



# **EPIDEMIOLOGIC TRENDS IN DRUG ABUSE**

**Proceedings of the Community  
Epidemiology Work Group**

**Volume II**

**June 2007**



NATIONAL INSTITUTE ON DRUG ABUSE



COMMUNITY EPIDEMIOLOGY WORK GROUP

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June 2007

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES  
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and Prevention Research  
National Institute on Drug Abuse  
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This publication, *Epidemiologic Trends in Drug Abuse, Volume II*, contains the individual papers presented and data reported at the June 2007 CEWG

meeting by representatives from 22 areas in the United States. This publication also includes a paper by a researcher on drug abuse among migrant workers in Pennsylvania, and papers by researchers from Mexico and the Netherlands.

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## Foreword

This publication includes papers presented at the 62nd semiannual meeting of the Community Epidemiology Work Group (CEWG) held in Philadelphia, Pennsylvania, on June 13–15, 2007, under the sponsorship of the National Institute on Drug Abuse (NIDA).

For the June 2007 meeting, CEWG representatives from 22 areas across the Nation prepared 2006 calendar year and/or fiscal year data on patterns and trends in drug abuse in their areas, which were included in their meeting presentations and in their papers contained in this publication. Also included in this publication are findings from a NIDA-supported ethnographic study of drug use among migrant workers in Pennsylvania. Other presentations contained in this publication focus on drug abuse patterns and trends in Mexico (including trends along the U.S.-Mexico border) and the Netherlands, as presented by researchers from those countries. The roles and functions of the CEWG are summarized in the next section.

The information published after each CEWG meeting represents findings from CEWG area representatives across the Nation, which are supplemented by national data and by special presentations at each meeting. Publications are disseminated to drug abuse prevention and treatment agencies, public health officials, researchers, and policymakers. The information is intended to alert authorities at the local, State, regional, and national levels, and the general public, to current conditions and potential problems so that appropriate and timely action can be taken. Researchers also use the information to develop research hypotheses that might explain social, behavioral, and biological issues related to drug abuse.

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# The CEWG Network: Roles, Functions, and Data Sources

The CEWG is a unique epidemiology network that has functioned for 31 years as a drug abuse surveillance system to identify and assess current and emerging drug abuse patterns, trends, and issues, using multiple sources of information. The 22 geographic areas represented at the June 2007 CEWG meeting are depicted in the map below.

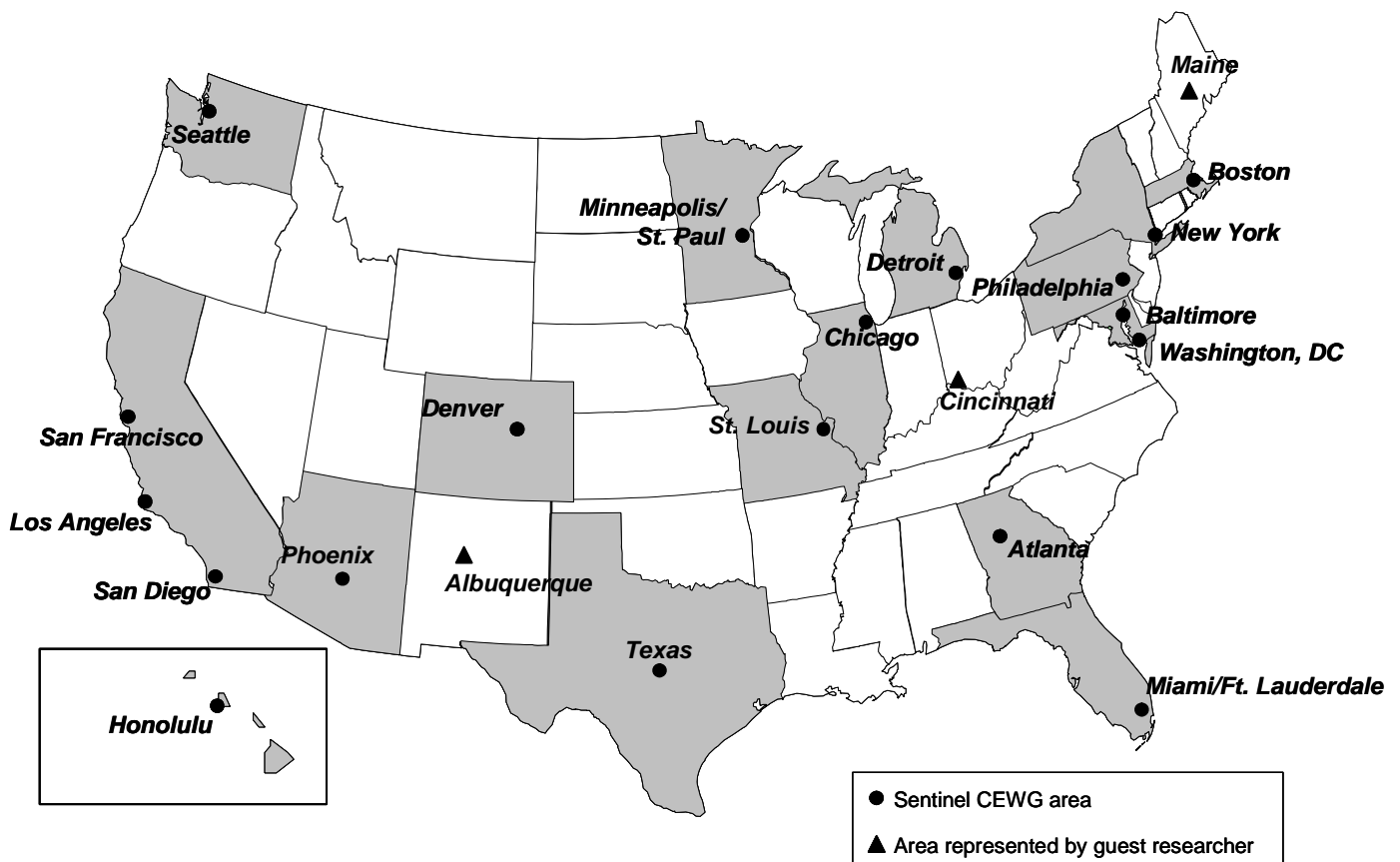
Each data source used by the CEWG provides information about the abuse of particular drugs, drug-using populations, and/or different facets of the behaviors and outcomes related to drug abuse. The information obtained from each source is considered a drug abuse *indicator*. Typically, indicators do not provide estimates of the number (prevalence) of drug abusers at any given time or the rate at which drug-abusing populations may be increasing or decreasing in size. However, indicators do help to characterize drug abuse trends and different types of drug abusers, such as those who have been treated in emergency rooms, have been admitted to drug treatment programs, or have died with drugs found in their bodies. Data on items submitted for forensic chemical analysis serve as indicators on availability of different substances and engagement of law enforcement at the local level, and data such as drug price and purity are indicators of availability, accessibility,

and potency of specific drugs. Drug abuse indicators are examined over time to monitor the nature and extent of drug abuse and associated problems within and across geographic areas.

Interactive semiannual meetings are a major and distinguishing feature of the CEWG. CEWG representatives and guest researchers present information on drug abuse patterns and trends in their areas through formal presentations, using slides to present graphic data. Time is set aside for question and answer periods and discussion sessions. The meetings provide a foundation for continuity in the monitoring and surveillance of current and emerging drug problems and related health and social consequences.

Through the meetings, the CEWG accomplishes the following:

- Dissemination of the most up-to-date information on drug abuse patterns and trends in each CEWG area
- Identification of changing drug abuse patterns and trends within and across CEWG areas
- Planning for followup on identified problems and emerging drug abuse problems



Time at each meeting is devoted to presentations by invited speakers. These special sessions typically focus on the following:

- Presentations by researchers in the CEWG host city
- Presentations by a panel of experts on a current or emerging drug problem identified in prior CEWG meetings
- Updates by Federal personnel on key data sets used by CEWG representatives
- Drug abuse patterns and trends in other countries
- Presentations by other speakers knowledgeable in the selected topic area

The primary data sources used by the CEWG and cited in this report include the following:

- **Treatment data** from State and local sources
- **Drug Abuse Warning Network (DAWN) emergency department (ED) data** for five

CEWG areas were accessed through DAWN *Live!*, a restricted-access online service administered by the Office of Applied Studies (OAS), Substance Abuse and Mental Health Services Administration (SAMHSA).

- **Local drug-related mortality data** from medical examiners/coroners (ME/Cs)
- **Forensic laboratory data** provided by National Forensic Laboratory Information System (NFLIS), Drug Enforcement Administration (DEA) for 20 metropolitan CEWG areas, or in three areas, State or local forensic labs that report to NFLIS
- **Other data sources** including local law enforcement (e.g., data on drug arrests); local DEA offices; High Intensity Drug Trafficking (HIDTA) reports; poison control centers; Help-lines; local and State surveys; and key informants, focus groups, and ethnographers

EPIDEMIOLOGY  
OF  
DRUG  
ABUSE:

CEWG  
AREA  
PAPERS



# Drug Abuse Patterns and Trends in Albuquerque and New Mexico

Nina Shah, M.S.<sup>1</sup>

## ABSTRACT

*Marijuana is the most widely available and commonly used illicit drug in New Mexico, especially among teenagers, though heroin is the most significant drug threat in New Mexico in terms of abuse. Interestingly, the drug class of prescription opioids (i.e., methadone, oxycodone, hydrocodone, propoxyphene, fentanyl) caused the most unintentional overdose deaths in 2006, followed by heroin, cocaine, and drug/alcohol combinations. For illicit drugs, the overdose death rate from heroin decreased 21 percent from 6.7 per 100,000 in 2005 to 5.3 per 100,000 population in 2006, while cocaine (5.6 per 100,000 in 2005 and 5.7 per 100,000 in 2006) and methamphetamine death rates (1.8 per 100,000 in 2005 and 1.7 per 100,000 in 2006) remained relatively unchanged. For prescription drugs, the overdose death rate from methadone increased 33 percent from 1.8 per 100,000 population in 2005 to 2.4 per 100,000 in 2006; overdose deaths from opioids other than methadone increased 14 percent from 4.3 per 100,000 in 2005 to 4.9 per 100,000 in 2006; tranquilizer/muscle relaxant overdoses remained stable (3.3 per 100,000 in 2005 and 3.2 per 100,000 in 2006); and overdoses from antidepressants decreased 18 percent from 1.7 per 100,000 in 2005 to 1.4 per 100,000 in 2006. The heroin and cocaine overdose death rates are highest among Hispanics in New Mexico, yet prescription opioid overdose deaths have sharply increased among Whites (non-Hispanic) in the past few years. Consequently, racial disparity for total drug overdose death is diminishing. Compared with the rest of the State, decedents residing in Albuquerque (Bernalillo County) were more likely to die from heroin (rate ratio [RR]=2.8), cocaine (RR=2.3), methadone (RR=2.6), and drug/alcohol combination overdose (RR=2.1) during 2004–2006. The burden from methamphetamine abuse is highest in the southeast and northwest regions of the State according to indicator data; resources to combat methamphetamine abuse are targeted to these localized areas and Albuquerque. The number of methamphetamine lab*

*incidents is declining, while most methamphetamine seized in 2006 was produced in Mexico. Items collected and analyzed by Albuquerque forensic labs during the first quarter of 2007 were largely cocaine (34 percent) and marijuana (30 percent); it is noted that the proportion of methamphetamine lab tests increased from 16 percent in 2006 to 24 percent in the first quarter of 2007. Rates of HIV infection remain low among IDUs because heroin-using networks are often familial and relatively static. Overall, 20 percent of 3,257 living HIV/AIDS cases in New Mexico have been identified with the risk factors of injection drug use or homosexual sex and injection drug use. Surveillance efforts have determined HCV infection status for one-third of people living with HIV/AIDS in the State. In 2006, 80 percent of IDUs living with HIV/HCV co-infection were male; 48 percent were White (non-Hispanic) and 37 percent were Hispanic. Forty-two percent were between ages 30 and 39, and 31 percent resided in the Albuquerque area. Data from the 2005 New Mexico Youth Risk and Resiliency Survey showed that high school students in the Albuquerque area, compared with students nationally (YRBS), reported higher prevalence of marijuana (30.5 vs. 20.2 percent) and cocaine use (9.4 vs. 3.4 percent) in the past month and of ever injecting an illicit drug (5.5 vs. 2.1 percent). Four percent of these students reported heroin use, 5.7 percent reported methamphetamine use, and 8.0 percent reported inhalant use in the past month. Drug use prevalence among these students was similar to high school students in New Mexico overall.*

## INTRODUCTION

The task of assessing and monitoring drug use patterns and trends has become increasingly more challenging in recent years. This report has been generated for the Community Epidemiology Work Group (CEWG) supported by the National Institute on Drug Abuse. The CEWG is an epidemiology network surveillance system designed to identify and assess current and emerging drug use trends. This report focuses on the most recent data and information available from the Albuquerque area (Bernalillo County) and statewide. Indicator data will also be described according to New Mexico Health and Human Services Planning Regions, shown in exhibit 1.

Drug abuse indicators show that the drug abuse problem in New Mexico is widespread, and they point to a need to develop the capacity to assess and monitor drug abuse and its consequences throughout the State. This problem needs to be understood and

<sup>1</sup>The author is affiliated with the Epidemiology and Response Division of the New Mexico Department of Health in Santa Fe, New Mexico.

addressed from a public health perspective, and ongoing surveillance of the problem is required. Functioning epidemiologic work groups can assist local communities and States by providing up-to-date information on drug use patterns and trends. Such information can provide the base of evidence needed by planners, policymakers, and providers to make informed decisions and develop appropriate intervention strategies throughout the State.

### Area Description

In general, New Mexico has had the highest drug-related death rate in the Nation since 1989; however, in 2004, New Mexico ranked third following West Virginia and Utah. New Mexico is a diverse population of 1.97 million. The demographics are as follows: 49 percent are male and 51 percent are female; 43 percent are White (non-Hispanic), 41 percent are Hispanic, 11 percent are American Indian, 3 percent are Black, and 2 percent are Asian or Pacific Islander. The median age is 36.2; 26 percent of the population are younger than 18, and 12 percent are 65 and older. There are four Metropolitan Statistical Areas in the State: Albuquerque, Santa Fe, Las Cruces, and Farmington. The Albuquerque area, which is defined as Bernalillo County for the purpose of this report, is the largest urban center, with roughly 615,000 residents and a similar gender and racial/ethnic breakdown as the State.

In 2005, the median income for households in New Mexico was roughly \$37,500. Nineteen percent of the New Mexico population were in poverty. Twenty-six percent of related children younger than 18 lived below the poverty level, compared with 13 percent of people 65 and older. Fourteen percent of all families and 36 percent of families with a female head of household and no husband present had incomes below the poverty level. The proportions of persons living 150 percent below poverty for the Albuquerque area and New Mexico were 24 percent and 31 percent, respectively. Overall in 2006, the unemployment rate in the Albuquerque area was 3.9 percent, compared with 4.2 percent in New Mexico and 4.6 percent in the Nation.

There are 180 miles of land along the U.S.-Mexico border, generally open desert and uninhabited with numerous roads, trails, footpaths, and ranches. Although one of the largest States geographically, the New Mexico population per square mile of land is 15.9, compared with 83.8 for the Nation. A sizable proportion of the State is sparsely populated, and 12 of 33 counties are considered rural/frontier, according to the 2003 Office of Management and Budget classification for statistical areas. On average, these

rural counties have less than three persons per square mile of land. Given this character, law enforcement intelligence suggests that drug traffickers make use of the vast geography and tribal land for transit and refuge.

### Data Sources

Information for this report was gathered from the sources shown below:

- **Mortality data** were provided by the New Mexico Office of the Medical Investigator (OMI). The OMI is authorized to investigate all deaths in New Mexico that are sudden, unexplained, suspicious, violent, or unattended, with the exception of those that occur on Federal or tribal jurisdictions. However, the OMI is often contracted to investigate some of those deaths as well. For all deaths suspected of being caused by the effect of drugs or poisons, a full autopsy is carried out, samples are screened for drugs of abuse, and those with positive results are confirmed with additional tests. When individuals die from toxic substances after a period of hospitalization, the OMI procures antemortem specimens, if available, from the health care facility for toxicological testing. Classification for cause of death is determined by board-certified forensic pathologists and is not simply a determination of the presence or absence of a drug in a toxicologic screen. The diagnosis of a drug overdose death is dependent on the autopsy, circumstances of death, scene investigation, medical records, and blood concentration levels of one or more drugs, either with or without alcohol, as determined by the pathologist. Pathologists also classify manner of death based on information from the full medicolegal investigation.
- **Crime lab data** for the Albuquerque area were collected by the Albuquerque Police Department ( $n=940$  in 2006;  $n=251$  in January–March 2007) and sent to the National Forensic Laboratory Information System (NFLIS).
- **Drug intelligence and retail price data** were obtained from the Drug Enforcement Administration (DEA), High Intensity Drug Trafficking Area (HIDTA), and National Drug Intelligence Center (NDIC; National Illicit Drug Prices, February 2007).
- **Youth survey data** were from the 2005 New Mexico Youth Risk and Resiliency Survey (YRRS). The YRRS is a school-based survey of

9th–12th graders attending public school in New Mexico. The survey questions are derived from the Youth Risk Behavior Survey (YRBS), Centers for Disease Control and Prevention. The New Mexico YRRS includes additional questions on protective factors and resiliency.

- **Data on infectious diseases related to drug use and injection drug use trends**, including the human immunodeficiency virus (HIV), acquired immunodeficiency syndrome (AIDS), and hepatitis, were provided by the HIV & Hepatitis Epidemiology Program, New Mexico Department of Health (NMDOH), and the Harm Reduction Program, NMDOH (2006).

### Policy

In 2007, New Mexico Governor Bill Richardson signed the “911 Good Samaritan” bill, which provides limited immunity from prosecution for individuals who call 911 to get help for a drug overdose victim. The law, first of its kind in the Nation, shields overdose victims, friends, and family members from drug-possession charges when police or emergency personnel respond to a 911 call reporting an overdose. This is an innovative strategy that educates drug users about harm reduction, thus encouraging families and friends of drug users to activate emergency medical services in the event of an overdose. The 911 overdose bill had its origins in a 2001 law that allowed drug users and their families, as well as police and emergency personnel, to administer naloxone to prevent heroin overdose death.

New Mexico has also been one of a few States to implement brief interventions and screenings for addiction in healthcare facilities and is considered a national model for the strategic prevention framework process, which seeks to improve prevention effectiveness and accountability. Also in early 2007, a medical marijuana bill passed into law. Briefly, the bill allows residents to use marijuana for medical purposes to treat pain from certain illnesses and other symptoms of diseases (cancer, epilepsy, multiple sclerosis, HIV/AIDS, and spinal-cord injuries) if approved by their own physician and a physician’s advisory board.

### DRUG ABUSE PATTERNS AND TRENDS

#### Cocaine/Crack

Cocaine use is a growing problem among New Mexicans, causing more unintentional overdose deaths than heroin in 2006. Even so, statewide

cocaine overdose deaths remained stable from 2005 ( $n=105$ ; 5.6 per 100,000 persons) to 2006 ( $n=109$ ; 5.7 per 100,000). The cocaine overdose death rate increased 35 percent from 1997 to 2006 (exhibit 2). Compared with the rest of the State, the Albuquerque area had the highest death rate from cocaine during 2004–2006: 7.7 per 100,000 persons (rate ratio=2.3) (exhibit 3a). In Albuquerque, the number of deaths rose from 33 in 2004 to 54 in 2005 and 56 in 2006 (exhibit 4).

In Albuquerque, powder cocaine sold for \$40–\$125 per gram (\$60–\$120 in June 2006) (exhibit 5), \$500–\$700 per ounce, and up to \$18,000 per kilogram in December 2006. In Las Cruces, the price of powder cocaine was \$60–\$100 per gram, \$600 per ounce, and roughly \$14,000–\$15,000 per kilogram. The price for a rock of crack remained relatively unchanged from June to December 2006: \$17–\$20 in Albuquerque and \$20–\$30 in Las Cruces.

There have been reports of a cocaine shortage in areas of northern New Mexico. However, large and consistent seizures indicate the supply is still coming into the State. Cocaine interdicted in New Mexico is typically destined for Denver, Oklahoma City, Kansas City, and Chicago. Recent cocaine interdictions indicate a possible shift to other destination cities in the Midwest and on the east coast.

NFLIS data revealed that cocaine was detected most often among 940 forensic lab tests in Albuquerque in 2006 (37 percent) (exhibit 6), and in the first quarter of 2007 (34 percent of 251 tests).

According to the 2005 New Mexico YRRS data, 7.9 percent of students in grades 9–12 reported cocaine use in the past 30 days (current use), compared with 3.4 percent nationally (YRBS) (exhibit 7a). Though not statistically different from students statewide, 9.4 percent of students in the Albuquerque area reported current cocaine use. Current cocaine use was reported by 10.1 percent of males and 8.2 percent of females in the Albuquerque area. New Mexico high school students ranked first among U.S. high school students for the highest prevalence of current cocaine use.

#### Heroin

Heroin use remains the greatest drug threat in terms of drug abuse. OMI first examined unintentional overdose deaths caused by heroin, either alone or in combination with other substances. The main metabolites for heroin and morphine are similar. To distinguish heroin overdose death from prescription morphine overdose death, heroin-caused overdose death is diagnosed by the presence of 6-mono-

acetylmorphine (6-MAM) and/or morphine, in combination with information from the OMI investigation. In general, a heroin-caused death is diagnosed when a lethal blood concentration level for 6-MAM is found. When a morphine blood concentration level is found without the presence of 6-MAM, the OMI may conclude that heroin is the cause of overdose death after considering all available information (i.e., syringe/heroin at scene, track marks, history of heroin use). The finding of a morphine blood concentration in a decedent is classified as a morphine-caused death if the differentiation between heroin- and morphine-caused death is not definitive.

The unintentional heroin overdose death rate decreased by 20 percent from 2005 ( $n=125$ ; 6.7 per 100,000 persons) to 2006 ( $n=101$ ; 5.3 per 100,000) statewide. Since 1997, the heroin overdose death rate increased 18 percent (exhibit 2). Compared with the rest of the State, Albuquerque had the highest death rate from heroin during 2004–2006: 8.8 per 100,000 (rate ratio=2.8) (exhibit 3a). In Albuquerque, the number of deaths increased from 39 in 2004 to 59 in 2006 (exhibit 4).

In Albuquerque, heroin sold for \$100–\$180 per gram (exhibit 5), \$900–\$2,900 per ounce, and up to \$40,000 per kilogram in December 2006. In Las Cruces, the price of heroin slightly increased in December 2006: \$120–\$180 per gram (compared with \$100 per gram in June 2006), \$900–\$1,200 per ounce, and roughly \$35,000 per kilogram.

Mexican black tar heroin and brown heroin are routinely seized at entry points in New Mexico. Mexican black tar heroin is most readily available statewide and also in Albuquerque. Availability has shown a steady increase over the past 5 years, as indicated by the increase in kilogram seizures and a steady decrease in price. Law enforcement efforts have resulted in numerous arrests; however, trafficking organizations routinely rotate cell managers, making long-term enforcement operations difficult to pursue.

The NFLIS reported that heroin was detected among 6 percent of forensic lab tests in 2006 (exhibit 6), the same percentage as in the first quarter of 2007 in Albuquerque.

The YRRS shows that 2.9 percent of New Mexico students reported current heroin use (exhibit 7a). Though not statistically different from students statewide, 4.2 percent of students in the Albuquerque area reported current heroin use. Significantly more males reported current heroin use than females in the

Albuquerque area: 5.3 percent, compared with 2.6 percent.

Ethnographic research has shown that heroin use in New Mexico is intergenerational and traced directly to an individual's social support network. Some users were initiated into heroin injection as a "rite of passage." Among drug users, alcohol and marijuana use are normalized, routine practice in daily life, as is the practice of self-medication with prescription drugs. Most people would describe themselves as "clean," despite consuming such substances regularly. Drug users complain of comorbid conditions and chronic, debilitating physical health conditions that underlie their decisions to use heroin and prescription drugs. Lastly, overdoses are familiar occurrences, though most are "handled at home" by family and friends.

### **Methadone and Other Prescription Opioids**

Similar to national trends, prescription opioid use has increased sharply during the past few years in New Mexico. In 2005, oxycodone was the most widely available opioid analgesic in New Mexico (11,082 grams per 100,000 persons), followed by hydrocodone (6,998 grams per 100,000 persons) and codeine (6,538 grams per 100,000 persons).

The prescription opioid overdose death rate in New Mexico increased roughly 140 percent during 1997–2006 (exhibit 8). Schedule II opioids other than methadone (oxycodone, morphine, meperidine, hydromorphone, and fentanyl) increased at the fastest pace and even surpassed overdose death rates from methadone and Schedule III/IV opioids by 2003. Of all drug types, benzodiazepines caused death most often in combination with opioids.

#### *Methadone*

For overdose death, methadone was analyzed separately because of its dual medical purpose in pain management and opiate replacement therapy. These decedents were significantly younger than decedents for other prescription opioids. The statewide methadone overdose death rate increased from 2005 ( $n=34$ ; 1.8 per 100,000 persons) to 2006 ( $n=47$ ; 2.4 per 100,000). Statewide since 1997, methadone overdose deaths increased roughly 160 percent (exhibit 2). During 2004–2006, Albuquerque had the highest death rate from methadone as in prior years: 3.3 per 100,000 (rate ratio=2.6, relative to the rest of the State) (exhibit 3b); yet, the number of deaths remained stable during the prior 5 years. A previous New Mexico study found roughly equal proportions



of methadone overdose decedents had been prescribed methadone for opiate replacement therapy and chronic pain treatment.

### *Opioids Other Than Methadone*

The statewide overdose death rate from opioids other than methadone remained relatively unchanged from 2005 ( $n=81$ ; 4.3 per 100,000 persons) to 2006 ( $n=95$ ; 4.9 per 100,000). Since 1997, the death rate from opioids other than methadone increased 140 percent (exhibit 2). During 2004–2006, the Albuquerque area matched the southwest region of the State with the highest death rate from opioids other than methadone: 5.0 per 100,000 (rate ratio=1.6, relative to the rest of the State) (exhibit 3b). The number of deaths caused by these drugs increased from 23 in 2004 and 28 in 2005 to 43 in 2006 (exhibit 4).

### **Marijuana**

Marijuana is the most prevalent drug in New Mexico and the most frequently seized substance; it is generally destined for distribution in eastern markets. The price of marijuana remained unchanged in Albuquerque in December 2006, as shown in exhibit 5. The price for Mexico-produced marijuana was \$30 for an eighth of an ounce, \$50–\$100 per ounce, and \$300–\$600 per pound. In Las Cruces, marijuana cost \$50–\$80 per ounce and roughly \$800 per pound.

In Albuquerque, NFLIS data showed that marijuana was the second most detected drug (34 percent) among forensic lab tests in 2006 (exhibit 6), and it represented 30 percent during the first quarter of 2007.

Marijuana is also the most widely available and commonly used illicit drug among teenagers. Among New Mexico students, 26.2 percent reported current marijuana use, significantly higher than the 20.2 percent nationally (YRBS) but similar to current use among Albuquerque-area students (30.5 percent) (exhibit 7b). Statewide, 20.7 percent of students reported using marijuana before the age of 13, and 8.4 percent reported using marijuana within the past 30 days on school property. Current marijuana use was reported by 30.9 percent of male students and 29.5 percent of female students in the Albuquerque area. Twenty-two percent of these students reported using marijuana before the age of 13, and 11.7 percent reported using marijuana on school property within the past 30 days. New Mexico high school students ranked first in the Nation for current marijuana use, tied with Massachusetts.

### **Methamphetamine**

Methamphetamine use remains a growing problem in New Mexico, although the overdose death rate remained stable from 2005 ( $n=35$ ; 1.8 per 100,000 persons) to 2006 ( $n=31$ ; 1.7 per 100,000). Statewide from 1997 to 2006, the methamphetamine overdose death rate doubled (exhibit 2). Interestingly, the regions with the highest overdose death rates from heroin and cocaine (Albuquerque and northeast) had the lowest methamphetamine death rates. Compared with the rest of the State, the Albuquerque area had the third highest death rate from methamphetamine during 2004–2006: 1.5 per 100,000 (rate ratio=1.1) (exhibit 3a). In Albuquerque, the number of deaths rose from 6 in 2004 to 10 in 2005 and 11 in 2006 (exhibit 4). Overall, decedents were mostly White (non-Hispanic) and male, though the proportion of Hispanics is growing among decedents.

As depicted in exhibit 9, localized pockets in the southeast and northwest of the State have been identified as areas where the impact from methamphetamine is most severe, as indicated from arrests, lab incidents, forensic lab items collected and analyzed, and children in protective custody because of methamphetamine exposure. Resources to combat methamphetamine have been focused on these parts of the State, as well as Albuquerque. There are also anecdotal reports that methamphetamine use on tribal land is increasing, especially among American Indian youth.

The price of Mexican ice methamphetamine remained relatively unchanged from June to December 2006 (exhibit 5). In Albuquerque, this form of methamphetamine sold for \$60–\$80 per gram, \$550–\$650 per ounce, and \$17,000–\$20,000 per kilogram. In Las Cruces, methamphetamine cost \$100 per gram, \$1,000 per ounce, and roughly \$15,000 per kilogram.

Although clandestine lab seizures in New Mexico have dropped (59 in 2005 to 6 in 2006), seizures of Mexican “ice” have increased at the border and along highway stops. The majority of methamphetamine seized originates in Mexico, but it arrives in New Mexico from distributors in Los Angeles and Phoenix (as part of larger Mexican trafficking organizations). There are also reports that small, clandestine laboratories are now setting up in remote, rural locations of the State. Currently, there is no evidence that colored and flavored forms of methamphetamine are found in New Mexico.

NFLIS data showed that methamphetamine was detected among 16 percent of forensic lab tests in 2006 (exhibit 6); the proportion increased to 24 percent during the first quarter of 2007 in Albuquerque. It will be interesting to monitor whether this proportional increase continues throughout 2007.

The YRRS data showed that 4.6 percent of New Mexico students reported current methamphetamine use, similar to current use among Albuquerque-area students (5.7 percent). Current methamphetamine use was reported by 6.3 percent of males and 4.8 percent of females in the Albuquerque area (exhibit 5a).

### **Tranquilizers and Muscle Relaxants**

The overdose death rate from the large class of tranquilizers and muscle relaxants remained unchanged from 2005 ( $n=62$ ; 3.3 per 100,000 persons) to 2006 ( $n=64$ ; 3.2 per 100,000). The overdose death rate from these drugs more than doubled from 1997 to 2006 (exhibit 2). The Albuquerque area had the highest death rate from tranquilizers/muscle relaxants during 2004–2006: 3.4 per 100,000 (rate ratio=1.7, relative to the rest of the State) (exhibit 3b). In Albuquerque, the number of deaths caused by these drugs increased from 11 in 2004, to 20 in 2005, to 32 in 2006 (exhibit 4).

The number of overdose deaths from diazepam, either alone or in combination with other drugs, increased sharply in New Mexico from 12 in 2002 to 40 in 2006. In 2006, diazepam was the fifth most common drug causing overdose death in the State.

Mexican pharmacies along the border region, where medications can be sold over-the-counter, continue to be a popular source of prescription drugs in New Mexico. Although some proportion of prescription drugs obtained in this way may not be diverted, prescription drug smuggling from Mexico likely contributes to the illegal distribution of these medications. According to the DEA, hydrocodone is the most commonly diverted opioid in New Mexico.

The extent to which Internet pharmacies may contribute to pharmaceutical diversion is unknown.

### **INFECTIOUS DISEASES RELATED TO DRUG USE AND INJECTION DRUG USE TRENDS**

There are an estimated 23,000 injection drug users (IDUs) living in New Mexico, according to a synthetic methodology based on national adult lifetime drug injection prevalence from the National Survey on Drug Use and Health (1.6 percent) and adjusted for local social indicator and infectious disease incidence data.

As of December 2006, there were 3,257 living HIV and AIDS cases in New Mexico, with 34 percent residing in the Albuquerque area. Exposure categories for all New Mexico cases of HIV and AIDS combined were as follows: men who have sex with men (MSM) (60.7 percent), IDU (10.6 percent), MSM and IDU (10.6 percent), heterosexual contact (9.7 percent), no identified risk (6.7 percent), pediatric (0.7 percent), and other exposure (1.1 percent). Breakdowns by gender are presented in exhibit 10.

The NMDOH also maintains the statewide syringe exchange program. Roughly 65 percent of participants are male; 55 percent are Hispanic, 36 percent are White (non-Hispanic), and 4 percent are American Indian. Sixty-eight percent report injecting heroin, 36 percent report injecting methamphetamine, and 26 percent report injecting cocaine (not mutually exclusive). In addition to syringe exchange, this program also provides overdose prevention trainings and naloxone prescription for heroin users and their families and friends; community health and social service referrals; health education and disease prevention information; acu-detox; and in some locations, primary medical care.

*For inquiries concerning this report, please contact Nina G. Shah, M.S., Drug Use Epidemiologist, Epidemiology and Response Division, New Mexico Department of Health, 1190 St. Francis Drive, N1310, Santa Fe, NM 87502, Phone: 505-476-3607, Fax: 505-827-0013, E-mail: nina.shah@doh.state.nm.us.*

**Exhibit 1. New Mexico Health and Human Services Planning Regions**

**Region 1**

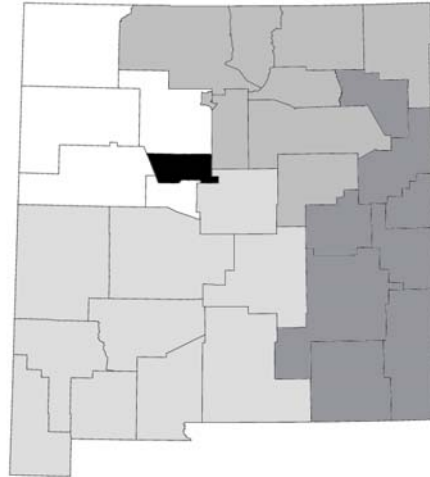
- San Juan County
- McKinley County
- Sandoval County
- Cibola County
- Valencia County

**Region 3**

- Bernalillo County

**Region 5**

- Catron County
- Socorro County
- Torrance County
- Lincoln County
- Otero County
- Doña Ana County
- Luna County
- Hidalgo County
- Grant County
- Sierra County



**Region 2**

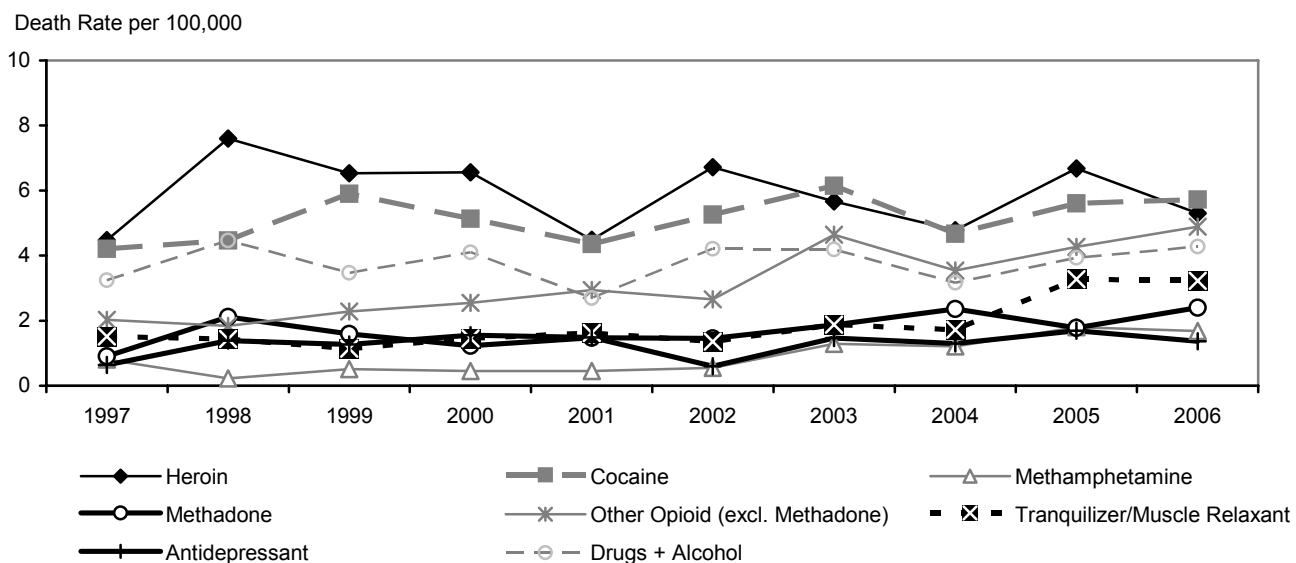
- Rio Arriba County
- Taos County
- Colfax County
- Union County
- Mora County
- San Miguel County
- Guadalupe County
- Santa Fe County
- Los Alamos County

**Region 4**

- Harding County
- Quay County
- Curry County
- Roosevelt County
- Lea County
- Eddy County
- Chaves County
- De Baca County

SOURCE: New Mexico Department of Health

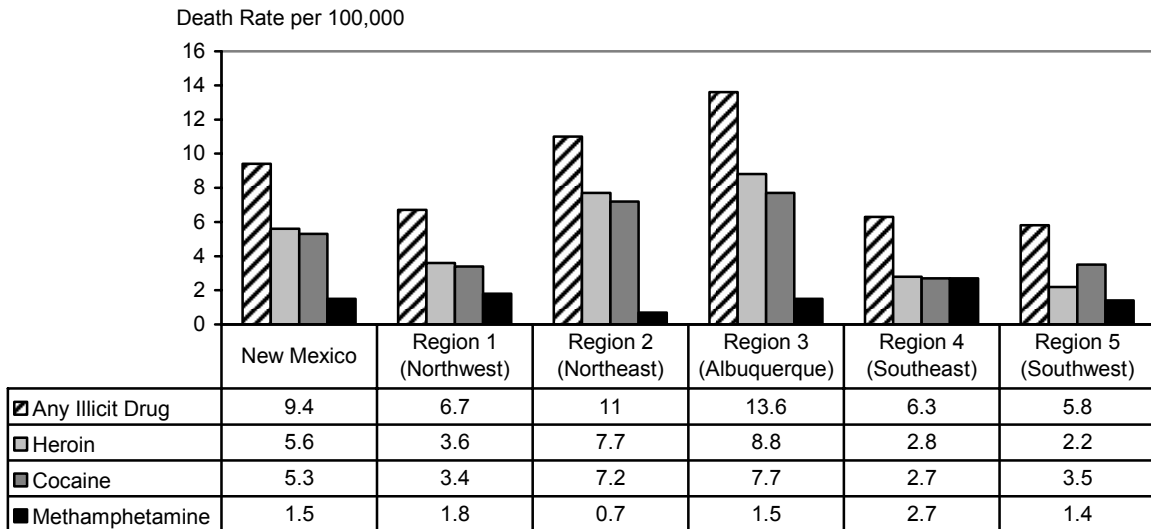
**Exhibit 2. Unintentional Drug Overdose Death Rates<sup>1</sup> in New Mexico: 1997–2006**



Drug Category <sup>1</sup>	Age-Adjusted Death Rate per 100,000 Persons										Total Deaths (N)
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	
Heroin	4.5	7.60	6.5	6.6	4.5	6.7	5.7	4.8	6.7	5.3	1,062
Cocaine	4.2	4.5	5.9	5.1	4.4	5.3	6.1	4.7	5.6	5.7	930
Methamphetamine	0.8	0.2	0.5	0.4	0.4	0.5	1.3	1.2	1.8	1.7	164
Methadone	0.9	2.1	1.6	1.2	1.5	1.4	1.9	2.3	1.8	2.4	315
Rx Opioid Other than Methadone	2.0	1.8	2.3	2.5	2.9	2.7	4.6	3.5	4.3	4.9	583
Tranquilizer/Muscle Relaxant	1.5	1.4	1.1	1.5	1.6	1.3	1.9	1.7	3.3	3.2	342
Antidepressant	0.6	1.4	1.3	1.6	1.5	0.6	1.5	1.3	1.7	1.4	233
Drugs and Alcohol	3.2	4.5	3.5	4.1	2.7	4.2	4.2	3.2	3.9	4.3	681
<b>Total</b>	<b>8.8</b>	<b>12.5</b>	<b>12.4</b>	<b>12.5</b>	<b>11.5</b>	<b>13.8</b>	<b>16.6</b>	<b>14.4</b>	<b>16.2</b>	<b>17.2</b>	<b>2,488</b>

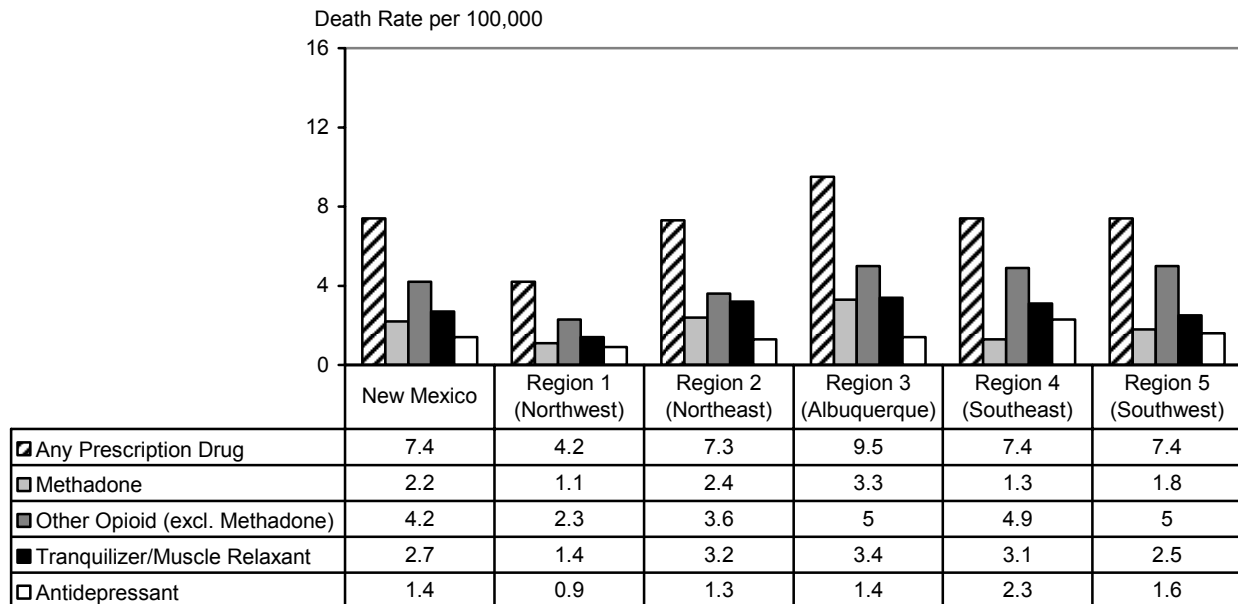
<sup>1</sup>Data are not mutually exclusive, where a drug caused a death either alone or in combination with other substances. All rates are age-adjusted to the 2000 U.S. Standard Population. SOURCE: New Mexico Office of the Medical Investigator

**Exhibit 3a. Unintentional Overdose Death Rates<sup>1</sup> by Types of Illicit Drugs, New Mexico and Regions: 2004–2006**



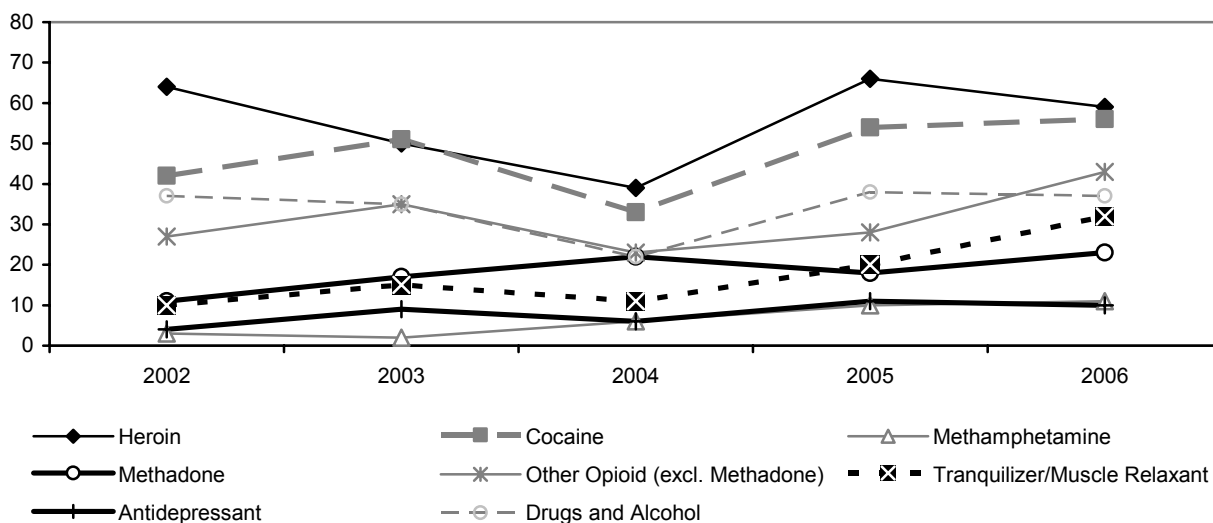
<sup>1</sup>All rates are age-adjusted to the 2000 U.S. Standard Population.  
SOURCE: New Mexico Office of the Medical Investigator

**Exhibit 3b. Unintentional Overdose Death Rates<sup>1</sup> by Types of Prescription Drugs, New Mexico and Regions: 2004–2006**



<sup>1</sup>All rates are age-adjusted to the 2000 U.S. Standard Population.  
SOURCE: New Mexico Office of the Medical Investigator

**Exhibit 4. Number of Unintentional Drug Overdose Deaths in Albuquerque, New Mexico: 2002–2006**



SOURCE: New Mexico Office of the Medical Investigator

**Exhibit 5. Retail Drug Prices<sup>1</sup> in Albuquerque and Las Cruces, New Mexico: June and December 2006**

Drug	Albuquerque		Las Cruces	
	June 2006	Dec. 2006	June 2006	Dec. 2006
Powder Cocaine	\$60–\$120 / g	\$40–\$125 / g	---	\$60–\$100 / g
Crack	\$20 / rock	\$17–\$20 / rock	\$20–\$30 / rock	\$20–\$30 / rock
Heroin (BT)	\$120–\$180 / g	\$100–\$180 / g	\$100 / g	\$120–\$180 / g
Marijuana (MX)	\$30 / 1/8 oz	\$30 / 1/8 oz	---	\$50–\$80 / oz
Methamphetamine (MX, LP)	\$60–\$80 / g	\$60–\$80 / g	\$100 / g	\$100 / g
MDMA	\$17–\$25 / tablet	\$17–\$25 / tablet	---	---

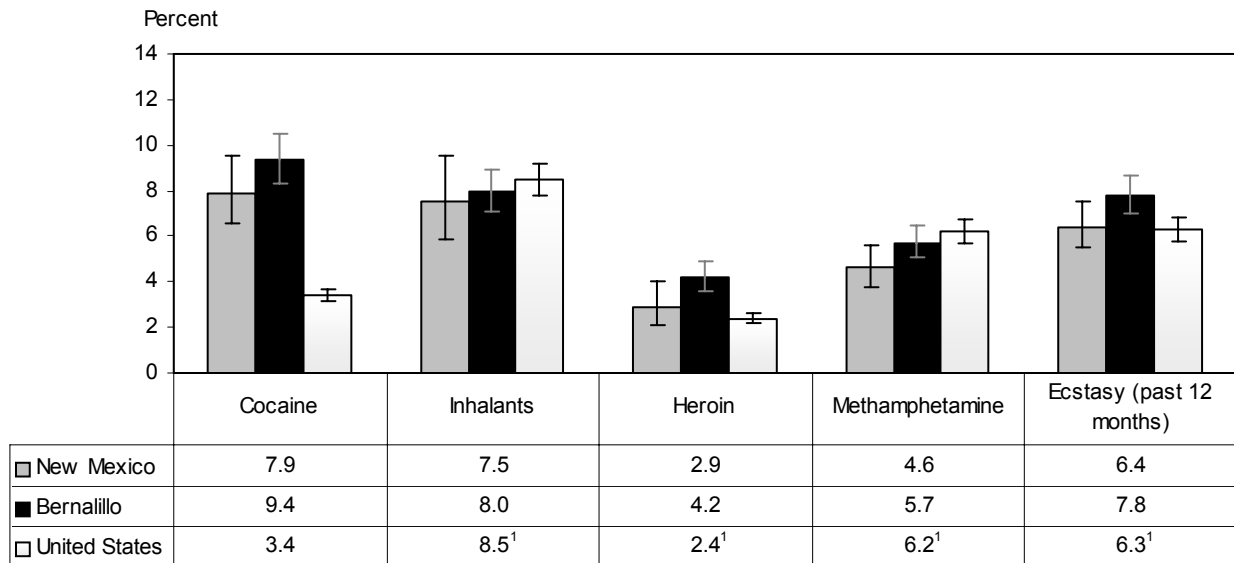
<sup>1</sup> BT=black tar heroin. MX=Mexico produced. LP=locally produced.  
SOURCE: NDIC

**Exhibit 6. Number and Percentage of Selected Items Analyzed by Albuquerque Forensic Labs: 2006**

Drug	Number of Items	Percent of Total Items
Cocaine	348	37
Cannabis	320	34
Methamphetamine	150	16
Heroin	56	6
Other (i.e., Prescription Drugs)	38	4
Quantity Not Sufficient	28	3
Total	940	100

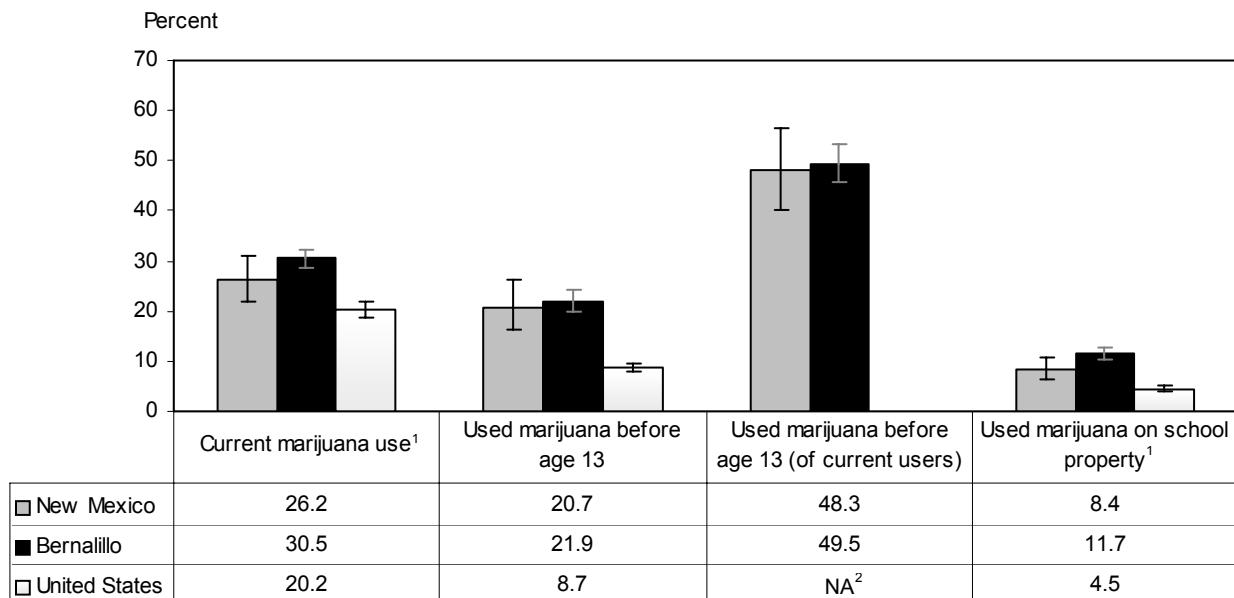
SOURCE: Albuquerque Police Department, NFLIS

**Exhibit 7a. Past-30-Day Drug Use among Bernalillo County (Albuquerque Area) and New Mexico Students, Grades 9–12: 2005**



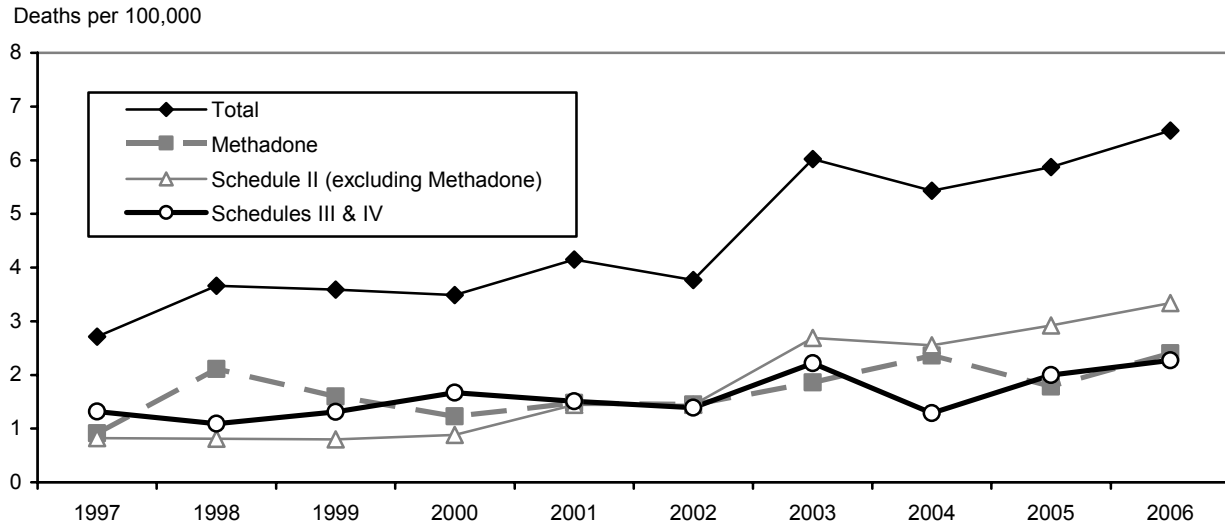
<sup>1</sup>For the United States, the patterned bars represent lifetime use (not comparable to the New Mexico question).  
 SOURCE: 2005 New Mexico Youth Risk and Resiliency Survey; Youth Risk Behavior Survey

**Exhibit 7b. Marijuana Use Among Bernalillo County (Albuquerque Area) and New Mexico Students, Grades 9–12: 2005**



<sup>1</sup>Within 30 days prior to survey.  
<sup>2</sup>NA=Not applicable. This question was not included in the national YRBS report.  
 SOURCE: 2005 New Mexico Youth Risk and Resiliency Survey; Youth Risk Behavior Survey

**Exhibit 8. Unintentional Prescription Opioid<sup>1</sup> Overdose Death Rates<sup>2</sup> in New Mexico, by Controlled Substance Schedule: 1997–2006**

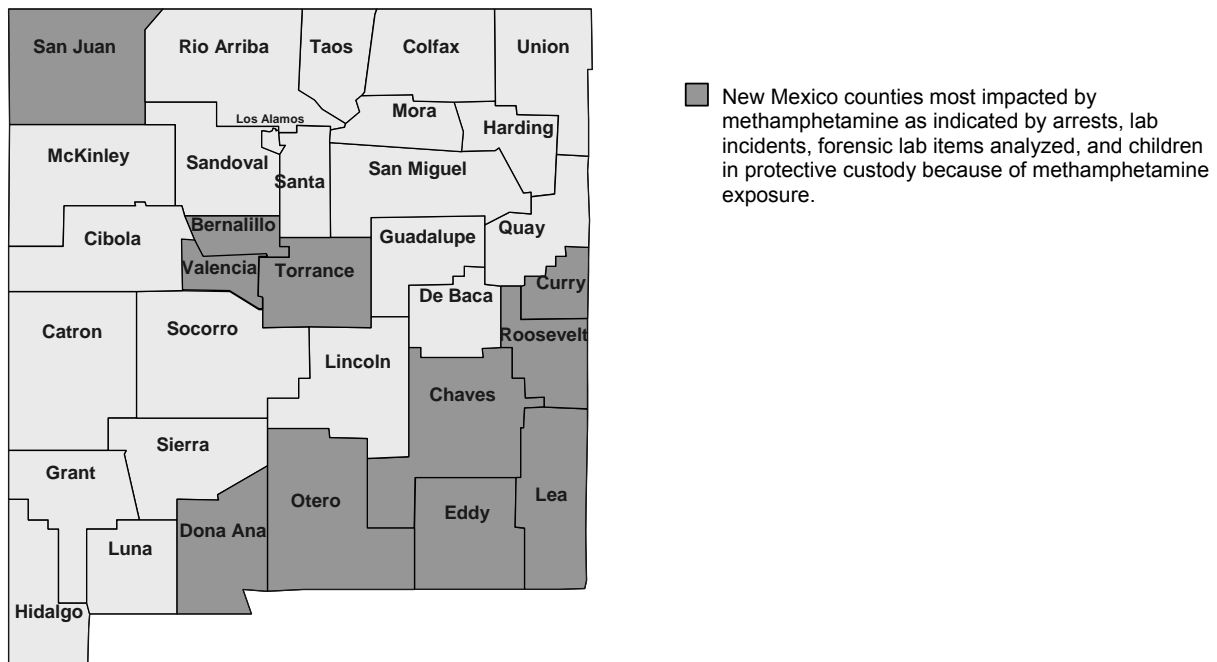


<sup>1</sup>Schedule II opioids other than methadone were oxycodone, fentanyl, hydromorphone, morphine, and meperidine. Schedule III/IV opioids were propoxyphene, codeine, hydrocodone, and pentazocine. These drugs are not mutually exclusive, where a prescription opioid may have caused overdose death alone or in combination with other substances.

<sup>2</sup>All rates are age-adjusted to the 2000 U.S. Standard Population.

SOURCE: New Mexico Office of the Medical Investigator

**Exhibit 9. Areas Severely Impacted by Methamphetamine, New Mexico: 2006**



SOURCES: New Mexico Department of Children, Youth, and Families; Dr. Rey Martinez, New Mexico Highlands University; Department of Public Safety Northern and Southern Forensic Lab Analysis, HITDA, DEA, Department of Public Safety. These data were compiled by Governor Richardson’s Office, Office of the State Drug Czar, Herman Silva.



**Exhibit 10. Persons Living with HIV and AIDS in New Mexico, by Sex and Mode of Exposure, as of December 2006**

Mode of Exposure <sup>1</sup>	Males		Females		Total	
	Total HIV and AIDS Cases	Percent	Total HIV and AIDS Cases	Percent	Total HIV and AIDS Cases	Percent
MSM	1,977	69.1	0	0.0	1,977	60.7
IDU	235	8.2	110	27.9	345	10.6
MSM/IDU	345	12.1	0	0.0	345	10.6
Heterosexual	106	3.7	209	53.0	315	9.7
Other	21	0.7	14	3.6	35	1.1
Pediatric	14	0.5	8	2.0	22	0.7
No Identified Risk	165	5.8	53	13.5	218	6.7
Total	2,863	100.0	394	100.0	3,257	100.0

<sup>1</sup>MSM=Men who have sex with men. IDU=Injection drug user. Heterosexual=For males, heterosexual contact with a female known to be HIV-positive, an injecting drug user, or a hemophiliac/blood product or organ transplant recipient. For females: heterosexual contact with a male known to be HIV-positive, bisexual, an injecting drug user, or a hemophiliac/blood product or organ transplant recipient. Other=Hemophilia patient/blood product, organ transplant recipient, occupational exposures, and other non-occupational exposures to blood. Pediatric=perinatal cases in children resulting from vertical transmission from an HIV-positive mother and cases involving the previously defined risk factors (i.e., hemophilia, or non-occupational exposure to blood). No Identified Risk=no reported history of exposure at the time of report date.

SOURCE: HIV & Hepatitis Program, New Mexico Department of Health

# Patterns and Trends of Drug Use in Atlanta

Brian J. Dew, Ph.D.<sup>1</sup>

## ABSTRACT

*Cocaine, marijuana, methamphetamine, and heroin are the dominant drugs of abuse in the metropolitan Atlanta area. Cocaine remains Atlanta's primary drug concern. Cocaine was the most mentioned drug among treatment admissions and prison admissions, and in NFLIS's drug seizure data. However, the proportion of cocaine-related treatment admissions continued a 6-year decline (59.0 percent in 2000 to 34.2 percent in the first half of 2006). Atlanta's cocaine users were most likely to be African-American, male, and older than 35. Nearly 8 out of 10 of all cocaine users who entered treatment preferred to smoke the drug. Marijuana remains the most commonly used substance in Atlanta. Ethnographic reports suggest that supply for marijuana is easily available, and price levels for Mexican-grown marijuana have remained stable. However, the supply of BC Bud and hydroponic marijuana has increased, thereby driving retail prices down. Indicators are mixed with regard to methamphetamine. For the first time in more than 10 years, methamphetamine-related treatment admissions decreased (from 11.4 percent in 2005 to 7.7 percent in the first half of 2006). Methamphetamine-related NFLIS drug seizure data for 2006 also declined, while local law enforcement officials indicated increased use of methamphetamine in suburban Atlanta. The increased availability of crystal methamphetamine led to an 11-percent increase (FY 2005 to the first half of 2006) in treatment admissions who preferred to smoke the drug. The proportion of female to male methamphetamine users seeking treatment widened in the first 6 months of 2006, both in metropolitan Atlanta and rural areas of the State. Although Whites were the most frequent users of methamphetamine, indicators suggest a growing level of methamphetamine use occurred among African-Americans. Heroin indicators continued to show decreasing levels of use, with the majority of users concentrated in Atlanta's Bluff district. Rates of injecting South American heroin have remained stable, although reports indicated a decrease in purity levels and an increase in price. Law enforcement officials have reported greater amounts of Mexican brown powder heroin in Atlanta. The Georgia Medi-*

*cal Examiners Office reports that prescription benzodiazepines are second only to cocaine in the number of statewide postmortem specimens that test positive for a particular drug. Multiple indicators show that hydrocodone is the most commonly abused narcotic analgesic in Atlanta, followed by oxycodone.*

## INTRODUCTION

### Area Description

The metropolitan Atlanta area is located in the northwest corner of Georgia and includes 20 of the State's 159 counties. The metropolitan area comprises more than 6,100 square miles, or 10.5 percent of Georgia's total size. Currently, Georgia is the 10th most populous State in the Nation. From April 2000 to December 2004, the State's population grew 4.4 percent, ranking fourth among all States.

With an estimated 4.6 million residents, the metropolitan Atlanta area includes nearly 52 percent of the State's population of nearly 8.4 million residents (U.S. Bureau of the Census 2003). The Atlanta metropolitan area ranks ninth among the Nation's major population centers. The city of Atlanta, with a population of approximately 369,000, represents 8.2 percent of the overall metropolitan population (American Community Survey 2003). The city is divided into two counties, Fulton County and DeKalb County, which include 18.8 and 15.9 percent of the metropolitan population, respectively.

There are demographic differences between the city of Atlanta and the larger metropolitan area, which more closely reflects the State as a whole. African-Americans are the largest ethnic group within the city (60 percent), followed by Whites (37 percent), Hispanics (6 percent), and Asians (2 percent). When examining the overall metropolitan Atlanta area, those numbers reverse. Whites account for the majority (62.5 percent), followed by African-Americans (29 percent), Hispanics (7.9 percent), and Asians (3.7 percent). Per capita family income in 2003 for the city of Atlanta was higher at \$32,635 than in the metropolitan area, at \$26,145. The poverty rate inside the city is 24 percent, compared with only 9.6 percent in the metropolitan area. The housing vacancy rate outside the city (8.9 percent) is much lower than in the city (17.5 percent).

In fiscal year (FY) 2005, the Georgia Bureau of Investigation (GBI)'s statewide drug enforcement efforts were led by 3 regional drug offices and 13 multijurisdictional task force programs. As a result of these combined efforts, 2,979 drug offenders were arrested. As of December 2004, there were 23 existing

<sup>1</sup> The author is affiliated with Georgia State University in Atlanta, Georgia.

drug courts in Georgia (of these, 13 were for adult felony drug offenses, 3 were for adult misdemeanor drug offenses, and 7 were for juvenile drug offenses). One adult felony drug court was located in Atlanta. In 2005, 35 percent of those on probation in Georgia, 21 percent of prisoners, and 39 percent of parolees had been convicted of a drug-related offense.

Additional factors that influence substance use in the State:

- Georgia is both a final destination point for drug shipments and a smuggling corridor for drugs transported along the east coast. Extensive interstate highway, rail, and bus transportation networks, as well as international, regional, and private air and marine ports of entry, serve the State.
- The State is strategically located on the I-95 corridor between New York City and Miami, the key wholesale-level drug distribution centers on the east coast and major drug importation hubs. In addition, Interstate Highway 20 runs directly into Georgia from drug entry points along the southwest border and gulf coast.
- The city of Atlanta has become an important strategic point for drug trafficking organizations as it is the largest city in the South. It is considered a convenient nexus for all east/west and north/south travel. The city's major international airport also serves as a distribution venue for illicit substances.
- The entire State, Atlanta in particular, has experienced phenomenal growth over the last several years with a corresponding increase in drug crime and violence. With Georgia bordering North Carolina, South Carolina, Tennessee, Alabama, and Florida, Atlanta is the base for several major dealers who maintain trafficking cells in these States, especially Mexican-based traffickers who hide within legitimate Hispanic enclaves.

### Data Sources

Principal data sources for this report include the following:

- **Drug abuse treatment program data** are from the Georgia Department of Human Resources for primary drugs of abuse among clients admitted to Atlanta's public drug treatment programs from 2000 through June 2006. Data for nonmetropolitan Atlanta counties of Georgia were also reported.

- **Drug-related prison admissions data** are from the Georgia Department of Correction and represent individuals who entered the prison or jail system because of drug possession from CY 2004 through CY 2006.
- **Drug price, purity, and trafficking data** are from the Drug Enforcement Administration (DEA) the National Drug Intelligence Center (NDIC), and the Office of National Drug Control Policy (ONDCP). Information on the price, purity, and source of several drugs was provided by the DEA's Domestic Monitoring Program (DMP) and local law enforcement officials. Additional information came from *Narcotics Digest Weekly* published by the NDIC. Other data are from the Atlanta High Intensity Drug Trafficking Area (HIDTA) Task Force, a coordination unit for drug-related Federal, State, and local law enforcement agencies.
- **Forensic drug analysis data** are from the National Forensic Laboratory Information System (NFLIS) and represent evidence in suspected drug cases throughout metropolitan Atlanta that were tested by the GBI Forensic Laboratory in 2006.
- **State drug-related mortality data** were obtained from the Georgia Medical Examiner's Office. Data representing the number of postmortem specimens that tested positive for a particular drug were collected from 2001 through 2006.
- **Ethnographic information** was collected from local drug use researchers and is used for several purposes: (1) to corroborate the epidemiologic drug indicators, (2) to signal potential drug trends, and (3) to place the epidemiologic data in a social context.
- **Acquired immunodeficiency syndrome (AIDS) data** are from the Department of Human Resources, Division of Public Health, and represent AIDS cases in Georgia and a 20-county Atlanta metropolitan from January 1981 through February 2006. Additional information was provided by the Centers for Disease Control and Prevention (CDC).

### DRUG ABUSE PATTERNS AND TRENDS

#### Cocaine/Crack

In the first half of 2006, cocaine continued to be the primary drug of choice for individuals seeking assistance at publicly funded treatment centers in

metropolitan Atlanta. However, the number of primary admissions in metropolitan Atlanta for cocaine ( $n=1,506$ ) in this period reflected a continuing downward trend (exhibit 1). From 2000 to 2002, approximately one-half of all treatment admissions in metropolitan Atlanta were cocaine-related. The percentage of cocaine-related admissions into Atlanta's public substance abuse treatment facilities decreased to 42.8 percent in 2003, 39.5 percent in 2004, and 37.2 percent in 2005. In the first half of 2006, cocaine admissions represented 34.2 percent of the total number of admissions. The ratio of men to women in treatment for cocaine was 1.4:1, a proportion that was lower than the 1.5:1 found in 2005. Consistent with previous years, the percentage of African-Americans entering treatment for cocaine-related issues was 73 percent. Although a greater percentage of African-Americans entered treatment for cocaine-related admissions outside metropolitan Atlanta in the first half of 2006 (51 vs. 48 percent), the difference between African-Americans and Whites was more narrow than in 2004 (55 vs. 45 percent) and similar to the proportion reported in 2005 (51 vs. 49 percent). Those persons older than 35 accounted for the largest number of both metropolitan and nonmetropolitan cocaine admissions (81 percent). In metropolitan Atlanta, smoking continued to be the most preferred route (78 percent), followed by inhalation (13 percent), injection (3 percent), and oral (2 percent).

According to the DEA, Atlanta HIDTA, local law enforcement officials, and key street informants, cocaine remains readily available in Atlanta. Atlanta is a growing distribution hub for surrounding States and Europe. Atlanta also serves as part of a smuggling corridor along the east coast. Powder cocaine and crack dominate the Georgia drug scene. The primary sources for cocaine are Texas and California. HIDTA intelligence analysts implicate Mexico-based drug trafficking organizations, whose members blend within enclaves of Hispanic workers. According to HIDTA and NDIC, cocaine prices remain relatively stable in Atlanta. Powdered cocaine typically sells for \$75–\$120 per gram. Crack rocks sell for as little as \$3 but typically are priced between \$10 and \$15.

The Georgia Threat Assessment (DEA 2006) reports that other than marijuana, crack is the most available drug in the city. Officials estimate that 75 percent of all drug-related arrests involve crack cocaine. Powder cocaine availability at the retail level in Georgia is limited, except in large cities such as Atlanta. NFLIS reported that cocaine accounted for 55.6 percent of confiscated substances in suspected drug cases that were tested in forensic laboratories in 2006 (exhibit 2), the same percentage reported in 2005. In 2004,

cocaine had represented nearly 44 percent of all confiscated substances in suspected drug cases.

In 2006, cocaine was indicated in 6.6 percent ( $n=299$ ) of all Georgia's postmortem specimens tested by the Georgia State Examiners Office. This proportion continues a general decreasing trend for the previous 4 years. In 2002, cocaine was indicated in 10.8 percent of statewide postmortem specimens, followed by 10.2 percent in 2003, 8.1 percent in 2004, and 9 percent in 2005.

In 2006, more prison admissions resulting from cocaine possession were found in Fulton County ( $n=256$ ) than in any other metropolitan Atlanta county. However, for the first time in the city's history, the number of cocaine possession-related prison admissions in a suburban county nearly equaled those numbers reported in Fulton County. The Georgia Department of Corrections reported that Cobb County had 248 prison admissions for cocaine possession, followed by DeKalb County ( $n=136$ ), Clayton County ( $n=79$ ), and Newton County ( $n=55$ ).

### Heroin

Heroin abuse indicators in Atlanta during 2006 remained low compared with other metropolitan areas. Furthermore, public substance abuse treatment admissions, drug-related deaths, and ethnographic data obtained through corroboration with local street outreach workers suggest that heroin use is decreasing.

In the first half of 2006, treatment admissions for individuals who reported heroin as their primary drug of choice accounted for 2.3 percent of all treatment admissions in the State; these admissions were mostly concentrated in metropolitan regions. Nearly 5 percent of metropolitan Atlanta admissions were for heroin as compared with 1.3 percent in nonmetropolitan areas (exhibit 1). Admission ratios for men were higher (2.2:1) than those of women in metropolitan regions, with a nonmetropolitan ratio of 1.2:1 male to female treatment admissions. Whites slightly outnumbered African-Americans (104 to 100) among metropolitan Atlanta treatment admissions in the first half of 2006. Outside of metropolitan Atlanta, Whites represented an overwhelmingly high percentage (79 percent) of heroin-related treatment admissions, followed by African-Americans (18 percent) and Hispanics (4.2 percent). The proportion of heroin-related treatment admissions for Hispanics was identical to data reported in 2005. However, the proportions doubled in 2005 and the first half of 2006 compared with 2004. A significant majority of heroin treatment admissions in both metropolitan (81 percent) and

nonmetropolitan (82 percent) Atlanta were 35 and older, as in previous reporting periods. While treatment admissions for heroin are relatively low for those younger than 35, it is important to note that 11.7 percent of heroin treatment admissions in metropolitan Atlanta are for individuals younger than 17 years. Nearly two out of three heroin treatment admissions preferred to inject the drug, followed by inhalation (26.6 percent), oral (4.2 percent), and smoking (2.8 percent). Most heroin users admitted to treatment in Georgia did not report having a secondary drug of choice, although metropolitan users were overall more likely than nonmetropolitan users to report a secondary drug of choice. Among heroin users in metropolitan Atlanta, 37 percent reported cocaine as a secondary drug of choice, compared with 10 percent for nonmetropolitan users. The Georgia Department of Public Health estimates the rate of heroin addicts in Atlanta to be 159 per 100,000 population ( $n$ =approximately 7,000).

The NDIC's *Georgia Threat Assessment* (June 2006) reports that heroin availability in metropolitan Atlanta is stable, and that the city remains a high traffic area for heroin distribution. The majority of heroin available in Atlanta is South American, followed by heroin from southwest Asia. However, law enforcement officials have reported greater amounts of Mexican brown powder heroin in Atlanta, likely a result of increasing Mexican drug trafficking efforts for methamphetamine and cocaine. The DEA (June 2006) reported that average purity of South American heroin was 39.3 percent and cost on average \$2.04 per milligram (exhibit 5). Compared with South American heroin, heroin from Southwest Asia was less pure (26.9 percent) and more expensive on average (\$2.53 per milligram). Purity rates for both South American and Southwest Asian heroin appeared stable in 2005, following sharp declines since 1999 when purities levels for South American and Southwest Asian heroin were 63.4 and 78.9 percent, respectively. Law enforcement groups, including HIDTA and the DEA, report local heroin is supplied via sources in Chicago, New York, and the southwest border, and that there has been increased Hispanic involvement in trafficking. Reports from outlying metropolitan Atlanta counties suggest an increase in heroin traffic in their jurisdictions. Approximately 1 percent ( $n$ =107) of NFLIS tested drug items seized tested positive for heroin in 2006 (exhibit 2).

Law enforcement groups, including HIDTA and the DEA, report that Mexican criminal groups are primarily responsible for the trafficking of South American heroin in Georgia. These groups use commercial and private vehicles to bring the drugs

into the State. Heroin also enters the State through Colombian and Nigerian groups that transport the drug via airline couriers. Additionally, NDIC and the DEA mention that Dominican criminal groups drive heroin into Georgia from New York and Philadelphia. Some of that heroin is sold in Atlanta, but the majority of the drug is shipped elsewhere.

### Other Opiates/Narcotics

Treatment data for other opiates or narcotics were only available for secondary and tertiary drug abuse categories. Continuing a stable trend, other opiates accounted for about 2–3 percent of secondary drugs abused statewide and about 1 percent of tertiary drugs abused in the first half of 2006. The use of opiates as a secondary abuse category was cited more often in nonmetropolitan areas (2.5 percent) than in metropolitan Atlanta (1.1 percent).

According to NFLIS data, oxycodone and hydrocodone each accounted for about 1 and 2 percent, respectively, of lab identifications of drugs seized by law enforcement in 2006 (exhibit 2). OxyContin, the most widely recognized oxycodone product, is a growing drug threat in Georgia, according to the DEA (exhibit 6). Twenty-milligram tablets sold on the illegal market for \$8 to \$10 in 2006. Citing increases in supply of illegal OxyContin on the street and the rise of the Internet as a supply source, this price represented a sharp decline from the average calendar year 2004 price of \$20. Hydrocodone (Vicodin) and hydromorphone (Dilaudid) are also abused in Atlanta, and 20-milligram tablets typically sell for \$5 to \$10. These drugs are typically obtained by “doctor-shopping,” purchasing from dealers, and/or ordering via the Internet.

In 2006, hydrocodone was indicated in 3.7 percent ( $n$ =137) of all Georgia's postmortem specimens tested by the State Examiners Office. This percentage deviates from a 5-year upward trend. In 2002, hydrocodone was indicated in 4.8 percent of statewide postmortem specimens, followed by 4.9 percent in 2003, 4.6 percent in 2004, and 5.5 percent in 2005. In 2006, oxycodone was indicated in 2.9 percent ( $n$ =100) of all Georgia's postmortem specimens tested by the State Examiners Office, thereby continuing what has been primarily a 5-year downward trend (3.5 percent in 2002, 4.5 percent in 2003, 3.2 percent in 2004, and 3.1 percent in 2005).

### Marijuana

Ethnographic sources consistently confirm that marijuana is the most commonly abused drug in

Atlanta. Most epidemiological indicators show an upward trend in marijuana use.

Nearly 21 percent of public treatment admissions in the first half of 2006 in metropolitan Atlanta were for those who considered marijuana their primary drug of choice (exhibit 1). Male admissions were just less than double those of females in metropolitan Atlanta (1.7:1), with the gap widening in nonmetropolitan regions (1.8:1). The proportion of African-Americans who identified marijuana as their primary drug of choice was identical with the previous year (56 vs. 56 percent in 2005) (exhibit 3). Similar to 2005, the vast majority of users (81 percent) in the first half of 2006 were at least 35 years old. Younger users of marijuana are seeking treatment at higher rates than in previous years. In metropolitan Atlanta, the percentage of treatment admissions of individuals 17 and younger (10.1 percent) more than tripled the number of 18 to 25 users (3.0 percent) in the first half of 2006. This trend was consistent in nonmetropolitan public treatment facilities, where individuals 17 and younger (8.8 percent) were also more likely to enter treatment than individuals 18 to 25 (3.7 percent). Alcohol was the most popular secondary drug of choice for marijuana users, followed by cocaine and methamphetamine for both metropolitan and nonmetropolitan Atlanta admissions.

Marijuana, which is readily available in Atlanta and the rest of Georgia, retails for about \$5–\$10 per gram, and \$100–\$350 per ounce, according to the DEA. Atlanta serves as a regional distribution center for marijuana. Most of the marijuana in Georgia comes from Mexico, although locally grown marijuana is also on the market. Colombian and Jamaican marijuana are purportedly present but less available. Mexican drug cartels are the primary transporters and wholesale distributors of Mexican-grown marijuana. Local gangs (African-American and Hispanic) and local independent dealers (African-American and White) are the primary resale distributors.

The NFLIS report for 2006 indicates that 2.3 percent of all drug-related items confiscated tested positive for marijuana (exhibit 2). This percentage indicates a significant decrease from the 25 percent average in the previous 4 years. These results are skewed because of recent changes in statewide drug testing for marijuana, and therefore, do not accurately reflect the prevalence of the drug's use. According to *The Georgia Governor's Task Force on Drug Suppression*, 58 percent of Georgia's 159 counties have been reported as significant locations for marijuana cultivation.

Ethnographic data continue to support treatment and law enforcement data that indicate the widespread availability and use of marijuana in Atlanta. Hydroponic cultivation of marijuana has become more popular due in part to the DEA's eradication program.

### Stimulants

Over the past 5 years, methamphetamine use has increased faster than any other illicit substance in both metropolitan and nonmetropolitan areas. Law enforcement efforts to stop the spread of this drug have involved seizures and closures of clandestine labs. Methamphetamine has become an increasing threat in the suburban areas because of the drug's price and ease of availability, and it is replacing some traditional drugs as a less expensive, more potent alternative. Moreover, frequent media reports; recent strengthening of criminal penalties for the manufacture, transfer, and possession of methamphetamine; and the statewide illegalization of transporting materials used in its production have fueled the growing concerns over the dangers the drug poses. Methamphetamine is not only a party drug, but it is also used for weight loss or as a way to keep up with demanding work schedules.

For the first time in more than 10 years, the proportion of treatment admissions for methamphetamine in metropolitan and nonmetropolitan areas declined from the previous year. In the first half of 2006, 7.7 percent of treatment admissions were primarily methamphetamine-related. In 2005, 11.9 percent ( $n=1,062$ ) of public treatment admissions reported methamphetamine as the primary drug of choice, compared with 8.5 percent ( $n=680$ ) in 2004, 5.1 percent (543) in 2003, and 3.1 percent (377) in 2002 (exhibit 1). The proportion of admissions for methamphetamine in nonmetropolitan Atlanta was more than 13.1 percent in the first 6 months of 2006, compared with 18 percent in 2005. The percentage of women in metropolitan Atlanta who reported to treatment for methamphetamine-related causes increased in the first half of 2006, and they represented more than 70 percent of all methamphetamine-related admissions (vs. 60 percent in 2005). In treatment centers outside metropolitan Atlanta, the percentage of women entering treatment also increased in the first half of 2006 (79 vs. 63 percent in 2005). Most users were White; in fact, Whites accounted for 93 percent of these admissions in metropolitan Atlanta during the first half of 2006 (exhibit 3). The proportions of African-American users increased slightly (3.8 vs. 3.5 percent) from 2005, and Hispanic users remained stable since 2004. Regardless of demographic area, more than 80 percent of statewide treatment admissions for

methamphetamine were individuals older than 35. Metropolitan Atlanta treatment admissions were most likely to smoke methamphetamine (62 percent), followed by snort (18 percent), and inject (7 percent). Compared with 2005, these results reflect a 6-percent increase among individuals preferring to smoke methamphetamine (62 vs. 56 percent). Nonmetropolitan Atlanta treatment admissions preferred to smoke (62 percent), inject (16 percent), and snort (11 percent) methamphetamine.

According to the DEA and HIDTA, methamphetamine popularity continues to rise, in part because of its low price and availability. In 2006, methamphetamine's retail price in Atlanta was \$80 to \$200 per gram, \$750 to \$1500 per ounce, and \$7,500 per pound.

Law enforcement officials report that methamphetamine has emerged as the primary drug threat in suburban communities neighboring Fulton and DeKalb counties (Exhibit 4). The Atlanta HIDTA task force found that more than 68 percent of participating law enforcement agencies identified methamphetamine as posing the greatest threat to their areas. Methamphetamine accounted for nearly 26 percent of NFLIS tests of seized drugs in 2006, compared with 33 percent in 2005, and 30 percent in 2004. In 2006, the proportion of positive methamphetamine tests of seized drugs ranked second behind only cocaine (exhibit 2). In 2003, the proportion of methamphetamine-related testing had ranked third behind cocaine and marijuana. The HIDTA task force seized more methamphetamine in 2006 than in previous years. HIDTA investigators also report an increase among African-Americans using methamphetamine in Atlanta. Ethnographic data from Atlanta-area drug research studies among methamphetamine users support this trend. Other trends supported by ethnographic field studies indicate that some drug users are transitioning from methamphetamine use to cocaine use because of a displeasure over the length of the high associated with the use of methamphetamine. While the majority of persons switching to cocaine had been former users of the drug, ethnographic data indicate that for some persons, this switch led to first time use of cocaine.

### Depressants

The use of depressants, especially benzodiazepines, is on the rise in Atlanta (exhibit 6). The most commonly abused benzodiazepine is alprazolam (Xanax). Less than 2 percent of those admitted for drug treatment chose benzodiazepines as their secondary or tertiary drug of choice, but ME reports for these drugs continued to increase.

The treatment data from publicly funded programs included depressants such as barbiturates and benzodiazepines only as secondary and tertiary drug choices for the first half of 2006. In metropolitan Atlanta, nearly 1 percent of primary heroin and methamphetamine users chose benzodiazepines as a secondary drug choice. These percentages are consistent with the figures from the previous 5 years.

In 2006, alprazolam was indicated in 3.2 percent ( $n=144$ ) of all Georgia's postmortem specimens tested by the State Medical Examiners Office. This proportion deviated from an upward trend found in the previous 4 years. In 2002, alprazolam was indicated in 3.3 percent of statewide postmortem specimens, followed by 4.8 percent in 2003, 5.2 percent in 2004, and 5.8 percent in 2005.

The DEA considers benzodiazepines and other prescription depressants to be a growing threat in Georgia. The pills are widely available on the street or via the Internet. Their abuse now exceeds that of oxycodone and hydrocodone. According to the NDIC and DEA, local dealers tend to work independently and typically sell to "acquaintances and established customers." These primarily White dealers and abusers steal prescription pads, rob pharmacies, and attempt to convince doctors to prescribe the desired pills.

### Hallucinogens

The epidemiological indicators and law enforcement data do not indicate much hallucinogen use in Atlanta. Despite these data, there was an increase in ethnographic reports of phencyclidine (PCP) use in the past 12 months, especially in combination with marijuana and ecstasy.

Treatment data for hallucinogens are only available for secondary and tertiary drug abuse categories, and these are listed as PCP and "other hallucinogens." In the first half of 2006, hallucinogens were listed 20 times as a secondary or tertiary drug of choice in metropolitan Atlanta. "Other hallucinogens" were listed 18 times as a secondary drug of abuse and 17 times as a tertiary drug in nonmetropolitan areas. These secondary and tertiary data indicate consistent use of hallucinogens compared with previous years.

In 2005, lysergic acid diethylamide (LSD) accounted for only 0.05 percent of drugs analyzed by NFLIS (data not shown). The DEA reports an increase in the availability of LSD, especially among White traffickers/users age 18–25. LSD is usually encountered in school settings and is imported through the U.S. Postal Service.

**Club Drugs**

While so-called club drugs—methylenedioxy-methamphetamine (MDMA or ecstasy), gamma hydroxybutyrate (GHB), and ketamine—appear relatively infrequently in epidemiological data, ethnographic and sociologic research suggests continued frequency in use, particularly among metropolitan Atlanta’s young adult population.

Atlanta serves as a distribution point for MDMA to other U.S. cities. According to the NDIC, most of the MDMA available in Georgia is produced in northern Europe and flown into major U.S. cities or produced in Canada and transported into the Southeast, including Atlanta. The NFLIS reported that in 2006, MDMA accounted for 5.5 percent of substances tested in suspected drug cases (exhibit 2), nearly double the percentage reported in 2005 (2.7 percent). Methylenedioxyamphetamine (MDA) accounted for another 0.2 percent. Results from ethnographic research indicate that most dealers are White middle and upper class high school and college students between the ages of 18 and 25. The drug retails at \$15 to \$25 per tablet, although ethnographic data indicate that many users buy ecstasy in bulk. Users report that bulk ecstasy rates are \$5–\$10 per pill. An

emerging trend among young adults is “candy flipping,” or combining MDMA and LSD, according to a local university report.

The NDIC reports that the primary distributors and abusers of GHB are White young adults, especially gay males. The HIDTA Atlanta Division reports that in 2006, liquid GHB sold for \$500 to \$1,000 per gallon and \$15 to \$20 per dose (one dose is usually the equivalent of a capful from a small water bottle).

**INFECTIOUS DISEASES RELATED TO DRUG ABUSE**

Georgia continued to be ranked eighth in the Nation for cumulative reported AIDS cases. A cumulative total of 29,716 adult/adolescent AIDS cases were reported in Georgia through 2005. Of the cumulative cases in Georgia, 66 percent were African-American, 31 percent were White, 3 percent were Hispanic, and 81 percent were male. The city of Atlanta represented nearly 58 percent of the State’s cumulative AIDS cases.

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**Exhibit 1. Percentages of Primary Treatment Admissions in Atlanta: FYs 2001–1H 2006**

Drug	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	1H 2006 <sup>1</sup>
Cocaine/Crack	58.5	43.1	42.8	39.5	37.2	34.2
Heroin	6.7	7.6	6.3	5.6	5.0	4.9
Marijuana	15.5	18.7	20.0	21.7	20.9	20.9
Methamphetamine	1.6	3.1	5.1	8.5	11.9	7.7
Other Drugs <sup>2</sup>	26.1	21.3	25.8	24.6	25.0	32.4
Total Admissions (N=)	(7,996)	(7,909)	(7,178)	(7,996)	(9,320)	(4,409)

<sup>1</sup>Represents the first half of 2006.

<sup>2</sup>Includes “alcohol-in-combination.”

