (18 percent), and 14–17-year-olds (17 percent).

During FY 2001 138 admissions reported methamphetamine as secondary drug, and 132 reported it as tertiary drug. Amphetamines were reported as secondary drug by 139 admissions and as tertiary drug by 127 admissions. There were five methcathinone admissions as a secondary drug and seven as a tertiary drug.

The 277 stimulant admissions in FY 2001 live in 52 of the 83 counties in Michigan (10 in Detroit/Wayne County), mostly in rural areas with more admissions in western and southern counties. Upper Peninsula residents accounted for 49 of these 277 stimulant admissions. During FY 2000, stimulant admissions lived in 36 different counties.

Mortality data from the Wayne County ME lab reported only two decedents positive for methamphetamine in the period from April to September 2001. Methamphetamine has not been found in drug tests of Detroit or Wayne County arrestee samples since the testing began.

Michigan’s border with Canada has been the focus of efforts to stop the flow of large amounts of pseudoephedrine and ephedrine entering the United States. These synthetic alkaloid substances (sold legally in over-the-counter medications) have been destined for the western part of the United States and are ingredients for making methamphetamine. Increasingly, these other ingredients used in making stimulant drugs are being used in clandestine labs around Michigan.

Michigan State Police reported seizing 40 methamphetamine labs in 2000 (all outside Detroit) compared with 14

labs in 1999. During the first 9 months of 2001, at least 72 labs have been seized; by the end of 2001 it is expected that about 100 labs will have been identified. At least three labs have been seized in the Upper Peninsula, where none were found in 2000. Environmental cleanups from these labs are an increasing issue. At least three labs exploded and burned so far in 2001.

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

### *Depressants*

All indicators are relatively stable for depressants.

Treatment admissions remain low in proportion to alcohol, cocaine, heroin, and marijuana. Depressant treatment admissions typically involve benzodiazepines or sedative/hypnotics. Barbiturates or tranquilizers are less often reported. Depressants are more often reported as secondary or tertiary drugs.

### *Hallucinogens*

Lysergic acid diethylamide (LSD) continues to be sporadically reported, and use remains relatively low. LSD is generally limited to high-school-age suburban and rural youth. Dose forms are primarily paper cutouts of various designs.

Hospital ED mentions for hallucinogens have been declining overall since about 1995 (exhibit 1).

During FY 2001 there were 77 hallucinogen admissions as primary drug statewide, with 8 of these cases involving phencyclidine (PCP). Males continue to dominate among admissions (3:1 ratio to females), and one-half of these admissions were under age 21.

### *Club Drugs*

Club drugs include ecstasy, gamma hydroxybutyrate (GHB), flunitrazepam (Rohypnol), and ketamine. Indicators are increasing for ecstasy and ketamine, while they are declining somewhat for GHB. There is no information from any source or indicator data to suggest flunitrazepam use is occurring in Michigan.

The drug known as ecstasy is typically methylenedioxyamphetamin (MDMA) or methylenedioxyamphetamine (MDA). Both drugs have been identified in lab testing of samples of ecstasy, sometimes in combination. There are many anecdotal reports of widespread and increasing use since about 1997, but these drugs rarely show up in traditional indicators identifying abuse.

Southeast Michigan ED drug mentions first began to reflect ecstasy in 1998, with six mentions. In 1999 there were 40 mentions, while in 2000 there were 60 ecstasy mentions reported (exhibit 1).

Children's Hospital of Michigan Poison Control received reports of 16 cases involving ecstasy between July and October 2001; cases were equally divided among males and females and ranged in age from 13 to 31 years of age.

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. 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 are western Europe or Canada, where it is reported that six labs were seized in Quebec or Ontario in 2000. Wholesale prices can be as low as \$10 a pill for quantities of 500 via Canada. Terms such as "jars" (quantities of 30B100 pills) and "buckets" (up to 1,000 pills) have emerged in the distribution chain. Customs seizures via airport and land seizures involving the border totaled 14,145 pills in 1998, 42,000 pills in 1999, 131,000 pills in 2000, and an estimated 400,000 ecstasy pills by the end of 2001. Users are typically college students or young professionals, often in dance settings. Urban areas outside Detroit noted as having significant ecstasy use are Kalamazoo (where a lab with reported potential to make ecstasy was seized), Battle Creek, and Grand Rapids, Michigan. It is not unusual for users to use other drugs while using ecstasy, including nitrous oxide. Some samples of ecstasy have been found to contain various other drugs; PCP has been one such combination.