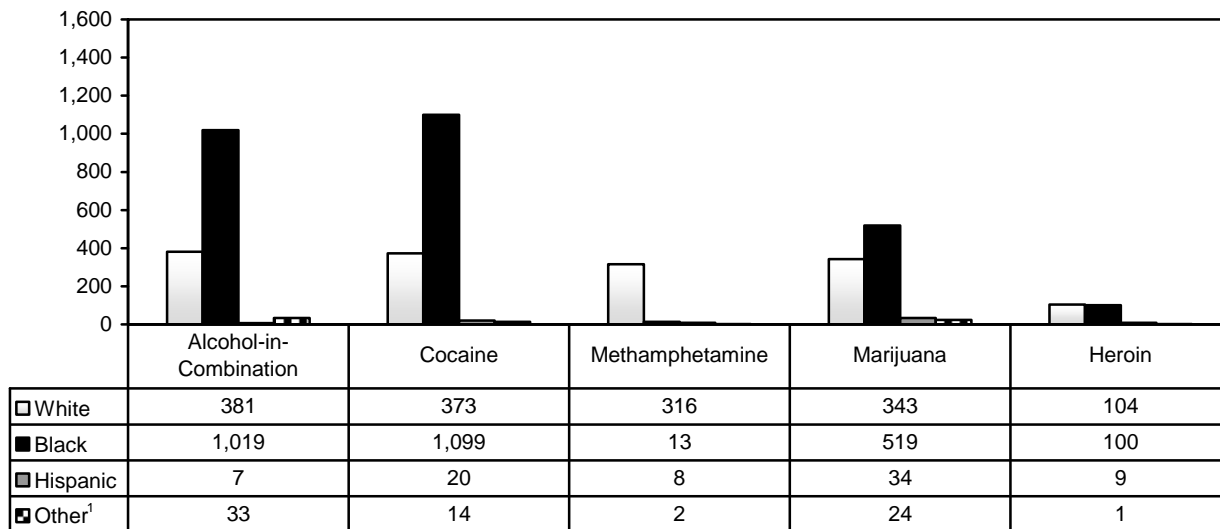
SOURCE: Georgia Department of Human Resources



**Exhibit 2. Number of Analyzed Items and Percentage of All Items Tested in Atlanta: CY 2006**

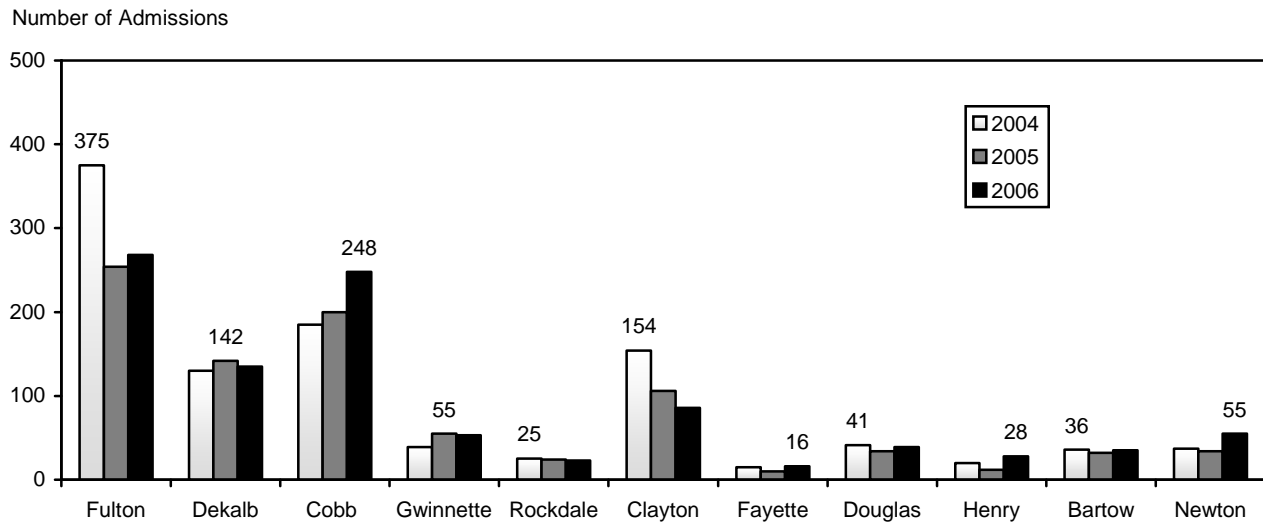
Drug	Number	Percent
Cocaine	8,932	55.6
Methamphetamine	4,097	25.5
MDMA/MDA	912	5.7
Alprazolam	420	2.6
Cannabis	365	2.3
Hydrocodone	344	2.1
Oxycodone	210	1.3
Heroin	107	0.7
Diazepam	56	0.4
Amphetamine	52	0.3
Other <sup>1</sup>	577	3.5
<b>Total</b>	<b>16,072</b>	<b>100.0</b>

<sup>1</sup>Includes carisoprodol, clonazepam, morphine, codeine, psilocin, non-controlled non-narcotic drug, methylphenidate, ketamine, gamma hydroxybutyrate, hydromorphone, 1-(3-trifluoromethylphenyl)-piperazine, lorazepam, and lysergic acid diethylamide.  
SOURCE: NFLIS, DEA

**Exhibit 3. Metropolitan Atlanta Public Substance Abuse Treatment Admissions, by Selected Drugs and Race/Ethnicity: January–June 2006**

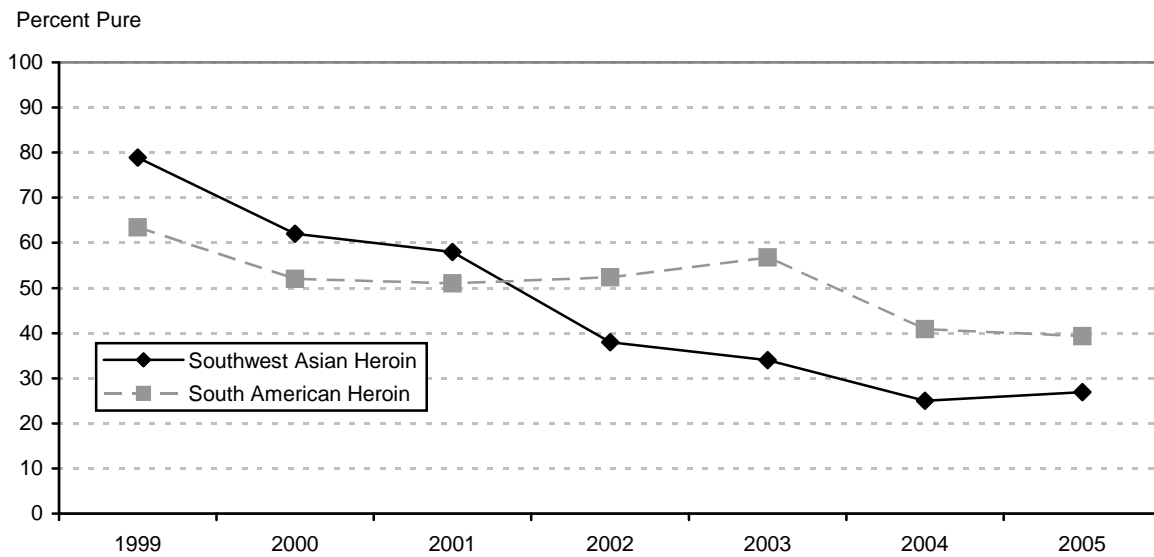
<sup>1</sup>Other category includes Asian, American Indian, Multicultural, other race.  
SOURCE: Georgia Department of Human Resources

**Exhibit 4. Prison Admissions Related to the Possession of Cocaine for Select Metropolitan Atlanta Counties 2004–2006**

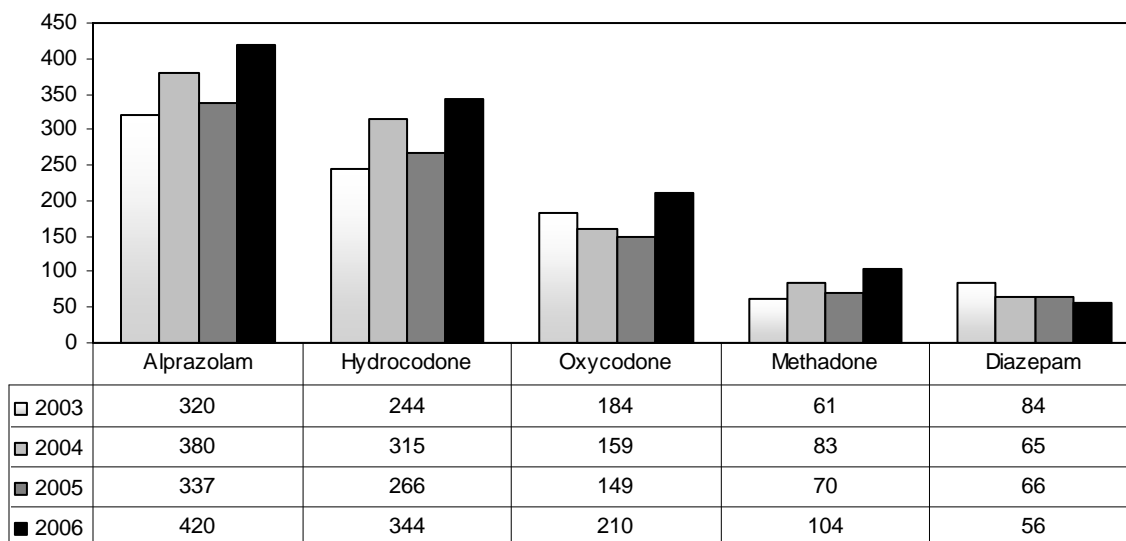


SOURCE: Georgia Department of Corrections

**Exhibit 5. Purity Levels of Southwest Asian and South American Heroin Samples from Atlanta: 1999–2005**



SOURCE: DEA

**Exhibit 6. Number of Analyzed Items by Select Prescription Drug: 2003–2006**

SOURCE: NFLIS, DEA

# Drug Use in the Baltimore Metropolitan Area: Epidemiology and Trends, 2002–2006

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## ABSTRACT

*Heroin remained the most significant substance of abuse among drug-related treatment admissions in the Baltimore PMSA in 2006, responsible for 45 percent of total admissions. Heroin use in the Baltimore metropolitan area is complex. There were several groups of heroin users differing by urbanicity, route of administration, age, and race. In 2006, Baltimore had a core of older African-American heroin users, both intranasal users and injectors (39 and 20 percent of all heroin treatment admissions, respectively). White users entering treatment for heroin were younger and were predominantly injectors rather than intranasal users (29 and 9 percent of all heroin treatment admissions, respectively). The cocaine situation is complicated by the fact that for every treatment admission reporting primary cocaine use, 2.3 reported secondary use. In 2006, primary cocaine use was reported by 16 percent of treatment admissions and secondary cocaine use by 35 percent. Cocaine smoking was the most prevalent route of administration among both primary and secondary users. Cocaine smoking and intranasal use were associated with intranasal heroin use in 33 percent of all those who smoked cocaine or used it intranasally. Cocaine injection was associated with heroin injection in 88 percent of all those who injected cocaine. Younger cocaine users tended to be White, while the African-American cocaine-using population aged. Marijuana was reported more frequently as a secondary substance by treatment admissions in 2006 (18 percent) than as a primary substance (16 percent). More than one-half (59 percent) of primary marijuana admissions reported the use of other substances, primarily alcohol (50 percent), although 9 percent reported cocaine. Some 41 percent were younger than 18, and 80 percent were male. Criminal justice referrals continued to constitute the majority of marijuana treatment admissions—61 percent in 2006. Opiates*

*and narcotics other than heroin continued to increase as primary substances among treatment admissions. In 2006, treatment admissions for primary opiate use were 84 percent White; slightly more than one-half were male, and they were a younger population than in 2002. Use of a wide range of secondary substances was reported. Similar numbers of treatment admissions reported primary and secondary opiate use. Secondary users were also predominantly White, and 58 percent were male. Most reported opiate abuse secondary to heroin injection (31 percent) or intranasal heroin use (23 percent). Stimulants other than cocaine were rarely mentioned as the primary substance of abuse by treatment admissions. Tranquilizer use secondary to primary opiate use was reported by 13 percent of primary opiate treatment admissions.*

## INTRODUCTION

### Area Description

The Baltimore primary metropolitan statistical area (PMSA) was home to some 2.6 million persons in 2006. 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 from 735,000 in 1990 to 613,000 in 2005. The population of the surrounding counties grew from approximately 1.7 million in 1990 to 2.0 million in 2006.

The city and the suburban counties represent distinctly different socioeconomic groups. In 2000, median household income in the city was \$34,000, and 23 percent of the population lived in poverty. In the suburban counties, however, median household income ranged from \$52,000 to \$82,000, and the poverty level averaged 6 percent. In 2000, the median value of a single-family home was \$69,100 in the city and averaged \$152,000 in the suburban counties. The 2004 population composition of the city differed markedly from that of the surrounding counties: 32 percent White and 64 percent African-American, versus 77 percent White and 16 percent African-American, respectively. Two percent of the population in the city and 3 percent of the population in the suburban counties was Asian. Two percent of the population in both the city and the suburban counties were Hispanic.

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

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south to Washington, Richmond, and Florida. Frequent daily train service is available on this route. The area is served by three major airports (Baltimore-Washington International Airport in Baltimore County and Reagan National and Dulles Airports in the vicinity of Washington, DC, approximately 50 miles from the Baltimore City center). Baltimore is also a significant active seaport. The area has numerous colleges and universities and several military bases.

### Data Sources

Information for this report was obtained from the sources shown below:

- **Population and demographic data**, including population estimates for 1990–2004 and income, poverty, and housing cost estimates for 2004 for Maryland counties, were derived from U.S. Bureau of the Census data (electronic access: <<http://factfinder.census.gov>> last accessed on January 11, 2005).
- **Treatment admissions data** were provided by the Maryland Alcohol and Drug Abuse Administration, Department of Health and Mental Hygiene, for 2002 through 2006. Data are presented for the PMSA as a whole, as well as separately for Baltimore City and the suburban counties. Included are those programs receiving both public and private funding. All clients are reported, regardless of individual source of funding. Significant omissions are the Baltimore City and Fort Howard Veterans' Administration Medical Centers, which do not report to the State data collection system. Treatment data in this report exclude admissions for abuse of alcohol alone (about 15 percent of all treatment admissions in 2006). Admissions with primary abuse of alcohol and secondary/ tertiary abuse of drugs (about 13 percent of all admissions) are included. Numbers of admissions for 2006 may increase as data are received from late-reporting treatment providers.
- **Illicit drug prices** were provided by the National Drug Intelligence Center, *National Illicit Drug Prices—December 2006*, Product No. 2007-L0424-002, February 2007.
- **Data on drug seizures** were provided by the National Forensic Laboratory Information System (NFLIS), for January 2006–December 2006.
- **Data on heroin purity** were provided by the Drug Enforcement Administration, *2005 Domes-*

*tic Monitor Program*, DEA 06005, September 2006.

- **Data on HIV and AIDS** were provided by the Centers for Disease Control and Prevention in *HIV/AIDS Surveillance Report, 2005*. Vol. 17. Rev. ed. Atlanta: U.S. Dept. of Health and Human Services, Centers for Disease Control and Prevention, 2007: 28-33 (electronic access: <<http://www.cdc.gov/hiv/topics/surveillance/resources/reports>> last accessed August 19, 2007) and the AIDS Administration, Maryland Department of Health and Mental Hygiene, in *Maryland HIV/AIDS Epidemiological Profile. Second Quarter 2006 - Data reported through June 30, 2006*, Sections III & X and *Twenty-Five Years of AIDS in Maryland*, Table 3 (electronic access: <<http://dhmh.state.md.us/AIDS/Data&Statistics>> last accessed August 19, 2007).
- **Data on homicides** were provided by the *Baltimore Sun* in N. Fuller, *Death on the streets. Homicides make city 2nd-most perilous in nation*, June 5, 2007 and *Deadlier for whom?* June 10, 2007 (electronic access: <<http://www.baltimore.sun.com>>)

### DRUG ABUSE PATTERNS AND TRENDS

Polydrug use in general is the norm in the Baltimore PMSA. About 73 percent of drug-related treatment admissions in 2006 reported problems with at least one substance other than their primary substance. Use of both heroin and cocaine was reported by 29 percent of drug-related treatment admissions, and alcohol with another drug was reported by 58 percent.

Baltimore's 2006 homicide rate was second only to that of Detroit among cities with a population greater than 100,000, according to FBI crime statistics. Baltimore (population 637,000) had 276 homicides in 2006, a rate of 43 per 100,000 persons. The 2006 homicide rate in Detroit was 47 per 100,000. New Orleans ranked third, at 38 homicides per 100,000. Washington, DC, had a homicide rate of 29 per 100,000, while New York City had a rate of 7 per 100,000. In 2007, there were 128 homicides reported in Baltimore City in the first 5 months of the year. If this rate is projected to the end of the year, there could be more than 300 homicides in 2007, the highest number reported in Baltimore since 1999.

A review of the records of homicide victims in the first 5 months of 2007 reveals that 89 percent had criminal records; 82 percent had been arrested on drug charges; 66 percent had been charged with

violent crimes; and 29 percent had been charged with gun crimes. Among the murder suspects arrested in the first 5 months of 2007, 98 percent had criminal records; 77 percent had been arrested on drug charges, 67 percent had been charged with violent crimes, and 46 percent had been charged with gun crimes. More than one-third of both victims and suspects were on probation at the time of the murder.

### Cocaine/Crack

Cocaine indicators were mixed (exhibit 1), but data from comparable times were not available. The cocaine treatment admission rate in the total PMSA increased from 203 per 100,000 population age 12 and older in 2002 to 230 per 100,000 in 2005. The rate declined to 211 per 100,000 in 2006 (exhibit 1). The proportion of drug items analyzed by NFLIS that were found to be cocaine was 43 percent in FY 2006. Cocaine was present in 226 (42 percent) drug-related deaths in 2003, and this represented a drop from 299 deaths in 2002. Mentions of cocaine in emergency departments increased between 2000 and 2002.

Smoked cocaine (crack) represented 77 percent of the treatment admissions for primary cocaine use in 2006 (exhibit 3). Intranasal cocaine use represented 14 percent and cocaine injection 7 percent. The population in treatment for cocaine use has aged. The median age at admission increased from 38 to 40 between 2002 and 2006; the proportion age 35 or older increased from 67 percent to 70 percent. The proportion of admissions who had been in treatment before increased from 58 percent in 2002 to 68 percent in 2006. The proportion of those entering treatment for the first time after more than 3 years of use declined from 35 percent to 25 percent, while the proportion entering treatment after 3 years of use or less remained at 7 to 8 percent. Males made up 56 to 60 percent of treatment admissions from 2002 through 2006. The proportion that was African-American fell from 63 percent to 55 percent, while the proportion that was White increased from 36 percent to 42 percent. Referral to treatment through the criminal justice system ranged from 32 percent to 34 percent. Daily use of cocaine ranged from 37 percent to 42 percent. Use of other drugs in addition to cocaine was reported by between 69 and 73 percent from 2002 through 2006. In 2006, alcohol was reported as a secondary substance by 40 percent, heroin by 25 percent (intranasal heroin by 14 percent, and heroin injection by 10 percent), and marijuana by 23 percent.

Despite the apparent dominance of heroin in the Baltimore PMSA, primary use of cocaine represented 16 percent of drug-related treatment admissions in

2006, about one-third of the 45 percent of admissions represented by primary heroin use (exhibit 2). Testing of 51,242 items in 2006 by NFLIS found that 43 percent were cocaine, and 23 percent were heroin. This apparent discrepancy may be explained by the use of cocaine as a secondary substance. Cocaine was reported as a secondary substance by 35 percent of treatment admissions in 2006 (exhibit 2). In other words, for every person reporting cocaine as a primary substance, 2.3 reported it as a secondary substance. Overall, 51 percent of treatment admissions reported cocaine abuse as a primary or secondary problem in 2006.

Exhibit 4 compares the characteristics of treatment admissions for primary and secondary cocaine use according to the route of administration of cocaine. Among primary cocaine users, 77 percent reported smoking, 14 percent reported intranasal use, and 7 percent reported injection. Among secondary users, however, 52 percent reported smoking, 17 percent reported intranasal use, and 30 percent reported injection. Differences in user characteristics were generally more pronounced among routes of administration than between primary and secondary users.

- Admissions who smoked cocaine were about one-half male (54 percent of primary cocaine smokers and 49 percent of secondary cocaine smokers); they were likely to be older with few younger users, to be African-American (60 and 65 percent, respectively), to have been in treatment before, and to receive treatment in the city.
- Intranasal cocaine users were about two-thirds male. They had relatively high proportions of Whites (58 percent of primary intranasal cocaine users and 55 percent of secondary intranasal cocaine users), of admissions first entering treatment after 3 years or less of cocaine use, and of admissions treated in the suburban counties.
- Cocaine injectors resembled cocaine smokers, but had higher proportions of males (64 percent of both primary and secondary cocaine smokers) and Whites (51 percent and 42 percent, respectively).

Exhibit 4 also highlights the strong association between cocaine and heroin use and suggests that the preferred route of heroin administration is related to the preferred route of cocaine administration.

- Cocaine smoking was associated with intranasal heroin use. Among primary cocaine smokers in 2006, 15 percent used intranasal heroin; only 8

percent used heroin by another route. Among secondary cocaine smokers, 45 percent reported their primary substance as intranasal heroin and 24 percent reported heroin injection. Overall, 34 percent of all cocaine smokers used intranasal heroin and 17 percent injected heroin.

- Intranasal cocaine and heroin use were similarly associated. Overall, 31 percent of all intranasal cocaine users also used intranasal heroin; 9 percent injected heroin.
- In contrast, almost all cocaine injectors (88 percent) injected heroin—90 percent as a primary and 70 percent as a secondary substance. Only 2 percent of cocaine injectors reported intranasal heroin use.

Prices for both powder and crack cocaine for December 2006 were reported as \$21,000–\$22,000 per kilogram at the wholesale level, \$850–\$1,000 per ounce at midlevel, and \$125 per 8-ball (1/8 ounce) or \$100 per gram at the retail level.

## Heroin

Heroin remained the most frequently reported primary substance among drug-related treatment admissions in Baltimore in 2006, representing 45 percent of admissions (exhibit 2). The heroin treatment admission rate increased from 799 per 100,000 population age 12 and older in 2002 to 855 per 100,000 in 2003 (exhibit 1). However, the rate declined slightly to 808 per 100,000 in 2005 and then to 618 per 100,000 in 2006. The proportion of drug items analyzed by NFLIS that were found to be heroin was 23 percent in 2006. Opiates were present in 469 (87 percent) drug-related deaths in 2003.

Heroin use in the Baltimore metropolitan area is complex. There are several groups of heroin users differing by urbanicity, route of administration, age, and race. In 2006, the heroin treatment admission rate was about 12 times higher in Baltimore City than in the suburban counties (exhibit 2). In Baltimore City, intranasal use was the preferred route of administration among treatment admissions, and the admission rate for intranasal use was 1.2 times that for injection. In the suburban counties, however, the rate for heroin injection was 2.4 times higher than for intranasal use.

Of the PMSA primary heroin admissions in 2006, 50 percent injected the drug and 48 percent were intranasal users (exhibit 6). The median age at admission increased from 36 to 39 between 2002 and 2006; the proportion age 35 or older increased from 57 to 67 percent. The proportion of admissions that had been in

treatment before increased from 65 percent in 2002 to 78 percent in 2006, and the proportions of those entering treatment for the first time decreased from 35 percent to 22 percent. Males made up 56 to 58 percent of treatment admissions from 2002 through 2006. The proportion that was African-American fell slightly, from 64 percent in 2002 to 59 percent in 2006. Referral to treatment through the criminal justice system ranged from 23 percent to 25 percent. Daily use of heroin ranged from 70 to 75 percent. Use of other drugs in addition to heroin was reported by between 69 and 73 percent from 2002 through 2006. In 2006, smoked cocaine was reported as a secondary substance by 30 percent, alcohol by 21 percent, injected cocaine by 19 percent, marijuana by 11 percent, and other opiates by 7 percent, a proportion that increased every year beginning in 2004.

Exhibit 7 depicts the number of treatment admissions in 2006 by route of administration, age, and race. Baltimore has a core of older African-American heroin users, both injectors and intranasal users. White users entering treatment for heroin use were younger and were predominantly injectors, although there is a significant group of White intranasal heroin users as well.

Exhibit 8 tabulates the characteristics of these four main groups of heroin users admitted to treatment in Baltimore.

- African-American intranasal heroin users made up the largest segment (39 percent) of the heroin users admitted to treatment in Baltimore in 2006, while White intranasal heroin users made up 9 percent. Most of the African-American intranasal users (94 percent) were treated in Baltimore City, compared with 54 percent of the White intranasal users. The African-American and White intranasal heroin users differed substantially in age, duration and frequency of use, treatment referral source, and secondary drugs reported. Of the African-American intranasal heroin users, 87 percent were age 35 and older in 2006, compared with 44 percent of their White counterparts. One percent of the African-American intranasal users were younger than age 26, compared with 28 percent of the White intranasal users. Among the 23 percent of African-American intranasal heroin users entering treatment for the first time, the median duration of use was 18 years. Among the 29 percent of the same group among Whites, the median duration of use was 3 years. Daily use was reported by 67 percent of the African-Americans and by 76 percent of the Whites. A larger proportion of African-American intranasal

users entered treatment through the criminal justice system (33 percent compared with 13 percent of their White counterparts). More than one-half of the African-American intranasal heroin users (55 percent) reported secondary abuse of cocaine (44 percent smoking and 10 percent intranasal use), compared with 36 percent of the White intranasal users (21 percent smoking and 15 percent intranasal use). The White intranasal heroin users were more likely to report use of opiates other than heroin than were the African-American intranasal users (21 and 3 percent, respectively).

- White heroin injectors made up 29 percent of the heroin users admitted to treatment in Baltimore in 2006, while African-American heroin injectors made up 20 percent (exhibit 8). A higher percent of African-American injectors (93 percent) were treated in Baltimore City, compared with 53 percent of the White heroin injectors. The African-American and White heroin injectors differed substantially in age, duration and frequency of use, treatment referral source, and secondary drugs reported. Of the White heroin injectors, 32 percent were age 35 and older in 2006, compared with 90 percent of their African-American counterparts. Thirty-five percent of the White heroin injectors were younger than age 26, compared with 1 percent of the African-American heroin injectors. Among the 21 percent of White heroin injectors entering treatment for the first time, the median duration of use was 6 years; among African-Americans (18 percent of this group), the median duration of injection use was 24 years. Daily use was reported by 75 percent of the Whites and by 68 percent of the African-Americans. A smaller proportion of White heroin injectors entered treatment through the criminal justice system (14 percent compared with 25 percent of their African-American counterparts). More than one-half (52 percent) of the White heroin injectors reported secondary abuse of cocaine (26 percent injection and 22 percent smoking), compared with 74 percent of the African-American heroin injectors (53 percent injection and 20 percent smoking). The White heroin injectors were more likely to report use of opiates other than heroin than were the African-American heroin injectors (11 and 3 percent, respectively).

Prices for heroin for December 2006 were reported as \$90,000–\$110,000 per kilogram at the wholesale level and, at the retail level, \$80–\$100 per gram. Most of the heroin sold in Baltimore is from South America, although among 32 samples purchased by

the DEA's Domestic Monitor Program in 2005, there was 1 from Southwest Asia and 1 from Mexico. The purity of the South American heroin ranged from 3 to 85 percent and averaged 24.1 percent. The average price was \$0.54 per milligram pure. Both purity and price were lower than the national averages (37.3 percent purity and \$0.81 per milligram pure). The DEA notes, "Heroin can be purchased on numerous corners in 'open-air markets' in east and west Baltimore, in both 'raw' (high purity) and 'cut' (diluted) forms."

### Other Opiates and Narcotics

Indicators for opiates and narcotics other than heroin continued to increase (exhibit 1). Treatment admission rates for opiates other than heroin more than doubled between 2002 and 2005, from 43 per 100,000 population age 12 and older to 91 per 100,000 in 2006 (exhibit 2). Drug items analyzed by NFLIS that were opiates other than heroin together made up just over 1 percent of the 51,242 items analyzed in 2006. Oxycodone was responsible for 48 percent of the 709 opiate items, followed by methadone (21 percent), buprenorphine (11 percent), and hydrocodone (10 percent). Fentanyl was identified in four items.

In 2006, opiates other than heroin were reported by 7 percent of admissions as the primary substance of abuse, and they were reported by an additional 6 percent as a secondary substance (exhibit 2). Exhibit 9 compares admissions reporting opiates other than heroin as primary substances with those reporting them as secondary substances.

Among primary opiate users in 2006, males were a slim majority (52 percent), and most were White (84 percent) (exhibit 9). The age distribution of primary opiate users showed no consistent trends between 2002 and 2006, although the small proportion of admissions younger than 18 declined. The proportion of those age 18–25 ranged from 20 to 27 percent. The proportion of age 26–34 ranged from 21 to 26 percent. The proportion of users age 35 and older ranged from 45 to 54 percent. The median age at admission ranged from 32 to 36 years. The location of the treatment population shifted dramatically; 74 percent were treated in the suburban counties in 2002, declining to 53 percent in 2006.

The preferred route of administration among primary opiate users also showed no consistent trends between 2002 and 2006. It was predominantly oral, ranging from 79 to 86 percent, or intranasal, ranging from 6 to 14 percent. Daily use of opiates was the norm, reported by 75 percent in 2006. Most entered



treatment of their own volition (only 9 percent were referred through the criminal justice system in 2006). Twenty percent of opiate admissions in 2006 first entered treatment within 3 years of beginning opiate use. The median duration of use before entering treatment was 3 years in 2006.

Secondary substances were diverse, and were reported by 63 percent of primary opiate admissions in 2006. No single substance was predominant. Use of alcohol, cocaine, marijuana, heroin, and tranquilizers were each reported by 13 to 19 percent of primary opiate admissions in 2006.

Secondary opiate users were similar in several respects to primary opiate users. They were predominantly White (81 percent). Oral use ranged from 81 to 86 percent; intranasal use ranged between 7 and 11 percent. There was a similar shift from treatment in the suburban counties to treatment in the city (72 percent in the counties in 2002 and 56 percent in 2006). Patterns of first treatment entry and duration of use were similar. There were, however, several significant differences. A substantial proportion of secondary opiate users were younger than age 18 (between 6 and 9 percent from 2002 to 2006). Daily use of opiates, at 41 percent in 2006, was substantially lower than among primary opiate users. The likelihood of referral to treatment through the criminal justice system was 7 to 9 percentage points higher among secondary opiate users than among primary users every year between 2002 and 2006.

Heroin was reported as the primary substance at treatment entry by 55 percent of secondary opiate admissions in 2006; 31 percent reported heroin injection and 23 percent reported intranasal heroin use. Other primary substances were alcohol (19 percent), cocaine (11 percent), and marijuana (9 percent). Tranquilizers, reported as secondary substances by 13 percent of primary opiate users, were reported by only 5 percent of secondary opiate users.

### **Marijuana**

The annual marijuana treatment admission rate increased from 225 per 100,000 population age 12 and older in 2002 to 247 per 100,000 in 2003, then declined to 214 per 100,000 in 2006 (exhibit 1). The proportion of marijuana treatment admissions in 2006 was higher in the suburban counties (20 percent of county admissions) than in Baltimore City (13 percent of city admissions). However, the admission rate for 2006 was higher in the city (466 per 100,000 population age 12 and older, compared with 140 per 100,000 in the counties). The proportion of drug items analyzed by NFLIS that were found to be

cannabis increased from 21 percent in 2003 to 38 percent in 2005, then fell to 30 percent in 2006.

More often than not, marijuana use in the indicator data sets was associated with the use of alcohol or other drugs. Marijuana was consistently reported more frequently as a secondary substance than as a primary substance from 2002 through 2006 (exhibit 2). Sixteen percent of admissions in 2006 reported it as a primary substance, while 18 percent reported it as a secondary substance. Of treatment admissions for primary marijuana use in 2006, 59 percent reported using additional substances (a decline from the 66 percent reporting secondary substances in 2002) (exhibit 10). Alcohol was the most frequent secondary substance (reported by 50 percent in 2006), but other drugs were also represented—cocaine (9 percent), heroin (3 percent), opiates other than heroin (3 percent), and a range of other substances.

Persons entering treatment for marijuana use were young. In 2006, 41 percent were younger than 18. This represented a slight annual decline from the 45 percent who were younger than 18 in 2002. Marijuana admissions were 80 percent male, consistent with the 81 to 82 annual percent male from 2002 through 2005. African-American admissions constituted a slim majority over White admissions, but the proportions remained relatively constant from 2002 through 2006, at 43 to 46 percent White and 50 to 53 percent African-American. Hispanics represented about 2 percent of marijuana treatment admissions.

The criminal justice system was responsible for referring the majority of admissions to treatment—61 percent in 2006. Daily marijuana use was not the norm; it was reported by 33 percent of admissions in 2006. Some 26 percent of marijuana admissions in 2006 first entered treatment within 3 years of beginning marijuana use, and 33 percent first entered treatment after more than 3 years of use. The median duration of use among those entering treatment for the first time remained unchanged from 2002 through 2006, at 4 years.

Prices for locally produced marijuana for December 2006 were reported as \$700–\$1,000 per pound at the wholesale level. Midlevel prices were \$350–\$500 per half-pound, and retail prices were \$150 per ounce. Prices for “BC bud” (known as “Purple Haze”) were reported as \$3,500 per pound at the wholesale level and \$600 per ounce at midlevel.

### **Stimulants**

Treatment admissions rarely mentioned stimulants (other than cocaine) as a primary substance of abuse

(exhibit 2). Nevertheless, the numbers increased from 68 admissions in 2002 to 112 in 2006. The majority (58 percent) of stimulant admissions in 2006 were for amphetamine, and 34 percent were for methamphetamine. The treatment admission rate for stimulants was 3 to 6 per 100,000 population age 12 and older from 2002 through 2006.

Prices for methamphetamine for December 2006 were not reported.

### **Other Drugs**

All other drugs (sedatives, tranquilizers, hallucinogens, PCP, inhalants, over-the-counter drugs, and any other drugs not specified elsewhere) were responsible for just over 1 percent of drug-related treatment admissions in 2006 (exhibit 2). From 2002 through 2006, the treatment admission rates for benzodiazepines and other tranquilizers increased from 4 to 10 admissions per 100,000 population age 12 and older. PCP admissions declined from 5 admissions per 100,000 population in 2002 to 3 in 2006. For barbiturates and other sedatives, rates were between 1 and 5 admissions per 100,000 population. For hallucinogens, they were between 1 and 3, and they were between less than 1 and 1 per 100,000 for both inhalants and over-the-counter drugs.

The retail level price for methylenedioxymethamphetamine (MDMA) for December 2006 was reported as \$10–\$25 per tablet.

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

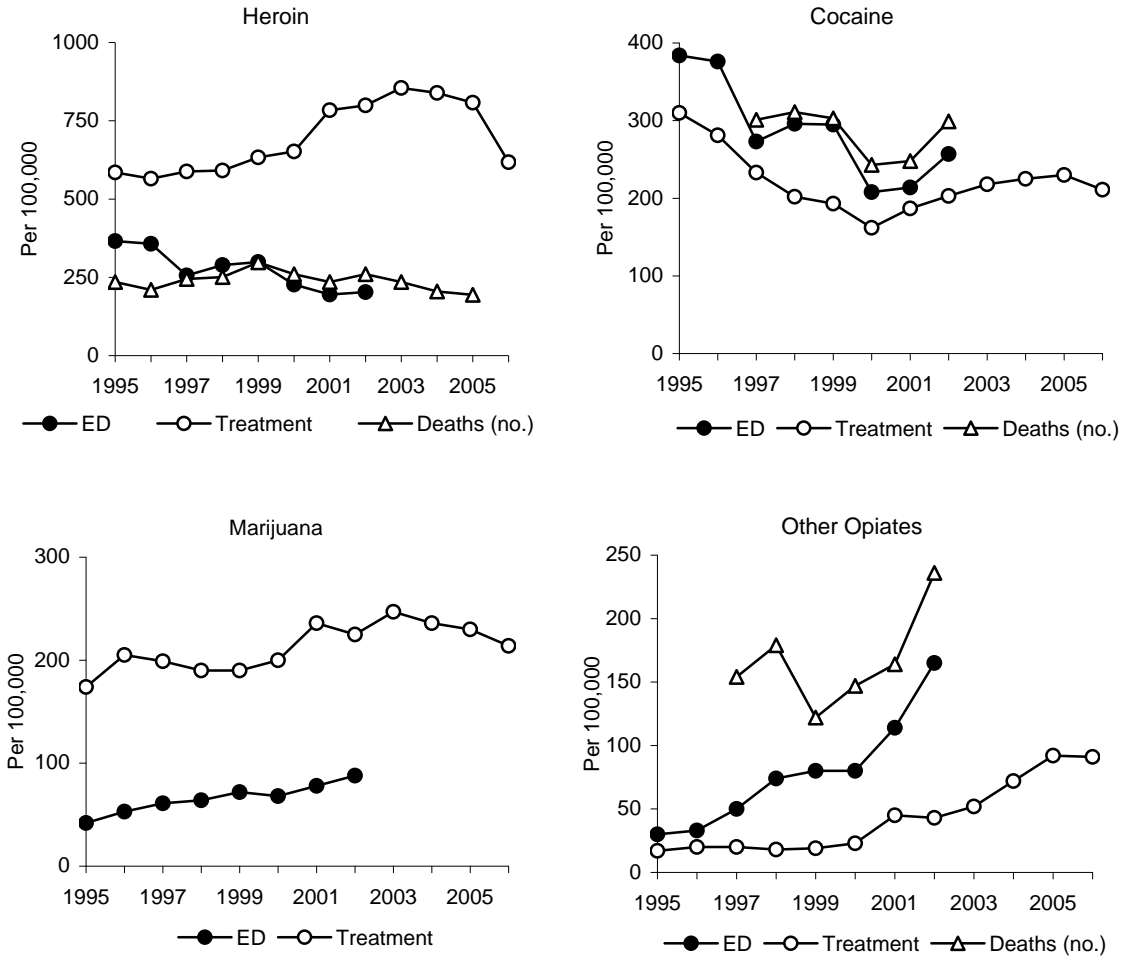
Among MSAs over 500,000 population, Baltimore's 2005 acquired immunodeficiency syndrome (AIDS) case report rate continued to be among the highest in the Nation. The rate had declined from 49.5 cases per 100,000 population in 2001 to 32.6 per 100,000 in 2004, but rebounded to 40.4 per 100,000 in 2006. Baltimore's rate was surpassed only by the New York Division of New York City (45.4 per 100,000) and by Miami (44.9 per 100,000). In Miami, both the Miami and Fort Lauderdale Divisions had rates greater than Baltimore (52.8 and 45.8 per 100,000, respectively). The overall rate for MSAs over 500,000 population was 17.4 cases per 100,000 population, and the overall rate for the State of Maryland was 28.5 per 100,000 population.

There were 19,624 cumulative AIDS cases reported at the end of 2005 for the Baltimore MSA. These cases made up 67 percent of the 29,116 cases reported for the State of Maryland. This proportion has been relatively constant since about 1990.

The Baltimore PMSA accounted for 66 percent of Maryland's incident human immunodeficiency virus (HIV) cases, 63 percent of its prevalent HIV cases, 63 percent of its incident AIDS cases, and 61 percent of its prevalent AIDS.

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**Exhibit 1. Annual Rates of Drug-Related Treatment Admissions and ED Mentions per 100,000 Population, and Numbers of Drug-Related Deaths<sup>1</sup> in Baltimore: 1995–2006**



<sup>1</sup>Deaths are opiate-related deaths for Baltimore City only.  
 SOURCES: DAWN, OAS, SAMHSA, and Alcohol and Drug Abuse Administration, Maryland Department of Health and Mental Hygiene

Exhibit 2. Characteristics of Drug-Related Treatment Admissions in Baltimore, by Percent: 2002-2006

	Total PMSA					Baltimore City					PMSA excluding Baltimore City				
	2002	2003	2004	2005	2006	2002	2003	2004	2005	2006	2002	2003	2004	2005	2006
(Number of Admissions)	(32,939)	(35,497)	(35,671)	(35,515)	(30,224)	(17,617)	(20,107)	(22,088)	(22,220)	(18,227)	(15,322)	(15,390)	(13,583)	(13,295)	(11,997)
Primary Substance (%)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Alcohol with Secondary Drug	14.5	13.4	13.6	14.0	15.2	7.2	6.7	7.6	6.8	8.2	22.8	22.1	23.4	26.0	25.7
Cocaine	13.3	13.4	13.8	14.3	15.5	13.3	13.0	13.8	13.6	14.5	13.3	13.9	13.8	15.4	16.9
Smoked	10.1	10.0	10.9	10.9	11.9	10.9	10.6	11.5	11.0	11.8	9.3	9.2	9.9	10.7	12.2
Intranasal	1.8	2.2	1.8	2.0	2.2	1.1	1.2	1.2	1.2	1.5	2.6	3.4	2.8	3.5	3.3
Injected	1.1	1.0	0.8	1.1	1.0	1.1	1.0	0.9	1.2	1.1	1.1	1.0	0.7	0.9	1.0
Other	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.1	0.2	0.3	0.3	0.3	0.4	0.5
Marijuana/Hashish	14.8	15.1	14.4	14.3	15.7	11.0	11.5	10.3	10.4	12.8	19.1	19.8	21.2	20.7	20.0
Heroin	52.3	52.3	51.4	50.1	45.3	65.7	65.4	63.7	63.2	58.2	37.0	35.2	31.4	28.1	25.8
Injected	24.5	25.0	25.0	24.8	22.5	27.6	28.4	28.3	28.8	25.8	20.9	20.6	19.6	18.1	17.6
Intranasal	25.0	24.2	24.8	24.0	21.8	34.4	33.6	33.7	33.0	31.3	14.2	11.8	10.4	8.9	7.3
Other	2.8	3.1	1.6	1.3	1.0	3.6	3.4	1.7	1.5	1.1	1.9	2.7	1.4	1.1	0.9
Other Opiates	2.8	3.2	4.4	5.7	6.6	1.4	1.6	3.0	4.7	5.2	4.4	5.3	6.7	7.4	8.9
Stimulants	0.2	0.3	0.4	0.3	0.4	0.1	0.1	0.1	0.1	0.2	0.4	0.6	0.7	0.5	0.7
All Other	2.1	2.4	2.0	1.4	1.4	1.4	1.8	1.5	1.2	1.0	3.0	3.2	2.9	1.7	1.9
<b>Primary Substance (annual admissions per 100,000 population aged 12+)</b>															
Alcohol with Secondary Drug	221	219	222	226	207	240	257	326	298	297	215	206	190	204	180
Cocaine	203	218	225	230	211	443	499	590	593	525	125	129	112	121	118
Smoked	155	163	177	176	163	363	407	491	482	427	87	86	81	84	86
Intranasal	28	36	30	33	30	37	47	51	51	54	24	32	23	27	23
Injected	17	16	14	18	14	37	39	39	53	38	11	9	6	7	7
Other	3	4	4	4	4	5	6	9	6	6	3	3	3	3	3
Marijuana/Hashish	225	247	236	230	214	366	443	441	453	466	180	185	172	163	140
Heroin	799	855	839	808	618	2,191	2,519	2,731	2,759	2,109	348	328	256	221	181
Injected	374	409	408	400	307	922	1,094	1,213	1,256	934	196	192	160	143	123
Intranasal	382	395	405	387	297	1,149	1,295	1,445	1,439	1,134	134	110	85	70	51
Other	43	51	26	21	14	120	131	73	64	41	18	25	11	8	6
Other Opiates	43	52	72	92	91	46	62	129	203	187	42	49	54	58	62
Stimulants	3	5	6	4	5	2	4	5	5	7	3	5	6	4	5
All Other	32	39	33	23	18	46	68	62	54	35	28	30	24	14	14
<b>Secondary Substance (%)<sup>1</sup></b>															
None	25.3	27.2	28.2	28.3	27.0	26.5	28.7	29.5	31.2	29.0	23.9	25.3	26.2	23.4	24.0
Alcohol	29.0	28.2	26.6	24.9	25.0	29.4	28.0	25.9	23.9	23.9	28.5	28.6	27.7	26.7	26.5
Cocaine	37.8	36.7	36.3	36.0	35.3	44.9	44.1	42.7	41.3	41.3	29.6	27.0	25.9	27.1	26.2
Marijuana/Hashish	20.7	18.0	17.4	18.0	18.4	14.8	11.9	11.9	11.3	12.2	27.5	26.1	26.4	29.1	27.8
Heroin	6.4	6.2	5.5	7.3	8.0	7.0	6.7	6.1	7.9	9.0	5.9	5.6	4.5	6.2	6.5
Other Opiates	3.4	3.6	4.1	5.0	6.4	1.8	2.0	2.7	3.5	4.6	5.2	5.7	6.5	7.5	9.1
All Other	6.0	6.2	7.0	6.9	6.5	3.6	3.5	5.5	5.3	4.8	8.8	9.8	9.5	9.6	9.2

<sup>1</sup> "Secondary substance" totals equal more than 100 percent because they include secondary and tertiary substances. SOURCE: Based on data from Alcohol and Drug Abuse Administration, Maryland Department of Health and Mental Hygiene

Exhibit 3. Characteristics of Primary Cocaine Treatment Admissions in Baltimore, by Percent: 2002–2006

	Total PMSA						Baltimore City						PMSA Excluding Baltimore City					
	2002	2003	2004	2005	2006		2002	2003	2004	2005	2006		2002	2003	2004	2005	2006	
(Number of Admissions)	(4,378)	(4,742)	(4,911)	(5,072)	(4,671)		(2,340)	(2,606)	(3,041)	(3,018)	(2,640)		(2,038)	(2,136)	(1,870)	(2,054)	(2,031)	
Percent of All Admissions	13.3	13.4	13.8	14.3	15.5		13.3	13.0	13.8	13.6	14.5		13.3	13.9	13.8	15.4	16.9	
Gender																		
Male	56.3	60.0	58.0	58.4	56.6		51.8	54.8	54.8	54.4	54.0		61.6	66.3	63.3	64.3	60.1	
Female	43.7	40.0	42.0	41.6	43.4		48.2	45.2	45.2	45.6	46.0		38.4	33.7	36.7	35.7	39.9	
Age at Admission																		
Younger than 18	1.2	1.2	1.9	1.8	1.9		1.2	1.0	1.5	1.0	1.5		1.2	1.4	2.6	3.1	2.4	
18-25	7.4	8.2	8.2	9.6	9.8		3.6	5.0	4.8	5.8	5.2		11.8	12.2	13.6	15.2	15.8	
26-34	24.5	22.4	20.4	18.3	17.9		20.5	17.3	16.9	15.4	13.6		29.1	28.7	26.1	22.4	23.5	
35 and older	66.8	68.0	69.4	70.3	70.4		74.7	76.6	76.7	77.8	79.7		57.7	57.6	57.6	59.3	58.2	
(Median Age at Admission)	(38 yrs)	(38 yrs)	(39 yrs)	(40 yrs)	(40 yrs)		(39 yrs)	(40 yrs)	(40 yrs)	(41 yrs)	(42 yrs)		(36 yrs)	(36 yrs)	(36 yrs)	(36 yrs)	(37 yrs)	
Race/Ethnicity																		
White	35.5	36.6	36.3	38.9	41.9		14.2	15.7	17.4	18.1	18.3		59.9	62.0	67.0	69.4	72.7	
African-American	62.9	61.2	61.9	59.0	55.3		85.0	82.8	81.4	80.4	79.2		37.5	34.8	30.2	27.7	24.3	
Hispanic	0.9	1.5	1.2	1.4	1.8		0.5	1.0	0.8	1.1	1.8		1.4	2.2	2.0	1.9	1.7	
Other	0.6	0.7	0.6	0.7	0.9		0.3	0.3	0.4	0.5	0.6		1.0	1.1	0.9	1.1	1.1	
Route of Administration																		
Smoking	76.3	74.7	78.9	76.3	77.3		82.1	81.5	83.2	81.3	81.3		69.8	66.2	72.0	69.0	72.2	
Intranasal	13.6	16.3	13.2	14.2	14.3		8.5	9.5	8.7	8.6	10.3		19.6	24.6	20.4	22.5	19.4	
Injection	8.4	7.4	6.1	7.8	6.6		8.3	7.7	6.6	9.0	7.3		8.4	6.9	5.3	6.1	5.7	
Other	1.6	1.7	1.8	1.6	1.9		1.1	1.3	1.5	1.1	1.1		2.2	2.2	2.3	2.4	2.8	
Daily Use	38.9	39.2	41.8	42.0	36.6		49.5	47.7	47.2	48.0	36.5		26.6	28.8	33.2	33.2	36.8	
Criminal Justice Referral	33.9	32.7	33.0	32.4	32.8		26.8	27.1	29.7	30.0	34.7		41.9	39.6	38.2	35.9	30.3	
User/Treatment Status																		
First Treatment (3 Years' Use or Less)	7.7	7.2	7.5	8.0	7.4		6.7	6.6	5.1	5.4	5.5		8.8	8.0	11.3	11.8	9.9	
First Treatment (More than 3 Years' Use)	34.5	32.8	31.5	29.8	24.6		33.2	32.0	29.2	28.1	25.9		36.0	33.7	35.1	32.3	22.8	
Prior Treatment	57.8	59.9	61.1	62.2	67.9		60.0	61.3	65.7	66.5	68.5		55.2	58.2	53.6	55.9	67.2	
(Median Duration of Use)	(12 yrs)	(12 yrs)	(12 yrs)	(12 yrs)	(12 yrs)		(12 yrs)	(12 yrs)	(13 yrs)	(13 yrs)	(14 yrs)		(11 yrs)	(12 yrs)	(11 yrs)	(10 yrs)	(10 yrs)	
Secondary Substance <sup>2</sup>																		
None	27.3	29.6	31.3	30.1	30.6		28.8	32.8	33.0	33.9	32.0		25.6	25.7	28.5	24.7	28.7	
Alcohol	48.1	46.0	44.9	40.8	40.1		45.5	41.3	41.5	35.4	34.8		51.0	51.6	50.5	48.7	47.1	
Marijuana/Hashish/THC	24.9	22.5	23.1	22.9	22.9		20.6	18.2	19.0	16.9	18.8		29.9	27.7	29.7	31.8	28.2	
Heroin	24.9	23.7	20.2	25.8	25.4		31.2	28.6	25.4	32.1	32.6		17.8	17.8	11.9	16.7	16.0	
Intranasal	15.4	13.3	12.5	13.3	14.0		21.4	17.7	16.9	17.8	19.2		8.5	8.1	5.3	6.7	7.2	
Injected	7.6	8.3	6.3	10.7	10.1		7.6	8.9	6.9	12.3	12.0		7.6	7.6	5.3	8.5	7.6	
Other Opiates	1.9	2.2	2.8	3.2	3.9		0.8	0.8	1.5	1.4	2.1		3.3	3.8	4.9	5.8	6.3	
All Other	3.4	3.6	5.4	3.8	3.6		1.2	1.8	4.6	2.6	2.5		5.8	5.9	6.6	5.6	4.9	

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

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

SOURCE: Based on data from Alcohol and Drug Abuse Administration, Maryland Department of Health and Mental Hygiene

**Exhibit 4. Characteristics of Cocaine Treatment Admissions (Primary and Secondary) in Baltimore, by Route of Administration and Percent: 2006**

	Route of Administration for Primary Cocaine Use				Route of Administration for Secondary Cocaine Use					
	Total	Smoked	Intranasal	Injected	Other	Total	Smoked	Intranasal	Injected	Other
(Number of Cocaine Admissions)	(4,671)	(3,611)	(666)	(307)	(87)	(10,585)	(5,693)	(1,984)	(2,782)	(126)
Percent of Cocaine Admissions	100.0	77.3	14.3	6.6	1.9	100.0	52.0	16.8	29.8	1.4
Gender										
Male	56.6	54.2	65.9	63.5	63.2	56.6	49.1	68.1	63.5	63.5
Female	43.4	45.8	34.1	36.5	36.8	43.4	50.9	31.9	36.5	36.5
Age at Admission										
Younger than 18	1.9	1.2	6.0	1.0	2.3	1.5	0.9	4.4	0.3	10.3
18-25	9.8	7.9	16.8	15.6	14.9	12.2	8.6	19.1	14.1	23.8
26-34	17.9	16.4	22.7	24.4	21.8	19.2	18.8	19.3	20.2	14.3
35 and older	70.4	74.5	54.2	59.0	60.9	67.0	71.6	57.1	65.5	51.6
(Median Age at Admission)	(40 yrs)	(41 yrs)	(36 yrs)	(39 yrs)	(38 yrs)	(39 yrs)	(39 yrs)	(37 yrs)	(40 yrs)	(35 yrs)
Race/Ethnicity										
White	42.5	38.4	58.4	51.1	56.3	40.4	34.0	55.0	42.1	57.1
African-American	55.9	60.1	39.0	46.3	42.5	58.0	64.6	42.6	56.3	40.5
Other	1.6	1.3	2.6	2.3	1.1	1.5	1.2	2.3	1.6	2.4
Daily Use	36.6	37.4	29.6	41.4	41.4	35.7	37.2	21.7	43.2	22.2
Criminal Justice Referral	32.8	33.0	36.6	23.5	29.9	27.5	26.3	37.6	22.1	36.5
User/Treatment Status										
First Treatment (3 Years' Use or Less)	7.4	6.7	12.5	3.3	14.9	4.5	3.7	10.0	1.9	11.1
First Treatment (More than 3 Years' Use)	24.6	23.2	31.1	23.1	35.6	17.3	17.2	20.6	14.7	25.4
Prior Treatment	67.9	70.1	56.2	73.6	49.4	78.2	79.1	69.4	83.4	63.5
(Median Duration of Cocaine Use)	(12 yrs)	(12 yrs)	(10 yrs)	(14 yrs)	(12 yrs)	(13 yrs)	(13 yrs)	(8 yrs)	(16 yrs)	(8 yrs)
Urbanicity										
Baltimore City	56.5	59.4	41.0	62.5	34.5	70.7	75.7	49.0	77.0	46.0
Suburban Counties	43.5	40.6	59.0	37.5	65.5	29.3	24.3	51.0	23.0	54.0
Primary or Secondary Substance										
None	30.6	33.1	25.2	11.1	33.3	-	-	-	-	-
Alcohol	40.1	40.2	48.6	20.5	41.4	19.3	21.6	31.7	5.2	31.7
Marijuana/Hashish/THC	22.9	22.3	30.0	14.0	24.1	4.2	3.4	10.5	0.7	22.2
Heroin	25.4	22.6	19.2	75.6	11.5	72.2	71.2	49.6	91.7	41.3
Intranasal	14.0	15.0	13.8	4.2	8.0	31.8	45.3	36.8	1.2	12.7
Injected	10.1	6.3	4.1	70.0	2.3	39.0	24.2	11.0	90.0	18.3
Other Opiates	3.9	3.1	6.8	5.5	11.5	3.5	3.1	6.7	2.1	3.2
All Other	3.6	3.3	5.4	3.3	2.3	0.8	0.6	1.6	0.4	1.6

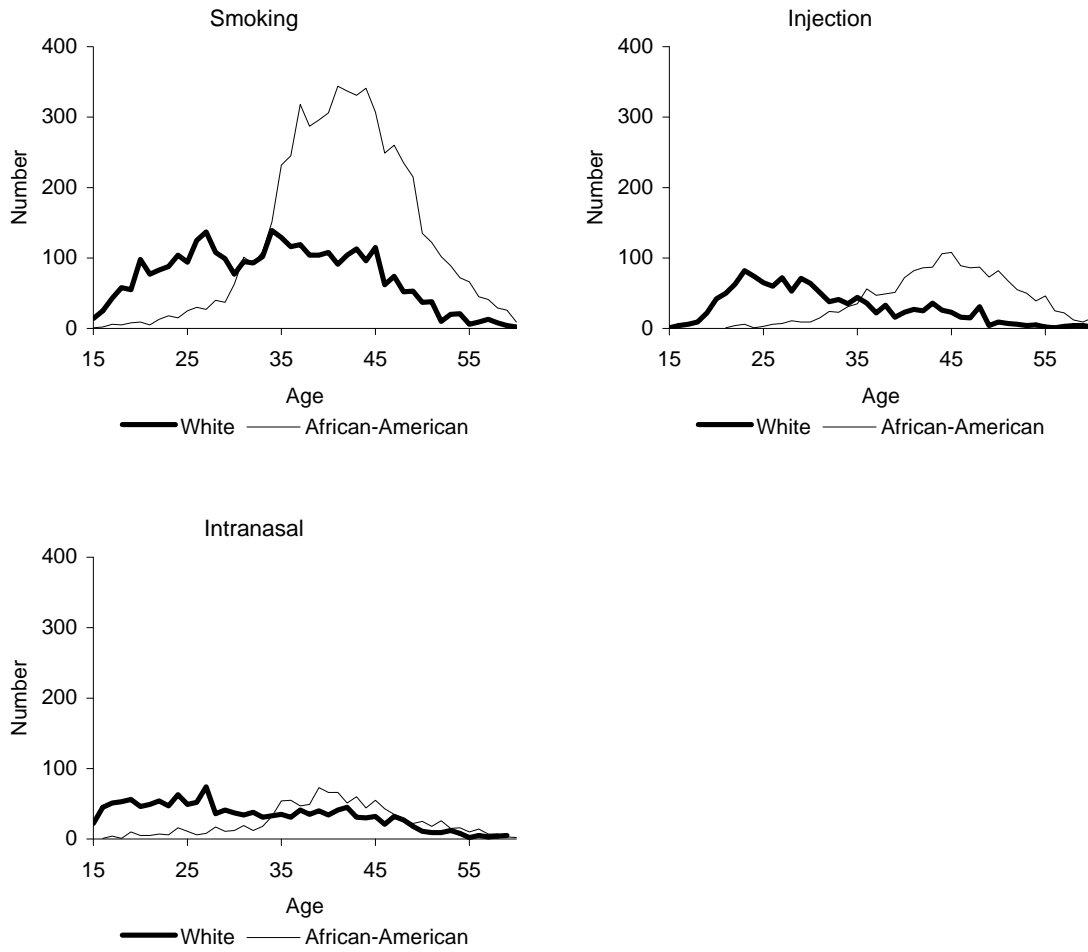
<sup>1</sup> "Secondary substance" totals equal more than 100 percent because they include secondary and tertiary substances.

- Quantity is zero.

n/a Not applicable.

SOURCE: Based on data from Alcohol and Drug Abuse Administration, Maryland Department of Health and Mental Hygiene

**Exhibit 5. Numbers of Primary, Secondary, and Tertiary Cocaine Treatment Admissions in Baltimore, by Route of Administration, Age, and Race: 2006**



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

**Exhibit 6. Characteristics of Primary Heroin Treatment Admissions in Baltimore, by Percent: 2002–2006**

	Total PMSA					Baltimore City					PMSA Excluding Baltimore City				
	2002	2003	2004	2005	2006	2002	2003	2004	2005	2006	2002	2003	2004	2005	2006
(Number of Admissions)	(17,241)	(18,559)	(18,343)	(17,782)	(13,705)	(11,575)	(13,146)	(14,074)	(14,045)	(10,604)	(5,666)	(5,413)	(4,269)	(3,737)	(3,101)
Percent of All Admissions	52.3	52.3	51.4	50.1	45.3	65.7	65.4	63.7	63.2	58.2	37.0	35.2	31.4	28.1	25.8
Gender															
Male	56.9	56.0	56.4	56.9	58.2	54.1	53.3	54.4	55.5	57.0	62.7	62.5	63.1	62.0	62.3
Female	43.1	44.0	43.6	43.1	41.8	45.9	46.7	45.6	44.5	43.0	37.3	37.5	36.9	38.0	37.7
Age at Admission															
Younger than 18	0.9	0.8	0.7	0.4	0.4	0.5	0.4	0.4	0.3	0.2	1.6	1.7	1.6	1.0	1.2
18-25	14.0	13.5	13.8	14.0	13.6	6.8	6.6	8.3	8.8	7.6	28.7	30.3	31.9	33.8	34.2
26-34	27.6	24.3	23.2	21.1	19.4	26.8	23.2	21.7	19.5	16.9	29.2	26.8	28.0	27.1	28.2
35 and older	57.4	61.3	62.4	64.4	66.5	65.8	69.6	69.6	71.4	75.4	40.3	40.9	38.5	38.1	36.3
(Median Age at Admission)	(36 yrs)	(37 yrs)	(38 yrs)	(38 yrs)	(39 yrs)	(38 yrs)	(39 yrs)	(39 yrs)	(39 yrs)	(40 yrs)	(32 yrs)	(32 yrs)	(31 yrs)	(30 yrs)	(29 yrs)
Race/Ethnicity															
White	34.2	34.4	36.8	36.9	37.9	19.4	20.5	25.4	27.9	25.7	64.3	68.2	74.6	71.0	79.8
African-American	64.2	63.9	61.0	60.2	59.4	79.3	78.0	72.9	70.5	71.9	33.2	29.7	21.7	21.8	16.8
Hispanic	0.8	0.9	1.5	2.2	1.7	0.6	0.9	1.0	1.1	1.6	1.3	1.1	2.9	6.3	1.9
Other	0.7	0.6	0.6	0.6	0.9	0.5	0.5	0.6	0.6	0.8	1.1	0.9	0.8	0.9	1.2
Route of Administration															
Intranasal	47.8	46.2	48.3	47.9	48.0	52.4	51.4	52.9	52.2	53.8	38.4	33.6	33.1	31.7	28.4
Injection	46.8	47.8	48.6	49.5	49.7	42.1	43.4	44.4	45.5	44.3	56.4	58.6	62.5	64.6	68.1
Other	5.3	5.8	3.1	2.6	2.3	5.4	5.2	2.7	2.3	2.0	5.2	7.5	4.4	3.7	3.5
Daily Use	72.4	73.3	74.5	74.7	70.1	78.3	77.4	77.5	77.1	70.9	60.5	63.4	64.7	65.8	67.6
Criminal Justice Referral	24.8	23.8	24.2	22.6	23.8	25.1	23.7	23.8	22.4	25.8	24.3	24.1	25.7	23.3	17.2
User/Treatment Status															
First Treatment (3 Years' Use or Less)	7.3	5.8	6.0	5.6	4.3	5.2	3.9	4.2	4.1	3.1	11.6	10.5	11.8	11.3	8.5
First Treatment (More than 3 Years' Use)	27.3	24.5	25.9	23.9	17.7	28.5	25.9	26.2	23.0	19.1	24.8	21.1	25.0	27.2	13.0
Prior Treatment	65.4	69.6	68.1	70.5	78.0	66.2	70.1	69.6	72.9	77.9	63.6	68.2	63.2	61.5	78.4
(Median Duration of Use) <sup>1</sup>	(11 yrs)	(12 yrs)	(12 yrs)	(12 yrs)	(14 yrs)	(12 yrs)	(14 yrs)	(14 yrs)	(14 yrs)	(16 yrs)	(7 yrs)	(7 yrs)	(7 yrs)	(7 yrs)	(5 yrs)
Secondary Substance <sup>2</sup>															
None	26.5	28.9	29.2	30.9	28.5	25.9	28.1	28.6	30.9	27.8	27.9	30.7	31.3	30.7	31.0
Alcohol	25.5	24.0	22.7	20.8	20.5	25.8	24.6	23.0	21.1	20.8	24.8	22.6	21.6	19.9	19.8
Cocaine	56.7	55.6	54.9	54.0	55.8	60.4	59.5	57.9	55.9	58.7	49.2	46.0	45.0	46.9	45.8
Smoked	23.9	24.7	26.6	27.6	30.0	27.7	28.6	29.6	30.5	33.2	16.1	15.1	16.7	16.8	19.1
Intranasal	9.0	7.8	7.2	6.7	7.3	8.3	7.4	6.6	6.0	6.8	10.2	8.7	9.2	9.4	9.0
Injected	22.6	21.8	20.5	19.3	18.8	23.0	22.3	21.2	19.1	19.1	21.8	20.7	18.5	19.9	17.7
Marijuana/Hashish/THC	14.8	12.3	11.2	11.0	11.2	12.4	9.4	8.7	8.6	9.2	19.9	19.2	19.6	20.0	17.9
Other Opiates	3.6	3.6	4.2	5.3	6.9	2.1	2.0	2.7	3.8	5.1	6.7	7.4	9.1	10.7	13.0
All Other	3.9	3.6	4.9	4.4	4.2	3.1	2.7	4.8	4.0	3.5	5.6	5.7	5.2	6.2	6.4

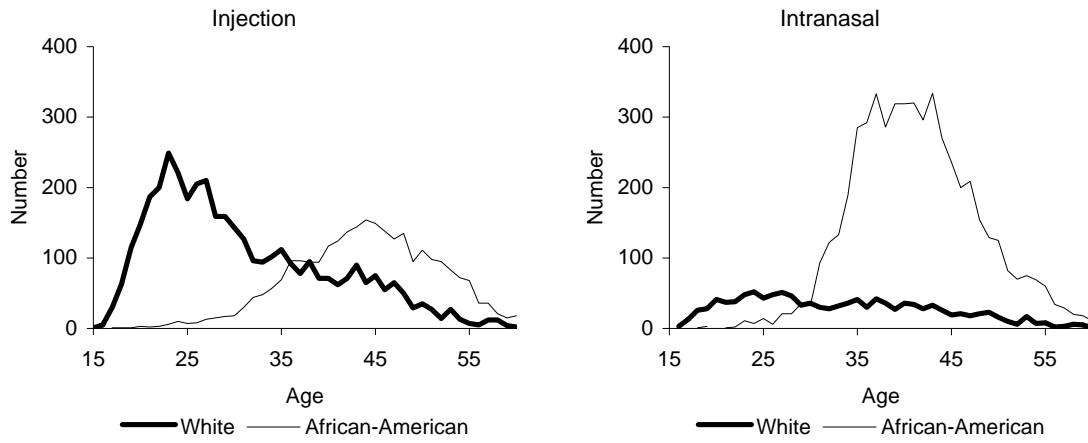
<sup>1</sup>For first-time treatment admissions.

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

SOURCE: Based on data from Alcohol and Drug Abuse Administration, Maryland Department of Health and Mental Hygiene



**Exhibit 7. Numbers of Primary Heroin Treatment Admissions in Baltimore, by Route of Administration, Age, and Race: 2006**



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

Exhibit 8. Characteristics of Heroin Treatment Admissions in Baltimore, by Route of Administration, Race, and Percent: 2006

	Route of Heroin Administration and Race					
	Total	Intranasal		Injection		All Other Routes & Races
		African-American	White	African-American	White	
(Number of Heroin Admissions)	(13,705)	(5,313)	(1,192)	(2,745)	(3,945)	(510)
Percent of All Heroin Admissions	100.0	38.8	8.7	20.0	28.8	3.7
Gender						
Male	58.2	58.2	57.8	62.1	55.6	59.0
Female	41.8	41.8	42.2	37.9	44.4	41.0
Age at Admission						
Younger than 18	0.4	-	1.3	*	0.9	1.0
18-25	13.6	0.7	26.3	1.2	34.6	22.2
26-34	19.4	12.3	28.5	9.1	32.8	24.7
35 and older	66.5	87.0	43.9	89.7	31.6	52.0
(Median Age at Admission)	(39 yrs)	(41 yrs)	(32 yrs)	(44 yrs)	(28 yrs)	(33 yrs)
Daily Use	70.1	67.4	76.3	68.1	74.5	62.2
Criminal Justice Referral	23.8	33.1	13.3	24.5	13.5	28.2
User/Treatment Status						
First Treatment (3 Years' Use or Less)	4.3	1.3	14.8	0.5	7.4	7.5
First Treatment (More than 3 Years' Use)	17.7	21.9	14.7	17.3	13.1	19.6
Prior Treatment	78.0	76.9	70.5	82.2	79.5	72.7
(Median Duration of Use)	(14 yrs)	(18 yrs)	(3 yrs)	(24 yrs)	(6 yrs)	(10 yrs)
Urbanicity						
Baltimore City	77.4	94.1	54.4	93.0	52.5	64.9
Suburban Counties	22.6	5.9	45.6	7.0	47.5	35.1
Secondary Substance <sup>2</sup>						
None	28.5	31.9	32.7	18.7	29.5	28.6
Alcohol	20.5	23.4	14.9	23.6	16.0	21.8
Cocaine	55.8	54.5	36.3	74.0	51.6	49.2
Smoked	30.0	43.7	20.8	19.6	21.8	27.5
Intranasal	7.3	10.4	15.2	2.5	3.9	9.2
Injected	18.8	0.5	0.6	52.9	26.2	10.2
Marijuana/Hashish/THC	11.2	10.4	15.6	6.4	13.7	16.1
Other Opiates	6.9	2.5	21.0	2.8	11.0	9.4
All Other	4.2	1.4	7.9	2.2	8.0	5.1

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

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

\* Less than 0.05%.

SOURCE: Based on data from Alcohol and Drug Abuse Administration, Maryland Department of Health and Mental Hygiene

**Exhibit 9. Characteristics of Admissions for Opiates Other than Heroin<sup>1</sup> (Primary and Secondary Use) in Baltimore, by Route of Administration and Percent: 2002–2006**

	Primary Use of Opiates Other than Heroin					Secondary Use of Opiates Other than Heroin				
	2002	2003	2004	2005	2006	2002	2003	2004	2005	2006
(Number of Non-Heroin Opiate Admissions)	(922)	(1,132)	(1,571)	(2,023)	(2,009)	(1,078)	(1,225)	(1,402)	(1,636)	(1,706)
Pct of Primary and Secondary Admissions	46.1	48.0	52.8	55.3	54.1	53.9	52.0	47.2	44.7	45.9
Gender										
Male	52.5	55.1	53.2	53.0	52.0	56.5	56.7	57.8	57.5	57.6
Female	47.5	44.9	46.8	47.0	48.0	43.5	43.3	42.2	42.5	42.4
Age at Admission										
Younger than 18	3.9	2.4	2.8	2.4	1.8	7.2	9.2	9.4	7.2	6.0
18-25	20.1	27.2	24.4	26.4	25.7	25.5	24.8	27.3	27.3	26.3
26-34	22.1	21.2	22.8	26.1	25.6	24.2	23.2	21.9	23.3	22.0
35 and older	53.9	49.2	50.0	45.0	46.8	43.1	42.8	41.4	42.2	45.7
(Median Age at Admission)	(36 yrs)	(34 yrs)	(35 yrs)	(32 yrs)	(33 yrs)	(32 yrs)	(32 yrs)	(31 yrs)	(32 yrs)	(33 yrs)
Race/Ethnicity										
White	89.3	88.1	85.5	85.3	84.3	81.7	79.3	83.3	78.8	81.1
African-American	9.0	10.8	12.8	12.6	14.3	17.3	18.6	15.2	18.7	17.0
Other	1.7	1.1	1.7	2.1	1.5	1.0	2.0	1.5	2.5	1.9
Route of Administration										
Oral	85.6	78.7	81.5	79.9	81.0	84.3	81.2	86.4	82.2	84.9
Intranasal	6.4	12.6	11.8	13.5	12.8	6.6	8.7	8.6	10.5	8.6
Other	8.0	8.7	6.7	6.6	6.2	9.1	10.1	5.0	7.4	6.4
Daily Use	74.4	74.2	76.8	80.2	75.3	44.1	44.2	44.7	42.5	41.0
Criminal Justice Referral	9.8	11.2	10.1	8.5	8.6	17.4	18.3	16.5	17.7	15.9
User/Treatment Status										
First Treatment (3 Years' Use or Less)	22.0	23.8	26.0	27.4	20.3	21.4	19.3	21.3	22.4	18.4
First Treatment (More than 3 Years' Use)	21.9	20.7	21.4	21.5	19.5	16.4	12.7	18.6	19.8	14.6
Prior Treatment	56.0	55.5	52.6	51.1	60.3	62.3	68.0	60.1	57.8	67.0
(Median Duration of Opiate Use <sup>2</sup> )	(3 yrs)	(3 yrs)	(3 yrs)	(3 yrs)	(3 yrs)	(3 yrs)	(3 yrs)	(3 yrs)	(3 yrs)	(3 yrs)
Urbanicity										
Baltimore City	26.6	28.5	42.5	51.1	47.0	28.4	30.9	39.7	43.9	44.2
Suburban Counties	74.3	71.5	57.5	48.9	53.4	71.7	69.1	60.3	56.1	56.2
Primary or Secondary Substance <sup>3</sup>			Secondary Substance <sup>3</sup>					Primary Substance		
None	46.4	40.6	47.3	39.7	37.0	n/a	n/a	n/a	n/a	n/a
Alcohol	21.0	22.5	16.9	16.5	17.1	21.0	22.4	20.3	18.6	18.8
Cocaine	12.6	16.9	15.1	18.7	18.5	7.9	8.3	9.8	9.8	10.8
Marijuana/Hashish/THC	14.4	15.8	13.1	14.1	14.2	9.1	9.6	11.5	9.7	9.1
Heroin	11.1	10.8	11.1	17.3	16.3	58.1	54.3	54.4	57.3	55.3
Intranasal	5.7	6.6	6.2	10.1	9.5	25.6	21.3	22.4	22.0	23.0
Injected	3.9	3.4	4.5	6.2	5.7	28.5	29.7	30.4	32.9	30.8
Tranquilizers	7.3	8.0	8.3	11.0	12.8	1.7	2.0	1.8	2.9	5.0
All Other	14.0	18.7	14.4	14.8	14.9	2.3	3.4	2.2	1.7	1.1

<sup>1</sup>Includes codeine, hydrocodone, hydromorphone, meperidine, methadone, morphine, opium, oxycodone, pentazocine, propoxyphene, tramadol, and any other drug with morphine-like effects.

<sup>2</sup>For first-time treatment admissions

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

n/a Not applicable.

SOURCE: Based on data from Alcohol and Drug Abuse Administration, Maryland Department of Health and Mental Hygiene

**Exhibit 10. Characteristics of Primary Marijuana Treatment Admissions in Baltimore, by Percent: 2002–2006**

	Total PMSA					Baltimore City					PMSA Excluding Baltimore City				
	2002	2003	2004	2005	2006	2002	2003	2004	2005	2006	2002	2003	2004	2005	2006
(Number of Admissions)	(4,864)	(5,357)	(5,150)	(5,061)	(4,737)	(1,936)	(2,311)	(2,275)	(2,306)	(2,341)	(2,928)	(3,046)	(2,875)	(2,755)	(2,396)
Percent of All Admissions	14.8	15.1	14.4	14.3	15.7	11.0	11.5	10.3	10.4	12.8	19.1	19.8	21.2	20.7	20.0
Gender															
Male	81.4	82.0	81.6	80.6	80.0	79.1	80.7	80.0	77.2	78.4	83.0	83.0	82.9	83.5	81.5
Female	18.6	18.0	18.4	19.4	20.0	20.9	19.3	20.0	22.8	21.6	17.0	17.0	17.1	16.5	18.5
Age at Admission															
Younger than 18	45.2	43.3	43.0	41.0	40.9	55.9	50.5	49.9	47.4	48.2	38.1	37.9	37.6	35.7	33.8
18-25	34.3	36.2	35.4	37.6	37.7	25.2	30.3	29.2	30.8	28.0	40.3	40.8	40.3	43.3	47.2
26-34	11.3	11.3	12.6	12.3	12.8	10.2	11.4	13.1	13.2	14.6	12.0	11.2	12.2	11.5	11.0
35 and older	9.2	9.2	9.0	9.0	8.6	8.8	7.9	7.8	8.6	9.2	9.5	10.1	9.9	9.4	8.1
(Median Age at Admission)	(18 yrs)	(18 yrs)	(18 yrs)	(19 yrs)	(19 yrs)	(17 yrs)	(17 yrs)	(18 yrs)	(18 yrs)	(18 yrs)	(19 yrs)	(19 yrs)	(19 yrs)	(19 yrs)	(19 yrs)
Race/Ethnicity															
White	46.4	43.7	43.5	43.9	43.2	21.7	19.0	17.9	19.4	17.7	62.7	62.5	63.7	64.4	68.0
African-American	50.3	53.1	52.8	52.3	52.9	76.5	78.4	79.9	78.4	79.5	33.0	33.8	31.3	30.5	26.9
Hispanic	1.7	1.8	2.3	2.2	2.5	0.9	1.7	1.5	1.2	2.0	2.2	1.9	3.0	3.1	3.0
Other	1.6	1.4	1.4	1.5	1.4	0.9	0.9	0.6	1.0	0.8	2.1	1.8	2.0	2.0	2.0
Daily Use	38.2	36.7	36.0	35.0	32.9	49.6	48.2	47.5	45.8	39.7	30.7	27.9	26.8	25.9	26.3
Criminal Justice Referral	64.7	63.0	63.1	62.1	61.3	62.0	60.1	60.5	57.4	57.4	66.4	65.2	65.2	66.0	65.2
User/Treatment Status															
First Treatment (3 Years' Use or Less)	31.5	29.9	29.0	30.0	25.6	35.3	30.9	26.9	30.8	21.9	29.0	29.1	30.6	29.4	29.3
First Treatment (More than 3 Years' Use)	38.4	36.7	37.7	35.9	32.5	38.4	36.3	35.8	35.2	31.4	38.4	37.1	39.3	36.5	33.6
Prior Treatment	30.1	33.4	33.3	34.1	41.8	26.3	32.7	37.3	34.0	46.7	32.6	33.9	30.1	34.1	37.1
(Median Duration of Use)	(4 yrs)	(4 yrs)	(4 yrs)	(4 yrs)	(4 yrs)	(4 yrs)	(4 yrs)	(4 yrs)	(4 yrs)	(5 yrs)	(4 yrs)	(4 yrs)	(4 yrs)	(4 yrs)	(4 yrs)
Secondary Substance <sup>c</sup>															
None	34.4	36.4	38.7	39.9	41.0	36.6	39.3	43.1	44.4	45.7	33.0	34.2	35.2	36.1	36.5
Alcohol	55.9	54.8	52.2	50.6	49.8	54.1	52.9	47.5	45.8	45.3	57.0	56.3	56.0	54.7	54.3
Cocaine	9.7	8.2	8.5	8.6	9.4	8.9	7.1	8.0	7.0	7.6	10.1	9.1	8.9	10.0	11.2
Smoked	4.1	3.8	4.1	4.3	4.1	3.6	3.4	4.7	3.8	3.8	4.5	4.2	3.5	4.8	4.3
Intranasal	4.2	3.3	3.7	3.8	4.5	2.8	2.3	2.5	2.5	2.9	5.0	4.1	4.7	4.8	6.0
Heroin	4.7	3.6	3.0	3.7	3.3	5.0	3.7	3.4	5.4	3.7	4.5	3.5	2.6	2.3	3.0
Intranasal	2.9	2.0	1.6	2.3	1.7	3.0	2.1	2.0	3.4	2.2	2.8	2.0	1.3	1.3	1.2
Other Opiates	2.0	2.2	3.1	3.1	3.3	1.1	1.6	2.5	2.3	2.3	2.6	2.6	3.6	3.8	4.3
Hallucinogens	4.2	3.9	3.1	2.1	1.5	4.0	3.6	2.8	2.6	1.5	4.2	4.1	3.4	1.7	1.5
All Other	9.0	9.1	7.4	9.7	7.0	7.9	8.2	6.6	12.5	8.1	9.8	9.8	8.0	7.4	6.0

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

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

SOURCE: Based on data from Alcohol and Drug Abuse Administration, Maryland Department of Health and Mental Hygiene

# Greater Boston Patterns and Trends in Drug Abuse: June 2007

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

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## ABSTRACT

Greater Boston's cocaine indicators remain at high levels that are slightly increasing. The proportion of treatment admissions with past-month cocaine (including crack) use increased slightly over 2 years, from 23 percent in FY 2004 to 26 percent in FY 2006. The number of cocaine calls to the Helpline remained stable from 2005 to 2006, but the proportion increased from 18 percent in 2003 to 21 percent in 2006. The number of Class B drug arrests (mainly cocaine) increased 12 percent from 2005 to 2006. Similarly, drug lab samples increased 11 percent from 2005 to 2006. Heroin abuse remains stable at high levels in Boston. In FY 2006, one-half of all treatment admissions cited heroin as the client's primary drug of choice. This proportion is similar to FY 2005 and to the first three quarters of FY 2007. The proportion of heroin calls to the substance abuse Helpline, 34 percent of all calls, did not change from 2005 to 2006. The levels of Class A drug arrests (mainly heroin) and heroin drug lab samples were stable from 2005 to 2006. In Boston, heroin remains relatively pure (the 2005 average purity was 28 percent) and inexpensive (the 2005 average price was \$.88 per milligram pure). The most recent street-level heroin purchases by the Domestic Monitoring Program (DEA) revealed stable price and purity from 2004 to 2005. Indicators for other opiates are relatively stable at historically high levels. The number and proportion of other opiate treatment admissions increased slightly from FY 2005 to FY 2006. The proportion of Helpline calls for other opiates (18 percent in 2006) remained fairly stable from 2003 to 2006. The number of oxycodone drug lab samples in 2006 decreased from 2005, but was similar to 2004 and previous years. In Boston, methamphetamine abuse levels remain small overall, but anecdotal evidence suggests higher levels of abuse in specific populations. The number of primary admissions for methamphetamine total less than 1 percent of all treatment admissions. Methamphetamine drug lab samples totaled 17 in 2004, 55 in 2005, and 36 in 2006. Of the 6,435 methamphetamine lab seizures

across the United States in 2006, only 2 were located in Massachusetts. Recent marijuana indicators are mostly stable. Treatment admissions for marijuana have steadily decreased in number and as a proportion of all admissions during the past 7 years. The proportion of marijuana Helpline calls and drug lab samples was unchanged from 2005 to 2006. Benzodiazepine misuse and abuse levels remain fairly stable at relatively high levels. In 2005, there were 257 adult HIV/AIDS cases diagnosed in Boston. Primary transmission risk factors of these cases included 11 percent who were IDUs, 2 percent who had sex with IDUs, and 32 percent with an unknown/undetermined risk factor.

## INTRODUCTION

### Area Description

According to the 2000 U.S. census, Massachusetts ranks 13th in population (6,349,097 people). The 746,914 people in the metropolitan Boston area represent 12 percent of the total Massachusetts population. The 2000 census data show that there were 589,141 residents of the city of Boston. The racial composition includes 50 percent White non-Hispanic, 23 percent Black non-Hispanic, 14 percent Hispanic/Latino, and 8 percent Asian.

Several characteristics influence drug trends in Boston and throughout Massachusetts:

- Contiguity with five neighboring States (Rhode Island, Connecticut, New York, Vermont, and New Hampshire) 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 and harbor areas
- Logan International Airport and several regional airports within a 1-hour drive of Boston
- A high number of homeless individuals seeking shelter

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

## Data Sources

This report presents data from a number of different sources with varied Boston-area geographical parameters. For this reason, caution is advised when attempting to generalize across data sources. A description of the relevant boundary parameters is included with each data source description. For simplicity, these are all referred to as “Boston” throughout the text. In addition, there are many systemic factors specific to each data source that do not directly relate to the level of abuse in the larger population, but may contribute to changes seen in the data. For example, field sources have indicated that past reductions in treatment funding caused reductions in available services, and, ultimately, in reductions in the number of admissions at a time when the number of potential clients exceeded the number of available treatment slots. As a result, decreasing admissions numbers were not an indication of a reduction in the number of people seeking treatment. How such systemic factors influence totals and subpopulation differences observed within a data source is often unknown. Further, to what degree an individual data source is representative of the larger drug-abusing population is largely unknown. Conclusions drawn from the data sources within this text are subject to these limitations. At best, these data present a partial picture of Boston’s collective drug abuse experience. Our understanding should improve as current data sources improve and new sources develop.

- **State-funded substance abuse treatment admissions data** for a Boston region comprising the cities of Boston, Brookline, Chelsea, Revere, and Winthrop (Community Health Network Area [CHNA] 19), for fiscal year (FY) 1998 through the first three quarters of FY 2007 (July 1, 1997, through March 31, 2007) were provided by the Massachusetts Department of Public Health (DPH), Bureau of Substance Abuse Services.
- **Analysis of seized drug samples** for a Boston region comprising the cities of Boston, Brookline, Chelsea, Revere, and Winthrop (CHNA 19) for 1998 through 2006 was provided by the Massachusetts Department of Public Health Drug Analysis Laboratory in Amherst, Massachusetts. The Boston area drug sample counts do not include samples analyzed at the Worcester County or State Police laboratories.
- **Information on drug mentions in Helpline calls** for a Boston region comprising the cities of Boston, Brookline, Chelsea, Revere, and Winthrop (CHNA 19) for 2000 through 2006

was provided by the Massachusetts Substance Abuse Information and Education Helpline.

- **Drug arrests data** for the city of Boston for 1997 through 2006 were provided by the Boston Police Department, Drug Control Unit and Office of Research and Evaluation. For arrest data only, Black and White racial designations include those who identify themselves as Hispanic.
- **Drug price, purity, and availability data** for New England were provided by the Drug Enforcement Administration (DEA), New England Field Division Intelligence Group, February 2007.
- **Adult acquired immunodeficiency syndrome (AIDS) and human immunodeficiency virus (HIV) data** for 2005, and cumulative data through June 1, 2007, were provided by the Massachusetts Department of Public Health AIDS Surveillance Program.

## DRUG ABUSE PATTERNS AND TRENDS

### Cocaine/Crack

Cocaine (including crack) is one of the most heavily abused drugs in Boston. Recent cocaine/crack indicators are at high and slightly increasing levels of use and abuse.

In the first three quarters of FY 2007, 1,267 treatment clients (8 percent of all admissions) reported cocaine/crack as their primary drug, and there were 4,190 mentions (27 percent of all admissions) of current cocaine/crack use among those admitted to State-funded treatment programs (exhibit 1).

A comparison of the last full year of data (FY 2006) to previous years shows that the proportion of patients reporting cocaine/crack as their primary drug was similar to FY 2005 and FY 2004, but decreased 45 percent from FY 1998 (exhibit 1). The proportion of mentions of current cocaine/crack use increased slightly from 25 to 26 percent from FY 2005 to FY 2006 (exhibit 1).

The gender distribution of cocaine/crack primary drug treatment admissions in FY 2006 (59 percent male and 41 percent female) reflects a recent slight decrease in the proportion of males (down 6 percent from FY 2005) and an increase in the proportion of females (up 10 percent from FY 2005) (exhibit 3a).

After years of decreasing proportions of younger clients (age 19–29), the most recent treatment data

reveal an increase from 13 percent in FY 2004 to 19 percent in FY 2006. Age group analysis further reveals an aging cocaine/crack treatment cohort. The proportion of clients age 40–49 increased 121 percent from FY 1998 to FY 2006, while the proportion of those age 30–39 (37 percent) decreased 32 percent from FY 1998.

The FY 2006 racial/ethnic distribution for cocaine/crack admissions (49 percent Black, 32 percent White, 16 percent Latino) reveals a shift toward higher White percentages (up 25 percent from FY 2005) and lower Black percentages (down 13 percent from FY 2005) (exhibit 3a).

One-third (33.8 percent) of cocaine/crack primary drug treatment admissions reported being homeless in FY 2006, constituting a dramatic 38-percent increase from FY 2004 (exhibit 3a).

In 2006, cocaine or crack was indicated in 958 calls to the Substance Abuse Helpline, increasing slightly from 935 calls in 2005 (exhibit 4). The proportion of Helpline calls with mentions of cocaine/crack increased gradually from 18 percent in 2003 to 21 percent in 2006.

In 2006, 3,394 seized samples of cocaine/crack were analyzed by the drug lab. The proportion of cocaine/crack samples among all drug samples analyzed increased from 29 percent in 2005 to 33 percent in 2006.

There were 2,033 Class B (mainly cocaine and crack) drug arrests in 2006, an increase of more than 200 from 1,821 in 2005 (exhibit 5). Class B arrests accounted for the largest proportion of drug arrests (43 percent) in the city of Boston in 2006. The proportion of Class B arrests has remained fairly stable since 2001.

The proportion of Class B arrests of those older than 40 increased 22 percent from 2005 to 2006 and increased 81 percent from 1997 to 2006. Class B arrests for those age 25–39 (40 percent) decreased 26 percent from 1997. The racial distribution of Class B arrests for 2006 remained similar to 2005 and 2004. However, the proportion of White Class B arrests decreased from 39 percent in 1997 to 33 percent in 2006, while the proportion of Black Class B arrests increased from 61 to 66 percent during the same period.

The DEA reports that cocaine costs between \$25 and \$100 per gram with variable levels of purity in Boston (exhibit 6). A rock of crack costs \$10–\$20.

Cocaine is considered available throughout New England.

## Heroin

Heroin remains one of the most heavily abused drugs in Boston. After years of continued growth most indicators are stable at very high levels.

One-half of all treatment client admissions identify heroin as their primary drug. During the first three quarters of FY 2007, 7,798 treatment clients (50 percent of all admissions) reported heroin as their primary drug, and there were 7,303 mentions (46 percent of all admissions) of current heroin use among those admitted to State-funded treatment programs (exhibit 1).

The proportion of heroin treatment admissions remained stable. A comparison of the last full year of data (FY 2006) to previous years shows that the proportion of patients that reported heroin as their primary drug (50 percent) is similar to FY 2005 (49 percent) but increased 42 percent from FY 1998. Similarly, the proportion reporting current heroin use (47 percent) did not change from FY 2005 to FY 2006, but increased 43 percent from FY 1998 (exhibit 1).

Exhibit 3b shows demographic characteristics of heroin or other opiates primary treatment admissions in Boston. The gender distribution of heroin/other opiates primary drug treatment admissions in FY 2006 (74 percent male and 26 percent female) did not change from FY 2005 (exhibit 3b).

The proportion of younger clients (age 19–29) increased from 27 percent in FY 2000 to 39 percent in FY 2006. The proportion of older clients (age 30–49) decreased from 67 to 54 percent during the same period.

The FY 2006 racial/ethnic distribution for heroin/other opiates admissions (66 percent White, 18 percent Latino, 12 percent Black) reveals a continued shift toward higher White percentages (up 36 percent) and lower Black and Latino percentages (down 49 percent and 16 percent, respectively) since FY 1998 (exhibit 3b).

The majority of heroin/other opiate client admissions in FY 2006 reported being homeless (55 percent). The proportion of homeless heroin/other opiates admissions more than doubled from FY 1998. In FY 2006, 70 percent of admissions reported having used a needle to inject drugs in the past year. This proportion increased from 58 percent in FY 2001 (exhibit 3b).

In 2006, heroin was mentioned in 1,507 calls (34 percent of the total) to the Helpline (exhibit 4). The proportion of heroin Helpline call mentions remained stable from 2004.

In 2006, 950 seized samples of heroin (9 percent of all drug samples) were analyzed. The proportion of heroin samples among all drug samples analyzed remained similar to 2005 (10 percent) but decreased from 19 percent in 2001.

There were 789 Class A (mainly heroin and other opiates) drug arrests in 2006 (exhibit 5). The proportion of Class A drug arrests among all drug arrests in the city of Boston did not change from 2005 to 2006 (17 percent), but decreased 37 percent from 2000. Class A arrest demographics remained stable from 2004 to 2006.

The most recent DEA data reports indicate that in Boston, street heroin costs \$6–\$20 per bag and \$65–\$70 per gram (exhibit 6). Samples purchased by the Domestic Monitoring Program found that the average purity decreased from 50 percent in 2002 to 29 percent in 2005. Analyzed samples were overwhelmingly South American in origin and distributed in wax or colored glassine packets. According to the DEA, heroin is considered “readily available throughout New England” and is available in all forms: bag, bundle, gram, ounce, kilogram, and cylinder shaped bullets/eggs.

### **Narcotic Analgesics**

After years of growing narcotic analgesic abuse, indicators are relatively stable at high levels.

In the first three quarters of FY 2007, 562 treatment clients (4 percent of all admissions) reported other opiates/synthetics as their primary drug (exhibit 1). During the first three quarters of FY 2005, 2,058 client admissions mentioned current other opiates/synthetics use (13 percent of all admissions) (exhibit 1). Based on these three quarters of data, the number and proportion of clients reporting current other opiate/synthetics use appears to be increasing, but this report compares full years of data only and refrains from drawing that conclusion.

A comparison of the last full year of client data shows the proportion reporting other opiates/synthetics as their primary drug increased slightly, from 3 percent in FY 2005 to 4 percent in FY 2006. Similarly, the proportion reporting current other opiates/synthetics use increased from 6 percent in FY 2005 to 7 percent in FY 2006 (exhibit 1).

Exhibit 3b shows demographic characteristics of heroin or other opiates primary treatment admissions in Boston. A description of some of the noteworthy demographic comparisons exists in the heroin section.