Since 1998, there have been several indicators of increasing ketamine use. Break-ins to veterinary clinics have continued in efforts to obtain this drug. Children's Hospital of Michigan Poison Control Center was consulted on three cases of hospitalization involving ketamine during the first 6 months of 2001.

Michigan State Police arrested 15 individuals for ketamine during the first 9 months of 2001, and seized over 1,000 grams in powder form. In July 2001 the DEA arrested 3 individuals on their way to suburban Detroit from California with 21,600 vials of ketamine in liquid form, which weighed more than 2,100 pounds. This was the largest ketamine seizure to date by the DEA.

GHB and gamma butyrolactone (GBL) abuse began to be reported about 1997, with peaking in cases occurring

about 1999 in both ED mentions and Poison Control case reports. Use has been primarily in nightclubs and at private parties. ED mentions of GHB totaled 45 in 1999 and 22 in 2000 (exhibit 1). Children's Hospital of Michigan Poison Control case reports totaled 100 cases in 1999 and about 35 cases in 2000. In the first 10 months of 2001, Poison Control was notified of 13 GHB cases; most of these involved hospitalization. Nine of these 13 cases involved GHB abuse by males.

#### *Other Drugs*

Nitrous oxide continues to be reported as being used at private parties and dance venues; most often it is used in combination with a variety of other drugs, primarily ecstasy.

Inhalants continue to be reported as commonly used, mostly by teens and young adults.

Intentional abuse of Coricidin HBP (an over-the-counter cold and flu medicine) is increasing in case reports to Children's Hospital of Michigan. These tablets contain dextromethorphan. Multiple tablets are taken for a dissociate effect; use of up to 40 pills at a time has been reported. During 2000 there were 44 cases reported, while in the first 10 months of 2001 there have been at least 52 cases involving this drug. Most cases involved teens, and nearly two out of every three cases were males. About two of every three of these cases involved hospitalization.

Also noted by Poison Control were five cases of cough syrup abuse (also containing dextromethorphan) between July and October 2001. Four of these were 14–17-year-olds.

#### INFECTIOUS DISEASES RELATED TO DRUG ABUSE

As of July 1, 2001, a cumulative total of 11,577 cases of AIDS have been reported in Michigan. Only 2 of Michigan's 83 counties have no reported AIDS cases. Cases in Detroit/Wayne County account for 55 percent of Michigan's total cases.

Injecting drug users (IDUs) continue to account for 30 percent of total AIDS cases; 23 percent have only this risk factor and 7 percent have both injection drug use and male-to-male sex as risk factors.

Among cases reported currently living with AIDS or HIV, of the 7,804 males, 15 percent are IDUs and 7 percent are in the dual risk group.

Among the 2,289 females living with AIDS or HIV, 32 percent are IDUs, 40 percent were infected through heterosexual contact, and 25 percent have undetermined risk factors.

Michigan ranks 17th among all States with an AIDS case rate of 116.4 per 100,000 population.

Statewide HIV prevalence is now estimated at a maximum of 2,970 IDUs and 810 IDUs who also engage in male-to-male sex. The estimate for IDUs is a slight decrease over prevalence estimates for the prior 6 months, while the dual risk group estimate is unchanged from that earlier period. Total HIV prevalence remains at 13,500 cases.