In 2006, there were 804 calls (18 percent of the total) to the Helpline during which opiates were mentioned (exhibit 4). Oxycodone (including OxyContin) was mentioned in 453 calls. The number of Helpline calls with oxycodone mentions decreased 27 percent from 617 in 2004. During the same 2-year period, the number of calls with methadone mentions decreased 38 percent from 210 in 2004 to 131 in 2006. In 2006, there were 120 calls with Percocet mentions, 39 calls with Vicodin mentions, 9 calls with codeine mentions, 9 calls with morphine mentions, and 2 calls with Roxicet mentions.

In 2006, 234 seized samples of oxycodone (2 percent of all drug samples) were analyzed. The number of oxycodone samples decreased 27 percent from 322 in 2005.

The DEA reports that OxyContin is “widely available” throughout New England and typically costs between \$0.45 and \$1.25 per milligram (exhibit 6). Generic oxycodone sells for as little as \$5 per dosage unit.

### **Marijuana**

The most recent marijuana indicators for greater Boston are stable at various levels of use/abuse.

In the first three quarters of FY 2007, 533 treatment clients (3 percent of all admissions) reported marijuana as their primary drug, and there were 1,378 mentions (9 percent of all admissions) of current marijuana use among those admitted to State-funded treatment programs (exhibit 1).

A comparison of the last full year of data (FY 2006) to previous years shows the proportion that reported marijuana as their primary drug remained relatively stable from FY 1998, accounting for 3–5 percent of total admissions. The proportion of all treatment admissions reporting current marijuana use decreased from 14 percent in FY 1998 to 8 percent in FY 2005 (exhibit 1).

Exhibit 3c shows demographic characteristics of marijuana primary treatment admissions in Boston. The gender distribution of marijuana primary drug treatment admissions in FY 2006 (72 percent male and 28 percent female) did not change from FY 2005.



The age distribution remained similar from FY 2004 through FY 2006. Since FY 1998, however, the proportion of marijuana clients younger than 19 decreased 52 percent. The proportion of clients age 30–39 increased 42 percent during the same period.

The FY 2006 racial/ethnic distribution for marijuana admissions (48 percent Black, 26 percent White, 21 percent Latino) reveals a slight increase in the percentage of White clients, from 21 percent in FY 2005 to 26 percent in FY (exhibit 3c).

One-half of the marijuana client admissions in FY 2006 reported being involved with the criminal justice system (exhibit 3c).

In 2006, marijuana was mentioned in 222 calls to the Helpline (exhibit 4). The proportion of Helpline calls with marijuana mentions remained stable at 5 percent from FY 2003 to 2006.

There were 4,139 seized samples of marijuana, more than any other drug, analyzed by the forensic lab in 2006. The proportion of marijuana samples analyzed in 2006 (40 percent of all drug samples) was similar to 2004 and 2005, but increased from 36 percent in 1998.

There were 1,396 Class D (mainly marijuana) drug arrests in 2006 (exhibit 5). The proportion of Class D arrests among all drug arrests (29 percent) decreased from 37 percent in 2005.

The proportion of Black (including Hispanics) Class D arrests (69 percent) in 2006 was similar to 2004 and 2005 but increased 24 percent from 1997. The proportion of White (including Hispanics) Class D arrests (30 percent) decreased 30 percent from 1997.

The latest DEA report shows marijuana is readily available throughout the New England States and sells for \$50–\$250 per ounce. A marijuana cigarette or “joint” typically costs \$5 (exhibit 6).

### **Benzodiazepines**

As a group, benzodiazepines continue to show high levels of abuse.

There were 198 calls (4 percent of the total) to the Helpline during which benzodiazepines (including Ativan, Valium, Xanax, Klonopin, Rohypnol, Halcion, and others) were mentioned in 2006 (exhibit 4). The number of Helpline calls with benzodiazepine mentions increased from 161 in 2005, but was similar to 2004 ( $n=200$ ).

Arrest and drug lab data are currently unavailable for benzodiazepines.

### **Methylenedioxymethamphetamine (MDMA)**

MDMA (ecstasy) indicators show stable and relatively low levels of abuse.

There were only 20 calls to the Helpline during which MDMA was self-identified as a substance of abuse (less than 1 percent of all mentions) in 2006. The number of MDMA Helpline calls ranged from 19 to 48 since 1999 (exhibit 4).

There were 68 MDMA drug lab submissions in 2005. The number of MDMA lab submissions ranged from 24 to 106 since 1998.

The latest DEA report indicates that one MDMA tablet costs between \$15 and \$40 retail, with lower prices when purchasing in bulk (more than 50 dosage units) (exhibit 6). Distributed at clubs and on college campuses, MDMA has remained “widely available and in significant quantities” (DEA, New England Field Division Intelligence Group, February 2007).

### **Other Drugs**

#### *Amphetamines*

There were 18 amphetamine samples analyzed in 2006. The number of amphetamine lab samples was similar to 2005 ( $n=13$ ) and 2004 ( $n=14$ ).

#### *Methamphetamine*

There were 68 methamphetamine primary treatment admissions in the first three quarters of FY 2007. In prior full years, there were 53 methamphetamine admissions in FY 2004, 75 in FY 2005, and 31 in FY 2006.

Calls to the Helpline with methamphetamine mentions increased from 9 in 2004, to 25 in 2005, to 28 in 2006 (exhibit 4).

There were 36 methamphetamine samples analyzed in 2006. The number of methamphetamine lab samples decreased from 55 in 2005.

The DEA reports that methamphetamine costs between \$100 and \$200 per gram (exhibit 6). The purity level is unknown.

*Ketamine*

In 2006, there were two calls to the Helpline during which ketamine was mentioned.

Ketamine lab samples decreased in number from 43 in 2002 to 5 in 2006.

The DEA reports that a vial of ketamine costs \$55 to \$120 (exhibit 6).

*Phencyclidine (PCP)*

The DEA reports that PCP costs between \$10 and \$20 per bag (1–2 grams) (exhibit 6).

INFECTIOUS DISEASES RELATED TO DRUG ABUSE

In 2005, there were 257 adult HIV and AIDS cases diagnosed in Boston. The primary risk factor for these cases included 11 percent who were injection drug users (IDUs), 2 percent who had sex with IDUs, and 32 percent with an unknown/undetermined transmission status. As of June 1, 2007, cumulative adult AIDS cases numbered 6,369. By primary risk factor, these included 25 percent who were IDUs, 7 percent who had sex with IDUs, and 14 percent for whom the risk behavior was unknown/undetermined.

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**Exhibit 1. Percentages of Admissions to State-Funded Substance Abuse Treatment Programs by Primary Drug and Drug Used in the Past Month in Greater Boston<sup>1</sup>: FY 1998–3Q FY 2007<sup>2</sup>**

Treatment Admissions	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	3Qs FY 2007
<b>Primary Drug</b>										
Alcohol	45	45	45	44	40	36	35	35	35	34
Heroin and/or Other Opiates	35	36	37	42	46	50	52	52	53	53
Heroin	35	36	36	40	43	47	48	49	50	50
Other Opiates	0	1	1	2	3	3	4	3	4	4
Cocaine and/or Crack	14	13	12	9	9	8	7	8	8	8
Cocaine (powder)	7	7	5	4	4	3	3	3	3	3
Crack	7	6	6	5	5	5	4	5	5	5
Marijuana	4	5	5	4	4	4	4	3	3	3
Other <sup>3</sup>	1	1	1	1	1	1	1	2	2	1
<b>Total (N)</b>	<b>23,008</b>	<b>24,653</b>	<b>24,478</b>	<b>25,334</b>	<b>25,586</b>	<b>24,440</b>	<b>20,041</b>	<b>18,774</b>	<b>18,098</b>	<b>15,731</b>
<b>Drug Used Past Month</b>										
Alcohol	58	59	58	56	53	50	47	47	46	45
Heroin and/or Other Opiates	34	35	37	41	45	48	49	49	51	50
Heroin	33	34	35	39	42	45	45	47	47	46
Other Opiates	3	3	4	5	6	7	8	6	7	13
Cocaine and/or Crack	30	30	27	25	24	24	23	25	26	27
Cocaine (powder)	21	21	20	18	17	18	16	16	17	NA <sup>4</sup>
Crack	16	15	13	12	11	11	11	14	15	NA
Marijuana	14	14	13	13	11	11	10	9	8	9
<b>Total (N)</b>	<b>23,008</b>	<b>24,653</b>	<b>24,478</b>	<b>25,334</b>	<b>25,586</b>	<b>24,440</b>	<b>20,041</b>	<b>18,774</b>	<b>18,098</b>	<b>15,731</b>

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

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

<sup>3</sup>Other includes barbiturates, other sedatives, tranquilizers, hallucinogens, amphetamines, “over-the-counter,” and other drugs.

<sup>4</sup>NA= Not available.

SOURCE: Massachusetts Department of Public Health, Bureau of Substance Abuse Services; prepared by the Boston Public Health Commission, Research Office

**Exhibit 2. Demographic Characteristics of Admissions to Greater Boston State-Funded Substance Abuse Treatment Programs,<sup>1</sup> by Percent: FY 1998–FY 2006<sup>2</sup>**

Characteristic	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006
Gender									
Male	75	74	76	77	77	74	73	76	75
Female	25	26	24	23	23	26	27	24	25
Race									
White	49	48	49	48	49	50	54	53	58
Black	32	33	32	30	29	28	26	27	23
Hispanic	15	16	16	18	18	18	17	16	16
Other	4	4	4	4	4	4	3	4	4
Age at Admission (Average age)	(35.6)	(36.5)	(36.7)	(36.5)	(36.5)	(36.7)	(36.9)	(37.0)	(NA) <sup>3</sup>
18 and younger	3	2	2	2	2	2	2	1	1
19–29	24	22	21	22	24	24	26	26	28
30–39	42	41	40	38	37	34	31	32	30
40–49	23	27	29	29	28	30	30	30	29
50 and older	8	9	9	9	10	10	11	11	11
Marital Status									
Married	10	10	10	10	10	10	9	9	8
Separated/divorced	22	21	19	18	18	18	17	16	15
Never married	68	69	71	72	72	72	74	75	77
Annual Income									
None	56	54	59	61	69	68	63	69	74
\$1–\$1,000	3	4	3	2	2	2	3	3	3
\$1,000–\$9,999	24	26	21	19	14	14	18	15	11
\$10,000 and higher	16	16	17	18	16	16	16	13	12
Homeless	31	31	30	34	37	37	36	42	45
Criminal Justice System Involvement	26	28	27	26	27	24	23	19	22
Mental Health									
No prior treatment	80	79	80	81	80	80	78	81	81
Prior treatment (counseling or hospitalization)	20	21	20	19	20	20	22	19	18
Needle Use in Past Year	25	26	26	27	32	37	38	38	40
Total (N)	(23,008)	(24,653)	(24,478)	(25,334)	(25,586)	(24,440)	(20,041)	(18,774)	(18,096)

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

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

<sup>3</sup>NA= Not available.

SOURCE: Massachusetts Department of Public Health, Bureau of Substance Abuse Services; prepared by the Boston Public Health Commission, Research Office

**Exhibit 3a. Demographic Characteristics of Clients<sup>1</sup> in Greater Boston State-Funded Substance Abuse Treatment Programs with a Primary Problem with Cocaine/Crack, by Percent: FY 1998–FY 2006<sup>2</sup>**

Characteristic	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006
Gender									
Male	61	59	59	62	63	56	57	63	59
Female	39	41	41	38	37	44	43	37	41
Race									
White	24	23	23	26	25	27	27	25	32
Black	64	63	65	60	61	58	58	56	49
Latino	10	11	10	12	11	11	12	16	16
Other	3	3	3	3	3	4	3	3	3
Age at Admission (Average age)	(33.6)	(35.2)	(35.5)	(36.0)	(36.7)	(37.1)	(38.0)	(38.3)	(NA) <sup>3</sup>
18 and younger	1	1	<1	1	<1	1	1	<1	1
19–29	28	19	18	15	15	15	13	16	19
30–39	53	56	55	55	51	49	45	39	37
40–49	16	21	23	26	29	31	35	36	35
50 and older	2	4	4	4	5	5	7	9	9
Marital Status									
Married	10	11	10	11	12	12	10	12	12
Separated/divorced	19	19	16	17	19	19	21	18	17
Never married	71	71	74	72	69	70	69	70	71
Annual Income									
\$0–\$999	57	56	59	58	60	56	54	61	63
\$1,000–\$9,999	27	29	24	22	23	26	29	25	21
\$10,000 and higher	17	16	17	21	18	18	17	14	15
Homeless	26	23	21	23	28	24	24	32	34
Criminal Justice System Involvement	25	30	29	30	33	31	31	27	28
Mental Health Treatment History	22	27	28	29	31	36	36	35	35
Needle Use in Past Year	6	6	5	7	7	9	8	9	10
Total (N)	(3,266)	(3,165)	(2,837)	(2,291)	(2,230)	(1,985)	(1,470)	(1,532)	(1,419)

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

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

<sup>3</sup>NA= Not available.

SOURCE: Massachusetts Department of Public Health, Bureau of Substance Abuse Services; prepared by the Boston Public Health Commission, Research Office

**Exhibit 3b. Demographic Characteristics of Clients<sup>1</sup> in Greater Boston State-Funded Substance Abuse Treatment Programs with a Primary Problem with Heroin or Other Opiates, by Percent: FY 1998–FY 2006<sup>2</sup>**

Characteristic	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006
Gender									
Male	72	72	75	76	77	74	72	74	74
Female	28	28	25	24	23	26	28	26	26
Race									
White	48	49	51	50	53	56	61	60	66
Black	24	24	22	21	19	18	15	16	12
Latino	22	22	23	25	25	22	21	20	18
Other	6	5	5	5	4	5	3	4	4
Age at Admission									
(Average age)	(34.6)	(35.2)	(35.3)	(35.1)	(34.6)	(35.2)	(35.1)	(34.6)	(NA) <sup>3</sup>
18 and younger	1	1	1	1	1	1	1	1	1
19–29	29	27	27	29	32	31	33	35	39
30–39	42	42	40	39	37	35	32	33	32
40–49	24	25	27	26	24	26	26	24	22
50 and older	4	6	5	6	6	7	8	7	7
Marital Status									
Married	11	10	11	10	10	9	7	7	7
Separated/divorced	21	20	19	17	15	16	16	13	12
Never married	68	70	71	73	75	75	77	80	82
Annual Income									
\$0–\$999	69	67	72	73	78	78	74	78	83
\$1,000–\$9,999	21	23	16	15	11	12	16	14	10
\$10,000 and higher	10	10	12	12	11	10	10	8	7
Homeless	25	26	22	29	35	40	39	42	55
Criminal Justice System Involvement	18	20	19	19	19	16	16	15	19
Mental Health Treatment History	17	18	16	16	16	16	18	16	14
Needle Use in Past Year	63	63	63	58	62	68	68	67	70
Total (N)	(8,145)	(8,932)	(9,151)	(10,613)	(11,850)	(12,210)	(10,402)	(9,793)	(9,627)

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

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

<sup>3</sup>NA=Not available.

SOURCE: Massachusetts Department of Public Health, Bureau of Substance Abuse Services; prepared by the Boston Public Health Commission, Research Office

**Exhibit 3c. Demographic Characteristics of Clients<sup>1</sup> in Greater Boston State-Funded Substance Abuse Treatment Programs with a Primary Problem with Marijuana, by Percent: FY 1998–FY 2006<sup>2</sup>**

Characteristic	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006
Gender									
Male	78	76	73	78	77	77	71	73	72
Female	22	24	27	22	23	23	29	27	28
Race									
White	32	28	28	29	27	26	29	21	26
Black	42	44	47	47	48	49	47	52	48
Latino	22	23	21	22	20	22	20	22	21
Other	4	4	4	3	5	4	3	5	4
Age at Admission (Average age)	(24.2)	(25.1)	(25.4)	(24.3)	(24.8)	(25.2)	(26.3)	(28.0)	(NA) <sup>3</sup>
18 and younger	29	24	19	27	24	22	17	12	14
19–29	48	50	56	51	50	52	52	52	51
30–39	18	17	18	16	19	18	21	24	25
40–49	5	6	5	6	6	7	7	10	8
50 and older	1	2	2	1	1	2	2	2	2
Marital Status									
Married	6	4	5	5	6	6	6	7	11
Separated/divorced	6	6	7	6	7	6	6	7	5
Never married	89	90	88	90	88	89	88	85	84
Annual Income									
\$0–\$999	50	59	55	57	60	64	53	51	52
\$1,000–\$9,999	31	27	27	22	21	21	28	28	29
\$10,000 and higher	19	14	18	21	19	16	19	21	19
Homeless	8	9	10	11	12	9	11	15	15
Criminal Justice System Involvement	47	53	48	48	50	43	44	44	50
Mental Health Treatment History	31	23	27	25	29	31	35	28	30
Needle Use in Past Year	2	2	2	2	2	2	2	2	3
Total (N)	(928)	(1,125)	(1,109)	(1,100)	(1,054)	(1,046)	(857)	(611)	(501)

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

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

<sup>3</sup>NA=Not available.

SOURCE: Massachusetts Department of Public Health, Bureau of Substance Abuse Services; prepared by the Boston Public Health Commission, Research Office

**Exhibit 4. Substance Abuse Helpline Drug Mentions in Greater Boston<sup>1</sup>: 2000–2006**

Drug	2000		2001		2002		2003		2004		2005		2006	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Alcohol – only	2,099	(38)	2,126	(36)	1,792	(34)	1,580	(29)	1,711	(32)	1,510	(32)	1,438	(32)
Cocaine/Crack	1,042	(19)	1,137	(19)	1,015	(19)	985	(18)	1,034	(19)	935	(20)	958	(21)
Heroin	1,800	(33)	2,067	(34)	1,816	(34)	2,121	(39)	1,920	(35)	1,582	(34)	1,507	(34)
Narcotic Analgesics <sup>2</sup>	355	(7)	734	(12)	764	(14)	929	(17)	1,020	(19)	870	(19)	804	(18)
Marijuana/Hashish	296	(5)	336	(6)	300	(6)	246	(5)	255	(5)	221	(5)	222	(5)
Benzodiazepines <sup>3</sup>	150	(3)	187	(3)	178	(3)	173	(3)	200	(4)	161	(3)	198	(4)
Methamphetamine	7	(<1)	8	(<1)	9	(<1)	15	(<1)	9	(<1)	25	(<1)	28	(<1)
MDMA	38	(<1)	48	(<1)	37	(<1)	30	(<1)	19	(<1)	19	(<1)	20	(<1)
Hallucinogens <sup>4</sup>	25	(<1)	14	(<1)	12	(<1)	11	(<1)	5	(<1)	7	(<1)	2	(<1)
Inhalants <sup>5</sup>	93	(2)	38	(<1)	25	(<1)	24	(<1)	17	(<1)	13	(<1)	10	(<1)
Total Number of Calls	5,453		5,994		5,321		5,423		5,423		4,684		4,480	

<sup>1</sup>Greater Boston includes Boston, Brookline, Chelsea, Revere, and Winthrop (CHNA 19).

<sup>2</sup>Narcotic analgesics include codeine, methadone, morphine, oxycodone (incl. OxyContin), Percocet, Roxicet, Vicodin, and other opiates.

<sup>3</sup>Benzodiazepines include Ativan, Halcion, Klonopin, Librium, Rohypnol, Valium, Xanax.

<sup>4</sup>Hallucinogens include LSD, PCP, psilocybin, mescaline.

<sup>5</sup>Inhalants include acetone, aerosols, glue, markers, paint, other inhalants.

SOURCE: Massachusetts Substance Abuse Information and Education Helpline (analysis by Boston Public Health Commission Research Office)



Exhibit 5. Boston Police Department Arrests by Substance,<sup>1</sup> by Number and Percent: 1997–2006

Drug Class	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
	Number (%)	Number (%)	Number (%)	Number (%)	Number (%)	Number (%)	Number (%)	Number (%)	Number (%)	Number (%)
<b>A (Mostly Heroin)</b>	1,392 (22.7)	1,061 (22.5)	984 (24.0)	1,022 (27.1)	905 (26.4)	947 (22.5)	939 (22.5)	791 (20.8)	752 (17.4)	789 (16.6)
<b>B (Mostly Cocaine)</b>	2918 (47.5)	2,225 (47.1)	1,847 (45.1)	1,532 (40.6)	1,428 (41.7)	1,762 (41.9)	1,736 (41.6)	1,650 (43.3)	1,821 (42.2)	2,033 (42.9)
<b>D (Mostly Marijuana)</b>	1,617 (26.3)	1,211 (25.6)	1,133 (27.7)	1,093 (29.0)	982 (28.7)	1,375 (32.7)	1,366 (32.7)	1,247 (32.8)	1,599 (37.1)	1,396 (29.4)
Other	216 (3.5)	226 (4.8)	133 (3.3)	123 (3.3)	111 (3.2)	125 (3.0)	133 (3.2)	119 (3.1)	141 (3.3)	526 (11.1)
Total Drug Arrests	6,143	4,723	4,097	3,770	3,426	4,209	4,174	3,807	4,313	4,744
Total Arrests	27,843	25,481	23,592	22,216	20,470	21,025	20,686	19,577	21,512	23,134
Drug Percentage of Total Arrests	(23.7)	(18.5)	(17.4)	(17.0)	(16.7)	(20.0)	(20.2)	(19.4)	(20.0)	(20.5)

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

SOURCE: Boston Police Department, Office of Planning and Research; prepared by the Boston Public Health Commission, Research Office

**Exhibit 6. Drug Street Price, Purity, and Availability in Boston**

<b>Drug</b>	<b>Price</b>	<b>Purity</b>	<b>Availability</b>
Heroin	\$65–\$70 per gram \$60–\$100 per bundle \$6–\$20 per bag	4%–60%	Readily Available
Cocaine (powder)	\$25–\$100 per gram retail	20%–90%	Available
Crack	\$10–\$20 per rock	NA <sup>1</sup>	NA
Marijuana	\$5 per joint \$50–\$250 per ounce	Commercial Grade	Readily Available
Methamphetamine	\$100–\$200 per gram	NA	Limited
MDMA (Ecstasy)	\$15–\$40 per tablet (retail) \$2.25–\$15 (wholesale)	NA	Widely Available (clubs & colleges)
OxyContin	\$0.45–\$1.25 per milligram	NA	Widely Available
PCP	\$10–\$20 per bag	1.3%–7.2%	Readily Available
Ketamine	\$55–\$120 per vial	NA	Available
GHB	\$31–\$120 per ounce (wholesale); \$150 (retail)	NA	Available

<sup>1</sup>NA=Not available.

SOURCES: New England Field Division, Drug Enforcement Administration (DEA) as of February 2007 and Domestic Monitoring Program, Drug Enforcement Administration (Prepared by the Boston Public Health Commission, Research Office)

# Patterns and Trends of Drug Abuse in Chicago

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## ABSTRACT

*Epidemiological indicators suggest that heroin, cocaine, and marijuana continue to be the most commonly used illicit substances in Chicago. Heroin is the major opiate abused in this region, and many heroin use indicators have been increasing or maintaining already elevated levels since the mid-1990s. Drug treatment services for heroin use, which surpassed those for cocaine in FY 2001, peaked in FY 2005 at 33,662 episodes, but they decreased to 26,889 episodes in FY 2006. Cocaine was the second most frequently reported reason for entering publicly funded treatment programs in FY 2006, a trend that has been relatively constant since FY 2001, with slight increases in the previous 3 years. Although reported marijuana-related treatment services decreased in Chicago in FY 2006, these services increased by 6 percent in the rest of the State. According to preliminary unweighted data from DAWN Live!, cocaine, heroin, and marijuana were the illicit drugs most often reported in emergency departments during 2006. These were also the drugs most frequently seized by law enforcement in FY 2006, accounting for 97 percent of all items seized. According to the Illinois Youth Survey, alcohol and marijuana use by 8th, 10th, and 12th grade students in Chicago increased by 19 and 11 percent, respectively, from 2004 to 2006. The number of deaths attributed to fentanyl-laced heroin has declined to pre-epidemic levels. Methamphetamine indicators continued to show low but increasing levels of use in Chicago, including an increase among African-Americans. Smoking 'ice' methamphetamine appears to be increasing as a form of methamphetamine administration. Methamphetamine use appears to remain concentrated among North Side men who have sex with men. Beyond Chicago, methamphetamine use is most common in downstate Illinois. Most MDMA indicators were stable at low levels; however, ethnographic and survey reports suggest MDMA is popular among young low-income African-Americans. The drug is available in street drug markets. LSD and PCP indicators continue to show levels of use below the national average. African-American injection drug users are an*

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*aging cohort, while among Whites, new cohorts of young heroin injectors continue to emerge.*

## INTRODUCTION

This report is produced for the Community Epidemiology Work Group of the National Institute on Drug Abuse. As part of this epidemiological surveillance network, researchers from 21 U.S. areas monitor trends in drug abuse using the most recent data from multiple sources.

## Area Description

Because of its geographic location and multifaceted transportation infrastructure, Chicago is a major hub for the distribution of illegal drugs throughout the Midwest. Located in northeastern Illinois, Chicago stretches for 25 miles along the shoreline of the southern tip of Lake Michigan. The 2000 U.S. census estimated the population of Chicago at 2.9 million and Cook County (which includes Chicago) at 5.4 million. In June 2003, the U.S. Office of Management and Budget (OMB) revised definitions for the Nation's Metropolitan Statistical Areas (MSAs). The Chicago-Naperville-Joliet, Illinois, MSA includes Cook, DeKalb, DuPage, Grundy, Kane, Kendall, McHenry, and Will Counties, and its population size was slightly more than 9 million (ranking third in the Nation), according to the 2000 census. In 2006, this population was estimated at 9.5 million, a 4.5-percent increase since 2000.

According to the U.S. Census Bureau, the city population increased about 4 percent between 1990 and 2000. The number of Hispanics living in Chicago increased 38 percent between 1990 and 2000, while the number of Whites and African-Americans declined by 14 and 2 percent, respectively. Among U.S. cities, Chicago has the second largest Mexican-American and Puerto Rican populations.

Based on 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. Twenty-six percent of the population were younger than 18, and 10 percent were age 65 or older. The unemployment rate is 6.2 percent, and the percentage of families living below the poverty level with children younger than 18 is 11.4 percent.

## Data Sources

This report is based on the most recent data available from the various sources detailed below:

- **Treatment data** for the State of Illinois and Chicago for fiscal years (FYs) 2000–2006 (July 1–June 30) were provided by the Illinois Division of Alcoholism and Substance Abuse (DASA).
- **Emergency department (ED) data** were derived for calendar year 2006 from the Drug Abuse Warning Network (DAWN) *Live!* restricted-access online query system administered by the Office of Applied Studies (OAS), Substance Abuse and Mental Health Services Administration (SAMHSA). Eligible hospitals in the Chicago MSA totaled 88; hospitals in the DAWN sample numbered 77, with 80 EDs in the sample. (Some hospitals have more than one ED.) During this 12-month period, between 28 and 31 EDs reported data each month. The completeness of data reported by participating EDs varied by month (exhibit 1). Exhibits in this paper reflect cases that were received by DAWN as of June 4, 2007. Data derived from DAWN *Live!* represent drug reports in drug-related ED visits. The number of drug reports exceeds the number of visits because a patient may report use of multiple drugs (up to six drugs plus alcohol). The DAWN *Live!* data are unweighted and, thus, are not estimates for the reporting area. These data cannot be compared with DAWN data from 2002 and before, nor can these preliminary data be used for comparison with future data. Only weighted DAWN data released by SAMHSA can be used for trend analysis. A full description of the DAWN system can be found on the DAWN Web site: <<http://dawninfo.samhsa.gov>>.
- **Drug-related mortality data** on deaths related to accidental drug poisonings were available through 2003 from the Chicago Department of Public Health (CDPH). The Chicago Police Department, Research and Development Division, and the Cook County Medical Examiner provided data on fentanyl-related overdose deaths in Cook County for the period of April 1, 2005, through March 31, 2007. Where appropriate, 2003 mortality data from CDPH and from DAWN, OAS, SAMHSA, are briefly summarized in this paper; a more detailed account of the DAWN medical examiner/coroner data for five counties in the Chicago metropolitan area were reported in the June 2005 Chicago CEWG report. The 2003 data are the most recent information on drug-related mortality other than the death data related to fentanyl.
- **Incidence data on drug-related calls** were provided by the Illinois Poison Center (IPC) in Chicago for Cook County for 2006. During this period, the IPC staff handled 107,024 calls from all 102 counties in Illinois regarding household products, herbal products, medication overdoses, adverse reactions to medications, alcohol or drug misuse, occupational accidents, chemical spills, and other poisonings, a 14-percent increase from 2005.
- **Criminal justice data** were available from the Illinois Criminal Justice Information Authority (ICJIA), which collects, maintains, and updates a variety of criminal justice data to support its research and evaluation efforts. ICJIA regularly publishes criminal justice research, evaluation reports, and statistical profiles. ICJIA's drug arrest data for 2004–2005 and the 2004 special report on methamphetamine trends in Illinois were reviewed.
- **Price and purity data** were provided by the Drug Enforcement Administration (DEA), Domestic Monitor Program (DMP), for heroin for 1991–2005. The Illinois State Police (ISP), Division of Forensic Science, provided purity data on drug samples for 2006. Drug price data are reported from the June 2006 and December 2006 reports of *National Illicit Drug Prices* by the National Drug Intelligence Center (NDIC). Data from the National Forensic Laboratory Information System (NFLIS) for FY 2006 were used to report on drugs seized by law enforcement in Chicago. Ethnographic data on drug availability, prices, and purity are from observations and interviews conducted by the Community Outreach Intervention Projects (COIP), School of Public Health, University of Illinois at Chicago (UIC).
- **Survey data on student and household populations** were derived from three sources. Student (8th, 10th, and 12th grades) drug use data were provided by the 2006 Illinois Youth Survey, which is prepared by the Chestnut Health Systems for the Illinois Department of Human Services. The 2005 Youth Risk Behavioral Surveillance System (YRBSS), prepared by the Centers for Disease Control and Prevention (CDC), provided drug use data representative of 9th through 12th grade students in public and private schools. Data on substance use and abuse for the State of Illinois were provided by SAMHSA's National Survey on Drug Use and Health for 2004 and 2005.
- **Recent drug use estimates** were derived from the NIDA-funded "Sexual Acquisition and Transmission of HIV – Cooperative Agreement Program" (SATH-CAP) study in Chicago (U01 DA017378). Respondent-driven sampling was used at multiple sites in Chicago to recruit men

and women who use “hard” drugs (cocaine, heroin, methamphetamine, or any illicit injected drug), men who have sex with men (MSM) regardless of drug use, and sex partners linked to these groups. All participants ( $n=1068$ ) in this ongoing study completed a computerized self-administered interview and were tested for human immunodeficiency virus (HIV), syphilis, chlamydia, and gonorrhea.

- **Acquired immunodeficiency syndrome (AIDS) and HIV data** were derived from both agency sources and UIC studies. IDPH surveillance reports provided statistics on STI/HIV infections from July 2006 until April 2007. The CDPH “STD/HIV/AIDS Chicago” surveillance report provided incidence and prevalence data on STI/HIV infections as of December 31, 2006. (Data may be incomplete because of delays in reporting.)

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

#### DRUG ABUSE PATTERNS AND TRENDS

This report of drug abuse patterns and trends is organized by major pharmacologic categories. Readers are reminded, however, that multidrug consumption is the normative pattern among a broad range of substance abusers in Chicago. Various indicators suggest that drug combinations play a substantial role in drug use prevalence. Preliminary unweighted DAWN data show that 25 percent of all ED drug reports in Chicago in 2006 were alcohol-in-combination. During FY 2006, heroin use was the most often mentioned reason for seeking treatment in Chicago. Among these treatment episodes, the most common secondary substances reported were cocaine (43 percent) and alcohol (12 percent).

#### Cocaine/Crack

The majority of quantitative and qualitative cocaine indicators suggest that use remains stable at high levels and that cocaine continues to be a serious drug problem for Chicago.

The number of treatment services rendered for primary cocaine use in Chicago fluctuated slightly be-

tween FY 2000 and FY 2006, and it peaked at 17,764 episodes in FY 2006. Generally, numbers of episodes remained stable at high levels (exhibit 2). Cocaine use was the second most common reason to enter treatment in FY 2006; the majority reported treatment for crack cocaine use (91 percent) (exhibit 3). Cocaine was the most commonly mentioned secondary drug among persons treated for primary alcohol, heroin, and other opioid related problems. In FY 2006, African-Americans remained the largest group treated (82 percent) for cocaine abuse, and males accounted for more services rendered (55 percent) than females (exhibit 3).

Preliminary unweighted data accessed from DAWN *Live!* for 2006 show that more than one-third (35 percent) of total ED reports for major substances of abuse (including alcohol) were cocaine related. ED cocaine reports totaled 8,970 during this period (exhibit 4). The majority of the cocaine reports involved males (66 percent) and persons between 35 and 54 years of age (66 percent). African-Americans represented 61 percent of cocaine ED reports. (Race was not documented for 11 percent of the cocaine ED reports.)

Drug-related mortality data from DAWN and CDPH were available only for 2003. Both sources reported that cocaine was a factor in more deaths in the Chicago area than any other illicit drug, although multiple drug use was involved in the majority of these cases. Readers are referred to the June 2005 Chicago CEWG report for additional information regarding cocaine-related mortality.

According to the Illinois Poison Center, cocaine-related calls remained relatively constant at 134 for 2006. As in 2004 and 2005, cocaine continued to generate more calls than any other “street drug” during this period.

State (ISP) and Federal (NFLIS) labs reported that cocaine was the drug most often received for testing in FY 2006 after cannabis. (See exhibit 5 for NFLIS data.)

Cocaine prices have fluctuated slightly since the June 2003 report, according to the NDIC. Ounce prices for powder cocaine reported by street sources have increased to between \$800 and \$1,200, depending on the drug’s quality and the buyer’s relationship to the seller. Gram prices for powder and rock cocaine were similar, ranging from \$75 to \$100 in 2006. However, prices for an ounce of crack cocaine (“rock”) and powder cocaine decreased, with reports ranging from \$750 to \$850. Bags of crack cocaine—the typical unit for street-level trans-

actions—usually sell for \$5, \$10, or \$20, though prices as low as \$2 were reported. The NDIC reported the wholesale price of a kilogram of cocaine in Chicago to be \$15,000–\$22,000 for powder cocaine. Prices for powder and crack cocaine did not vary significantly from the first to the second halves of 2006.

The Illinois State Police seized 183,000 grams of cocaine in Cook County (which includes Chicago) in 2006, 38 percent of which was crack cocaine. Cook County seizures represent 47 percent of all cocaine seizures in Illinois. In Chicago, 55 percent purity was reported for an exhibit of less than 2 grams of cocaine, and 95 percent was reported for an exhibit greater than 980 grams.

The 2006 Illinois Youth Survey assessed past-year cocaine use among 8th, 10th, and 12th grade students in the State of Illinois and Cook County. After an increase from 1.9 to 2.6 percent in past-year cocaine use between 2002 and 2004, cocaine use decreased among these Cook County students to 2.1 percent in 2006 (exhibit 8). The 2005 National Survey on Drug Use and Health conducted by SAMHSA reported that 1.3 percent of youth aged 12–17 years used cocaine in the past year. This percentage increased more than four times to 5.8 for those age 18–25 years. No updated information was available from the CDC YRBS. For more information regarding this survey, the reader is referred to the June 2006 Chicago CEWG report.

According to data from SAMHSA's National Survey on Drug Use and Health, the proportion of past-year cocaine use among Illinois youth age 12–17 decreased slightly from 1.43 percent in 2004 to 1.32 percent in 2005.

In the SATH-CAP study, crack cocaine was the most prevalent illicit drug, with 59 percent of participants reporting its use in the past 30 days. However, crack use varied by site; prevalence was highest on the city's North and West Sides (75 percent and 67 percent, respectively) and lowest on the Northwest and Southeast Sides (50 percent and 58 percent respectively).

### **Heroin**

Heroin abuse indicators in this reporting period continue to suggest high levels of use in the Chicago area.

The number of persons treated for heroin use in State-supported programs increased considerably between FY 2000 and FY 2005 in both Chicago and the rest of the State (125 percent and 135 percent increases, re-

spectively) (exhibit 2, Chicago data only). However, in FY 2006, the number of persons treated decreased by 20 percent. During this period, heroin was the most common reason for seeking treatment in Chicago and accounted for 38 percent of all services rendered (exhibit 3). Of the 26,889 persons treated in FY 2006, the majority (82 percent) reported intranasal “snorting” as the primary route of administration, while only 14 percent injected (exhibit 3). In contrast, 47 percent of patients entering treatment programs outside of Chicago reported injection as the primary route of administration. Recent research indicates that injection is declining among African-Americans but increasing among Whites, which may account for some of this difference in injection prevalence. Patients entering treatment in Chicago were more likely to be African-American (82 percent), while patients from the remainder of Illinois were more likely to be White (62 percent).

Preliminary unweighted DAWN *Live!* ED data for 2006 indicate that heroin is the second most frequently reported major substance of abuse, following only cocaine (exhibit 4). The majority of the 6,753 heroin ED reports involved males (65 percent), those between the ages of 35 and 54 (65 percent), and African-Americans (61 percent). (Race was not documented for 12 percent of the heroin reports.)

Neither the DAWN ME system for the Chicago MSA nor the CDPH have provided updated drug-related mortality data since 2003. In that year, the DAWN ME recorded 27 heroin-related deaths, of which 5 were single-drug deaths. According to CDPH, three deaths in the city were attributed to heroin use in 2003.

In light of the outbreak of fentanyl-related deaths in Chicago, the Cook County ME provided mortality data through the end of March 2007. In December 2005, an increase in the number of deaths related to fentanyl was reported. The epidemic peaked in May and June of 2006, with 47 fentanyl-related deaths occurring in each of these months. By March 2007, the number of fentanyl-related deaths in Chicago had decreased to pre-epidemic levels (exhibit 9). Between April 2005 and March 2007, 349 fentanyl-related deaths were recorded in Cook County, of which 84 percent were male and 59 percent were African-American. Twenty percent of these deaths occurred outside the city. Many of these cases are thought to be the result of fentanyl mixed with or sold as heroin and used in combination with other substances, such as cocaine. For more information regarding the increase in fentanyl-related deaths in 2006, readers should refer to Chicago's June 2006 CEWG report.

Based on the 2005 DMP report, heroin from multiple geographic source areas, including South America,

Southeast Asia, Southwest Asia, and Mexico, was consistently available. This makes Chicago unique among other U.S. cities. The purity of street-level heroin continued to decline between 2000 and 2004 after it peaked in 1997 at about 31 percent. In 2005, South American heroin exhibits purchased by the DMP in Chicago averaged 17.1 percent pure, an increase from 13.8 percent in 2004 but still below the first 3 years of this decade (exhibit 6). The average price per milligram pure was \$0.45 in 2005, a slight decrease from both 2004 (\$0.56) and the lowest level for heroin in the 1990s (\$0.58 in 1998).

The amount of heroin analyzed in Cook County by the ISP laboratory increased from 12 kilograms in 2002 to 21 kilograms in 2003, remained at this level in both 2004 and 2005, and then dropped to less than 20 kilograms in 2006. According to NFLIS, heroin was the third most often seized drug in Chicago in FY 2006, accounting for nearly 15 percent of all items analyzed (exhibit 5).

The Illinois Youth Survey (IYS) added heroin to the list of illicit drugs in the 2006 survey. According to the IYS, 0.6 percent of 8th, 10th, and 12th grade students in Cook County used heroin in the past year. White students reported the most use of heroin, followed by Hispanics and African-Americans, at 1.5, 0.4, and 0.2 percent, respectively. Among male students, 1.0 percent reported heroin use in the past year, compared with 0.8 percent of female students.

Heroin prices have fluctuated slightly since the Chicago June 2003 report. According to the NDIC, the price of 1 gram of Mexican brown powder heroin was estimated at \$100, while that of heroin of unknown type ranged from \$70 to \$200. On the street, heroin is commonly sold in \$10 and \$20 units (bags), though bags for as little as \$5 are available. "China White" heroin is the most common, but brown and tar heroin are also available. Prices for larger quantities varied greatly, depending on the type and quality of heroin, the buyer, and the area of the city where the heroin was sold. At outdoor drug markets, purchases of multibag quantities—versus grams and fractions of ounces—were the most common means of buying larger amounts of heroin. The NDIC reports that the wholesale prices for a kilogram of heroin were \$60,000 for Mexican brown, \$45,000–\$80,000 for South American, and \$30,000–\$90,000 for heroin of unknown type.

Recent ethnographic reports indicate that some street-level dealers are moving toward arranging sales through telephone contacts rather than walk-up or drive-up contacts on the street. There was also one report that suggested some dealers on the South Side of Chicago may have figured out how to successfully

mix fentanyl into heroin without causing an abnormal number of overdoses. Finally, there were reports from some heroin users of having experienced side effects that may be consistent with ingesting Clenbuterol, a drug used in veterinary medicine.

### **Other Opiates/Narcotics**

Most indicators for the abuse of other opiates were not updated at the time of this report. Readers are therefore referred to the January 2005 Chicago CEWG report for the most recent information regarding the use of other opiates in Chicago.

### **Methamphetamine/Amphetamines**

Since the mid-1990s, many indicators of methamphetamine ("speed") use in Illinois increased steadily. Overall, use of methamphetamine remains low in Chicago, though some indicators have increased slightly, reflecting higher use of methamphetamine in some parts of the city.

Since FY 2002, treatment services rendered in Chicago for methamphetamine use have been steadily increasing from 29 episodes to 139 in FY 2006. An increase of 78 percent was reported between FY 2005 and FY 2006. The city of Chicago may be undergoing a demographic shift in terms of methamphetamine use. In FY 2005, Whites were the majority of those seeking treatment (68 percent) for methamphetamine abuse, followed by African-Americans (15 percent). However, in FY 2006, equal proportions of Whites and African-Americans sought treatment for methamphetamine use (47 percent) (exhibit 3). Males continued to be more likely to seek treatment than females (83 vs. 17 percent), probably because the use of methamphetamine in Chicago remains concentrated among men who have sex with men. Smoking was the most commonly reported primary route of administration (66 percent, an increase from 47 percent in 2005), followed by injecting (16 percent). A more pronounced increase in methamphetamine treatment episodes was reported in the rest of the State. Treatment episodes increased from 698 in FY 2000 to 5,134 in FY 2005, but they decreased slightly in FY 2006 to 4,879. Readers are referred to the January 2006 Chicago CEWG report for additional information regarding methamphetamine treatment data.

Treatment services rendered for methamphetamine outnumber those for amphetamine in Chicago and the rest of the State. In FY 2006, 106 amphetamine episodes were reported in Chicago, which was a 10-percent increase from the previous year. Amphetamine treatment episodes in the rest of the State numbered 555 in FY 2006. Chicago males were more likely than

females to seek treatment for amphetamine use (71 vs. 29 percent). A large proportion of African-Americans sought treatment (63 percent) compared with Whites (25 percent) and Hispanics (8 percent). Alcohol was reported as the major secondary drug used in conjunction with amphetamine (30 percent).

In 2006, preliminary unweighted DAWN *Live!* data showed 55 methamphetamine ED reports for Chicago (exhibit 4). ED patient characteristics were similar to patients receiving treatment services in publicly funded programs. Males (84 percent), persons age 25–44 (64 percent), and Whites (at least 62 percent) accounted for the majority of ED methamphetamine reports. (Race was not documented for 13 percent of these reports.) In 2006, 83 preliminary amphetamine ED reports were registered by DAWN *Live!* (exhibit 2).

Methamphetamine calls to the Illinois Poison Center in Chicago are infrequent. In 2006, the Poison Center received a total of four such calls. However, there were 28 amphetamine-related calls during this period.

Data from the ISP indicated that seizures of methamphetamine in 2006 decreased considerably from the previous year. In 2005, more methamphetamine was seized than cocaine or heroin in nearly 50 percent of Illinois counties. However, methamphetamine seizures in all counties in Illinois were reduced by 52 percent in 2006. The amount of methamphetamine received by ISP from Cook County in 2006 also decreased considerably from the previous year, from approximately 19 to 8 kilograms. According to the NFLIS report, 0.59 percent of the items analyzed in Chicago in FY 2005 were methamphetamine, compared with 0.91 percent in FY 2006—which is a considerable increase from the 0.36 percent reported FY 2004 (exhibit 5).

The most recent ICJIA analysis of criminal justice data related to methamphetamine use in Illinois supports the pattern of considerably lower use in Chicago compared with the rest of the State. The number of methamphetamine-related arrests, drug seizures, and clandestine lab closures increased dramatically in Illinois, with the largest increases in rural counties. Readers are referred to the June 2005 Chicago CEWG report for more detailed discussion of the ICJIA data on methamphetamine trends in Illinois.

According to the Illinois Youth Survey, past-year use of methamphetamine among 8th, 10th, and 12th grade students decreased considerably in Cook County from 1.1 percent in 2004 to 0.3 percent in 2006 (exhibit 8). White students were most likely to report use at 0.5 percent, followed by Hispanic students at 0.3 percent and African-American students at 0.1 percent. Methamphetamine use among these students in rural Illi-

nois counties decreased by more than 50 percent from 2.1 percent in 2004 to 1.0 percent in 2006.

Within Chicago, a low but stable prevalence of methamphetamine use has been reported for a number of years in the North Side gay community. In a recent study of young men (age 16–24) who have sex with men ( $n=270$ ), 13 percent reported past-year use of methamphetamine (Garofalo et al. 2007). Use was more likely among those who were older, non-African-American, or HIV positive.

In the SATH-CAP study, 13 percent of participants reported ever trying amphetamine or methamphetamine, and only 4 percent reported use in the 30 days prior to being interviewed. Among men who have sex with men, these figures increased to 16 percent and 8 percent, respectively.

Methamphetamine prices have not changed much since June 2003, when it was reported that bags of methamphetamine sold for \$20. Current reports of the cost of a bag of methamphetamine range from \$10 to \$50. According to the NDIC 2006 report, “ice” methamphetamine cost \$1,000–\$1,500 per ounce and \$330 per gram, while methamphetamine powder was reported to cost \$1,000 per ounce and \$80–\$100 per gram.

During this reporting period, the authors received more street reports of the availability of “ice” methamphetamine than in past years, which is consistent with the increase in smoking as the primary route of administration among entrants to drug treatment.

## Marijuana

Marijuana continues to be the most widely available and used illicit drug in Chicago and Illinois.

Marijuana users represented 13 percent of all treatment episodes in Chicago in FY 2006 and 24 percent of episodes elsewhere in the State. Marijuana-related episodes increased as a percentage of total episodes in Illinois between FY 2000 and FY 2006, though the increase outside Chicago was 15 percent larger than in the city. Alcohol remained the most commonly reported secondary drug among persons receiving treatment for marijuana (37 percent). In Chicago, treatment episodes for marijuana were highest for males (75 percent) and for African-Americans (76 percent) (exhibit 3).

Preliminary unweighted data accessed from DAWN *Live!* show that ED reports of marijuana in 2006 represented 12 percent of all substance abuse reports, including alcohol (exhibit 4). Of the 3,100 marijuana ED reports during this period, one-half involved Af-



rican-American patients, followed by Whites (26 percent). (Race was not documented for 12 percent of the reports.) The majority of these patients were male (69 percent) and younger than 35 (65 percent).

According to the DEA, the bulk of marijuana shipments are transported by Mexico-based polydrug trafficking organizations that conceal the drug among legitimate goods in tractor-trailers coming into the Chicago area from the southwest border. The primary wholesalers of marijuana are the same Mexico-based organizations that supply most of the cocaine, methamphetamine, and Mexican heroin in the Midwest. Marijuana produced locally (indoor and outdoor) by independent dealers is also available.

In general, currently available marijuana is of variable quality. The abundance and popularity of marijuana across the city has led to an increased array of varieties and prices. Marijuana prices may have increased since 2003. According to the NDIC December 2006 report, a pound of marijuana in Chicago cost \$2,000–\$4,000 for hydroponic and \$450–\$700 for Mexican-produced; these prices were consistent with local street reports. Ounce prices for “hydro” and Mexican heroin were \$300 and \$80–\$120, respectively. On the street, marijuana was most often sold in bags for \$5–\$20 or as blunts. Both ISP and NFLIS laboratories analyzed more marijuana samples than samples for any other drug in 2006. Fifty percent of drug samples analyzed by the NFLIS for Chicago in FY 2006 were identified as cannabis (exhibit 5).

According to the CDC’s YRBS, recent marijuana use among 9th through 12th grade students in Chicago decreased between 2001 and 2005. Past-30-day use decreased by 22 percent, from 28.7 percent in 2001 to 22.5 percent during the same period. Although a similar trend was seen in the Illinois Youth Survey for Cook County until 2004, data in 2006 show an increase in marijuana use among Illinois and Chicago youth (8th, 10th, and 12th grades) (exhibit 7). Less than 15 percent of Cook County youth reported past-month marijuana use in 2004, compared with 16.5 percent in 2006. This percentage rose to 18.3 percent for students in Chicago public schools. Among Cook County students, African-Americans more often reported past-month use of marijuana (19.6 percent) than did Whites (16.1 percent) and Hispanics (14.6 percent). Male students were more likely than female students to report recent marijuana use in 2006 (18.5 and 14.9 percent, respectively). This difference was also found in the 2005 YRBS. For more information about the YRBS, readers are referred to the June 2006 Chicago CEWG report.

Data from SAMHSA’s National Survey on Drug Use and Health for 2004 and 2005 painted a slightly different picture of drug use among Illinois youth. In this survey, marijuana use in the past month and the past year remained constant at 6 and 13 percent, respectively, for Illinois youth age 12–17. In addition, the “perception of great risk of smoking marijuana once a month” among these youth remained constant from 2004 to 2005, at 35 percent.

Drug arrests in Chicago under the Cannabis Control Act increased slightly from 2004 to 2005, totaling 25,322 and 25,720 arrests, respectively. These arrests represent 43 and 44 percent, respectively, of all drug arrests in Chicago.

### Club Drugs

The number of treatment services rendered for “club drugs” in Chicago was low, but it increased between FY 2004 and FY 2006 from 30 to 79 episodes. During FY 2006, 68 percent of club drug treatment episodes were among males, a decrease from 92 percent in FY 2005. Seventy-five percent of treatment episodes were among African-Americans.

In the Chicago area, methylenedioxymethamphetamine (MDMA or “ecstasy”) continues to be the most prominently identified of the club drugs, and its use appears to have increased among African-Americans.

The preliminary unweighted data extracted from DAWN *Live!* show 135 MDMA reports in 2006 (exhibit 4). MDMA ED reports were more common among male patients (65 percent), African-Americans (52 percent), and those younger than 35 (93 percent).

Between 2004 and 2006, past-year use of MDMA among 8th, 10th, and 12th grade students in Cook County remained relatively constant at 1.8 percent, according to the Illinois Youth Survey. White students were more likely to report MDMA use in the past year (2.7 percent) than were African-American (1.8 percent) and Hispanic students (1.4 percent) (exhibit 8). For students throughout the State, past-year use of MDMA increased from 0.6 percent in 2002 to 2.4 percent in 2006. Use of MDMA among Illinois male students increased from 2.2 percent in 2004 to 3.2 percent in 2006, while use among female students decreased slightly from 1.9 percent to 1.7 percent (data not shown).

MDMA samples sent to the ISP laboratory from Cook County increased from 0.8 kilograms in 2003 to 3.1 kilograms in 2004, and they remained at about the same level (2.9 kilograms) in 2005. However, in 2006, ISP laboratory samples increased to 3.7 kilo-

grams. Similarly, the NFLIS reported an increase in the proportion of all items analyzed for Chicago that were MDMA, from 0.29 percent in FY 2004 to 0.41 percent in FY 2005 and 0.78 percent in FY 2006 (exhibit 5).

Drugs sold as ecstasy remain available in mainstream dance clubs and at house parties. Ecstasy is increasingly available in street drug markets, though availability varies across the city. In some areas, ecstasy is reported by street sources to be sold by the same persons who sell heroin and cocaine. In other markets, ecstasy is sold by persons who specialize in the drug. On the Northwest Side of Chicago, ecstasy was said to be sold mainly on weekends, as it is considered a “weekend drug.” Raves featuring ecstasy use are said to be close to nonexistent. Ecstasy continues to be sold in pill or capsule form, and, according to the 2006 NDIC report, prices decreased slightly in recent years. In 2003, per-tablet wholesale prices ranged between \$10 and \$12, but declined to \$4–\$10 in 2004 and to \$4–\$5 in 2006. Retail prices in 2006 ranged from \$15 to \$30 for a single tablet, compared with \$25–\$35 in 2003. Larger retail quantities ranged from \$100 to \$125 for 5 tablets and from \$200 to \$250 for 10 tablets. However, street sources in neighborhoods with major drug markets reported prices as low as \$100 for 10 pills.

There have been increasing reports of ecstasy use from participants in local studies of drug users. These reports indicate increased use of ecstasy by African-Americans, principally those in their teens and twenties, but some older. This use of ecstasy occurs not only in the context of club going and house parties, but also among street populations, including sex workers. Some users claim that ecstasy can be obtained in “upper” and “downer” forms, which suggests a combination of drugs. Likewise, the Cook County Sheriff’s Police Department Forensic Laboratory reported in February 2006 that pills resembling MDMA in color and logo were upon analysis identified to be a mixture of methamphetamine and phencyclidine (PCP). Alcohol and marijuana are the drugs most often purposely consumed in combination with ecstasy.

Gamma hydroxybutyrate (GHB), a central nervous system depressant with hallucinogenic effects, is used infrequently in Chicago, and use is mainly by young White males.

No treatment services were provided specifically for GHB use in FY 2006, and, according to preliminary unweighted data accessed from DAWN *Live!*, there were only 20 GHB ED reports in 2006.

GHB is sold as a liquid (also referred to as “Liquid G”), in amounts ranging from drops (from a dropper

at raves or parties) to capfuls. Prices for a capful have been reported at \$5–\$25 and remain level. Compared with other club drugs, overdoses are more frequent with GHB, especially when used in combination with alcohol. GHB is not tracked in most quantitative indicators, but its use is perceived to be low compared with ecstasy.

Ketamine, an animal tranquilizer, is another depressant with hallucinogenic properties and is often referred to as “Special K.” DASA reported only four persons treated for ketamine use in FY 2006 in publicly funded treatment programs in Illinois, two of whom were in Chicago. As reported in the June 2004 Chicago CEWG report, street reports indicate that ketamine is usually sold in \$5–\$30 bags of powder or in liquid form.

### **PCP, LSD, and Other Hallucinogens**

Treatment services rendered for hallucinogen use in Chicago increased from 30 in FY 2002 to 284 in FY 2003, then decreased in recent years to 133 episodes in FY 2006. Much of the increase since FY 2002 occurred among African-Americans and female patients, while hallucinogen-related treatment episodes decreased among Hispanics. During FY 2006, 80 percent of treatment episodes were reported among African-Americans and 30 percent were female, compared with 47 percent and 13 percent, respectively, in FY 2002.

In general, both phencyclidine (PCP) and lysergic acid diethylamide (LSD) use in Chicago remain low, though use of PCP appears more common. According to preliminary unweighted data accessed from DAWN *Live!*, there were 84 PCP and 14 LSD ED reports in 2006 (exhibit 4). No deaths related to hallucinogens were reported to the DAWN ME system in 2003.

The amount of PCP samples received by the ISP laboratory for analysis decreased significantly between 2002 and 2006, from 4.2 kilograms to 0.16 kilograms. Likewise, the FY 2006 NFLIS reported a decrease in PCP items analyzed from 0.29 percent in FY 2005 to 0.11 percent in FY 2006. LSD seizures were less than 0.1 percent of total drug items seized in Chicago in FY 2005 and 0.1 percent in FY 2006 (exhibit 5).

According to the Illinois Youth Survey, hallucinogen (including LSD and PCP) use has decreased markedly among 8th, 10th, 12th grade students in Cook County since the turn of the century. Past-year use was reported by 4 percent of students in 2000, but only 1.8 percent reported use in 2004 and 1.2 percent reported use in 2006 (exhibit 8). Hallucinogen use

was reported more often by males (2.7 percent) than females (1.5 percent) and by White students (2.5 percent) than African-American (0.6 percent) and Hispanic (0.6 percent) students.

Calls into the Illinois Poison Center in Chicago for LSD, PCP, and other hallucinogens totaled 73 in 2006.

Ethnographic reports on PCP use are available in the June 2003 Chicago CEWG report. On the West Side, 2–3 PCP “sticks” about the size of toothpicks were reportedly available for \$5–\$10, according to the June 2003 CEWG report. Prices for PCP may have increased since 2003, when 2–3 PCP “sticks” about the size of toothpicks were reportedly available for \$5–\$10. One ethnographic report for the current period indicated that the price of a “stick” had increased to about \$20. For more information on PCP prices, the readers are referred to the June 2003 Chicago CEWG report.

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

According to some accounts by White youth, hallucinogenic mushrooms remain available. Reported prices were \$20–\$40 per mushroom.

### **Benzodiazepines/Barbiturates**

In Chicago, depressants, such as benzodiazepines and barbiturates, are commonly taken with narcotics to potentiate the effect of opiates, frequently heroin. Depressants may also be 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).

Treatment data suggest depressants rarely are the primary drugs of choice among entrants. In FY 2006, DASA reported 17 treatment episodes for tranquilizers and 15 episodes for sedatives/hypnotics in Chicago.

The most recent drug-related mortality data available from DAWN ME are for 2003. In that year, 17 benzodiazepine misuse-related deaths were reported in the Chicago MSA. Fourteen of these deaths were ruled as suicide.

Preliminary unweighted data accessed from DAWN *Live!* showed that 1,582 ED reports were related to the misuse of benzodiazepines in 2006. More than

one-fifth (23 percent) of these mentions were classified as overmedication.

Benzodiazepine-related calls to the Illinois Poison Center in Chicago repeatedly represented nearly one-half of all substance misuse calls between 2001 and 2006. Approximately 500 to 600 calls annually were reported during this period. Calls for barbiturate use remained low during this period, at approximately 40 calls annually.

No updated prices for depressants were available. As stated in past Chicago CEWG reports, alprazolam typically sells for \$2–\$3 for 0.5-milligram tablets and \$5–\$10 for 1-milligram tablets.

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

While Chicago accounts for 23 percent of Illinois' population, 68 percent of the State's 34,410 cumulative AIDS cases are from Chicago. Metropolitan Chicago (Cook County and the collar counties of DuPage, Kane, Lake, McHenry, and Will) accounted for 86 percent of cumulative AIDS cases diagnosed in Illinois. The CDPH reports that as of December 31, 2006, there were 21,038 Chicagoans living with HIV (not AIDS) or AIDS.

In 2005, CDPH reported 1,118 HIV diagnoses, a decline of 88 diagnoses from the previous year. Male-to-male sexual contact continued to be the leading mode of transmission (45 percent). Injection drug use declined from 19 percent of HIV diagnoses in 2001 to 11 percent in 2005. In 2005, non-Hispanic Blacks represented the majority of HIV diagnoses (58 percent), followed by non-Hispanic Whites (25 percent) and Hispanics (13 percent).

Since 2003, the CDPH has been part of CDC's National HIV Behavioral Surveillance, locally known as Project CHAT (Chicago Health Assessment). Between June 2005 and December 2005, 525 IDUs were surveyed for Project CHAT at 6 different interview sites throughout the city. The majority of respondents were male (72 percent), and the median age was 44. Almost one-half of the respondents reported median household income of below \$10,000. More than three-quarters (76 percent) of respondents reported having an HIV test in the 12 months prior to the interview. Among these 525 IDUs, 6 percent reported being HIV-positive; however, 32 percent were unaware of their HIV status.

The vast majority (98 percent) of the IDUs surveyed through project CHAT reported heroin as their injected drug of choice, and most (83 percent) reported injecting drugs at least once a day. The use of noninjection

drugs was common, with 45 percent reporting smoking crack cocaine more than once a week. Thirty-seven percent reported sharing needles, and 54 percent reported sharing injection paraphernalia, such as cookers, cotton, or rinse water, in the past 12 months. African-American IDUs were less likely to share needles than Whites; however, there was little difference in the proportion of sharing injection paraphernalia by sex. There was also little difference in the proportion of sharing needles or injection paraphernalia by sex. Findings from the CHAT surveys highlight the need to address substance use as it relates to transmission of HIV and not just in the MSM and IDU populations, but also among all Chicagoans at risk.

In 2005, 90 percent of Cook County students in grades 9 through 12 reported being taught about AIDS or HIV infection in school, an increase from 82 percent in 1995. Despite this improvement in education, a considerable proportion of students continue to report behavior that may place them at risk for sexually transmitted infections. In 2005, 57 percent were sexually active, 31 percent did not use condoms, and 15 percent consumed alcohol or drugs before their last sexual intercourse.

The prevalence of HIV infection in SATH-CAP participants was 7 percent. Men who had sex with men had a considerably higher prevalence of HIV at 18 percent, while 8 percent of those who injected drugs within the last 6 months were infected with HIV.

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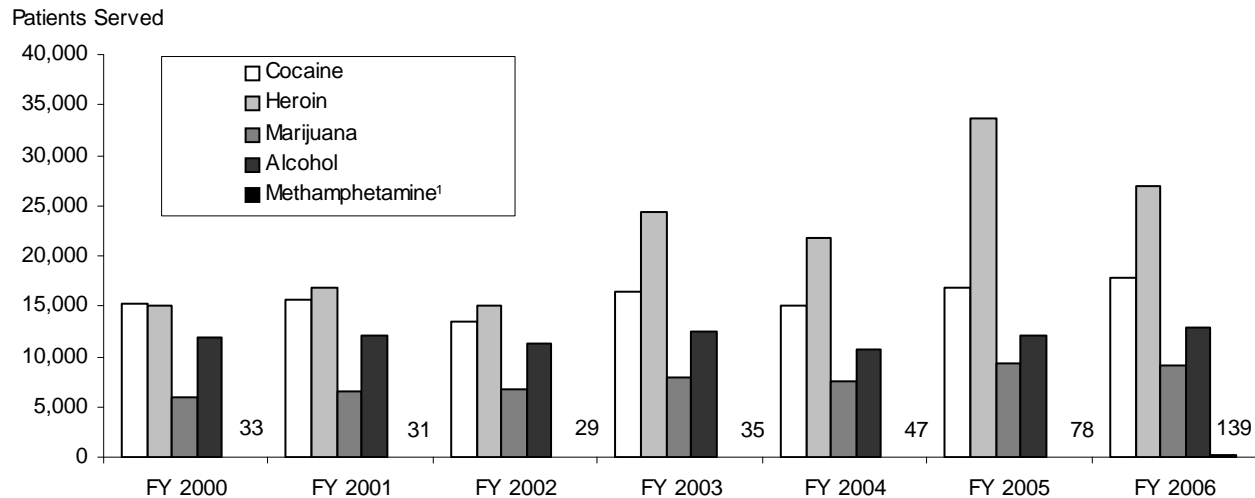
**Exhibit 1. DAWN ED Sample and Reporting Information: January–December 2006**

CEWG Area	Total Eligible Hospitals <sup>1</sup>	No. of Hospitals in DAWN Sample	Total EDs in DAWN Sample <sup>2</sup>	No. of EDs Reporting per Month: Completeness of Data (%)			No. of EDs Not Reporting
				90–100%	50–89%	<50%	
Chicago MSA <sup>3</sup>	88	77	80	24-28	1–5	0–2	49–52

<sup>1</sup>Short-term, general, non-Federal hospital with 24-hour emergency departments based on the American Hospital Association Annual Survey.

<sup>2</sup>Some hospitals have more than one emergency department.

<sup>3</sup>Chicago MSA includes Chicago “Core” and Chicago “Other.”  
SOURCE: DAWN *Live!*, OAS, SAMHSA, updated 4/10, 2007

**Exhibit 2. Persons Served in Publicly Funded Treatment Programs in Chicago, by Primary Substance: FYs 2000–2006**

<sup>1</sup> Methamphetamine values shown in the graph.

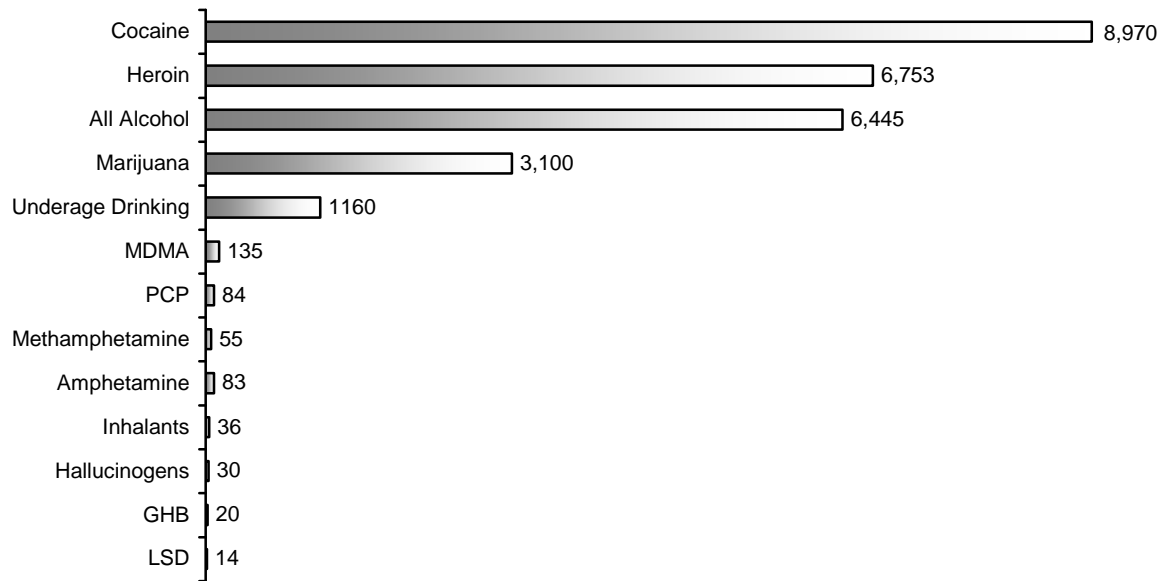
SOURCE: Illinois Department of Human Services, Division of Alcoholism and Substance Abuse

**Exhibit 3. Demographic Characteristics of Persons Served in Publicly Funded Treatment Programs in Chicago, by Primary Substance and Percent: FY 2006**

Characteristics (N=70,065)	Heroin (n=26,889)	Cocaine (n=17,764)	Alcohol (n=12,894)	Marijuana (n=9,192)	Other Opioids (n=788)	Methamphetamine (n=139)
<b>Percent of Total</b>	38	25	18	13	1	<1
<b>Gender</b>						
Male	53	55	74	75	48	83
Female	47	45	26	25	52	17
<b>Race/Ethnicity</b>						
White	8	9	18	6	20	47
African-American	82	82	58	76	67	47
Hispanic	8	7	22	16	12	2
Other	1	2	2	2	2	4
<b>Age</b>						
17 or younger	<1	<1	3	40	-	1
18–25	4	6	12	33	7	18
26–34	17	20	20	17	20	24
35 and older	79	74	65	9	73	57
<b>Route of Administration</b>						
Oral	1	1	100	4	19	8
Smoking	2	91	-	94	5	66
Inhalation	82	7	-	1	61	11
Injecting	14	<1	-	<1	14	16
<b>Secondary Drug</b>	Cocaine 43	Alcohol 44	Cocaine 29	Alcohol 37	Cocaine 35	Alcohol 30

SOURCE: Illinois Department of Human Services, Division of Alcoholism and Substance Abuse

**Exhibit 4. Numbers of Selected Illicit Drug Reports in Chicago EDs (Unweighted<sup>1</sup>): January–December 2006**

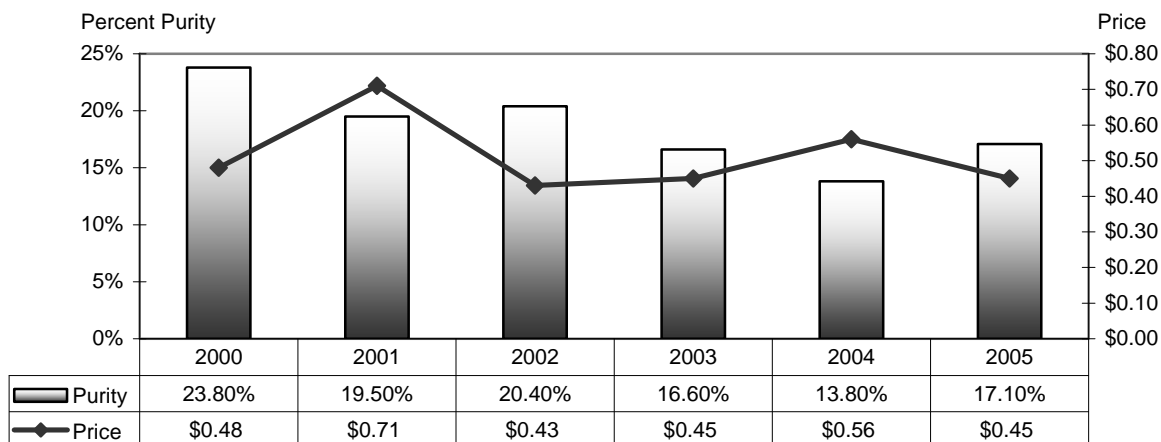


<sup>1</sup>Unweighted data are from 28–31 Chicago EDs reporting to DAWN in January–December 2006. All DAWN cases are reviewed for quality control. Based on this review, cases may be corrected or deleted and, therefore, are subject to change.  
SOURCE: DAWN *Live!*, OAS, SAMHSA, updated 6/4/2006

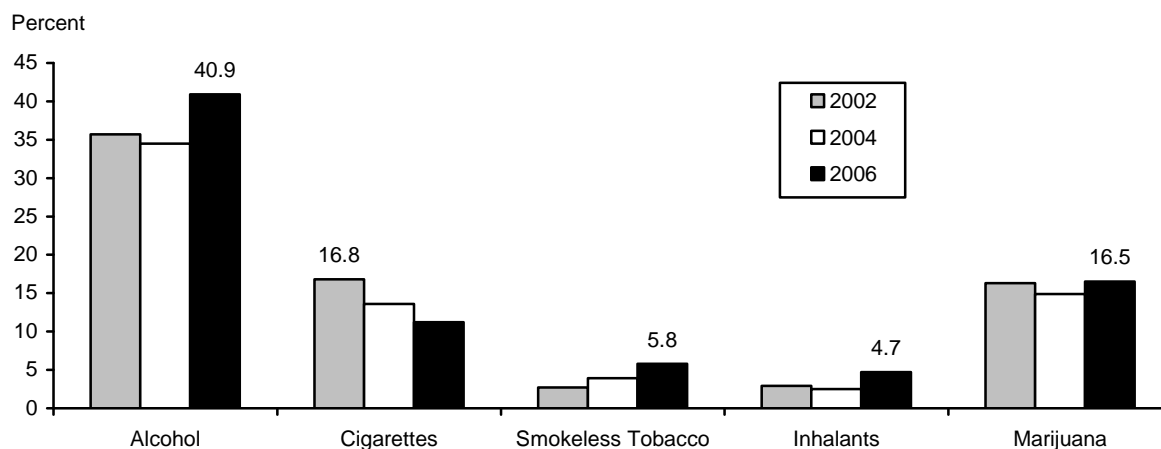
**Exhibit 5. Drug Seizures Items Analyzed by Forensic Labs in Chicago: FY 2004–2006<sup>1</sup>**

Selected Substance	FY 2004		FY 2005		FY 2006	
	Count	Percent	Count	Percent	Count	Percent
Cannabis	30,176	47.15	34,144	49.01	33,153	49.55
Cocaine	21,384	33.41	22,428	32.19	21,317	31.86
Heroin	11,247	17.57	11,597	16.65	10,001	14.95
Clonidine	NA	NA	NA	NA	612	0.91
Methamphetamine	230	0.36	412	0.59	608	0.91
3,4-Methylenedioxymethamphetamine	188	0.29	286	0.41	519	0.78
Phencyclidine	320	0.50	202	0.29	76	0.11
Hydrocodone	33	0.05	79	0.11	113	0.17
Methadone	55	0.09	69	0.10	82	0.12
Alprazolam	42	0.07	59	0.08	63	0.09
Psilocin	9	0.01	53	0.08	44	0.07
Codeine	24	0.04	41	0.06	38	0.06
Diazepam	24	0.04	31	0.04	25	0.04
Clonazepam	16	0.02	26	0.04	20	0.03
Oxycodone	12	0.02	23	0.04	12	0.02
Amphetamine	17	0.03	16	0.02	25	0.04
3,4-methylenedioxyamphetamine	26	0.04	15	0.02	9	0.01
Ketamine	22	0.03	15	0.02	5	0.01
Propoxyphene	NA	NA	13	0.02	NA	NA
Morphine	20	0.03	10	0.01	15	0.02
Psilocybin	6	0.01	9	0.01	5	0.01
Lorazepam	10	0.02	8	0.01	18	0.03
Pseudoephedrine	NA	NA	8	0.01	7	0.01
Chlordiazepoxide	NA	NA	2	<0.01	NA	NA
Lysergic acid diethylamide	NA	NA	2	<0.01	7	0.01
<b>Total Items Reported</b>	<b>64,002</b>		<b>69,668</b>		<b>66,905</b>	

<sup>1</sup>Drug items analyzed between October 1st and September 30th of each year.  
SOURCE: NFLIS, DEA

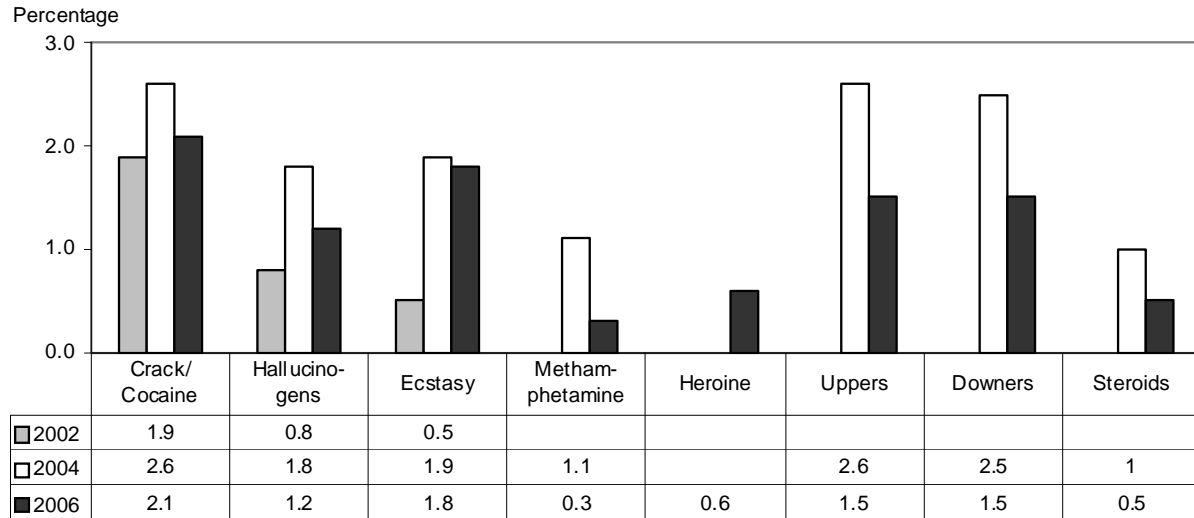
**Exhibit 6. Heroin<sup>1</sup> Price and Purity Trends in Chicago: 2000–2005**

<sup>1</sup>South American heroin.  
SOURCE: DMP, DEA

**Exhibit 7. Past-Month Use of Substances by Students in Grades 8, 10, and 12 in Cook County, by Survey Year and Percent: 2002, 2004, 2006**

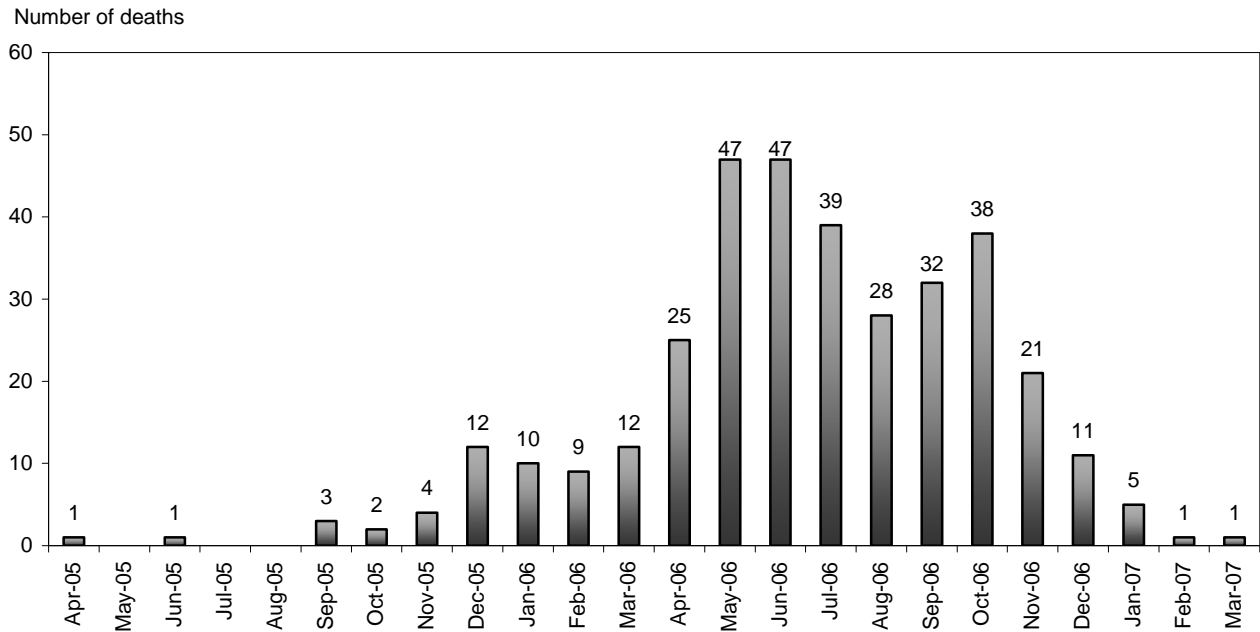
SOURCE: Illinois Youth Survey, Illinois Department of Human Services, Division of Community Health and Prevention

**Exhibit 8. Past-Year Use of Substances by Students in Grades 8, 10, and 12 in Cook County, by Survey Year<sup>1</sup>: 2002, 2004, 2006**



<sup>1</sup>Methamphetamine, uppers, downers, and steroids were not surveyed separately until 2004, and heroin was not surveyed until 2006. SOURCE: Illinois Youth Survey, Illinois Department of Human Services, Division of Community Health and Prevention

**Exhibit 9. Overdose Deaths Related to Fentanyl in Cook County, by Month: April 2005–March 2007**



SOURCE: Cook County Medical Examiner



# Drug Abuse Patterns and Trends in Cincinnati, Ohio

Jan Scaglione, B.S., M.T. PharmD, DABAT<sup>1</sup>

## ABSTRACT

*In reading this report, the reader should be aware of the following: in October 2006, the Alcohol and Drug Addiction Services Board merged with the Mental Health and Recovery Services Board in Hamilton County, Ohio. Publicly funded treatment data for FY 2006 are not yet available in complete form while the various reporting agencies work through new data requirements. Available treatment data are estimates representing 65–75 percent of the total treatment services provided during FY 2006. The data presented are expected to closely reflect overall percentages of total treatment services provided to residents of Hamilton County. Drug abuse indicators showed that cocaine/crack cocaine and marijuana continue to be primary drugs of abuse in Cincinnati, with the drugs dominant among publicly funded treatment admissions, seizures from Cincinnati law enforcement and the Drug Enforcement Administration, and seized items analyzed by the National Forensic Laboratory Information System. Available treatment data for cocaine/crack cocaine, excluding alcohol, accounted for nearly 37 percent of primary admissions during FY 2006. The Cincinnati Police Department record of seizures of powdered cocaine nearly doubled from the previous year and constituted 49 percent of NFLIS lab submissions in 2006. The Hamilton County Coroner's Office recorded 93 deaths in which evidence of cocaine/crack cocaine use was documented by the medical examiner during 2006. Indicators for marijuana remained high, decreasing slightly, with the drug accounting for approximately 27 percent of treatment admissions, excluding alcohol, and nearly 38 percent of seized items analyzed by NFLIS for the Cincinnati area. Indicators for heroin use decreased slightly; heroin accounted for approximately 17 percent of the publicly funded treatment admissions and seizures declined. The 2005–2006 national epidemic of fentanyl-laced heroin accounted for one confirmed death recorded by the Hamilton County Coroner's Office. Methamphetamine indicators were low, with a decrease noted among treatment admissions, intentional drug exposures reported to the Cincinnati Drug and Poi-*

*son Control Center, items analyzed by NFLIS, and recorded cleanup of methamphetamine sites by the Ohio Bureau of Criminal Investigation and Identification. Prescription opioids and benzodiazepines remain a problem across the area. Methadone indicators increased across the area, as evidenced by a 16-percent increase in items analyzed by NFLIS and a 43-percent increase of reported intentional methadone exposures to the Cincinnati DPIC from the first half to the latter half of 2006. Epidemiology indicators for MDMA indicated a decrease in availability and use across the Cincinnati region during 2006.*

## INTRODUCTION

### Area Description

The city of Cincinnati is 1 of 36 municipalities within Hamilton County, located in the southwest region of the State of Ohio along the Ohio River. Hamilton County is also home to 12 separate townships. Since 1990, the Census Bureau recorded consistent decreases in the population in the city of Cincinnati, at the rate of approximately 1 percent per year. Census projections indicated there were 308,728 residents of Cincinnati in 2003, along with 823,472 residents in Hamilton County. The census list that came out in June 2006 showed Cincinnati at the bottom of the list, as the city losing the highest number of U.S. residents of any city during the previous 5-year period. This finding prompted the mayor of Cincinnati to challenge the Census Bureau to reevaluate the population based upon several indicators that the population had actually increased in numbers for both the city and county. The mayor approached the Census Bureau with the following for consideration:

- Statistical analysis from city records, including the following:
  - Building permits
  - Demolition permits
  - Conversion of buildings to apartments or condominiums
- Increased home-building data
- Increased development projects data

The Census Bureau accepted the challenge, and, after review of all data submitted, concluded that the city and county populations had indeed increased in size. The new projections for the population of Cincinnati were revised in October 2006 to record 331,310 residents, an increase of 6.8 percent over previous estimations. Similarly, the estimation of residents within Hamilton County rose 4.3 percent to 860,652 with the revised census projections. The Cincinnati

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population distribution remained consistent, with 53 percent White and nearly 43 percent African-American. By comparison, residents of Hamilton County were comprised of nearly 73 percent White and 23 percent African-American.

The city of Cincinnati recorded 89 homicides during calendar year 2006. According to local law enforcement, the majority of these were suspected to be related to drug activity: risky drug-dealing practices, territorial gang activity, and drug commerce throughout the city. The Cincinnati Police Department arrested more than 1,400 individuals, charging them with more than 13,000 drug-related offenses during the 2006 calendar year. Approximately 68 percent of the offenses involved drug trafficking, possession, or drug abuse with illicit or pharmaceutical drugs. Most of the drug-related arrests involved males (65 percent) and African-Americans (56 percent); arrestees were most likely to be age 20–29.

Various factors were identified by law enforcement that continue to influence drug trafficking and substance abuse in the Cincinnati region and State. Ground travel is the predominant source of drugs to the city of Cincinnati and the State of Ohio, as many major thoroughfares cut through the State, making transport relatively easy across the State line. Interstate-75 (I-75) is a direct route, running south to north, from the Florida border through four States, including Ohio, and terminating in Detroit, Michigan. Transport of cocaine through this route has earned the I-75 corridor the nickname of “cocaine lane.” Interstate-80/90 travels east to west across the top of Ohio and contributes to drug travel from Chicago and New York.

Cincinnati is within close proximity of the Northern Kentucky/Cincinnati International airport to the south, and the Dayton International airport to the north, with a few smaller airports scattered throughout the region. The region is also close to major package delivery centers where air transport of drugs in containers or packages contributes to the supply of imported drugs from Mexico, Texas, and California.

Some drug travel through the ports of Lake Erie occurs as well, but this is a less common route of distribution than ground travel.

### Data Sources

The major sources of data/information for this paper are as follows:

- **Treatment data** were provided by the Hamilton County Mental Health and Recovery Services

Board for fiscal years (FYs) 2001 through 2006. Primary drugs of abuse among adult clients treated are reported here for selected drugs, excluding alcohol. Treatment data for FY 2006 were estimated based upon available data at the time of this report, approximating 65–75 percent of total treatment services provided.

- **Poison control center call data** were accessed from the Cincinnati Drug and Poison Information Center (DPIC) and include call data from 38 of 88 counties in Ohio, 4 counties in Northern Kentucky, and 1 county in Indiana. The Cincinnati region captures data from Hamilton County and five surrounding counties in Ohio, four Northern Kentucky counties, and Dearborn County in Indiana. The DPIC provides a 24/7-telephone hotline for drug and poison information, as well as management and treatment information of hazardous or toxic exposures for the public, healthcare professionals, business, and government officials. The information obtained from DPIC includes exposures to illicit substances (e.g., heroin, cocaine, 3, 4-methylenedioxymethamphetamine [MDMA]), as well as prescription drugs used for purposes of intentional abuse or suicide. Data may also include intentional misuse or intentional use for unknown reason.
- **Crime laboratory drug analyses data** were derived from the Drug Enforcement Administration (DEA), National Forensic Laboratory Information System (NFLIS), and the Hamilton County Coroner’s office for 2006.
- **Drug seizure and arrest data** were provided by the Cincinnati Police Department for 2004 through 2006.
- **Mortality data** were provided by the Hamilton County Coroner’s Office for 2006.
- **Drug purity and cost data** are from the DEA, Cincinnati Resident Office, National Drug Intelligence Center (NDIC), Warren-Clinton County Drug Task Force, and the Ohio Substance Abuse Monitoring Network (OSAM) for 2006.
- **Methamphetamine lab seizure data** were provided by the Ohio Bureau of Criminal Investigation and Identification (BCI&I)
- **Qualitative data** are based on interviews conducted for the OSAM project from January to December 2006 with 102 recovering or active drug users, 21 Drug Abuse Community Educa-

tors and Service Providers, a physician in private practice prescribing buprenorphine, and a Drug Task Force Officer.

## DRUG ABUSE PATTERNS AND TRENDS

### Cocaine/Crack

Cocaine remains the most serious drug problem in Cincinnati. The treatment data for FY 2006 show that, as a proportion of all admissions, excluding alcohol, cocaine accounted for nearly 37 percent of the primary illicit drug admissions (exhibit 1).

From 2001 to 2006, the proportion of primary cocaine admissions remained relatively stable, hovering around 40 percent of all admissions, excluding alcohol. Qualitative data indicate that new cocaine users are more likely to be young (some as young as 13) and more likely to start their use by mixing the cocaine, either crack or cocaine powder, with tobacco or marijuana and smoking it. The term "Primo" describes the mix of tobacco or marijuana with cocaine. While Whites are the primary users of powdered cocaine, African-Americans dominate the crack-user population. Use of crack cocaine among other ethnic groups has recently been reported as increasing.

Poison control center data showed a total of 136 cocaine (salt/crack) human exposure calls captured by the Cincinnati DPIC during 2006 for the entire service region. All of the cases involved intentional use of cocaine (salt/crack). Ninety-six of these exposures (70 percent) were recorded for the Cincinnati region alone.

The Hamilton County Coroner's Office recorded 93 deaths in which evidence of cocaine/crack cocaine use was documented by the medical examiner during 2006. Deaths were recorded in one of three categories: accidental, suicide, or homicide. Evidence of cocaine was not necessarily related to manner of death. Seventy-five percent of the cases with cocaine presence recorded in the decedent were ruled as accidental, 9 percent were due to suicide intent, and 16 percent were ruled homicide.

In 2005, the Cincinnati Police Department began to merge data from drug seizures from all municipalities and townships within Hamilton County. Data were merged back to calendar year 2004. From 2004 to 2006, county-wide law enforcement seizures for powder cocaine increased nearly 50 percent each year (exhibit 2). In 2005, the amount of powder cocaine seized by law enforcement was 66,403.6 grams, almost double the amount seized in 2004 (36,494.3 grams) and approximately one-half that seized in

2006 (130,031.6 grams). Crack cocaine seizures across the county remained fairly stable over the same time frame. Qualitative data indicate no decreased availability of crack cocaine in the city, but an increased number of users purchasing powder cocaine to "rock up" their own crack to ensure better quality of the crack smoked.

Of the 16,678 drug items analyzed by NFLIS labs in the Cincinnati metropolitan area, 49.3 percent were cocaine (exhibit 3). The Hamilton County Coroner's Office analyzed 10,735 drug items seized by county law enforcement during 2006. Of those, 3,391 items were identified as crack cocaine, and an additional 769 items were identified as cocaine hydrochloride (exhibit 4). These items combined to account for 38 percent of the total number of seized items in Hamilton County. An analysis of the purity of cocaine samples seized by the local DEA in 2006 showed that the average purity of cocaine (salt/crack) was 80 percent, with a range of 44–91 percent (exhibit 5).

The retail (street) price of powdered cocaine during 2006 was \$30–\$50 per gram and \$130–\$180 per 8-ball (exhibit 6). Prices varied depending on ethnicity and geography throughout the Cincinnati region. Prices were lower if the buyer was African-American rather than White, and they were higher in the suburbs, outside the city limits. Midlevel prices for powder cocaine ranged from \$600 to \$1,000 per ounce, and wholesale prices ranged from \$15,000 to \$25,000 per kilogram. The street price of crack cocaine changed little during 2006, with a gram costing \$30–\$40 and an 8-ball costing \$120–\$150. Midlevel prices for crack cocaine ranged from \$650 to \$850 per ounce.

### Heroin

Indicators for heroin abuse decreased slightly during 2006. Heroin abuse accounted for approximately 17 percent of primary treatment admissions (excluding alcohol) during FY 2006 (exhibit 1). The number of treatment admissions was higher than in previous years, indicating an increase in individuals seeking treatment for heroin abuse. From 2001 to 2005, the number of primary heroin treatment admissions, excluding alcohol, averaged 12.5 percent (range: 11.1–13.6).

Qualitative data show relative stability in availability of heroin during 2006, with Mexican brown powder heroin as reportedly the most available form of heroin in the Cincinnati area. Users and law enforcement report local transport to Cincinnati from Dayton of black tar heroin, but at lower rates than

previously noted. Injection of heroin remains the primary method of administration among young heroin users. New users of heroin continue to be reported as White, as young as 15–16 years of age, and both male and female.