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EPIDEMIOLOGIC TRENDS IN DRUG ABUSE

Exhibit 1. Estimated Number of Emergency Department Drug Mentions in the Seven-County Area of Southeast Michigan: 1990–2000

Mentions	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Alcohol-in-combination	4,307	5,683	7,313	9,449	7,220	8,379	9,087	7,984	7,992	7,199	8,447
Cocaine	3,888	5,919	6,939	8,991	7,964	8,767	10,435	8,093	8,617	7,699	7,880
Heroin/morphine	1,552	1,828	1,843	2,380	2,160	2,390	3,188	3,028	1,410	2,653	3,328
PCP/PCP combinations	14	19	33	57	26	56	21	19	20	24	21
LSD	33	44	42	91	99	143	57	74	27	63	*
Amphetamine	*	15	27	210	305	292	440	359	362	178	*
Methamphetamine/speed	24	29	10	24	17	*	*	*	0	*	*
Marijuana/hashish	589	807	1,487	2,716	2,955	3,875	4,210	3,746	2,007	4,100	4,344
GHB	-	-	-	-	*	0	*	*	11	45	22
MDMA (ecstasy)	-	-	-	-	*	0	0	*	6	40	60
Hydrocodone	-	-	-	-	89	129	159	155	175	235	369
Drug Episodes	11,527	14,327	15,777	19,169	17,653	18,626	20,796	17,604	17,477	16,125	17,042
Total drug mentions	19,102	24,377	28,378	35,715	31,633	34,192	38,952	32,487	32,582	30,207	32,740
Total ER visits (in 1,000s)	1,556	1,522	1,507	1,568	1,436	1,513	1,537	1,449	1,461	1,481	1,474
Drug episodes (rate/100,000)	293	361	393	472	432	451	498	417	409	374	388
Drug mentions (rate/100,000)	468	614	707	880	776	828	933	770	763	700	746

\* An estimate with a relative standard error greater than 50 percent has been suppressed.

SOURCE: SAMHSA, Drug Abuse Warning Network files

Exhibit 2. Positive Drug Toxicology Cases Independent of Cause of Death in Detroit/Wayne County: 1994–2001

Month	1994	1995	1996	1997	1998	1999	2000	2001
January								
Heroin	16	16	21	17	21	23	43	52
Cocaine	11	31	36	29	32	21	39	50
February								
Heroin	8	14	16	27	26	31	37	40
Cocaine	6	23	29	33	27	20	27	36
March								
Heroin	12	11	13	13	21	41	34	45
Cocaine	10	28	15	29	27	33	38	39
April								
Heroin	12	12	11	24	23	29	42	38
Cocaine	26	25	33	29	35	34	24	32
May								
Heroin	11	19	10	14	16	28	56	33
Cocaine	24	36	19	22	32	33	46	27
June								
Heroin	15	25	25	24	33	40	42	36
Cocaine	19	31	32	30	38	32	32	30
July								
Heroin	6	25	21	30	21	30	44	46
Cocaine	21	27	32	26	32	25	36	42
August								
Heroin	16	13	23	27	25	29	35	46
Cocaine	15	14	29	28	25	31	36	36
September								
Heroin	9	12	18	33	29	31	23	32
Cocaine	9	16	25	22	37	21	24	24
October								
Heroin	16	16	29	27	27	37	39	
Cocaine	40	29	34	32	33	35	26	
November								
Heroin	22	21	20	27	32	41	40	
Cocaine	37	29	28	28	32	32	35	
December								
Heroin	15	19	33	24	35	23	38	
Cocaine	33	28	37	36	35	25	33	
Total								
Heroin	151	203	240	287	308	383	473	
Cocaine	324	342	349	344	384	342	396	

SOURCE: Wayne County Medical Examiner's Office

EPIDEMIOLOGIC TRENDS IN DRUG ABUSE

Exhibit 3. Arrestee Drug Abuse Monitoring Data, Detroit Adult Urine Test Results by Percent: 1995–2000\*

Drug	1995	1996	1997	1998	1999	2000*
Heroin-Positive						
Males	6	7	5	7	9	8
Females	17	18	9	22	16	24
Cocaine-positive						
Males	30	27	23	28	27	24
Females	61	53	48	46	46	42
Marijuana-positive						
Males	42	46	44	47	48	50
Females	16	19	28	22	26	24

\* In year 2000, a revised sampling strategy was implemented to reflect Detroit/Wayne County representative sample; earlier samples were city of Detroit arrestees only. Results for 2000 are based on weighted sample for female arrestees.