Poison control center data showed that there were 32 heroin exposure calls related to intentional abuse during 2006, nearly all of them (88 percent) recorded from the Cincinnati region. There were four intentional abuse cases reported with suspected fentanyl-laced heroin in the summer of 2006. One of the individuals died as a result of the exposure, and subsequent analysis by the Hamilton County Coroner's Office confirmed both fentanyl and heroin in the decedent as manner of death. Overall, the medical examiner data recorded 10 deaths during 2006 with evidence of heroin abuse as manner of death. All of the deaths were ruled accidental in nature by the Medical Examiner.

The Cincinnati Police Department recorded 325 grams of heroin seized during 2006, an 85-percent drop in recorded seizures from 2005, when 2,374 grams were removed from the street.

Heroin accounted for 4.5 percent of the items analyzed by NFLIS in 2006 (exhibit 3). The Hamilton County Coroner's Office analyzed 528 items that tested positive for heroin, accounting for 4.8 percent of the total number of items tested during 2006 by their laboratory (exhibit 4). Only one heroin item was submitted to the DEA during 2006, with analysis indicating purity of 66 percent in this sample (exhibit 5). Heroin sold on the street (retail) for \$150–\$200 per gram and for \$20 per one-tenth gram in 2006 (exhibit 6). Midlevel prices for heroin ranged from \$2,000 to \$4,000 per ounce for Mexican brown powder heroin. Wholesale prices for a kilogram of heroin were reported to be \$80,000. Qualitative data continue to show variability in the price of heroin as dependent on the race/ethnicity of the buyer.

### **Other Opiates/Opioids**

Primary admissions for opiates/opioids other than heroin accounted for 8.6 percent of total admissions (excluding alcohol) in FY 2006 (exhibit 1). Qualitative data indicated a slight increase in overall use of opioids during the latter half of 2006. Users continue to be described primarily as White, with less gender bias, and between 19 and 50 years of age. While most opioids are ingested, OxyContin remains the one most likely to be crushed and insufflated or injected according to users.

Poison control center data showed that hydrocodone and oxycodone pharmaceutical products were more likely to be abused than other opiates/opioids available. There were a total of 73 exposure calls for intentional abuse, including suicide, of single agent oxycodone products, including OxyContin, with a subset of 44 (60 percent) originating in the Cincinnati area during 2006. In addition, there were 104 intentional human exposure cases involving oxycodone in combination with either acetaminophen or aspirin, with 64 (61 percent) from the Cincinnati region. The number of hydrocodone combination narcotic exposures in 2006 for intentional abuse, including suicide, totaled 158 for the entire catchment area and 103 (65 percent) for the Cincinnati area alone. The number of intentional methadone cases recorded during 2006 was 41, with more than one-half of those reported during the last 6 months of the year. Intentional exposures from the Cincinnati region alone accounted for 78 percent of the total methadone cases.

Among the drugs analyzed by NFLIS in 2006, oxycodone accounted for 1.9 percent of the total items, hydrocodone represented 1.1 percent of all items, and other opiates/opioids accounted for 0.9 percent of all items (exhibit 3). These numbers reflect increases of 29 and 19 percent, respectively, for the two predominant opioids, oxycodone and hydrocodone, from the previous year.

The Hamilton County Coroner's Office recorded 105 deaths during 2006 that had evidence of opiate/opioid use on the part of the decedent. Of those reported, 73 percent were determined to be accidental, 19 percent were involved in a suicide, and 8 percent were victims of homicide. In addition, there were 18 recorded cases in which methadone was determined to be contributory to the death. All of the methadone deaths were determined to be from accidental exposure/overdose.

Qualitative data illustrate that OxyContin continues to lead other opioids in both desirability and availability with regard to diversion of pharmaceutical products to the street. In 2006, OxyContin sold on the streets of Cincinnati for \$40–\$60 for 80 milligrams, \$25–\$30 for 40 milligrams, and \$10–\$15 for 20 milligrams. Overall prices ranged from \$0.50 to \$0.75 per milligram of oxycodone. Generic versions of the branded extended release product were sold for similar price points. Sold by hydrocodone content, Vicodin, Lorcet, and Lortab products sold for \$1.50–\$3.00 for 5 milligrams hydrocodone, \$4.00–\$5.00 for 7.5 milligrams, and \$5.00–\$8.00 for 10 milligrams. Methadone prices ranged from \$0.50 to \$1.00 per milligram, regardless of whether the formulation was liquid or tablet.

## Methamphetamine/Amphetamines

Methamphetamine abuse indicators continue to decrease in the Cincinnati area. Of the primary illicit drug admissions in FY 2006, methamphetamine/amphetamines accounted for only 0.4 percent of the admissions (exhibit 1). Qualitative data describe slower movement of methamphetamine from rural areas into the inner city, attributed to tighter pseudoephedrine laws restricting sales of precursor chemicals.

Poison control data showed a total of eight intentional abuse exposures, including suicide, to methamphetamine reported in 2006, with three of these exposures (37.5 percent) recorded in the Cincinnati area.

Methamphetamine items analyzed by NFLIS in 2006 totaled 168, a drop of 23 percent from the previous year, accounting for only 1 percent of the total drug items recorded. Twenty-three amphetamine items were recorded, representing 0.14 percent of the total items. In 2006, the retail price for methamphetamine from Mexican sources ranged from \$50 to \$60 per gram, and the cost was \$50–\$75 per gram for locally produced powdered methamphetamine (exhibit 6). Midlevel prices for methamphetamine ranged from \$1,000 to \$1,200 per ounce.

Throughout Ohio, the number of methamphetamine incidents involving laboratories, dumpsites, and chemical glass findings rose sharply from 36 in 2000 to 444 in 2005, but declined by nearly one-half in 2006 to 243, according to the Ohio BCI&I. The decline in methamphetamine incidents was linked directly to tighter restrictions on the sale of pseudoephedrine and precursor chemicals. The primary method of manufacture for small local labs remains the “Nazi” method, involving anhydrous ammonia, in the Cincinnati region.

Qualitative data continue to report that local methamphetamine makers make use of “buying groups” to obtain precursor chemicals needed for methamphetamine production. The methamphetamine “cook” will recruit many individuals to purchase the limited amounts legally available of precursor chemicals in exchange for cash or some of the finished product. Law enforcement also described the purchase of precursor chemicals through the Internet as an avenue that cooks are utilizing to “beat the system.”

## Marijuana

Marijuana remains another primary drug in the Cincinnati region, reported as both widely available

and widely used. Marijuana accounted for 27.3 percent of the treatment admissions, excluding alcohol, in FY 2006 (exhibit 1).

Cannabis (marijuana) was the second most frequently reported drug by NFLIS, representing 38 percent of the total drug items analyzed in 2006. Cannabis was the most frequently reported substance identified by the Hamilton County Coroner’s Office, with 5,320 drug items analyzed in 2006, accounting for nearly 49 percent of the total number of items analyzed for the year.

Medium-grade marijuana sold on the streets for \$5 per gram in 2006, while the retail price of high-grade marijuana was \$15–\$25 per gram (exhibit 6). Mid-level prices for marijuana from Mexican sources were \$275–\$400 per ounce and \$320–\$400 per ounce of high-grade marijuana. The wholesale price for marijuana from Mexican sources was \$700–\$1,000 per pound, and high-grade marijuana cost \$2,000–\$2,500 per pound.

Poison control center data revealed a total of 60 human exposure cases involving intentional abuse, including suicide, in 2006, with 39 (65 percent) of these marijuana-related cases reported from the Cincinnati region. The Cincinnati Police Department recorded seizures of more than 1,000 kilograms of marijuana during 2006.

## MDMA

Abuse indicators for 3, 4-MDMA abuse declined in the Cincinnati region during 2006. Primary treatment admissions for stimulants, including MDMA and amphetamines, for FY 2006 accounted for only 0.3 percent of the total admissions, excluding alcohol.

Qualitative data show a decline in overall MDMA availability and use during 2006 according to users. The typical MDMA user reportedly is White, with no gender bias, between 18 and 30 years of age, and likely to be involved with the club scene. The primary route of administration described was ingestion of tablets.

Poison control center data show a total of 7 intentional abuse exposures to MDMA for 2006, a 56-percent decrease over 2005, when 16 exposure cases involving MDMA were recorded. The Cincinnati region recorded 65 percent of the total exposures overall.

Of the NFLIS items analyzed in 2006, there were 123 MDMA items and 1 3, 4-methylenedioxympheta-

mine (MDA) item. Together, these items accounted for 0.75 percent of all drug items reported.

MDMA sold for \$10–\$20 for a “single hit,” \$30 for a “double stack,” and for \$20 for one-tenth gram. A “double stack” is a tablet approximately twice the height, containing double the strength, of MDMA per tablet versus a single stack or “hit.” No wholesale information on MDMA was available.

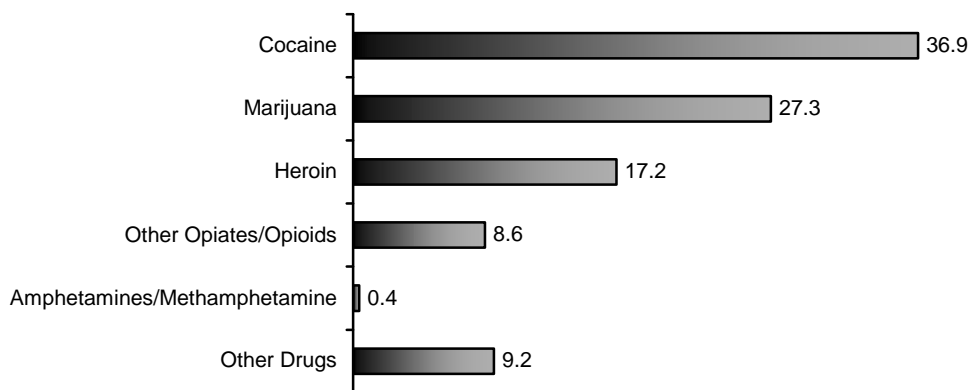
**ACKNOWLEDGEMENTS**

The author would like to thank those individuals and agencies that contribute alcohol- and drug-related data, statistics, and information that are used to form these reports. Cincinnati’s contribution to the Com-

munity Epidemiology Work Group would be vastly limited without the cooperation of local, State, and national agencies. In particular, the author thanks Dr. O’dell Owens and Terry Daly (Hamilton County Coroner’s Office), Tom Senecal (DEA, Cincinnati Resident Office), Paul Byers (Cincinnati Police Department), John Roberts (Hamilton County Mental Health and Recovery Services Board), Chrissie Ross (Ohio Bureau of Criminal Investigation and Identification), and the staff at the Cincinnati Drug and Poison Information Center.

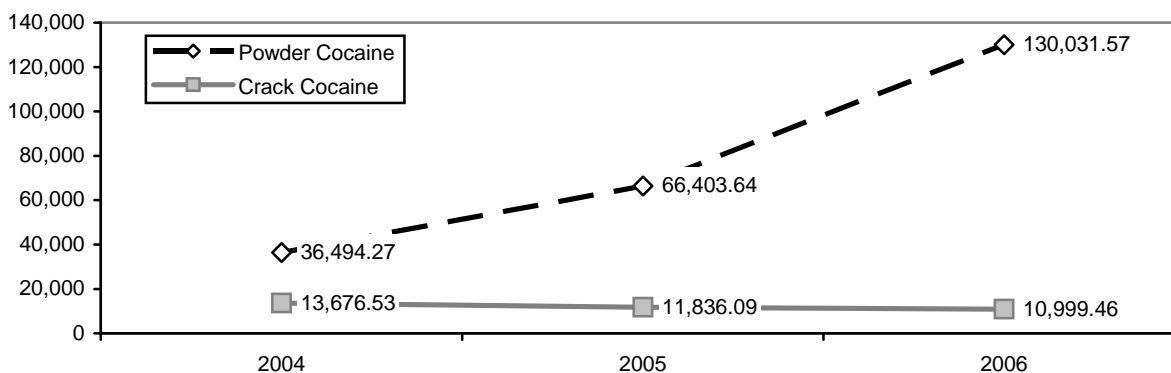
*For inquiries concerning this report, please contact Jan Scaglione, Cincinnati Children’s Hospital, Cincinnati Drug and Poison Information Center, 3333 Burnet Ave., ML-9004, Cincinnati, Ohio 45229, Phone: (513) 636-5060, Email: Jan.Scaglione@cchmc.org.*

**Exhibit 1. Treatment Admissions in Cincinnati by Primary Drug of Abuse, as a Percentage of Total Admissions (Excluding Alcohol): FY 2006<sup>1</sup>**



<sup>1</sup>FY 2006 data estimate: 65–75 percent complete.  
SOURCE: Hamilton County Mental Health and Recovery Services Board

**Exhibit 2. Seizures of Cocaine HCl and Crack, in Grams: 2004–2006<sup>1</sup>**



<sup>1</sup>Cincinnati Police Department seizure data added township and municipal police department data from Hamilton County; data have been merged back to calendar year 2004.  
SOURCE: Cincinnati Police Department

**Exhibit 3. Number and Percentage of Total Items<sup>1</sup> for Selected Drugs Analyzed by Forensic Laboratories in the Cincinnati Metropolitan Area: 2006**

Drug	Number	Percent of Total Items
Cocaine	8,226	49.3
Cannabis	6,330	37.9
Heroin	748	4.5
Oxycodone	313	1.9
Methamphetamine	168	1.0
Hydrocodone	181	1.1
Other Opiates/Opioids <sup>2</sup>	145	0.9
Benzodiazepines <sup>3</sup>	263	1.6
MDMA/MDA	124	0.7
Amphetamines	23	0.1

<sup>1</sup>Total items analyzed=16,678.

<sup>2</sup>Includes methadone (81), morphine (39), propoxyphene (9), codeine (14), and hydromorphone (2).

<sup>3</sup>Includes alprazolam (113), diazepam (78), clonazepam (58), lorazepam (13), and temazepam (1).

SOURCE: NFLIS, DEA

**Exhibit 4. Drug Counts<sup>1</sup> in Metropolitan Cincinnati: 2006**

Drug	Number	Percent of Total Items
Crack Cocaine	3,391	31.0
Cannabis	5,320	48.7
Heroin	528	4.8
Cocaine HCl	769	7.0
Clandestine Methamphetamine/Amphetamine	162	1.5
Prescription Opiates/Opioids	735	6.7
Psilocybe Mushrooms	19	0.17
LSD	2	0.02

<sup>1</sup>Total Items analyzed=10,725.

SOURCE: Hamilton County Coroner's Office

**Exhibit 5. Purity Analysis of Drug Seizures: 2006**

Drug	Number of Items	Weight (Grams)	Purity Range (%)
Cocaine	15	39,283.8	44–91 (avg. 80)
Heroin	1	–	66

SOURCE: DEA, Cincinnati Resident Office

**Exhibit 6. Prices for Selected Drugs,<sup>1</sup> by Distribution Level and Quantity:<sup>2</sup> 2006**

Drug	Wholesale	Midlevel	Retail
Powder Cocaine	\$20,000–\$25,000/kg. \$15,000–\$17,000/kg	\$875–\$1,000/oz. \$600–\$800/oz.	\$30–\$50g. \$130–\$180/8-ball
Crack Cocaine	–	\$650–\$850/oz.	\$30–\$40/g. \$120–\$150/8-ball
Heroin	\$80,000/kg	\$2,000–\$4,000/oz. MBP	\$150–\$200/g. \$20/0.1 g.
Marijuana	\$700–\$1,000/lb. MX High Grade: \$2,000–\$2,500/lb.	\$275–\$400/oz. MX High grade: \$320–\$400/oz	Medium Grade: \$5/g. High Grade: \$15–\$25/g.
Methamphetamine	–	\$1,000–\$1,200/oz.	\$50–\$60/g. MX \$50–\$75/g. PM LP
MDMA	–	–	\$10–\$20/“single hit” \$30/“double stack” \$20/0.1g.
OxyContin	–	–	80mg: \$40–\$60 40mg.: \$25–\$30 20mg.: \$10–\$15

<sup>1</sup>Key: MX=Mexican; PM LP=Powdered Methamphetamine, Locally Produced; MBP=Mexican Brown Powder.

<sup>2</sup>Kg=kilogram; lb=pound; oz=ounce; g=gram.

SOURCES: NDIC, DEA, Warren-Clinton County Drug Task Force, OSAM



# Patterns and Trends in Drug Abuse in Denver and Colorado: January–December 2006

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## ABSTRACT

*Excluding alcohol, marijuana abuse has continued to result in the highest number of treatment admissions annually since 1997, although in 2006, all indicators decreased. There has been a gradual decline in statewide treatment admissions since 2001 and in Denver area admissions since 2004. There have also been declines in marijuana hospital discharge reports, calls to the Rocky Mountain Poison & Drug Center, and in illicit drug seizures. Most cocaine indicators rose in 2006. In 2006, cocaine ranked third in statewide treatment admissions and second in admissions of persons living in the Denver metropolitan area. Cocaine had the highest illicit drug rate per 100,000 persons for hospital discharges from 1996 through 2006 and the highest proportion of illicit drug ED reports from 2004 through 2006, based on unweighted data accessed from DAWN Live!. Cocaine also accounted for the highest drug-related mortality rates from 1996 through 2002, but was surpassed in 2003 by all opiates including heroin, and in 2004 through 2006, by opiates other than heroin. Cocaine had the highest number of poison center calls from 2001 through 2003 in the Denver area, but was surpassed by methamphetamine in 2004 and 2005. However, in 2006, cocaine had substantially more poison calls than methamphetamine (129 vs. 29 respectively). Most methamphetamine indicators declined in 2006. While methamphetamine surpassed cocaine in statewide treatment admissions in 2003, and in Denver/Boulder treatment admissions in 2005, 2006 data showed the first decline in several years for methamphetamine admissions and for poison calls. Clandestine laboratory closures decreased steadily since 2003, but the amount of methamphetamine seized continually increased through 2006. This is most likely because an estimated 80 percent of Colorado's methamphetamine comes from outside the State, predominantly Mexico. Moreover, drug enforcement officials have reported increased purity*

*levels of methamphetamine seized in Colorado. Many heroin abuse indicators decreased over the last several years, while poison calls remained stable. In 2003 through 2006, opiate-related drug misuse mortalities exceeded those that were cocaine-related. Beyond abuse of illicit drugs, alcohol remained Colorado's most frequently abused substance and accounted for the most treatment admissions, emergency department reports based on unweighted data accessed from DAWN Live!, poison center calls, drug-related hospital discharges, and drug-related mortality in 2006.*

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## INTRODUCTION

### Area Description

Denver, the capital of Colorado, is located slightly northeast of the State's geographic center. Covering only 154.6 square miles, Denver is bordered by several suburban counties: Arapahoe on the southeast, Adams on the northeast, Jefferson on the west, Broomfield on the northwest, and Douglas on the south. These areas made up the Denver Population and Metropolitan Statistical Area (PMSA) through 2004, which accounted for 50 percent of the total population.

For this report, both statewide data and data for the Denver/Boulder metropolitan area were analyzed; the latter includes the counties of Denver, Boulder, Adams, Arapahoe, Broomfield, Clear Creek, Douglas, Gilpin, and Jefferson and accounts for 56 percent of the total population.

Denver and the surrounding counties experienced rapid population growth from the 1990s through 2003, and Colorado was the third fastest growing State in the Nation until 2004, when the growth rate declined. The State population more than doubled from 1960 to 2000, but recently, the population moving out of Colorado exceeded new arrivals. Colorado now ranks among those States with the lowest rates of net domestic immigration and is 14th on the list of fastest growing States. The 2000 census projections estimated a population increase of 1 percent from 4,653,844 in 2004 to 4,804,353 by 2006.

The median age of residents in the Denver area is 34.1. For the population 25 and older, 82 percent are high school graduates and 36 percent have bachelor's degrees. Males represent 50.7 percent and females 49.3 percent of the population. Ethnic and racial characteristics of the area are Whites 71 percent, Black or African-American 11 percent, Asian 3 percent, and Native American Indian 1 percent; there were no Native Hawaiian and Other Pacific Islanders re-

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

corded by the census. Hispanics or Latinos of any race represent 35 percent of the area's population.

The major industries in Colorado are communications, utilities, agriculture, and transportation. By the end of 2004, Colorado's employment growth rate of 2.1 exceeded that of the Nation (1.6). The per capita income for the city is \$27,676. The median household income is \$43,777, and the median family income is \$53,616. Eleven percent of families and 15 percent of individuals in the area are below the poverty level. The unemployment rate in Colorado as of April 2007 was 3.6. Nationally it was 4.5.

The Violent Crime Rate National Ranking for Colorado in 2005 was 24 out of 50.

Two major Interstate highways, I-25 and I-70, intersect in Denver. I-25 runs north-south from Wyoming through New Mexico, and I-70 runs east-west from Maryland through Utah. The easy transit across multiple States via these highways, along with the following other factors, may influence drug use in Denver and Colorado:

- The area's major international airport is nearly at the Nation's midpoint.
- The area has a growing population and expanding economic opportunities.
- A large tourism industry draws millions of people to Colorado each year.
- The area is marked by remote, rural areas that are ideal for the undetected manufacture, cultivation, and transport of illicit drugs.
- Several major universities and small colleges are in the area.
- A young citizenry is drawn to the recreational lifestyle available in Colorado.

#### Data Sources

- **Treatment data** are provided by the Drug/Alcohol Coordinated Data System (DACODS), which is maintained by the Alcohol and Drug Abuse Division (ADAD) at the Colorado Department of Human Services. Data for this system are collected on clients at admission and discharge from all Colorado alcohol and drug treatment agencies licensed by ADAD. Treatment admissions are reported by the primary drug of use (as reported by the client at admis-

sion) unless otherwise specified. Annual figures are for calendar years (CY) 2000 through 2006.

- **Drug-related emergency department (ED) reports** for the Denver metropolitan area from January through December 2006 were provided by the Substance Abuse and Mental Health Services Administration (SAMHSA), Office of Applied Studies (OAS) through its restricted online Drug Abuse Warning Network (DAWN *Live!*). These data were accessed on and reflect cases received by DAWN as of May 8, 2007, and are subject to change in future OAS quality reviews. Because these data were unweighted, they cannot be used as estimates of the reporting area. Only weighted DAWN data released by SAMHSA can be used for trend analysis. The total number of eligible DAWN hospitals for the time period measured was 15, and 6–7 hospitals reported during every month in 2006, except October (when 8 hospitals reported). A "completeness" table appears in exhibit 1. Because a patient may report more than one drug, the number of drug reports may exceed the number of cases. A full description of the DAWN system can be found at <<http://dawninfo.samhsa.gov>>.
- **Drug-related mortality data** statewide for CY 2006 are from the Colorado Department of Public Health and Environment (CDPHE). The 2003 mortality data for the Denver area are from the DAWN medical examiner/coroner system.
- **Hospital discharge data** statewide for 1997–2006 were provided by the Colorado Hospital Association through CDPHE's Health Statistics Section. Data included diagnoses (ICD-9-CM codes) for inpatient clients at discharge from all acute care hospitals and some rehabilitation and psychiatric hospitals. These data exclude ED care.
- **Rocky Mountain Poison and Drug Center (RMPDC) data** are presented for Colorado. The data represent the number of calls to the center regarding "street drugs" from 1996 through December 2006.
- **Colorado Youth Risk Behavior Survey (YRBS) data** for 2005 were obtained from the CDPHE.
- **Statistics on seized drug items** were obtained from *Colorado Fact Sheet Reports* published by the Drug Enforcement Administration (DEA).
- **Availability, price, and purity data** were obtained from the February 2007 National Drug

Intelligence Center's report, *National Illicit Drug Prices, December 2006*.

- **Intelligence data** were obtained from Rocky Mountain High Intensity Trafficking Area staff and local law enforcement officials.
- **HIV/AIDS data** were obtained from the CDPHE and are presented from 2001 through 2006.
- **Population statistics** were obtained from the Colorado Demography Office, Census 2000, including estimates and projections, and <factfinder.census.gov>.
- **Qualitative and ethnographic data** for this report were available from clinicians from treatment programs across the State, Denver Vice Detectives, street outreach workers, and local researchers.

#### DRUG ABUSE PATTERNS AND TRENDS

##### Cocaine/Crack

Of the five major drugs of cocaine, heroin, other opiates, methamphetamine, and marijuana, cocaine ranked third in statewide and second in Denver-area treatment admissions, both of which increased from 2005 to 2006. Of nine cocaine indicators, all but hospital discharge reports, deaths, and Colorado YRBS data increased. Excluding alcohol, cocaine ranked first in ED and hospital discharge reports of illicit drugs and poison control center calls and second in numbers of deaths caused by illicit drug use.

During 2006, cocaine was reported as a primary drug in 21.1 percent of treatment admissions (excluding alcohol) statewide (exhibit 2). Since 2000, cocaine constituted 18.1 to 21.1 percent of statewide admissions each year, and through 2002, it was second to marijuana in volume of treatment admissions. Since 2003, methamphetamine admissions have exceeded cocaine admissions.

In the Denver metropolitan area, cocaine was reported in 23.5 percent of treatment admissions (excluding alcohol) during 2006 (exhibit 3). While cocaine surpassed heroin in treatment admissions in 2003, methamphetamine admissions slightly exceeded cocaine admissions in 2005, but cocaine surpassed methamphetamine again in 2006 admissions.

Statewide, the proportion of male cocaine admissions rose from 55.4 percent in 2000 to 61.5 percent in 2004 and declined to 59.3 percent in 2006 (see exhibit 4). Likewise, in the Denver metropolitan area,

the proportion of male cocaine admissions increased from 50.8 percent in 2000 to 63.1 percent in 2004, and declined to 59.7 percent in 2005. In 2006, males accounted for 61.2 percent of Denver-area cocaine admissions (exhibit 5).

Historically, Whites have accounted for the largest proportion of cocaine admissions statewide (44.3 percent overall, 2000 through 2006). However the proportion of Hispanics, which is 31.8 percent of admissions overall, increased each year statewide from 27.4 percent in 2001 to 35.2 percent in 2005, and then decreased to 33.8 percent in 2006. In Denver the proportion of Hispanics increased from 23.0 percent in 2000 to 31.9 percent in 2005, and then declined slightly to 31.1 percent in 2006. From 2000 to 2006, the proportion of Black treatment admissions declined from 21.9 to 17.3 percent statewide and from 30.7 to 20.8 percent in the Denver metropolitan area.

Statewide, 2.3 percent of all primary cocaine admissions in 2006 were for persons younger than 18, and 17.4 percent were for persons younger than 25 (exhibit 4). Roughly 70 percent of cocaine admissions from 2000 through 2005 were for persons age 25 to 44. However, that age group's proportion declined steadily from 76.0 percent in 2000 to 63.9 percent in 2006, while the proportion of those older than 44 increased from 8.1 to 18.7 percent during that time, which may be indicative of a cohort that is aging.

The Denver metropolitan area showed similar trends with a decline in total cocaine admissions of those 25 to 44 (80.0 to 63.5 percent from 2000 to 2006) and a rise in persons older than 44 (7.5 to 20.4 percent from 2000 to 2006). The Denver area also reported an increase from 9.2 to 13.5 percent in admissions for persons age 18 to 24 from 2000 through 2006.

Statewide, in 2006, the proportions of all admitted clients who smoked, inhaled, or injected cocaine were 61.9, 30.6, and 5.6 percent, respectively (exhibit 4). The proportion that smoked increased slightly from 2000 (57.9 percent) to 2006 (61.9 percent). From 2002 through 2006, the proportion inhaling cocaine increased from 25.7 to 30.6 percent, and the proportion injecting fell from 12.0 to 5.6 percent.

The Denver-area proportions of cocaine users who smoked, inhaled, or injected the drug in 2006 were 57.0, 36.6, and 4.3 percent, respectively (exhibit 5). However, while smoking has been fairly stable statewide, in the Denver area, the proportion of cocaine smokers declined steadily from 68.8 percent in 2000 to 57.0 percent in 2006. Compared with Colorado overall, the Denver area had a more dramatic rise in

cocaine inhalation (from 21.8 percent in 2002 to 36.6 percent in 2006) and a larger decline in cocaine injection (12.0 to 4.3 percent from 2002 to 2006).

Treatment data show that cocaine users most often use alcohol as a secondary drug (exhibits 4 and 5), and treatment providers have indicated that marijuana is commonly used with cocaine to enhance its effects or lessen the effects of withdrawal.

In addition to traditional demographics, the proportion of users entering treatment for the first time (persons with no prior treatment episodes) as well as those first-time users who had been using less than 3 years (new users) were examined. Statewide, the proportion of first-time treatment admissions (those having no prior treatment episodes; first-timers) declined from 36.0 percent in 2000 to 31.1 percent in 2004. In 2005 and 2006, proportions rose to 32.1 and 32.8 percent, respectively. In the Denver area, first-timers represented 35.7 percent of 2006 cocaine-related admissions, rising from 28.4 percent in 2003. Prior to 2003, the proportion of new treatment admissions stayed between 29.4 and 31.1 percent.

Statewide, between 19.0 and 21.3 percent of first-time cocaine admissions had been using less than 3 years from 2000 through 2004. This proportion increased to 24.4 percent in 2005 and again to 26.1 percent in 2006 (exhibit 6). In the Denver area, the proportion of new users in treatment increased from 16.0 percent in 2003 to 23.8 percent in 2006.

In 2006, first-time cocaine admissions statewide and for Denver only reported average onset ages of 23.5 and 23.7, respectively (both had a median age of 21.0, exhibit 6). From 2000 onward, the mean age of onset for first-time admissions was between 21.7 and 23.8 statewide and between 22.2 and 23.8 in the Denver metropolitan area.

In 2006, the mean number of years from reported onset of cocaine use to the first treatment episode was 10.1 years for statewide admissions and 10.8 years for Denver-area admissions (exhibit 6). Before 2004, the mean time to enter treatment remained between 10.0 and 10.2 years statewide and 10.0 and 10.8 years in the Denver metropolitan area.

Excluding alcohol, cocaine accounted for the most illicit drug-related ED reports in the unweighted DAWN *Live!* data for the Denver area in 2006. There were 2,764 ED reports for cocaine, which constituted 44.4 percent of illicit drug ED reports (exhibit 7).

Statewide, cocaine-related deaths climbed from 92 in 1997 (23.6 per million) to 146 in 1999 (36.1 per mil-

lion). While they declined to 116 in 2000 (27 per million), they increased again to 134 in 2001 (30.4 per million), 153 in 2002 (34.1 per million), 180 in 2003 (39.2 per million), and declined again in 2004 to 170 (36.5 per million). In 2005, cocaine deaths increased to the highest number to date to 217 deaths (exhibit 8), but declined in 2006 to 206.

Statewide, cocaine has been second only to alcohol in drug-related hospital discharges since 1998, and cocaine-related hospital discharges rose steadily from 1999 (60 per 100,000) through 2006 (91 per 100,000; exhibit 9).

From 2001 through 2003, poison control center call data for street drugs were reported for the city and county of Denver only. In 2004, data were received for both the city of Denver and the entire State, but from that point on, only statewide data were available. From 2001 through 2003, cocaine was second only to alcohol in the number of Denver calls received by the Rocky Mountain Poison & Drug Center, and the number of cocaine calls rose from 59 in 2001 to 68 in 2003 (exhibit 10). In 2004, cocaine accounted for 59 calls in Denver and 120 calls statewide. In 2005 and 2006 respectively, cocaine constituted 107 and 129 poison center calls statewide.

Reports from law enforcement indicate increased availability of cocaine around the State, and Denver-area outreach workers noted increased crack use, especially in street youth.

## Heroin

Before 2005, most heroin indicators, except for quantities seized, had declined. However, in late 2005, there were anecdotal reports of increased availability and use, and 2005 treatment data showed slight increases in admissions. Despite this, the numbers and proportions of ED reports, as well as the quantity recovered in drug enforcement seizures, decreased in 2005. All indicators except seizures declined in 2006.

During 2006, heroin was reported as a primary drug in 7.7 percent of treatment admissions (excluding alcohol) statewide and 10.6 percent in the Denver metropolitan area (exhibits 2 and 3). Since 2000, primary heroin treatment admissions (excluding alcohol) fell from 16.3 to 7.7 percent statewide and from 27.6 to 10.6 percent in the Denver area. Since 2001, the volume of heroin admissions has been behind marijuana, methamphetamine, and cocaine admissions statewide.

In Denver, the volume of heroin admissions exceeded admissions for cocaine and methamphetamine until

2002; however, in 2003, it dropped below cocaine admissions; in 2004, it dropped even further, below both cocaine and methamphetamine admissions and remained so through 2006.

Heroin admissions have been predominately male, and from 2000 to 2006, the proportion of male admissions out of all heroin admissions rose from 62.8 to 68.7 percent statewide and from 63.6 to 68.4 percent in the Denver area (exhibits 4 and 5).

Historically, Whites have accounted for the largest proportion of heroin admissions and in 2006, that proportion was the highest it had been since 1997 (exhibit 4). Statewide the 2006 proportions for Whites, Hispanics, and Blacks, respectively, constituted 67.8, 22.9, and 5.3 percent of total admissions. In Denver in 2006, the proportions of White, Hispanic, and Black admissions were 64.9, 24.1, and 6.8 percent, respectively (exhibit 5).

Statewide in 2006, the average age of heroin users admitted to treatment was 37.5 (median=36.0). Since 2000, less than 1 percent of heroin users entering treatment were younger than 18, and in 2006, the proportion younger than 18 was 0.4 percent. Changes in two age ranges over time are indicative of an aging cohort. From 2000 to 2006, the proportions of persons 35 to 44 declined from 34.2 to 20.9 percent, while those 45 and older increased from 24.7 percent in 2000 to 33.8 percent in 2004. In 2006, 32.3 percent of statewide heroin admissions were for persons older than 44.

In Denver in 2006, the average age of heroin users entering treatment was 38.6 (median=37.0). The Denver metropolitan area showed a decline in heroin admissions of persons 35 to 44 (32.9 percent in 2000 to 21.3 percent in 2006) and rises in persons 45 and older from 2000 to 2004 (26.6 to 36.9 percent). In 2006, the 45 and older group constituted 36.1 percent of heroin admissions.

Heroin is a drug that is predominantly injected. Statewide, the proportion of heroin injectors remained between 85.9 and 88.2 percent between 2000 and 2004 and declined to 83.6 in 2006 (as shown in exhibit 4). The proportion smoking heroin increased from 5.4 percent in 2003 to 8.9 percent in 2005, and then declined in 2006 to 8.3 percent. The proportion inhaling heroin ranged between 4.1 and 6.4 percent from 2000 through 2006.

Denver's proportions were similar to statewide figures. The proportion of heroin injectors declined from 88.2 percent in 2001 to 82.6 percent in 2006 (exhibit 5). The proportion that smoked heroin re-

mained between 5.5 and 7.0 percent from 2000 to 2004, and rose to 9.5 and 9.6 percent, respectively, in 2005 and 2006. The proportion inhaling heroin remained between 4.3 and 6.3 percent from 2000 to 2006.

Treatment data, overall, show that heroin users most often used cocaine as a secondary drug (exhibits 4 and 5), followed by marijuana and other opiates.

In 2006, the proportion of heroin admissions in treatment for the first time was 21.2 percent statewide and 20.5 percent in the Denver metropolitan area (exhibit 6). Statewide, from 2000 through 2006, the proportion of first-timers was between a low of 20.4 percent in 2003 and a high of 23.7 in 2002. During that time period in Denver, the proportion of first-timers was between a low of 20.4 percent in 2000 and a high of 22.6 in 2002.

Statewide in 2006, 26.1 percent of heroin users in treatment for the first time had been using less than 3 years (exhibit 6), rising from 19.4 percent in 2004. In Denver, the proportion of new users in treatment decreased from 37.1 to 18.9 percent from 2000 to 2004 and rose to 27.2 percent in 2006.

Heroin users tend to be the oldest drug-using group and to have the latest age of onset. Among 2006 first-time heroin admissions, the mean and median ages of onset statewide were 22.3 and 20.0, respectively (exhibit 6). The mean and median onset ages decreased slightly from 2000 to 2003 (mean, 24.1 to 21.6 and median, 23.0 to 18.5), but they have increased since.

In Denver, the mean and median age of onset for 2006 was 22.6 and 20.0, respectively. Similar to the statewide trend, there was a decrease in onset age from 2000 to 2003 (mean, 25.2 to 21.9; median 24.0 to 18.0), with a subsequent increase.

Among 2006 first-time heroin admissions, the mean time to enter treatment was 11.9 years for the State and 12.1 for the Denver metropolitan area (exhibit 6). Statewide, the mean time to enter treatment rose from 8.9 to 14.0 years from 2000 to 2004. During that same period, Denver showed a similar trend with an increase from 7.8 to 14.8 years.

DAWN *Live!* unweighted data showed 745 heroin-related ED reports in 2006, accounting for 12 percent of illicit drug reports, excluding alcohol (exhibit 7).

Statewide, in 2003, mortality data reported 247 deaths (5.4 per 100,000) related to all opiates (including heroin, morphine, other opioids and narcotics), but since 2004, heroin-related deaths have been sepa-

rated out from all other opiates. Heroin-related deaths jumped from 22 in 2004 to 42 in 2005, but decreased to 37 in 2006 (exhibit 8). However, because of the variation in how drugs were classified and in the geographical areas reporting, no mortality trends can be assessed for heroin alone.

CDPHE statewide hospital discharge data from 1997–2006 combined all narcotic analgesics and other opiates, including heroin. While trends in this indicator for heroin alone cannot be assessed, this indicator for all opiates increased steadily with the rate doubling in 7 years from 36 per 100,000 in 1997 (not shown in exhibit) to 73 per 100,000 in 2003 (exhibit 9). However, the rate of hospital discharges for all opiates decreased to 61 per 100,000 in 2004 and increased to 64 and 77 per 100,000 in 2005 and 2006, respectively.

The number of Denver-area poison calls for heroin and morphine combined remained fairly steady with 19, 16, 22, and 18 calls each year from 2001 through 2004 (exhibit 10). Since 2004, statewide heroin calls have been broken out separately and there were 20, 24, and 25 heroin calls statewide in 2004, 2005, and 2006, respectively.

### Other Opiates

This category excludes heroin and includes all other opiates and narcotic analgesics such as methadone, morphine, hydrocodone, hydromorphone, codeine, and oxycodone. Of the five major illicit drugs, this category has ranked last in numbers and proportions of treatment admissions and has remained fairly steady over the last 6 years. Other opiates ranked third in volume of hospital discharges, which increased steadily through 2003 and declined in 2004. While this category accounted for the highest number of deaths (excluding alcohol) in 2004 through 2006, discrepancies in the classification of opiates and geographical areas reported precluded assessment of mortality trends.

During 2006, opiates other than heroin were reported as primary drugs in 5.0 percent of statewide treatment admissions, excluding alcohol (exhibit 2), and this proportion rose from a low of 3.3 percent in 2000. In Denver, other opiates had represented between 4.2 and 6.1 percent of treatment admissions (excluding alcohol) since 2000 (exhibit 3), and they accounted for 5.3 percent of admissions in 2006.

Treatment admissions related to non-heroin opiates have always had higher proportions of females than the other four major illicit drugs. Statewide, females represented 55.4 percent of other opiate treatment

admissions in 2001, but this proportion dropped to 49.1 percent in 2006 (exhibit 4). In Denver, females accounted for 55.5 percent of non-heroin opiate treatment admissions in 2001; however, this proportion declined to 47.9 percent in 2006 (exhibit 5).

Statewide and in Denver, Whites account for the largest proportion of treatment admissions related to other opiates. Since 2000, the proportion of Whites fluctuated between 81.3 and 87.8 percent statewide. The proportion was at 82.0 percent in 2006 (exhibit 4). Black treatment admissions for other opiates declined from 3.4 percent in 2002 to 1.4 percent in 2006. The proportion of Hispanic other opiate admissions in Colorado rose from 6.5 percent in 2003 to 13.9 percent in 2006.

In the Denver metropolitan area, the proportion of White admissions for other opiates declined from 86.3 to 80.3 percent between 2000 and 2002, jumped to 89.0 percent in 2003, and declined to 83.8 percent in 2004. In 2006, the proportion of White other opiate admissions was 86.2 percent (exhibit 5). In 2006, Blacks represented 2.5 percent of admissions, down from a high of 5.3 percent in 2002. However, the moderate change in proportion is influenced by the small numbers of Black other opiate admissions (between 8 and 16 from 2000 through 2006). Hispanics accounted for 9.1 percent of Denver-area opiate admissions in 2006, and since 2000, their numbers have vacillated between 4.4 and 5.0 percent. The vacillating proportions may also be based on the small numbers of admissions (between 8 and 37 over the 7-year period).

Like heroin users, users of other opiates tend to be older than other drug-using groups. Statewide, the average age of other opiate users entering treatment in 2006 was 36.1 (median=34); less than 1.0 percent were younger than 18 and 26.5 percent were older than 44. Two age ranges demonstrate a possible trend toward younger users. From 2000 to 2006, the proportion of opiate admissions age 18–34 increased from 33.6 to 50.2 percent, while those older than 35 declined from 64.5 percent in 2000 to 55.8 percent in 2005. In 2006, the proportion of those older than 35 was 49 percent.

Likewise, in Denver, there was an overall increase in admissions of users of other opiates in persons age 18 to 34 (31.5 to 46.7 percent from 2000 through 2006).

Non-heroin opiates are most often taken orally. Statewide, between 2000 and 2004, the proportion of admissions ingesting other opiates orally ranged from 83.5 to 86.7 percent. Since 2004, the proportions of

this client group who ingested other opiates orally declined to 83.9 percent in 2005, and declined again in 2006 to 81.4 percent. In 2006, 8.0 and 9.4 percent, respectively, inhaled and injected other opiates (exhibit 4). From 2000 to 2005, the proportions of this client group who injected other opiates declined from 12.3 to 8.2 percent, and then increased in 2006 to 9.4 percent. The proportion inhaling increased from 0.6 to 8.0 percent from 2000 through 2006, most likely reflecting the practice of crushing and inhaling OxyContin.

Denver's proportions were similar to statewide figures. The proportion of other opiate admissions ingesting orally ranged from 89.0 percent in 2000 to 83.5 percent in 2006 (exhibit 5). The 2006 proportions of this client group who inhaled and injected were 5.2 and 10.4 percent, respectively. The Denver area did not show the same decline as seen statewide in the numbers injecting other opiates, but inhaling increased from 0.6 percent in 2000 to 7.2 percent in 2005 and decreased to 5.2 percent in 2006.

Treatment data overall show that other opiates users most often used alcohol as a secondary drug (exhibits 4 and 5), followed by marijuana and cocaine.

In 2006, first-time admissions for abuse of other opiates represented 35.6 percent of treatment admissions statewide and 34.0 percent in the Denver metropolitan area (exhibit 6). Statewide, the proportion of first-timers increased from 32.5 to 37.6 percent from 2002 to 2005. In Denver, from 2000 to 2005, the proportion of first-timers fluctuated widely between 29.3 and 38.5 percent with no clear trend.

Among first-time admissions for opiate treatment in 2006, the mean and median ages of onset statewide were 25.8 and 23.0, respectively (exhibit 6), decreasing since 2001 from a mean onset age of 28.8 (median, 28).

Denver showed a similar trend, with a decrease from 2001 to 2005 in the mean age of onset from 29.4 to 25.0 and in the median age from 30.0 to 21.0. In 2006, the mean and median onset age of Denver-area first time admissions for abuse of other opiates was 27.0 and 25.5.

In 2006, the mean time to enter treatment for first-time other opiate admissions was 8.3 years statewide and 8.4 years for the Denver metropolitan area (exhibit 6). Statewide, the mean time to enter treatment declined from 12.1 years in 2003. Denver showed a similar decline from 13.4 years in 2003.

In 2006, 26.2 percent of users of other opiates entering their first treatment in Colorado and 27.9 percent

in Denver had been using less than 3 years (exhibit 6). Statewide, this proportion was at its lowest (19.5 percent) in 2002 and jumped to 26.3 percent in 2004. In Denver, the proportion of new users in treatment increased from 17.5 to 27.9 percent from 2002 through 2006.

In 2006, the unweighted DAWN *Live!* data show 1,213 ED reports for opiates/opioids (exhibit 7).

In 2003, statewide mortality data showed 247 deaths (5.4 per 100,000) related to all opiates (including heroin, morphine, other opioids, and narcotics). In 2004, heroin deaths were categorized separately from all other opiates, and there were 238 other opiate-related deaths. In 2003, other opiate-related deaths in the Denver/Aurora County area totaled 138, excluding those involving suicide (exhibit 8). In 2005 and 2006, there were 301 and 335 deaths, respectively, related to the use of opioids other than heroin.

As noted earlier, CDPHE statewide hospital discharge data from 1997–2006 combined all narcotic analgesics and opiates, including heroin. This indicator increased steadily with the rate almost doubling in 7 years, from 36 per 100,000 in 1997 (not shown in exhibit) to 73 per 100,000 in 2003. In 2004, however, the number of hospital discharges for all narcotics decreased to 61 per 100,000, but increased to 64 and 77 per 100,000 in 2005 and 2006, respectively.

There were no poison control center calls reported for opiates other than heroin and morphine.

### **Methamphetamine**

For the first time in years, all methamphetamine indicators, except amount seized, declined.

Methamphetamine ranked second in statewide treatment admissions (excluding alcohol) and third in Denver-area treatment admissions, poison calls, and quantity of drug seized. For hospital discharges and deaths, methamphetamine was not reported separately but was included in the general category of "amphetamines & stimulants," which ranked third on both of these indicators.

In 2006, methamphetamine was the primary drug reported for 30.1 percent of all treatment admissions (excluding alcohol) statewide (exhibit 2). Prior to 2006, methamphetamine admissions rose steadily from 12.5 percent in 1999 (not shown in exhibit) to a high of 31.7 percent in 2005. In 2003, methamphetamine exceeded cocaine in illicit drug admissions and has been second to marijuana admissions ever since.

In the Denver metropolitan area, methamphetamine represented proportionately fewer treatment admissions (21.4 percent in 2006) than statewide. While the proportion of methamphetamine admissions (excluding alcohol) in Denver rose each year from 8.6 to 20.8 percent from 2000 through 2005, there was only a slight increase to 21.4 percent in 2006. Moreover, while Denver-area methamphetamine admissions exceeded heroin admissions in 2004 and surpassed both heroin and cocaine admissions in 2005, the volume of Denver-area methamphetamine admissions dropped below cocaine admissions again in 2006.

After admissions for non-heroin opiates, methamphetamine admissions have the highest proportion of females statewide and in Denver (46.6 and 45.4, respectively, in 2006; exhibits 4 and 5). Statewide, the proportion of female admissions stayed between 45.1 and 50.4 percent from 2000 through 2003, decreased to 44.0 percent in 2004, and rose to 46.0 and 46.6 percent in 2005 and 2006, respectively.

In the Denver area, the proportion of female methamphetamine admissions was at 50.0 and 50.4 percent, respectively, in 2000 and 2001, decreased to 46.0 percent in 2002, jumped to a high of 52.7 percent in 2003, declined to a low of 43.5 percent in 2004 and 2005, and rose to 45.4 percent in 2006.

Methamphetamine admissions in Colorado and Denver were predominately White—81.2 and 81.9 percent, respectively, in 2006 (exhibits 4 and 5). From 2000 to 2005, the proportion of White treatment admissions declined from 87.8 to 81.1 percent statewide and from 90.1 to 81.8 percent in the Denver area. At the same time, the proportion of Hispanic methamphetamine admissions rose from 8.5 to 14.5 percent statewide and from 7.0 to 13.3 percent in Denver.

Compared with cocaine, methamphetamine admissions tend to be younger. In 2006, the average age of persons entering treatment for methamphetamine abuse was 30.6 (median=29.0) statewide and 30.7 (median=30.0) for Denver. Also, 28.6 percent of statewide methamphetamine admissions and 28.2 percent of the Denver admissions were younger than 25. Some 63.5 percent statewide and 64.3 percent of Denver-area admissions were persons age 25 to 44.

Statewide, in 2006, the proportions of clients who smoked, injected, or inhaled methamphetamine were 66.5, 20.0, and 10.9 percent, respectively (exhibit 4). The proportion who smoked increased dramatically from 2000 (38.7 percent) to 2006 (66.5 percent), while both the proportions who injected and inhaled decreased substantially during that time. Injectors

decreased from 33.9 to 20.0 percent and inhalers declined from 21.5 to 10.9 percent.

During 2006 in the Denver area, the proportions that smoked, injected, or inhaled methamphetamine were 65.4, 18.4, and 12.3 percent, respectively (exhibit 5). As with the State overall, the proportion that smoked increased substantially from 35.6 to 65.4 percent from 2000 to 2006, and at the same time, those who injected declined from 38.5 to 18.4 percent. While there appears to be an overall downward trend, the proportion of inhalers declined from 19.8 to 9.4 percent from 2000 to 2003, but during 2004 through 2006, the proportions were 12.7, 15.1, and 12.3 percent, respectively.

Treatment data, overall, show that methamphetamine users most often use marijuana as a secondary drug, followed by alcohol (exhibits 4 and 5).

Statewide and in Denver, 35.8 and 35.6 percent, respectively, of 2006 methamphetamine admissions were first-time admissions (exhibit 6). Statewide, the proportion of first-time admissions declined from 44.9 in 2000 to 35.9 in 2004, where it has remained. In Denver, the proportion of first-time methamphetamine admissions remained between 34.1 and 36.5 percent between 2000 and 2006.

Statewide, the proportion of new users in first-time admissions rose from 19.5 to 27.8 percent from 2000 to 2003. In 2004, the proportion of new users declined to 24.9 percent, and in 2005 and 2006 was at 26.1 and 21.6 percent, respectively (exhibit 6). In Denver, the proportion of new users in treatment increased from 14.3 percent in 2000 to 28.2 percent in 2003, declined to 23.5 percent in 2004, and was at 26.0 and 21.2 percent, respectively, in 2005 and 2006.

For the State and Denver metropolitan area, the average age of onset for methamphetamine use reported among 2006 first-time admissions was 21.6 (median=19.0) (exhibit 6). Since 2000, the mean age of onset for methamphetamine admissions statewide and Denver stayed between 20 and 22. The median age remained between 18 and 19 statewide and between 18 and 20 in the Denver area (exhibit 6).

From 2000 to 2005, the average time for methamphetamine abusers to enter treatment decreased from 8.7 to 7.5 years statewide and from 9.1 to 7.6 years in Denver (exhibit 6). In 2006, the average time to enter treatment rose to 8.5 and 8.4 years, respectively, for statewide and Denver-area admissions.



The unweighted DAWN *Live!* ED data for the Denver metropolitan area show 707 reports for methamphetamine in 2006.

Methamphetamine-related deaths were reported under the “Stimulant” category in both DAWN ME for the Denver area (2003) and CDPHE data from 2004 to 2006 (exhibit 8). From 2003 through 2006, there were 47, 45, 70, and 42 stimulant-related deaths reported statewide.

Methamphetamine was also included in the stimulants category in hospital discharge data. Overall, amphetamine-related hospital discharges nearly quadrupled from 1999 to 2005, from 16 per 100,000 population to 62 per 100,000, respectively (exhibit 9); however, the discharges dropped in 2006 to 46 per 100,000.

In 2004, methamphetamine-related poison calls in the Denver area exceeded cocaine-related calls. In 2005, methamphetamine accounted for the highest number of calls ( $n=127$ ) statewide out of all street drugs (exhibit 10). However, the number of methamphetamine calls statewide dropped drastically in 2006 to 29.

While the number of laboratory closures increased dramatically from 2000 through 2002, closures declined steadily thereafter (exhibit 11). Factors contributing to this decline include the recent enactment of legislation restricting the purchase of cold medicines and other precursor chemicals, the effectiveness of law enforcement, and increased community awareness and cooperation with law enforcement that have kept labs at bay.

However, despite the decline in laboratory closures, the quantity of methamphetamine seized in law enforcement raids has risen since 2003. Denver Vice Detectives reported that this is happening because Colorado’s supply of Mexican methamphetamine has risen to compensate for less local production. Further, Mexican methamphetamine historically had the reputation of having lower purity levels than locally produced methamphetamine, but local law enforcement sources have reported increased purity levels and prices for methamphetamine. It has been surmised that prices have increased based on increasing competition between Mexican drug trafficking organizations in obtaining precursor chemicals, which are becoming more difficult to obtain in Mexico.

## Marijuana

Of the five major illicit drugs, marijuana ranks first in treatment admissions and amounts seized, second in ED reports and hospital discharges, and third in poi-

son control center calls. Excluding alcohol, marijuana has continued to account for the highest numbers of primary treatment admissions statewide and in the Denver area; however, the number of statewide treatment admissions for marijuana has decreased steadily from 42.8 percent in 2000 to 34.1 percent in 2006 (exhibit 2).

In Denver, the proportions of marijuana admissions also declined from 37.3 percent in 2001 to 32.3 percent in 2003, but jumped to 38.6 percent in 2004 and was at 37.0 percent in 2006 (exhibit 3).

Historically, marijuana admissions have represented the highest proportion of males among drug groups. In 2006, 76.0 percent of marijuana admissions statewide and 76.6 percent in Denver were male (exhibits 4 and 5). In prior years, the proportion of males constituted anywhere from 72.3 to 76.0 percent of the marijuana admissions statewide; however, in Denver, the proportion of males increased substantially from 69.3 percent in 2003 to a high of 77.7 percent in 2005.

In 2006, Whites, Hispanics, and Blacks represented 52.2, 28.4, and 14.5 percent of marijuana admissions, respectively, statewide (exhibit 4). From 2000 to 2005, the proportion of White admissions decreased from 58.3 to 51.5 percent. However, the proportion of Black marijuana admissions increased from 2000 (7.4 percent) to 2006 (14.5 percent). The proportion of Hispanics decreased from 30.7 to 26.2 percent from 2000 to 2003, increased to 30.2 percent in 2005, and decreased to 28.4 percent in 2006.

In Denver, there was a clear downward trend in the proportion of White marijuana admissions from 2000 to 2005 (58.2 to 41.9 percent), but an increase in 2006 to 44.4 percent (exhibit 5). There was a consistent rise in Black admissions from 11.5 percent in 2000 to 20.8 percent in 2006. As with the statewide trend, Hispanics declined from 2001 to 2003 (27.1 to 24.5 percent), but increased to 32.4 percent in 2005 and declined somewhat to 29.8 percent in 2006.

In Colorado and Denver, marijuana users are typically the youngest of the treatment admissions groups. In 2006, the average age of marijuana users entering treatment was 24.3 (median=22) statewide and 23.2 (median=20) in Denver. For both the State and Denver, there appeared to be slight upward trends in the age of treatment admissions. From 2000 to 2006, the median age increased from 18 to 22 statewide and from 17 to 20 in Denver.

Treatment data, overall, show that marijuana users most often use alcohol as a secondary drug (exhibits 4 and 5), followed by cocaine.

Statewide in 2006, 53.1 percent of marijuana admissions were in treatment for the first-time (exhibit 6), a decline from 59.7 percent in 2001. Of the 2006 Denver-area admissions, 55.4 percent entered for the first time, a decline from 60.2 percent in 2001.

Marijuana users tended to be the youngest of drug-using admissions groups and also started using at the youngest age. In 2006, the mean and median ages of onset for first-time admissions statewide were 14.1 and 14.0 (exhibit 6). For the Denver area, the mean and median ages of onset for those in treatment the first-time were 13.9 and 14.0, respectively. Since 2000, age of onset has remained stable statewide and for Denver-area admissions.

Statewide in 2006, 22.8 percent of marijuana users had been using less than 3 years (exhibit 6) before entering treatment for the first-time, decreasing from 33.4 percent in 2003. In Denver, the proportion of new users entering treatment for the first time decreased from 37.8 to 23.3 percent from 2003 to 2006.

In 2006, the mean time for marijuana users to enter treatment for the first time was 9.0 years statewide and 8.4 years for Denver-area admissions (exhibit 6). For the State as a whole and the Denver area, both the mean and median times to enter treatment increased since 2000 (by 2 years, statewide, and 3 years in Denver).

In 2006, there were 1,458 unweighted ED marijuana reports; these accounted for 23.4 percent of the illicit drug reports (exhibit 7).

CDPHE reported that the marijuana-related mortality data for the Denver PMSA has been quite small, from 1 in 1996 to a peak of 31 in 2001, with a decline to 5 in 2002. The annual numbers of cases since 2003 have been too small to report.

Marijuana-related hospital discharges increased steadily from 1999 the level of 52 per 100,000 population to 84 per 100,000 in 2005, and then decreased in 2006 to 76 per 100,000 (exhibit 9).

From 2002 through 2004, the number of Denver-area marijuana poison control center calls declined from 37 to 29. An increase followed to 68 and 78 marijuana calls statewide in 2004 and 2005, respectively, and a decrease to 45 calls in 2006 (exhibit 10).

### Other Drugs

This section covers five categories of drugs: other depressants (including barbiturates, benzodiazepines, tranquilizers, and other sedatives/hypnotics); stimu-

lants and amphetamines other than cocaine, and, in some data sources, methamphetamine; club drugs; hallucinogens; and other drugs (over-the-counter drugs, inhalants, steroids, and other nonspecified drugs). The combination of all five categories comprised 2 percent of treatment admissions (excluding alcohol) statewide and in the Denver metropolitan area in 2006.

During 2006, there were 16,039 treatment admissions (excluding alcohol) in Colorado including 118 for other depressants, 50 for “other” stimulants, 44 for club drugs, 35 for hallucinogens, and 81 for other drugs. The small numbers preclude looking at demographic trends. However, the proportion of treatment admissions decreased slightly since 2000 for all these categories except club drugs. The proportion of club drugs, which were not tracked until 2002, remained stable at around three tenths of 1 percent.

In 2006, there were 104 unweighted ED reports for methylenedioxymethamphetamine (MDMA) (exhibit 7), 10 for gamma hydroxybutyrate (GHB), 39 for lysergic acid diethylamide (LSD), 23 for phencyclidine (PCP), 58 for miscellaneous hallucinogens, and 54 for inhalants and other combinations not specified.

In 2006, there were 42 deaths related to stimulants other than cocaine. Before 2003, methamphetamine deaths were reported separately, but since 2003, methamphetamine-related deaths were reported within the general category of “other stimulants/amphetamines.”

In 2006, there were 690 hospital discharges related to depressants, 2,219 involving stimulants/amphetamines (this category excludes cocaine but includes methamphetamine and psycho-stimulants, which are most likely club drugs), and 130 related to hallucinogens. While the hospital discharge rate (per 100,000 population) for the general stimulants/amphetamines category increased dramatically from 1999 through 2005 (see exhibit 9), there was a decline from 2005 to 2006 (from the rate of 62 to 46). Moreover, cases involving methamphetamine and club drugs cannot be isolated for analysis. The trend for discharges involving depressants cannot be assessed because this information was not available until 2004.

Poison control center calls for “other drugs” were reported for stimulants/amphetamines (excluding cocaine and methamphetamine) and club drugs. From 2001 through 2004, the number of stimulant/amphetamine-related calls in Denver was three in 2001 and 2002, six in 2003, and four in 2004 (exhibit 10). Statewide, the number of stimulant calls in 2004 through 2006 was 321, 308 and 318. Club drug calls

for the city of Denver increased from 30 in 2001 to 55 in 2002 and then decreased to 40 in 2003. The number of club drug calls statewide in 2004, 2005, and 2006 was 43, 49, and 47 respectively.

**INFECTIOUS DISEASES RELATED TO DRUG ABUSE:  
ACQUIRED IMMUNODEFICIENCY SYNDROME (AIDS)  
AMONG INJECTION DRUG USERS**

Of the 8,693 cumulative AIDS cases reported in Colorado from 2001 to 2006, 9.2 percent were classified as injection drug users (IDUs), and another 10.8 per-

cent were classified as homosexual or bisexual males and IDUs (exhibit 13). The proportion of newly diagnosed HIV and AIDS cases (not cumulative cases as shown in exhibit 13) attributed to injection drug use has stayed fairly stable from 2001 to 2006 (exhibits 14 and 15).

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**Exhibit 1. Data Completeness for the Denver Metropolitan Area DAWN Live! Emergency Departments (n=15),<sup>1</sup> by Month: January–December 2006**

Data Completeness	Number of EDs by Month: 2006											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Basically Complete (90% or greater)	6	6	7	7	7	7	7	6	7	8	7	7
Partially Complete (< 90%)	0	0	0	0	0	0	0	1	0	1	2	1
No Data Reported	9	9	8	8	8	8	8	8	8	6	6	7
Total EDs in Sample <sup>4</sup>	15	15	15	15	15	15	15	15	15	15	15	15

<sup>1</sup>Total eligible hospitals in area = 15; hospitals in DAWN sample = 15; emergency departments in DAWN sample = 15. Tables reflect cases received by DAWN as of 5/14/07. All DAWN cases are reviewed for quality control. Based on this review, cases may be corrected or deleted. Therefore, these data are subject to change.

SOURCE: DAWN Live!, OAS, SAMHSA, updated 5/14/07

**Exhibit 2. Numbers and Percentages of Treatment Admissions by Primary Drug Type in Colorado:  
CY 2000–2006**

Drug		2000	2001	2002	2003	2004	2005	2006	Total
Alcohol	<i>n</i>	6,589	6,323	6,871	7,252	9,835	10,131	11,119	58,120
	%	40.5	38.6	38.8	37.8	40.7	38.9	40.9	39.6
Marijuana	<i>n</i>	4,140	4,255	4,358	4,232	5,286	5,531	5,466	33,268
	%	25.4	26.0	24.6	22.0	21.9	21.2	20.1	22.6
	(excluding alcohol) %	42.8	42.3	40.2	35.4	36.9	34.8	34.1	37.5
Methamphetamine	<i>n</i>	1,315	1,664	2,076	2,791	3,835	5,041	4,832	21,554
	%	8.1	10.2	11.7	14.5	15.9	19.4	17.8	14.7
	(excluding alcohol) %	13.6	16.5	19.1	23.3	26.8	31.7	30.1	24.3
Cocaine	<i>n</i>	1,919	1,889	2,199	2,362	2,998	2,884	3,385	17,636
	%	11.8	11.5	12.4	12.3	12.4	11.1	12.5	12.0
	(excluding alcohol) %	19.8	18.8	20.3	19.8	20.9	18.1	21.1	19.9
Heroin	<i>n</i>	1,576	1,483	1,424	1,676	1,272	1,415	1,232	10,078
	%	9.7	9.0	8.0	8.7	5.3	5.4	4.5	6.9
	(excluding alcohol) %	16.3	14.7	13.1	14.0	8.9	8.9	7.7	11.3
Other Opiates <sup>1</sup>	<i>n</i>	321	395	412	541	613	709	796	3,787
	%	2.0	2.4	2.3	2.8	2.5	2.7	2.9	2.6
	(excluding alcohol) %	3.3	3.9	3.8	4.5	4.3	4.5	5.0	4.3
Depressants <sup>2</sup>	<i>n</i>	66	64	159	131	101	95	118	734
	%	0.4	0.4	0.9	0.7	0.4	0.4	0.4	0.5
	(excluding alcohol) %	0.7	0.6	1.5	1.1	0.7	0.6	0.7	0.8
Other Amphetamines/Stimulants	<i>n</i>	108	91	104	78	56	57	50	544
	%	0.7	0.6	0.6	0.4	0.2	0.2	0.2	0.4
	(excluding alcohol) %	1.1	0.9	1.0	0.7	0.4	0.4	0.3	0.6
Hallucinogens <sup>3</sup>	<i>n</i>	77	73	43	31	27	30	35	316
	%	0.5	0.4	0.2	0.2	0.1	0.1	0.1	0.2
	(excluding alcohol) %	0.8	0.7	0.4	0.3	0.2	0.2	0.2	0.4
Club Drugs <sup>4</sup>	<i>n</i>	NA	NA	12	37	56	49	44	198
	%	NA	NA	0.1	0.2	0.2	0.2	0.2	0.1
	(excluding alcohol) %	NA	NA	0.1	0.3	0.4	0.3	0.3	0.2
Other <sup>5</sup>	<i>n</i>	149	151	58	76	87	92	81	694
	%	0.9	0.9	0.3	0.4	0.4	0.4	0.3	0.5
	(excluding alcohol) %	1.5	1.5	0.5	0.6	0.6	0.6	0.5	0.8
<b>Total</b>	<b><i>N</i></b>	<b>16,260</b>	<b>16,388</b>	<b>17,716</b>	<b>19,207</b>	<b>24,166</b>	<b>26,034</b>	<b>27,158</b>	<b>146,930</b>
	<b>(excluding alcohol) <i>N</i></b>	<b>9,671</b>	<b>10,065</b>	<b>10,845</b>	<b>11,955</b>	<b>14,331</b>	<b>15,903</b>	<b>16,039</b>	<b>88,809</b>

<sup>1</sup> Includes nonprescription methadone and other opiates and synthetic opiates.

<sup>2</sup> Includes barbiturates, benzodiazepine tranquilizers, clonazepam, and other sedatives.

<sup>3</sup> Includes LSD, PCP and other hallucinogens.

<sup>4</sup> Includes Rohypnol, ketamine (Special K), GHB, and MDMA (ecstasy).

<sup>5</sup> Includes inhalants, over-the-counter, and other drugs not specified.

SOURCE: Drug/Alcohol Coordinated Data System, Alcohol and Drug Abuse Division, Colorado Department of Human Services

**Exhibit 3. Numbers and Percentages of Treatment Admissions by Primary Drug Type in the Denver/Boulder Metropolitan Area: CY 2000–2006**

Drug		2000	2001	2002	2003	2004	2005	2006	Total
Alcohol	<i>n</i>	2,255	2,496	1,990	2,354	3,517	3,536	4,232	20,380
	%	33.8	33.4	31.9	29.0	33.6	33.1	35.8	33.2
Marijuana	<i>n</i>	1,546	1,855	1,458	1,855	2,687	2,663	2,801	14,865
	%	23.1	24.8	23.3	22.9	25.7	24.9	23.7	24.2
	(excluding alcohol) %	34.9	37.3	34.3	32.3	38.6	37.3	37.0	36.2
Methamphetamine	<i>n</i>	380	564	515	946	1,263	1,490	1,622	6,780
	%	5.7	7.5	8.2	11.7	12.1	13.9	13.7	11.0
	(excluding alcohol) %	8.6	11.3	12.1	16.5	18.2	20.8	21.4	16.5
Cocaine	<i>n</i>	980	1,028	946	1,259	1,586	1,418	1,780	8,997
	%	14.7	13.8	15.1	15.5	15.1	13.3	15.1	14.6
	(excluding alcohol) %	22.2	20.7	22.2	21.9	22.8	19.8	23.5	21.9
Heroin	<i>n</i>	1,223	1,176	978	1,226	921	1,001	800	7,325
	%	18.3	15.7	15.7	15.1	8.8	9.4	6.8	11.9
	(excluding alcohol) %	27.6	23.6	23.0	21.3	13.2	14.0	10.6	17.8
Other Opiates <sup>1</sup>	<i>n</i>	184	238	208	300	340	433	405	2,108
	%	2.8	3.2	3.3	3.7	3.2	4.1	3.4	3.4
	(excluding alcohol) %	4.2	4.8	4.9	5.2	4.9	6.1	5.3	5.1
Depressants <sup>2</sup>	<i>n</i>	31	32	79	55	47	44	55	343
	%	0.5	0.4	1.3	0.7	0.4	0.4	0.5	0.6
	(excluding alcohol) %	0.7	0.6	1.9	1.0	0.7	0.6	0.7	0.8
Other Amphetamines/Stimulants	<i>n</i>	23	25	33	31	24	21	33	190
	%	0.3	0.3	0.5	0.4	0.2	0.2	0.3	0.3
	(excluding alcohol) %	0.5	0.5	0.8	0.5	0.3	0.3	0.4	0.5
Hallucinogens <sup>3</sup>	<i>n</i>	32	31	15	18	16	14	25	151
	%	0.5	0.4	0.2	0.2	0.2	0.1	0.2	0.2
	(excluding alcohol) %	0.7	0.6	0.4	0.3	0.2	0.2	0.3	0.4
Club Drugs <sup>4</sup>	<i>n</i>	NA	NA	5	22	29	23	24	103
	%	NA	NA	0.1	0.3	0.3	0.2	0.2	0.2
	(excluding alcohol) %	NA	NA	0.1	0.4	0.4	0.3	0.3	0.3
Other <sup>5</sup>	<i>n</i>	25	29	19	38	40	40	35	226
	%	0.4	0.4	0.3	0.5	0.4	0.4	0.3	0.4
	(excluding alcohol) %	0.6	0.6	0.4	0.7	0.6	0.6	0.5	0.6
<b>Total</b>	<b>N</b>	<b>6,679</b>	<b>7,474</b>	<b>6,246</b>	<b>8,097</b>	<b>10,407</b>	<b>10,186</b>	<b>11,812</b>	<b>61,468</b>
	<b>(excluding alcohol) N</b>	<b>4,424</b>	<b>4,978</b>	<b>4,256</b>	<b>5,745</b>	<b>6,922</b>	<b>6,817</b>	<b>7,580</b>	<b>41,088</b>

<sup>1</sup> Includes nonprescription methadone and other opiates and synthetic opiates.

<sup>2</sup> Includes barbiturates, benzodiazepine tranquilizers, clonazepam, and other sedatives.

<sup>3</sup> Includes LSD, PCP and other hallucinogens.

<sup>4</sup> Includes Rohypnol, ketamine (Special K), GHB, and MDMA (ecstasy).

<sup>5</sup> Includes inhalants, over-the-counter, and other drugs not specified.

SOURCE: Drug/Alcohol Coordinated Data System, Alcohol and Drug Abuse Division, Colorado Department of Human Services

**Exhibit 4. Demographic Characteristics of Clients Admitted to Treatment in the State of Colorado, by Percent: 2006**

Characteristics	Alcohol <sup>1</sup> Only or In Combo	Cocaine	Heroin	Other Opiates	Marijuana	Methamphetamine	Other Stimulants <sup>2</sup>	Sedatives	Hallucinogens	Club Drugs	All Other <sup>3</sup>
Total (N=27,158)	(11,119)	(3,385)	(1,232)	(796)	(5,466)	(4,832)	(50)	(118)	(35)	(44)	(81)
Gender											
Male	70.4	59.3	68.7	50.9	76.0	53.4	66.0	52.5	68.6	68.2	59.3
Female	29.6	40.7	31.3	49.1	24.0	46.6	34.0	47.5	31.4	31.8	40.7
Race/Ethnicity											
White	67.2	45.3	67.8	82.0	52.2	81.2	68.0	74.6	60.0	68.2	76.5
African-Amer.	5.4	17.3	5.3	1.4	14.5	1.3	2.0	6.8	8.6	4.5	2.5
Hispanic	22.3	33.8	22.9	13.9	28.4	14.2	22.0	16.9	20.0	25.0	17.3
Other	5.1	3.5	4.1	2.6	4.9	3.2	8.0	1.7	11.4	2.3	3.7
Age at Admission											
Younger than 18	4.5	2.3	0.4	0.9	32.4	3.1	4.0	0.8	17.1	18.2	22.2
18 to 24	18.8	15.1	13.2	15.8	28.7	25.5	30.0	19.5	31.4	31.8	23.5
25 to 34	25.2	27.9	33.2	34.4	23.0	39.8	36.0	34.7	28.6	25.0	17.3
35 to 44	27.5	36.0	20.9	22.5	11.1	23.7	18.0	13.6	11.4	20.5	13.6
45 to 54	18.5	16.4	23.7	20.5	4.1	7.3	10.0	22.9	11.4	2.3	18.5
55 and older	5.4	2.3	8.6	6.0	0.9	0.5	2.0	7.5	0	2.3	4.9
Route of Ingestion											
Smoking	0.4	61.9	8.3	0.9	94.3	66.5	16.0	18.6	17.1	27.3	8.6
Inhaling	1.5	30.6	6.4	8.0	3.9	10.9	36.0	2.5	11.4	9.1	21.0
Injecting	0.1	5.6	83.6	9.4	0.1	20.0	16.0	4.2	2.9	13.6	3.7
Oral/Other	98.1	1.6	1.7	81.4	1.7	2.6	32.0	74.6	68.6	50.0	66.6
Secondary Drug	Marijuana	Alcohol	Cocaine	Alcohol	Alcohol	Marijuana	Cocaine	Alcohol	Marijuana	Alcohol	Marijuana
	23.8	32.2	32.0	13.4	41.2	34.8	34.0	16.9	22.9	34.1	17.3
Tertiary Drug	Coc. & Marij.	Alcohol	Alcohol	Alcohol	Alcohol	Alcohol	Marijuana	Alcohol	Alcohol	Alc & Mari	Marijuana
	4.6 Each	13.4	9.8	7.2	8.5	16.1	32.0	12.7	22.9	15.9 Each	9.9

<sup>1</sup> Includes alcohol only or in combination with other drugs.

<sup>2</sup> Includes other stimulants (e.g., Ritalin, etc.) and amphetamines (Benzedrine, Dexadrine, Desoxyn, etc.).

<sup>3</sup> Includes over the counter drugs, inhalants, anabolic steroids, and other non-classified substances.

SOURCE: Drug/Alcohol Coordinated Data System, Alcohol and Drug Abuse Division, Colorado Department of Human Services

Exhibit 5. Demographic Characteristics of Clients Admitted to Treatment in Denver, by Percent: 2006

Characteristics	Alcohol <sup>1</sup> Only or in Combo (4,232)	Cocaine (1,780)	Heroin (800)	Other Opiates (405)	Marijuana (2,801)	Methamphetamine (1,622)	Other Stimulants <sup>2</sup> (33)	Sedatives (55)	Hallucinogens (25)	Club Drugs (24)	All Other <sup>3</sup> (35)
<b>Total (N=27,158)</b>											
Gender											
Male	69.6	61.2	68.4	52.1	76.6	54.6	69.7	60.0	64.0	62.5	60.0
Female	30.4	38.8	31.6	47.9	23.4	45.4	30.3	40.0	36.0	37.5	40.0
Race/Ethnicity											
White	65.9	44.4	64.9	86.2	44.4	81.9	69.7	76.4	52.0	66.7	77.1
African-Amer.	7.4	20.8	6.8	2.5	20.8	1.4	3.0	14.5	12.0	8.3	2.9
Hispanic	21.9	31.1	24.1	9.1	29.8	12.9	18.2	9.1	24.0	20.8	14.3
Other	4.9	3.6	4.3	2.2	5.0	3.8	9.1	0.0	12.0	4.2	5.7
Age at Admission											
Younger than 18	3.9	2.6	0.3	0.5	38.9	4.0	3.0	0.0	24.0	33.3	25.7
18 to 24	17.6	13.5	12.5	11.6	27.5	24.2	30.3	27.3	32.0	29.2	28.6
25 to 34	26.3	26.3	30.0	35.1	20.1	38.7	39.4	27.3	20.0	20.8	11.4
35 to 44	28.7	37.2	21.3	24.4	9.9	25.6	15.2	18.2	8.0	16.7	14.3
45 to 54	18.0	18.1	25.8	21.0	2.9	7.2	12.1	21.8	16.0	0.0	14.3
55 and older	5.5	2.3	10.3	7.4	0.7	0.4	0.0	5.4	0.0	0.0	6.0
Route of Ingestion											
Smoking	0.4	57.0	9.6	1.0	93.2	65.4	15.2	29.1	20.0	8.3	5.7
Inhaling	2.9	36.6	6.3	5.2	5.0	12.3	42.4	3.6	12.0	12.5	28.6
Injecting	0.1	4.3	82.6	10.4	0.0	18.4	21.2	5.5	4.0	12.5	0.0
Oral/Other	96.6	2.1	1.5	83.5	1.8	3.9	21.2	61.8	64.0	66.7	66.7
Secondary Drug	Marijuana 24.1	Alcohol 33.8	Cocaine 30.1	Alcohol 14.1	Alcohol 40.9	Marijuana 32.2	Cocaine 42.4	Alcohol 20.0	Marijuana 20.0	Alcohol 33.3	Marijuana 20.0
Tertiary Drug	Coc. & Marij. 5.7 & 5.8	Alcohol 14.4	Alc & Marij. 7.8 & 8.1	Marijuana 6.9	Alcohol 7.6	Alcohol 15.7	Marijuana 36.4	Alcohol 14.5	Alc & Marij. 16.0 each	Marijuana 25.0	Marijuana 8.6

<sup>1</sup> Includes alcohol only or in combination with other drugs.

<sup>2</sup> Includes other stimulants (e.g., Ritalin, etc.) and amphetamines (Benzedrine, Dexadrine, Desoxyn, etc.).

<sup>3</sup> Includes over the counter drugs, inhalants, anabolic steroids, and other non-classified substances.

SOURCE: Drug/Alcohol Coordinated Data System, Alcohol and Drug Abuse Division, Colorado Department of Human Services

**Exhibit 6. Age of Onset, Years to Treatment, and Proportions of New Users (< 3 Years) and New to Treatment (Tx) Admissions for Colorado and the Denver Area: 2006**

Area		Cocaine	Heroin	Other Opi-ates	Metham-phetamine	Marijuana
Statewide		(n=3,385)	(n=1,232)	(n=796)	(n=4,832)	(n=5,466)
Age at Onset <sup>1</sup>	Mean	23.5	22.3	25.8	21.6	14.1
	Median	21.0	20.0	23.0	19.0	14.0
Years to 1 <sup>st</sup> Tx <sup>1</sup>	Mean	10.1	11.9	8.3	8.5	9.0
	Median	8.0	7.0	5.0	7.0	6.0
% New Users <sup>1</sup>		26.1	26.1	26.2	21.6	22.8
% New to Tx. <sup>2</sup>		2.8	21.2	35.6	35.8	53.1
Denver Area		(n=1,780)	(n=800)	(n=405)	(n=1,622)	(n=2,801)
Age at Onset <sup>1</sup>	Mean	23.7	22.6	27.0	21.6	13.9
	Median	21.0	20.0	25.5	19.0	14.0
Years to 1 <sup>st</sup> Tx <sup>1</sup>	Mean	10.8	12.1	8.4	8.4	8.4
	Median	9.0	7.5	4.5	6.0	6.0
% New Users <sup>1</sup>		23.8	27.2	27.9	21.2	23.3
% New to Tx <sup>2</sup>		35.7	20.5	34.0	35.6	55.4

<sup>1</sup> Computed for first-time treatment admissions/no prior treatment admissions only.

<sup>2</sup> Proportion of those with no prior treatment admissions out of all treatment admissions.

SOURCE: Drug/Alcohol Coordinated Data System, Alcohol and Drug Abuse Division, Colorado Department of Human Services

**Exhibit 7. Number and Percentage of Reports in Drug-Related ED Visits in Denver, by Drug Category (Unweighted<sup>1</sup>): 2006**

Category/Drug <sup>2</sup>	Number	% Incl. Alcohol	% Excl. Alcohol
Alcohol	3,743	37.5	NA
Cocaine	2,764	27.7	44.4
Heroin	745	7.5	12.0
Marijuana	1,458	14.6	23.4
Methamphetamine	707	7.1	11.4
Amphetamines	250	2.5	4.0
MDMA	104	1.4	1.7
GHB	10	0.1	0.2
Flunitrazepam (Rohypnol)	3	0.03	0.05
Ketamine	4	0.03	0.06
LSD	39	0.4	0.6
PCP	23	0.2	0.4
Miscellaneous Hallucinogens	58	0.6	0.9
Other <sup>3</sup>	54	0.5	0.9
Total Illicit Drugs <sup>4</sup> (Excluding Alcohol)	6,219	–	100.0
Total Illicit Drugs & Alcohol	9,962	100.0	–

<sup>1</sup>Unweighted data from 7 Denver area hospital EDs reporting to DAWN. All DAWN cases are reviewed for quality control. Based on this review, cases may be corrected or deleted. Therefore, these data are subject to change.

<sup>2</sup>Misuse cases only, which exclude adverse reaction and accidental ingestion cases.

<sup>3</sup>Includes inhalants and other combinations not tabulated above.

<sup>4</sup>Includes cocaine, heroin, marijuana, methamphetamine, other amphetamines, MDMA, and Other.

SOURCE: DAWN Live!, OAS, SAMHSA, updated 5/14/07



**Exhibit 8. Drug-Related Deaths for Denver and Colorado: 2003–2006**

Drug	Denver/Aurora Co. (DAWN 2003)	Statewide (2003)	Statewide (2004)	Statewide (2005)	Statewide (2006)
Alcohol	130 <sup>1</sup>	1,141	1,052	1,171	1,138
Cocaine/Crack	102	180	170	217	206
Heroin	7	... <sup>2</sup>	22	42	37
Other Opiates <sup>3</sup>	138	247	238	301	335
Stimulants	26	47	45	70	42
Benzodiazepines <sup>3</sup>	30	NR <sup>4</sup>	NR	36	37
Antidepressants <sup>3</sup>	28	NR	NR	57	48

<sup>1</sup>Includes alcohol-in-combination with other drugs (all ages) and alcohol alone (decedents younger than 21) (DAWN).

<sup>2</sup>In 2003, Heroin was combined with other opiates.

<sup>3</sup>Includes "misuse"; excludes "suicide."

<sup>4</sup>NR=Not reported.

SOURCES: DAWN, OAS, SAMHSA and Colorado Department of Public Health and Environment

**Exhibit 9. Number and Rates of Colorado Drug-Related Hospital Discharge Reports per 100,000 Population for Selected Drugs: 1998–2006**

Drug	1998	1999	2000	2001	2002	2003	2004	2005	2006
Alcohol (n)	17,154	18,577	18,744	20,644	21,433	23,750	24,889	25,077	24,855
Rate	418	441	432	464	474	518	535	531	517
Stimulants (n)	815	682	942	1,161	1,463	1,814	2,284	2,911	2,219
Rate	20	16	22	26	32	40	49	62	46
Cocaine (n)	2,492	2,517	2,732	2,787	3,305	3,658	4,174	4,259	4,358
Rate	61	60	63	63	73	80	90	90	91
Marijuana (n)	2,227	2,204	2,455	2,755	3,016	3,246	3,729	3,952	3,668
Rate	54	52	57	62	67	71	80	84	76
Opiate (n)	1,566	1,639	2,053	2,237	2,605	3,368	2,850	3,005	3,710
Rate	38	39	47	50	58	73	61	64	77
Population	4,102,491	4,215,984	4,335,540	4,446,529	4,521,484	4,586,455	4,653,844	4,720,772	4,804,353

<sup>1</sup>NA=Not available.

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

**Exhibit 10. Number of Drug-Related Calls<sup>1</sup> to the Rocky Mountain Poison & Drug Center in Denver and Colorado: 2001–2006**

Drug	Denver Metro				Statewide		
	2001	2002	2003	2004	2004	2005	2006
Alcohol	110	149	150	223	762	884	868
Cocaine/Crack	59	66	68	59	120	107	129
Heroin/Morphine	19	16	22	18	20	24	25
Marijuana	34	37	36	29	68	78	45
Methamphetamine	20	39	39	66	95	127	29
Other Stimulants/ Amphetamines	3	3	6	4	321	308	318
Club Drugs	30	55	40	39	43	49	47
Inhalants	4	16	10	4	29	... <sup>2</sup>	...

<sup>1</sup> Human exposure calls only.

<sup>2</sup>Dots (...)=Unknown

SOURCE: Rocky Mountain Poison & Drug Center

**Exhibit 11. Federal Drug Seizures in Colorado, by Quantity: 2002–2006**

Drug	Quantity Seized				
	2002	2003	2004	2005	2006
Cocaine	45.0 kgs <sup>1</sup>	65.5 kgs	36.0 kgs	131.5 kgs	135.1 kgs
Heroin	0.0 kgs	3.9 kgs	4.6 kgs	3.0 kgs	4.0 kgs
Methamphetamine (Meth. labs)	18.9 kgs (483)	14.8 kgs (345)	28.8 kgs (228)	34.4 kgs (145)	50.3 kgs (85)
Marijuana	43.5 kgs	444.1 kgs	774.6 kgs	765.6 kgs	656.8 kgs
Ecstasy	NR <sup>2</sup>	1,128 tablets	0 tablets	0.6 kgs/ 2,104du <sup>3</sup>	0.0 kgs/ 1,103du

<sup>1</sup>kgs=kilograms.

<sup>2</sup>NR=Data not reported.

<sup>3</sup>du=dosage units.

SOURCE: U.S. Drug Enforcement Administration State Factsheets for Colorado 2003–2007

**Exhibit 12. Price and Purity of Selected Drugs in Denver, by Type and Quantity:<sup>1</sup> December 2006**

Drug	Wholesale Price	Retail Price	Street Price	Percent Purity at Retail Level
Powder Cocaine	\$16,000–\$20,000 kg \$ 5,800–\$6,000 lb	\$600–\$650 oz	\$50–\$80 gm	50–60%
Crack Cocaine	\$16,000–\$18,000 kg	\$650–\$900 oz	\$20 rock \$75 gm	75–85%
Heroin	\$30,000–\$37,500 kg (MBT, MBP)	\$900–\$1,600 oz (MBT, MBP)	\$200 gm (MBT, MBP) \$20 bag (MBT)	6–73%
Methamphetamine	\$13,000 lb (Ice) \$9,000–\$13,000 lb (PM, MX)	\$700–\$1,600 oz (Ice MX, LP) \$700–\$1,100 oz (PM)	\$90–\$100 gm (Ice MX, PM, LP)	14–50%(MX) 70–90%(LP)
Marijuana	\$250–\$800 lb (MX) \$3,000–\$4,000 lb (DO, HY)	\$60–\$100 oz (MX) \$300–\$400 oz (HY, LP <sup>5</sup> )	\$5 joint (CG) \$20 gm (DO, HY)	–
Ecstasy	\$5–\$6.75 tablet	\$10–\$20 tablet	\$20 tablet	–

<sup>1</sup>Note: kg=kilogram; oz=ounce; lb=pound; gm=gram; MBT=Mexican Black Tar; PM=Powder Methamphetamine; MX=Mexican Produced, LP=Locally Produced; DO=Domestic, HY=Hydroponic, CG=Commercial Grade, MBP=Mexican Brown Powder.

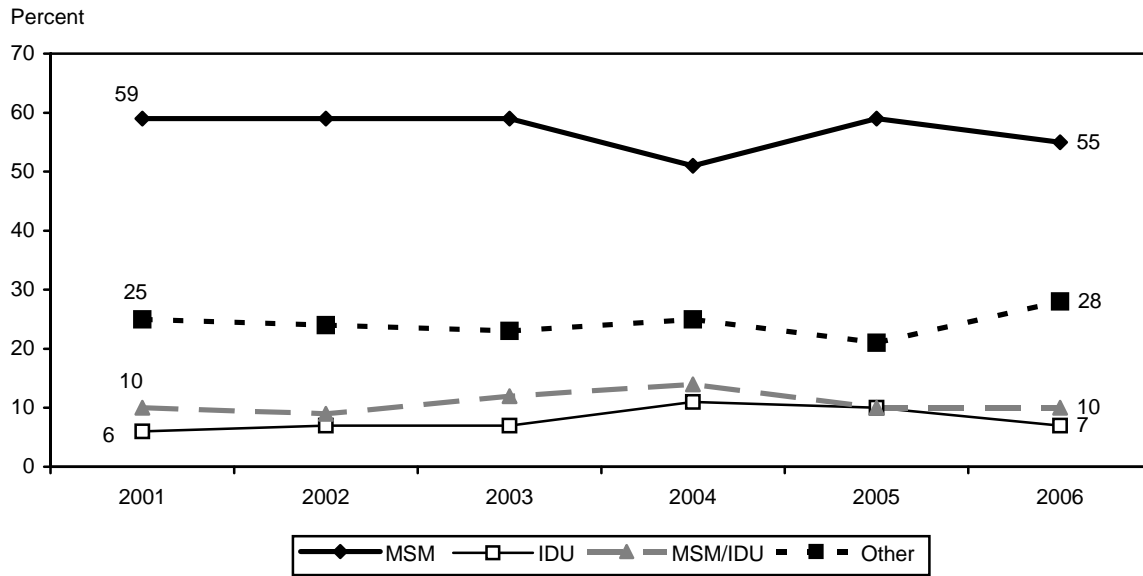
SOURCE: DEA, National Drug Intelligence Center, local law enforcement

**Exhibit 13. Colorado AIDS Cases by Exposure Category and Gender and HIV Testing, by Number and Percent: Cumulative Through December 31, 2006**

Gender/Exposure Category	Number of AIDS Cases	Percent of AIDS Cases	Number of Individuals Testing Positive for HIV	Percent of Individuals Testing Positive for HIV
Gender				
Male	7,956	92.0	5,496	90.0
Female	737	8.0	613	10.0
Total	8,693	100.0	6,109	100.0
Exposure Category				
Men who have sex with men (MSM)	5,781	66.5	3,896	63.8
Injection drug user (IDU)	804	9.2	519	8.5
MSM and IDU	935	10.8	553	9.1
Heterosexual contact	593	6.3	433	7.1
Other	182	2.1	62	1.0
Risk not identified	398	4.6	646	10.6

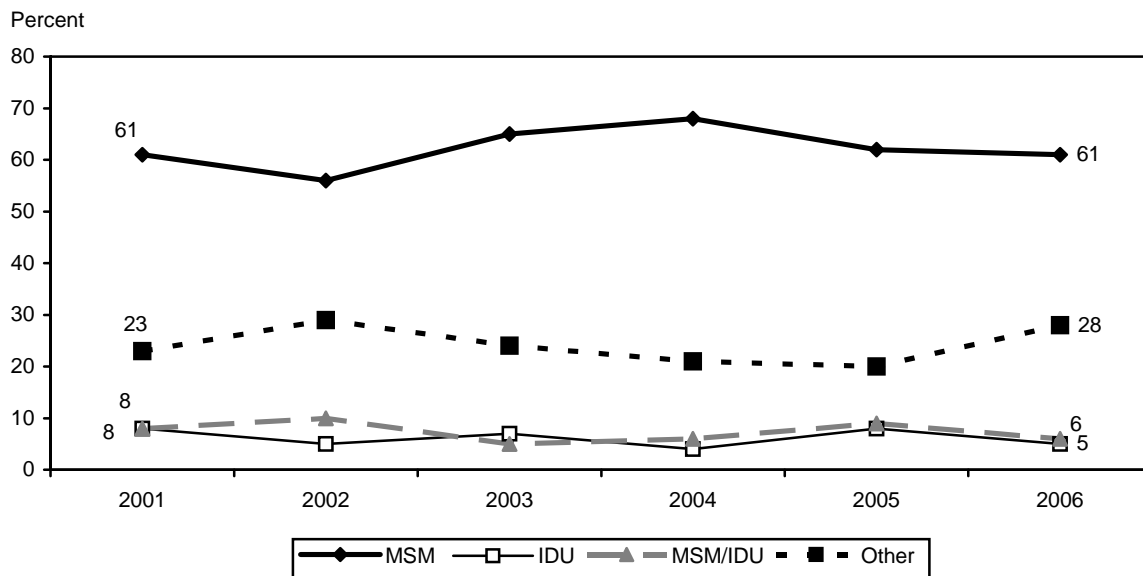
SOURCE: Colorado Department of Public Health & Environment

**Exhibit 14. Percent of New AIDS Cases in Colorado, by Exposure and Year: 2001–2006**



SOURCE: Colorado Department of Public Health and Environment

**Exhibit 15. Percent of New HIV Cases in Colorado, by Exposure and Year: 2001–2006**



SOURCE: Colorado Department of Public Health and Environment

# Drug Abuse in Detroit, Wayne County, and Michigan

Cynthia L. Arfken, Ph.D., and Yvonne E. Anthony, Ph.D., M.B.A., M.H.A.<sup>1</sup>

## ABSTRACT

*Cocaine and heroin are the two major drugs of abuse in the area, but marijuana is the most widespread. Cocaine primary treatment admissions accounted for 28 percent of publicly funded admissions in the first half of FY 2007; 92 percent of these admissions were for crack cocaine. Of the cocaine/crack admissions, 59 percent were male, 92 percent were African-American, and 86 percent were older than 35. Cocaine accounted for 34 percent of the drug items reported by NFLIS in 2006. In 2006, the medical examiner (ME) reported 424 deaths involving cocaine, the highest number for all drugs. In the first half of FY 2007, heroin primary treatment admissions represented 31 percent of the publicly funded admissions; 58 percent were male, 89 percent were African-American, and 93 percent were older than 35. Two hundred thirty-one deaths involving heroin were reported by the ME in 2006. The 641 heroin items analyzed by forensic laboratories accounted for 16 percent of the total drug items. In 2006, the ME reported increases in deaths in which fentanyl, hydrocodone, and methadone were detected in the decedents. Fentanyl was detected in 241 decedents, second only to cocaine. The lethal combination of heroin or cocaine and fentanyl, which appeared in Detroit and northern Michigan during the second half of 2005, continued in 2006 with two monthly peaks in number of deaths but then appeared to dissipate. Outreach efforts were implemented to disseminate information to at-risk people on the streets about this new threat, and efforts are underway to implement an overdose prevention approach to opiates. Treatment admissions for marijuana have increased steadily since 2003, accounting for 16 percent of the publicly funded admissions in the first half of FY 2007. Of these admissions, 71 percent were male, 93 percent were African-American, and 40 percent were younger than 18. Marijuana represented 45 percent of the drug items reported by NFLIS in 2006. The number of indicators for methamphetamine remained low. Ecstasy use is still troublesome, as evi-*

*denced by treatment admissions, poison control calls, law enforcement, and ME reports.*

## INTRODUCTION

### Area Description

Detroit and surrounding Wayne County are located in the southeast corner of Michigan's Lower Peninsula. In 2000, the Wayne County population totaled 2.1 million residents (of whom 46 percent live in Detroit) and represented 21 percent of Michigan's 9.9 million population.