SOURCE: National Institute of Justice

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## Illicit Drug Use in Honolulu and the State of Hawaii

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

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### ABSTRACT

*In Hawaii in 2000–2001, drug abuse patterns were relatively unchanged from 1999, except for crystal methamphetamine (“ice”). Crystal methamphetamine increased its impact on the State: treatment admissions, deaths, Honolulu Police cases, and neighbor island police cases increased. Prices of ice are down, supply is high, and the societal costs, in terms of violence and disruption of families and communities have continued. Ecstasy abuse has now been confirmed in the islands, with seizures by police and reports of deaths associated with the drug. Raves, in Waikiki and elsewhere on the islands, remain unregulated and unsupervised high-risk environments for youth.*

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### 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 26, 2001. No law enforcement data were available from Kauai, although a representative of the Kauai Narco-Vice Unit did attend the meeting.

### Area Description

The 2000 U.S. Census shows that the State’s current 1.2 million population is somewhat different from the population reported in the 1990 census. The major difference is in ethnicity. The 2000 census includes people with more than one ethnic identity. More than one-fifth (21.4 percent) of the population identified two or more ethnicities. While the population decreased in number in the latter part of the 1990s, it has shown a 9.3 percent increase more recently. The Tri-Isle county of Maui, Molokai, and Lanai had the greatest increases, at about 24 percent, followed by the “Big Island” (Hawaii) at just over 13 percent.

There is no distinct ethnic majority, but those identifying as “Asian” now constitute 41.6 percent of the State population. Whites account for 24.3 percent and Blacks for 1.8 percent. Hawaiians are separately identified in these census data but Part-Hawaiians are not. The percent of Hawaiians in the State is 9.1.

The Hawaii economy strengthened during the first two quarters of 2001. Overall, a modest increase in State revenues and GDP is predicted. There are concerns about the tourism industry as the economic “engine” for the State, especially Asian tourism. The economy of Japan remains sluggish, and the essential fiscal reforms are apparently not forthcoming.

The influence of the mainland United States and Asia has never been as great as during the first half of 2001. Past Asian purchases of businesses and property in Hawaii have resulted in many vacant properties in bankruptcy. Mainland purchasers in the last half-year continue the new investment trend that started in late 2000. For the local economy, this is not an unfamiliar situation. The goods and services produced in the State are controlled by offshore investors; the influence of those investors has not tended to be beneficial for local employment, wages, and benefits.

### Data Sources

Quantitative and qualitative data were compiled from participants in the October 26, 2001, Honolulu CEWG meeting.

Data from the following sources are for January–June 2001 except as noted otherwise:

Treatment data—Admissions and client demographic data were provided by the Hawaii State Department of Health, Alcohol and Drug Abuse Division (ADAD). Previous ADAD data are updated for this report whenever ADAD reviews its records. These data represent all State-supported treatment facilities (95 percent of all facilities). About 5 percent of the programs and two large private treatment facilities do not provide data. During this reporting period, approximately 45 percent of the treatment admissions were paid for by ADAD; the remainder were covered by State health insurance agencies or by private insurance.

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Mortality data—This information was provided by the Honolulu City and County Medical Examiner (ME) Office. The data are based on toxicology screens performed by the ME Office on bodies brought to them for examination. The circumstances that would lead to a body being examined are cases of unattended deaths, death by suspicious cause, and clear drug-related deaths. While the ME data are consistent, they are not comprehensive and account for only about one-third of all deaths on Oahu.

Availability, price, and purity data—These data were provided by the Honolulu Narcotics Division and the Drug Enforcement Agency. These data are updated for discrepancies whenever possible.

Law enforcement data—Data are usually provided by the Vice Divisions of the Honolulu, Maui, Hawaii, and Kauai Police Departments. These data are updated whenever possible to include cases that had occurred during a previous period but were then under investigation. No current data were received from the Kauai Police Department but information was presented on Kauai for the CEWG members.

Acquired immunodeficiency syndrome (AIDS) data—The Department of Health provided data on newly reported AIDS cases.

## DRUG ABUSE TRENDS

Indicators reflect substance abuse patterns and trends in the State of Hawaii. Although much of the drug activity involves alcohol and tobacco, and marijuana use is historically endemic to the area, crystal methamphetamine is the most devastating and serious of all drugs in the State. The number of methamphetamine abusers arrested, the number entering treatment, and the number dying has increased from previous years.