Currently, Michigan is the eighth most populous State in the Nation. In 2000, Detroit ranked 10th in population among cities (with 951,000 people), but the population has since dropped below 900,000. It has the highest percentage of African-Americans (82 percent) of any major city in the country. The following factors contribute to the probability of substance abuse in the State:

- Michigan has a major international airport with a new terminal that opened in 2002, 10 other large airports that also have international flights, and 235 public and private small airports. Long-term projections for the Detroit Metropolitan Airport forecast a 31-percent increase in flights during the next 10 years.
- The State has a 700-mile international border with Ontario, Canada; land crossings at Detroit (bridge and a tunnel), Port Huron, and Sault Ste. Marie; and water crossings through three Great Lakes and the St. Lawrence Seaway, which connects to the Atlantic Ocean. Many places along the 85 miles of heavily developed waterway between Port Huron and Monroe County are less than one-half mile from Canada. Michigan has more than 1 million registered boats. In 2004, 3 major bridge crossings from Canada (Windsor Tunnel, Ambassador Bridge, and Port Huron) had 21.2 million vehicles cross into Michigan. Southeast Michigan is the busiest port on the northern U.S. border with Canada. Detroit and Port Huron also have nearly 10,000 trains entering from Canada each year.

Additional factors influencing substance use in Detroit:

- The percentage of individuals living below the poverty line in 2000 (26.1 percent) was more than twice the national level (12.4 percent). The percentage has increased dramatically with the economic downturn.

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- The percentage of working age individuals (age 21–64) with a disability is substantially higher than the national level (32.1 versus 19.2 percent respectively).
- There are chronic structural unemployment problems. At the State level, the unemployment rate has been among the highest in the country since 2002, with no housing appreciation boom. Within the State, Detroit has one of the lowest rates of employed adults. Detroit's labor force has dropped by 42 percent since 1975, while the number of people unemployed has more than doubled since 2000. Detroit's unemployment rate is more than double that of surrounding suburban areas.

### Data Sources

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

- **Treatment admissions data** for the first half of fiscal year (FY) 2007 were provided by the Bureau of Substance Abuse and Addiction Services, Division of Substance Abuse and Gambling Services, Michigan Department of Community Health (MDCH), for the city of Detroit for those persons whose treatment was covered by Medicaid or Block Grant funds. The data do not include admissions funded by the Department of Corrections. The city of Detroit uses a "Treatment on Demand" approach without a wait list (unless the client is seeking a specific provider). MDCH, following revised Treatment Episode Data Set (TEDS) Federal guidelines, is converting to an episode-based reporting system in which changes in levels of care that are part of the treatment plan (moving from residential treatment to outpatient, for example) are not reported as new separate admissions but rather as transfers within an episode. This transition has not been fully implemented by all publicly funded programs. As this change is fully implemented, it is expected that total admissions will decline, and comparisons of admissions trends before and after this change are not recommended. Treatment data in this report are limited to admissions in which treatment is the only indicator source for a particular drug or group of drugs.
- **Mortality data** were provided by the Wayne County Office of the Medical Examiner (ME). The Wayne County ME provided summary data on deaths with positive drug toxicology for 2006. These drug tests are mostly routine when the decedent had a known drug use history, was younger than 50, died of natural causes or homicide, was a motor vehicle accident victim, or there was no other clear cause of death. In addition, the ME provided counts on the numbers of deaths attributed to specific drugs of abuse in 2006.
- **Heroin purity data** were provided by the Drug Enforcement Administration (DEA) for 2006 and the first quarter of 2007.
- **Drug intelligence data** were provided by the DEA and the Michigan State Police for 2006 and the first quarter of 2007.
- **Drug distribution data** were provided for 2006 and the first quarter of 2007 by the High Intensity Drug Trafficking Area, Investigative Support and Deconfliction Center, of Southeast Michigan (HIDTA-SEM). Nine counties (not all in southeast Michigan) now cooperate in HIDTA-SEM.
- **Data on drug content** among drug seizures were provided by the National Forensic Laboratory Information System (NFLIS) for 2006.
- **Poison control case data** from contact data on cases of intentional abuse of substances from January to May 2007 were provided by the Children's Hospital of Michigan Poison Control Center in Detroit. This center is one of two in Michigan; its catchment area is eastern Michigan.
- **Drug-related infectious disease data** were provided by the MDCH on the acquired immunodeficiency syndrome (AIDS) and human immunodeficiency virus (HIV) prevalence estimates, as of April 1, 2007.

### DRUG ABUSE PATTERNS AND TRENDS

#### Cocaine/Crack

For the first half of FY 2007, 28.1 percent of all Detroit publicly funded treatment admissions listed cocaine/crack as the primary drug of abuse (exhibit 1). An additional 10.7 percent of treatment admissions listed cocaine/crack as the secondary drug. Clients seeking treatment for crack cocaine were more likely to be male (59.0 percent) and African-American (92.1 percent), with a mean age of 42.9.

Cocaine constituted 34.2 percent of drug items reviewed by forensic laboratories in 2006 (exhibit 2).

Cocaine was detected in 424 deaths during 2006 in Wayne County. Cocaine was the immediate cause of

death in 60 decedents and the immediate cause with heroin in another 57 decedents.

According to intelligence reports, crack cocaine is found in the city of Detroit, while powder cocaine is more likely found elsewhere in the State. Prices are stable and low.

### **Heroin**

In the first half of FY 2007, 30.7 percent of Detroit publicly funded treatment admissions listed heroin as the primary drug of abuse (exhibit 1). An additional 1.6 percent of treatment admissions listed heroin as the secondary drug. Clients seeking treatment for heroin were likely to be male (57.6 percent) and African-American (89.1 percent), with a mean age of 48.4.

Only 15.6 percent of drug items reviewed by forensic laboratories were found to contain heroin in 2006 (exhibit 2).

Heroin was detected in 231 deaths during 2006 in Wayne County. Heroin was the cause of death in 38 decedents, and, combined with cocaine, it was the cause of death in another 57 decedents.

Heroin street prices remained stable and relatively low in Detroit. Nearly all heroin continues to be white in color, but Mexican black and brown heroin can be found. A wide range of purity can also be found, but it averaged 40.3 percent in FY 2006 and 45.9 percent in the first quarter of FY 2007. South America remains the dominant source, although heroin originating in Southwest Asia has been identified.

### **Other Opiates/Narcotic Analgesics**

Other opiates represented 1.2 percent of primary treatment admissions in Detroit in the first half of FY 2007 (exhibit 1).

Toxicology findings from the Wayne County ME laboratory showed 241 decedents with fentanyl positivity. This number is much higher than the 63 decedents in 2005. The surge was noted in news media and resulted in outreach efforts to warn and educate drug users of the threat of fentanyl-laced heroin or cocaine. Work groups also formed to address the threat. The monthly trends showed peaks in May and June and then again in November.

For oxycodone/combinations, there were 39 decedents with positive toxicology findings, up from 31 deaths during 2005, compared with 10 in 2000, 13 in 2001, 12 in 2002, and 19 in 2003. For hydrocodone/combinations, there was also an increase,

with 189 deaths in 2006, compared with 60 in 2000, 80 in 2001, 120 in 2002, 108 in 2003, 123 in 2004, and 147 in 2005. Methadone was found in 106 decedents in 2006.

According to intelligence reports, other opiates are common and viewed as a gateway to heroin, especially if obtaining prescription opiates becomes difficult. Because of difficulty in prosecuting diversion cases, the DEA is the sole agency investigating these cases.

### **Marijuana**

Marijuana indicators remain mostly stable but at highly elevated levels. Domestic, Canadian, and Mexican marijuana remain widely available.

In Detroit, marijuana accounted for 14.6 percent of all publicly funded substance abuse treatment admissions (including alcohol) in the first half of FY 2007 in Detroit (exhibit 1). Clients seeking treatment for marijuana were likely to be male (70.8 percent), African-American (93.4 percent), and have criminal justice involvement (65.2 percent); the mean age of marijuana admissions was 24.3.

Marijuana was found in 44.5 percent of drug items reviewed by forensic laboratories in 2006 (exhibit 2). Prices have gone up recently for commercial grade marijuana.

### **Stimulants**

In Detroit during the first half of FY 2007, treatment data show that admissions for stimulants other than cocaine as primary drugs of abuse included one admission for amphetamines. The ME found 11 deaths with positive toxicology for methamphetamine.

### **Club Drugs**

The club drugs category includes methylenedioxymethamphetamine (MDMA or ecstasy), gamma hydroxybutyrate (GHB), flunitrazepam (Rohypnol), and ketamine. Indicators may be increasing for ecstasy but stabilizing for ketamine and declining for GHB. There were 10 treatment admissions for ecstasy during the first half of FY 2007.

Toxicology findings from the Wayne County ME laboratory showed 18 cases of MDMA during 2005 and 6 cases of ketamine.

MDMA was found in 2.2 percent of drug items reviewed by forensic laboratories in 2006 (exhibit 2).

**INFECTIOUS DISEASES RELATED TO DRUG ABUSE**

Michigan has an estimated AIDS prevalence rate of 171.1 per 100,000 population. As of April 1, 2007, a cumulative total of 15,128 cases of AIDS ever diagnosed had been reported in Michigan. Of the people currently living with AIDS or HIV, 39.6 percent live in the city of Detroit.

Injection drug users (IDUs) account for 17.2 percent of people living with HIV/AIDS; 12.7 percent have only this risk factor, and 4.5 percent are IDUs who also have male-to-male sex as a risk factor.

Of the 9,810 men currently living with AIDS or HIV, 10 percent are IDUs, and 6 percent are in the dual risk group.

Among the 2,954 women currently living with AIDS or HIV, 21 percent are IDUs (23 percent among Black women and 18 percent among White women), 40 percent were infected through heterosexual contact, and 35 percent have undetermined risk factors.

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**Exhibit 1. Treatment Admissions in Detroit, by Primary and Secondary Drugs of Abuse and Percent: First Half FY 2007**

Drug	Primary Drug of Abuse	Secondary Drug of Abuse
Alcohol	23.2	14.8
Heroin	30.7	1.6
Cocaine	28.1	10.7
Other Opiates	1.3	0.8
Marijuana	16.4	8.4
Other Drugs	0.2	0.9

N=4,167.

SOURCE: Michigan Department of Community Health, Division of Substance Abuse and Gambling Services, Bureau of Substance Abuse and Addiction Services

**Exhibit 2. Numbers and Percentages of Seized Drug Items Analyzed in Detroit: 2006**

Substance <sup>1</sup>	Number of Items Seized	Percent of Items Seized
Cocaine	1,423	34.2
Cannabis	1,850	44.5
Heroin	648	15.6
Codeine	13	0.3
MDMA	93	2.2
Fentanyl	53	1.3
Hydrocodone	36	0.9
Benzodiazepine	16	0.4
<b>Total Items Reported</b>	<b>4,157</b>	

<sup>1</sup>Drugs detected in more than 10 items analyzed.

SOURCE: NFLIS

# Illicit Drug Use in Honolulu and the State of Hawai‘i

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## ABSTRACT

*During 2006, several important changes occurred with respect to illicit drug use in Honolulu. There was a 31-percent decrease in Honolulu Police Department arrests for methamphetamine; a 3-percent decrease in treatment admissions for primary methamphetamine drug admissions; and a 24-percent decrease in decedents with a positive toxicology screen for methamphetamine. At the same time, there was an 80-percent increase in decedents with a positive toxicology screen for cocaine, a 55-percent increase in persons claiming cocaine as their primary drug of choice on admission to treatment, and a 94-percent increase in Honolulu Police Department arrests for cocaine. A 5-percent increase in positive decedent presence of opiates occurred during this time period, with an additional 26 methadone deaths. Arrests for opiates were down 51 percent. Seizures of 95,188 grams of dried marijuana from 4,842 plants were made during the year; there was a 2.8-percent increase in marijuana treatment admissions and a 2.4-percent increase in decedents with positive toxicology screens for marijuana during 2006. Data from NFLIS are presented, showing great stability in the four drugs most often collected and analyzed over the past 4 years. Numbers and risks for AIDS data are also presented. As these major changes in drug activity were being reported, the State was continuing its major fiscal recovery. Unemployment is nearly nonexistent, at 3 percent. As of December 2006, Caucasians represented nearly two-fifths of the population.*

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## INTRODUCTION

This report presents current information on illicit drug use in Hawai‘i, based on the Honolulu Community Epidemiology Work Group (CEWG) described later in this section.

### Area Description

Record tax revenues for the State were the hallmark of the economy for 2006 in the 50th State. Hawai‘i

continues to prosper in Asia with increased tourism and related construction.

However, despite increasing wealth, an estimated 16,000 homeless are living in Hawai‘i. The proportion of the State population below the Federal Poverty Level is 10.6 percent, or about 140,000 people. In 2006, there were 2,134 instances of confirmed child maltreatment in the State. In the same year, 4,385 children younger than 18 were in foster care. The Adult Corrections System has 6,251 inmates in jails in Hawai‘i and on the mainland (where some are sent because of overcrowding in Hawai‘i jails), an additional estimated 2,500 persons on parole, and an estimated 7,200 probationers in the State. In 2006, approximately 7,500 persons were admitted to treatment for the abuse and/or dependence on alcohol and drugs in the State. Finally, an estimated 4,500 people and firms declared bankruptcy in 2006. These and other indicators of poverty in the midst of plenty suggest that more than 10 percent of the State’s population is disenfranchised from the general prosperity. While the data in this report tend to focus on these marginalized populations, the impacts are relevant to all residents of the State.

The State has initiated several programs to assist these marginalized populations, including the creation of more affordable housing and job search assistance. At the same time, the continued bifurcation of incomes in the State has meant that many of those “not currently in trouble” will be if there are any interruptions to the flow of income, such as illnesses causing layoffs resulting from market adjustments. The proportion of persons trying to work at more than one job to financially survive appears to have increased in the community.

The deployment of large numbers of military, active duty, National Guard, and Reserves continues and means the economy has not fully recovered from the “post 9-11 slump” mentioned in previous reports, with fewer civilian jobs on the bases, the departure of families of those on active duty for their family homes on the mainland, and the general decline in purchasing power of families whose primary earner has lost their regular wage and is forced to accommodate the military wage structures.

For some time now, the traditional cultural values of the various ethnic groups have eroded and blended such that the multicultural society that has been discussed for decades has actually begun to form. At the same time, the pride of cultural membership, the preservation of the native languages, and the felt need

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to honor the history of the various groups and their role in the development of the State has meant that, for the past 15 years, the people of Hawai'i have celebrated their diversity while melting it away into a more homogenous form of culture called the Aloha Spirit.

In 2006, a report from High Intensity Drug Trafficking Area (HIDTA), followed by a confirmation from the Honolulu Police Department (HPD) Narcotics Division, suggested that some changes were happening with regard to the methamphetamine market in Hawai'i. It was rumored that the purity of "ice" on the street had reduced by more than one-third and that price had not changed. No major other changes were reported with ice use until late in the fall, when the HPD reported a decrease in methamphetamine arrests; following shortly after was a similar announcement regarding decedents from the Medical Examiner (ME) for Honolulu. At the time of the State CEWG meeting in May 2007, the reduction in methamphetamine use was said to be persisting. A quick look at the HPD, ME, and Alcohol and Drug Abuse Division (ADAD) treatment data confirmed the statements but also revealed a secondary trend, namely that cocaine use had increased.

### Data Sources

Much of the data presented in this report are from the Honolulu CEWG, which met on May 4, 2007. The meeting was hosted by the Hawai'i HIDTA program office, whose staff facilitated the attendance of the Drug Enforcement Administration (DEA) representatives, as well as persons knowledgeable about drug data from Honolulu and neighbor islands. The State of Hawai'i Narcotics Enforcement Division participated in the CEWG meeting, presenting a paper on "Medical Marijuana." The Honolulu Police Department submitted data and participated in the CEWG meeting and subsequent discussions. The County Medical Examiner's Office provided data on toxicology screens from decedents for 2006 but was unable to attend the meeting. The State's Alcohol and Drug Abuse Division attended and presented data from the State treatment data system as well as information on the recently formed State Outcomes Epidemiology Workgroup (SOEW) sponsored by funding from the Substance Abuse and Mental Health Services Administration (SAMHSA).

This report is focused only on drug activities on O'ahu (Honolulu County) for the calendar year 2006. Other specific data sources are listed below:

- **Treatment admissions and demographic data** were provided by the Hawai'i State Department of Health, Alcohol and Drug Abuse Division.

Previous data from ADAD are updated for this report whenever ADAD reviews its records. These data represent all State-supported treatment facilities (90 percent of all facilities). About 5–10 percent of these programs and two large private treatment facilities do not provide data. During this reporting period, approximately 45 percent of the treatment admissions were paid for by ADAD; the remainder were covered by State health insurance agencies or by private insurance. The rate of uninsurance for the State is about 10 percent.

- **Drug-related death data** were provided by the Honolulu City and County Medical Examiner Office for 1991 through 2006. These data are based on toxicology screens performed by the ME Office on decedents brought to them for examination. The types of circumstances that would lead to the body being examined by the ME include unattended deaths, deaths by suspicious cause, and clear drug-related deaths. In short, while the ME data are consistent, they are not comprehensive, and they account for only about one-third of all deaths on O'ahu. To allow a direct comparison between ME data and treatment data, the ME data were multiplied by a factor of 10 on the exhibits.
- **Law enforcement case data** for 2006 were received from the Honolulu Police Department Narcotics/Vice Division only.
- **Drug price data** were provided for 2006 by the HPD, Narcotics/Vice Division.
- **Uniform Crime Reports (UCR) data** were accessed from the State's Attorney General's Web site for 1975–2004.
- **Forensic laboratory data** are from the National Forensic Laboratory Information System (NFLIS), Drug Enforcement Administration, for 2002 through 2006.
- **Acquired immunodeficiency syndrome (AIDS) data** were provided by the Hawaii State Department of Health and represent cumulative cases from 1983 to 2006.

Emergency department (ED) drug mentions data have not been available in Hawai'i since 1994. Discussions with the Healthcare Association of Hawai'i regarding inclusion in the Drug Abuse Warning Network (DAWN) program included a briefing of all hospital CEOs and the sharing of DAWN information. The Healthcare Association,

however, declined the opportunity to participate, and no hospitals signed on as a DAWN site. The CEWG for Honolulu and Hawai'i State was able to secure hospital emergency department admissions data for 2004 from the Hawaii Health Information Corporation (HHIC). These data may be available on a regular basis as soon as the SOEW negotiates access with the HHIC. The HHIC database provides the audited numbers of ICD-9CM diagnoses by age, sex, marital status, and patient home geo-descriptor that were billed using the UB-82 hospital billing forms from the Centers for Medicaid Services, DHHS, and were sent for payment to the Federal Government or health insurance companies in 2004. For a listing of data available from the UB-82 forms, see [http://www.unlv.edu/Research\\_Centers/chia/hospitalinpatientdata/html/hospitalfilingrequirements.htm](http://www.unlv.edu/Research_Centers/chia/hospitalinpatientdata/html/hospitalfilingrequirements.htm).

## DRUG ABUSE PATTERNS AND TRENDS

### General Comments

Mixed Hawaiians and Whites remain the majority drug user groups among the 17 identified ethnic groups (plus 2 other categories, "other" and "unknown/blank") who access ADAD facilities for substance abuse treatment. During 2006, 43.3 and 22.4 percent of the admissions to treatment services were Mixed Hawaiians or Whites, respectively. All other groups represented significantly lower proportions of admissions. Hawaiians represented only 2.7 percent of all admissions to treatment. A two-to-one ratio of males to females characterizes treatment admissions (61.8 percent male), and, by far, those younger than 18 (27.5 percent), those 25–44 years of age (23.7 percent), and those 35–44 (22.3 percent) dominated the admissions. More than one-third (35.4 percent) of admissions were from court referrals, 8.9 percent came from the schools (education), 5.3 percent were from Child Protection Services, and 10.2 percent were from other health care providers. More than one-fourth (26.5 percent) of all admissions were students.

Methamphetamine remains the leading primary substance of abuse for those admitted to treatment, accounting for 39.6 percent of all admissions in 2006. Marijuana remained the third most frequently reported primary substance for treatment admissions (23.5 percent), behind alcohol (25.1 percent). As in other jurisdictions, almost all admissions are polydrug treatment admissions, and most list alcohol as a substance of abuse in addition to the primary drug at admission listed above. While marijuana abuse accounts for the majority of treatment admissions among those younger than 18 (the most frequently admitted age group), the abuse of ice or

crystal methamphetamine remains the major treatment category for this group.

The police data used in this report are only for the Honolulu Police Department. In previous reports, attempts have been made to include whatever data were available from neighbor island police departments. The frequency and consistency of reporting made it impossible to continue the practice, and from this point forward only HPD data will be reported.

During 2006, drug prices in general rose slightly in most categories (see exhibit 1). The size of the drug supply seems stable, with seizures having little impact on price structure. The drop in purity mentioned previously had little effect on price, and both price and purity remained high following the event mentioned.

### Cocaine/Crack

Powder cocaine and crack treatment admissions in Hawai'i declined during the current period. There were 363 primary cocaine treatment admissions in 2004; for 2005, that number was 244, and for 2006 it rose to 300, an increase of 22.9 percent (exhibit 2). This shows that the number of clients listing cocaine as the primary drug, after a slow decline of several years, began to rise again this past year. One can only speculate that there is an association between the reported decline in methamphetamine arrests and the increase in cocaine arrests. Powder cocaine and crack now rank fourth (4.0 percent of admissions) among primary drugs of treatment admissions, after methamphetamine, alcohol, and marijuana.

The Honolulu ME reported 27 deaths with a cocaine-positive toxicology screen during 2006, which compares to 15 deaths in 2005 and 22 deaths in all of 2004 (exhibit 2). In 2003, there were 26 deaths, compared with 22 to 24 in 1999–2002. These data reinforce the treatment finding of the relative and continual decline in cocaine use over the past decade. However, both ME data and treatment data show a marked up tick for 2006, when there were 27 decedents (an 80-percent increase) with cocaine in their toxicology screen. Treatment data show a similar up-tick with 378 admissions for 2006 (a 54.9-percent increase). It should be remembered that data on exhibit 2 have been adjusted to allow for their presentation on the same axes by multiplying all death data by a constant of 10.

According to the HPD, cocaine prices have remained relatively stable over the past several years. One-quarter gram of crack sold for \$20–\$40 in 2006, the

same amount of cocaine powder was listed at the same price on the HPD Chart (exhibit 1). Police cases for cocaine/crack were at a decade high in 2006 with 305 cases (a 111-percent increase). In 2005, there were 144 cases (exhibit 3), compared with 239 cases from 2004 and 202 in 2003. Over the past several years, the number of HPD cocaine cases plummeted from more than 1,200 cases in 1996 to less than 150 cases in 2005 (an 86-percent decline over the decade). Cocaine seizures by HPD also increased to 9,993.5 grams of powder cocaine and 472 grams of rock cocaine in 2006. This compares with 8,797 grams of powder and 464 grams of rock cocaine in 2005, 14,927 grams of powder and 239 grams of rock cocaine in 2004, 7,637 grams of powder and 3,721 grams of rock in 2003, and 5,727 grams of powder and 629 grams of rock cocaine in 2002.

### Heroin and Other Opiates

The heroin market for Honolulu is dominated by black tar heroin, and it is readily available in all areas of the State. China white heroin has been uncommon in Hawai'i for many years, but it is occasionally available for a premium price. HPD data show 1.6 grams of black tar heroin and 0.2 grams of white powder heroin were seized in 2006. This compares with the 3,602.0 grams of black tar and 18.5 grams of China white powder seized in 2005, which was triple the amount seized for 2004 (1,251.0 grams of black tar and 1.7 grams of powder) and was even higher than the 3,502.0 grams of black tar seized in 2003 and the less than 0.1 gram of powder seized in 2003. For 2002, 992 grams of black tar and 494 grams of powder were seized. In 2001, 530 grams of powder were seized, along with 3,258 grams of black tar heroin. According to the HPD in 2006, black tar heroin prices remained stable in Honolulu at \$20–\$50 per one-quarter gram, \$500–\$800 per one-quarter ounce (7 grams), and \$1,700–\$2,000 per ounce (exhibit 1).

The continuation of the 3-year increase in heroin treatment admissions in Hawai'i is depicted in exhibit 4. In 1998, record levels of treatment admissions were recorded, with more than 500 individual admissions that year. In 2006, however, heroin ranked fifth if considered alone (2.4 percent), or fourth (4.9 percent) if considered along with other opiate admissions, among treatment admissions.

The Honolulu ME reported that deaths in which opiates were detected rose sharply again in 2006; however, the residuals of heroin versus morphine and other opiates could not be definitively separated for several cases. For now, only 44 heroin deaths are confirmed for 2006, an increase of 238 percent over

2005 (exhibit 4). Decedents with a positive toxicological result for other opiates were primarily constituted of those in whom hydrocodone, oxycodone, morphine, or methadone were detected. The exact medication (OxyContin or another) used was not specified. Twenty-five decedents had oxycodone present, 18 had hydrocodone, none had fentanyl, and an additional 26 had methadone present in their toxicology screens in 2006. In 2005, there were 21 decedents with methadone in the toxicology screens, compared with 25 decedents in 2004, 22 in 2003, and 28 in 2002.

The HPD reported 15 heroin cases in 2006, compared with 29 cases in 2005, 25 cases in 2001, 44 in 2002, 30 in 2003, and 34 in 2004 (exhibit 5). In spite of the very high number of cases reported in 1998, the decade-long trend in heroin cases is a downward one from the 54 cases reported in 1995. Seizures were minimal at 1.6 grams of black tar and 0.2 grams of powder in 2006 compared with the 3,602.0 grams of black tar heroin and 18.5 grams of white powder seized in 2005. This was the largest amount of black tar heroin seized since 2000. White powder seizure amounts were surpassed by the 2002 seizure of 494 grams.

### Marijuana

Statewide, marijuana treatment admissions for 2006 again rose to a new height of all years collected since 1991. A total of 1,783 admissions with marijuana as the primary drug occurred in 2006, compared with the 1,733 admissions for 2005. For 2004, 1,461 admissions occurred (exhibit 6). Those admitted for treatment in 2006 continued to be younger persons referred by the courts and schools. In examining these treatment data, it is important to remember that the number of persons in treatment for marijuana use in 2006 represents a sevenfold increase over the number in treatment in 1991, the first year for which there are full data. It is also important to note that while marijuana is listed as the primary drug of use at admission, many users of other drugs use marijuana as a secondary or tertiary drug of choice.

Between 1994 and 1999, the O'ahu ME reported 12–21 deaths per year in which marijuana was found in the specimens submitted for toxicology screening (exhibit 6). Those numbers increased to 25 in 2000, 36 in 2001, 30 in 2002, 32 in 2003, 31 in 2004, and 43 in 2005. In 2006, the number of decedents with a positive tetrahydrocannabinol (THC) toxicological screen was 44, the highest number to be reported since record collection began in 1991. Again, in most instances, marijuana was used with other drugs if there was a drug-related death.

The HPD continues to monitor, but to not specifically report, case data for marijuana. Instead, marijuana cases are lumped together with others under the category “Detrimental Drugs,” an artifact of the Uniform Crime Reporting (UCR) system. As mentioned in previous CEWG reports, possession cases remain steady at about 650 per year, although distribution cases have continued to increase. Law enforcement sources speculate that much of the Big Island’s marijuana is brought to O’ahu for sale. Exhibit 7 shows the HPD reported 110 detrimental drug cases in 2006. The 116 marijuana cases previously reported in 2005 are also listed officially as detrimental drug cases. In 2006, 4,842 marijuana plants were seized, and a total of 95,187 grams of dried marijuana were seized. The comparable numbers for 2005 were 6,814 plants and 81,966 grams of dried marijuana; in 2004, 1,045 plants and 24,814 grams of dried marijuana were seized.

As shown in exhibit 1, marijuana cost \$10–\$30 per joint and \$400–\$500 per ounce during 2006.

### **Methamphetamine**

Hawai‘i’s problem with methamphetamine has continued for more than 20 years. It remains the drug of choice among the 18–34-year-old group. The concerns of treatment providers and law enforcement officers have been well documented in these reports over the years, and now, for the first time, a positive note seems to be sounding. Hawai‘i’s methamphetamine has always been of extremely high purity (more than 90 percent). As mentioned previously, in the latter part of 2005, anecdotal evidence emerged that suggested that even though the price of the drug was constant, the purity had declined. According to HIDTA, the purity of several samples submitted during late 2005 was in the mid-50s rather than in the high 90s. The high purity is a necessary, but obviously not a sufficient, condition for the smoking of the drug—Hawaiians’ chosen route of administration. No decline in users, cases, decedents, or those admitted to treatment occurred during this period of low purity.

Statewide methamphetamine treatment admissions declined slightly (2.9 percent) during this period but remained extremely high ( $n=3,253$ ), accounting for 39.6 percent of all admissions in 2006. The continued increase in admissions observed for the past 13 years (exhibit 8) declined for the first time in more than a decade. In 2005 there were 3,353 admissions, compared with 3,328 in 2004, 3,182 in 2003, and 2,677 in 2002. The increase in demand for treatment for methamphetamine abusers has been nearly 2,000 percent since 1991. This situation continues to

outstrip the treatment system’s capacity, meaning that people who might want treatment for alcohol or any other drug are unable to receive it in a timely manner. With court diversion programs in place, the available treatment slots for nonjudicial treatment admissions are extremely tight.

Between 1994 and 2000, the O’ahu ME mentioned crystal methamphetamine in 24–38 cases per year (exhibit 8). In 2001, that number jumped to 54, and methamphetamine-positive decedents increased to 62 in 2002. In 2003, the number of decedents with ice detected in their toxicology reports was 56, in 2004 it was 67 decedents and, in 2005, a total of 88 decedents were found to have a positive toxicology for methamphetamine, representing 97.3 deaths per 1,000,000 population for the island of O’ahu. The 2006 report from the Medical Examiner shows 66 decedents with positive toxicology reports.

Crystal methamphetamine prices remained constant over the course of 2006. The drug is sold in the islands as “clear” (a clear, white form) or “wash” (a brownish, less processed form). Prices for ice varied widely in 2006. HPD reports that 0.25 gram of ice sells for \$50–150, depending on whether it is “wash” or “clear.” That distinction remains across all amounts of the drugs, with the lower number representing the more impure “wash” and the higher price representing the purer “clear” or “crystal.” “Wash” sells for \$300 for 3.5 grams or \$600 for “clear.” Amounts of 1 pound sell for \$20,000 as “wash” and \$5,000 as “clear” (exhibit 1).

HPD methamphetamine case data for Honolulu vary considerably from year to year. The highest recorded number of cases in the past decade previously peaked at 964 in 2003, the lowest number (616) was in 2002 (exhibit 9). For 2005, 962 cases were registered by the Honolulu Police Department, which was the second highest number of cases since data collection began in 1991. The 2006 number of cases was 660, a reduction of 31.4 percent.

Seizures of methamphetamine are up again. In 2006, a total of 32,277 grams of ice were seized, but no powdered methamphetamine was seized. That is significantly less methamphetamine than was seized in 2005 (74,767 grams of ice and 10,842 grams of powdered methamphetamine), 2004 (63,000 grams of ice and 2 grams of powdered methamphetamine), 2003 (66,635 grams of ice and no powder), or in 2002 (40,511 grams of ice and 1 kilogram of powder). The sudden reduction in amount of methamphetamine seized and the total absence of powdered methamphetamine seized in 2006 is not sufficient to suggest a change in methamphetamine

use. This sort of pattern, although not as extreme, has occurred previously and without the indicators of drug shortage (i.e., high process of large amounts as well as general price increase); the pattern is interesting and worth watching for at least another few data collection periods. The shift to cocaine use also parallels occurrences in other jurisdictions where users of methamphetamine have shifted to cocaine as a stimulant that is not as damaging; they reserve the use of methamphetamine for periodic "binge" use.

### Depressants

Barbiturates, sedatives, and sedatives/hypnotics are combined into this category. Few data were provided about these drugs in the islands. ADAD maintains three categories under this heading: benzodiazepines, other tranquilizers, and barbiturates. Treatment admissions for these drugs are minimal in terms of impact on the State system. Annually, the numbers admitted to treatment for these drugs total less than 40. The number of ME mentions for depressants in Honolulu has remained stable for several years at five or less. The HPD has not reported depressant case data since 1991. Neighbor island police reported fewer than 15 cases per year since 1996.

### Hallucinogens

Statewide, hallucinogen treatment admissions have totaled less than five per year during recent periods. No hallucinogen ME mentions have been reported since the beginning of data collection. Prices for lysergic acid diethylamide (LSD) were \$4–\$6 per "hit" and \$225–\$275 per 100 dosage unit sheets (a "page") in 2005 (exhibit 1).

### Overall Death Data

An examination of Exhibit 10 shows that over the past 15 years, the Honolulu Medical Examiner drug cases have varied considerably. Brief descriptions of drug trends, as seen from the Medical Examiner's viewpoint, were very complex in the early 1990s, with low numbers of cases for cocaine, methamphetamine, and marijuana. In addition, it is important to note that the accumulation of drug cases in 1993–1995 became quite high.

By 2000, heroin cases had started to decline, but marijuana and methamphetamine cases began to soar in numbers. Cocaine cases remained relatively stable throughout this period, but they appear to have begun a decline in the mid-2000–2005 period, although they increased in 2006. Alcohol cases,

which were only added to the series in 2000, showed a continual and rapid increase until 2006, when they suddenly dropped.

### National Forensic Laboratory Information System (NFLIS) Data

Exhibit 11 shows NFLIS data for Honolulu for 2002 through 2006. The data originate in the Honolulu Police Department (HPD) forensic laboratory and are based on drugs seized and otherwise collected in the performance of the department's investigation and enforcement duties.

Within the data presented in this exhibit are several interesting findings that relate to the dominance of methamphetamine within the drug community of Hawai'i. First, the proportion of all samples collected that are methamphetamine ranges between 58 percent and 63 percent across the 5 years of available data. That is, of all samples collected from all sources for all reasons, fully 3 in 5 are methamphetamine. The second important finding in this exhibit is that the second most commonly occurring drug in the samples is cannabis, which consistently represents between 16.5 to 17.6 percent of the total drug items. Third on the list of drugs consistently appearing across all years is cocaine, which represents between 11.9 and 14.2 percent of the total drug items. Heroin continues to be the fourth drug in terms of proportion of all drugs sampled across the 4 years and is consistently between 1.6 and 1.9 percent of all items. These four drugs—methamphetamine, cannabis, cocaine, and heroin—represent a cumulative total of between 92.01 and 94.49 percent. The samples of all other drugs represent less than 10 percent of the total samples tested.

### INFECTIOUS DISEASES RELATED TO DRUG ABUSE

State-level data regarding the numbers of AIDS cases reported from 1983 to 2006 are shown by risk factor in exhibit 12. The men having sex with men (MSM) mode of transmission represents 73 percent of all cases. Intravenous drug users (IDUs) accounted for 7 percent, with another 7 percent including both injection drug use and MSM risk. All other reasons accounted for less than 15 percent of all cases.

Since 1983, a total of 2,920 AIDS cases were reported to the Hawai'i State Department of Health by health providers, and 1,719 (58.9 percent) of these individuals are known to be deceased. The estimated size of the population in Hawai'i living with HIV/AIDS is between 2,600 and 2,900, including

those who are currently unaware of their HIV-positive status. There were 88 cases reported in 2006 (1-year), which yields an annual AIDS report rate of 6.8 per 100,000 population. Of the 88 cases, there were 78 (88.6 percent) males and 10 (11.4 percent) females. Honolulu County reported 65 cases (73.9 percent); Maui County reported 10 cases (11.4 percent); Hawai'i County reported 10 cases (11.4

percent); and Kauai County reported 3 cases (3.4 percent).

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**Exhibit 1. Street Prices of Narcotics/Dangerous Drugs in the City and County of Honolulu: 2006**

Drug	Price	Quantity	
Crystal methamphetamine <sup>1</sup>	\$50–\$150	<i>Paper</i> (0.25 grams)	
	\$150–\$300	<i>1/2 Teen</i> (1/32 ounce or 0.88 grams)	
	\$200–\$400	<i>Teen/"T"</i> (1/16 ounce or 1.77 grams)	
	\$300–\$600	<i>8-ball</i> (1/8 ounce or 3.5 grams)	
	\$500–\$1,000	<i>Quarter</i> (1/4 ounce or 7.0 grams)	
	\$1,000–\$2,100	<i>Half</i> (1/2 ounce or 14.175 grams)	
	\$2,500–\$3,500 \$20,000–\$45,000	<i>"O"</i> (ounce or 28.35 grams) <i>"LB's"</i> (pound or 453.5924 grams)	
Heroin Powder	\$30–\$70	<i>Paper</i> (0.25 grams)	
	\$1,700–\$2,000	<i>"O"</i> (ounce or 28.35 grams)	
	\$30,000	<i>"LB's"</i> (pound or 453.5924 grams)	
	\$70,000	<i>"Kilo's"</i> (2.2 pounds or 2.2046 pounds)	
	Black tar	\$20–\$50	<i>Paper</i> (0.25 grams)
		\$500–\$800	<i>Quarter</i> (1/4 ounce or 7.0 grams)
\$1,700–\$2,000		<i>"O"</i> (ounce or 28.35 grams)	
Cocaine Powder	\$80–\$100	<i>1/2 Teen</i> (1/32 ounce or 0.88 grams)	
	\$200–\$350	<i>8-ball</i> (1/8 ounce or 3.5 grams)	
	\$400–\$600	<i>Quarter</i> (1/4 ounce or 7.0 grams)	
	\$900–\$1,200	<i>"O"</i> (ounce or 28.35 grams)	
	\$13,500–\$25,000	<i>"LB's"</i> (pound or 453.5924 grams)	
	\$26,500–\$52,000	<i>"Kilo's"</i> (2.2 pounds or 2.2046 pounds)	
	Rock	\$20–\$40	<i>Paper</i> (0.25 grams)
		\$200–\$300	<i>8-ball</i> (1/8 ounce or 3.5 grams)
	Crack	\$20–\$40	<i>Paper</i> (0.25 grams)
		\$60–\$90	<i>1/2 Teen</i> (1/32 ounce or 0.88 grams)
\$90–\$100		<i>Teen/"T"</i> (1/16 ounce or 1.77 grams)	
\$140–\$225		<i>8-ball</i> (1/8 ounce or 3.5 grams)	
\$300–\$450		<i>Quarter</i> (1/4 ounce or 7.0 grams)	
\$600–\$800		<i>Half</i> (1/2 ounce or 14.175 grams)	
\$1,050–\$1,200		<i>"O"</i> (ounce or 28.35 grams)	

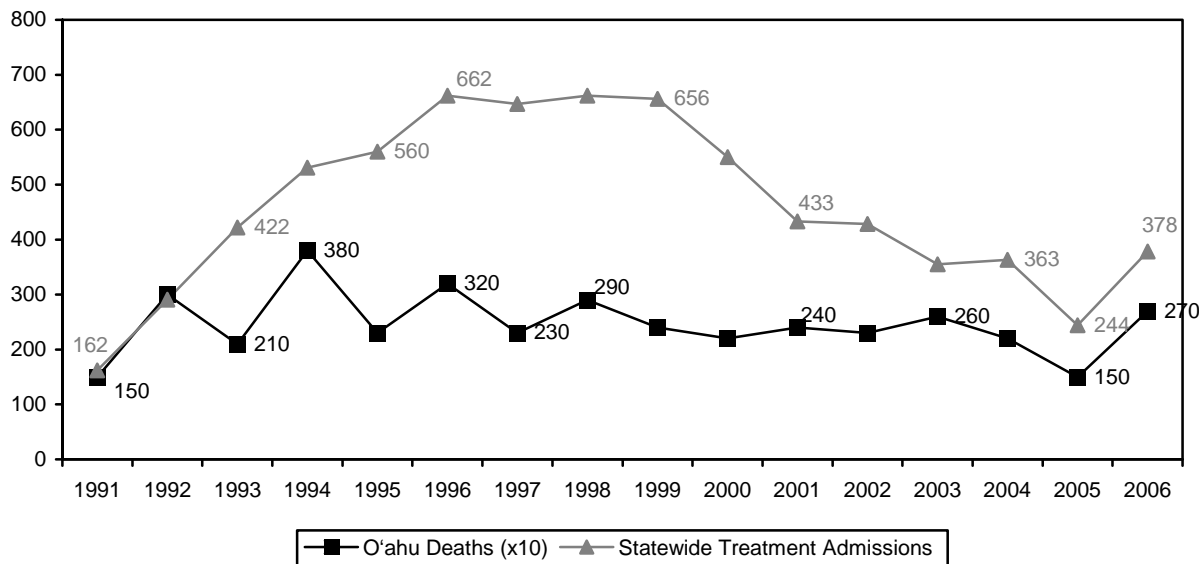
(Continued)

**Exhibit 1. Street Prices of Narcotics/Dangerous Drugs in the City and County of Honolulu: 2006 (Continued)**

Drug	Price	Quantity
Ecstasy	\$15–\$50	<i>Paper</i> (0.25 grams)
Marijuana	\$10–\$30	<i>Paper</i> (0.25 grams)
	\$400–\$500	"O" (ounce or 28.35 grams)
	\$4,500–\$5,500	"LB's" (pound or 453.5924 grams)
Hashish	\$10–\$15	<i>Paper</i> (0.25 grams)
PCP	\$10–\$20	<i>Paper</i> (0.25 grams)
	\$100	Gram
	\$350–\$550	<i>Quarter</i> (1/4 ounce or 7.0 grams)
	\$900–\$1,200	"O" (ounce or 28.35 grams)
LSD	\$4–\$6	<i>Hit</i>
	\$225–\$275	100 <i>hits</i>
Vicodin	\$3–\$5	Tablet
Valium	\$3–\$5	Tablet
Xanax	\$3–\$8	Tablet
Ecstasy	\$15–\$50	<i>Paper</i> (0.25 grams)

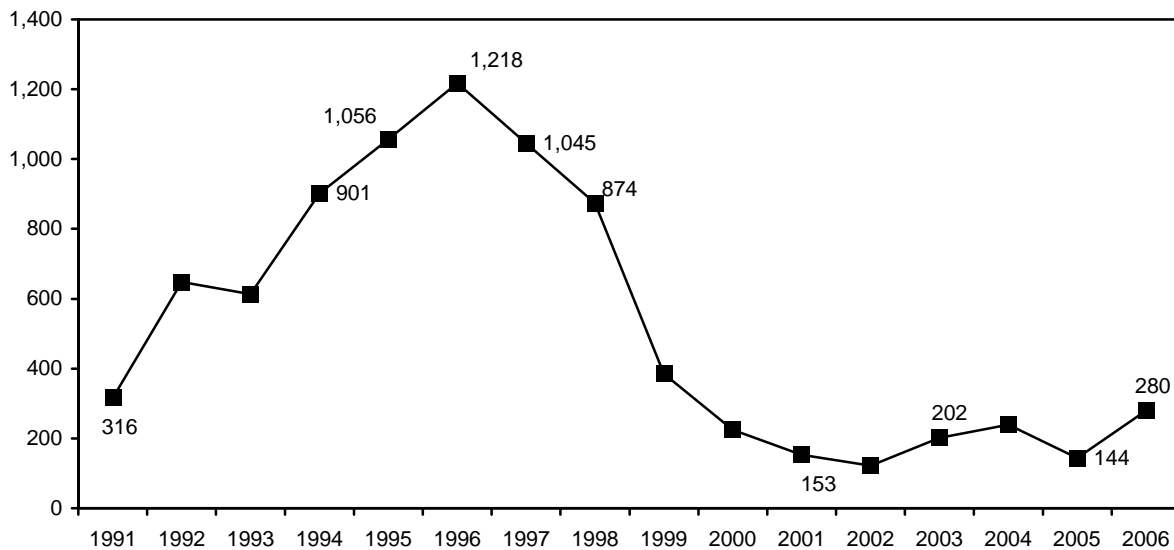
<sup>1</sup>For statistical purposes, 1 gram value of crystal methamphetamine = \$200–\$300.  
 SOURCE: Honolulu Police Department, Narcotics/Vice Division

**Exhibit 2. Cocaine Death<sup>1</sup> and Treatment Data in Honolulu and Hawai'i: 1991–2006**



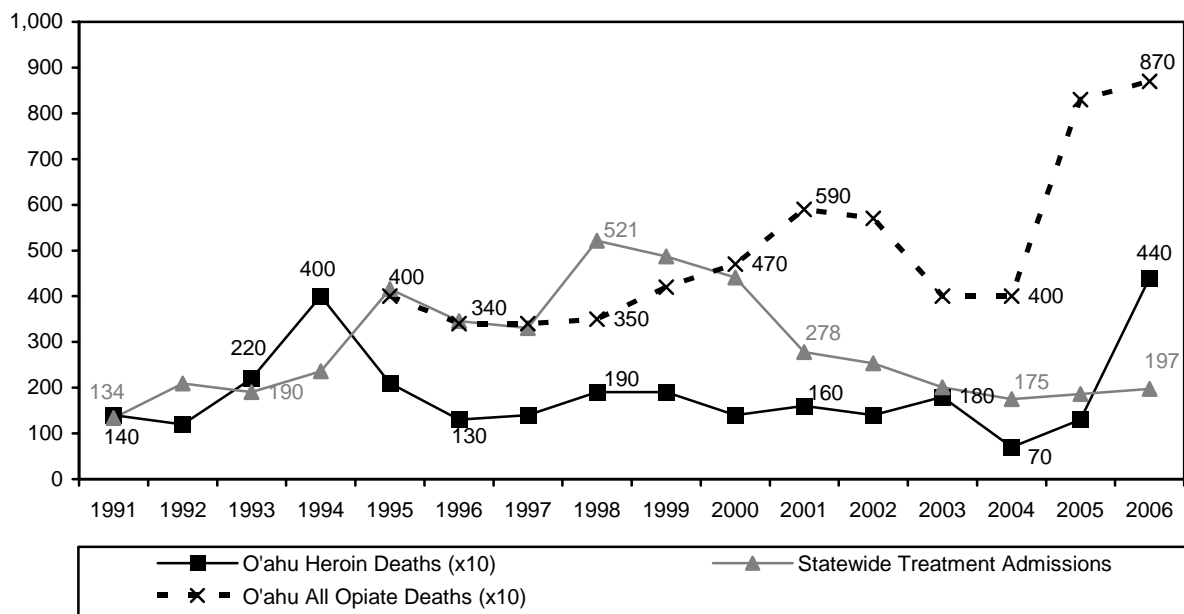
<sup>1</sup>To allow for direct comparison between O'ahu ME data and statewide treatment data, the O'ahu ME data have been multiplied by 10. ME cases are for Honolulu City and County.  
 SOURCES: Hawai'i State Department of Health, Alcohol and Drug Abuse Division and Honolulu Medical Examiner Office

**Exhibit 3 Cocaine-Related Police Case Data in Honolulu: 1991–2006**



SOURCE: Honolulu Police Department, Narcotics Division

**Exhibit 4. Heroin Death<sup>1</sup> and Treatment Data in Honolulu and Hawai'i: 1991–2006**

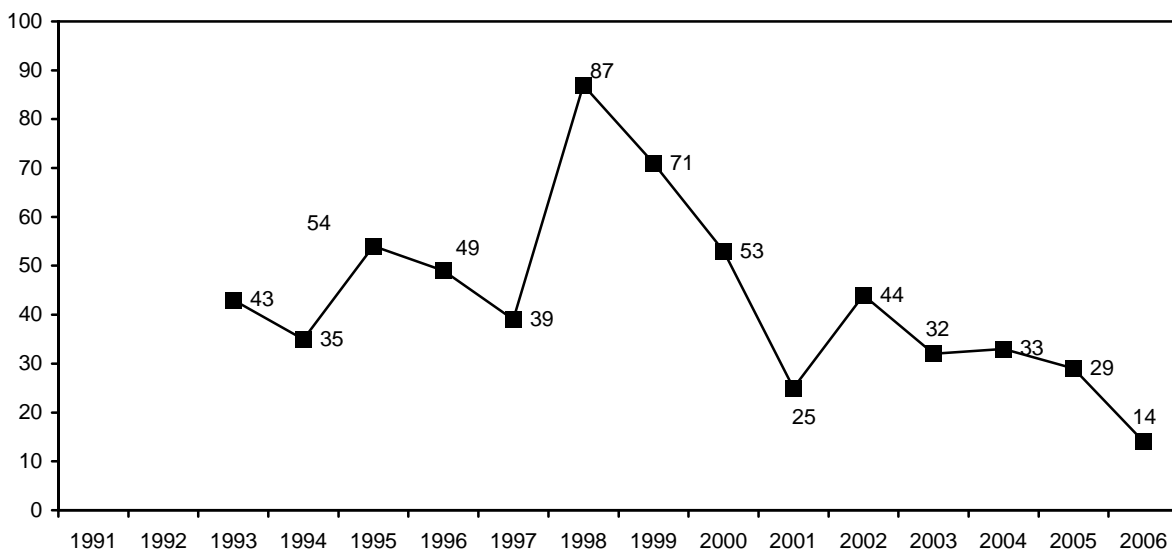


<sup>1</sup>To allow for direct comparison between O'ahu ME data and statewide treatment data, the O'ahu ME data have been multiplied by 10. ME cases are for Honolulu City and County.

SOURCES: Hawai'i State Department of Health, Alcohol and Drug Abuse Division and Honolulu Medical Examiner Office

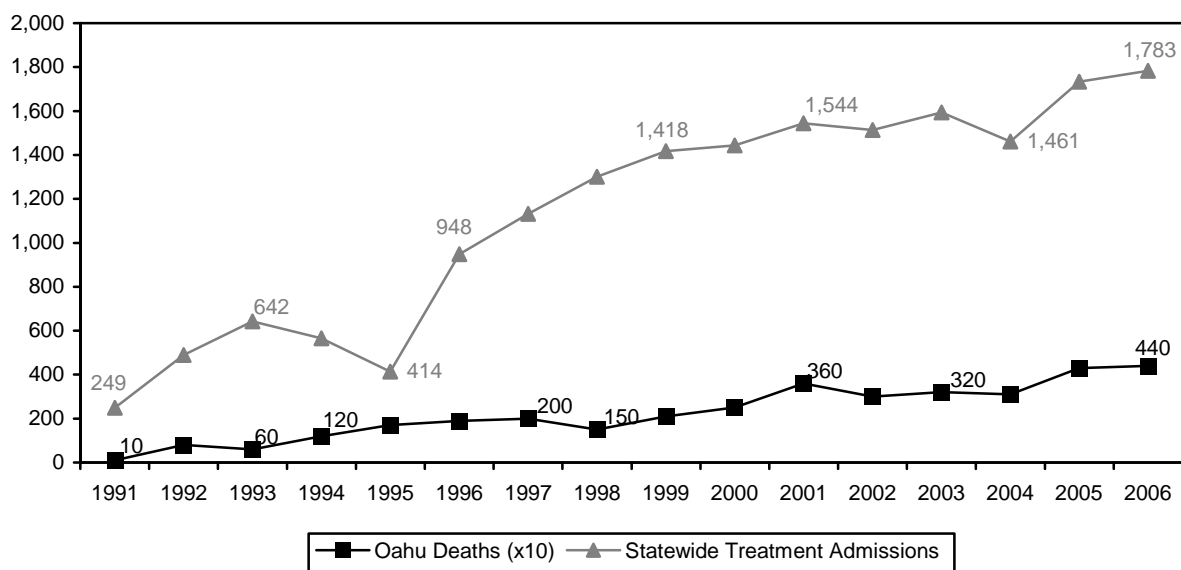


**Exhibit 5 Heroin-Related Police Case Data in Honolulu: 1991–2006**



SOURCE: Honolulu Police Department, Narcotics Division

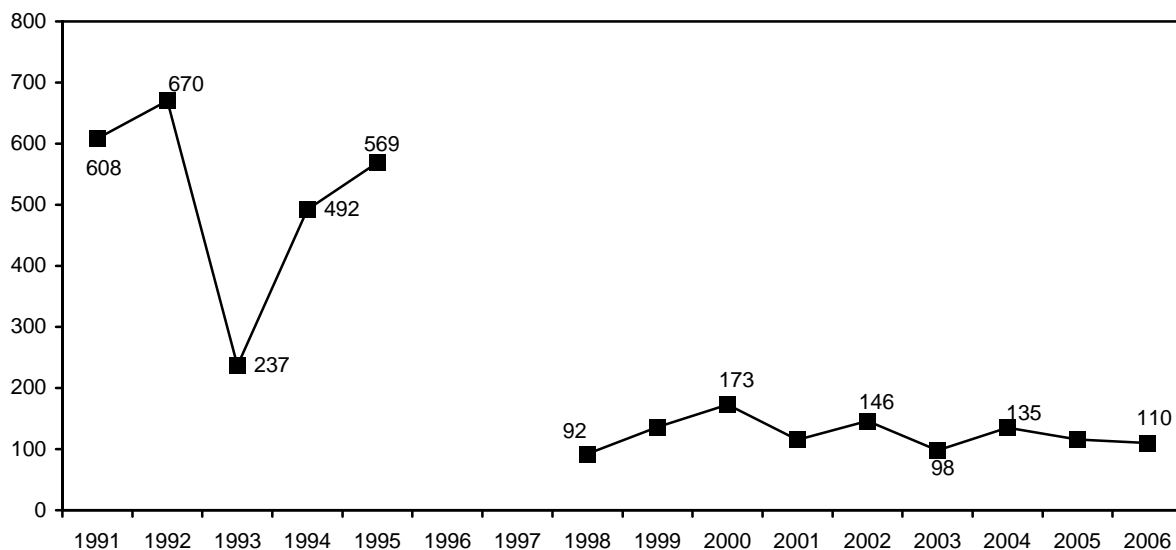
**Exhibit 6. Marijuana Death<sup>1</sup> and Treatment Data in Honolulu and Hawai'i: 1991–2006**



<sup>1</sup>To allow for direct comparison between O'ahu ME data and statewide treatment data, the O'ahu ME data have been multiplied by 10. ME cases are for Honolulu City and County.

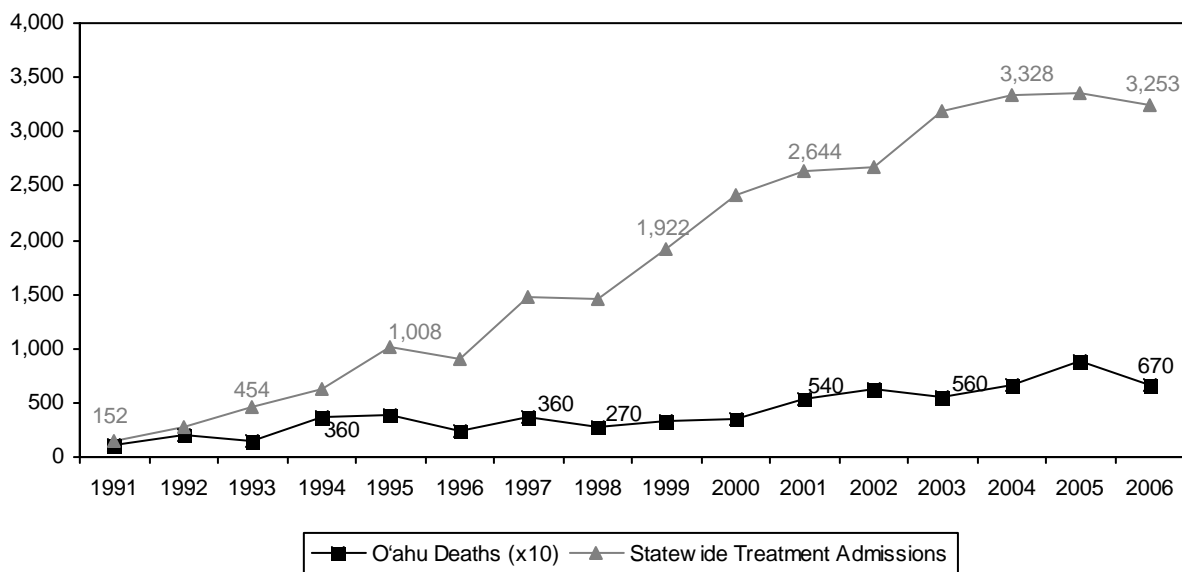
SOURCES: Hawai'i State Department of Health, Alcohol and Drug Abuse Division and Honolulu Medical Examiner Office

**Exhibit 7. Marijuana-Related Police Case Data in Honolulu: 1991–2006**



SOURCE: Honolulu Police Department, Narcotics Division

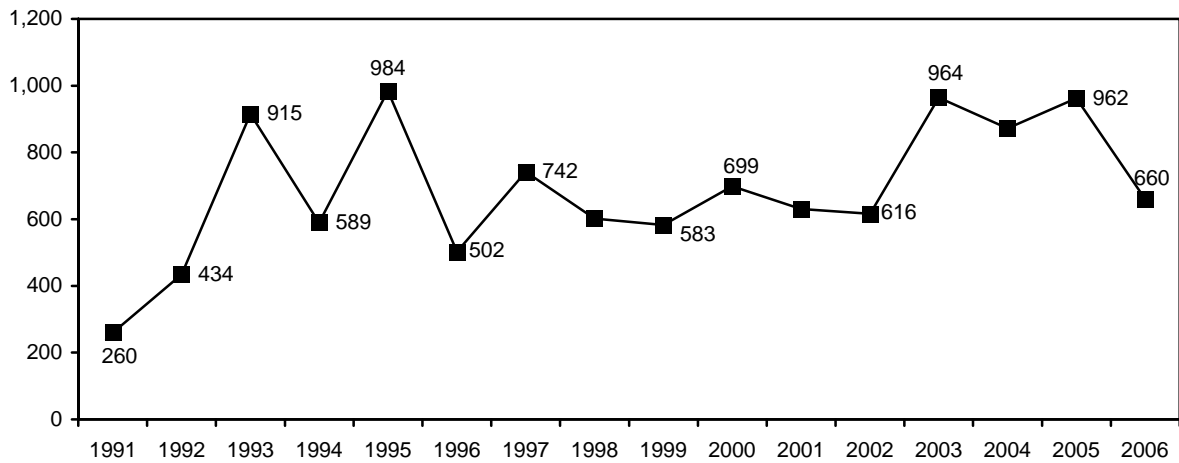
**Exhibit 8. Methamphetamine Death<sup>1</sup> and Treatment Data in Honolulu and Hawai'i: 1991–2006**



<sup>1</sup>To allow for direct comparison between O'ahu ME data and statewide treatment data, the O'ahu ME data have been multiplied by 10. ME cases are for Honolulu City and County.

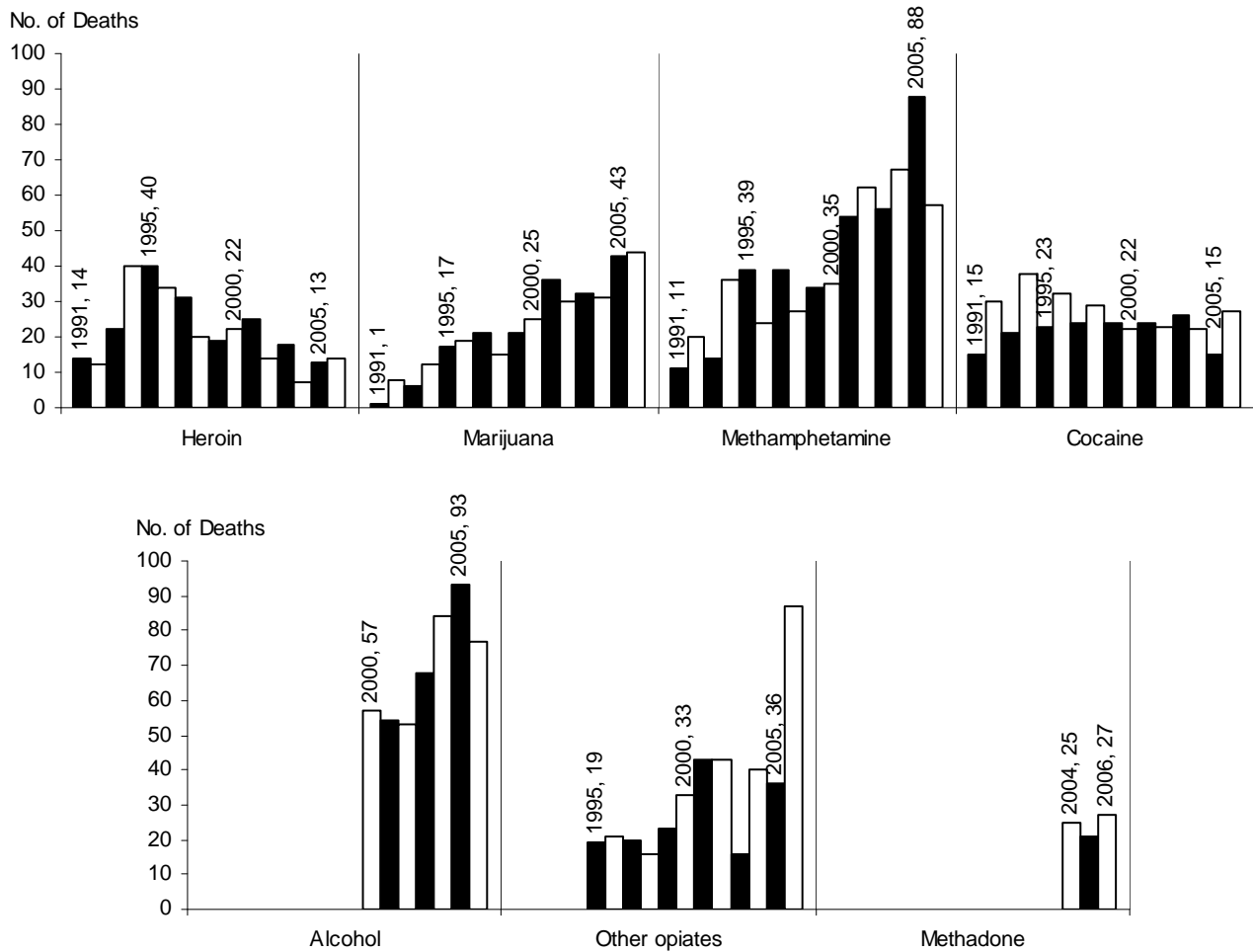
SOURCES: Hawai'i State Department of Health, Alcohol and Drug Abuse Division and Honolulu Medical Examiner Office

**Exhibit 9. Methamphetamine-Related Police Case Data in Honolulu: 1991–2006**



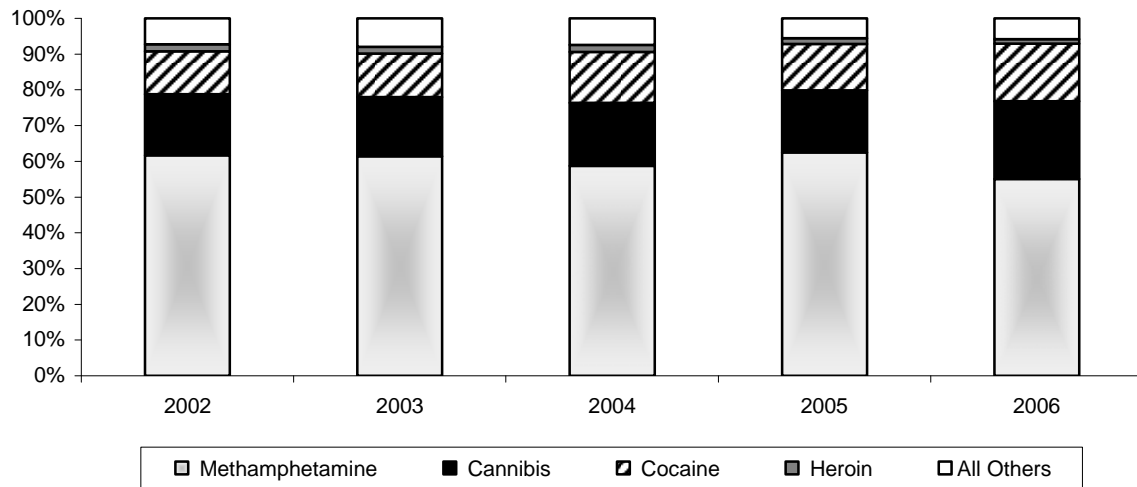
SOURCE: Honolulu Police Department, Narcotics Division

**Exhibit 10. Number of Deaths in Hawai'i with a Presence of Drugs, by Drug and Year: 1991–2006**



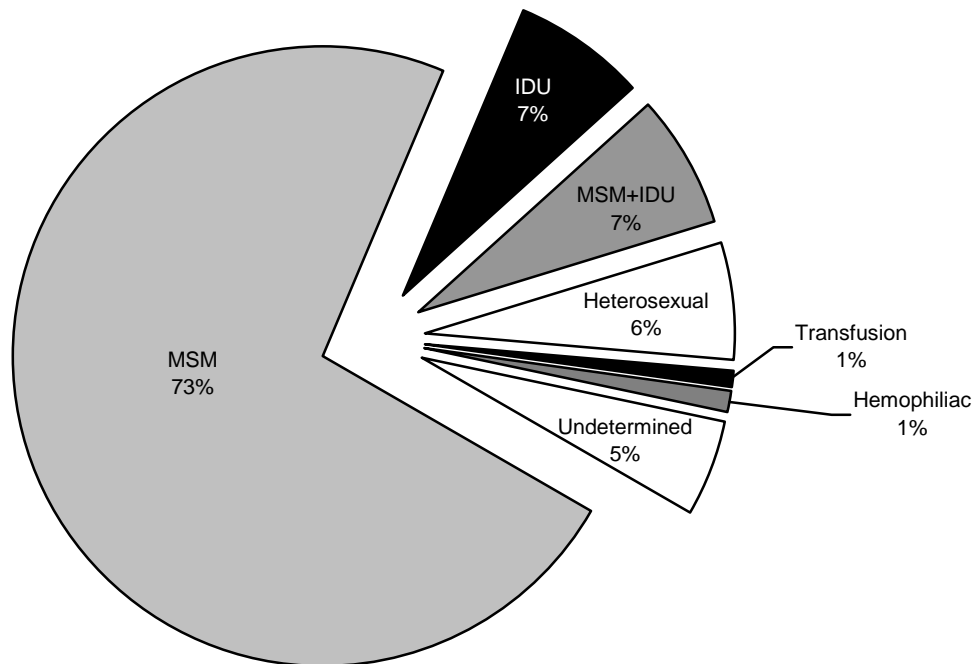
SOURCES: Honolulu City and County Medical Examiner's Office

**Exhibit 11. Drug Items Analyzed by the National Forensic Laboratory Information System for Hawai'i, by Specific Drug and Percent of Total Items Analyzed: 2002–2006**



SOURCE: NFLIS, DEA

**Exhibit 12. Mode of Transmission of AIDS Cases in Hawai'i, by Percent: 1983–2006**



SOURCE: Hawai'i State Department of Health

# Patterns and Trends in Drug Abuse in Los Angeles County, California: June 2007 Update

Beth Rutkowski, M.P.H.

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## ABSTRACT

*As the California Department of Alcohol and Drug Programs continues its shift to a new data management system, Los Angeles treatment admissions data were only available for the first half of 2006 (January–June). Methamphetamine continued to dominate the local treatment system in early 2006 (with more than one in four admissions [26 percent] reporting primary methamphetamine abuse), despite an apparent leveling off of methamphetamine admissions. The second most frequently mentioned primary drug of abuse at admission was heroin (20.2 percent), followed closely by cocaine/crack (16.4 percent). Cocaine and methamphetamine together accounted for 66 percent of all Los Angeles-based illicit drug items analyzed and recorded by the NFLIS in calendar year 2006; analgesics and benzodiazepines accounted for 70 percent of pharmaceutical/noncontrolled drug items. Adolescent substance use data collected in the California Healthy Kids Survey (2005–06) illustrated that past-month usage percentages among Los Angeles County secondary school students remained somewhat stable (with a slight increase seen in inhalant use) over the percentages seen in 2004–05. In the 2005–06 survey, school-based students were most likely to report lifetime use of marijuana (22.6 percent) or inhalants (12.8 percent), followed more distantly by methamphetamine or cocaine/crack (6.8 and 6.9 percent, respectively). Wholesale and retail drug prices and purities were relatively stable between 2005 and 2006. Mexican black tar heroin continues to be the heroin of choice in Los Angeles, though there has been a 0.3 percentage point decline in average purity and a \$0.10 increase in price per milligram pure. The Los Angeles HIDTA region (comprised of Los Angeles, Orange, Riverside, and San Bernardino counties) accounted for 26 percent of the 337 clandestine methamphetamine laboratory incidents reported in California in calendar year 2006. California was ranked seventh in laboratory seizures in the United States in 2006 and remains the home of the domestic methamphetamine ‘superlab.’ Ninety-two percent of the 13 superlabs seized throughout the United States from January to December 2006 were located in California; of those, 25 percent were located in LA*

*HIDTA counties (Los Angeles and Riverside, specifically). Regarding AIDS cases diagnosed in 2006 in Los Angeles County, 63 percent of males were infected through sexual contact with another male and 6 percent were infected through sexual contact with an intravenous drug user (IDU), while 27 percent of females were infected through heterosexual contact and 14 percent were infected through sexual contact with an IDU.*

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## INTRODUCTION

### Area Description

Los Angeles County is the most populous county in the Nation (9,948,081, 2006 estimate). If Los Angeles County were a State, it would rank ninth in population behind California, New York, Texas, Florida, Pennsylvania, Illinois, Ohio, and Michigan. Approximately 27 percent of California’s residents live in Los Angeles County. The population of Los Angeles County has increased 4.5 percent since the 2000 census. Nearly 90 percent of all Los Angeles County residents live within 88 incorporated cities; the remaining 10 percent reside in unincorporated city-like areas of the county. The five most populated cities are, in descending order of population, Los Angeles (3,694,820), Long Beach (461,522), Glendale (194,973), Santa Clarita (151,088), and Pomona (149,473).

Just over one-half of all Los Angeles County residents are female (50.6 percent). More than one-quarter (28.0 percent) are younger than 18; 9.7 percent are older than 65. The racial and ethnic composition of Los Angeles County residents is quite diverse. Of those residents who report being of one race, just under one-half identify as White (48.7 percent), followed by Asians (11.9 percent), Blacks/African-Americans (9.8 percent), American Indians/Alaska Natives (0.8 percent), and Native Hawaiians/Other Pacific Islanders (0.3 percent). About one-quarter of residents (23.5 percent) identify with another race (not specified). Furthermore, 5 percent report two or more races. Residents of Hispanic/Latino origin may be of any race. Therefore, they are included in the appropriate racial categories above. Nearly 45 percent of Los Angeles County residents are of Hispanic/Latino origin; approximately 31 percent of Whites are not of Hispanic/Latino origin.

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

Angeles County's coastline is 81 miles long. The coastal portion of Los Angeles County is heavily urbanized, though there is a large expanse of lesser-populated desert inland in the Santa Clarita Valley (especially in the Antelope Valley). In between the large desert portions of the county (comprising 40 percent of land area) and the heavily populated central and southern portions sits the San Gabriel Mountains, containing the Angeles National Forest.

According to the Drug Enforcement Administration (DEA), due to California's diverse culture and unique geography, there are many issues that affect the drug situation in California. Drugs such as cocaine, heroin, methamphetamine, and marijuana are smuggled into the State from Mexico; however, methamphetamine and marijuana are produced or cultivated in large quantities within the State. Los Angeles is a distribution center for all types of illicit drugs destined for other major metropolitan areas throughout the U.S. as well as locally.

#### Data Sources

This report describes drug abuse trends in Los Angeles County from January 1999 to December 2006. Information was collected from the following sources:

- **Drug treatment data** were derived from the California Outcomes Monitoring System (CalOMS) and were accessed from the County of Los Angeles Department of Public Health, Los Angeles County Alcohol and Drug Program Administration (ADPA). The statistics correspond to Los Angeles County alcohol and other drug treatment and recovery program admissions for January 2000 to June 2006. In January 2006, there was a major statewide shift in the substance abuse treatment and recovery program admission/discharge data system, from the California Alcohol and Drug Data System (CADDs) to CalOMS. Because of this, data collected in calendar year 2006 and beyond may not be totally comparable to data collected prior to January 2006. The reader is cautioned when interpreting the treatment statistics contained within this and future reports. In addition to including the core admission/discharge questions previously captured in CADDs, CalOMS also includes National Outcome Monitoring System (NOMS) measures. It should be noted that admissions for heroin treatment are disproportionately represented because of reporting requirements for facilities that use narcotic replacement therapy to treat heroin users. Both private and publicly funded narcotic treatment providers must report their admissions to the State, while for other
- **drug types, only publicly funded providers must report.**
- **Poison control center call data** were accessed from the California Poison Control System (CPCS) for January 2002 through December 2006. The CPCS provides poison information and telephone management advice and consultation about toxic exposures; hazard surveillance to achieve hazard elimination; and professional and public education on poison prevention, diagnosis, and treatment. The information obtained from the CPCS includes calls in which there was a confirmed exposure to a major substance of abuse/illicit substance (e.g., cocaine, heroin, marijuana, ecstasy), a prescription over-the-counter medication, or substance with common household uses, or a combination of both. For major substances of abuse, calls for all exposure reasons are included in the analysis; for prescription/OTC and common household substances, only calls for the following exposure reasons are included: intentional/suspected suicide, intentional/misuse, intentional/abuse, intentional/unknown, contamination/tampering, and other malicious.
- **Prescription drug sales data** were extracted from the Drug Enforcement Administration's Automation of Reports and Consolidated Orders System (ARCOS) reports. The data provide retail drug distribution data by Zip Code, covering primarily sales to hospitals and pharmacies. ARCOS data presented here are for the 3-digit Zip Code areas of 900xx through 935xx, which roughly correspond with Los Angeles County boundaries. Available data report the "grams of active ingredient" by year; this is complicated to translate into the number of prescriptions or users, so data are reported in terms of proportional change over time (calendar year [CY] 2001 vs. CY 2005).
- **Drug availability, price, purity, seizure, and distribution data** were derived from the Los Angeles Police Department (LAPD), the Los Angeles High Intensity Drug Trafficking Area (HIDTA), the Los Angeles County Regional Criminal Information Clearinghouse (LA CLEAR), the National Drug Intelligence Center (NDIC), and the DEA. The prices included in this report reflect the best estimates of the analysts in the Research and Analysis Unit at LA CLEAR. The price estimates are based primarily on field reports, interviews with law enforcement agencies throughout the Los Angeles HIDTA, and Post Seizure Analysis.

- **Drug analysis results** from local forensic laboratories were derived from the DEA's National Forensic Laboratory Information System (NFLIS). The statistics correspond to items analyzed between January 1, 2003, and December 31, 2006 (calendar years 2003–2006).
- **Adolescent substance use statistics** were accessed from the Los Angeles County-level California Healthy Kids Survey (CHKS) data for the 1999–2000, 2000–2001, 2001–2002, 2002–2003, 2003–2004, 2004–2005, and 2005–2006 school years from WestEd. Data for the two most recent school years (2004–2006) were weighted to enrollment. The CHKS is a modular survey that assesses the overall health of secondary school students (in grades 7, 9, 11, and a small sample of non-traditional school students). In California, Local Education Agencies (LEAs) and County Offices of Education (COEs) that accept funds under the Federal Title IV Safe and Drug Free Schools and Communities (SDFSC) program or the State Tobacco Use Prevention Education (TUPE) program must administer the CHKS at least once every 2 years. Individual school districts are given the opportunity to administer the survey in every school year, however, if the resources exist to do so. It should be noted that data for school years 2000–2001, 2002–2003, and 2004–2005 do not include Los Angeles Unified School District secondary school students (The Los Angeles Unified School District [LAUSD] only collects CHKS every other year, as required). Section A (Core Module) includes questions on lifetime and past-30-day use of alcohol, drugs, and tobacco. Another module (Section C) is comprised of additional questions related to alcohol and drug use, violence, and safety.
- **Demographic and geographic data** were provided by the United Way of Greater Los Angeles, Los Angeles County Online, and the U.S. Census Bureau (*State and County QuickFacts*).
- **Acquired immunodeficiency syndrome (AIDS) and human immunodeficiency virus (HIV) data** (cumulative through December 2006) were provided by the Los Angeles County Department of Health Services, HIV Epidemiology Program, Advanced HIV (AIDS) Quarterly Surveillance Summary, January 2007.

## DRUG ABUSE PATTERNS AND TRENDS

### Cocaine/Crack

Approximately 17 percent of all Los Angeles County treatment and recovery program admissions in January–June 2006 reported a primary crack or powder cocaine problem (exhibit 1). The absolute number of primary cocaine/crack admissions increased 18 percent from the second half of 2005 to the first half of 2006. As a percentage of the total, cocaine admissions had remained quite stable at between 17.1 and 19.3 percent since calendar year 2000 (exhibit 2). Alcohol was the most commonly reported secondary drug problem among primary cocaine admissions (36 percent) (exhibit 3), followed by marijuana (19 percent). Smoking is the reported route of administration for 86 percent of all cocaine admissions, followed by inhalation (11 percent). When asked whether they had used any drug intravenously in the year prior to admission, approximately 3 percent of all primary cocaine admissions reported that they had used needles to administer one or more drugs intravenously at least once during the specified time period (exhibit 3).

Sixty-seven percent of the primary cocaine admissions reported in early 2006 were male, stable since 2005. Black non-Hispanics continued to dominate cocaine admissions (at 57 percent of the total), followed by Hispanics (at 25 percent, still up from the 22 percent seen in the second half of 2004) and White non-Hispanics (15 percent). In terms of age at admission, 36 percent were concentrated in the 36–44 age group; an additional 18 percent of all primary cocaine admissions were between the ages of 26 and 35 (exhibit 3).

Primary cocaine treatment admissions are more likely than treatment admissions for any other substance (alcohol, prescription medications, or illicit drugs) to report being homeless at admission (30 percent). The percentage of cocaine admissions referred to treatment through the criminal justice system in the first half of 2006 (12 percent) remained down from the 20 percent reported in early 2004. More frequently mentioned referral sources included self-referral (30 percent) or referral through Proposition 36 (a.k.a., the Substance Abuse and Crime Prevention Act [SACPA]) court/probation (35 percent). Forty-five percent of primary cocaine admissions had never been admitted to treatment in Los Angeles County for their primary cocaine problem (exhibit 3). An additional 35 percent had one or two prior treatment episodes. Forty-five

percent had earned a high school diploma or GED (compared with 42 percent reported in the first half of 2005). At the time of admission, approximately 15 percent were employed either full- or part-time.

Cocaine injectors were more likely than cocaine inhalers or crack smokers to be male (81 percent), White non-Hispanic (58 percent), or to have been through four or more prior treatment episodes (19 percent). Crack smokers were more likely than cocaine inhalers or injectors to be female (30 percent) or Black non-Hispanic (63 percent). Lastly, cocaine inhalers were more likely than their counterparts to be Hispanic (63 percent), referred by SACPA/Proposition 36 (44 percent), on probation (49 percent), or employed full- or part-time (39 percent).

California Poison Control System calls involving the use of cocaine/crack by Los Angeles County residents increased from 77 in 2002 to a high of 97 in 2003. In 2005, the number of cocaine exposure calls dropped by 37 percent to a 5-year low of 61 calls. In 2006, the number of cocaine/crack exposure calls increased 34 percent to 82 calls (exhibit 4a). Between January and December 2006, 60 percent of the cocaine-exposed callers were male, and 48 percent were between the ages of 26 and 44 (exhibit 5). An additional 20 percent were between the ages of 18 and 25. Regarding the reason for the cocaine/crack exposure calls, 15 percent were for unintentional exposure (all types), 33 percent were for intentional exposure/suspected suicide, 6 percent were for intentional exposure/misuse, and 45 percent were for intentional exposure/abuse.

A total of 10,349 cocaine arrests were made within the city of Los Angeles in calendar year 2006. This represented stabilization over the number of cocaine arrests made during the same time period in 2005. Cocaine arrests accounted for 25 percent of all narcotics arrests made between January 1 and December 31, 2006. Citywide cocaine (including crack and powder) seizures decreased dramatically (57 percent), from 10,735 pounds seized in 2005 to 4,609 pounds seized in 2006. The street value of the seized cocaine (more than \$126 million) accounted for 50 percent of the total street value of all major drugs seized between January and December 2006.

Data from NFLIS for calendar year 2006 showed that out of 55,793 analyzed items reported by participating laboratories within Los Angeles County, 39.5 percent ( $n=22,018$ ) were found to be cocaine/crack (exhibit 6). Cocaine/crack was the most likely illicit drug to be found among items tested in the county, followed by methamphetamine and cannabis. Cocaine/crack has been in the top two (alternating with methamphetamine) in terms of drug items seized

in Los Angeles and analyzed by the NFLIS since calendar year 2003.

Los Angeles-based gangs dominate the street-level distribution of crack cocaine throughout the Los Angeles and San Diego metropolitan areas. Cocaine bought by the gangs is “rocked” or converted into crack cocaine in the Los Angeles area (including Santa Ana and Riverside) and then sold locally or distributed to other cities in California and nationally (DEA 2007). The current retail price range of crack cocaine has remained consistent with previous area reports of \$10–\$40 per rock (exhibit 7a). The current wholesale price for one kilogram of powder cocaine ranges from \$12,000 to \$17,000, which has a less expensive low end than that seen in the last several area reports (of \$14,000 to \$17,000). The current mid-level and retail prices of powder cocaine remained stable, as well, at \$500–\$600 per ounce and \$80 per gram. The purity of powder cocaine was reported as 73–76 percent pure, identical to the purity rate cited in the January 2006 area report.

According to weighted CHKS data for the 2004–2006 school years (exhibit 8), 6.9 percent of all Los Angeles County secondary school students (including 7th, 9th, and 11th graders, and a small sample of nontraditional students) who responded to the survey had ever used cocaine (crack or powder), and 2.9 percent were current cocaine users (defined as any use in the past 30 days). A breakdown of the data by grade level illustrated that among responding 9th graders, 4.9 percent had ever used cocaine and 2.3 percent were current cocaine users. A higher percentage of 11th graders than 9th graders reported both lifetime and past-30-day cocaine/crack use. When asked about past-6-month use of cocaine (any form), methamphetamine, or other stimulants, 5.2 percent of 9th graders and 6.2 percent of 11th graders responded in the affirmative (exhibit 9).

Long-term trends calculated from CHKS data spanning over the most recent 7 school years (exhibit 10) indicate that the pattern of past-30-day cocaine (powder or crack) use among responding secondary school students was similar to usage patterns for some of the other licit and illicit drugs, such as lysergic acid diethylamide (LSD)/other psychedelics and methamphetamine. Past-30-day cocaine/crack use decreased consistently from the peak level seen in 1999–2000 (4.9 percent) to 3.8 percent in 2002–2003. In 2003–2004, current cocaine use remained stable at 3.8 percent of all respondents, and in 2004–2005, current cocaine use dipped below the 3.0 percent mark to 2.7 percent of all respondents. In 2005–2006, current cocaine use remained relatively stable at 2.9 percent of all respondents.



## Heroin

From January to June 2006, 5,506 Los Angeles County treatment and recovery program admissions were attributable to primary heroin abuse, compared with 5,127 admissions reported in the county in the second half of 2005 (exhibit 1). This signifies a 7.4-percent increase in the number of primary heroin admissions but a 1-percent decrease in the proportion of the total. Primary heroin admissions had been on a consistent decline from the year 2000 to the first half of 2005 (exhibits 1 and 2). In the second half of 2005, the decreasing trend line appeared to reverse, and primary heroin admissions increased, accounting for 21.1 percent of all admissions. Despite the apparent trend reversal, primary heroin treatment admissions are still second to methamphetamine by a substantial margin (25.8 percent vs. 20.2 percent of all admissions). It will be interesting to see what happens in the second half of 2006 and beyond.

Demographics of heroin admissions have remained stable over recent reporting periods. In the first half of 2006, primary heroin admissions were predominantly male (73.2 percent), most likely to be age 41–50 (38 percent), and more likely to be Hispanic (50 percent) than White non-Hispanic (36 percent) or Black non-Hispanic (10 percent) (exhibit 3). Compared with other major types of illicit drug admissions, primary heroin admissions in the first half of 2006 had the largest proportion of users age 36 and older (75 percent). Slightly less than one-third (31 percent) of all primary heroin admissions initiated their heroin use prior to age 18, which is quite low compared with other primary substances, such as alcohol, marijuana, methamphetamine, and phencyclidine (PCP). If primary heroin admissions abused another drug secondarily to heroin, it was most likely to be cocaine/crack (19 percent), followed by alcohol (11 percent).

Heroin administration patterns remained relatively stable in the first half of 2006, with injectors accounting for 86 percent, smokers accounting for 8 percent, and inhalers (snorters) accounting for 5 percent (exhibit 3). When asked whether they had used any drug intravenously in the year prior to admission, 84 percent of all primary heroin admissions reported that they had used needles to administer one or more drugs intravenously at least once during the specified time period (down from 90 percent in the second half of 2005).

Fourteen percent of all primary heroin admissions were homeless at time of admission, down slightly from 18 percent in the second half of 2005. Only 2.6 percent were referred by the court or criminal

justice system (exhibit 3). Primary heroin users were most likely to have self-referred for the current treatment episode (74 percent of all heroin admissions). In a measure of current legal status, the majority (74 percent) were not involved at all with the criminal justice system. This corroborates with the very low proportion of criminal justice referrals among primary heroin users. Twenty percent indicated that they had never received treatment for their heroin problem, whereas 51 percent reported three or more primary heroin treatment episodes. Forty-six percent of all primary heroin admissions graduated from high school (stable from the last reporting period), and, at the time of admission, 24 percent were employed full- or part-time.

Heroin injectors were more likely than their inhaler or smoker counterparts to be Hispanic (52 percent), homeless (15 percent), age 36 or older (76 percent), or to have been through four or more prior treatment episodes (42 percent). Heroin smokers were more likely than heroin inhalers or injectors to be male (74 percent), White non-Hispanic (58 percent), employed full- or part-time (39 percent), or to have a high school diploma/GED (54 percent).

Los Angeles County-based California Poison Control System calls involving exposure to heroin fluctuated between 17 and 22 from 2002 to 2004 (exhibit 4a). In 2005, slightly more heroin exposure calls were reported ( $n=25$ ), up from 22 in 2004, and in 2006, the number of calls dropped to the number seen in 2003 ( $n=17$ ). Between January and December 2006, 76 percent of the heroin-exposed callers were male, and 41 percent were either between the ages of 18 and 25 or the ages of 26 and 54. Regarding the reason for the heroin exposure calls, 18 percent were for unintentional exposure (all types), 6 percent were for intentional exposure/suspected suicide, 6 percent were for intentional exposure/misuse, 65 percent were for intentional exposure/abuse, and 6 percent were for contamination/tampering.