Hawaiians and Whites continue to be the majority 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 2001, 40.1 percent of the admissions were Hawaiian and 27.3 percent were White. This represents an increase in Hawaiians and a decrease in Whites.

Among treatment admissions, methamphetamine (31.7 percent) was the leading primary substance of abuse behind alcohol (35.1 percent). However, it is important to note that almost all polydrug treatment admissions list alcohol as the primary substance of abuse. Marijuana remains the third (19.0 percent) most frequently reported primary substance among treatment admissions. The 25–34 and 35–44-year-old age groups had the highest representation among treatment admissions. Marijuana abuse accounts for the majority of treatment admissions among those younger than 18.

Drug prices in Honolulu remain stable or slightly lower because of the relatively stable drug supply. This makes access to drugs much easier for abusers. Prices for major drugs in the first half of 2001 are shown in exhibit 1. The Big Island of Hawaii shows no change in terms of the concerns of county vice and narcotics officials. Mexican nationals continue to import black tar heroin and maintain their diversified product line, which also includes cocaine, amphetamine, and crystal methamphetamine.

Ice continues to dominate the Hawaiian drug market. Prices have decreased throughout the reporting period, indicating that more ice is available on the street. It is now easier to purchase larger quantities than in the past. In addition, police closed four clandestine labs (almost exclusively reprocessing labs).

Because of weak airport security 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. Inter-island flights from the neighbor islands are being used again because of reduced security.

The mainland supply chain is the main source of the precursor chemicals used in reprocessing crystal methamphetamine. Thus, there is less use of clandestine labs to produce the drug. Purity of ice in Hawaii approaches 100 percent. During the reporting period, more than 7.5 liters of liquid methamphetamine and 18.25 kilograms of ice were seized. The Hawaii DEA continues its efforts to break the supply of chemicals from California needed to operate Hawaii’s ice labs.

The Big Island’s “Operation Green Harvest” was restored. The Big Island Police worked with the National Guard to eradicate marijuana plants. The effort was organized to destroy the plants rather than to seek interdiction directly. More than 55,000 plants were seized in the Hilo area alone. Oahu efforts during this period netted 39,035 plants.

In the following sections, data are presented as annualized charts. In examining the police activity data exhibits, all neighbor island data have been combined and titled “neighbor island” because of inconsistencies in data reporting from police departments. These data should be seen as preliminary. The reports from the Honolulu Police Department (HPD) are more consistent.

### *Cocaine and Crack*

Admissions for cocaine use were relatively stable between 1996 and 1999, but are now decreasing (exhibit 2). In 2000, there were 550 treatment admissions identifying cocaine as their primary drug of abuse. This represents a 16-percent reduction from 1999. For the first half of 2001, ADAD reported 219 primary cocaine/crack admissions, which suggests a further reduction in cocaine treatment admissions. Current cocaine and crack use rank fourth among primary drugs of treatment admissions, behind methamphetamine, alcohol, and marijuana.

Over the past 6 years, the Honolulu ME has consistently reported between 22 and 32 deaths per year, based on cocaine-positive toxicology screens (exhibit 2). Data for the first half of 2001 suggest an annual number of decedents in the range of 15, a marked reduction.

According to the HPD, cocaine prices have not changed appreciably for nearly 3 years. Powder cocaine prices have stabilized throughout the State, at \$100–\$250 per gram, \$1,000–\$1,500 per ounce, and \$24,000 per kilogram (exhibit 1). Purity levels remain lower for smaller quantities (20–50 percent per gram) and increase with quantity purchases (>90 percent per pound). For larger amounts of cocaine, prices and purity tend to be stable. The DEA does not regularly test the purity of drugs from Hawaii, so the data presented here are from local laboratory analyses.

The number of HPD cocaine cases has continued to decline during the current reporting period. The rate has been decreasing over the past 4 years. This half-year period is no exception to that trend and is projected to show a 10-percent decrease in the number of cases over the previous year (exhibit 3). Data are from all neighbor islands except Kauai, and numbers slightly exceed those reported by the HPD.