A total of 760 heroin arrests were made within the city of Los Angeles from January 1 to December 30, 2006. This represented an 11-percent decrease from the number of heroin arrests made during the same timeframe in 2005. Heroin arrests accounted for approximately 1.8 percent of all narcotics arrests made from January to December 2006. One hundred and thirty-one pounds of heroin were seized within the city of Los Angeles in 2006, which is almost identical to the amount seized in 2005 (128 pounds). The street value of all seized heroin (about \$5.3 million) accounted for approximately 2 percent of the total street value of all major drugs seized in 2006.

According to NFLIS data based on 55,793 analyzed items reported by participating laboratories within Los Angeles County between January 1, 2006, and December 31, 2006, only 4.3 percent (2,412) of all items analyzed were found to be heroin (similar to the amount recorded in CY 2004 and CY 2005; exhibit 6). This small proportion corresponds to the small proportion of heroin (black tar and other forms) reported among Los Angeles Police Department seizures statistics.

Los Angeles remains a primary market for Mexican black tar heroin (NDIC 2007). According to NDIC and DEA (2007), Mexican black tar heroin remains the predominant type of heroin used by Los Angeles County users, as well as the type of heroin seized by law enforcement agencies throughout the State. Mexican criminal groups control the transportation and wholesale, midlevel, and retail activity (NDIC 2007). According to LA CLEAR, the wholesale price per kilogram of Mexican black tar heroin ranges from \$16,000 to \$40,000 (a much broader range than that seen in the last several CEWG area reports for Los Angeles County) (exhibit 7a). The current midlevel range is \$400–\$800 per “pedazo” (Mexican ounce), which is up slightly from the range reported in January 2006 (\$400–\$700); and the retail price is stable at \$40–\$100 per gram (down from \$90–100). A regular ounce is 28.5 grams, whereas a pedazo is 25.0 grams. Black tar heroin available on the streets of Los Angeles has an average purity of approximately 31 percent.

Mexican brown powder heroin sells for a wholesale price of \$24,000 to \$34,000 per kilogram, when available in the area. Retail distribution of Southeast Asian heroin remains limited, but it is associated with a wholesale price range of \$70,000–\$80,000 per 700–750 grams. The lack of China white on the streets is related, in part, to local users’ preference for black tar. The wholesale price for a kilogram of Colombian heroin is \$80,000–\$100,000 (exhibit 7a). Southwest Asian opium is associated with a cost of \$30,000 per kilogram and \$650–\$800 for an 18-gram stick.

In accordance with weighted CHKS data for the 2004–2006 school years (exhibit 8), 2.6 percent of all Los Angeles County secondary school students (including 7th, 9th, and 11th graders, and a small sample of nontraditional students) who responded to the survey had ever used heroin. A breakdown of the data by grade level illustrated that a slightly higher percentage of 9th than 11th graders reported lifetime heroin use (2.4 and 2.3 percent, respectively). When asked about past-6-month use of other drugs, heroin, or sedatives, 5.1 percent of 9th graders and 5.3 percent of 11th graders responded positively (exhibit 9).

## Other Opiates/Narcotics

Other opiates/synthetics continue to constitute a small percentage of all Los Angeles County treatment admissions (exhibit 1). In the recent past, the peak year for other opiates/synthetics was calendar year 2003, when 2.3 percent of Los Angeles County admissions were for primary other opiate/synthetic abuse (exhibit 2). In the second half of 2004, other

opiates/synthetics represented 1.6 percent of all admissions (373 admissions). More recently, in the first half of 2005, the percentage of primary other opiate/synthetic admissions decreased to less than 1 percent of all admissions (203 admissions; 0.9 percent). In the second half of 2005, the number and percentage rebounded a bit (280 admissions; 1.2 percent of the total). And in the first half of 2006, other opiate/synthetic admissions continued to increase in both absolute number (440 admissions) and proportion (1.6 percent of the total) to the proportion seen in late 2004. Despite the small overall numbers of admissions, it will be important to carefully monitor future treatment admissions data, given the increase in prescription opiate abuse/misuse in other major CEWG areas.

Other opiates/synthetics admissions were typically male (53 percent), White non-Hispanic (62 percent), and age 36–50 (41 percent). Approximately 1.1 percent of the primary other opiate/synthetic admissions were younger than 18. Ninety percent administered other opiates/synthetics orally, and an additional 5 percent reported smoking them. Forty-seven percent of primary other opiate/synthetic admissions reported no secondary or tertiary substance use. An additional 6 percent reported secondary alcohol or marijuana use, 10 percent reported secondary heroin use, and 4 percent reported secondary cocaine/crack use. Reports of primary non-prescription methadone admissions continued to be minimal among Los Angeles County treatment admissions (23 admissions, representing 0.1 percent of all admissions).

According to reports from many CEWG representatives, non-heroin opiate users across the Nation have a definite preference of oxycodone (i.e., OxyContin) over hydrocodone (i.e., Vicodin). In Los Angeles, however, hydrocodone is much more likely to show up in recent drug indicator data than oxycodone. This is evidenced by the fact that among NFLIS exhibits in 2006, 51 percent of the opiate/analgesic samples were found to be hydrocodone (vs. 7 percent oxycodone); among 2005 ARCOS data, 27 percent were hydrocodone (vs. 18 percent oxycodone); and among poison control calls for opiate/analgesic exposures

(January–December 2006), 39 percent were for hydrocodone (vs. 10 percent for oxycodone).

Los Angeles County-based California Poison Control System calls involving exposure to opiates/analogics have fluctuated slightly over the years, from 270 in 2002 to 316 in 2005 (exhibit 5a). In 2006, 368 opiate/analgic exposure calls were reported, which represented a 16-percent increase over the number reported in 2005. Between January and December 2006, calls involving an exposure to hydrocodone were more likely than calls involving an exposure to oxycodone (145 calls vs. 37 calls).

DEA ARCOS data on sales of prescription-type opiates to hospitals and pharmacies in the Los Angeles County area indicate that the sale of codeine and meperidine have steadily decreased each year, with a total decrease (between calendar years 2001 and 2005) of 28 percent for codeine and 35 percent for meperidine (exhibit 11). Methadone sales have steadily increased each year, with a total increase of 117 percent from 2001 to 2005. It is important to mention that these data for methadone only include prescriptions for the treatment of pain by physicians. They do not include methadone provided in local narcotic treatment programs. Sales also increased for other prescription-type opiates between 2001 and 2005, including oxycodone (84 percent), hydromorphone (81 percent), hydrocodone (47 percent), morphine (61 percent), and fentanyl base (122 percent). In terms of total drug amounts (in grams) distributed in Los Angeles, codeine, hydrocodone, and morphine were distributed in the largest amounts, when compared with the grams of other opiates distributed (data not shown).

Approximately 1,604 of the 55,793 items analyzed and reported to NFLIS between January 1 and December 31, 2006, were identified as pharmaceuticals/prescription/non-controlled non-narcotic medications (as opposed to illicit substances). Of those, a large proportion (735 items; 46 percent) were found to be narcotic/other analgesics (exhibit 6). The most frequently cited analgesics were hydrocodone (375 items; 51 percent) and codeine (107; 15 percent). In fact, hydrocodone was ranked 6th in the top 10 substances reported in the local NFLIS data. Other analgesics identified included oxycodone (53 items), dihydrocodeine (36 items), methadone (32 items), and morphine (30 items). To put these numbers/percentages into perspective, analgesics accounted for 1.3 percent of all items analyzed by participating Los Angeles County laboratories.

Several methods of pharmaceutical diversion exist, including illegal sale and distribution by health care

professionals, doctor shopping, forged prescriptions, employee theft, pharmacy and in-transit theft, and the Internet (DEA 2007). Retail prices of several types of pharmaceuticals have remained stable for the last few years. The two exceptions to this statement are Dilaudid (hydromorphone), which now retails for \$20–\$60 per 4-milligram tablet (down from \$100), and Percocet, which now sells for \$1–\$5 per 5-milligram tablet (down from \$5–\$10). For more detail regarding the street price of particular diverted medications, please refer to exhibit 7b.

### **Methamphetamine/Other Amphetamines**

The proportion of primary methamphetamine admissions to Los Angeles County treatment and recovery programs appears to have stabilized in the first half of 2006 at 25.8 percent of all admissions. Despite this apparent leveling, methamphetamine surpassed heroin for the fourth 6-month period in a row (exhibit 1). When looking at absolute numbers, primary methamphetamine admissions increased 8 percent from 6,483 admissions in the second half of 2005 to 7,011 admissions in the first half of 2006. Methamphetamine is the one illicit drug that has continually increased in number (but not percent) of all treatment admissions over the past 5 years (exhibit 2). Compared with other major illicit drug admissions, primary methamphetamine admissions had the largest proportion of females (41 percent), Asian/Pacific Islanders (2.5 percent), 18–25-year-olds (29.5 percent), and 26–35-year-olds (33.4 percent) (exhibit 3). In the first half of 2006, an additional 14 admissions were associated with primary amphetamine use (0.1 percent of all admissions; data not shown).

At one time, White methamphetamine users were the predominant racial/ethnic group. Between 2000 and 2005, however, a shift occurred, and primary methamphetamine admissions became more and more dominated by Hispanics, with substantially fewer admissions occurring among Whites. This shift has appeared to hold steady more recently; in the second half of 2005, 54 percent of the primary methamphetamine admissions were Hispanic, whereas 37 percent were White non-Hispanic. And in first half of 2006, the racial/ethnic distribution remained at nearly identical levels, with Hispanics representing 54 percent of the admissions, compared with 36 percent for Whites (exhibit 3).

In the first half of 2006, 18–25-year-olds and 26–30-year-olds accounted for 29.5 percent and 18.5 percent, respectively, of all primary methamphetamine admissions (exhibit 3). The 21–25 age group was the modal group (21.1 percent). Primary

methamphetamine admissions tended to most frequently report secondary abuse of marijuana (29 percent) or alcohol (22 percent).

As shown in exhibit 3, smoking continued as the most frequently mentioned way for primary methamphetamine admissions to administer the drug. In 1999, one-half of all primary methamphetamine admissions smoked the drug. By the first half of 2006, 75 percent reported this mode of administration. Conversely, the proportions of injectors and inhalers continued to decline, from 15.2 and 29.5 percent, respectively, in 1999, to 5 and 17 percent, respectively, in the first half of 2006.

Nine percent of all primary methamphetamine admissions reported past-year intravenous use of one or more drugs. Approximately one-fifth of the primary methamphetamine treatment admissions were homeless (19.3 percent), and 14.9 percent were referred by the court or criminal justice system (down from the 18.1 percent in the second half of 2004). Forty-eight percent were entering treatment for the first time. Forty percent had graduated from high school, and, at the time of admission, 19 percent were employed full- or part-time (exhibit 3).

Methamphetamine injectors were considerably more likely than their inhaler or smoker counterparts to be male (69 percent, down from 75 percent reported in June 2006), White non-Hispanic (68 percent), 36 or older (44 percent), homeless (40 percent), on parole (16 percent, down from 21 percent in the second half of 2005), or to have been through four or more prior treatment episodes (15 percent). Interestingly, injectors were equally as likely as their counterparts to have a high school diploma or GED (percentages ranged between 39 and 40 percent for all three groups). Injectors continued to be, by far, the most impaired of all primary methamphetamine abusers. Methamphetamine smokers were equally as likely as methamphetamine inhalers to be female (42 percent). Smokers were equally as likely as inhalers to be age 20 or younger (17 percent each), but more likely than injectors or inhalers to be on probation at the time of admission (46 percent). Lastly, methamphetamine inhalers were more likely than their counterparts to be Hispanic (66 percent), to have used methamphetamine for the first time at age 31 or older (18 percent), or to be employed part- or full-time at admission (22 percent). An interesting difference emerged with regards to the percentage of Black non-Hispanics. In the past, no difference existed among the three modes of administration with regards to the percentage of Blacks—about 3 percent of the methamphetamine injectors, snorters, and smokers were Black. But in the first half of 2006, 4.5 percent

of the methamphetamine injectors were Black, compared with 4.3 percent of the methamphetamine smokers and 2.7 percent of the methamphetamine snorters.

California Poison Control System calls involving exposure to methamphetamine/amphetamine among Los Angeles County residents have fluctuated over the years, from 95 calls in 2002 to approximately 118 calls in 2005. The 118 calls in 2005 represented a 5-year high (exhibit 4a). In 2006, methamphetamine/amphetamine-related exposure calls decreased nearly 40 percent to 73 calls. Regarding the reason for the methamphetamine/amphetamine exposure calls, 23 percent were for unintentional exposure (all types), 30 percent were for intentional exposure/suspected suicide, 4 percent were for intentional exposure/misuse, 41 percent were for intentional exposure/abuse, and 1 percent were for contamination/tampering. Between January and December 2006, a higher percentage of callers reporting exposure to methamphetamine or other amphetamines were male (64 percent) than female (36 percent), and 56 percent were between the ages of 18 and 34 (exhibit 5). In addition to calls relating to methamphetamine and amphetamine exposure, Ritalin/Adderall exposure calls ranged from 21 to 37 between 2002 and 2005. In 2006, the number of calls more than doubled (128 percent) to 48 calls (exhibit 4b).

Throughout calendar year 2006, 483 amphetamine arrests were made within the city of Los Angeles, signaling a 34-percent decrease over the number of arrests made during the same period in 2005 (736 arrests). As a class, amphetamine arrests continued to account for only about 1.2 percent of the total. Arrests for methamphetamine are included in the category “other narcotics.” In 2006, 22,627 arrests for other narcotics were made (which translates into an increase of 11 percent over the total number in 2005). Many of these “other narcotics” arrests could be attributable to methamphetamine, but there is no way of knowing from the LAPD report. Arrests for “other narcotics” accounted for 55 percent of all arrests.

While methamphetamine is not reported separately in citywide drug arrests, it is broken out in citywide seizures. Citywide methamphetamine seizures experienced a dramatic increase (of 102 percent), from 477 pounds seized in calendar year 2005 to 963 pounds seized during 2006. It is interesting that the city of Los Angeles experienced a surge in methamphetamine seizures, given the consistent decreases in countywide and statewide methamphetamine laboratory seizures that have occurred since 1999. The street value of the seized methamphetamine (\$41.3

million) accounted for approximately 16 percent of the total street value of all major drugs seized between January and December 2006.

DEA ARCOS data on sales of prescription stimulants to hospitals and pharmacies in the Los Angeles County area indicate that sales of Adderall (DL-Amphetamine), Dexedrine (D-Amphetamine), and Ritalin (methylphenidate) have steadily increased each year since 2001. Adderall sales had the greatest total percent change (82 percent) from 2001 to 2005. Sales of Dexedrine increased 25 percent and sales of Ritalin increased 42 percent during the same 5-year period (exhibit 11). In terms of total drug amounts (in grams) distributed in Los Angeles, Ritalin was distributed in the largest amount when compared to the grams of the other stimulants distributed (data not shown).

According to NFLIS data based on 55,793 analyzed items reported by participating laboratories within Los Angeles County between January 1 and December 31, 2006, 26.3 percent (14,646) of all items analyzed were found to be methamphetamine/amphetamine (exhibit 6). Methamphetamine accounted for the second largest proportion of samples positively identified by NFLIS. An additional 11 items were identified as methylphenidate, and 8 items were pseudoephedrine and phentermine (each accounting for less than one-tenth of a percent of all exhibits).

The DEA reports that methamphetamine is the number one law enforcement drug threat in California (2007). Mexican criminal groups based in both Mexico and California control the wholesale and midlevel distribution of methamphetamine and distribute the drug via private vehicles and commercial trucks. A secondary trafficking group, composed primarily of Caucasians, operates small, unsophisticated laboratories (DEA 2007).

The wholesale price per pound of methamphetamine ranged from \$5,000 to \$7,200 in December 2006 (exhibit 7a), which is similar to the range reported in January 2006, but still higher than the wholesale price reported in 2002–2004 (\$3,700 to \$5,000). The midlevel price was \$300 per ounce (stable since 2006). According to one intelligence source, the purity of finished powder methamphetamine available in the Los Angeles area remains at approximately 30–35 percent. Given the many different production “recipes” and the multiple types of methamphetamine entering into and staying in the Los Angeles area (locally produced and Mexican produced), however, it is very possible that there is a wide range of purity (especially since such

a high percentage of users report smoking methamphetamine).

Crystal methamphetamine, which is much more pure than powder methamphetamine, has a wholesale price of \$8,000–\$12,000 per pound in Los Angeles (up from the range of \$6,500 to \$7,000 reported in January 2006). The midlevel price for an ounce of crystal methamphetamine is \$600–\$800, which is identical to the range reported in January 2006. At the retail level, crystal methamphetamine sells for \$20 per one-quarter gram, \$40–\$50 per 1/32 ounce, \$60–\$70 per 1/16 ounce, \$100–\$125 per 1/8 ounce, and \$140 per gram (all stable since 2006). A double case of pseudoephedrine (17,000 60-milligram tablets per case) sells for \$4,000–\$6,000 (up from \$3,250–\$4,000 reported in January 2006).

Clandestine laboratory incidents (which include lab seizures, dumpsites, and chemical/glass/equipment) have decreased consistently and dramatically in both the LA HIDTA and in California. In 1999, 2,090 lab incidents were reported in California (1,187 of which occurred in the 4-county LA HIDTA region). By 2006, there were just 337 laboratory incidents reported in California (89 in the LA HIDTA). Despite the decrease in the number of local lab incidents, qualitative reports from key law enforcement contacts throughout the area indicate that the availability of finished methamphetamine has remained stable in Los Angeles County.

According to the El Paso Intelligence Center’s (EPIC’s) National Clandestine Laboratory Seizure System (as of February 2007), California had the seventh highest number of methamphetamine laboratory incidents in 2006 (281 as of February 2007, which is slightly lower than the figure reported by LA CLEAR in May 2007), following Missouri (1,268), Illinois (751), Indiana (689), Arkansas (350), Tennessee (337), and Iowa (303).

Within California, the Los Angeles HIDTA accounted for 26 percent of all laboratory-only seizures made in California during calendar year 2006 (76 of the 178 total lab-only seizures). The Central Valley HIDTA (covering Fresno, Kern, Madera, Merced, Sacramento, Stanislaus, and Tulare counties) accounted for 21 percent of all labs seized; the Northern California HIDTA (covering Alameda, Contra Costa, Lake, Marin, Monterey, San Francisco, San Mateo, Santa Clara, Santa Cruz, and Sonoma Counties) accounted for 13 percent; and the Southwest Border HIDTA (covering San Diego and Imperial Counties) accounted for 2.2 percent. Of the 4 counties in the LA HIDTA, Los Angeles County had the highest number of seizures in 2006 (30),

followed by San Bernardino County (23), Riverside County (19), and Orange County (4).

Even though six States exceed California in terms of laboratory incidents, California leads the country in the number of domestic “superlabs.” Twelve of the 13 superlabs (92 percent) seized in 2006 were located in California. The LA HIDTA reported the highest percentage of superlabs seized throughout California (3 out of the 12 superlabs seized between January 1 and December 31, 2006, or 25 percent). Within the LA HIDTA, Los Angeles County led with two superlab seizures, followed by Riverside County with one superlab. Orange County and San Bernardino County reported no superlabs.

The cost to clean up methamphetamine-related activities located in the LA HIDTA in 2006 totaled \$332,802. Los Angeles County had the highest clean-up costs (\$128,182, or 39 percent of the total). An additional 58 percent of this total (\$194,192) corresponds to the cost of cleaning up Riverside and San Bernardino County laboratories (34 percent for San Bernardino and 24 percent for Riverside County). It is important to note that these cleanup figures do not encompass building and environment remediation, which each cost taxpayers even more money.

Nationally, in 2006, 984 children were “affected” by methamphetamine laboratories. Approximately 6 percent of the affected children resided in California. Within California, 24 of the 58 (41 percent) affected children resided in the 4 LA HIDTA counties. The highest proportion was reported in Los Angeles County (13 of the 24 children), followed by Riverside County (6), and San Bernardino County (5). It is important to note that these numbers are underreported, due to differences in county- and State-level reporting procedures.

According to weighted CHKS data for the 2004–2006 school years (exhibit 8), 6.8 percent of all Los Angeles County secondary school students (including 7th, 9th, and 11th graders, and a small sample of nontraditional students) who responded to the survey had ever used methamphetamine, and 2.8 percent were current methamphetamine users (defined as any use in the past 30 days). A breakdown of the data by grade level illustrated that among responding 9th graders, 4.9 percent had ever used methamphetamine and 2.3 percent were current users. A higher percentage of 11th than 9th graders reported lifetime methamphetamine use (6.6 percent). When asked about past-6-month use of cocaine, methamphetamine, or other stimulants, 5.2 percent of 9th graders and 6.2 percent of 11th graders responded in the affirmative (exhibit 9).

According to long-term trends calculated from CHKS data spanning over the most recent seven school years (exhibit 10), the pattern of past-30-day methamphetamine use among responding secondary school students was similar to patterns seen for cocaine and LSD/other psychedelics. From 1999–2000 to 2001–2002, past-30-day methamphetamine use decreased consistently from the peak level of 4.6 percent in 1999–2000 to 4.1 percent in 2001–2002. In 2002–2003, the percentage of current methamphetamine users increased slightly to 4.3 percent, but it decreased to 3.7 percent in 2003–2004 and to 2.7 percent (the lowest level yet) in 2004–2005. In 2005–2006, the percentage of current methamphetamine users rebounded a bit to 2.9 percent.

### **Marijuana**

The number of primary marijuana treatment admissions has fluctuated over several semiannual reporting periods (exhibit 1), but the percentage of the total has remained somewhat fixed between 13 and 16 percent. In the first half of 2006, 4,453 primary marijuana admissions were reported in Los Angeles County (representing a 10-percent increase from the 4,041 admissions reported in the first half of 2005). As a percentage of the total, marijuana accounted for 16.4 percent of all admissions. Like many of the other major drugs of abuse, the user demographics of primary marijuana admissions were relatively stable in the first half of 2006. Seventy-one percent of the primary marijuana admissions were male (down from 76 percent), and individuals younger than 18 constituted 55 percent of these admissions (up from 50 percent; exhibit 3). Primary marijuana admissions were most likely to be Hispanic (52 percent), followed by Black non-Hispanics (29 percent) and White non-Hispanics (14 percent).

Alcohol was identified as a secondary drug problem for 38 percent of the primary marijuana admissions in the first half of 2006. An additional 14 percent reported methamphetamine, and 6 percent reported cocaine/crack as their secondary drug problem. Compared with other major illicit drug admissions, primary marijuana admissions had the largest proportion of users age 17 and younger (54 percent). When asked whether they had used any drug intravenously in the year prior to admission, 1 percent of all primary marijuana admissions answered affirmatively (exhibit 3).

Approximately 7 percent of the primary marijuana treatment admissions in the first half of 2006 were homeless at the time of admission, and 14 percent were referred to treatment by the court or criminal

justice system (a continual decrease from the 21 percent of primary marijuana admissions referred by the criminal justice system in the earlier part of 2005). Seventy-six percent were entering treatment for the first time. Twenty percent had graduated from high school, and, at the time of admission, 12 percent were employed full- or part-time (exhibit 3). Such characteristics reflect the fact that just under one-half of all primary marijuana admissions were younger than 18 at the time of admission.

California Poison Control System calls involving exposure to marijuana among Los Angeles County residents were stable at 26–40 calls between 2002 and 2004 (exhibit 4a). In 2005, marijuana-related exposure calls increased to 30 calls. And in 2006, the number of marijuana exposure calls increased again to 35 calls. In calendar year 2006, 74 percent of the marijuana-exposed callers were male (up from 53 percent), and 83 percent were age 25 or younger (up from 73 percent). Regarding the reason for the marijuana exposure calls, 49 percent were for unintentional exposure (all types), 9 percent were for intentional exposure/suspected suicide, 40 percent were for intentional exposure/abuse, and 3 percent were for contamination/tampering.

A total of 7,122 marijuana arrests were made within the city of Los Angeles in calendar year 2006; this number is 18 percent higher than the number of marijuana arrests made during the same time period in 2005 (6,017). Marijuana arrests accounted for approximately 17 percent of all narcotics arrests made between January 1 and December 31, 2006. Marijuana continues to dominate drug seizures in the city of Los Angeles. The amount of marijuana seized in 2006 increased more than 115 percent, from 9,273 pounds in 2005 to 19,961 pounds in 2006. In calendar year 2006, the amount of marijuana seized accounted for 78 percent of the total weight of drugs (in pounds) seized. Cocaine was a distant second, accounting for an additional 32 percent of the total weight. The street value of the seized marijuana (\$73.4 million) accounted for approximately 29 percent of the total street value of all major drugs seized in 2006.

According to NFLIS data based on 55,793 analyzed items reported by participating laboratories within Los Angeles County between January and December 2006, 25 percent (13,862) of all items analyzed were found to be marijuana/cannabis (exhibit 6). Cannabis was the third most frequently identified substance in Los Angeles County, following cocaine/crack and methamphetamine.

The wholesale price of Mexican-grade marijuana ranges from \$300 to \$360 per pound (stable since

January 2006 report; exhibit 7a). The midlevel and retail prices of commercial grade marijuana are \$70–\$100 per ounce (compared with \$75 to \$100 in January 2006) and \$5–\$10 per gram. The wholesale price of domestic mid-grade marijuana is \$700–\$750 per pound (stable). Midlevel and retail prices are \$150–\$250 per ounce (the former range was \$120 to \$150) and \$25 per gram. The wholesale price of high-grade sinsemilla is stable at \$2,500–\$6,000 per pound. An ounce of sinsemilla sells for \$300–\$600, and one-eighth ounce sells for \$60–\$80. A pound of BC Bud, which would cost approximately \$1,500 in Vancouver, has a wholesale per pound value of \$3,300 to \$6,000 in Los Angeles.

According to weighted CHKS data for the 2004–2006 school years (exhibit 8), 22.6 percent of all Los Angeles County secondary school students (including 7th, 9th, and 11th graders, and a small sample of nontraditional students) who responded to the survey had ever used marijuana, and 11.3 percent were current marijuana users (defined as any use in the past 30 days). A breakdown of the data by grade level illustrated that among responding 7th graders, 8.1 percent had ever used marijuana and 4.4 percent were current marijuana users. A higher percentage of 9th graders than 7th graders and a higher percentage of 11th graders than 9th graders reported marijuana use in the past 30 days. When asked about past-6-month use of marijuana, 7.0 percent of 7th graders, 16.2 percent of 9th graders, and 24.9 percent of 11th graders responded in the affirmative (all down from the past reporting period; exhibit 9).

According to long-term trends calculated from CHKS data spanning over the seven most recent school years (exhibit 10), the pattern of past-30-day marijuana use among responding secondary school students was more likely than the use of many other drugs, but slightly less likely than binge drinking. Past-30-day marijuana use had decreased consistently from the peak level of 13.2 percent seen in 1999–2000 to 10.3 percent in 2003–2004. In 2004–2005, however, the percentage of secondary school students in Los Angeles reporting lifetime marijuana use climbed slightly to 11.1 percent, and in 2005–2006, the percentage increased ever so slightly to 11.3 percent.

### Club Drugs

California Poison Control System calls involving exposure to methylenedioxymethamphetamine (MDMA, ecstasy) among Los Angeles County residents had been decreasing consistently over recent years, from 34 in 2002 to 20 in 2005 (exhibit 4a). In 2006, the number of ecstasy-related exposure calls decreased slightly to 17

calls. During calendar year 2006, more callers reporting exposure to ecstasy were male (53 percent) than female (47 percent; a reversal of the pattern seen in 2005), and 58 percent were between the ages of 13 and 25 (exhibit 5). In addition to calls relating to ecstasy exposure, a total of six gamma hydroxybutyrate (GHB) exposure calls, two ketamine calls, and zero Rohypnol calls were recorded between January and December 2006 (exhibit 4a). Regarding the reason for the club drug exposure calls, 28 percent were for unintentional exposure (all types), 8 percent were for intentional exposure/suspected suicide, and 64 percent were for intentional exposure/abuse.

The California Poison Control System also kept track of calls relating to Coricidin HBP and dextromethorphan (DXM) exposures. Between January and December 2006, 62 Coricidin HBP calls and 34 DXM calls were logged in the system (exhibit 4b). Fifty-six percent of Coricidin HBP calls and 62 percent of DXM calls were male. Furthermore, 72 percent of the Coricidin HBP calls and 56 percent of the DXM calls were made because of exposure to individuals younger than 18. Those individuals aged 18–25 represented an additional 24 percent of the Coricidin HBP calls and 18 percent of the DXM calls.

According to NFLIS data based on 55,793 analyzed items reported by participating laboratories within Los Angeles County during calendar year 2006, 1.3 percent (753) of all items analyzed were found to be MDMA, GHB, ketamine, or Rohypnol (exhibit 6). Of those four club drugs, MDMA was most likely to be detected; it represented 89 percent (669) of the club drug samples analyzed by NFLIS. GHB and its analogues, gamma butyrolactone (GBL) and 1,4-butanediol (1,4BD), represented an additional 6 percent.

The DEA reports that MDMA is widely available in Los Angeles, one of the three major gateway cities for the influx of MDMA into the country (Miami and New York are the other two cities). NDIC reports that Los Angeles is a large domestic MDMA market (with supplies originating from Canadian sources). Asian DTOs have established trafficking networks in the Southwest Region, particularly in Los Angeles and Houston (NDIC 2007).

At the retail level, ecstasy usually sells for between \$10 and \$20 a tablet (exhibit 7a). In Los Angeles, ecstasy “boats” continue to be mentioned. A boat contains 1,000 MDMA pills and sells for \$6,000 to \$8,000. Flunitrazepam (Rohypnol), when available, has a retail value of \$6–\$10 for a 1-milligram pill. On the street, ketamine sells for \$100–\$200 per 10-milliliter vial. In addition, ketamine retails for \$20 for

two-tenths of a gram of powder. The wholesale price for GHB is \$275–\$350 per gallon, and a liter sells for \$80–\$100. A 16-ounce bottle of GHB sells for \$120 (stable over several reporting periods). Capfuls can still be purchased for \$5–\$20 each. The vast majority of GHB users ingested the drug as a liquid, either in straight shots or mixed with a drink.

According to weighted CHKS data for the 2004–2006 school years (exhibit 8), 5.3 percent of all Los Angeles County secondary school students (including 7th, 9th, and 11th graders, and a small sample of nontraditional students) who responded to the survey had ever used ecstasy. A higher percentage of 11th graders (5.5 percent) than 9th graders (3.9 percent) reported lifetime ecstasy use. Current use of ecstasy was not assessed, although a question regarding past-6-month use of psychedelics, ecstasy, or other club drugs was included in the survey. Overall, 5.5 percent of all respondents reported use of these drugs (exhibit 9). By grade, 4.7 percent of 9th graders (down from 6.7 percent) and 5.5 percent of 11th graders (stable) answered in the affirmative.

### Phencyclidine and Hallucinogens

Primary PCP treatment admissions accounted for 0.5 percent of all admissions ( $n=124$ ) in the first half of 2006 (exhibit 1). The proportion of PCP admissions among all admissions has been stable for several years, but the overall number of PCP admissions has fluctuated since the late 1990s. From 1999 to the first half of 2003, the number of admissions increased 89 percent. In the second half of 2003, however, the number of PCP admissions decreased slightly (16 percent) to 262 admissions, and it continued to decrease further (12 percent) in the first half of 2004 (to 230 admissions) and in the second half of 2004 (to 135 admissions, a 41-percent decrease from the first half of the year). In the first half of 2005, there was a very slight upturn in the number of PCP admissions, representing an 11-percent increase in number. But in the second half of 2005, the number decreased again (7 percent) to 128 admissions, and remained stable at 124 admissions in early 2006 (exhibit 1). Alcohol (23 percent), cocaine/crack (17 percent), and marijuana (17 percent) were the three most frequently reported secondary drugs among primary PCP admissions. An overwhelming majority (95 percent) of the primary PCP admissions smoked the drug. About 2.4 percent reported oral ingestion, and 1.6 percent inhaled (snorted) PCP. There were no notable changes from the previous reporting period in terms of user demographics. Other hallucinogens, such as LSD, peyote, and mescaline, continued to account for approximately 0.1 percent of the total treatment admissions.



California Poison Control System calls involving exposure to PCP among Los Angeles County residents fluctuated between 13 calls in 2002 to 9 calls in 2005 (exhibit 4a). In calendar year 2006, there was a slight increase in PCP-related exposure calls to 12.

One hundred and thirteen PCP arrests were made within the city of Los Angeles during calendar year 2006, which was almost identical to the number of arrests made during calendar year 2005 (117 arrests). Like amphetamine arrests, PCP arrests accounted for a very low proportion of all arrests (less than 1 percent). The street value of the PCP seized in 2006 (\$3.1 million) represented approximately 1.2 percent of the total street value of all drugs seized during that year. The total amount of PCP seized from January through December 2006 (7.5 pounds) was 55 percent lower than the amount seized during the same period in 2005 (16.7 pounds).

According to NFLIS data based on 55,793 analyzed items reported by participating laboratories within Los Angeles County between January and December 2006, 0.6 percent ( $n=327$ ) of all items analyzed were found to be PCP, and a mere 9 items were found to be LSD (exhibit 6).

The wholesale price for a gallon of PCP remains at a high level, ranging from \$10,000 to \$15,000 (about \$5,000 lower than the wholesale price range reported in June 2006; exhibit 7a). An ounce of PCP can be purchased for \$300–\$350. A sherm cigarette dipped in liquid PCP continues to sell for \$10–\$20 (stable since 2006). A sheet of approximately 100 doses of LSD has a wholesale price range of \$150–\$200. Typically, a single dose sells for \$5–\$10. At the retail level, psilocybin mushrooms cost about \$20 per one-eighth ounce.

According to the 2007 *National Drug Threat Assessment*, PCP production has decreased during the past year in Los Angeles. The reason for this decrease is recent arrests of several major PCP producers. As a result of reduced production, PCP is less available in Los Angeles and will likely decrease at the national level as well (NDIC 2007).

Weighted CHKS data for the combined 2004–2006 school years indicates that 5.0 percent of all Los Angeles County secondary school students (including 7th, 9th, and 11th graders, and a small sample of nontraditional students) who responded to the survey had ever used LSD or another psychedelic, and 2.2 percent had used LSD/other psychedelics in the past 30 days (exhibit 8). A breakdown of the data by grade level illustrated that among responding 9th graders, 3.7 percent had ever used LSD/other psy-

chedelics, and 1.9 percent were current users. Among 11th graders, 5.2 percent had ever used LSD/other psychedelics, and 1.9 percent used a psychedelic at least once within the past 30 days.

According to long-term trends calculated from CHKS data spanning over the last 7 school years (exhibit 10), the pattern of past-30-day LSD/other psychedelics use among responding secondary school

students (in grades 7, 9, and 11) was similar to usage patterns seen with cocaine and methamphetamine. Current use of LSD/other psychedelics has been trending downward since the late 1990s, to a low of 2.8 percent in 2002–2003. In 2003–2004, the percentage increased ever so slightly to 2.9 percent of all respondents. But in 2004–2005, only 2.0 percent of the respondents indicated that they had used LSD/other psychedelics in the recent past, and in 2005–2006, 2.2 percent responded in the affirmative.

### **Benzodiazepines, Barbiturates, and Sedative/Hypnotics**

In the first half of 2006, treatment and recovery program admissions associated with primary barbiturate, benzodiazepine, or other sedative/hypnotic abuse continued to account for less than 1 percent of all admissions in Los Angeles County.

Los Angeles County-based California Poison Control System calls involving exposure to benzodiazepines fluctuated between 449 and 537 calls from 2002 to 2004 (exhibit 4b). Benzodiazepine-related calls had been on an upswing from 2002 (449 calls) to 2004 (537 calls). In 2005, however, 477 benzodiazepine exposure calls were reported, and in 2006, close to 500 calls were reported (494). Between January and December 2006, 123 (25 percent) of the benzodiazepine-related exposure calls were for alprazolam, 118 (24 percent) were for clonazepam, 97 (20 percent) were for lorazepam, and 58 (12 percent) were for diazepam. In addition to calls for benzodiazepine exposures, a total of 124 antidepressant exposure calls, 90 antipsychotic exposure calls, and 4 barbiturate exposure calls were reported in 2006 (exhibit 4b).

Approximately 1,604 of the 55,793 items analyzed and reported to the NFLIS system in CY 2006 were identified as pharmaceuticals/prescription/non-controlled non-narcotic medications (as opposed to illicit substances). Of those, roughly 24 percent (391 items) were found to be benzodiazepines (exhibit 6). The three most frequently cited benzodiazepines were alprazolam (117 items; 30 percent), diazepam (116 items; 30 percent), and clonazepam (106 items; 27 percent).

Two primary methods of attaining prescription drugs without a prescription in the Los Angeles metropolitan area are either doctor shopping or prescription forgery (DEA 2007). LA CLEAR reports that Valium retails for \$1 per 5-milligram tablet (exhibit 7b), which is stable since the June 2004 report. Xanax retails for \$1 per 4-milligram tablet.

#### INFECTIOUS DISEASES RELATED TO DRUG ABUSE

The cumulative total of adult/adolescent AIDS cases reported in Los Angeles County through December 31, 2006, reached 51,780. Of those cases, 771 were reported between July 1, 2006, and December 31, 2006. Currently, approximately 21,602 Los Angeles County residents are living with advanced HIV disease. Los Angeles County cumulative cases represent approximately 36 percent of the 143,946 cumulative cases in California and approximately 5 percent of the 988,376 cumulative cases nationwide. Of the cumulative cases reported in Los Angeles County, 46 percent were White, 31 percent were Hispanic, 20 percent were African-American, 44 percent were age 30–39, and 92 percent were male.

The proportion of newly diagnosed males solely exposed through injection drug use ranged between 4 and 6 percent from 2000 to 2006 (exhibit 12). The proportions for other exposure categories, such as the combination of male-to-male sexual contact and injection drug use, heterosexual contact, blood transfusion, and hemophilia/coagulation disorder, remained relatively stable since 2000. The proportion of men exposed to AIDS through male-to-male sexual contact has fluctuated slightly, from 65 percent in 2000, to a high of 69 percent in 2003, and then down to 63 percent in 2005 and 2006. The proportion of male cases with an “other” or “undetermined” exposure category accounted for 23 percent of all male cases diagnosed in 2006. Since the 2006 data are preliminary, it is possible that some of the cases in the “other/undetermined” category will be transferred into the other exposure categories.

In 2006, 27 percent of all newly diagnosed female AIDS cases were associated with heterosexual contact. Female cases attributable to injection drug use fluctuated between 12 and 21 percent of all female cases over the years, and they now account for 14 percent. The proportion of female cases with an

“other” or “undetermined” exposure category accounted for 56 percent of all female AIDS cases (exhibit 12).

In Los Angeles County in 2006, approximately 7 percent of all AIDS cases involved injection drug use (alone) as the primary route of exposure. Among the 3,555 cumulative cases primarily attributable to injection drug use, 71 percent occurred among males. African-Americans are now the modal group of male injection drug users (IDUs) (accounting for 37 percent), followed by Hispanics (32 percent) and Whites (30 percent). Among female IDU AIDS cases, African-Americans constituted 44 percent, Whites constituted 32 percent, and Hispanics constituted 22 percent.

An additional 7 percent of the total cumulative cases were attributable to a combination of male-to-male sexual contact and injection drug use. Fifty-one percent of the male-to-male sexual contact and injection drug use cases were White.

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**Exhibit 1. Numbers and Percentages of Semiannual Treatment Admissions in Los Angeles County, by Primary Major Drug of Abuse: July 2003–June 2006**

Primary Drug	07/03–12/03 Number (%)	01/04–06/04 Number (%)	07/04–12/04 Number (%)	01/05–06/05 Number (%)	07/05–12/05 Number (%)	01/06–06/06 Number (%)
Cocaine/Crack	4,815 (18.2)	5,137 (18.1)	4,124 (17.8)	4,397 (17.6)	4,021 (16.6)	4,726 (17.4)
Heroin	6,704 (25.4)	6,942 (24.5)	5,341 (23.2)	4,870 (19.5)	5,127 (21.1)	5,506 (20.2)
Marijuana	3,452 (13.1)	3,812 (13.4)	3,318 (14.4)	4,041 (16.2)	3,640 (15.0)	4,453 (16.4)
Methamphetamine	5,095 (19.3)	5,840 (20.6)	5,395 (23.4)	6,392 (25.6)	6,483 (26.7)	7,011 (25.8)
PCP	262 (1.0)	230 (0.8)	135 (0.6)	150 (0.6)	128 (0.5)	124 (0.5)
Other Opiates/ Synthetics	645 (2.4)	583 (2.1)	373 (1.6)	230 (0.9)	280 (1.2)	440 (1.6)
Other (Includes Alcohol)	5,420 (20.5)	5,827 (20.5)	4,373 (19.0)	4,892 (19.6)	4,624 (19.0)	4,957 (18.2)
<b>Total Admissions</b>	<b>26,393</b>	<b>28,371</b>	<b>23,059</b>	<b>24,972</b>	<b>24,303</b>	<b>27,217</b>

SOURCE: LA County Alcohol and Drug Program Administration, California Outcomes Monitoring System (CalOMS)

**Exhibit 2. Numbers (and Percentages) of Annual Treatment Admissions in Los Angeles County, by Primary Major Drug of Abuse: Calendar Years 2000–2005 and January–June 2006**

Primary Drug	2000 (%)	2001 (%)	2002 (%)	2003 (%)	2004 (%)	2005 (%)	1H 2006 <sup>1</sup> (%)
Cocaine	8,951 (17.7)	8,703 (18.9)	9,009 (19.3)	10,057 (18.8)	9,261 (18.0)	8,418 (17.1)	4,726 (17.4)
Heroin	22,975 (45.4)	17,560 (38.1)	14,863 (31.9)	13,595 (25.4)	12,283 (23.9)	9,997 (20.3)	5,506 (20.2)
Marijuana	3,553 (7.0)	4,286 (9.3)	5,502 (11.8)	7,121 (13.3)	7,130 (13.9)	7,681 (15.6)	4,453 (16.4)
Methamphetamine	4,140 (8.2)	5,418 (11.7)	7,145 (15.3)	10,056 (18.8)	11,235 (21.8)	12,875 (26.1)	7,011 (25.8)
PCP	337 (0.7)	405 (0.9)	415 (0.9)	576 (1.1)	365 (0.7)	278 (0.6)	124 (0.5)
Other Opiates/ Synthetics	859 (1.7)	834 (1.8)	839 (1.8)	1,227 (2.3)	956 (1.9)	510 (1.0)	440 (1.6)
Other (Includes Alcohol)	9,753 (19.3)	8,921 (19.3)	8,856 (19.0)	10,871 (20.3)	10,200 (19.8)	9,516 (19.3)	4,957 (18.2)
<b>Total Admissions</b>	<b>50,568 (100.0)</b>	<b>46,127 (100.0)</b>	<b>46,629 (100.0)</b>	<b>53,503 (100.0)</b>	<b>51,430 (100.0)</b>	<b>49,275 (100.0)</b>	<b>27,217 (100.0)</b>

<sup>1</sup>1H 2006 corresponds to admissions data collected in Jan-Jun 2006; data for 2H 2006 (Jul–Dec) have yet to be finalized.

SOURCE: LA County Alcohol and Drug Program Administration, California Outcomes Monitoring System (CalOMS)

**Exhibit 3. Demographics of Treatment Admissions in Los Angeles County, by Primary Illicit Drug of Abuse and Percent: January–June 2006**

Demographics	Cocaine/ Crack	Heroin	Marijuana	Metham- phetamine	All Admissions
Gender					
Male	67.3	73.2	70.7	58.6	66.1
Female	32.7	26.8	29.3	41.4	33.9
Race/Ethnicity					
White, non-Hispanic	15.4	36.3	14.1	35.7	28.7
Black, non-Hispanic	56.6	9.8	29.4	4.1	22.3
Hispanic	24.6	49.6	52.2	54.4	44.1
American Indian	0.3	0.8	0.4	1.0	0.9
Asian/Pacific Islander	1.3	1.1	1.7	2.5	1.8
Other	1.7	2.3	2.3	2.2	2.3
Age at Admission					
17 and younger	1.2	0.3	54.5	7.8	14.3
18–25	8.6	8.0	20.3	29.5	16.1
26–35	17.9	17.2	12.2	33.4	20.6
36 and older	72.3	74.5	13.0	29.3	49.0
Route of Administration					
Oral	1.3	1.0	1.6	1.9	20.5
Smoking	86.0	7.8	97.5	75.0	52.4
Inhalation	11.2	5.1	0.5	16.8	7.5
Injection	0.8	85.8	0.0	5.4	18.9
Unknown/other	0.8	0.3	0.4	1.0	0.6
Secondary Drug	Alcohol	Cocaine/ Crack	Alcohol	Marijuana	Alcohol
Positive for Intravenous Drug Use in Past Year	3.3	84.2	1.0	8.9	20.7
Homeless	30.0	14.1	6.7	19.3	17.8
Employed Full- or Part-Time	14.9	24.0	11.9	19.0	17.6
Graduated from High School	44.7	45.9	20.0	39.8	38.2
Referred by Court/Criminal Justice System (Not Including SACPA <sup>1</sup> Referrals)	12.4	2.6	14.2	14.9	10.3
First Treatment Episode	44.8	19.5	75.8	48.1	48.5
<b>Total Admissions (N)</b>	<b>(4,726)</b>	<b>(5,506)</b>	<b>(4,453)</b>	<b>(7,701)</b>	<b>(27,217)</b>

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

SOURCE: LA County Alcohol and Drug Program Administration, California Outcomes Monitoring System (CalOMS)

**Exhibit 4a. Numbers of Los Angeles County Poison Control System Exposure Calls for Major Substances of Abuse: 2002–2006**

<b>Major Substance</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>Cumulative</b>
Cocaine/Crack <sup>1</sup>	77	97	74	61	82	<b>391</b>
Heroin <sup>1</sup>	20	17	22	25	17	<b>101</b>
Marijuana <sup>1</sup>	39	40	26	30	35	<b>170</b>
Methamphetamine/ Amphetamine <sup>1</sup>	97	115	103	118	73	<b>506</b>
Ecstasy (MDMA) <sup>1</sup>	34	17	19	20	17	<b>107</b>
Rohypnol/flunitrazepam <sup>1</sup>	4	1	4	1	0	<b>10</b>
GHB <sup>1</sup>	25	10	8	4	6	<b>53</b>
Ketamine <sup>1</sup>	7	2	4	2	2	<b>17</b>
PCP <sup>1</sup>	13	16	6	9	12	<b>56</b>
LSD <sup>1</sup>	6	1	2	1	5	<b>15</b>
Mushrooms <sup>1</sup>	0	2	1	0	2	<b>5</b>
Other hallucinogens <sup>1</sup>	4	3	5	6	8	<b>26</b>
Inhalants <sup>2</sup>	9	7	6	12	20	<b>54</b>
<b>Total</b>	<b>335</b>	<b>328</b>	<b>280</b>	<b>289</b>	<b>279</b>	<b>1,511</b>

<sup>1</sup>Includes calls for all exposure reasons.

<sup>2</sup>Includes calls for the following exposure reasons: intentional suspected suicide, intentional misuse, intentional abuse, intentional unknown, contamination/tampering, and other malicious.

SOURCE: California Poison Control System

**Exhibit 4b. Numbers of Los Angeles County Poison Control System Exposure Calls for Prescription and Over-the-Counter Medications and Common Household Substances: 2002–2006**

Substance <sup>1</sup>	2002	2003	2004	2005	2006	Cumulative
Antidepressants	110	149	120	130	124	633
Antipsychotics	49	64	82	68	90	353
<i>Benzodiazepines</i>	(449)	(486)	(537)	(477)	(494)	(2,443)
Alprazolam	84	113	128	123	123	571
Clonazepam	103	105	135	125	118	586
Diazepam	81	74	62	45	58	320
Lorazepam	89	89	94	90	97	459
Other	92	105	118	94	98	507
Other Sedatives/ Hypnotics	17	25	33	26	37	138
Barbiturates	10	12	8	3	4	37
<i>Opiates/Analgesics</i>	(270)	(310)	(300)	(316)	(368)	(1,564)
Codeine	13	12	19	20	12	76
Hydrocodone	143	172	160	144	145	764
Buprenorphine	0	0	4	2	4	10
Methadone	6	3	8	8	11	36
Oxycodone	17	17	7	18	37	96
Narcotic analgesics	23	23	20	27	28	121
Other (non-narcotic)	68	83	82	97	131	461
Fentanyl	3	0	5	5	1	14
Dextromethorphan	20	26	26	27	34	133
Coricidin HBP	34	30	46	49	62	221
Muscle Relaxants	34	44	41	65	49	233
Misc. Anxiolytics	8	7	8	3	4	30
Ritalin/Adderall	23	24	27	21	48	143
Other Stimulants	19	13	13	7	9	61
Other	176	161	202	149	180	868
Unknown	14	8	7	2	13	44
<b>Total</b>	<b>1,236</b>	<b>1,359</b>	<b>1,455</b>	<b>1,348</b>	<b>1,517</b>	<b>6,915</b>

<sup>1</sup>Includes calls for the following exposure reasons: intentional suspected suicide, intentional misuse, intentional abuse, intentional unknown, contamination/tampering, and other malicious.  
SOURCE: California Poison Control System

**Exhibit 5. Los Angeles County Poison Control System Exposure Calls for Select Substances, by Gender, Age, and Number and Percent<sup>1</sup>: 2006**

Gender/Age Group	Cocaine/ Crack	Methamphetamine/ Amphetamine	Ritalin/ Adderall	Ecstasy	Coricidin HBP	Dextro- methorphan
<b>Gender</b>						
Male	49 (60%)	47 (64%)	26 (54%)	9 (53%)	35 (56%)	21 (62%)
Female	31 (38%)	26 (36%)	22 (46%)	8 (47%)	27 (44%)	13 (38%)
Unknown	2 (2%)	---	---	---	---	---
<b>Age Group</b>						
Younger than 13	12 (15%)	11 (15%)	4 (8%)	5 (29%)	2 (3%)	1 (3%)
13–17	2 (2%)	7 (10%)	24 (50%)	5 (29%)	43 (69%)	18 (53%)
18–25	16 (20%)	25 (34%)	7 (15%)	5 (29%)	15 (24%)	6 (18%)
26–34	18 (22%)	16 (22%)	2 (4%)	2 (12%)	---	5 (15%)
35–44	21 (26%)	10 (14%)	8 (17%)	---	1 (2%)	3 (9%)
45–54	10 (12%)	3 (4%)	1 (2%)	---	---	---
55 and older	3 (4%)	1 (<1%)	2 (4%)	---	1 (2%)	1 (3%)
<b>Total Number of Calls</b>	<b>82</b>	<b>73</b>	<b>48</b>	<b>17</b>	<b>62</b>	<b>34</b>

<sup>1</sup>Percentages may not add to 100 due to rounding.  
SOURCE: California Poison Control System

**Exhibit 6. Number of Drug Items Analyzed by the National Forensic Laboratory Information System for Los Angeles County, by Specific Drug and Percent of Total Items Analyzed: Calendar Years 2003–2006**

Name of Substance	CY 2003		CY 2004		CY 2005		CY 2006	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Cocaine/Crack	14,874	(32.7)	21,037	(38.3)	22,111	(36.5)	22,018	(39.5)
Methamphetamine/Amphetamine	16,263	(35.7)	17,789	(32.4)	19,617	(32.4)	14,646	(26.3)
Marijuana/Cannabis	11,311	(24.9)	12,327	(22.4)	13,864	(22.9)	13,862	(24.8)
Heroin	1,544	(3.4)	2,236	(4.1)	2,720	(4.5)	2,412	(4.3)
PCP	440	(<1.0)	280	(<1.0)	324	(<1.0)	327	(<1.0)
LSD	--	--	1	(<1.0)	7	(<1.0)	9	(<1.0)
MDMA/MDA	211	(<1.0)	232	(<1.0)	427	(<1.0)	669	(1.2)
GHB/GBL/1,4-BDL	15	(<1.0)	29	(<1.0)	55	(<1.0)	45	(<1.0)
Ketamine	14	(<1.0)	23	(<1.0)	25	(<1.0)	32	(<1.0)
Rohypnol	--	--	--	--	4	(<1.0)	7	(<1.0)
Psilocin/Psilocybin	77	(<1.0)	109	(<1.0)	88	(<1.0)	118	(<1.0)
<b>All Illicit Drugs</b>	<b>44,749</b>	<b>98.5%</b>	<b>53,954</b>	<b>98.2%</b>	<b>59,238</b>	<b>97.7%</b>	<b>54,189</b>	<b>97.7%</b>
Opiates/Analgesics	303	(<1.0)	401	(<1.0)	656	1.1	735	1.3
Benzodiazepines	174	(<1.0)	195	(<1.0)	314	(<1.0)	391	(<1.0)
Stimulants	9	(<1.0)	19	(<1.0)	37	(<1.0)	44	(<1.0)
Muscle Relaxants	23	(<1.0)	58	(<1.0)	78	(<1.0)	78	(<1.0)
Non-Controlled Non-Narcotic Drugs	60	(<1.0)	101	(<1.0)	143	(<1.0)	176	(<1.0)
Other	125	(<1.0)	188	(<1.0)	147	(<1.0)	61	(<1.0)
<b>All Prescription/OTC/ Non-Controlled Substances</b>	<b>694</b>	<b>1.5%</b>	<b>962</b>	<b>1.4%</b>	<b>1,375</b>	<b>2.3%</b>	<b>1,604</b>	<b>2.3%</b>
<b>TOTAL</b>	<b>45,443</b>	<b>100.0%</b>	<b>54,916</b>	<b>100.0%</b>	<b>60,613</b>	<b>100.0%</b>	<b>55,793</b>	<b>100.0%</b>

SOURCE: NFLIS, DEA

**Exhibit 7a. Illicit Drug Prices in Los Angeles: December 2006**

Type of Drug	Price		
	Wholesale	Midlevel	Retail
Cocaine Powder Crack Cocaine	\$12,000–\$17,000 per kilogram N/R <sup>1</sup>	\$500–\$600 per ounce \$400–\$700 per ounce	\$80 per gram \$10–\$40 per rock
Heroin Mexican Black Tar	\$16,000–\$40,000 per kilogram	\$400–\$800 per ounce (25 grams)	\$40–\$100 per gram \$10 per 1/10 gram
Mexican Brown Powder	\$24,000–\$34,000 per kilogram	N/R	N/R
Southeast Asian Per 700–750 grams Per 300–350 grams	\$70,000–\$80,000 \$35,000–\$40,000	\$2,700–\$3,500 per ounce	\$300–\$375 per gram
Southwest Asian Southwest Asian - Opium	\$90,000 per kilogram \$30,000 per kilogram	N/R \$650–\$800 per 18-gram stick	N/R N/R
South American	\$80,000–\$100,000 per kilogram	N/R	\$55 per gram
Marijuana Mexican Low-Grade Domestic Mid-Grade Sinsemilla High-Grade BC Bud	\$300–\$360 per pound \$700–\$750 per pound \$2,500–\$6,000 per pound \$3,300–\$6,000 per pound	\$70–\$100 per ounce \$150–\$250 per ounce \$300–\$600 per ounce N/R	\$5–\$10 per gram \$25 per gram \$60–\$80 per 1/8 ounce N/R
Hashish	\$8,000 per pound	N/R	N/R
Methamphetamine (Powder)	\$5,000–\$7,200 per pound	\$300 per ounce	\$35–\$120 per gram
Crystal Methamphetamine (Ice)	\$8,000–\$12,000 per pound	\$600–\$800 per ounce \$340–\$420 per ½ ounce \$250 per ¼ ounce	\$140 per gram \$100–\$125 per 1/8 ounce \$60–\$70 per 1/16 ounce \$40–\$50 per 1/32 ounce \$20 per ¼ gram
Pseudoephedrine	\$4,000–\$6,000 double case (1 case=17,000 60-mg tablets)	N/R	N/R
PCP	\$10,000–\$15,000 per gallon	\$300–\$350 per ounce	\$10–\$20 per sherm cigarette
LSD	\$150–\$200 per sheet (100 doses)	N/R	\$5–\$10 per dose
Psilocybin Mushrooms	N/R	N/R	\$20 per 1/8 ounce
MDMA (ecstasy)	\$6,000–\$8,000 per boat (1,000 tablets)	\$6–\$12 per tablet	\$10–\$20 per tablet
GHB	\$275–\$350 per gallon \$80–\$100 per liter \$120 per 16 ounce bottle	N/R	\$5–\$20 per capful
GBL	\$600 per liter	N/R	N/R
Ketamine	N/R	\$100–\$200 per 10 milliliter vial	\$20 per two-tenths gram
Rohypnol (flunitrazepam)	N/R	N/R	\$6–\$10 per 1-mg pill

<sup>1</sup>N/R=Not reported.

SOURCE: 4th Quarter 2006 Drug Price List, LA County Regional Criminal Information Clearinghouse, and NDIC National Illicit Drug Prices, December 2006



**Exhibit 7b. Prescription Medication Prices in Los Angeles: December 2006**

Name of Prescription Medication	Price		
	Wholesale	Midlevel	Retail
Codeine	N/R <sup>1</sup>	\$80–\$200 per liquid pint	\$1–\$2.50 per tablet
Dilaudid (hydromorphone)	N/R	N/R	\$20–\$60 per 4-mg tablet
Duragesic Patch (fentanyl)	\$500,000 per kilogram \$227,000 per pound	N/R	N/R
Methadone	N/R	N/R	\$10 per tablet
MS Contin	N/R	N/R	\$20 per 60-mg tablet
OxyContin (oxycodone)	N/R	N/R	\$50–\$80 per 80-mg tablet
Percocet/Percodan	N/R	N/R	\$1–\$5 per 5-mg tablet
Ritalin (methylphenidate)	N/R	N/R	\$1–\$2 per tablet
Steroids	N/R	N/R	\$10 per dose
Valium (diazepam)	N/R	N/R	\$1 per 5-mg tablet
Vicodin ES (hydrocodone)	N/R	N/R	\$1 per 10-mg tablet
Xanax (alprazolam)	N/R	N/R	\$1 per 4-mg tablet

<sup>1</sup>N/R=Not reported.

SOURCE: 4th Quarter 2006 Drug Price List, LA County Regional Criminal Information Clearinghouse, and NDIC National Illicit Drug Prices, December 2006

**Exhibit 8. Reported Drug Use Among Los Angeles County Secondary School Students, by Grade and Percent: 2004–2006<sup>1</sup> School Years**

Usage Patterns Among Survey Respondents	7th Grade <sup>2</sup>	9th Grade	11th Grade	All Respondents <sup>3</sup>
Cocaine (any form)				
Lifetime	***	4.9	7.1	6.9
Past 30 days	***	2.3	2.5	2.9
Ecstasy				
Lifetime	***	3.9	5.5	5.3
Past 30 days	N/A <sup>4</sup>	N/A	N/A	N/A
Heroin				
Lifetime	***	2.4	2.3	2.6
Past 30 days	***	N/A	N/A	N/A
Inhalants				
Lifetime	11.9	13.5	11.7	12.8
Past 30 days	5.5	4.7	3.0	4.6
LSD/Other Psychedelics				
Lifetime	***	3.7	5.2	5.0
Past 30 days	***	1.9	1.9	2.2
Marijuana				
Lifetime	8.1	23.4	35.7	22.6
Past 30 days	4.4	11.8	16.0	11.3
Methamphetamine				
Lifetime	***	4.9	6.6	6.8
Past 30 days	***	2.3	2.3	2.8

<sup>1</sup>Data have been weighted to enrollment.

<sup>2</sup>The 7th grade data for several drugs (i.e., cocaine/crack, ecstasy, heroin, LSD/other psychedelics, and methamphetamine) were based on responses from a very small subset of 7th graders. Therefore, these results have been suppressed (\*\*\*).

<sup>3</sup>All respondents include responding 7th graders (when applicable), 9th graders, 11th graders, and a small sample of nontraditional students (enrolled in continuation or alternative schooling programs).

<sup>4</sup>N/A=Not applicable.

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

**Exhibit 9. Past-6-Month Substance Use among Los Angeles County Secondary School Students, by Grade and Percent: 2004–2006<sup>1</sup> School Years**

Usage Patterns Among Survey Respondents	7th Grade <sup>2</sup>	9th Grade	11th Grade	All Respondents <sup>3</sup>
Any Alcohol	19.1	35.8	50.8	35.5
Inhalants	8.4	7.9	6.1	7.9
Marijuana	7.0	16.2	24.9	17.1
Cocaine (any form), Methamphetamine, or Other Stimulants	***	5.2	6.2	6.4
Psychedelics, Ecstasy, or Other Club Drugs	***	4.7	5.5	5.5
Other Drugs, Heroin, or Sedatives	***	5.1	5.3	5.5
Two or More Drugs at the Same Time	***	8.7	13.1	11.8

<sup>1</sup>Data have been weighted to enrollment.

<sup>2</sup>The 7th grade data for several drug categories were based on responses from a very small subset of 7th graders. Therefore, these results have been suppressed (\*\*\*).

<sup>3</sup>All respondents include responding 7th graders (when applicable), 9th graders, 11th graders, and a small sample of nontraditional students (enrolled in continuation or alternative schooling programs).

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

**Exhibit 10. Long-Term Trends in the Percentage of Current (Past-30-Day) Substance Users Among a Sample of Los Angeles County Secondary School Students,<sup>1</sup> by Percent: 1999–2006**

Substance	1999–2000	2000–2001 <sup>2</sup>	2001–2002	2002–2003 <sup>2</sup>	2003–2004	2004–2005 <sup>2</sup>	2005–2006
At Least One Drink of Alcohol	29.2	28.4	25.4	24.8	24.6	25.3	25.7
5 or More Alcoholic Drinks/Occasion (a.k.a., Binge Drinking)	14.4	13.4	12.4	12.4	12.3	12.8	13.0
Cocaine (Any Form)	4.9	4.3	3.9	3.8	3.8	2.7	2.9
Inhalants	5.7	5.1	5.0	5.3	5.3	4.2	5.0
LSD/Other Psychedelics	5.0	4.4	3.3	2.8	2.9	2.0	2.2
Marijuana	13.2	13.0	12.0	10.9	10.3	11.1	11.3
Methamphetamine	4.6	4.3	4.1	4.3	3.7	2.7	2.9

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

<sup>2</sup>California school districts have the option of administering the CHKS every year, but are only required to participate every 2 years. Los Angeles Unified School District does not administer the CHKS in the off years. Therefore, LAUSD students are not a part of the sample in the indicated school years.

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

**Exhibit 11. Percent Change in Amount of Prescription Opiates and Stimulants Sold to Hospitals and Pharmacies in the Los Angeles County Area<sup>1</sup>: 2001–2005**

<b>Name of Prescription Opiate</b>	<b>Percent Change, 2001 to 2005</b>
Codeine	-28%
Oxycodone	+84%
Hydromorphone	+81%
Hydrocodone	+47%
Meperidine	-35%
Methadone	+117%
Morphine	+61%
Fentanyl base	+122%
<b>Total Opiates</b>	<b>+12%</b>
<b>Name of Prescription Stimulant</b>	<b>Percent Change, 2001 to 2005</b>
DL Amphetamine (Adderall)	+82%
D Amphetamine (Dexedrine)	+25%
Methylphenidate (Ritalin)	+42%
<b>Total Stimulants</b>	<b>+43%</b>

<sup>1</sup>Data for Zip Codes 900xx to 935xx, which approximates Los Angeles County boundaries.  
SOURCE: DEA, Automation of Reports and Consolidated Orders System

**Exhibit 12. Annual Adult/Adolescent AIDS Cases by Gender, Year of Diagnosis, and Exposure Category: 2000–2006**

Adult/Adolescent Exposure Category <sup>1</sup>	2000 Number (%)	2001 Number (%)	2002 Number (%)	2003 Number (%)	2004 <sup>2</sup> Number (%)	2005 <sup>2</sup> Number (%)	2006 <sup>2</sup> Number (%)
Males							
Male-to-Male Sexual Contact	975 (65)	943 (65)	1,052 (66)	964 (69)	784 (67)	638 (63)	378 (63)
Injection Drug Use	91 (6)	91 (6)	83 (5)	56 (4)	59 (5)	52 (5)	30 (5)
Male-to-Male Sexual Contact/Injection Drug Use	119 (8)	106 (7)	111 (7)	99 (7)	60 (5)	52 (5)	35 (6)
Hemophilia or Coagulation Disorder	<5 (-)	5 (<1)	<5 (-)	<5 (-)	<5 (-)	<5 (-)	<5 (-)
Heterosexual Contact <sup>3</sup>	50 (3)	70 (5)	63 (4)	59 (4)	27 (2)	25 (2)	14 (2)
Transfusion Recipient	<5 (-)	5 (<1)	7 (<1)	<5 (-)	<5 (-)	<5 (-)	<5 (-)
Mother with/at Risk for HIV	<5 (-)	<5 (-)	<5 (-)	<5 (-)	<5 (-)	<5 (-)	<5 (-)
Other/Undetermined	263 (17)	235 (16)	277 (17)	212 (15)	247 (21)	245 (24)	137 (23)
<i>Male Subtotal</i>	<b>1,507</b>	<b>1,455</b>	<b>1,595</b>	<b>1,396</b>	<b>1,178</b>	<b>1,017</b>	<b>598</b>
Females							
Injection Drug Use	43 (19)	47 (21)	46 (20)	23 (12)	30 (18)	29 (18)	13 (14)
Hemophilia or Coagulation Disorder	<5 (-)	<5 (-)	<5 (-)	<5 (-)	<5 (-)	<5 (-)	<5 (-)
Heterosexual Contact <sup>3</sup>	105 (46)	88 (39)	86 (38)	84 (44)	60 (36)	66 (42)	26 (27)
Transfusion Recipient	<5 (-)	6 (3)	7 (3)	<5 (-)	<5 (-)	<5 (-)	<5 (-)
Mother with/at Risk for HIV	<5 (-)	<5 (-)	<5 (-)	<5 (-)	<5 (-)	<5 (-)	<5 (-)
Other/Undetermined	78 (34)	84 (37)	88 (39)	83 (43)	73 (44)	63 (40)	54 (56)
<i>Female Subtotal</i>	<b>228</b>	<b>226</b>	<b>228</b>	<b>191</b>	<b>167</b>	<b>158</b>	<b>96</b>
<b>Total</b>	<b>1,735</b>	<b>1,681</b>	<b>1,823</b>	<b>1,587</b>	<b>1,345</b>	<b>1,175</b>	<b>694</b>

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

<sup>2</sup>Data are provisional due to reporting delay. Cases include those reported by December 31, 2006.

<sup>3</sup>Heterosexual contact indicates contact with a person who is HIV-infected or at increased risk for HIV.

SOURCE: Los Angeles County Department of Health Services, HIV Epidemiology Program

# Maine Patterns and Trends in Drug Abuse: June 2007

Marcella H. Sorg<sup>1</sup>

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## ABSTRACT

*Cocaine indicators in Maine are stable or increasing. Primary cocaine treatment admissions increased each year from 2000 to 2006, and the age of new admissions grew younger. The number of cocaine deaths has stabilized at 20 per year, and, in 2006, cocaine accounted for 12 percent of drug-induced deaths. Cocaine combined with methadone or other opiates caused 55 percent of cocaine-induced deaths in 2006. The proportion of cocaine arrests rose to 43.5 percent in 2006, and the proportion of forensic lab items containing cocaine rose to 43 percent in 2006 and to 58 percent in early 2007. Most heroin indicators are stable or decreasing. The proportion of primary heroin treatment admissions decreased 2 percent from 2003 to 2006, but the proportion of new admissions decreased sharply. The heroin treatment population is quite young; only 19 percent of heroin admissions in 2006 were age 35 or older. The number of deaths caused by heroin/morphine doubled from 2004 to 2005, but it decreased by 32 percent in 2006 to 17 percent of drug deaths. The proportion of heroin arrests by the Maine Drug Enforcement Agency (MDEA) decreased dramatically from 13 percent in 2005 to 3 percent in 2006. Primary admissions for pharmaceutical narcotics increased heavily over the last decade and represented 42 percent of the 2006 drug admissions (excluding alcohol admissions); oxycodone admissions alone accounted for 31 percent. Mortality caused by pharmaceutical narcotics swelled to 61 percent of drug-induced deaths in 2006; 15 percent were from 'multiple drug toxicity.' Methadone, the majority of cases in tablet form, dominated the narcotic mortality pattern in 2006 and constituted 41 percent of drug deaths, which included 11 percent caused by 'multiple drug toxicity.' Calls to the Northern New England Poison Center involving methadone exposure constituted the largest proportion (28 percent) of all narcotics calls, including heroin, between 2001 and 2006. The proportion of arrests by MDEA for prescription drug trafficking was 25 percent in 2006, down slightly from 27 percent in 2005, and second only to cocaine. Methamphetamine indicators have small numbers, but those for treatment admissions and arrests*

*continued to rise. Recent declines in the number of small methamphetamine lab seizures are occurring, along with increases in methamphetamine product in pill form. Most marijuana indicators have decreased. Primary marijuana treatment admissions (excluding alcohol) declined from 33.5 percent in 2003 to 21.7 percent in 2006. The number of arrests decreased from 125 to 111 in the same period, and the number of prosecutions fell from 126 in 2004 to 86 in 2005. Forensic lab items containing marijuana declined from 15 percent in 2003 to 11 percent in 2006. MDMA indicators were low and stable in 2006, with treatment admissions hovering at 0.3 percent, arrests at 1 percent or less, NFLIS identifications at less than 1 percent, and deaths occurring about once a year. Reported current (prior-30-day) marijuana use by Maine youth, which was less than 2 percent in 2006, dropped by about one-half across all grades (6–12) between 2002 and 2006. Benzodiazepines are among the most common street drugs. They represented 34 percent of all prescriptions written for scheduled pharmaceuticals in Maine from FY 2004 to FY 2006. More than 600,000 prescriptions for tranquilizers are written in a year, with 68 percent written for persons older than 45; they are predominantly for females. Only 5.0 percent of forensic lab items tested in 2006 contained benzodiazepines, up from 2.8 percent in 2005. In 6 percent of drug-induced deaths in 2006, benzodiazepines were mentioned as a cause; in another 9 percent, the attributed cause was 'multiple drug toxicity,' and benzodiazepines were found in toxicology tests.*

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## INTRODUCTION

### Area Description

Maine is the third most rural State in the United States, with only 1.2 million inhabitants thinly distributed across a large geographic area, averaging 40 persons per square mile. Most of its citizens, 97 percent, are White. The majority of Maine's borders are shared with Canada, leading to a significant pattern of cross-border drug trafficking. Maine's long coast and many harbors have also contributed to drug distribution, in addition to the north-south I-95 corridor, which connects it to more southerly urban centers.

Maine has experienced a dramatic increase in drug-induced deaths that began in the late 1990s. Most of the increase involved unintentional poisonings, rising more than 600 percent over the study period. When the treatment, arrest, and mortality data are analyzed according to involved drug categories, it is clear that

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<sup>1</sup> The author is affiliated with the Margaret Chase Smith Policy Center, University of Maine.

misuse and abuse of prescription opiates and opioids fueled the upswing in these indicators.

Analysis of substance abuse indicators in Maine and other rural States is provided by the Rural Drug and Alcohol Research Program at the Margaret Chase Smith Policy Center at the University of Maine.<sup>2</sup>

### Data Sources

The information presented in this report is from the sources shown below.

- **Treatment data** on admissions in State-funded treatment in Maine from 1995 through 2006 were collected and administered by the Maine Office of Substance Abuse; the data were analyzed to study primary and secondary admissions as well as first-time (new) admissions. The data presented exclude primary alcohol admissions, unless otherwise specified.
- **Mortality data** were provided by the Maine Office of Chief Medical Examiner. These include data from all drug-induced deaths from 1997 to 2006, which includes all deaths in which the medical examiner (ME) implicated drugs as a cause or contributing factor to the death. All manners of death are included unless specified otherwise. Totals for 2006 are provisional at the time of this report; estimated findings for the several cases still pending have been included. For most drug categories, two totals are provided. In the first, the death certificate includes mention of specific drugs causing death, and totals are provided for these drugs as causes. In the second situation, the death certificate mentions only “multiple drug toxicity” (or a comparable phrase). In these cases, the toxicology findings were examined to identify the presence of key substances (narcotics, cocaine, alcohol, and benzodiazepines). A second category was then created for the frequency of these drugs’ involvement in polysubstance cases.
- **Poison control center call data** were provided by the Northern New England Poison Center (NNEPC). Data in tabular and graph format using the Substance Abuse Sentinel Surveillance Reporting System (SASSR) were provided by the NNEPC for information calls and calls

related to exposure for abuse or withdrawal for the period 2001–2006.

- **Prescription Monitoring Program data** were provided by the Maine Office of Substance Abuse. This program tracks prescriptions for controlled substances statewide; data include the period July 2004 through 2006.
- **Forensic laboratory drug data** for the State of Maine represent drug items tested by the Maine Department of Human Services Health and Environmental Testing Laboratory through May 2007 and reported to the National Forensic Laboratory Information System (NFLIS), Drug Enforcement Administration.
- **Arrest data** were provided by the Maine Drug Enforcement Agency (MDEA). These data comprise the majority of drug-related arrests in Maine, reflecting the activity of the statewide Multi-jurisdictional Task Force for 2003 through 2006.
- **Drug price data** are from the National Drug Information Center, New England, June 2006 report, and represent wholesale, midlevel, and retail (street) prices for illicit drugs.
- **Student drug use data** are from the Maine Youth Drug and Alcohol Use Survey for 2006, which included more than 75,000 Maine students in grades 6 through 12. This survey was conducted in 2002 and 2004 previously and is administered by the Maine Office of Substance Abuse.

### DRUG ABUSE PATTERNS AND TRENDS

#### Cocaine/Crack

Cocaine indicators were stable or increasing during 2006. Cocaine abuse and trafficking increased during the past few years, and the drug has emerged as a very significant problem in Maine, affecting treatment, law enforcement, and mortality indicators.

Primary treatment admissions for cocaine and crack have increased each year since 2000. In 2003, 10.9 percent of primary admissions (excluding alcohol) were for cocaine. This proportion rose to 14.2 percent in 2006. Among the 2006 admissions, the predominant route of administration was smoking, 54 percent, and 30 percent reported intranasal use. The Maine population as a whole is 96.9 percent White; this is reflected in the proportion of White treatment admissions, 94 percent. Approximately one-quarter (24 percent) of the primary cocaine admissions were younger than 25, with 37 percent being between 25

<sup>2</sup>The research has been funded in part by the Bureau of Justice Assistance, Department of Justice, in association with the Rural Substance Abuse Partnership, and by the Center for Substance Abuse Treatment, Substance Abuse and Mental Health Services Administration (SAMHSA).

and 34, and 36 percent being 35 and older. Among all primary admissions (excluding alcohol) who reported use of a secondary drug, 12 percent reported using cocaine/crack as a secondary drug. Analysis of the subcategory of first admissions reveals that users seeking treatment recently represented younger persons than in the past. During the years 2003 and 2004, most first admissions for cocaine were age 35–44; during the years 2005 and 2006, the peak age group was 25–34.

The Rural Drug and Alcohol Research Program at the University of Maine analyzed and mapped SAMHSA's Treatment Episode Data Set (excluding alcohol) for the years 2002–2004, comparing Maine, New Hampshire, and Vermont. The rate per 100,000 population of primary cocaine admissions increased in each of the three States over that time period. The percentage of primary cocaine admissions was highest in New Hampshire (15 percent in 2002, rising to 21 percent in 2004). Vermont admissions were 13 percent in 2002, rising to 15 percent in 2004. Maine admissions rose from 8 percent to 11 percent over that time period.

The number of deaths caused by cocaine, either alone or in combination with other drugs or alcohol, rose sharply from 2 in 2000 to 9 in 2003 to 20 in 2004. That number was stable at 20 per year during 2005 and 2006, although the proportion rose slightly. In 2006, cocaine-induced deaths constituted 12 percent of all drug-induced deaths, all unintentional. This included only those deaths in which the ME mentioned cocaine as a cause or significant contributing factor. In an additional 11 deaths (7 percent), the ME attributed the cause to "multiple drug toxicity" and cocaine (or a cocaine metabolite) was found in the toxicology; 10 of these were unintentional and 1 was a suicide. Cocaine and methadone (and/or other pharmaceutical opiates or opioids) were implicated in combination as the cause of death in the majority (55 percent) of 2006 cocaine-induced deaths.

The number of Maine calls to the Northern New England Poison Center involving cocaine abuse/withdrawal exposure decreased from 28 in 2004 to 22 in 2005 and subsequently rose slightly to 24 in 2006.

Current drug arrest data for Maine comes from the Maine Drug Enforcement Agency, which coordinates the multijurisdictional task forces that handle the majority of these arrests. Together cocaine (21.0 percent) and crack (16.8 percent) constituted 37.8 percent of arrests in 2003. These numbers rose to 43.5 percent in 2006 (27.3 percent for cocaine and

16.2 percent for crack), as proportions for heroin and marijuana arrests decreased. The most urban of the MDEA multijurisdictional task forces in Portland reports that in early 2007, crack was more available than heroin in the southern part of the State. For example, during February, March, and April of 2007, they seized less than 2 grams of heroin, compared with more than 400 grams of cocaine and about 300 grams of crack. They observed that cocaine and methadone were being used routinely in combination, a pattern also reflected in the cocaine deaths. Somali kinship gangs, which had been organized to traffic in khat, have recently become involved with cocaine. HIDTA reports in 2006 for Maine, New Hampshire, and Vermont indicated the involvement of African-American and Hispanic street gangs from Lawrence and Lowell, Massachusetts, in cocaine trafficking hubs.

Drug items identified as cocaine at the Maine State Health and Environment Testing Laboratory and reported to NFLIS rose from 36 percent in 2003 to 43 percent of the 1,542 items tested in 2006. During the first 5 months of 2007, an even higher proportion, 58 percent, of items tested contained cocaine.

Prices for cocaine powder and crack in 2006 were reported by NDIC for three cities in Maine, all connected to more southern distribution sources through I-95. Portland is the largest and nearest neighbor to Massachusetts, whereas Bangor is nearer to Canadian distribution points. Retail prices for crack ranged from \$20–\$50 per rock in Portland to \$100 per gram in Bangor, with Lewiston at \$150–\$200 per gram. Retail prices for a gram of powder cocaine were \$80–\$100 in Portland, \$75–\$100 in Lewiston, and \$100 in Bangor. Midlevel prices for an ounce of crack were \$1,100 to \$3,800 in Portland and \$1,200 to \$1,800 in Lewiston. Midlevel prices for an ounce of powder cocaine were \$900–\$1,600 in Portland, \$900–\$1,500 in Lewiston, and \$1,400–\$1,500 in Bangor. Wholesale prices for a kilogram of powder cocaine were \$24,000–\$35,000 in Portland and \$28,000–\$35,000 in Lewiston. In Bangor, one-quarter pound of powder cocaine sold for \$4,400 (approximately \$8,000 per kilogram).

The Maine Youth Drug and Alcohol Use Survey for 2002, 2004, and 2006 reported lifetime and current (last-30-day) use for grades 6 through 12. Among Maine 11th and 12th graders, about 3 percent reported current use, and about 8 percent reported lifetime use. Use was lower for younger grades. Overall, the data show a slight decrease in both current and lifetime use among students: generally less than 1 percent reduction from 2002 to 2004.

## Heroin

Heroin indicators for 2006 are decreasing. The proportion of primary heroin/morphine treatment admissions (excluding alcohol admissions) has decreased slightly since 2003. Deaths caused by heroin/morphine in 2006 decreased substantially since a peak in 2005. Similarly, the proportion of 2006 heroin arrests dropped sharply and seizures followed suit.

While the proportion of primary admissions for heroin/morphine among illicit drug admissions decreased, the number of admissions increased slightly. Since 2003, the percentage was down by 2.0 percent from 20.7 percent in 2003 to 18.7 percent in 2006, although in 2004 it had risen to 21.3 percent. In 2006, 52 percent of heroin/morphine admissions were male and 96 percent were White. In terms of the routes of administration, the vast majority (76 percent) reported injection use, and 18 percent reported intranasal use. Compared with other CEWG areas, heroin/morphine admissions were younger, with 35 percent being 18–24, 45 percent being 25–34, and only 19 percent being 35 and older.

Among new admissions for heroin/morphine, there were some striking demographic changes during the prior 3 years, including a 14-percent drop in the number of new admissions between 2005 and 2006. The proportion of first admissions age 18–24 decreased from 53 percent in 2003 to 42 percent in 2006; at the same time, the proportion of admissions age 25–34 rose from 32 percent in 2003 to 42 percent in 2006. These two age groups, taken together, represented 84 percent of first admissions for heroin/morphine in 2006.

The number of heroin/morphine-induced deaths statewide increased sharply from 19 (12 percent) in 2004 to 41 (23 percent) in 2005. Qualitative data indicate that much of the 2004–2005 increase may have been related to an upsurge in the abuse of pharmaceutical morphine, a pattern that seems to have subsided in 2006. During 2006, there were 28 (17 percent) deaths caused by heroin/morphine, a 32-percent decrease in the number of cases compared with 2005. In an additional four of the 2006 cases (2 percent), the ME attributed the cause to “multiple drug toxicity,” and heroin/morphine (or a metabolite) was found in the toxicology. In 6 (21 percent) of the 28 cases, at least 1 other opiate or opioid was mentioned as a cause. In 3 (11 percent) of 28 cases, cocaine was also mentioned as a cause, and in another 3 (11 percent) alcohol was a co-intoxicant cause of death.

The Northern New England Poison Center data show poisoning exposure calls involving heroin in Maine have remained low and relatively stable or have decreased since the end of 2002. The NNEPC reports recent exposures in Vermont in three individuals involved the contamination of heroin with Clenbuterol.

Data from the MDEA show a sharp drop in the percentage of heroin arrests, from 13 percent of drug arrests in 2005 to 3 percent in 2006. This trend is reflected in the NDIC’s report that law enforcement agencies in Maine have perceived a declining threat from heroin, replaced by rising levels from pharmaceuticals and cocaine. NFLIS data from the State’s forensic laboratory reveal that in 2006, 10.2 percent of the 1,542 items tested contained heroin, a decrease from the 18.2 percent reported in 2003. Data from the first 5 months of 2007 indicate a further decrease to 4.4 percent.

Data from the NDIC in June 2006 indicated the presence of South American heroin in Portland, Lewiston, and Bangor, all of which are located along I-95. The price in Portland, closest to Boston and points south, was \$250–\$350 per gram retail and \$6,000–\$8,000 per ounce at midlevel distribution levels. Further north in Lewiston, the price was \$75–\$100 per gram retail, \$180–\$200 per bundle midlevel, and \$2,000 per 10 grams wholesale. In Bangor, the retail price was \$30–\$35 per bag.

The Maine Youth Drug and Alcohol Use Survey for 2002, 2004, and 2006 indicated that in 2006, 1.8 percent of Maine students reported any lifetime use of heroin, down slightly from 2.0 percent in 2004 and 2.5 percent in 2002. Use within the prior 30 days was 0.9 percent in 2006, down from 1.0 percent in 2004 and 1.1 in 2002. Slightly more than 1.0 percent (1.2 percent) of males and 0.6 percent of females had used heroin within the past 30 days in 2006.

## Other Opiates/Narcotics

Pharmaceutical narcotics continue to play a primary role in drug misuse/abuse and trafficking in Maine. Primary pharmaceutical narcotic treatment admissions in 2006 increased 9 percent over the 2004 level and constituted 42 percent of all 2006 illicit drug admissions; 14 percent were first admissions. The demographic characteristics of pharmaceutical narcotic admissions were 55 percent male and 94 percent White. The group represented fairly young ages: 43 percent were 25 and younger, 33 percent were age 26–34, and 24 percent were 35 and older.

Within the 2006 primary narcotic analgesic admissions, oxycodone dominated, at 31 percent of all



2006 primary drug admissions. In addition, 41 percent of primary heroin admissions reported oxycodone as a secondary or tertiary problem. Of the primary oxycodone admissions in 2004 and 2005, 55 percent were in opioid replacement therapy; among these, the average age of first use was 22 years.

The rise in misuse and abuse of pharmaceutical narcotics is reflected in the increasing number of admissions to opioid therapy programs; admissions more than tripled from 5 percent of all primary drug admissions in 2000 to 24 percent in 2006.

Mortality caused by pharmaceutical narcotics swelled during the past decade in Maine. The largest proportion were caused by methadone, as well as oxycodone and fentanyl, often in combination with other opiates/opioids, alcohol, or benzodiazepines. Among the 169 deaths in 2006, there were 77 (46 percent) in which at least 1 pharmaceutical opiate/opioid was specifically mentioned as the cause (excluding deaths caused by heroin/morphine). In another 25 (15 percent) cases, the death certificate implicated “mixed” or “multiple drug toxicity,” with narcotic analgesics found in toxicology. Of the 77 non-morphine/heroin opiate deaths, 50 were caused by methadone. Twenty-nine (17 percent) of 169 deaths were caused by hydrocodone, oxycodone, or codeine, alone or in combination with other drugs or alcohol. Most of these (18) were caused by oxycodone. The 50 (30 percent) methadone deaths in 2006 were down from 67 in 2005. The 18 (11 percent) oxycodone deaths, however, were up from 14 (8 percent) in 2005, as were the 10 (6 percent) deaths caused by hydrocodone, up from 3 (2 percent) in 2005. Codeine deaths, which totaled one (1 percent), were down from four (2 percent) in 2005. Note that exhibit 3 provides the frequency of deaths due to specific narcotics, reporting the total in which the death certificate mentions that drug as a cause (as discussed above), added to the number deaths in which the death certificate specifies “multiple drug toxicity” and that drug is found in the toxicology.

Methadone, the majority of cases in tablet form, dominated the drug-induced deaths, causing 50 (30 percent) of all 2006 deaths, 31 of which were caused by methadone alone. An additional 19 deaths were caused by “multiple drug toxicity,” with methadone present in the toxicology. Deaths caused by methadone rose to 65 (40 percent) in 2004, 67 (38 percent) in 2005, and down to 50 (30 percent) in 2006. If deaths caused by multidrug toxicity with methadone-involved are added to cases in which methadone is specifically mentioned as a cause of death, the proportions in 2005 and 2006 are level at 41 percent.

Calls to the Northern New England Poison Center involving abuse/withdrawal exposures to methadone constituted the largest proportion (27 percent) of all 2006 narcotics calls, including heroin, from 2001 to 2006. The NNEPC qualitative assessment regarding call volume representing pharmaceutical diversion was that opiates are the most prominent, followed by benzodiazepines. Buprenorphine-related calls totaled about 30 per month, including exposures and law enforcement calls for information.

Maine’s Prescription Monitoring Program tracks prescribing/dispensing of controlled substances. In FY 2006, hydrocodone/acetaminophen was the most commonly reported controlled substance prescription (21 percent of dispensed prescriptions), followed by oxycodone formulations (11 percent).

The proportion of MDEA arrests involving prescription drugs was 27 percent in 2005 and 25 percent in 2006, second only to crack/cocaine. Of 1,542 items analyzed by the Maine forensic testing laboratory, 167 (11 percent) were pharmaceutical opiates/opioids, primarily oxycodone (7 percent) or methadone (3 percent).

The Maine Youth Drug and Alcohol Use Survey for 2002, 2004, and 2006 showed that the percentage of students reporting current (prior-30-day) nonmedical use of prescription drugs dropped between 2004 and 2006 in all grades, 6th through 12th. Students in the 11th grade reported the most use: 11.6 percent in 2004, decreasing to 9.5 percent in 2006.

### **Methamphetamine/Amphetamines**

Methamphetamine indicators have small numbers, but several have continued to rise. There were no small-lab seizures in the early months of 2007, but methamphetamine is being imported, with a significant proportion coming from Canada.

Primary treatment admissions for methamphetamine (excluding alcohol admissions) increased 0.3 percent, from 24 (0.5 percent) in 2003 to 49 (0.9 percent) in 2006. In 2006, the majority (67 percent) of this admissions group reported intranasal administration; 18 percent reported smoking and 4 percent reported injection as the mode of methamphetamine use. Within the 2006 admissions, 53 percent were male, 96 percent were White, and most (71 percent) were younger than 35. Eighty-six percent of clients admitted in 2004 and 2005 had a secondary drug of abuse at the time of admission, mainly alcohol (24 percent), marijuana (24 percent), or cocaine/crack (14 percent). Methamphetamine was also reported as a secondary problem by (unduplicated) clients admitted

for other drug categories in 2006, specifically 1.6 percent of those admitted for abuse of benzodiazepines and 1.5 percent of those admitted for cocaine/crack abuse.

Primary treatment admissions for amphetamines are about the same in number as those for methamphetamine and have followed a very similar pattern of gradual increase, representing just under 1 percent of illicit drug admissions in 2006.

Maine has experienced no methamphetamine-induced deaths since 2004 when there was one. In 2005, there were two deaths caused by amphetamines.

The Northern New England Poison Center has reported very few calls regarding methamphetamine exposures: five in 2005 and one in 2006. Calls regarding exposures to pharmaceutical amphetamine-like formulations (e.g., Ritalin, Concerta) numbered 9 in 2005 and 10 in 2006. Calls about exposures to amphetamine/dextroamphetamine totaled 9 in 2005 and 19 in 2006.

There were 8 Maine Drug Enforcement Agency arrests for methamphetamine in 2005, rising to 38 in 2006. The number of small labs seized in 2005 was four, rising to seven in 2006. Although most of these labs were in rural townships, they were generally close to I-95. During the first 5 months of 2007, beginning Maine's second year with over-the-counter (OTC) pseudoephedrine controls, there have been no further small lab seizures.

In 2006, 3 percent of 1,542 drug items tested and reported to NFLIS contained methamphetamine. During the first 5 months of 2007, the State forensic lab reported that 18 (3 percent of 650 items tested) contained methamphetamine, including 14 that were pills of various colors and that contained methamphetamine along with multiple substance combinations: 4 with MDMA; 12 with caffeine; 4 with diphenhydramine; 2 with procaine; 1 with lidocaine; 1 with ketamine, and 1 with 1-benzylpiperazine.

The NDIC reports that in the first half of 2006, prices in Maine ranged from \$75 to \$150 per gram for locally produced methamphetamine to \$100–\$200 per gram for the powder form.

The Maine Youth Drug and Alcohol Use Survey for 2002, 2004, and 2006 showed that the percentage of students reporting any lifetime use of stimulants (methamphetamine/amphetamines) decreased across nearly all grades. This was particularly true among

12th graders: 14 percent reported lifetime use in 2004 compared with 5 percent in 2006.