### *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 extremely rare and very difficult to obtain. Purity levels remain fairly high for “black tar” (67 percent). According to the HPD, heroin prices are now stable in Honolulu, at \$50–\$75 per quarter gram, \$150–\$200 per gram, and \$2,500–\$3,500 per ounce.

Heroin treatment admissions decreased again for the first half of 2001. There were 521 admissions in 1998, 487 in 1999, 441 in 2000, and a projected 340 for 2001 (based on 170 in the first half of 2001). Heroin treatment admissions peaked in 1998 (exhibit 4).

The Honolulu ME reported that deaths in which heroin was detected will likely be lower for 2001. There were 9 ME cases involving heroin during the first 6 months of 2001.

Honolulu police reported a continual decline in the number of heroin cases. In the first half of 2001, there were only 17 cases. If the numbers hold for the rest of 2001, Honolulu will have the smallest number of heroin cases since reporting began in 1991 (exhibit 5). Neighbor island police reported 39 heroin cases during the first half of 2001, about the same as in the previous year, if the rate of heroin cases remains stable throughout 2001.

### *Marijuana*

Statewide, marijuana treatment admissions are currently the highest in the 10 years recorded by the Hawaii CEWG. There were 1,443 admissions for marijuana treatment in 2000, and 743 in the first half of 2001, suggesting the 2001 total that will exceed that of 2000 (exhibit 6). In examining these treatment data, it is important to remember that the number of persons in treatment for marijuana use has tripled since 1992. It is also important to note that while marijuana is listed as the primary drug of abuse, many of these admissions also used other substances. Most of these admissions are young adults and adolescents.

The Honolulu ME reports that over the past 5 years there have been 15 to 20 deaths per year in which marijuana is found in specimens submitted for toxicology screening. In 2000, that number increased to 25. In the first half of 2001, the number of decedents with marijuana identified through toxicological examination was 19, suggesting a much higher annual number of 38.

There have been several seizures of marijuana over the past few months. Marijuana prices have increased, according to the Honolulu Vice/Narcotics Divisions, at \$5–\$20 per joint, \$100–\$200 per quarter ounce (based on quality), \$300–\$500 per ounce of low quality marijuana, \$400–\$800 per ounce for higher quality, and \$6,000–\$9,000 per pound (exhibit 1). As yet, there is no sign of blunt use.

Honolulu police continue to monitor, but do not specifically report, case data for marijuana. Possession cases are steady at about 650 per year; however, distribution cases continue 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 (exhibit 7). During the first half of 2001, nearly 40,000 plants were confiscated in addition to about 10 kilograms of dried marijuana.

### *Methamphetamine*

In spite of the dramatic problems with “ice” in terms of disrupting life on the islands, little if any notice was

taken of the problems at the latest session of the legislature. Child Protective Service caseloads are swollen by family violence reports, the police are in a constant state of vigilance regarding potential ice-related violence, and hospitals and emergency services personnel are well aware of the gravity of the situation. California-based Mexican trafficking groups capitalize on Hawaii's cultural diversity to facilitate smuggling and distribution of methamphetamine to and within the islands. Analysis of confiscated methamphetamine continues to reveal that the product is still a high-quality *d*-methamphetamine hydrochloride in the 90–100 percent purity range.

Primary methamphetamine treatment admissions remained extremely high during the first half of 2001, exceeded only by those for alcohol. There were 1,241 primary methamphetamine treatment admissions during the first half of 2001, suggesting the annual admissions will be higher than those in the previous year (2,419). As exhibit 8 shows, the rate of increase for methamphetamine treatment has been geometric and not linear over the past decade. Treatment demand has far outstripped the treatment system's capacity. People seeking treatment would not be likely to receive it in a timely manner.

The Honolulu crystal methamphetamine ME mentions have remained between 25 and 35 cases per year for the past 7 years. The number in 2001 may increase if the rate during the first half of 2001 data (26 deaths) continues through the rest of the year.

Crystal methamphetamine prices have decreased. "Ice" is sold in the islands as "clear" (a cleaner, white form) or "wash" (a brownish, less processed form). Prices for ice vary widely for these two forms of the drug, as illustrated by prices on Oahu: \$50 (wash) or \$75 (clear) per quarter gram; \$100 (wash) or \$200 (clear) per gram; \$250–400 per quarter ounce; \$2,200–3,000 per ounce. Other price data appear in exhibit 1.

HPD methamphetamine case data (exhibit 9) show increased activity, with 348 cases in the first 6 months of 2001. That projects to about 700 cases for the year if the current case rate continues. Neighbor island data (except Kauai) also show an increase in cases, at 706 in 2000, compared with 342 in 1999.

### *Depressants*

ADAD maintains admissions data on three categories of depressants: benzodiazepines, other tranquilizers, and barbiturates. There were only two primary admissions for depressant abuse in the first half of 2001 and three in 2000 (exhibit 10).

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

The HPD has not reported depressant case data since 1991. Neighbor island police report fewer than 15 cases per year since 1996 (exhibit 11).

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

### *Hallucinogens*

Primary hallucinogen treatment admissions continued to be less than five per year since 1998 (exhibit 12). No hallucinogen ME mentions have been reported since data collection began for the CEWG.

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

In 2001, no hallucinogen case data were generated by HPD, although neighbor island police reported 18 cases in 2000 (exhibit 12).

### AIDS

As shown in exhibit 14a, the rates of AIDS peaked at 34 per 100,000 population in 1993 and dropped to 9 in 2000. More than two-thirds of the cases were attributed to men having sex with men (MSM), 7 percent involved injection drug use only, and 4 percent were categorized in the dual MSM/IDU exposure category (exhibit 14b). In the first half of 2001, 35 new cases of AIDS were reported in Hawaii (exhibit 14c). The majority, again, were classified in the MSM exposure category (61 percent), with 6 percent attributed to injection drug use, and 4 percent to MSM/IDU.

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EPIDEMIOLOGIC TRENDS IN DRUG ABUSE

Exhibit 1. Drug Prices in Honolulu: January-June 2001

Drug/Price	Heroin	Cocaine	Ice	Marijuana
Paper	\$50-\$75	\$25-\$35	\$50 per quarter gram	\$5-\$20/joint
Gram	\$150-\$200	\$100-\$250	\$100-\$200	\$25
Quarter Once	\$750	\$400	\$250-\$400	\$100-\$200
1 Ounce	\$2,500-\$3,500	\$1,000-\$1,500	\$2,220-\$3,000	\$400-\$800
1 Pound	N/A	\$24,000	\$30,000	\$6,000-\$9,000
1 Kilogram	N/A	\$26,500-\$52,000	\$50,000-\$70,000	N/A

SOURCE: Honolulu Police Department, Narcotics Vice Division

Exhibit 2. Hawaii Cocaine Use Indicators: 1991-2001\*

Year	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001*
Oahu Deaths	15	30	21	38	23	32	23	29	24	22	7
Treatment Admissions	162	291	422	531	560	662	647	662	656	550	219

\* Partial year data (01/01/01-06/30/01)

SOURCES: Honolulu City and County Medical Examiner Office and Department of Health, Hawaii

Exhibit 3. Hawaii Cocaine Cases: 1991-2001\*

Year	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001*
Honolulu	316	648	613	901	1,056	1,218	1,045	874	385	225	102
Neighbor Island	735	553	210	639	474	528	468	345	384	283	108

\* Partial year data (01/01/01-06/30/01)

SOURCE: Department of Health, Hawaii

Exhibit 4. Hawaii Heroin Use Indicators: 1991-2001\*

Year	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001*
Oahu Deaths	14	12	22	40	40	34	22	20	24	22	9
Treatment Admissions	134	209	190	236	416	346	330	521	487	441	170

\* Partial year data (01/01/01-06/30/01)

SOURCE: Honolulu City and County Medical Examiner and Department of Health, Hawaii

Exhibit 5. Hawaii Heroin Cases: 1991-2001\*

Year	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001*
Honolulu			43	35	54	49	39	87	86	74	17
Neighbor Island	87	56	46	107	120	148	61	95	99	77	39

\* Partial year data (01/01/01-06/30/01)