## Marijuana

Most marijuana indicators have decreased, including treatment admissions, arrests, and youth in the student surveys. However, the Maine Drug Enforcement Agency reported large seizures of marijuana during the first months of 2007.

Excluding alcohol admissions, primary treatment admissions for marijuana decreased from 33.5 percent in 2003 to 21.7 percent in 2006, an 11.8-percentage-point reduction. Admissions in 2006 were 74 percent male and 92 percent White; 33 percent were younger than 18 and 31 percent were age 18–25.

The Northern New England Poison Center exposure calls for marijuana fluctuated from 19 in 2003 to 13 in 2004 and rose again to 19 in 2006.

MDEA arrests for marijuana increased slightly from 17 percent of drug arrests in 2005 to 20 percent in 2006, but they decreased in number from 125 to 111 during that time period. Similarly, the Maine Department of Attorney General reported that marijuana prosecutions decreased from 2004 (126) to 2005 (86). Of 1,542 drug items analyzed in 2006 by the Maine forensic lab, 10.8 percent were marijuana, down from 15.0 percent in 2003.

According to the 2007 NDIC National Drug Threat Assessment, trafficking from Canada increased 129 percent from 2001 to 2005, primarily because of Canadian-based Asian operations. The NDIC reports differential prices for sinsemilla, hydroponic, and commercial grade marijuana. Sinsemilla prices in Portland were as follows: retail at \$2–\$5 per joint, midlevel at \$200–\$500 per ounce, and wholesale at \$1,800–\$2,000 per pound. In Lewiston, sinsemilla retail prices were not reported, but the midlevel price was \$200–\$500 per ounce. In Bangor, sinsemilla retail prices were not specified, although one-eighth ounce of an unspecified type cost \$30. Hydroponic retail prices in Portland were \$40 for one-eighth of an ounce. In Lewiston, the wholesale price for hydroponic was \$1,200–\$2,800 per pound. Commercial grade hydroponic prices in Portland at the retail level were \$10 per gram or \$3–\$5 per joint; the midlevel price was \$125–\$175 per ounce; and the wholesale price was \$1,000–\$1,600 per pound. Commercial grade marijuana in Lewiston cost \$125–\$175 per ounce midlevel and \$650–\$2,000 per pound wholesale. In Bangor, commercial grade marijuana cost \$200 per ounce midlevel and \$1,800–\$2,200 per pound wholesale.

## Club Drugs

Primary treatment admissions for methylenedioxy-methamphetamine (MDMA, or ecstasy) were low and stable, at 0.3 percent in both 2003 and 2006. MDMA was listed as the cause of death for one case in 2002 and as a significant contributing factor for one death in 2005. One 2004 death attributed to a “multiple drug toxicity” had MDMA in the toxicology findings. Calls to the Northern New England Poison Center for exposures to MDMA have been low and fluctuating over the past several years; there were 15 calls in 2005 and 5 in 2006. Arrests by the MDEA related to MDMA remained very low, at 1 percent or less of arrests since 2003. NFLIS data show the MDMA level stable at 0.7 percent in 2006, including the four methamphetamine and MDMA pills mentioned earlier. The Bangor price for MDMA was \$20–\$25 per dosage unit.

Data from the Maine Youth Drug and Alcohol Use Survey from 2002, 2004, and 2006 include the percentage of students reporting current (prior-30-day) use of ecstasy. The 2006 percentages were about one-half of those reported in 2002 across all grades, although these numbers are small. In 2006, 1.5 percent of males and 0.9 percent of females reported current ecstasy use.

## Benzodiazepines

Slightly fewer than 2 percent of treatment admissions (excluding alcohol) are for a primary problem with benzodiazepines: 1.2 percent in both 2005 and 2006.

In 2006, benzodiazepines caused 6 percent of deaths, usually in combination with narcotics. An additional 9 percent of cases in which “mixed” or “multiple” drug toxicity was given as the cause of death included at least one benzodiazepine in the toxicology findings. Both the number and proportion were down from 2005, with 20 (11 percent) deaths in which the cause of death was attributed to benzodiazepines and an additional 7 (4 percent) caused by “multiple drug toxicity,” with benzodiazepine involve-

ment. Diazepam and alprazolam were the most common benzodiazepines involved in these deaths.

The Maine Prescription Monitoring Program FY 2006 data on controlled substances were dominated by prescriptions for narcotics (55 percent) and benzodiazepines (34 percent). Of the more than 600,000 prescriptions for tranquilizers, 35 percent were for persons 61 and older, and 33 percent were for persons age 46–60. The majority were women.

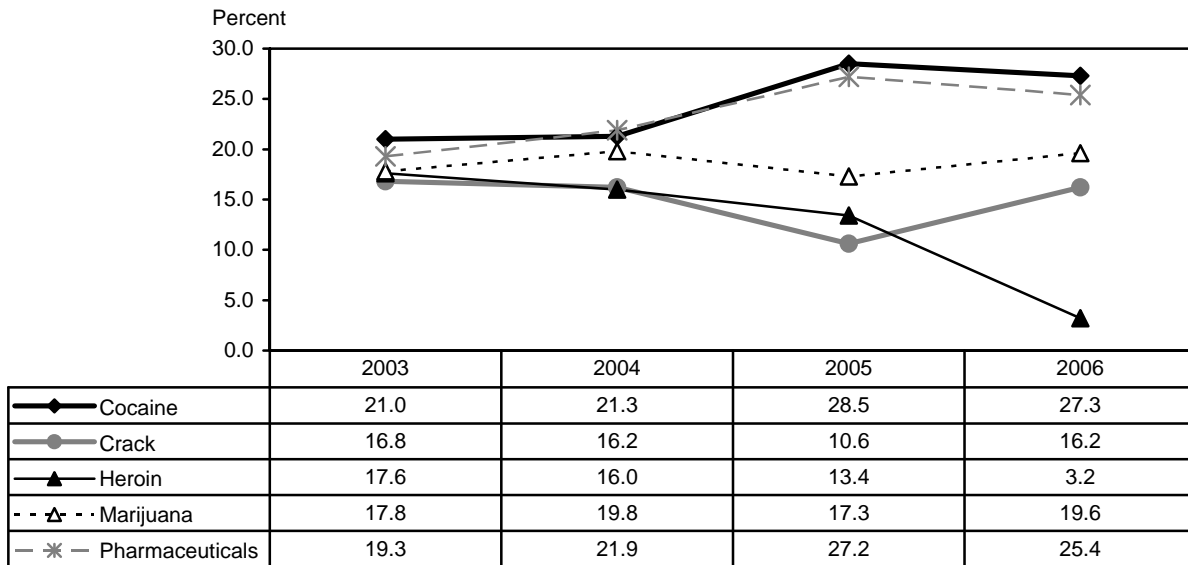
Drug items tested by the Maine forensic laboratory in 2005 included 2.8 percent testing as benzodiazepines; this number increased to 4.9 percent in 2006. Of these, 1.7 percent of the items contained alprazolam and 1.8 percent contained clonazepam.

## ACKNOWLEDGEMENTS

The author would like to acknowledge the contribution of the following individuals and the organizations providing data and information for this report: Debra Brucker, Supervisor, Data and Research, Maine Office of Substance Abuse; James Cameron, Assistant Attorney General, Maine Department of Attorney General; Daniel Eccher, Coordinator, Prescription Monitoring Program, Maine Office of Substance Abuse; Margaret Greenwald, Maine Chief Medical Examiner; Kimberly Johnson, Director of Maine Office of Substance Abuse; Christopher Montagna, Forensic Section Supervisor, Maine Health and Environmental Testing Laboratory; Roy McKinney, Director of Maine Drug Enforcement Agency; Scott Pelletier, Portland Police Department and Maine Drug Enforcement Agency; and Karen Simone, Director of Northern New England Poison Center. In addition, thanks are extended to staff at the Rural Drug and Alcohol Research Program, Margaret Chase Smith Policy Center: Sharon LaBrie, Kerriann Marden, and William Parker.

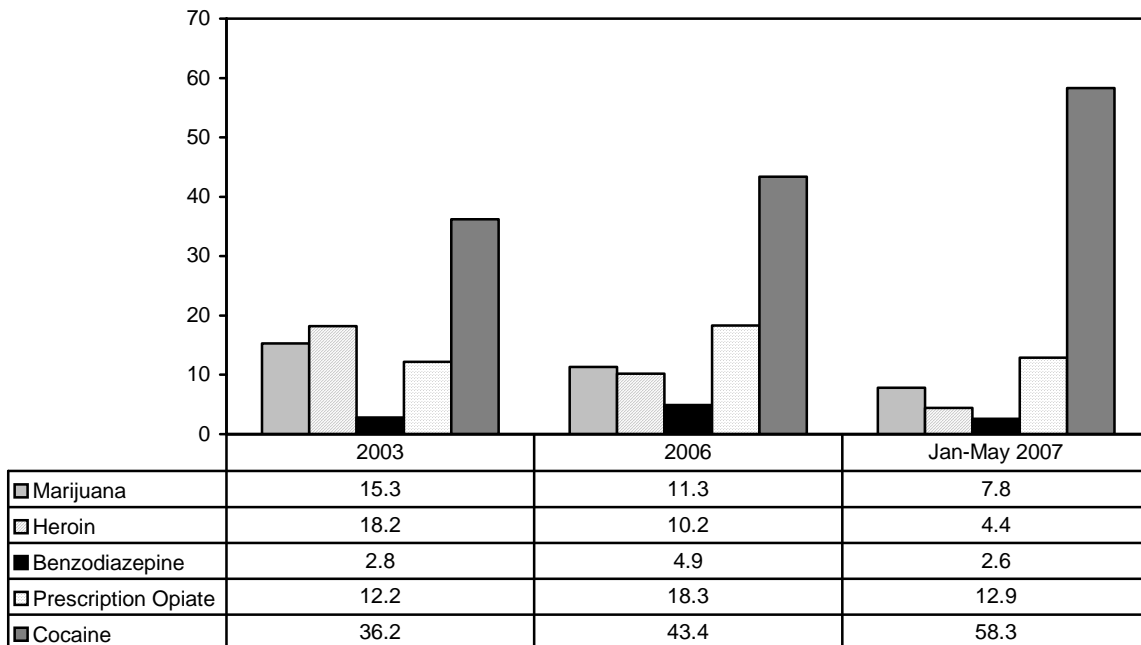
*For inquiries concerning this report, please contact Marcella H. Sorg, Ph.D., R.N., D-A.B.F.A., Director, Rural Drug and Alcohol Research Program, Margaret Chase Smith Policy Center, University of Maine, Orono, ME 04469, Phone: 207-581-2596, Fax: 207-581-1266, E-mail: Marcella.Sorg@umit.maine.edu.*

**Exhibit 1. Percentage of Drug-Related Arrests by the MDEA, by Drug Category: 2003–2006**



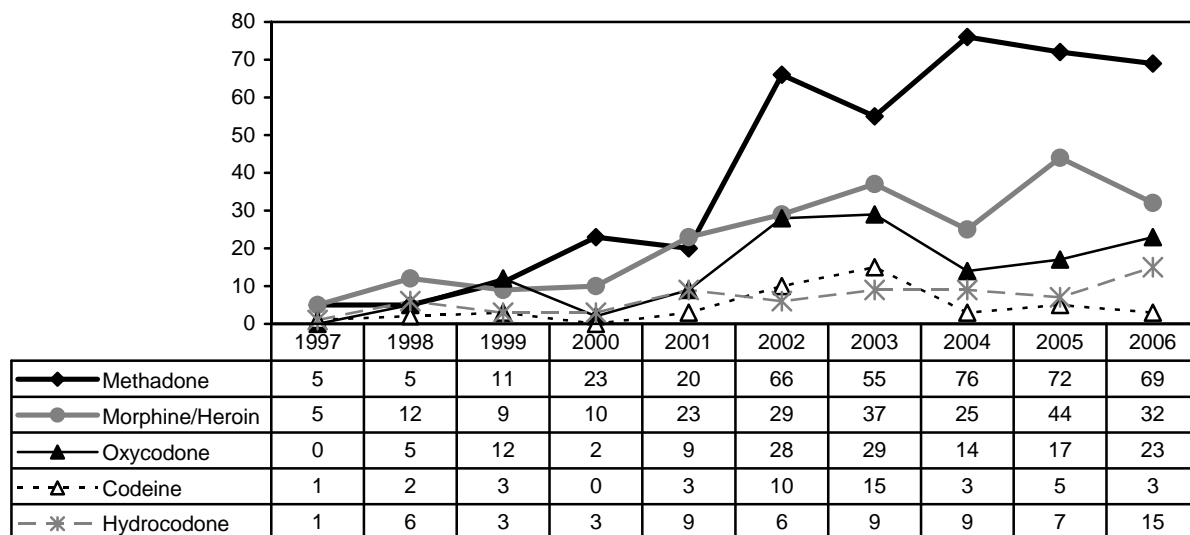
SOURCE: Maine Drug Enforcement Agency

**Exhibit 2. Percentage of Item Identifications by the Maine State Forensic Laboratory, by Drug Category: 2003, 2006, Jan.–May 2007**



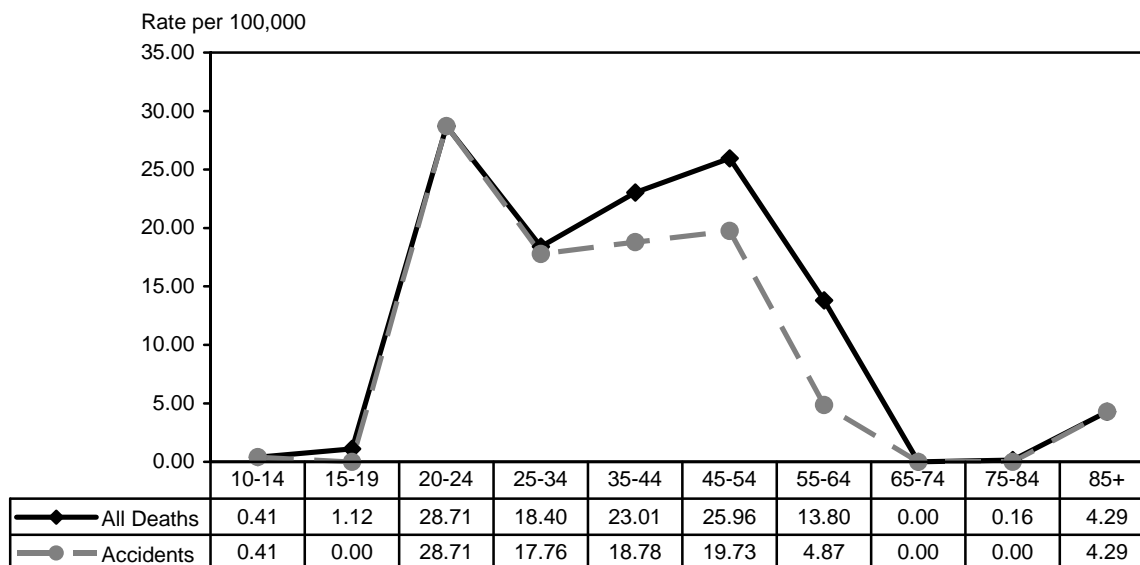
SOURCE: Maine Health and Environmental Testing Laboratory

**Exhibit 3. Number of Maine Deaths Caused by Specific Narcotics—Totals Include Deaths Caused by “Multiple Drug Toxicity” That Have Positive Toxicology Findings for These Drugs<sup>1</sup>: 1997–2006**



<sup>1</sup>Note that more than one drug may cause a death.  
SOURCE: Maine Office of Chief Medical Examiner

**Exhibit 4. Age-Specific Mortality Rates per 100,000 Population for All Drug-Induced Deaths Compared with Unintentional Poisonings in Maine: 2006**



SOURCE: Maine Office of Chief Medical Examiner

# Drug Abuse in Miami/ Ft. Lauderdale, Florida: 2005–2006

James N. Hall<sup>1</sup>

## ABSTRACT

*Polysubstance abuse consequences fueled by non-medical use of pharmaceuticals in combination with illicit drugs and/or alcohol dominate drug abuse indicators in Southeast Florida. A prescription drug was present in one-half of all cocaine-related deaths statewide. Cocaine consequences outnumber those for all other drugs in Miami-Dade County. The numbers of deaths, unweighted ED reports, and crime lab items related to the nonmedical use of prescription drugs in Broward County were more than double the numbers for Miami-Dade County in 2006. Heroin deaths across Florida decreased 56 percent between 2000 and 2005, while deaths related to prescription opiate pain medications increased 166 percent. Oxycodone was the most frequently cited narcotic analgesic among the unweighted ED DAWN Live! reports in both counties in 2006. Alprazolam (Xanax) is the benzodiazepine most often related to nonmedical use. Marijuana ranks second after cocaine (excluding alcohol) in unweighted ED reports, treatment admissions, and crime lab items. Measures of MDMA ('ecstasy') consequences and use increased slightly during 2006, reversing declining trends since 2001. GHB problems are reported at very low levels and continue to decline. Indicators of methamphetamine abuse also remain low, yet criminal cases are rising as high potency 'Mexican ice' is being trafficked via Atlanta into Florida. Sexual activity related to methamphetamine abuse is cited by public health officials as the key factor for why Miami-Dade and Broward Counties rank first and second in the Nation for per capita rates of HIV infection. Local trends from the Florida Youth Survey on Substance Abuse reflected declines in the prevalence of current use for most substances among Broward County middle and high school students between 2004 and 2006 but increases among Miami-Dade students.*

## INTRODUCTION

This report reviews data from 2005 and 2006 about drug-related deaths, medical emergencies, addiction treatment admissions, and law enforcement intelligence. Information is presented by primary substance of abuse, with topics including cocaine, heroin, prescription narcotic analgesics, methamphetamine, marijuana, gamma hydroxybutyrate (GHB), 3,4 methylenedioxymethamphetamine (MDMA or "ecstasy"), benzodiazepines, and muscle relaxants. While the information is classified by a single drug or category, the reader should note an underlying problem of polysubstance abuse as mentioned throughout this report. Exhibits for the report follow the narrative text.

## Area Description

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

Broward County, situated due north of Miami-Dade, is composed of Ft. Lauderdale plus 28 other municipalities and an unincorporated area. The county covers 1,197 square miles, including 25 miles of coastline. According to the 2000 census, the population was 1,649,925. The population is roughly 63 percent White non-Hispanic, 21 percent Black non-Hispanic, and 17 percent Hispanic.

Broward County is the second most populated county in Florida after Miami-Dade and accounts for approximately 10 percent of Florida's population. Broward was the top growth county in Florida in the 1990s and added 367,000 more people during that decade. Palm Beach County (population 1,154,464) is located due north of Broward County and is the third most populated county in the State. Together, the 5.4 million people of these 3 counties constitute one-third of the State's 16.3 million population.

Starting in 2003, these three counties constitute the new Federally designated Metropolitan Statistical Area (MSA) for South Florida, making it the sixth largest in the Nation. Previously, the MSA included only Miami-Dade County. This means that Broward and Palm Beach Counties are included in more national data sets

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tracking health-related conditions and criminal justice information. One change is the addition of more hospitals in the national Drug Abuse Warning Network that monitors emergency department reports of drug-related episodes.

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

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

- Proximity to the Caribbean and Latin America exposes South Florida to the entry and distribution of illicit foreign drugs destined for all regions of the United States. Haiti and Jamaica remain as transshipment points for Colombian traffickers.
- South Florida is a designated High Intensity Drug Trafficking Area and one of the Nation's leading cocaine importation centers. It also remains a gateway for Colombian heroin since the 1990s.
- Extensive coastline and numerous private air and sea vessels make it difficult to pinpoint drug importation routes into Florida and throughout the Caribbean region.
- Lack of a prescription monitoring system in Florida now makes the State a source for diverted medications in the southeastern United States.

### Data Sources

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

- **Drug-related mortality data** were provided by the Florida Department of Law Enforcement (FDLE) Medical Examiners Commission's 2006 *Report of Drugs Identified in Deceased Persons*

*between January and December 2006.* Analysis of drug-related deaths in 2005 is from detailed data tables of 7,573 cases provided by the Florida Medical Examiners Commission.

- **Emergency Department (ED) data** were derived for Miami-Dade County from the Drug Abuse Warning Network (DAWN), Substance Abuse and Mental Health Services Administration (SAMHSA). The data represent drug reports involved in drug-related visits for illicit drugs (derived from the category of "major substances of abuse," excluding alcohol) and the nonmedical use of selected prescription drugs (derived from the category of "other substances"). Drug reports exceed the number of ED visits because a patient may report use of multiple drugs (up to six drugs plus alcohol). Unweighted Miami-Dade ED data for 2006 are from the DAWN *Live!* restricted-access online query system administered by the Office of Applied Studies (OAS), SAMHSA. Eligible hospitals in only the Miami-Dade County Division totaled 21; hospitals in the DAWN sample numbered 19, with the number of EDs in the sample also totaling 19. (Some hospitals have more than one emergency department.) During 2006, nine EDs reported data each month. The completeness of data reported by participating EDs varied by month (exhibit 1). Exhibits in this paper for 2006 Miami-Dade County data reflect cases that were received by DAWN as of May 30, 2007. Unweighted Broward County ED data for 2006 are also from the DAWN *Live!* restricted-access online query system. Eligible hospitals in the Ft. Lauderdale Division only (that includes Broward and Palm Beach Counties) totaled 27; there were 22 hospitals in the DAWN sample, and the number of emergency departments in the sample also totaled 22. During 2006, between six and nine EDs reported data each month. The completeness of data reported by participating EDs varied by month (exhibit 2). DAWN *Live!* exhibits in this paper for Broward and Palm Beach Counties reflect cases that were received by DAWN as of May 30, 2007. Based on the DAWN *Live!* reviews, cases may be corrected or deleted; thus, the unweighted data presented in this paper are subject to change. Data derived from DAWN *Live!* represent drug reports in drug-related ED visits. Drug reports exceed the number of ED visits, since a patient may report use of multiple drugs (up to six drugs and alcohol). The DAWN *Live!* data are unweighted and, thus, are not estimates for the reporting area. DAWN *Live!* data cannot be compared to DAWN data from 2002 and before, nor can preliminary data be used for

comparison with future data. Only weighted DAWN data released by SAMHSA can be used for trend analysis. A full description of the DAWN system can be found on the DAWN Web site <<http://dawninfo.samhsa.gov>>.

- **Drug treatment data** for the first half of 2006 were provided by the Broward Addiction Recovery Centers (BARC) of the Broward County Department of Human Services and are from nine adult programs operated by BARC in Broward County. The programs serve persons 18 and older. There are a total of 19 addiction treatment programs in the county. The data are also reported by BARC to the State of Florida for inclusion in its Treatment Episode Data Set (TEDS) submission to SAMHSA.
- **Crime lab drug analyses data** were derived from the Drug Enforcement Administration's (DEA's) National Forensic Laboratory Information System (NFLIS) Report for Miami-Dade (all substances) and Broward County (for selected drugs) from January through December 2006. Broward County data for substances other than cocaine, heroin, and marijuana in 2006 are from the Broward Sheriff's Office (BSO) Crime Lab.
- **Drug pricing data** for South Florida were derived from the National Drug Intelligence Center (NDIC), *National Illicit Drug Prices*, December 2006.
- **Heroin price and purity information** is from the U.S. Drug Enforcement Administration (DEA) Domestic Monitor Program (DMP) from 2002 to 2005.
- **Data on the prevalence of substance use by middle and high school students** in Florida, Miami-Dade, and Broward Counties are from the 2006 Florida Youth Substance Abuse Survey.

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

## DRUG ABUSE PATTERNS AND TRENDS

### Cocaine/Crack

South Florida's cocaine epidemic is characterized by consequences that rank among the highest in the Nation. Cocaine abuse indicators have been rising since 2000 across the State but have remained relatively stable in Miami-Dade and Broward Counties at high

numbers. Cocaine indicators still dominate consequences of drug abuse. The majority of cocaine deaths, medical emergencies, and addiction treatment reports are among those older than 35. Many of the indicators reflect cocaine use in combination with other drugs, including prescription opiates and benzodiazepines.

Throughout Florida, the number of *cocaine-related* deaths increased 5.6 percent in 2006 as compared with 2005, continuing an upward trend since 2000. The rising numbers of cocaine deaths occurred in counties north of Miami-Dade and Broward Counties, where cocaine fatalities have remained relatively stable in recent years. There were 2,052 cocaine-related deaths across Florida in 2006. The 1,943 cocaine-related fatalities statewide in 2005 reflected a 14.2-percent increase from the 1,702 deaths in 2004. The 2006 total is the highest number since the drug has been tracked beginning in the late 1980s. The number of cocaine deaths increased 86 percent between 2001 and 2006; the key factor for that rise appears to be a corresponding 90-percent increase of deaths with cocaine-in-combination with other drugs, particularly prescription medications (exhibit 4).

An analysis of the 1,943 cocaine-related deaths in Florida during 2005 revealed that 26 percent of the cases involved only cocaine; 21 percent involved cocaine and only alcohol; 16 percent were found with cocaine, alcohol, and at least one other drug; and 37 percent involved cocaine and at least one other drug but no alcohol (exhibit 5). Most importantly, one or more prescription medications were identified in 52 percent, or 1,003, of the cocaine deaths. One or more narcotic analgesics were detected in 45 percent of the cocaine deaths; benzodiazepines were found in 34 percent; and the muscle relaxant Carisoprodol was involved in 4.8 percent of the cocaine deaths (exhibit 6).

In Florida, a drug is considered to be the cause of death if it is detected in an amount considered a lethal dose by the local medical examiner (ME). Among the cocaine-related deaths statewide in 2006, 829 or 40 percent were considered to be *cocaine-induced*.

There were 182 deaths related to cocaine abuse in Miami-Dade County during 2006, representing a 12-percent increase over the number in 2005. Cocaine was detected at a lethal level in 30 percent of the 2006 cases. Cocaine was found in combination with another drug in 58 percent of the cases. Two percent ( $n=3$ ) of the cocaine-related fatalities were younger than 18; 19 percent were age 18–25; 21 percent were 26–34; 42 percent were 35–50; and 16 percent were



older than 50. Miami-Dade County's number of cocaine deaths in 2006 ranked fourth among the 24 medical examiner districts in the State.

There were 150 deaths related to cocaine abuse in Broward County in 2006, representing a 10-percent increase over the 136 deaths in 2005. Cocaine was detected at a lethal level in 50 percent of the 2006 cases in Broward County. Cocaine was found in combination with another drug in 77 percent of the related death cases. Two of the cocaine-related fatalities were younger than 18; 17 percent were age 18–25; 17 percent were 26–34; 45 percent were 35–50; and 19 percent were older than 50. Broward County's number of cocaine deaths ranked seventh among the 24 medical examiner districts in the State.

The Jacksonville medical examiner district reported the highest number of cocaine-related deaths in the State during 2006, with 246 cases, followed by Palm Beach with 191, St. Petersburg with 185, Miami with 182, Orlando with 178, Broward County with 150, and Tampa with 130. St. Petersburg had the highest number of lethal cocaine cases, with 104 such deaths, followed by Jacksonville with 98, Palm Beach County with 78, and Broward County with 74 cocaine-induced deaths. Miami-Dade County ranked sixth with 54 lethal cocaine cases.

During 2006, unweighted data from *DAWN Live!* showed 5,369 cocaine reports from a sample of 9 out of 19 emergency departments in Miami-Dade (exhibit 7). As noted earlier, it is not appropriate to compare this number with the *DAWN* estimates for 2005 or with *DAWN Live!* data from any time period or any other metropolitan area.

Cocaine was the most commonly cited illicit drug among Broward County unweighted *DAWN Live!* ED reports, accounting for 58 percent of the 6,544 major substances of abuse reports (excluding alcohol and medications) during 2006; these data represent a sample of 6–9 emergency departments out of 22 (exhibit 8). Most (69 percent) of the 3,779 Broward cocaine ED patients were male. Sixty percent were non-Hispanic Whites, 27 percent were non-Hispanic Blacks, and 13 percent were Hispanic/other. Cocaine-involved ED patients were age 35 or older in 58 percent of these reports. The patients' ages were as follows: 3 percent were younger than 18, 14 percent were 18–24, 26 percent were 25–34, 34 percent were 35–44, 20 percent were 45–54, and 4 percent were 55 or older.

Cocaine accounted for 2,083 (or 39 percent) of the 7,717 primary, secondary, and tertiary treatment drug

mentions (excluding alcohol) from the BARC treatment programs during the first half of 2006 (exhibit 9). During this 6-month period, cocaine use was cited by 51 percent of the 4,073 BARC clients, including clients who mentioned alcohol. Of the 2,083 total cocaine mentions, 46 percent (or 949 cases) were as the primary drug of abuse. Fifty-seven percent of the total cocaine treatment mentions were from White, non-Hispanic clients; 34 percent were from Black, non-Hispanic patients; and 8 percent were from Hispanics. BARC client data are for clients age 18 and older. Those age 18–24 accounted for 8 percent of the cocaine treatment mentions; 23 percent were 25–34; and 69 percent were older than 34. Drug-specific data on treatment admissions in Miami-Dade County are not available.

Cocaine continued to be the most commonly analyzed substance by the Miami-Dade and Broward Sheriff's Office crime labs. It accounted for 13,730 items, or 71 percent, of the 19,429 total samples tested in Miami-Dade during 2006 and for 7,220 cases, or 68 percent, of the 10,655 total items analyzed in Broward County.

Powder cocaine and crack continued to be reported as "widely available" throughout Florida. According to NDIC, in Miami powder cocaine sells for \$15,250–\$22,000 per kilogram wholesale, \$700–\$1,250 per ounce, and \$13–\$100 per gram retail. Crack cocaine sells for \$475–\$1,400 per ounce, \$50–\$125 per gram, and \$10 per 0.1 gram "rock."

The 2006 Florida Youth Survey on Substance Abuse reported that 0.8 percent of State middle school students and 2.1 percent of high school students had used cocaine at least once in the 30 days prior to the survey. The 2006 combined prevalence for all students was 1.6 percent, reflecting a 20-percent decline from 2.0 percent reported in 2000 but a 45-percent increase from 1.1 percent in 2005. In Miami-Dade County, 1.6 percent of middle and high school students reported past-30-day cocaine use, representing a 7-percent increase since 2000 and a 33-percent increase since 2004 (exhibit 10). In Broward County, 0.7 percent of middle and high school students reported past-30-day cocaine use, representing a 50-percent decrease since 2000 and a 22-percent decrease since 2004 (exhibit 11).

## Heroin

The purity of street-level heroin increased in 2005 after declining between 2000 and 2004. Deaths related to heroin have declined dramatically in Florida since 2001. Substantial increases in abuse and conse-

quences of narcotic analgesics use have occurred as heroin problems have declined. Most heroin ED patients and addiction treatment admissions continue to be among older, White males. Yet, in 2006, 61 percent of heroin-related deaths in Broward County occurred among those persons younger than 35. South American heroin has been entering the area over the past decade. Abuse of narcotic pain medication has fueled opioid consequences. Polydrug abuse patterns have facilitated first-time use of opiate drugs, including heroin.

Throughout Florida, the number of *heroin-related* deaths decreased 21 percent during 2006 as compared with 2005, continuing a declining trend since 2001. There were 96 heroin-related deaths across Florida in 2006. Heroin continued to be the most lethal drug, with 81 percent ( $n=78$ ) of heroin-related deaths in 2006 being caused by the drug. There were 122 heroin-related deaths in 2005 that represented a 32-percent decline from the 180 such deaths in 2004. Heroin deaths continued a 5-year decline, down from 328 related deaths in 2001 (exhibit 12), yet deaths from prescription narcotic opiates increased over the same period. Polysubstance abuse was noted in 89 percent of the 2006 heroin-related deaths statewide. Across Florida, there were 261 heroin deaths in 2003, 326 in 2002, and 328 in 2001.

In 2006, 43 percent of the heroin-related deaths in Florida occurred in the three southeastern counties of Miami-Dade ( $n=20$ ), Broward (13), and Palm Beach (8). Miami-Dade County accounted for one-fifth of all heroin deaths in Florida.

In Miami-Dade County, heroin was found at a lethal dose level in 12 of the 20 deaths in which heroin was detected in 2006, down from 19 of 22 such deaths in 2005. Other drugs were detected in 85 percent of the 2006 cases. None of the heroin-related fatalities was younger than 18; 5 (25 percent) were age 18–25, 2 (10 percent) were age 26–34, 10 (50 percent) were age 35–50, and 3 (15 percent) were older than 50. The 20 heroin-related deaths in Miami-Dade during 2006 reflect a 9-percent decrease over the 22 deaths in 2005. Heroin deaths peaked in Miami-Dade County in 2000 with 61 fatalities.

In Broward County, heroin was detected at a lethal dose level in 85 percent of the 13 heroin-related deaths during 2006. Other drugs were detected in 77 percent of these cases. None of the heroin-related fatalities was younger than 18; three (23 percent) were age 18–25; five (38 percent) were 26–34; two (15 percent) were 35–50; and three (23 percent) were older than 50. The 13 heroin-related deaths during

2006 in Broward County reflected a 24-percent decrease over 2005, when there were 17 deaths in the entire year. The 35 heroin-related deaths during 2004 in Broward County reflected a 29-percent decrease over the 49 in 2003. There were 50 heroin-related deaths in 2002 and 41 in 2001.

During 2006, unweighted DAWN *Live!* data for Miami-Dade showed 948 heroin reports (exhibit 7), which, as noted earlier, cannot be compared to other areas.

Unweighted DAWN *Live!* data from the Broward EDs in 2006 identified a total of 470 heroin reports, representing 7 percent of illicit drug reports (exhibit 8). The heroin ED patients were predominantly older White males. Males accounted for 70 percent of the patients, and 76 percent were non-Hispanic Whites. Hispanics accounted for 18 percent of the heroin ED patients, and Blacks represented 6 percent of the patients. There were three (0.6 percent) patients younger than 18, while 17 percent were age 18–24, 31 percent were age 25–34, 31 percent were 35–44, 15 percent were 45–54, and 5 percent were 55 or older.

Heroin accounted for 555 (10 percent) of the primary, secondary, and tertiary treatment drug mentions (excluding alcohol) from the BARC program in the first half of 2006 (exhibit 9). Heroin was cited by 14 percent of the 4,073 total BARC clients during the first 6 months of 2006. Of the 555 total heroin mentions, 81 percent ( $n=451$ ) were as the primary drug of abuse. White, non-Hispanic clients accounted for 75 percent of the total heroin mentions; 15 percent were Black, non-Hispanic; and 9 percent were Hispanic patients. Clients age 18–24 accounted for 9 percent of the heroin treatment mentions; 32 percent were age 25–34, 35 percent were 35–44, 15 percent were 45–54, and 8 percent were 55 or older.

Heroin accounted for 521 crime lab cases in Miami-Dade during 2006 according to NFLIS, representing 2.7 percent of all drugs tested. There were 131 heroin crime lab cases worked in Broward County during 2006, representing 1.2 percent of all samples.

The DEA's Domestic Monitoring Program tested 29 street-level samples of heroin in South Florida in 2005. All were South American heroin samples that averaged 19.4 percent pure heroin, a 24-percent increase from 2004 (16.7 percent pure) but a 32-percent decrease from 2002 (28.5 percent pure). The average price per milligram pure in 2005 was \$1.36. The price per milligram pure decreased 11 percent from 2004 (\$1.53) but increased 35 percent from 2002 (\$1.01).

South American heroin is available in South Florida, as described by law enforcement officials and epidemiologists/ethnographers. According to NDIC, 1 kilogram of heroin sells for \$42,000–\$85,000 in the region and for \$2,500 per ounce; retail prices are roughly \$50–\$150 per gram. The most common street unit of heroin is a bag of heroin (roughly 15–20 percent purity) weighing about one-tenth of a gram that sells for \$10.

The 2006 Florida Youth Survey on Substance Abuse reported that 0.3 percent of State middle school students and 0.4 percent of high school students had used heroin at least once in the past 30 days. The 2006 combined prevalence for all students was 0.4 percent, reflecting a 50-percent decline from 0.8 percent reported in 2000 but a 33-percent increase from 0.3 percent in 2005. In Miami-Dade County, 0.4 percent of middle and high school students reported past-30-day heroin use, representing a 20-percent decrease since 2000 and a 33-percent decrease since 2004 (exhibit 10). In Broward County, 0.1 percent of middle and high school students reported past-30-day heroin use, representing an 80-percent decrease since 2000 and a 67-percent decrease since 2004 (exhibit 11).

### Other Opiates

Between 2005 and 2006, deaths related to the category of prescription narcotic analgesics increased 7.6-percent in all of Florida, going from 4,167 to 4,482. Deaths from hydrocodone, oxycodone, and methadone have been tracked in Florida since 2000. Beginning in 2003, morphine, propoxyphene, fentanyl, hydromorphone, meperidine, and other opioids were included in the Florida Medical Examiners Commission's surveillance monitoring program. Deaths related to 5 prescription narcotics totaled 193 in Broward County, 87 in Miami-Dade County, and 313 in Palm Beach County in 2006.

Across Florida, deaths related to oxycodone ( $n=923$ ) increased 29 percent between 2005 and 2006, and deaths related to hydromorphone (138) increased 28 percent. Hydrocodone deaths (731) increased 13 percent, fentanyl deaths (178) increased 5 percent, and methadone deaths (974) increased 4 percent between 2005 and 2006. The most lethal prescription narcotics statewide were methadone that caused 74 percent ( $n=716$ ) of the deaths related to it, fentanyl that caused 60 percent (112) of its related deaths, and oxycodone that was the cause of 54 percent (496) of the deaths related to it.

Medical examiner mentions for all opiate analgesics totaled 4,482 during 2006, compared with 3,698 al-

cohol medical examiner mentions. Most of the statewide opiate analgesics mentions were polydrug episodes, including 90 percent of the methadone ME cases, 89 percent of the oxycodone ME cases, 85 percent of the hydrocodone ME cases, 77 percent of propoxyphene deaths, and 74 percent of morphine cases.

Miami-Dade recorded 30 morphine-related deaths during 2006, of which 27 percent were morphine induced. Miami-Dade also had 23 oxycodone-related deaths in 2006, 4 of which were oxycodone induced. Most of these deaths (60 percent) involved oxycodone found in combination with at least one other drug. Miami-Dade County recorded 14 hydrocodone-related deaths during the year, and 5 were hydrocodone induced. Miami-Dade County recorded 13 methadone-related deaths in 2006, with 11 of them considered methadone induced. There were seven propoxyphene-related deaths in Miami-Dade County, with one considered to be a lethal dose. These 87 combined mentions represented a 7-percent decline over the 94 such deaths in 2005.

Broward County recorded 62 methadone-related deaths during 2006, of which 58 percent were methadone induced. Broward County had 71 oxycodone-related deaths in the same year, 69 percent of which were oxycodone induced. Most of these deaths (93 percent) involved oxycodone found in combination with at least one other drug. Broward County recorded 25 morphine-related deaths in 2006, with 40 percent of them considered morphine induced. There were 13 propoxyphene-related deaths in Broward County, with 4 considered to be a lethal dose. Broward County recorded 22 hydrocodone-related deaths during the period, and 36 percent were hydrocodone induced. These 193 combined mentions represented a 21-percent decline over the total in 2005.

Palm Beach County recorded 101 methadone-related deaths during 2006, of which 78 percent were methadone induced. Palm Beach County had 111 oxycodone-related deaths in the same year, 64 percent of which were oxycodone induced. Most of these deaths (90 percent) involved oxycodone found in combination with at least one other drug. Palm Beach County recorded 51 morphine-related deaths in 2006, with 39 percent of them considered morphine induced. Palm Beach County recorded 36 hydrocodone-related deaths during the period, with 30 percent considered to be hydrocodone induced. There were 14 propoxyphene-related deaths in Palm Beach County, with 1 considered to be a lethal dose. These 313 combined mentions represented a 17-percent decline over the number in 2005.

Unweighted DAWN *Live!* data for Miami-Dade show 370 narcotic analgesic reports in 2006 (exhibit 7).

Unweighted data accessed from DAWN *Live!* for Broward County EDs during 2006 reveal a total of 1,559 nonmedical use reports for narcotic analgesics (exhibit 8). Of these, 980 were oxycodone ED reports. The total also includes 204 methadone ED reports, 192 hydrocodone reports, 60 morphine reports, 30 propoxyphene reports, 29 fentanyl reports, and 28 hydromorphone ED reports.

In the 2006 unweighted DAWN data, males accounted for 60 percent of the Broward oxycodone ED patients, and 86 percent were non-Hispanic Whites. Hispanics accounted for 10 percent, and Blacks represented 5 percent of the oxycodone ED patients. Race or ethnicity was not named or documented for 3 percent of these ED reports. Two percent of the oxycodone patients were younger than 18; 18 percent were age 18–24; 24 percent were 25–34; 23 percent were 35–44; 23 percent were 45–54; and 10 percent were 55 or older.

Opiates other than heroin accounted for 666 (or 13 percent) of primary, secondary, and tertiary treatment drug mentions (excluding alcohol) from the BARC program in the first half of 2006 (exhibit 9). These prescription opiates were cited by 13 percent of the 4,073 BARC clients during this 6-month period. Of the 666 total mentions for these other opiates, 57 percent ( $n=382$ ) were as the primary drug of abuse. Oxycodone was the specific opiate mentioned by 91 patients. White, non-Hispanic clients accounted for 96 percent of the total oxycodone mentions; 3 percent were from Hispanics; and one patient was a Black, non-Hispanic. Clients age 18–24 accounted for 20 percent of the oxycodone treatment mentions; 28 percent were age 25–34 and 52 percent were older than 34.

The NFLIS reported 47 oxycodone crime lab cases, 33 hydrocodone cases, 10 methadone cases, and 11 other narcotic analgesic cases during 2006 in Miami-Dade County, representing 0.4 percent of all drug items analyzed. The 2006 NFLIS data for Broward County does not breakout narcotic analgesics from the 1,782 controlled substance prescription drug cases. The Broward Sheriff's Office Crime Lab, however, reported working 313 oxycodone cases from July 2005 to June 2006. There were also 152 hydrocodone cases, 7 hydromorphone cases, and 3 buprenorphine cases in the same period. These 475 narcotic analgesics cases in Broward County represented 5.3 percent of all cases.

The 2006 Florida Youth Survey on Substance Abuse found that 2.1 percent of State middle school students and 4.0 percent of high school students reported nonmedical use of a prescription pain medication at least once in the past 30 days. The 2006 combined prevalence for all students was 3.2 percent, reflecting a 9.0-percent decline from 3.5 percent reported in 2002 when the question was first asked on the survey but a 14.0-percent increase from 2.8 percent in 2005. In Miami-Dade County, 1.8 percent of middle and high school students reported past-30-day nonmedical prescription pain medication use, representing a 20.0-percent increase since 2000 and a 10.0-percent decrease since 2004 (exhibit 10). In Broward County, 2 percent of middle and high school students reported past-30-day nonmedical pain medication use, representing a 5-percent increase since 2000 and a 5-percent increase since 2004 (exhibit 11).

### **Methamphetamine**

Law enforcement sources confirm increased trafficking from Atlanta of high-grade Mexican-manufactured methamphetamine or "ice" in the last year. Mexican drug trafficking organizations are supplying powdered methamphetamine directly to local Latino populations of Central and South American nationalities. Outlaw motorcycle gang activity involved with local lab production and distribution has also been noted.

Methamphetamine-related deaths totaled 117 during 2006 statewide in Florida, representing a 2-percent increase from the 115 such deaths in 2005, following a 24-percent increase between 2004 and 2005. Methamphetamine was considered the cause of death in 21 of the 117 cases (18 percent) during 2006. There were also 122 amphetamine-related deaths in 2006 across Florida, a 20-percent increase over the previous year, following a 7-percent increase between 2004 and 2005. Amphetamine was considered the cause of death in 10 percent of the 122 cases in 2006.

In 2005 there were 115 methamphetamine-related deaths in Florida, 11 in Miami-Dade County, 8 in Broward County, and 4 in Palm Beach County (exhibit 13). The number of local deaths is not available for 2006.

Unweighted data accessed from DAWN *Live!* reveal 39 methamphetamine-related ED reports during 2006 in Miami-Dade County (exhibit 7). Among those patients, 77 percent were male, 49 percent were non-Hispanic Whites, 23 percent were Hispanics, and 18 percent were non-Hispanic Blacks. Race/ethnicity was not documented for 10 percent of the reports. No methamphetamine ED patient was younger than 18;

31 percent were age 18–24; 28 percent were age 25–34; 25 percent were 35–44; 8 percent were 45–54; and 10 percent were 55 or older, including one patient older than 65. There were also 28 amphetamine-related ED reports during 2006.

Unweighted data accessed from DAWN *Live!* reveal 48 methamphetamine-related ED reports during 2006 in Broward County (exhibit 8). Among those patients, 83 percent were male, 58 percent were non-Hispanic Whites, 19 percent were non-Hispanic Blacks, and 15 percent were Hispanics. Race/ethnicity was not documented for 8 percent of the reports. One methamphetamine ED patient was between 12 and 17 years of age; 25 percent were age 18–24; 31 percent were age 25–34; 33 percent were 35–44; 4 percent were 45–54; and 4 percent were 55–64. There were also 125 amphetamine-related ED reports in 2006.

Methamphetamine accounted for 33 (or 0.6 percent) primary, secondary, and tertiary treatment drug mentions (excluding alcohol) among clients age 18 and older in the BARC program during the first half of 2006 (exhibit 9). Methamphetamine was cited by 0.8 percent of the total 4,073 BARC clients during this 6-month period. Of the 33 total methamphetamine mentions, 55 percent ( $n=18$ ) were as the primary drug of abuse. White, non-Hispanic clients accounted for 81 percent of the total methamphetamine mentions; 13 percent were from Hispanics; and 6 percent were Black, non-Hispanics. Those age 18–24 accounted for 3 percent of the methamphetamine treatment mentions; 42 percent were age 25–34; and 55 percent were older than 34. Prescription amphetamines accounted for 6 primary mentions and 23 additional secondary and tertiary mentions among BARC clients in the first half of 2006.

The NFLIS reported that the Miami-Dade Crime Lab analyzed 124 methamphetamine exhibits in 2006, representing 0.6 percent of all substances tested. There were 112 Broward Sheriff's Office Crime Lab methamphetamine cases in 2006, representing 1.1 percent of all cases analyzed.

Statewide, the number of clandestine methamphetamine labs or equipment seizures rose from 30 cases in fiscal year (FY) 2000 (October 1999 to September 2000) to 341 in the FY ending September 30, 2005, and then declined to 244 seizures in the FY ending September 30, 2006.

In South Florida, methamphetamine has some of the highest prices in the Nation at \$15,000–\$20,000 per pound for powder Mexican methamphetamine as of

December 2006, \$10,000–\$30,000 per pound for Mexican ice (up from \$10,000 to \$20,000 per pound in June 2006), and \$1,800–\$2,100 per ounce for Mexican ice. A gram of the high purity ice sells for \$50–\$100 per gram. Lower purity powered methamphetamine sells for \$950–\$1,600 per ounce and from \$15 to \$100 per gram.

The 2006 Florida Youth Survey on Substance Abuse found that 0.9 percent of State middle school students and 0.5 percent of high school students reported use of a methamphetamine at least once in the past 30 days. The 2006 combined prevalence for all students was 0.7 percent, reflecting a 56-percent decline from 1.6 percent reported in 2000 and no change from 0.7 percent reported in 2005. In Miami-Dade County, 0.9 percent of middle and high school students reported past-30-day methamphetamine use, representing a 10-percent decrease since 2000 and a 31-percent decrease since 2004 (exhibit 10). In Broward County, 0.1 percent of middle and high school students reported past-30-day methamphetamine use, representing an 89-percent decrease since 2000 and a 83-percent decrease since 2004 (exhibit 11).

Methamphetamine abuse and related sexual activity have contributed to sharp increases in sexually transmitted diseases in South Florida, particularly among men who have sex with men (MSM). Local public health officials consider methamphetamine-related sexual behavior as a key factor in why Miami-Dade and Broward County rank numbers one and two nationally in per capita rates of HIV infection.

## Marijuana

Marijuana is abused by more Americans, particularly youth, than any other illicit drug. Consequences of its abuse and addiction continue as declines in its rates of use among youth since 2000 have stalled in recent surveys.

Cannabinoids were detected in 990 deaths statewide in Florida during 2006, representing a 17-percent increase compared with the previous year.

Unweighted DAWN *Live!* data for Miami-Dade showed 2,201 marijuana reports in 2006 (exhibit 7).

Marijuana was the second most cited illicit drug among Broward County unweighted DAWN *Live!* ED reports, accounting for 30 percent of the 6,544 major substances of abuse reports (excluding alcohol and medications) during 2006 (exhibit 8). Most (68 percent) of the 1,950 Broward marijuana ED patients were male. Sixty percent were non-Hispanic Whites,

24 percent were non-Hispanic Blacks, and 16 percent were Hispanic. Marijuana-involved ED patients younger than 35 accounted for 67 percent of these cases. The percentages of patients' ages were as follows: 14 percent were younger than 18, 27 percent were 18–24, 26 percent were 25–34, 20 percent were 35–44, 11 percent were 45–54, and 2 percent were 55 or older.

Marijuana accounted for 1,151 (or 22 percent) of the 5,336 primary, secondary, and tertiary treatment drug mentions (excluding alcohol) among clients 18 and older at the BARC treatment programs during the first half of 2006 (exhibit 9). Marijuana was cited by 28 percent of the 4,073 total BARC clients during the first 6 months of 2006. Of the 1,151 total marijuana mentions, 29 percent ( $n=336$ ) were as the primary drug of abuse. Fifty-two percent of the total marijuana treatment mentions were from White, non-Hispanic clients, 39 percent were from Black, non-Hispanic patients, and 9 percent were from Hispanics. Those age 18–24 accounted for 22 percent of the marijuana treatment mentions; 29 percent were age 25–34; and 49 percent were older than 34.

The NFLIS reported 4,134 marijuana crime lab cases in Miami-Dade County during 2006, representing 21 percent of all exhibits analyzed. Broward County reported 1,351 marijuana crime lab cases in 2006, representing 13 percent of all exhibits analyzed. Statewide, marijuana was seized more frequently than any other illicit drug in Florida. Marijuana is still described as widely available throughout Florida, with local commercial, sinsemilla, and hydroponic grades available. A pound of commercial grade marijuana sells for \$300–\$1,250 per pound. Hydroponic and sinsemilla grades sell for \$3,000–\$5,000 per pound. The ounce price for commercial grade marijuana is \$60–\$200. Sinsemilla sells for \$200–\$500 per ounce. Depending on its potency, marijuana may sell for \$5–\$20 per gram.

The 2006 Florida Youth Survey on Substance Abuse reported that 5.2 percent of State middle school students and 16.0 percent of high school students had used marijuana at least once in the past 30 days. The 2006 combined prevalence for all students was 11.4 percent, reflecting a 21.0-percent decline from 14.4 percent reported in 2000 but a 10.0-percent increase from 10.4 percent in 2005. In Miami-Dade County, 9.4 percent of middle and high school students reported past-30-day marijuana use, representing a 6.0-percent increase since 2000 and a 9.0-percent increase since 2004 (exhibit 10). In Broward County, 7.3 percent of middle and high school students reported past-30-day marijuana use, representing a

37.0-percent decrease since 2000 and a 28.0-percent decrease since 2004 (exhibit 11).

### **Methylenedioxymethamphetamine (MDMA, or “Ecstasy”)**

Measures of MDMA abuse suggest problems may have peaked in 2001, declined thereafter, stabilized between 2003 and 2005, but then started to increase in 2006.

Ecstasy pills generally contain 75–125 milligrams of MDMA, although pills are often adulterated and may contain other drugs being sold as “ecstasy.”

There were 67 MDMA-related deaths statewide in Florida in 2006, with the drug being cited as the cause of death in 13 of these cases. There were also 42 methylenedioxyamphetamine (MDA)-related deaths statewide in Florida during the same time. There were an additional nine deaths related to other methylated amphetamines in 2006, with those substances being the cause for two of the deaths. During 2005, there were 27 MDMA-related deaths, 18 MDA-related deaths, and 8 other deaths from an unidentified methylated amphetamine. Thus, MDMA deaths increased 148 percent and MDA deaths rose 133 percent in 2006 compared with the previous year.

In 2006, unweighted DAWN *Live!* data revealed 81 MDMA reports in Miami-Dade (exhibit 7).

In the unweighted DAWN *Live!* data for Broward County during 2006, there were 106 MDMA-related ED reports (exhibit 8). A majority (65 percent) of the MDMA-involved ED patients were male. Non-Hispanic Whites accounted for 47 percent of the marijuana patients; 34 percent were non-Hispanic Blacks; and 19 percent were Hispanics. MDMA-involved ED patients younger than 25 accounted for 62 percent of the reports. Patients ages were as follows: 18 percent were younger than 18, 44 percent were 18–24, 25 percent were 25–34, 8 percent were 35–44, 4 percent were 45–54, and one patient was older than 54.

The NFLIS reported that the Miami-Dade Crime Lab analyzed 262 MDMA exhibits, 9 MDA samples, and 6 samples containing both MDMA and MDA, representing a combined 1.4 percent of all substances analyzed in 2006. The Broward Sheriff's Office Crime Lab analyzed 147 MDMA cases and 8 MDA cases, together representing 1.6 percent all cases.

In South Florida, ecstasy tablets sell for \$5–\$7 per tablet wholesale (in bulk), \$9–\$10 per pill midlevel, \$20–\$30 retail for a single pill, or up to \$50 per pill at expensive nightclubs. These prices have increased since 2002.

The 2006 Florida Youth Survey on Substance Abuse reported that 0.8 percent of State middle school students and 1.6 percent of high school students had used “ecstasy” at least once in the past 30 days. The 2006 combined prevalence for all students was 1.2 percent, reflecting a 57.0-percent decline from 2.8 percent reported in 2001, which was the first year the question was asked on the survey, but a 20.0-percent increase from 1.0 percent in 2005. In Miami-Dade County, 1.4 percent of middle and high school students reported past-30-day MDMA use, unchanged from 2000 but a 40.0-percent increase since 2004 (exhibit 10). In Broward County, 0.9 percent of middle and high school students reported past-30-day MDMA use, representing a 31.0-percent decrease since 2000 and a 50.0-percent increase since 2004 (exhibit 11).

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

Abuse of the anesthetic GHB has declined significantly in recent years. There are several compounds that are converted by the body to GHB, including gamma butyrolactone (GBL) and 1,4 butanediol (1,4 BD). Most recently, GHB abuse involves the abuse of 1,4 BD. Commonly used with alcohol, these substances have been implicated in drug-facilitated rapes and other crimes. GHB was declared a federally controlled Schedule I drug in March 2000, and indicators of its abuse have declined since that time. More recently, GHB and its related substances are reported to be used by those seeking to come down from stimulant effects of methamphetamine.

There were four GHB-related deaths statewide during 2006. The drug was considered the cause of death in two of these cases. There were 9 GHB-related deaths reported statewide during 2005 and 11 deaths in both 2003 and 2004. In all of Florida, GHB-related deaths increased from 23 in 2000 to 28 in 2001 and then declined to 19 in 2002 before declining to 11 in 2003 and 2004.

Unweighted data accessed from DAWN *Live!* for Miami-Dade County reveal only two GHB-related ED reports 2006. There were 10 such DAWN *Live!* reports in Broward County.

The NFLIS reported 15 crime lab cases of 1,4 BD in Miami-Dade County in 2006, along with 3 GHB cases and 3 GBL cases. The Broward Sheriff’s Office

crime lab reported four cases of 1,4 BD, two cases of GHB, and two cases of GBL in 2006.

### **Benzodiazepines**

Benzodiazepines in general and alprazolam (Xanax) in particular are a substantial problem. There were 1,987 benzodiazepine-related deaths across Florida in 2006, representing a 5-percent decrease over the 2,080 such deaths in the previous year. Of the benzodiazepine-related deaths in 2006, a benzodiazepine was identified as the cause of death in 553 cases (28 percent). Among the benzodiazepine-related deaths statewide, 1,117 were attributed to alprazolam and 617 were attributed to diazepam.

In Miami-Dade County, there were 62 alprazolam-related deaths during 2006, of which 32 percent were alprazolam-induced. Seventy-seven percent of the deaths involved at least one other drug. There were also 33 diazepam-related deaths in Miami-Dade County; 4 were caused by the drug; 79 percent of these deaths involved at least 1 other drug. These 95 combined mentions for alprazolam and diazepam represented an 83-percent increase over the 52 such deaths in 2005. None of the combined mentions in the first half of 2006 involved a person younger than 18 ; 6 percent of the decedents were between 18 and 25, 6 percent were age 26–34, 45 percent were age 35–50, and 42 percent were older than 50.

Broward County recorded 88 alprazolam-related deaths during 2006, of which 41 (or 47 percent) were drug-induced. Only six of the deaths involved alprazolam alone. There were also 53 diazepam-related deaths in Broward County; 13 (25 percent) were caused by the drug; 92 percent of these deaths involved at least 1 other drug. These 141 combined mentions for alprazolam and diazepam represented a 31-percent decrease over the 204 such deaths in 2005.

Palm Beach County recorded 113 alprazolam-related deaths during the first half of 2006, of which 43 (38 percent) were drug-induced. Only two of the deaths involved alprazolam alone. There were also 57 diazepam-related deaths in Palm Beach County; 18 percent were caused by the drug; and 91 percent of these deaths involved at least 1 other drug. These 170 combined mentions for alprazolam and diazepam represented an 8-percent decrease over the 185 such deaths in 2005.

Unweighted DAWN *Live!* data for Miami-Dade show 968 benzodiazepine reports (exhibit 7).

Unweighted data accessed from DAWN *Live!* for Broward County EDs during 2006 reveal a total of 2,137 nonmedical use reports for benzodiazepines (exhibit 8). Of these, 995 (or 47 percent) were identified as alprazolam reports. There were 151 ED reports (7 percent) identified as clonazepam. The total also included 672 reports (31 percent) in which the specific benzodiazepine was not identified.

Males accounted for 51 percent and females for 49 percent of the Broward benzodiazepine ED patients, and 81 percent were non-Hispanic Whites. Hispanics accounted for 14 percent, and Blacks represented 5 percent. Five percent of the benzodiazepine patients were younger than 18, 14 percent were age 18–24, 22 percent were 25–34, 24 percent were 35–44, 22 percent were 45–54, and 13 percent were 55 or older.

Benzodiazepines accounted for 440 (8 percent) of the 5,336 primary, secondary, and tertiary treatment drug mentions (excluding alcohol) from the BARC treatment programs during the first half of 2006 (exhibit 9). Benzodiazepines were cited by 11 percent of the 4,073 total BARC clients during the first 6 months of 2006. Of the 440 total benzodiazepines mentions, 13 percent (57 cases) were as the primary drug of abuse. Ninety percent of the total benzodiazepines treatment mentions were from White, non-Hispanic clients, 6 percent were from Hispanics, and 3 percent were from Black, non-Hispanic patients. Those age 18–24 accounted for 16 percent of the benzodiazepines treatment mentions; 27 percent were age 25–34; and 57 percent were older than 34.

The NFLIS reported that Miami-Dade had 361 benzodiazepine exhibits (or 1.8 percent of all exhibits) in 2006, including 319 alprazolam items, 18 clonazepam samples, 11 diazepam items, and 13 for other benzodiazepines. In 2006, the Broward Sheriff's Office Crime Lab analyzed 736 benzodiazepine exhibits (7.4 percent of all items), including 628 alprazolam cases, 85 unspecified benzodiazepine cases, and 23 clonazepam samples.

The 2006 Florida Youth Survey on Substance Abuse found that 1.2 percent of State middle school students and 3.4 percent of high school students reported

nonmedical use of a depressant (with "Xanax" included as an example in the question) at least once in the past 30 days. The 2006 combined prevalence for all students was 2.5 percent, reflecting a 14.0-percent decline from the 2.9 percent reported in 2002, the first year "Xanax" was added as a question, but a 14.0-percent increase from 2.2 percent in 2005. In Miami-Dade County, 1.4 percent of middle and high school students reported past-30-day depressant use, representing a 133.0-percent increase from 2000 and a 17.0-percent increase since 2004 (exhibit 10). In Broward County, 1.6 percent of middle and high school students reported past-30-day depressant use, representing a 41.0-percent decrease since 2000 but unchanged since 2004 (exhibit 11).

### Muscle Relaxants

Muscle relaxants may be abused in combination with MDMA and other drugs. There were 313 deaths related to carisoprodol across Florida in 2006, of which 74 (or 24 percent) were considered to be caused by the drug. The number of carisoprodol-related deaths in 2006 decreased by only 1 from the 314 such deaths in 2005.

Unweighted DAWN *Live!* data for Miami-Dade County in 2006 show 37 reports on nonmedical use of muscle relaxants. Carisoprodol was specifically cited in 41 percent of the reports.

Unweighted DAWN *Live!* data on nonmedical muscle relaxants use show 180 ED reports involving these pharmaceuticals in Broward County in 2006. Carisoprodol was specifically cited in 87 percent of the reports.

There was 1 secondary and 2 tertiary treatment admission mentions of carisoprodol among the 4,073 total BARC clients during the first 6 months of 2006.

The NFLIS reported 3 carisoprodol crime lab cases in Miami-Dade County in 2006, and Broward County reported 52 carisoprodol lab cases in 2006.

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**Exhibit 1. DAWN ED Miami-Dade County Sample and Reporting Information: January–December 2006**

Total Eligible Hospitals <sup>1</sup>	No. of Hospitals in DAWN Sample	Total EDs in DAWN Sample <sup>2</sup>	No. of EDs Reporting per Month: Completeness of Data (%)			No. of EDs Not Reporting
			90–100%	50–89%	<50%	
21	19	19	9-10	0-1	0–1	8–9

<sup>1</sup>Short-term, general, non-Federal hospitals with 24-hour emergency departments based on the American Hospital Association Annual Survey.

<sup>2</sup>Some hospitals have more than one emergency department.

SOURCE: Miami-Dade County Division EDs DAWN *Live!*, OAS, SAMHSA, updated 5/30, 2007

**Exhibit 2. DAWN ED Ft. Lauderdale Division Sample and Reporting Information: January–December 2006**

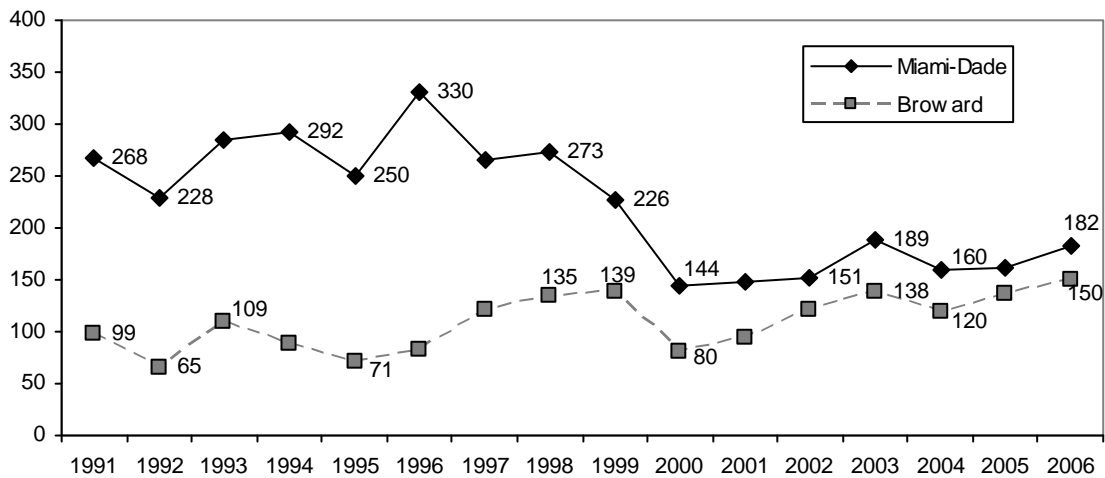
Total Eligible Hospitals <sup>1</sup>	No. of Hospitals in DAWN Sample	Total EDs in DAWN Sample <sup>2</sup>	No. of EDs Reporting per Month: Completeness of Data (%)			No. of EDs Not Reporting
			90–100%	50–89%	<50%	
27	22	22	4–6	0–2	0–3	13–16

<sup>1</sup>Short-term, general, non-Federal hospitals with 24-hour emergency departments based on the American Hospital Association Annual Survey.

<sup>2</sup>Some hospitals have more than one emergency department.

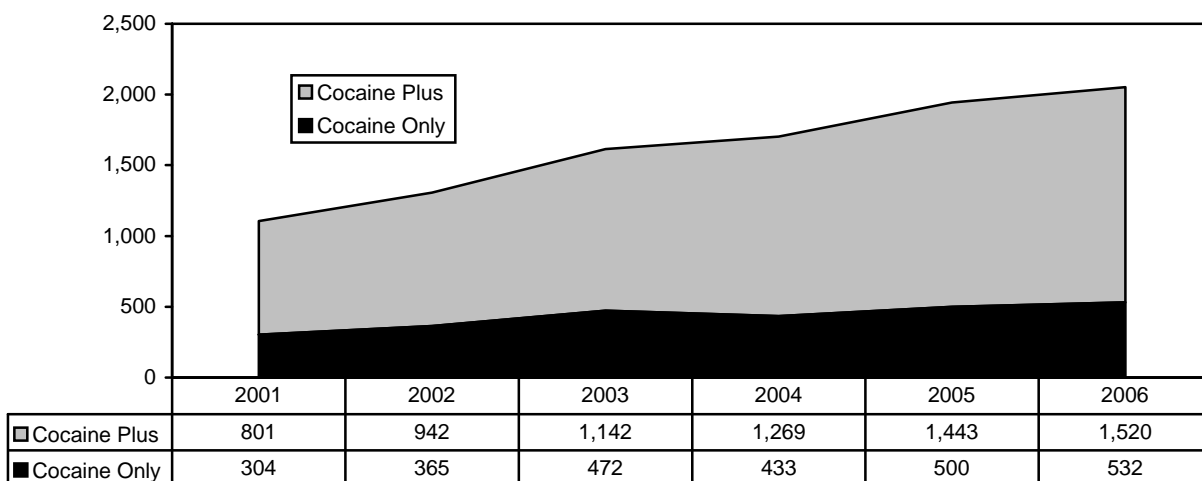
SOURCE: DAWN *Live!*, OAS, SAMHSA, updated 5/30, 2007

**Exhibit 3. Numbers of Drug-Related Deaths in Florida: 1991–2006**



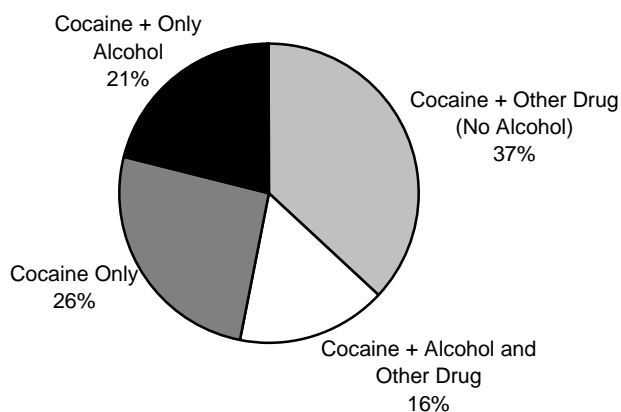
SOURCE: Florida Department of Law Enforcement, Florida Medical Examiners Commission Report 2005

**Exhibit 4. Polysubstance Use Among State of Florida Cocaine-Related Deaths: 2001–2006**



SOURCE: Florida Department of Law Enforcement, Florida Medical Examiners Commission Reports 2001–2006

**Exhibit 5. Alcohol and Other Drugs Detected in Cocaine-Related Deaths in Florida During 2005**



SOURCE: Florida Department of Law Enforcement, Florida Medical Examiners Commission Report 2005

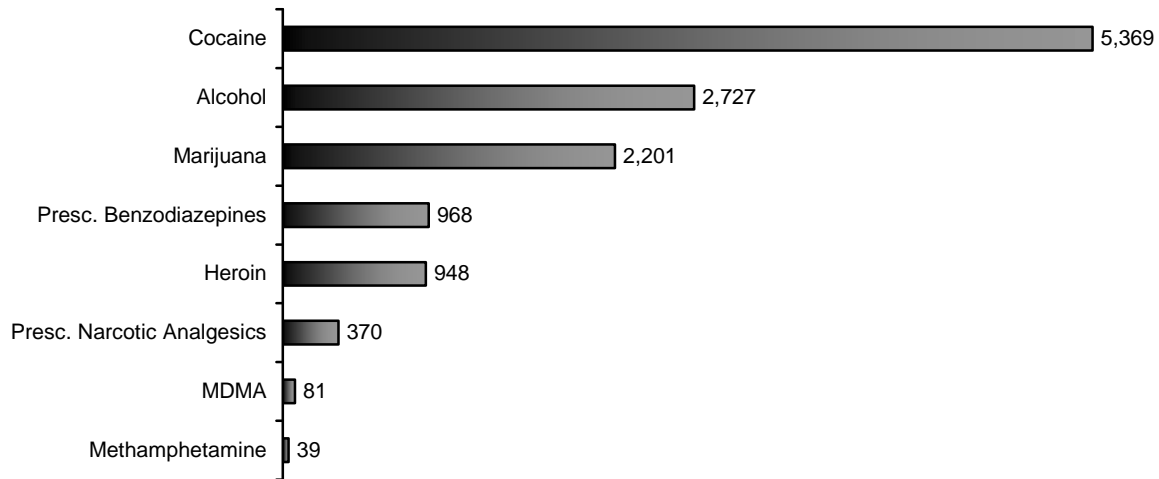
**Exhibit 6. Selected Prescription Medications Detected in Florida Cocaine-Related Deaths, by Percent: 2005**

Prescription Medication	Percent
Alprazolam	17.8
Methadone	15.8
Other Benzodiazepines	9.4
Oxycodone	9.1
Hydrocodone	7.9

Prescription Medication	Percent
Morphine	7.8
Diazepam	7.0
Carisoprodol	4.8
Propoxyphene	2.9
Fentanyl	1.8

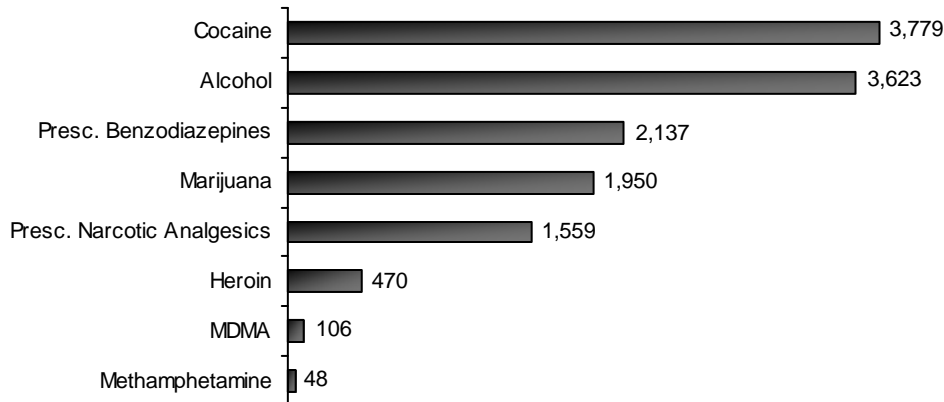
SOURCE: Florida Medical Examiners Commission 2005

**Exhibit 7. Numbers of Selected Drug Reports in Miami-Dade County DAWN ED Data (Unweighted<sup>1</sup>), by Drug Category: January–December 2006**



<sup>1</sup>The unweighted data are from 9–10 Miami-Dade EDs reporting to DAWN in 2006. All DAWN cases are reviewed for quality control. Based on this review, cases may be corrected or deleted, and, therefore, are subject to change.  
 SOURCE: Miami-Dade County Division EDs DAWN *Live!*, OAS, SAMHSA, updated 5/30, 2007

**Exhibit 8. Numbers of Selected Drug Reports in Broward County DAWN ED Data (Unweighted<sup>1</sup>), by Drug Category: January–December 2006**



<sup>1</sup>The unweighted data are from 6–9 Ft. Lauderdale EDs reporting to DAWN January–December 2006. All DAWN cases are reviewed for quality control. Based on this review, cases may be corrected or deleted, and, therefore, are subject to change.  
 SOURCE: Miami-Ft. Lauderdale Division ED DAWN *Live!*, OAS, SAMHSA, updated 5/30, 2007

**Exhibit 9. Primary Treatment Admissions and Admissions' Mentions for Selected Drugs Among BARC Clients, by Number and Percent: January–June 2006**

Drug	Number	Percent	
		Excluding Alcohol	Including Alcohol
<b>Primary Admissions<sup>1</sup></b>			
Cocaine	949	37.9	23.4
Heroin	451	18.0	11.1
Other Opiates	382	15.3	9.4
Marijuana	336	13.5	8.2
Benzodiazepines	57	2.3	1.4
Methamphetamine	18	0.7	0.4
<b>Mentions: Primary, Secondary, and Tertiary<sup>2</sup></b>			
Cocaine	2083	39.0	27.0
Heroin	555	10.4	7.2
Other Opiates	666	12.5	8.6
Marijuana	1151	21.6	14.9
Benzodiazepines	440	8.3	5.7
Methamphetamine	33	0.6	0.4

<sup>1</sup>Total Admissions=2,502 excluding alcohol, 4,073 including alcohol.

<sup>2</sup>Total Mentions=5,336 excluding alcohol, 7,717 including alcohol.

SOURCE: Broward Addiction Recovery Center

**Exhibit 10. Current Use of Selected Drugs Among Miami-Dade County Middle and High School Students, by Percent: 2006**

Selected Drugs	2006	Percent Change	
		2000–2006	2004–2006
Cocaine	1.6	+7	+33
Heroin	0.4	-20	-33
Prescription Pain Medications	1.8	+20	-10
Methamphetamine	0.9	-10	-31
Marijuana	9.4	+6	+9
MDMA	1.4	0	+40
Depressant "Xanax"	1.4	+133	+17
Alcohol	32.5	+9	+5

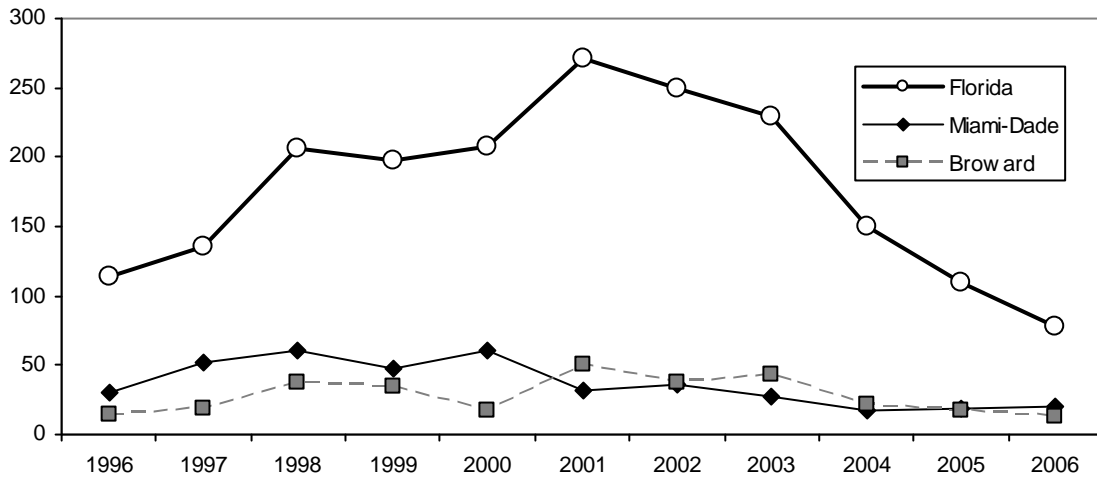
SOURCE: Florida Youth Substance Abuse Survey 2006

**Exhibit 11. Current Use of Selected Drugs Among Broward County Middle and High School Students, by Percent: 2006**

Selected Drugs	2006	Percent Change	
		2000–2006	2004–2006
Cocaine	0.7	-50	-22
Heroin	0.1	-80	-67
Prescription Pain Medications	2.0	+5	+5
Methamphetamine	0.1	-89	-83
Marijuana	7.3	-37	-28
MDMA	0.9	-31	+50
Depressant "Xanax"	1.6	-41	0
Alcohol	27.1	-18	-11

SOURCE: Florida Youth Substance Abuse Survey 2006

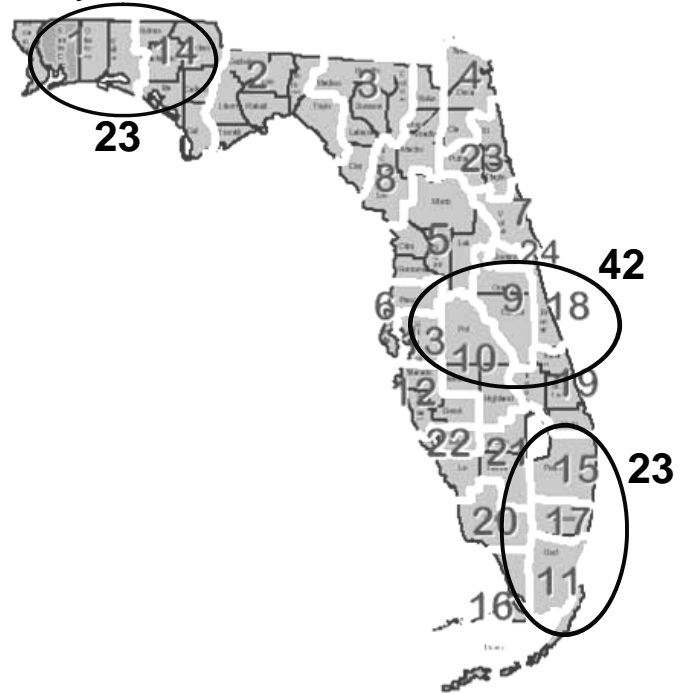
**Exhibit 12. Numbers of Heroin-Induced Deaths in Florida: 1996–2006**



SOURCE: Florida Department of Law Enforcement, Florida Medical Examiners Commission Report 2006

**Exhibit 13. Numbers of Florida Methamphetamine Deaths by Medical Examiner District: 2005**

ME District	City/Metro Area	Number of Methamphetamine Deaths
10	Lakeland	22
9	Orlando	15
1	Pensacola	15
11	Miami	11
17	Ft. Lauderdale	8
14	Panama City	8
6	St. Petersburg	7
18	Melbourne	5
15	Palm Beach	4
	Rest of Florida	20
	Total	115



SOURCE: Florida Department of Law Enforcement, Florida Medical Examiners Commission Reports 2005

# Drug Abuse Patterns and Trends in Minneapolis/St. Paul

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

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## ABSTRACT

*Consequences related to methamphetamine abuse and addiction showed significant signs of decline in 2006 in the wake of rising indicators since 2000. Only 8 percent of admissions to Twin Cities area addiction treatment programs were for methamphetamine in 2006, compared with 12 percent in 2005 and 10 percent in 2004. Methamphetamine was reported in 480 hospital emergency department incidents in 2006, compared with 2,307 for cocaine, 2,186 for marijuana, and 682 for heroin. The number of clandestine methamphetamine labs also fell throughout the State, in large part attributed to the 2005 State law restricting the retail sales of products containing pseudoephedrine. Methamphetamine-related accidental deaths remained stable. Opiate-related accidental overdose deaths outnumbered those for any other illicit drug in 2006. From 2005 to 2006, these increased in Hennepin County from 60 to 69, but they declined in Ramsey County from 42 to 27. Treatment admissions for opiates other than heroin and methadone continued to increase, accounting for 3.8 percent of total admissions in 2006 compared with only 1.3 percent in 2000. Heroin addiction among high school students surfaced in a small college town south of the Twin Cities. Marijuana accounted for more admissions to addiction treatment programs than any other illicit drug, with 3,702 admissions representing 18.3 percent of total admissions. It was also a commonly reported secondary and tertiary substance problem among patients admitted for addiction to other drugs. Among patients in treatment for alcoholism, for example, 56.2 percent reported marijuana as their secondary substance problem, and 29.3 reported it as a tertiary problem.*

## INTRODUCTION

This report is produced twice annually for participation in an epidemiological surveillance network comprising researchers from 21 U.S. areas who monitor emerging patterns and trends in drug abuse, the Community Epidemiology Work Group of

the National Institute on Drug Abuse. Compiled using the most recent data and information obtained from multiple sources, this report is also available online at [www.hazelden.org/research](http://www.hazelden.org/research).

## Area Description

The Minneapolis/St. Paul (“Twin Cities”) metropolitan area includes Minnesota’s largest city, Minneapolis (Hennepin County), the capital city of St. Paul (Ramsey County), and the surrounding counties of Anoka, Dakota, and Washington. Recent estimates of the population of each county are as follows: Anoka, 313,197; Dakota, 375,462; Hennepin, 1,239,837; Ramsey, 515,274; and Washington, 213,395, for a total of 2,557,165, or roughly one-half of the Minnesota State population. In the five-county metropolitan area, 84 percent of the population are White. African-Americans constitute the largest minority group in Hennepin County, while Asians are the largest minority group in Ramsey, Anoka, Dakota, and Washington Counties.

Aside from the Twin Cities metropolitan area, the remainder of the State is less densely populated and more rural in character. Minnesota shares an international border with Canada, a southern border with Iowa, an eastern border with Wisconsin, and a western border with North Dakota and South Dakota, two of the country’s most sparsely populated States. Illicit drugs are sold and distributed within Minnesota by Mexican drug trafficking organizations, street gangs, independent entrepreneurs, and other criminal groups. Drugs are typically shipped or transported into the Minneapolis/St. Paul area for further distribution across the State.

## Data Sources

Information for this report was gathered from the sources shown below:

**Treatment data** are from addiction treatment programs (residential, outpatient, and extended care) in the five-county metropolitan area, as reported on the Drug and Alcohol Abuse Normative Evaluation System (DAANES) of the Performance Measurement and Quality Improvement Division, Minnesota Department of Human Services (through 2006).

**Hospital emergency department (ED) data** are from the Drug Abuse Warning Network (DAWN) *Live!* system administered by the Office of Applied Studies (OAS) of the Substance Abuse and Mental Health Services Administration. The unweighted data are derived from drug reports from a sample of metropolitan-area emergency departments (EDs).

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

There are 28 eligible hospitals in the Minneapolis and St. Paul Standard Metropolitan Statistical Area; 26 are in the DAWN sample. Participation by EDs was incomplete; completeness data are summarized in exhibit 1. The unweighted numbers represent drug reports involved in drug-related ED visits for illicit drugs and for nonmedical use of prescription-type drugs. Drug reports exceed the number of visits because a patient may report the use of multiple drugs (up to six) and alcohol. Most data reported represent the full calendar year of 2006 and were updated by OAS on May 22, 2007; in some instances, however, only cases from the first half of 2006 were available. Since all DAWN cases are reviewed for quality control, the data may be corrected and, therefore, are subject to change. The DAWN *Live!* data do not represent weighted estimates of ED visits and cannot be compared across CEWG areas or across data collection years. A full description of the DAWN system can be found at <<http://dawninfo.samhsa.gov>>.

**Mortality data** on drug-related deaths are from the Hennepin County Medical Examiner and the Ramsey County Medical Examiner (through December 2006). Hennepin County cases include those in which drug toxicity was the immediate cause of death and those in which the recent use of a drug was listed as a significant condition contributing to the death. Ramsey County cases include those in which drug toxicity was the immediate cause of death and those in which drugs were present at the time of death.

**Crime lab data** for St. Paul are from the National Forensic Laboratory Information System (NFLIS). This system, which began in 1997, is sponsored by the U.S. Drug Enforcement Administration, and collects solid dosage drug analyses conducted by State and local forensic laboratories across the country on drugs seized by law enforcement (January 1, 2006, through December 31, 2006).

**Poison control center data** are from the American Association of Poison Control Centers Toxic Exposure Surveillance System (TESS) and were provided by the Hennepin Regional Poison Center of the Hennepin County Medical Center in Minneapolis (from January 1, 2006, through May 31, 2006).

**Human immunodeficiency virus (HIV) infection and acquired immunodeficiency syndrome (AIDS) data** for 2006 are from the Minnesota Department of Health.

**Additional information** is from interviews with treatment program staff, narcotics agents, and school-based drug and alcohol specialists conducted in May 2007.

## DRUG ABUSE PATTERNS AND TRENDS

### Cocaine/Crack

Treatment admissions reporting cocaine as the primary substance problem accounted for 14.1 percent of all admissions in 2006, compared with 14.4 percent in 2005 (exhibit 2). Exhibit 3 shows the proportion of non-alcohol admissions who were in treatment for cocaine. Most cocaine treatment admissions in 2006 were for crack cocaine (exhibit 4), and almost one-half (49.3 percent) were African-American. The average age of first cocaine use was 25.2 years, and more than two-thirds of patients receiving treatment for cocaine were age 35 or older. Women accounted for one-third of cocaine treatment admissions, and only 16.1 percent reported no prior treatment experience. Alcohol was the most frequently reported secondary substance problem, and marijuana was the most common tertiary substance problem.

Incidents involving cocaine at Twin Cities EDs outnumbered those involving any other illegal drug, with 2,307 unweighted reports in 2006 (exhibit 5).

Accidental overdose deaths involving cocaine were stable in both Hennepin and Ramsey Counties in 2006. In Hennepin County, there were 48 cocaine-related deaths in 2006, compared with 50 in 2005. In Ramsey County, there were 13 cocaine-related deaths in 2006, compared with 12 in 2005 (exhibit 6).

Cocaine accounted for 27.7 percent of the drug seizures reported to NFLIS in St. Paul in 2006 (exhibit 7). Cocaine generally sold for \$100 per gram, \$200 per “eightball” (one-eighth ounce), \$700–\$800 per ounce, and up to \$22,000 per kilogram. The price of a rock of crack was unchanged at \$10–\$20. Gangs in both cities were involved in the street-level retail distribution of crack cocaine. A large-scale, 3-month-long, drug sting operation that centered around bus stops in downtown St. Paul resulted in the arrest of roughly 100 street drug dealers (by early June 2007) who were selling mostly crack and marijuana.

### Heroin/Opiates/Other Opiates

Treatment admissions reporting heroin as the primary substance problem accounted for 5.8 percent of total admissions in 2006, compared with 5.3 percent in 2005 (exhibit 2). Of these 1,172 patients with heroin as the primary substance problem, 1.5 percent were younger than 18, 31.2 percent were women, and injecting was the most common route of administration (59.5 percent) (exhibit 4). Only 14.9 percent

were in treatment for the first time. Cocaine was the most frequently reported secondary substance problem (42.2 percent), and alcohol was the most common tertiary one (25.0 percent).

Treatment admissions for other opiates (other than heroin and methadone) continued to increase in 2006, accounting for 3.8 percent of total treatment admissions, compared with only 1.3 percent in 2000. There were 767 such admissions to treatment in 2006 (exhibit 3).

There were 682 unweighted ED reports of heroin in 2006, far fewer than the reports involving cocaine (2,307) or marijuana (2,186), and just slightly more than those involving underage drinking (636) (exhibit 5).

Opiate-related deaths, mostly accidental heroin overdoses, outnumbered cocaine-related deaths again in 2006. For both Hennepin and Ramsey Counties, there were 96 opiate-related deaths in 2006, down slightly from 102 in 2005. Within the counties, however, opiate-related deaths increased in Hennepin from 60 in 2005 to 69 in 2006, while they decreased in Ramsey from 42 to 27. Sixteen of the 69 accidental opiate-related deaths in Hennepin County in 2006 involved methadone, as did 9 of the 27 deaths in Ramsey County. Six Hennepin County and three Ramsey County deaths involved fentanyl, a potent prescription synthetic narcotic analgesic. The sale of heroin that also contains fentanyl, a combination responsible for a wave of accidental overdose deaths in several other U.S. cities in 2006, was reported in St. Paul.

Heroin accounted for 1.4 percent of the drug seizures analyzed by NFLIS in 2006 (exhibit 7). Both hydrocodone and oxycodone accounted for roughly 1 percent each.

Law enforcement sources report heightened availability of “black tar” heroin, especially in Minneapolis in 2007. The heroin is of Mexican origin and distributed by Hispanic criminal networks. Heroin prices remained at the lowest levels ever: \$20–\$40 per dosage unit or “paper,” as low as \$50 per gram, and \$600 per ounce.

Outside of the Twin Cities metropolitan area, heroin addiction emerged among high school students in Northfield, Minnesota, a college town located an hour south of the Twin Cities. Law enforcement officials remain watchful for a heroin mix known as “cheese” (black tar heroin combined with diphenhydramine) that remains largely limited to the Dallas, Texas, area. Several middle school youth in one rural

farm community in southern Minnesota were quite knowledgeable about “cheese” heroin, from conversations with their extended families in Texas, but the extent to which it is being imported into or used in Minnesota remains unclear.

A small segment of Minnesota’s Hmong immigrant population regularly smokes opium. Packages concealing opium continued to be shipped from Asia to residents of that Twin Cities community.

### **Methamphetamines/Other Stimulants**

In the wake of rising consequences related to methamphetamine abuse from 2000 through 2005, notable downward trends occurred in 2006. Since the enactment of a Minnesota State law (effective July 1, 2005) that restricted retail sales of pseudoephedrine-containing products, methamphetamine labs in Minnesota declined significantly to 59 in 2006 (through November), compared with 112 in 2005 (full year) and 212 in 2004.

In the Twin Cities, methamphetamine-related admissions to addiction treatment programs declined, especially among adolescents. Patients addicted to methamphetamine accounted for 8 percent of total treatment admissions in the Twin Cities in 2006, compared with 12 percent in 2005 and 10 percent in 2004 (exhibits 2 and 3). In 2006, only 4.8 percent of these patients were younger than 18 (exhibit 4), compared with 9.2 percent in 2005 (entire year) and 11.5 percent in the first half of 2005.

Women accounted for 35.4 percent of the treatment admissions for methamphetamine, the highest percentage within any drug category. Almost all were White (88.5 percent). However, Asians accounted for 2.8 percent, the highest percentage of Asians within any drug category. The average age of first use was 21.1 years. Three-quarters of the patients reported prior treatment experience. Smoking was the most common route of administration for methamphetamine (66.8 percent). Marijuana was the most frequently reported secondary substance problem (44.9 percent), and it was also reported by 29.3 percent of patients as a tertiary substance problem.

Unweighted hospital ED reports involving methamphetamine totaled 480 in 2006, compared with 3,278 for alcohol, 2,307 for cocaine, and 2,186 for marijuana (exhibit 5).