SOURCE: Department of Health, Hawaii

EPIDEMIOLOGIC TRENDS IN DRUG ABUSE

**Exhibit 6. Hawaii Marijuana Use Indicators: 1991-2001\***

Year	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001*
Oahu Deaths	1	8	6	12	17	19	20	15	21	25	19
Treatment Admissions	249	489	642	565	414	948	1,132	1,301	1,418	1,443	743

\* Partial year data (01/01/01-06/30/01)

SOURCE: Honolulu City and County Medical Examiner and Department of Health, Hawaii

**Exhibit 7. Hawaii Marijuana Cases: 1991-2001\***

Year	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001*
Honolulu	608	370	234	492	569			92	205	173	
Neighbor Island	673	477	550	1,240	1,087	1,365	1,210	1,065	1,914	1,599	645

\* Partial year data (01/01/01-06/30/01)

SOURCE: Department of Health, Hawaii

**Exhibit 8. Hawaii Methamphetamine Use Indicators: 1991-2001\***

Year	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001*
Oahu Deaths	11	20	14	36	39	24	36	27	34	35	26
Treatment Admissions	152	268	454	628	1,008	909	1,478	1,450	1,922	2,419	1,241

\* Partial year data (01/01/01-06/30/01)

SOURCE: Honolulu City and County Medical Examiner and Department of Health, Hawaii

**Exhibit 9. Hawaii Methamphetamine Cases: 1991-2001\***

Year	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001*
Honolulu	260	434	915	589	984	502	742	602	583	699	348
Neighbor Island	85	46	86	177	254	352	425	385	342	706	348

\* Partial year data (01/01/01-06/30/01)

SOURCE: Department of Health, Hawaii

**Exhibit 10. Hawaii Barbituate Use Indicators: 1991-2001\***

Year	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001*
Oahu Deaths	12	25	22	6	3	1	9	2	6	1	2
Treatment Admissions	8	6	8	6	6	22	12	5	3	2	

\* Partial year data (01/01/01-06/30/01)

SOURCE: Honolulu City and County Medical Examiner and Department of Health, Hawaii

**Exhibit 11. Hawaii Barbituate Cases: 1991-2001\***

EPIDEMIOLOGIC TRENDS IN DRUG ABUSE

Year	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001*
Honolulu	0	0	0	0	0	0	0	5	0	0	0
Neighbor Island	22	13	16	14	16	30	7	12	12	17	0

\* Partial year data (01/01/01–06/30/01)

SOURCE: Department of Health, Hawaii

**Exhibit 12. Hawaii Hallucenogen Use Indicators: 1991-2001\***

Year	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001*
Oahu Deaths	0	0	0	0	0	0	0	0	0	0	0
Treatment Admissions	4	10	12	9	12	7	9	3	2	4	3

\* Partial year data (01/01/01–06/30/01)

SOURCE: Honolulu City and County Medical Examiner and Department of Health, Hawaii

**Exhibit 13. Hawaii Hallucinogen Cases: 1991-2001\***

Year	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001*
Honolulu	1	4	5	11	0	0	0	0	0	0	0
Neighbor Island	35	12	8	11	10	5	3	4	4	4	0

\* Partial year data (01/01/01–06/30/01)

SOURCE: Department of Health, Hawaii

**Exhibit 14a. Rates of AIDS Cases per 100,000 Reported in Hawaii: 1982–2000**

1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	
9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	0	
8	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	0	
2	3	4	5	6	7	8	8	9	0	1	2	3	4	5	6	7	8	9	0
0	1	1	2	5	7	1	1	1	1	1	3	2	2	2	6	8	1	8	9
						0	7	3	8	2	4	1	0	.	2	.	7	.	9

n = 2,468

SOURCE: Department of Health, Hawaii

**Exhibit 14b. AIDS Cases by Risk and Percent: 1993–2000**

MSM	IDU	MSM/IDU	Heterosexual	Transfusion	Hemophiliac	Others	Undetermined
68	7	4	8	1	0	0	12

SOURCE: Department of Health, Hawaii

**Exhibit 14c. AIDS Cases by Risk and Percent: 2001**

MSM	IDU	MSM/IDU	Heterosexual	Transfusion	Hemophiliac	Others	Undetermined
61	6	4	11	1	0	1	16

n = 35

SOURCE: Department of Health, Hawaii