Ramsey County reported six accidental deaths related to methamphetamine in 2006, compared with seven in 2005 (exhibit 6). Excluding MDMA-related deaths, Hennepin County reported 7 methampheta-



mine-related deaths in both 2006 and 2005, compared with 11 in 2004.

Seizures of methamphetamine by law enforcement accounted for 37.9 percent of the samples reported to the NFLIS in 2006 (exhibit 7), compared with 51.0 percent in 2005. Methamphetamine prices were as low as \$70 per gram, \$200 for a “teener” (one-sixteenth ounce), \$240–\$280 for an “eightball” (one-eighth ounce), \$900–\$1,000 per ounce, and \$8,000–\$14,000 per pound.

Khat, a plant indigenous to East Africa and the Arabian Peninsula and used for its stimulant effects in East Africa and the Middle East, maintained a presence within the Somali immigrant community in the Twin Cities. Its active ingredients, cathinone and cathine, are controlled substances in the United States. Cathinone, a Schedule I drug, is present only in the fresh leaves of the flowering plant and converts to the considerably less potent cathine in about 48 hours. The plants are often wrapped in banana leaves to preserve freshness. Users chew the leaves, smoke them, or brew them in tea.

Methylphenidate (Ritalin), a prescription drug used in the treatment of attention deficit hyperactive disorder, is also used nonmedically as a drug of abuse to increase alertness and suppress appetite by some adolescents and young adults. Crushed and snorted or ingested orally, each pill is sold for \$5 or simply shared with fellow middle school or high school students at no cost. It is sometimes known as a “hyper pill” or “the study drug.”

## Marijuana

Marijuana remained a popular drug among adolescents and accounted for more admissions into addiction treatment programs than any other illicit drug in the Twin Cities, with 3,702 admissions in 2006 (18.3 percent of total treatment admissions) (exhibit 2). Of these, 39.3 percent were younger than 18, and an additional 32.9 percent were age 18–25 (exhibit 4). Only 20.4 percent were women, and for many (40.2 percent), it was their first treatment episode. The average age of first marijuana use was 13.8 years.

Marijuana was also a commonly reported secondary and tertiary substance problem among patients admitted for addiction to other drugs. Among patients in treatment for alcoholism, for example, 56.2 percent reported marijuana as their secondary substance problem, and 29.3 percent reported it as a tertiary substance problem.

There were 2,186 unweighted reports involving marijuana at Twin Cities area hospital EDs in 2006 (exhibit 5).

Marijuana (cannabis) accounted for 14.6 percent of drugs seized according to 2006 NFLIS data (exhibit 7), compared with 10.5 percent in 2005.

Marijuana sold for \$5 per joint. Standard, commercial grade marijuana sold for \$50 per one-quarter ounce, \$150–\$175 per ounce, and \$600–\$900 per pound. Higher potency “BC Bud” from British Columbia sold for up to \$100 per quarter ounce, \$600 per ounce, and up to \$4,000 per pound.

In May 2007, two large-scale indoor marijuana-growing operations were uncovered in upscale suburban homes, one in the eastern metropolitan area and one in the southern metropolitan area. In both raids combined, more than 2,400 plants of high potency “BC Bud” were revealed in one of the largest cases of its kind to date, according law enforcement officials, with marijuana valued at more than \$6 million. Also in May, a 3-ton shipment of marijuana from Mexico that was concealed in boxes of jawbreaker candy in a semi-trailer truck was intercepted as the result of a routine traffic stop in the Twin Cities.

Marijuana joints that are dipped in formaldehyde, which is often mixed with phencyclidine (PCP), are known as “wets,” “wet sticks,” “water,” or “wet daddies.” Marijuana joints containing crack cocaine are known as “primos.”

## Club Drugs

In 2006, 119 unweighted hospital ED reports involved MDMA (exhibit 5), which is also known as 3,4-methylenedioxymethamphetamine, or “ecstasy,” “X,” or “e.” It sold for \$20 per pill.

Gamma hydroxybutyrate (GHB), known as “G,” “Liquid E,” or “Liquid X,” is a concentrated liquid abused for its stupor-like depressant effects. It is also used as a predatory, knockout, drug-facilitated rape drug. There were three unweighted hospital ED reports of GHB in 2006 (first half). It sold for \$10 per capful.

Ketamine, also known as “Special K,” is a veterinary anesthetic that first appeared as a drug of abuse among young people in Minnesota in 1997. There were no hospital ED reports of it in 2006 (first half).

### Hallucinogens

Lysergic acid diethylamide (LSD or “acid”) is a strong, synthetically produced hallucinogen, typically sold as saturated, tiny pieces of paper known as “blotter acid,” for \$5 to \$10 per dosage unit. There were 28 unweighted hospital ED reports of LSD in 2006 (first half) and an additional 30 reports of “miscellaneous hallucinogens.” PCP, a dissociative anesthetic, is most often used in combination with marijuana in joints known as “wet sticks” or “dipped joints,” but can also be injected or snorted. In 2006 (first half), there were 19 unweighted hospital ED reports of PCP.

Dextromethorphan (also known as “DXM”) is the active cough suppressant ingredient in Coricidin HBP Cough and Cold (known as “Triple Cs”) and Robitussin. Over-the-counter cough and cold products that contain dextromethorphan continued to be abused for their hallucinogenic effects by ingesting doses many times in excess of the recommended amount. Excessive dosages produce long-acting hallucinations, altered time perception, slurred speech, profuse sweating, uncoordinated movements, and high blood pressure. Being under the influence of these products is known as “Robo-tripping” or “Skittle-ing.” The Hennepin Regional Poison Center received 58 dextromethorphan-related calls in January through May 2006, of which 70.2 percent involved people younger than 20.

### Alcohol and Tobacco

Almost one-half of the total admissions to addiction treatment programs (48.3 percent) reported alcohol as the primary substance problem in 2006, down from

54.4 percent in 2000 (exhibit 2). Of these patients, 59.2 percent were age 35 or older, and 28.2 percent were female (exhibit 4). The average age of first alcohol use was 15.7 years. Marijuana was reported as a secondary substance problem by more than one-half of these admissions (56.2 percent) and as a tertiary problem by 29.3 percent. There were 636 unweighted hospital ED reports of underage drinking in 2006, and 3,278 total unweighted reports involving alcohol (exhibit 5).

Nicotine use was widespread among patients in addiction treatment programs (exhibit 4).

### DRUG ABUSE-RELATED DISEASES

Most cases of HIV infection and AIDS in Minnesota in 2006 were in the Minneapolis/St. Paul area. Exposure categories for all Minnesota cases of HIV and AIDS combined were as follows: men who have sex with men (51 percent); injection drug use (7 percent); men who have sex with men and injection drug use (5 percent); heterosexual contact (12 percent); perinatal (1 percent); and unspecified/no interview (22 percent) (exhibit 8).

The level of hepatitis C virus (HCV), a blood-borne liver disease, among injection drug abusers remained high, with estimates as high as 90 percent among patients in some methadone treatment programs.

*For inquiries concerning this report, please contact Carol Falkowski, Director of Research Communications, Hazelden Foundation, Butler Center for Research, 15245 Pleasant Valley Road, Box 11, Center City, MN 55012-0011, Phone: 651-213-4566, Fax: 651-213-4344, E-mail: <cfalkowski@hazelden.org>.*

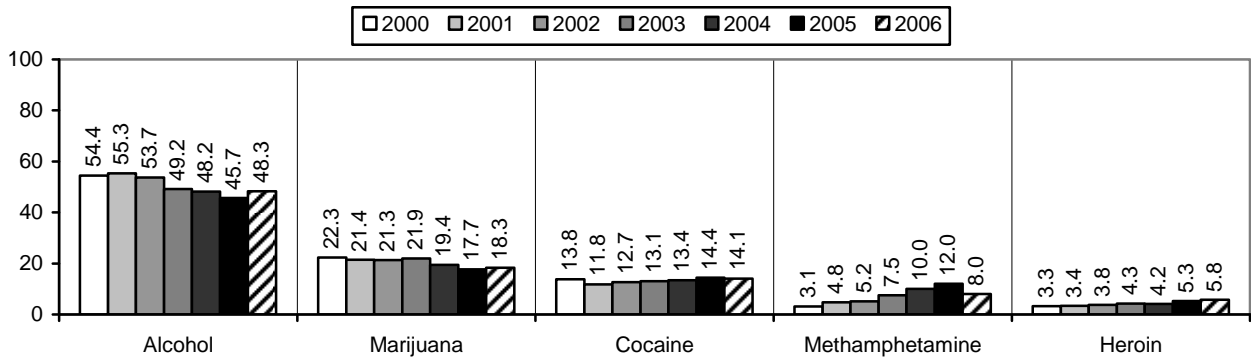
**Exhibit 1. Minneapolis/St. Paul DAWN ED Sample and Reporting Information: 2006**

Total Eligible Hospitals <sup>1</sup>	No. of Hospitals in DAWN Sample	Total EDs in DAWN Sample <sup>2</sup>	No. of EDs Reporting per Month: Completeness of Data (%)			No. of EDs Not Reporting
			90–100%	50–89%	<50%	
28	26	26	7–9	0–3	0–1	16–17

<sup>1</sup>Short-term, general, non-Federal hospitals with 24-hour emergency departments based on the American Hospital Association Annual Survey.

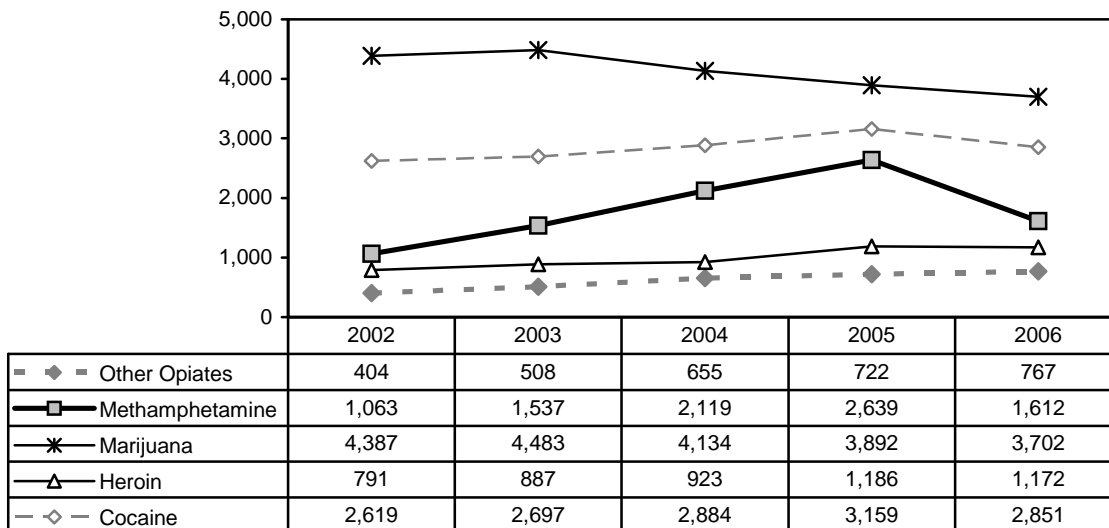
<sup>2</sup>Some hospitals have more than one emergency department.  
SOURCE: DAWN *Live!*, OAS, SAMHSA, updated 5/22/2007

**Exhibit 2. Admissions to Twin Cities Area Addiction Treatment Programs, by Primary Substance Problem and Percent: 2000–2006**



SOURCE: Drug and Alcohol Abuse Normative Evaluation Systems (DAANES), Performance Measurement and Quality Improvement Division, Minnesota Department of Human Services, 2007

**Exhibit 3. Number of Non-Alcohol Admissions to Twin Cities Addiction Treatment Programs by Primary Substance Problem: 2002–2006**



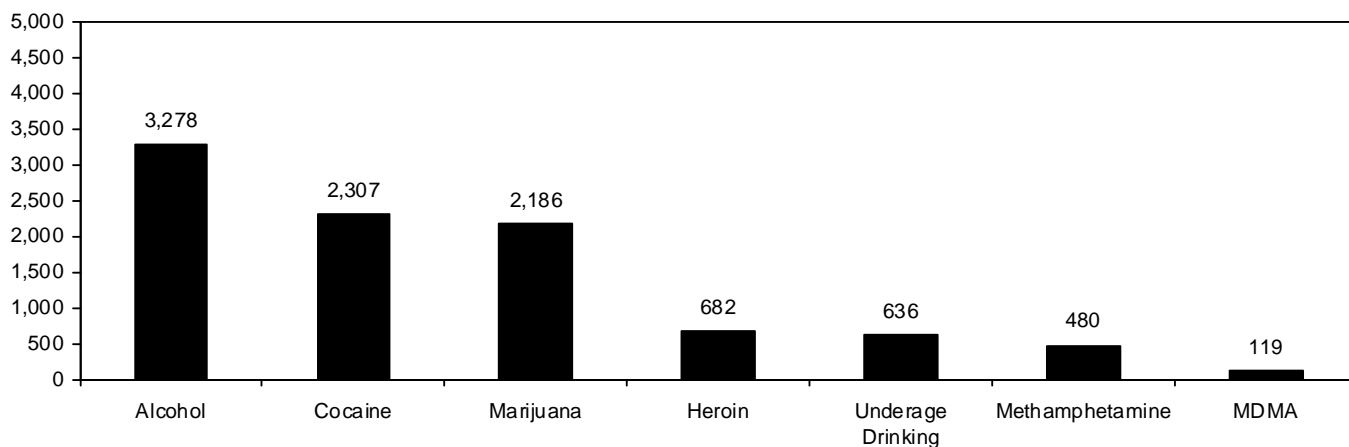
SOURCE: Drug and Alcohol Abuse Normative Evaluation Systems (DAANES), Performance Measure and Quality Improvement Division, Minnesota Department of Human Services

**Exhibit 4. Characteristics of Persons Admitted to Twin Cities Area Addiction Treatment Programs, by Primary Substance Problem and Percent: 2005**

Total Admissions (N=20,562)	Alcohol n=9,768 (48.3%)	Marijuana n=3,702 (18.3%)	Cocaine n=2,851 (14.1%)	Methamphetamine n=1,612 (8.0%)	Heroin n=1,172 (5.8%)
Gender					
Male	71.8	79.6	66.7	64.6	68.8
Female	28.2	20.4	33.3	35.4	31.2
Race/Ethnicity					
White	75.7	60.5	40.6	88.5	57.9
African-American	13.1	27.0	49.3	1.3	34.3
Hispanic	6.1	5.0	4.9	3.3	3.7
American Indian	3.3	3.3	2.4	2.5	2.9
Asian	0.9	1.1	0.7	2.8	0.5
Age					
17 and younger	4.1	39.3	2.6	4.8	1.5
18–25	16.6	32.9	11.1	32.7	17.9
26–34	20.1	15.7	19.2	33.2	26.1
35 and older	59.2	12.2	67.1	29.4	54.6
Route of Administration					
Smoking			83.4	66.8	3.4
Sniffing			15.6	15.2	37.0
Injecting			0.9	14.1	59.5
Oral				3.9	
Secondary Drug	Marijuana–56.2	Alcohol–71.1	Alcohol–53.1	Marijuana–44.9	Cocaine–42.2
Tertiary Drug	Cocaine–31.8	Alcohol–31.1	Marijuana–41.2	Alcohol–44.6	Alcohol–25.0
First Treatment Episode	29.7	40.2	16.1	25.6	14.9
Average Age First Use (in Years)	15.7	13.8	25.2	21.1	22.6
Daily Nicotine Use	58.3	63.7	66.5	74.3	78.1

SOURCE: Drug and Alcohol Abuse Normative Evaluation System (DAANES), Minnesota Department of Human Services, 2007

**Exhibit 5. Reports on Drug-Related Emergency Department (ED) Visits in Minneapolis/St. Paul, by Drug Category (Unweighted<sup>1</sup>): 2006**



<sup>1</sup>Cases derived from a sample of up to 10 metropolitan area hospital emergency departments from 1/1/06 through 12/31/06. All DAWN cases are reviewed for quality control and based on this review, cases may be corrected or deleted.

SOURCE: DAWN, OAS, SAMHSA; accessed 5/22/07

**Exhibit 6. Drug-Related Deaths in Hennepin County and Ramsey County: 2000–2006**

County/Drug	2000	2001	2002	2003	2004	2005	2006
Hennepin County							
Cocaine	43	37	34	44	39	50	48
Opiates	41	58	59	50	47	60	69
Methamphetamine	6 (incl. 3 MDMA)	8 (incl. 1 MDMA)	11 (incl. 3 MDMA)	15 (incl. 1 MDMA)	19 (incl. 8 MDMA)	10 (incl. 3 MDMA)	8 (incl. 1 MDMA)
Ramsey County							
Cocaine	17	11	11	10	10	12	13
Opiates	17	19	18	19	25	42	27
Methamphetamine	11 (incl. 3 MDMA)	2	3	10	9	7	6

SOURCE: Hennepin County Medical Examiner and Ramsey County Medical Examiner, 2006

**Exhibit 7. Drug Seizures in St. Paul, Minnesota: 2006**

Drug	Number of Items	Percent of Total Items
Methamphetamine	2,859	37.9
Cocaine	2,090	27.7
Cannabis	1,098	14.6
MDMA	216	2.9
Heroin	108	1.4
Oxycodone	93	1.2
Hydrocodone	74	1.0
All Other	1,010	13.3
Total	7,548	100.0

SOURCE: NFLIS, DEA

**Exhibit 8. Persons Living with HIV (non-AIDS) and AIDS in Minnesota, by Gender and Mode of Exposure in Minnesota: 2006**

Mode of Exposure <sup>1</sup>	Males		Females		Total	
	Total HIV and AIDS Cases	Percent	Total HIV and AIDS Cases	Percent	Total HIV and AIDS Cases	Percent
MSM	2,844	66	0	0	2,844	51
IDU	256	6	138	11	394	7
MSM/IDU	289	7	0	0	289	5
Heterosexual	147	3	515	41	662	12
Perinatal	16	0	34	3	50	1
Other	41	1	12	1	53	1
Unspecified	267	6	256	20	523	9
No Interview	440	10	311	25	751	13
Total	4,300	100	1,266	100	5,566	100

<sup>1</sup>MSM=Men who have sex with men. IDU=Injection drug user. Heterosexual=For males, heterosexual contact with a female known to be HIV-positive, an injecting drug user, or a hemophiliac/blood product or organ transplant recipient. For females: heterosexual contact with a male known to be HIV-positive, bisexual, an injecting drug user, or a hemophiliac/blood product or organ transplant recipient. Perinatal=Mother-to-child HIV transmission. Other=Hemophilia patient/blood product or organ transplant recipient. Unspecified=Cases who did not acknowledge any of the risks listed above. No interview=Cases who refused to be, could not be, or have not yet been interviewed.

SOURCE: Minnesota Department of Health

# Drug Use Trends in New York City

Rozanne Marel, Ph.D., John Galea, M.A.,  
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Rainone, Ph.D.<sup>1</sup>

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## ABSTRACT

*Drug use trends in New York City were again mixed for this reporting period. Cocaine indicators are beginning to show an increase, and cocaine remains a major problem in New York City. Primary cocaine admissions constitute one-quarter of New York City's drug and alcohol treatment admissions, and 57 percent of clients in treatment report cocaine as a primary, secondary, or tertiary drug. Heroin indicators were mixed for this reporting period. Heroin-related deaths have decreased, and treatment admissions have remained stable. Heroin remains widely available, and purity continues to increase, although it is lower than the 60 percent levels that had been noted for several years. Marijuana indicators seem to have stabilized. Marijuana continues to be of good quality and available in a wide variety of flavors and colors. Many users mix and combine drugs for simultaneous use. Although the numbers remain small, methamphetamine continues to be used in the gay community and among the nightclub population of New York City. Street sources report that the methamphetamine in New York City is low in quality and high in price. According to street sources and indicator data, many kinds of prescription drugs are popular and available on the street. Of the 95,417 New Yorkers living with HIV or AIDS, men having sex with men and injection drug use history continue to be the 2 major transmission risk factors. Deaths have continued to decrease in both sexes, all races, and all transmission categories. The number of new HIV (non-AIDS) diagnoses attributed to injection drug use continues to decline, and it decreased 36 percent between 2004 and 2005.*

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## INTRODUCTION

### Area Description

New York City, with 8 million people, is the largest city in the United States. It is situated in the southeastern corner of the State on the Atlantic coast

and encompasses an area of 320 square miles. It has nearly 600 miles of waterfront and one of the world's largest harbors.

Historically, New York City has been home to a large multiracial, multiethnic population. New York City is the largest and most racially/ethnically diverse city in the country. As has been true throughout its history, immigration continues to shape the character of New York City. It has contributed to a substantial shift in the racial/ethnic composition of New York. Findings from the 2000 census show that the population diversity continues: 35 percent are White; 27 percent are Black; 27 percent are Hispanic of any race; and 10 percent are Asian and Pacific Islander. The five largest Asian groups in the city are Chinese, Asian Indian, Korean, Filipino, and Pakistani, and the five largest groups of Hispanic origin are Dominican, Mexican, Puerto Rican, Colombian, and Ecuadorian. Moreover, New York City includes people who identify with races/ethnicities from all over the world. Nearly 3 million New York City residents are foreign born (2,871,032), which represents 36 percent of the resident population, and about 1.2 million legal immigrants became New York City residents between 1990 and 2000. The Dominican Republic remains the city's largest source of immigrants.

The highest percentage of foreign-born New Yorkers resides in Queens (46 percent). It is estimated, for example, that in Queens alone more than 120 languages are spoken. Brooklyn has the next highest percentage of foreign-born (38 percent), followed by Manhattan (29 percent), the Bronx (29 percent), and Staten Island (16 percent). According to the New York City Department of Health and Mental Hygiene, foreign-born New Yorkers are less likely than those born in the United States to have insurance and primary care providers and thus face barriers to accessing health care and treatment.

The city remains the economic hub of the Northeast. Its main industries include services and wholesale and retail trade. Of the more than 3.7 million people employed in the city, 22 percent commute from surrounding areas. Overall, the unemployment rates were lower this year than last. The unemployment rate in New York City for April 2007 was 4.4 percent, compared with 4.1 percent in New York State and 4.5 percent in the Nation. The unemployment figures for April 2006 were 5.1 for New York City, 4.7 for New York State, and 4.7 for the Nation.

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Census 2000 data showed that the median household income for New York City residents was \$38,323, compared with \$43,393 for State residents and \$41,994 for U.S. residents as a whole. The percentages of persons living below the poverty level for New York City and the State as a whole were 21.2 percent and 14.6 percent, respectively. The comparable figure for U.S. residents as a whole in 2000 was 12.4 percent.

### Data Sources

This report describes current drug abuse trends in New York City from 1995 to 2006, using the data sources summarized below:

- **Drug abuse-related death data** are from the New York City Department of Health and Mental Hygiene, Bureau of Vital Statistics. Data were made available for the period of 1995 through 2005 and cover the five counties composing New York City. These data have been coded in accordance with the International Classification of Diseases (i.e., ICD-9 for years 1995–1998 and ICD-10 for years 1999–2005) and are defined as “Mental and Behavioral disorders due to use of cocaine/drug dependence” and “Mental and Behavioral disorders due to use of Opioids (including Heroin)/drug dependence.” The relevant codes used by the Bureau of Vital Statistics in compiling the totals for cocaine-related deaths were 304.2 for years 1995–1998 (ICD-9) and F14 for 1999–2005 (ICD-10). In compiling the totals for heroin-related deaths, the codes used were 304.0 (ICD-9) for years 1995–1998 and F11.2 (ICD-10) for years 1999–2005.
- **Treatment admissions data** were provided by the New York State Office of Alcoholism and Substance Abuse Services (OASAS) for 1995 through 2006 and included both State-funded and nonfunded admissions. Demographic data are for 2006.
- **Drug-related arrest data** for cocaine were provided by the New York City Police Department Office of Management Analysis and Planning for 1995–2006. Because of changes in the New York City Police Department data reporting system, drug arrest data for 2002 through 2006 cannot be compared with data for 1995 to 2001. Drug-related arrest data for marijuana are from Harry G. Levine, “The Marijuana Arrest Binge in New York City, 1997–2004,” presented at the American Sociological Association meetings, Philadelphia, August 2005; this is based on data from the New York State Division of Criminal Justice Services, Computerized Criminal History System (as of March 2005), and includes all fingerprintable arrests for New York

State Penal Law Article 221 offenses as the most serious charge in arrest event, age 16 and older.

- **Forensic laboratory testing data** for New York City were provided by the Drug Enforcement Administration (DEA)’s National Forensic Laboratory Information System (NFLIS) for January through December 2006.
- **Drug price, purity, and trafficking data** were provided by the DEA’s Domestic Monitor Program (DMP) for heroin. These data are supplemented by information from the OASAS Street Studies Unit (SSU) reports and *National Illicit Drug Prices – December 2006*, a National Drug Intelligence Center (NDIC) Intelligence Bulletin.
- **Acquired immunodeficiency syndrome (AIDS) and human immunodeficiency virus (HIV) data** were provided by the New York City Department of Health and Mental Hygiene, HIV Epidemiology Program, for 1981–2005.
- **Hepatitis C data** were provided by the New York City Department of Health and Mental Hygiene, Bureau of Communicable Diseases for 2003–2005.

### DRUG ABUSE PATTERNS AND TRENDS

#### Cocaine/Crack

Many cocaine indicators, which had been stable, are beginning to show an increase. In general, the drug still accounts for major problems in New York City (exhibit 1).

According to the New York City Department of Health and Mental Hygiene, Bureau of Vital Statistics, there were 214 cocaine-related deaths in 2005, the same number as the year before, and slightly higher than the years preceding it.

While primary cocaine treatment admissions to State-funded and nonfunded programs in New York City declined from 17,572 in 1998 to 14,059 in 2000, they increased to 17,328 in 2006, the highest number in almost a decade. It should be noted that even when the cocaine treatment admissions were in decline, they did not show the same type of dramatic long-term decline that was seen in other indicators. In 2006, cocaine admissions constituted 25 percent of New York City’s 70,348 total drug and alcohol treatment admissions (excluding alcohol-only). In addition to these primary cocaine admissions, there were 19,323 admissions who reported cocaine as a secondary substance and 3,685 who reported cocaine as a tertiary substance. Thus, among the 70,348 drug treatment admissions in 2006,



40,336 (57 percent) mentioned cocaine as a primary, secondary, or tertiary substance of abuse.

Exhibit 2 shows demographic characteristics of cocaine treatment admissions for 2006 by the two primary modes of use: smoking crack (representing 61 percent of cocaine admissions) and using cocaine intranasally (representing 35 percent). Those who smoked crack were more likely than intranasal users to be female (36 vs. 26 percent), Black (69 vs. 39 percent), and without income (42 vs. 31 percent). Those using intranasally were more likely to be Hispanic or White and to have some criminal justice status. For both groups the secondary drugs of abuse tended to be alcohol and marijuana. It should be noted that all admissions for primary cocaine abuse represented an aging population, and those smoking crack tended to be older than those using cocaine intranasally.

Arrests involving cocaine numbered 27,992, a slight increase over the year before, but very similar to the year prior to that (exhibit 1).

Another data source, the DEA's National Forensic Laboratory Information System, showed that of the 49,914 drug items analyzed and reported for New York City, from January through December 2006, 26,776 (54 percent) were cocaine.

The NDIC reports that prices for cocaine powder for December 2006 were \$13,000–\$26,000 per kilogram, \$825–\$1,400 per ounce, \$35–\$150 per gram, and \$10–\$20 per bag. The NDIC reports that crack sells for \$25,000–\$32,000 per kilogram, \$800–\$1,000 per ounce, \$20–\$100 per gram, and \$5–\$10 per rock. The NDIC reported a notable change in the wholesale price of powder cocaine in New York City between June and December 2006. In December, the low price was \$13,000 per kilogram, compared with a low of \$17,000 in June. The difference in high end prices was \$6,000, from \$32,000 per kilogram in June to \$26,000 per kilogram in December.

According to the Street Studies Unit, cocaine hydrochloride (HCl) buying and use continues at a stable pace. Cocaine continues to be sold primarily behind closed doors (e.g. apartments or bodegas) except for special events or areas (e.g. concerts or clubs). Cocaine prices can fluctuate, as sellers vary the purity of the product and offer several different size packages. For example, cocaine is sold in \$20, \$25, \$30, \$50, and \$60 amounts. The most common price is the \$25 packet, which contains about 0.25 ounces; however, this same amount can sell for \$30, depending on the location or time of day.

Cocaine hydrochloride (HCl) continues to be packaged using various methods, including vials, aluminum foil, glassine bags, light plastic wrap knotted at both ends, cellophane, folded paper, magazine pages, and balloons. Of these, the traditional method of aluminum foil continues to be the most frequently used method.

Based on information from street sources, it is reported that Dominican drug gangs continue to dominate the mid-level distribution of cocaine in New York City. Compared with other drugs, cocaine selling continues to exhibit stronger and more direct ties to midlevel dealers and extended organizations. In some cases, these ties are based on family, small town origins, or long-term friendships. At the street level, the racial composition of the sellers usually corresponds to the racial composition of the surrounding community.

There are three basic selling methods used in marketing cocaine. The techno-method or virtual connection method is becoming increasingly utilized. A buyer makes a connection with a seller through the use of a beeper, cell-phone, or Internet. In most cases, the sellers use no-name cell phones or buy phones using false identification. These phones are regularly disposed of to hamper tapping. One common strategy to disrupt surveillance is to have the buyer contact the seller on one phone, with the seller using a second phone to make the meeting arrangement. Text messaging is also becoming popular because it avoids the vulnerability of voice recognition.

Cocaine sellers typically work out of their own apartments or ones belonging to relatives. Cocaine selling on the street, however, continues to be popular among sellers who primarily sell small amounts of cocaine with prices under \$50.

According to street interviews, most cocaine HCl users report that they “only” snort the drug. However, street contacts seem to suggest that a growing number of individuals are actually injecting. It is likely that this is related to individuals who speedball cocaine and heroin.

Crack users report that crack continues to be highly available. Crack selling operations tend to be clustered in and around public housing developments and street corners. Because of law enforcement targeting of crack sellers and selling locations, selling techniques are less overt. There has been a substantial decline in “open-air” market activity.

At any given selling location, there is only one standard price; however, SSU staff have found crack sold in \$5, \$10, and \$20 amounts. The most common price continues to be the \$10 amount, which represents

approximately 0.1 grams. During the summer, the \$5 amount may be more common. Sellers appear to want to shift to the \$20 amount as the standard selling unit because it significantly decreases buyer traffic.

There are three basic packaging methods associated with crack in New York City. These are the plastic vial, thumb-nail size plastic bag, and glassine bag. The thumb-nail-size bag continues to be the most common packaging method used by sellers.

The use of brand names in association with the selling of crack is becoming increasingly rare. Brand names attract attention from law enforcement, and competitors can easily duplicate them.

Today, most street-level crack sellers tend to be independent entrepreneurs with no direct connection with the midlevel dealers. These independent sellers, which are best described as floaters, operate within a known small area but do not claim any specific location. The sellers usually reflect the racial and ethnic composition of the community; however, there appear to be more Hispanic sellers than Black sellers. This may be because Hispanic criminal organizations control the mid- and upper-level supply and distribution nodes in New York.

Most street sellers buy ready-made crack from midlevel dealers. However, some sellers prefer to buy cocaine HCl powder and cook their own crack because it is more profitable.

## Heroin

Heroin continues to be a major drug problem in New York City (exhibit 3). For example, almost one-third of New York City's primary treatment admissions in 2006 were for heroin. Over the last several years, there has been a marked change in the price and purity of heroin, with a substantial decrease in purity and increase in price.

According to the New York City Department of Health and Mental Hygiene, Bureau of Vital Statistics, there were 131 heroin-related deaths in 2005, essentially the same number as the year before, but substantially lower than the years preceding that.

Primary heroin admissions to treatment programs in New York City gradually increased between 1995 and 2004, from 18,287 to 23,802, a 30-percent increase (exhibit 3). Although they have decreased in the prior 2 years, in 2006, primary heroin admissions numbered 21,973 and constituted 31 percent of New York City's 70,348 drug treatment admissions. In addition to the primary heroin admissions, 2,806 clients reported heroin as a secondary substance of abuse, and 1,271

reported it as a tertiary drug. Thus, most treatment admissions with heroin as a substance of abuse reported it as the primary drug of abuse. This contrasts with cocaine; almost 57 percent of those reporting cocaine considered it a secondary or tertiary drug of abuse.

Intranasal heroin use may have peaked in the second half of 1998, with 62 percent of heroin admissions to all New York City drug treatment programs reporting this as their primary route of administration. Since then, the proportions reporting intranasal use declined slightly and ranged from 59 to 61 percent. In 2006, the proportion using intranasally was 61 percent. Meanwhile, heroin injection increased among heroin admissions, from 32 percent in the second half of 1998 to 38 percent in 2006.

Exhibit 4 highlights general demographic characteristics of heroin abusers admitted to all New York City treatment programs in 2006 by mode of use. In general, primary heroin admissions were overwhelmingly male (76 percent), older than 35 (75 percent), more likely to be Hispanic (49 percent) than Black (27 percent) or White (20 percent), and likely to report cocaine as a secondary drug of abuse (43 percent). Compared with heroin injectors, intranasal users were more likely to be Black (34 vs. 15 percent) and have some criminal justice status (30 vs. 21 percent). In contrast, primary heroin injectors were more likely than intranasal users to be White (31 vs. 12 percent), to report cocaine as a secondary drug of abuse (52 vs. 41 percent), and to have started use before reaching age 20 (57 vs. 42 percent).

In addition to heroin admissions to traditional treatment programs, heroin admissions for detoxification or crisis services in New York City have become sizable in number. These special services are usually short term, provided in a hospital or community-based setting, and medically supervised. In 1995, 4,503 such admissions were reported for heroin abuse. By 2006, the number of heroin admissions was 15,300.

NFLIS data show that 11 percent of the 49,914 drug items analyzed for New York City in 2005 ( $n=5,624$ ) contained heroin.

From 1992 to 2000, the DMP found average heroin purities to be generally above 60 percent. While findings for 2004 showed an average purity for South American heroin of 43.3 percent, and an associated price of \$0.62 per milligram pure, the figures for 2005 were 49.4 percent pure and a price of \$0.46. According to the NDIC, kilogram prices in December 2006 were \$45,000–\$80,000 for South American heroin and \$40,000–\$90,000 for Southwest Asian heroin. The price for Southeast Asian heroin was \$70,000–\$75,000 per 700 grams.

According to the SSU field staff, heroin in New York City continues to be highly available, and the demand for heroin continues to be high. Regular users report that they would be able to purchase heroin within a 10-minute walk from anywhere in the city. Despite the wide availability of heroin, however, there appear to be fewer heroin sellers operating in public than marijuana or crack sellers. Most users report that the potency currently available is good. According to various street contacts, the majority of the heroin available in the city comes from South America, and the distribution is controlled by Colombian/Dominican organized crime groups.

The majority of heroin coping sites are indoor or off-the-street operations. In certain “high drug” areas, there are “roaming” street sellers. These individuals operate in a given medium size area and sell from several sites during the day. These sellers make rounds from one location to another. In some cases, these rounds are time dependent. For example, a heroin dealer operating in a particular park may walk through every hour on the quarter hour. This selling pattern eliminates the need to be continuously present at one location, which might elicit undesired attention from local residents or law enforcement. In addition, the predictability of the schedule also serves to reduce loitering by customers who have learned to time their arrival to coincide with the seller’s rounds.

The amount sold in the standard \$10 bag appears to be unchanged. Each package contains approximately 0.10 to 0.13 grams of powder. The most popular packaging method is the glassine bag, which varies by color to denote a given area or dealer. In addition, brand names are sometimes used, but this practice is not as common as it once was.

Although most heroin users describe themselves as snorters, they report that more and more users they know are using needles. This is particularly true for young users (those younger than 30). A number of users report regularly using the needle exchange.

### **Other Opiates/Narcotics**

According to the SSU, OxyContin is sold on the street for \$10 for a 40-milligram tablet and \$22 for an 80-milligram tablet. SSU staff also report that OxyContin continues to be used to cut heroin or to boost methadone. Other medications being used to cut heroin include Dilaudid, Klonopin, Tylenol with codeine (#4), and Percocet.

Other narcotics being sold on the street include Tylenol with codeine (#4) for \$2 per pill and methadone diskettes, 40 milligrams at \$15 each or two for \$25. Some street sources report that in order to get these

narcotic pharmaceuticals, they tell their doctors they are experiencing severe back pain.

### **Methamphetamine/Amphetamines**

Although methamphetamine is popular in other parts of the Nation, there were relatively few arrests, deaths, or treatment admissions related to the drug in New York City.

NFLIS data show that less than 1 percent of the 49,914 drug items analyzed for New York City in 2006 contained methamphetamine.

According to the SSU, the general demand for crystal methamphetamine in New York City remains low, and there is little availability or selling activity. The use of “crystal meth” is still primarily limited to the gay/male community. Some informants indicate that methamphetamine can be found, but the quality is poor and the price is high.

### **Marijuana**

In New York City, marijuana indicators, which had recently increased steadily and dramatically, appear to be stabilizing.

Primary marijuana admissions to all treatment programs increased steadily over the past several years. Overall, the number increased more than ninefold between 1991 and 2006, from 1,374 to 16,113, the highest annual number (exhibit 5). In 1991, primary marijuana admissions represented less than 5 percent of all treatment admissions; by 2006, these admissions represented 23 percent of admissions (excluding alcohol-only) to all New York City treatment programs.

Exhibit 6 shows demographic characteristics of primary marijuana admissions to all New York City treatment programs in 2006. The vast majority were male (79 percent), and 26 percent were younger than 21. More than one-half (60 percent) were Black, about one-third (28 percent) were Hispanic, and 8 percent were White. Alcohol was the secondary drug of abuse for 37 percent of the marijuana admissions, and 64 percent had some criminal justice status.

According to NFLIS data, 27 percent of the drug items analyzed for New York City in 2006 ( $n=13,540$ ) contained cannabis.

According to the NDIC, marijuana prices can range from \$700 to \$1,500 per pound wholesale for commercial grade and from \$2,100 to \$7,500 per pound for hydroponic marijuana.

According to the SSU, marijuana continues to be widely available and in high demand. There is currently a tendency by drug users, regardless of primary drug, to mix and combine multiple drugs for simultaneous use, and marijuana in a blunt cigar often serves as the base to which other drugs are added.

The quality of marijuana varies greatly by seller and location. "Haze" marijuana comes in a variety of colors and flavors, and it continues to be perceived as high quality. Usually, street sales involve thumb-nail size plastic zip-lock bags that sell for either \$10 or \$20.

### Club Drugs

Club drugs are a collection of various synthetic chemical compounds that are often abused by young people in social settings, such as dance clubs, after-hour clubs, and other special events. Club drugs include methylenedioxymethamphetamine (MDMA), gamma hydroxybutyrate (GHB), and ketamine. All-night parties are about endurance and sensory overstimulation, and, not surprisingly, many of the club drugs have stimulant or hallucinogenic properties.

According to the SSU, street sources report that MDMA, a stimulant with hallucinogenic properties, is easy to obtain in many areas of the city. MDMA is available in tablet, capsule, and powdered form. According to the NDIC for December 2006, a dose sells for \$5–\$38 per tablet retail.

Available as a club drug in New York City, the veterinary anesthetic ketamine produces hallucinogenic effects similar to PCP and visual effects similar to lysergic acid diethylamide (LSD). On the street, the drug is called "Special K," "K," "Vitamin K," and "Cat Valium," and sells for approximately \$25–\$50 per dosage unit. It comes in liquid, powdered, or tablet form, and it may be administered intranasally or injected. While ketamine is not currently a controlled substance under Federal law, it is listed as a controlled substance in New York State. It is available in club settings and has not been reported on the street.

Although not generally available on the street, GHB and the analogs (GBL, BD, GHV, and GVL) can be easily obtained in many dance clubs. It is also known as liquid MDMA, "grievous bodily harm," or "Georgia Homeboy." It is usually available in liquid form, and in a club GHB may cost \$45–\$65 for a bottle cap full. A single dose costs about \$20.

### Phencyclidine (PCP) and Lysergic Acid Diethylamide (LSD)

PCP ("angel dust") continues to be available in some areas of New York City.

LSD is a strong hallucinogen that has not been a major problem in New York City since the late 1960s and early 1970s. It is also known as acid, boomer, and yellow sunshine.

### Benzodiazepines/Barbiturates

Psychoactive prescription drugs continue to be widely available and popular. The SSU continues to report a variety of drugs readily available on the street, some for as little as \$0.50 per pill.

According to the SSU, the three most popular or commonly sold pharmaceuticals on the street in this category are alprazolam (Xanax), amitriptyline (Elavil), and clonidine (Catapres). Xanax is often obtained through a prescription paid by Medicaid and sold on the street for \$5 per 2-milligram pill. Most of these medications come in a variety of strengths, and not all strengths are found on the street. Elavil is sold for \$1 for 50-milligrams and Catapres is \$1 for a 0.3-milligram pill.

### INFECTIOUS DISEASES RELATED TO DRUG ABUSE

The AIDS epidemic, with its impact on injection drug users (IDUs), has played a crucial role in shaping the New York City drug scene over the last two decades. HIV first entered New York City in the mid- to late-1970s. AIDS reporting was mandated in 1983, but reporting of HIV infection began in June 2000. Since AIDS surveillance began in New York City, 189,165 cases of HIV and AIDS have been diagnosed and reported, and 93,748 people have died.

As of December 31, 2005, 95,417 New Yorkers had been diagnosed with HIV or AIDS; 35,482 (37 percent) were living with HIV (non-AIDS), and 59,935 (63 percent) were living with AIDS. According to the New York City Department of Health and Mental Hygiene, the true number of persons living with HIV/AIDS (PLWHA) is actually higher, since they estimate that one-quarter of persons living with HIV have never been tested and do not know that they are infected.

Of the 95,417 PLWHA in New York City as of December 31, 2005, 69 percent were male and 30 percent were female. In terms of race/ethnicity, 45 percent were

Black, 32 percent were Hispanic, and 21 percent were White. For transmission risk factors, 29 percent (27,661) were men who have sex with men, 22 percent (21,079) had an injection drug use history, 19 percent reported a heterosexual transmission factor, 3 percent had a perinatal transmission risk factor, less than 1 percent had another risk factor, and 29 percent had an unknown risk factor or were under investigation. Among males, the transmission risk factors were 42 percent men who have sex with men, 23 percent injection drug use history, 7 percent heterosexual, 2 percent perinatal, and 26 percent unknown. Among females, the transmission factors were 21 percent injection drug use history, 38 percent heterosexual, 4 percent perinatal, 1 percent other, and 36 percent unknown.

According to the New York City Department of Health and Mental Hygiene HIV Epidemiology Program 2nd Semiannual Report, the number of new HIV (non-AIDS) diagnoses attributed to injection drug use continued a steady decline from 298 in 2004 to 191 in 2005, a decrease of 36 percent. Deaths have decreased in both sexes, all races, and all transmission categories.

The New York City Department of Health and Mental Hygiene, Bureau of Communicable Diseases, also has a surveillance of hepatitis C data. As of December 2005, there were 13,814 newly reported individuals with a diagnosis date (or specimen collection date) in 2004. For 2003, that figure was 15,129.

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**Exhibit 1. Semiannual Cocaine Trends for Selected Indicator Data in New York City: 1995–2006**

Year	Semiannual/ Annual Periods	Deaths Involving Cocaine <sup>1</sup>	Treatment Admissions: Cocaine as Primary Drug of Abuse <sup>2</sup>	Cocaine Arrests <sup>3</sup>	Births to Women Using Cocaine <sup>4</sup>
1995	1H		8,371		
	2H		7,836		
	Total	221	16,207	40,846	1,059
1996	1H		8,561		
	2H		8,817		
	Total	250	17,378	38,813	1,005
1997	1H		9,048		
	2H		8,401		
	Total	213	17,449	35,431	864
1998	1H		8,999		
	2H		8,573		
	Total	205	17,572	35,577	742
1999	1H		8,346		
	2H		7,567		
	Total	196	15,913	31,781	626
2000	1H		7,337		
	2H		6,722		
	Total	180	14,059	31,919	490
2001	1H		7,343		
	2H		7,032		
	Total	208	14,375	23,498	438
2002	1H		7,736		
	2H		7,872		
	Total	183	15,608	26,773	363
2003	1H		8,203		
	2H		7,911		
	Total	205	16,114	25,868	354
2004	1H		8,410		
	2H		8,301		
	Total	214	16,711	27,963	337
2005	1H		8,248		
	2H		7,848		
	Total	214	16,096	26,773	301
2006	1H		8,560		
	2H		8,768		
	Total		17,328	27,992	

SOURCES: <sup>1</sup>New York City Department of Health and Mental Hygiene, Bureau of Vital Statistics

<sup>2</sup>New York State Office of Alcoholism and Substance Abuse Services (OASAS)-funded and nonfunded treatment admissions

<sup>3</sup>New York City Police Department, Office of Management Analysis and Planning. Due to changes in the New York City Police Department's data reporting system, drug arrest data for years 2002 through 2006 cannot be compared with arrests for years 1995 through 2001

<sup>4</sup>New York City Department of Health and Mental Hygiene, Bureau of Vital Statistics

**Exhibit 2. Characteristics of Primary Cocaine Admissions<sup>1</sup> to State-Funded<sup>2</sup> and Nonfunded<sup>3</sup> Treatment Programs in New York City, by Route of Administration and Percent: 2006**

Demographic Characteristic	Percent Total (N=17,328)	Percent Smoking Crack (n=10,656)	Percent Using Cocaine Intranasally (n=6,114)
Gender			
Male	68	64	74
Female	32	36	26
Age at Admission			
25 and younger	7	4	12
26–35	20	16	25
36 and older	73	79	63
(Average age)	(40.1 years)	(41.1 years)	(38.2 years)
Race			
Black	57	69	39
Hispanic	24	17	35
White	15	11	21
No Source of Income <sup>4</sup>	38	42	31
Some Criminal Justice Status	35	31	41
Age of First Use			
14 and younger	7	5	9
15–19	29	25	36
20–29	43	46	39
30 and older	21	24	16
Secondary Drug of Abuse			
Alcohol	40	43	36
Marijuana	21	19	25
Heroin	8	7	8

<sup>1</sup>Figures on this table may differ somewhat from figures cited on other tables, because computer runs may have been executed at different times and files are being updated continuously.

<sup>2</sup>State-funded programs receive some or all funding through the New York State Office of Alcoholism and Substance Abuse Services (OASAS).

<sup>3</sup>Nonfunded programs receive funding through sources other than OASAS, including Medicaid and private insurance reimbursements and patient fees (self-pay).

<sup>4</sup>Defined as not earning income, not receiving support from family or significant others, and not receiving any public assistance.

SOURCE: New York State Office of Alcoholism and Substance Abuse Services

**Exhibit 3. Semiannual Heroin Trends for Selected Indicator Data in New York City: 1995–2006**

Year	Semiannual/ Annual Period	Deaths Involving Heroin <sup>1</sup>	Treatment Admissions: Heroin as Primary Drug of Abuse <sup>2</sup>	Heroin Arrests <sup>3</sup>	Average Purity of Street Heroin (%) <sup>4</sup>
1995	1H		9,286		
	2H		9,001		
	Total	239	18,287	38,131	(69.4)
1996	1H		9,161		
	2H		9,617		
	Total	208	18,778	37,901	(56.3)
1997	1H		10,276		
	2H		10,431		
	Total	229	20,707	35,325	(62.5)
1998	1H		10,793		
	2H		10,203		
	Total	189	20,996	37,483	(63.6)
1999	1H		10,690		
	2H		10,189		
	Total	229	20,879	32,949	(61.8)
2000	1H		10,944		
	2H		10,672		
	Total	217	21,616	33,665	(62.9)
2001	1H		11,324		
	2H		11,455		
	Total	192	22,779	27,863	(56.0)
2002	1H		11,357		
	2H		11,157		
	Total	179	22,514	34,098	(61.4)
2003	1H		11,540		
	2H		12,023		
	Total	181	23,563		(53.5)
2004	1H		12,059		
	2H		11,743		
	Total	128	23,802		(43.3)
2005	1H		11,139		
	2H		10,749		
	Total	131	21,888		(49.4)
2006	1H		11,123		
	2H		10,850		
	Total		21,973		

SOURCES: <sup>1</sup>New York City Department of Health and Mental Hygiene, Bureau of Vital Statistics

<sup>2</sup>New York State Office of Alcoholism and Substance Abuse Services (OASAS)-funded and nonfunded treatment admissions

<sup>3</sup>New York City Police Department

<sup>4</sup>U.S. Drug Enforcement Administration



**Exhibit 4. Characteristics of Primary Heroin Admissions<sup>1</sup> to State-Funded<sup>2</sup> and Nonfunded<sup>3</sup> Treatment Programs in New York City, by Route of Administration and Percent: 2006**

Demographic Characteristic	Percent Total (N=21,973)	Percent Using Heroin Intranasally (n=13,391)	Percent Injecting Heroin (n=8,282)
Gender			
Male	76	75	77
Female	24	25	23
Age at Admission			
25 and younger	6	4	8
26–35	20	17	25
36 and older	75	80	66
(Average age)	(41.3 years)	(42.0 years)	(40.2 years)
Race			
Black	27	34	15
Hispanic	49	49	50
White	20	12	31
No Source of Income <sup>4</sup>	33	32	33
Some Criminal Justice Status	27	30	21
Age of First Use			
14 and younger	13	10	16
15–19	35	32	41
20–29	36	38	33
30 and older	16	20	10
Secondary Drug of Abuse			
Alcohol	11	12	11
Marijuana	8	10	6
Cocaine	43	41	52

<sup>1</sup>Figures on this table may differ somewhat from figures cited on other tables, because computer runs may have been executed at different times and files are being updated continuously.

<sup>2</sup>State-funded programs receive some or all funding through the New York State Office of Alcoholism and Substance Abuse Services (OASAS).

<sup>3</sup>Nonfunded programs receive funding through sources other than OASAS, including Medicaid and private insurance reimbursements and patient fees (self-pay).

<sup>4</sup>Defined as not earning income, not receiving support from family or significant others, and not receiving any public assistance.

SOURCE: New York State Office of Alcoholism and Substance Abuse Services

**Exhibit 5. Semiannual Marijuana Trends for Selected Indicator Data in New York City: 1995–2006**

Year	Semiannual/ Annual Period	Treatment Admissions: Marijuana as Primary Drug of Abuse <sup>1</sup>	Cannabis Arrests <sup>2</sup>
1995	1H	2,171	11,958
	2H	2,159	
	Total	4,330	
1996	1H	2,845	18,075
	2H	3,185	
	Total	6,030	
1997	1H	3,794	27,270
	2H	3,657	
	Total	7,451	
1998	1H	4,554	43,055
	2H	4,473	
	Total	9,027	
1999	1H	5,119	43,969
	2H	5,100	
	Total	10,219	
2000	1H	5,664	61,858
	2H	5,487	
	Total	11,151	
2001	1H	6,677	48,700
	2H	6,593	
	Total	13,270	
2002	1H	7,512	50,214
	2H	6,798	
	Total	14,310	
2003	1H	6,844	44,380
	2H	6,627	
	Total	13,471	
2004	1H	6,835	34,194
	2H	6,468	
	Total	13,303	
2005	1H	7,192	
	2H	7,036	
	Total	14,228	
2006	1H	8,113	
	2H	8,000	
	Total	16,113	

**SOURCES:**

<sup>1</sup>New York State Office of Alcoholism and Substance Abuse Services (OASAS)-funded and nonfunded treatment admissions

<sup>2</sup>New York State Division of Criminal Justice Services, Computerized Criminal History system (as of 4/05). Includes all fingerprintable arrests for NYS Penal Law Article 221 offenses as the most serious charge in an arrest event. Ages 16 and older. Levine, Harry G., "The Marijuana Arrest Binge In New York City, 1997-2004." These data were presented at the Annual Meetings of the American Sociological Association, Philadelphia, August. 15, 2005

**Exhibit 6. Characteristics of Primary Marijuana Admissions<sup>1</sup> to State-Funded<sup>2</sup> and Nonfunded<sup>3</sup> Treatment Programs in New York City, by Percent: 2006**

Demographic Characteristic	Percent of Total (N=16,113)
Gender	
Male	79
Female	21
Age at Admission	
20 and younger	26
21–25	25
26–35	30
36 and older	19
(Average Age)	(27.4 years)
Race	
Black	60
Hispanic	28
White	8
No Source of Income <sup>4</sup>	29
Some Criminal Justice Status	64
Age of First Use	
14 and younger	48
15–19	44
20–29	7
30 and older	1
Secondary Drug of Abuse	
Alcohol	37
Cocaine	14

<sup>1</sup>Figures on this table may differ somewhat from figures cited on other tables, because computer runs may have been executed at different times and files are being updated continuously.

<sup>2</sup>State-funded programs receive some or all funding through the New York State Office of Alcoholism and Substance Abuse Services (OASAS).

<sup>3</sup>Nonfunded programs receive funding through sources other than OASAS, including Medicaid and private insurance reimbursements and patient fees (self-pay).

<sup>4</sup>Defined as not earning income, not receiving support from family or significant others, and not receiving any public assistance.

SOURCE: New York State Office of Alcoholism and Substance Abuse Services

# Drug Use in Philadelphia, Pennsylvania

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## ABSTRACT

*Cocaine abuse, particularly in the form of crack, continues to lead the 2006 consequence data with respect to deaths with the presence of drugs, treatment mentions, and laboratory tests performed by NFLIS. It was the second most frequently encountered substance in urine/drug screens performed by the Philadelphia Adult Probation and Parole Department (APPD). The street-level purity of heroin declined between 2000 (73 percent) and the spring of 2006 (38 percent), which appears to have caused users to seek or approximate a high through the use of increased amounts or adding other drugs to use in combination. In 2006, heroin ranked third among deaths with the presence of drugs, treatment mentions, and APPD urinalysis, and NFLIS submissions. The inclusion of fentanyl in drug packets containing or sold as heroin since April 2006 has had a marked influence on mortality data. Deaths with the presence of heroin increased 57 percent from 2005 (n=215) to 2006 (337). Deaths with the presence of fentanyl increased 754 percent from 2005 (n=35) to 2006 (299). Deaths with the presence of oxycodone ranked seventh among all positive toxicology reports in 2006. Marijuana, which is not tested for in decedents, was the most frequently detected drug by the APPD, ranked second in the NFLIS study, and was third in treatment mentions in 2006. Alcohol in combination with other drugs ranked second among drugs detected in decedents, second in treatment mentions, and seventh in APPD urinalysis results. The most frequently abused benzodiazepine continued to be alprazolam, while the popularity of diazepam has significantly waned. Benzodiazepines ranked fourth in the NFLIS study. This class of drugs ranked fifth in both the APPD data and among drugs of abuse mentioned by clients in treatment. Methamphetamine indicators continue to be low compared with other drugs. There is cause to suspect that its use appears to be expanding to different populations.*

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*The average number of drugs detected in decedents was 4.16 in 2006, compared with 3.75 in 2004 and 3.69 per decedent in 2005.*

## INTRODUCTION

### Area Description

Philadelphia, the largest city in the State, is located in the southeastern corner of Pennsylvania. The 2000 U.S. census count of 1,517,550 Philadelphia residents was updated in 2005 at 1,463,281, a decline of almost 3.6 percent. The population is 53.5 percent female, 45.0 percent White, 43.2 percent Black/African-American, 5.5 percent Asian, 4.1 percent other races, and 2.2 percent two or more races. Persons identified as being of Hispanic or Latino origin (of any race) were estimated at 10.5 percent of the population. The median age is 34 years, and the population density is 10,831 persons per square mile.

### Data Sources

This report focuses primarily on the city/county of Philadelphia and includes data from the sources shown below. Unless otherwise noted, fiscal year (FY) refers to a year starting July 1 and ending the following June 30.

- **Treatment admissions data** for programs in Philadelphia County were provided by the Behavioral Health Special Initiative Client Data System (BHSCI/CDS) and the data represent mentions of use of different drugs by persons admitted to treatment from 2003 through 2006. This database covers the uninsured population in the treatment provider network.
- **Mortality data** were provided by the Philadelphia Medical Examiner's (ME) Office. These data cover mortality cases with toxicology reports indicating the detection of drugs in decedents in Philadelphia. The time period is January 1, 1994, through December 31, 2006. (The cases include persons who died from the adverse affects of one or multiple drugs, as well as persons who exhibited some substance presence but died from other causes. The Philadelphia ME also distinguishes between persons who appeared to have a lethal reaction to what might be considered a light or moderate amount of drugs and persons whose toxicology reports showed a high level of drugs in their systems.) Alcohol cases are only reported in combination with one or more other drugs. The ME does not

test for the presence of marijuana/tetrahydrocannabinol (THC)/cannabis.

- **Criminal justice urinalysis data** for adults who are in probation or parole status were derived from reports from the First Judicial District of Pennsylvania, Adult Probation/Parole Department (APPD), for calendar year 2006.
- **Heroin purity and price data** were provided by the Drug Enforcement Administration (DEA), Domestic Monitor Program (DMP), through 2005.
- **The National Forensic Laboratory Information System (NFLIS)** provided data on the analysis of drug samples tested by the Philadelphia Police Department forensic laboratory in 2006. The total sample size for this time period was 26,193 positive tests for drugs.
- **Drug prices** were provided by the U.S. Department of Justice, National Drug Intelligence Center (NDIC), report for the period June through December 2006. The NDIC report indicated that price information was derived from undercover purchases and informants.
- **Acquired immunodeficiency syndrome (AIDS) data** were provided by the Philadelphia Department of Public Health's AIDS Activities Coordinating Office on AIDS cases reported from November 1, 1981, to December 31, 2006.

In addition to these sources, this report draws on focus group discussions with former drug users currently enrolled in treatment programs, as well as outreach workers assigned to homeless populations, current substance abusers, and persons with human immunodeficiency virus (HIV) infection.

#### DRUG ABUSE PATTERNS AND TRENDS

The four major drugs of abuse in Philadelphia continue to be cocaine, heroin, marijuana, and alcohol. These are frequently used in combination with each other and with other supplemental drugs. In 2006, 87.6 percent of drugs mentioned by all people entering treatment were one of these four drugs (exhibit 1). During this period, 78.4 percent of the treatment admissions were male, 48.1 percent were African-American, 31.1 percent were White, 10.4 percent were Hispanic, 5.4 percent were classified as of some other racial/ethnic category, and 5.0 percent were unknown/unrecorded. The plurality age range was 21–25.

Treatment admissions in 2006 are shown below by age group:

- Younger than 21 (3.9 percent)
- 21–25 (18.8 percent)
- 26–30 (17.9 percent)
- 31–35 (13.9 percent)
- 36–40 (15.6 percent)
- 41–45 (14.1 percent)
- 46 and older (15.8 percent)

Among clients younger than 21 who entered treatment for the first time, the plurality, 43.5 percent, mentioned marijuana as their problem drug.

Seventy percent of the clients who were 46 or older—and were admitted to treatment for the first time—mentioned cocaine or alcohol as their problem drugs.

In 2006, the average number of drugs detected in decedents by the ME (4.16) exceeded the previous 12-year average (1994 to 2005) of 2.69 drugs per case (exhibit 2). The average in 2005 was 3.69 drugs per decedent. Only 11.5 percent of all mortality cases with positive toxicology reports were single-drug cases in 2006.

The number of mortality cases with positive toxicology reports (1,153 in 2006) was the highest on record, going back to at least 1970. There were 556 cases in the first half of 2006 and 597 cases in the latter half. Of the 1,153 deaths, adverse effect of drugs accounted for 41.1 percent; other deaths were attributed to overdose (6.2 percent), violence (23.3 percent), and “other causes” (29.4 percent) (exhibit 3). From 2000 through 2006, adverse reaction to drugs (as the identified cause of death) accounted for 43.2 percent, overdose accounted for 5.7 percent, violence accounted for 22.6 percent, and 28.5 percent were attributable to other causes.

In addition to disparities in the types of drugs, drug combinations, and demographic categories of decedents, there are differences with respect to the quantities of drugs by cause of death. The trend for average number of drugs per decedent by cause of death is shown in exhibit 4.

In 2006, African-American male decedents ( $n=402$ ) outnumbered White male decedents (395), while White female decedents (134) outnumbered African-American female decedents (108). There were 96 deaths with the presence of drugs among Hispanics, and 18 such deaths were among Asians and others.

Overall, Whites accounted for 45.9 percent of the deaths; African-Americans constituted 44.2 percent; Hispanics represented 8.3 percent, and Asians and others accounted for 1.6 percent. These figures vary slightly from the makeup of Philadelphia's population.

The 10 most frequently detected drugs among the 1,153 decedents in 2006 were as follows:

1. Cocaine (552)
2. Alcohol-In-Combination (386)
3. Heroin/Morphine (337)
4. Fentanyl (299)
5. Codeine (191)
6. Diphenhydramine (179)
7. Oxycodone (148)
8. Methadone (139)
9. Alprazolam (129)
10. Diazepam (117)

The total number of drugs detected during calendar year 2006 in Philadelphia through the NFLIS was 26,193, with no count of alcohol. Of these, 86.2 percent were cocaine, marijuana, or heroin (exhibit 5).

The rankings of positive urinalysis tests of adults on probation or parole (APPD data) by drug detected were nearly unchanged between 2005 and 2006. However, the total percent positive declined 12 percentage points from 54 percent of all tests in 2005 to 43 percent in 2006. In 2006, a total of 42,415 samples were taken, of which 18,019 were positive for the 9 drugs/drug classes tested for. The 2006 rankings, showing percent of positive test results, were as follows:

1. Marijuana (44.0 percent)
2. Cocaine (36.3 percent)
3. Methadone (14.5 percent)
4. Opiates (11.7 percent)
5. Benzodiazepines (11.1 percent)
6. PCP (9.5 percent)
7. Alcohol (5.4 percent)
8. Barbiturates (1.6 percent)
9. Amphetamines (0.4 percent)

### **Cocaine/Crack**

Cocaine/crack remains the major drug of abuse in Philadelphia. Treatment admissions data from 2003 through 2006 reveal cocaine as composing the plurality of mentions (exhibit 1). African-Americans accounted for 55.6 percent of cocaine treatment mentions in 2006, followed by Whites (27.2 percent), Hispanics of any race (7.8 percent), Asians and others (5 percent), and unknown/unrecorded (4.4 percent).

Nearly three-quarters (73.6 percent) were males, and 60.1 percent were age 36 or older.

ME data show that cocaine was present in 423 of the 904 decedents in 2005 and 552 of the 1,153 total decedents in 2006. It continued to be detected in the highest percentage of mortality cases since 1994 (exhibit 2). In 2006, 9.1 percent of the deaths ( $n=50$ ) with the presence of cocaine were single-drug deaths.

NFLIS data revealed that cocaine was detected in the highest number of lab tests ( $n=11,125$ ) in 2006, accounting for 42.5 percent of all tests (exhibit 5).

APPD urinalysis data of adults on probation or parole revealed the presence of cocaine in 36.3 percent of the tests. Cocaine ranked second to marijuana in the APPD data.

The NDIC reported the 2006 prices for powder cocaine as \$17,000–\$28,000 per kilogram wholesale, \$800–\$1,600 per ounce at midlevel, and \$125 per 1/8 ounce and \$70–\$125 per gram at the retail level. Crack cocaine cost \$800–\$1,600 per ounce for mid-level sales and \$160 per 1/8 ounce, \$70 per gram, and \$5–\$20 per rock at the retail level.

According to key informants, the predominant form of crack sold in Philadelphia is the "rock," which usually costs \$5. The availability of "treys" (\$3 rocks) declined between 2005 and 2006. Shapes of crack range from circular, to bumpy-circular, to pieces cut into the shape of a parallelogram. Powder cocaine is sold in \$10 and \$20 bags. Focus group participants continued to report that the majority of cocaine powder buys are for intranasal use, with the remainder either injected straight or injected in a "speedball." These estimates were very similar to the focus group responses dating back to the spring of 2002. The same informants also reported that the size/volume of the rock has been decreasing since 2002.

Crack users continue to report frequent use in combination with 40-ounce bottles of malt liquor or beer, or other drugs, including alprazolam, marijuana, or heroin.

### **Heroin/Morphine**

According to DEA Domestic Monitor Program data, the average street-level purity of heroin in Philadelphia declined every year from 2000 (73.0 percent) through 2004 (51.6 percent) (exhibit 6). The average purity was reported as 54.4 percent in 2005.

Treatment admissions data reveal heroin as constituting the third highest percentage of mentions in 2003, but the fourth highest percentage in 2004, 2005, and 2006 (exhibit 1). Whites accounted for 53 percent of heroin treatment mentions in 2006, followed by African-Americans (19.8 percent), Hispanics of any race (13.9 percent), Asians and others (7.0 percent), and unknown/unrecorded (6.3 percent). The majority (77.3 percent) were male, and 42.8 percent were age 21–30.

ME data show that heroin/morphine was present in 337 of the 1,153 decedents in 2006 and continued to rank second in illicit drug detections since 1994 (exhibit 2). Only 2 of the 337 deaths with the presence of heroin in 2006 had no other drug present.

NFLIS data revealed that heroin was detected in the third highest number of lab tests ( $n=2,544$ ) in 2006, representing 9.7 percent of the total sample (exhibit 5).

APPD urinalysis data of adults on probation or parole revealed the presence of opiates in 11.7 percent of the tests. Opiates ranked fourth in the APPD data.

The NDIC reported the 2006 prices for heroin as \$95,000–\$105,000 per kilogram and \$45,000–\$55,000 per pound at the wholesale level. The mid-level price was \$2,100–\$3,500 per ounce, and retail prices were \$65–\$300 per gram, \$60–\$100 per bundle (10 to 13 bags), and \$10–\$20 per bag.

Focus group participants continued to report that the \$10 bag of heroin remained the standard unit of purchase. The \$10 bag usually yields one hit, and \$20 bags are also available. All groups since autumn 2000 reported that the average heroin user injects the drug four or five times per day.

## Other Opiates and Narcotics

### *Fentanyl*

The year 2006 was marked by fentanyl, with its lethal effects, being included in packets sold as heroin. Some of these packets contained heroin, fentanyl, and other additives, while other packets were absent of heroin. There were 297 deaths with the presence of fentanyl, of which 248 were deemed “adverse effect of drugs” by the ME’s office. Below is the distribution of mortality cases with the presence of fentanyl that were classified as adverse reaction cases in 2006:

- January (2)
- February (0)
- March (0)

- April (23)
- May (26)
- June (35)
- July (41)
- August (44)
- September (30)
- October (8)
- November (21)
- December (18)

NFLIS data revealed that fentanyl was detected in the eighth highest number of lab tests ( $n=225$ ) in 2006, representing 0.9 percent of the total sample (exhibit 5).

### *Oxycodone*

The nonmedical use of oxycodone products, including OxyContin, Percocet, Percodan, Roxicet, and Tylox, continues to be reported by individuals in treatment. Mentions of these drugs by people admitted to treatment programs were unstable from 2003 to 2006 (see exhibit 1, “Other Opiates/Synthetics”).

Oxycodone was detected in 688 decedents from 1994 through 2006 (the eighth most frequently detected drug during that time period) (exhibit 2). Detections of oxycodone have been rapidly increasing since 2000. The 2006 annual total, 148, exceeds the previous high, 119 in 2005. In 2006, oxycodone was present in 12.8 percent of all drug-positive deaths.

NFLIS data revealed that oxycodone was detected in the fifth highest number of lab tests ( $n=730$ ) in 2004, accounting for 2.8 percent.

### *Methadone*

The reader is cautioned against making prejudicial interpretation of data in this section. Throughout all indicators, it is uncertain whether methadone was used as directed by a physician for the management of pain, as a prescribed adjunctive measure in addictions treatment, or in an abusive manner.

In 2006, 16 individuals were admitted to treatment indicating nonprescription methadone as a problem drug. There were 139 deaths with the presence of methadone in 2006 and 731 in the 13-year period 1994–2006 (exhibit 2). Deaths with methadone ranked seventh in this period.

### *Hydrocodone*

Hydrocodone detections in mortality cases have shown some increases in recent years. There were 40 positive toxicology ME reports for hydrocodone in

2003, followed by 51 in 2004, 66 in 2005, and 63 in 2006. There were a total of 368 cases in the 13-year period from 1994 to 2006. Hydrocodone detections now rank 14th among all deaths with positive toxicology reports.

### **Methamphetamine**

Methamphetamine and amphetamines remain a relatively minor problem in Philadelphia. Use of these drugs appears to be confined to a small portion of the population.

Treatment admissions data from 2003 through 2006 reveal a miniscule proportion of methamphetamine mentions (0.01 percent in 2006) (exhibit 1).

There were 98 deaths with the presence of methamphetamine from 1994 through 2004 and an additional 20 detections each year in 2005 and 2006. Deaths with the presence of methamphetamine rank 38th in the 13-year period 1994 through 2006.

NFLIS data revealed that methamphetamine was detected in the 15th highest number of lab tests ( $n=48$ ), 0.2 percent.

The NDIC reported the following December 2006 prices for methamphetamine: \$8,000–\$20,000 per pound wholesale, \$700–\$2,400 per ounce and \$125–\$175 per 1/8 ounce midlevel, and \$100 per gram retail. The wholesale price increased from a range of \$8,000 to \$15,000 per pound in June 2006.

Focus group participants indicated that among local methamphetamine users, 50 percent inject and 50 percent inhale.

### **Other Amphetamines**

Treatment admissions data from 2003 through 2005 also reveal a small proportion of amphetamine mentions (less than 0.4 percent in 2006) (exhibit 1).

There were 90 deaths with the presence of other amphetamines from 1994 through 2004, plus 18 additional detections in 2005 and 17 in 2006, for a total of 125 for the 13-year period (1994 through 2006). Deaths with amphetamines rank 46th in this period.

NFLIS data revealed that amphetamine was detected in the 26th highest number of lab tests ( $n=8$ ) in 2006, representing less than 1 percent.

APPD urinalysis data of adults on probation or parole revealed the presence of amphetamines in 0.4 percent of the tests. Amphetamines ranked last among the nine substances tested for by the APPD.

### **Marijuana**

Treatment admissions data reveal marijuana as constituting the fourth most mentions in 2003 and the third most from 2004 through 2006 (exhibit 1). African-Americans accounted for 60 percent of marijuana treatment mentions in 2006, followed by Whites (18 percent), Hispanics of any race (11 percent), Asians and others (5 percent), and unknown/unrecorded (6 percent). The majority (80 percent) were males, and 56 percent were age 30 or younger.

NFLIS data revealed that marijuana (cannabis) was detected in the second highest number of lab tests in 2006 ( $n=8,902$ ), representing 34 percent (exhibit 5).

APPD urinalysis data of adults on probation or parole in 2006 revealed the presence of marijuana in 44 percent of the tests, the highest amount in the APPD data.

The NDIC reported the 2006 prices for marijuana as \$800–\$2,500 per pound, commercial grade, wholesale; \$150–\$200 per ounce, commercial grade, midlevel; and \$25 per 1/8 ounce and \$5 per joint at the retail level.

Focus group participants since the spring of 2004 continued to report the increasing use of blunts, especially the use of flavored cigars. These groups and outreach workers continued to report that marijuana use is widespread throughout Philadelphia.

The combination of marijuana and PCP, frequently mixed in blunts, is commonly called “wet” (which is also a term for PCP).

Blunts laced with crack (called “Turbo”) are still common. Blunt users commonly ingest beer, whiskey, alprazolam, clonazepam, or oxycodone. These comments by users continue to underscore the common practice of multiple drug use, either simultaneously or sequentially.

### **Phencyclidine (PCP)**

PCP began to gain popularity as an additive to blunts in 1994, and its use increased up to around the beginning of 2004. Since then, users reveal that use is declining, identifying an aversion to “bad trips” and unpredictable experiences while on PCP.



Mentions of PCP use at admission to treatment declined precipitously from 2004 to 2005, but they increased slightly in 2006 (exhibit 1). African-Americans accounted for 43 percent of PCP treatment mentions in 2006, followed by Hispanics of any race (22 percent), Whites (15 percent), Asians and others (11 percent), and unknown/unrecorded (8 percent). Ninety-one percent were male, and 72 percent were age 30 or younger.

PCP was detected in 607 decedents from 1994 through 2006, making it the ninth most frequently detected drug during that time period. Of these, 74 cases occurred in 2006 (exhibit 2).

NFLIS data revealed that PCP was detected in the sixth highest number of lab tests in 2006 ( $n=500$ ), accounting for 1.9 percent of the total.

APPD urinalysis data of adults on probation or parole in 2006 revealed the presence of PCP in 9.5 percent of the tests, the sixth highest amount in the APPD data.

Focus groups that were conducted in the spring of 2007 comprised of users new to treatment described typical users as being of any race, but noted increasing use among Hispanics. Regarding how PCP is taken, the practice of dipping cigarettes into PCP oil is still common (known as “Sherms,” “dippies,” or “dip-sticks”). PCP is also available sprayed onto mint leaves, and these are what are usually added to blunts. PCP is sold in vials for \$10 each.

### **Benzodiazepines**

Benzodiazepines, particularly alprazolam (Xanax), continue to be used in combination with other drugs.

Treatment admissions data reveal benzodiazepines as constituting the fifth most mentions from 2003 through 2005, but the seventh most in 2006 (exhibit 1). African-Americans accounted for 42 percent of benzodiazepine treatment mentions in 2006, followed by Whites (27), Hispanics of any race (16 percent), Asians and others (4 percent), and unknown/unrecorded (10 percent). Eighty-two percent were male, and 69 percent were age 30 or younger.

Diazepam was detected in 779 decedents from 1994 through 2006 ( $n=117$  in 2006), making it the fifth most frequently detected drug during that time period, behind cocaine, heroin/morphine, alcohol-in-combination, and codeine (exhibit 2).

NFLIS data revealed that diazepam was detected in

the 13th highest number of lab tests in 2006 ( $n=83$ ), accounting for less than 1 percent.

Alprazolam was detected in 482 decedents from 1994 through 2006 ( $n=129$  in 2006), making it the 10th most frequently detected drug during that time period. In 2006, decedents with alprazolam exceeded decedents with diazepam in their system for the first time (exhibit 2).

NFLIS data for 2006 revealed that alprazolam was detected in the fourth highest number of lab tests ( $n=849$ ), accounting for 3.2 percent.

APPD urinalysis data of adults on probation or parole revealed the presence of benzodiazepines in 11.1 percent of the tests in 2006, the fifth highest amount in the APPD data.

Benzodiazepine abuse continued to be reported by focus group participants as common among users of heroin, oxycodone, cocaine, marijuana, and cough syrup. From spring 2000 through autumn 2006, all focus groups have reported that alprazolam has overtaken diazepam as the “most popular pill” on the street. The spring 2007 focus groups stated that almost nobody seeks diazepam anymore. The demand has increased for alprazolam to such an extent, that when the supply cannot satisfy the demand, users seek Tylenol PM, which contains acetaminophen and diphenhydramine.

From 1994 through 2006, there were 243 positive toxicology reports for oxazepam (Serax), making this drug the 23rd most frequently detected drug. This includes 48 detections in 2006.

From 1994 through 2006, there were 209 positive toxicology reports for olanzapine (Zyprexa) (2006  $n=22$ ), making this drug the 28th most frequently detected drug.

### **Other Prescription Drugs of Note**

Prescription drugs are most frequently detected among decedents in combination with other drugs of the same type and/or in combination with cocaine, heroin, or alcohol. ME mentions for the most frequently detected prescription drugs among decedents (not already noted above) include propoxyphene (Darvon) ( $n=443$  cases in the 13-year data and ranked 11th) and fluoxetine (Prozac) ( $n=229$  cases in the 13-year data and now ranked 24th).

Medications that contain codeine are also commonly abused in Philadelphia. The ME detected codeine in

120 cases in 2003 and again in 2004, 139 cases in 2005, and 191 in 2006. In the 13-year period ending December 2006, deaths with the presence of codeine ranked fourth (exhibit 2).

Dextromethorphan is a common ingredient in numerous cough and cold medications. Focus group participants beginning in the spring of 2004 indicated that its use was increasing among people age 30–40, particularly in combination with benzodiazepines. The Philadelphia ME detected dextromethorphan in 58 cases in 2006, with a 13-year total of 269 detections, ranking 21st.

Diphenhydramine is an ingredient in numerous over-the-counter medications that are abused in Philadelphia. Negative consequences appear most markedly among decedents in combination with other drugs. The Philadelphia ME detected diphenhydramine in 116 cases in 2003, 129 cases in 2004, 113 cases in 2005, and 179 cases in 2006. Deaths with the presence of diphenhydramine now rank sixth (exhibit 2).

Quetiapine (Seroquel), an antipsychotic, has only been on the market for about 8 years. Through 2006, there have been 97 quetiapine detections by the ME, including 25 in 2006, the most for any year to date.

### Club Drugs

In 2006, methylenedioxymethamphetamine (MDMA) was detected in 103 NFLIS lab tests (0.4 percent), making it the 11th highest drug in the Philadelphia data. MDMA has been detected by the ME since 1999. Through 2006, this drug was detected in 66 decedents, including 16 cases in 2006, the most for any year to

date. Focus groups held from spring 2001 through autumn 2006 have reported that MDMA is used in combination with marijuana and lysergic acid diethylamide (LSD), which helps describe its use among club-goers. The participants in the spring 2007 groups had scanty knowledge of both MDMA and LSD.

The Philadelphia ME first detected methylenedioxymethamphetamine (MDA) in the second half of 1999. There have been 55 positive toxicology reports for MDA since then, including 15 cases in 2006. MDA was detected in 6 samples tested by the NFLIS in 2006.

### INFECTIOUS DISEASES RELATED TO DRUG ABUSE

As of December 31, 2006, Philadelphia recorded 18,725 cumulative AIDS cases among adults (exhibit 7). Among those cases, 6,498 involved injection drug users (IDUs) or needle-sharers. Another 935 were in the dual exposure category of IDUs who were also men who had sex with other men (MSM).

Cases reported as of December 31, 2006, with heterosexual contact as a risk factor continued to exceed the historical proportion. Heterosexual contact was the identified exposure category in 22.1 percent of all AIDS cases.

*For inquiries concerning this report, please contact Samuel Cutler, City of Philadelphia, Department of Behavioral Health and Mental Retardation Services, Office of Addiction Services, 1101 Market Street, Suite 800, Philadelphia, Pennsylvania 19107-2908, Phone: (215) 685-5414, Fax: (215) 685-4977, E-mail: <sam.cutler@phila.gov>.*

**Exhibit 1. Drugs of Abuse Mentioned at Admission to Treatment by Uninsured Persons in Philadelphia: 2003–2006**

Drugs Mentioned	2003	2004	2005	2006
Cocaine	4,935	4,818	5,151	4,701
Alcohol	4,383	4,232	3,835	3,893
Marijuana	3,069	3,153	3,120	3,647
Heroin	3,313	3,124	3,107	3,578
Other Sedatives/Hypnotics	11	34	489	968
PCP	618	563	347	368
Benzodiazepines	1,129	1,165	626	307
Other Hallucinogens	180	101	106	261
Other (Not Listed)	94	133	160	140
Other Opiates/Synthetics	713	1,042	483	105
Other Amphetamines	74	41	29	79
Inhalants	1	6	9	10
Methamphetamine	17	37	33	2
Barbiturates	121	80	26	1
Other Tranquilizers	7	17	14	1
Over-the-Counter	4	6	3	--
<b>Total</b>	<b>18,669</b>	<b>18,552</b>	<b>17,538</b>	<b>18,061</b>

SOURCE: Behavioral Health Special Initiative Client Data System

**Exhibit 2. Mortality Cases in Philadelphia with the Presence of the 10 Most Frequently Detected Drugs by the Medical Examiner: 1994–2006**

ME-Identified Drugs	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	Total
Cocaine	368	336	277	304	218	238	321	300	270	326	399	423	552	4,332
Heroin/Morphine	262	318	290	336	249	236	332	316	275	208	214	215	337	3,588
Alcohol-in-Combination	253	254	182	214	157	179	197	185	153	290	219	323	386	2,992
Codeine	36	39	19	20	3	15	19	45	57	120	120	139	191	823
Diazepam	58	44	35	58	39	67	46	56	28	66	88	77	117	779
Diphenhydramine	18	13	5	4	9	25	33	53	42	116	129	113	179	739
Methadone	23	12	26	24	10	36	36	46	55	79	132	113	139	731
Oxycodone	4	2	1	14	29	17	49	53	68	81	103	119	148	688
Phencyclidine (PCP)	46	44	29	46	19	35	48	45	51	58	28	42	74	565
Alprazolam	24	8	17	18	19	8	16	31	27	45	72	68	129	482
<b>Total Deaths with the Presence of Drugs</b>	<b>617</b>	<b>632</b>	<b>565</b>	<b>607</b>	<b>534</b>	<b>533</b>	<b>680</b>	<b>661</b>	<b>593</b>	<b>841</b>	<b>888</b>	<b>904</b>	<b>1153</b>	<b>9,208</b>
<b>Total Drugs Mentioned</b>	<b>1,346</b>	<b>1,245</b>	<b>1,121</b>	<b>1,282</b>	<b>1,039</b>	<b>1,232</b>	<b>1,637</b>	<b>1,857</b>	<b>1,589</b>	<b>2,672</b>	<b>3,330</b>	<b>3,336</b>	<b>4,797</b>	<b>26,483</b>
<b>Avg. Number of Drugs Per Death</b>	<b>2.18</b>	<b>1.97</b>	<b>1.98</b>	<b>2.11</b>	<b>1.95</b>	<b>2.31</b>	<b>2.41</b>	<b>2.81</b>	<b>2.68</b>	<b>3.18</b>	<b>3.75</b>	<b>3.69</b>	<b>4.16</b>	<b>2.88</b>

SOURCE: Philadelphia Medical Examiner's Office

**Exhibit 3. Causes of Annual Mortality Cases among Decedents with Positive Toxicology Reports for Drugs, in Philadelphia, as Determined by the Medical Examiner, by Percent: 2000–2006**

ME-Identified Cause	2000	2001	2002	2003	2004	2005	2006
Adverse Effect of Drugs	56.6	56.4	57.7	30.4	31.0	40.2	41.1
Overdose	2.1	3.8	2.5	6.3	10.1	6.7	6.2
Homicide	13.0	10.0	11.6	17.2	16.3	17.4	17.1
Suicide	5.6	6.2	5.6	10.5	8.3	9.2	6.2
Other Causes <sup>1</sup>	22.7	23.6	22.6	35.6	34.2	26.5	29.4

<sup>1</sup>"Other Causes" includes deaths with the presence of drugs caused by accident, injury, drowning, or a health or physical malady.  
SOURCE: Philadelphia Medical Examiner's Office

**Exhibit 4. Average Number of Drugs Detected in Decedents by Cause of Death in Philadelphia, as Determined by the Medical Examiner: First Half 2004–Second Half 2006**

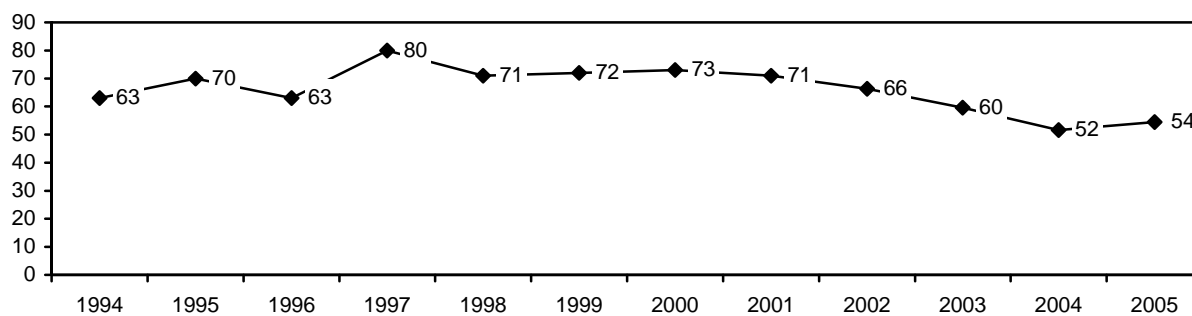
ME-Identified Cause	1H-04	2H-04	1H-05	2H-05	1H-06	2H-06
Adverse Effect of Drugs	4.66	4.71	4.18	4.12	5.30	5.26
Overdose	5.33	4.96	5.08	5.44	5.27	6.11
Homicide	3.01	2.66	2.65	2.79	2.88	2.86
Suicide	3.21	2.57	3.05	2.96	2.76	2.87
Other Causes <sup>1</sup>	2.96	3.44	3.53	3.39	3.33	3.26

<sup>1</sup>"Other Causes" includes deaths with the presence of drugs caused by accident, injury, drowning, or a health or physical malady.  
SOURCE: Philadelphia Medical Examiner's Office

**Exhibit 5. Top 10 Drugs Detected in the National Forensic Laboratory Information System in Philadelphia: 2006**

Drug	Count	Percent
Cocaine	11,125	42.5
Marijuana	8,902	34.0
Heroin	2,544	9.7
Alprazolam	849	3.2
Oxycodone	730	2.8
Phencyclidine (PCP)	500	1.9
Non-controlled non-narcotic drug	318	1.2
Fentanyl	225	0.9
Hydrocodone	179	0.7
Clonazepam	141	0.5
<b>Total Count</b>	<b>26,193</b>	

SOURCE: NFLIS, DEA

**Exhibit 6. Average Percentage<sup>1</sup> of Purity of Street-Level Heroin in Philadelphia: 1994–2005**

<sup>1</sup>Percentages rounded.

SOURCE: Drug Enforcement Administration, Domestic Monitor Program

**Exhibit 7. Adult AIDS Cases in Philadelphia by Exposure Category: Cumulative Totals Through December 31, 2006**

Exposure Category	November 1, 1981 to December 31, 2006	
	Number	Percent
IDU	6,498	(34.7)
MSM and IDU	935	(5.0)
MSM	6,870	(36.7)
Heterosexual Contact	4,129	(22.1)
Blood Products	91	(0.5)
No Identified Risk Factor	202	(1.1)
Total Adult Cases	18,725	

SOURCE: Philadelphia Department of Public Health, AIDS Activities Coordinating Office

# Drug Abuse Patterns and Trends in Phoenix and Arizona

James K. Cunningham, Ph.D.<sup>1</sup>

## ABSTRACT

*After rising for multiple years, amphetamine-related hospital admissions in the Phoenix area plateaued in 2006. In contrast, cocaine- and heroin/opioid-related admissions increased in 2006 compared with the previous year. Despite their increases, cocaine- and heroin/opioid-related hospital admissions remained below amphetamine-related admissions, as they have since 2004. Amphetamine-related hospital admissions in Arizona's rural counties also outnumbered those related to cocaine and heroin/opioids. In the Tucson area, however, cocaine-related hospital admissions in 2006 outnumbered amphetamine-related admissions by more than 100 percent. Heroin/opioid-related admissions also outnumbered amphetamine admissions, though by a lesser percentage. Source and intelligence information indicates that major Mexican producers are smuggling methamphetamine across the Arizona border in both solid and liquid form, possibly in equal proportions. To transport methamphetamine in liquid form, the drug is dissolved in water and then placed in containers, including liquor bottles and over-the-counter medicine bottles. Once the liquid methamphetamine is transported across the border, traffickers boil the water away, leaving methamphetamine in solid form. Intelligence also indicates that some high school students are 'Roboing,' which is mixing stimulants, depressants, or hallucinogenics with Robitussin, a nonprescription cough medicine. The specific controlled substances mixed with Robitussin are selected depending on the desired effect. The rate of emergent HIV/AIDS cases involving injection drug use appears to be slowly declining.*

## INTRODUCTION

### Area Description

In 2006, Arizona surpassed Nevada as the fastest growing State in the Nation (U.S. Census). Arizona's population grew by 3.6 percent during the 12 months

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ending July 1, 2006, while Nevada's population grew by 3.5 percent. As of July 1, 2006, Arizona had 6,166,318 residents, making it the 16th largest State.

Arizona also appears to be the top State for growth in wealth disparity. From 1980 to 2000, families with the bottom 20 percent of income experienced a gain of 5.7 percent in wealth, while families in the top 20 percent experienced a gain of 58.1 percent (exhibit 1).

Maricopa County, which includes the State's capital, Phoenix, is Arizona's primary population center, with an estimated 3,768,123 persons in 2006, an increase of 22.6 percent since 2000. It ranks fourth in population among the Nation's counties. In 2005, 61.5 percent of the population were White (non-Latino), 29.0 percent were Latino, 4.0 percent were Black, 2.7 percent were Asian, and 2.2 percent were American Indian/Alaska Native.

Maricopa County is located in the central part of the State and includes more than 20 cities/towns, as well as multiple Indian reservations, the largest of which are the Salt River Pima Maricopa Indian Community and the Gila River Indian Community.

Pima County, with a population estimate of 946,362 in 2006, includes Tucson. It is located south of Phoenix and borders Mexico. Counties other than Maricopa and Pima are grouped together and referred to here as the Arizona rural counties.

## Data Sources

This report is based on the most recent available data obtained from the following sources:

- **Treatment data** are from the Arizona Department of Health Services (ADHS), Division of Behavioral Health Services (DBHS), Division of Clinical Recovery Services, Bureau of Grants Management, Training and Administration, Evaluation Unit, for 2005 and 2006.
- **Hospital admissions (inpatient) data** are from analyses conducted by the University of Arizona, Department of Family and Community Medicine using hospital discharge records from the Arizona Hospital Discharge Data System operated by the Arizona Department of Health Services. Trend data are for 2000 through 2006.
- **Urine screening data** are from the Treatment Assessment Screening Center, Inc. (TASC) headquartered in Phoenix, Arizona, for the first quarter of 2007, and, for juveniles, for the third quarters of 2005 and 2006 and the first quarter of 2007.

- **Price data** are from Arizona Department of Public Safety, Phoenix Police Department, Tucson Police Department, Yuma Police Department, and Nogales Police Department, as well as information from confidential sources (CS) and information received in the course of Drug Enforcement Administration (DEA) case investigations for 2006.
- **School survey data** on Maricopa County students in grades 8, 10, and 12 are from the Arizona Criminal Justice Commission for school years 2002, 2004, and 2006.
- **Law enforcement data** are from the DEA and the DEA Phoenix Division, *Intelligence Quarterly Trends Report*, first quarter 2007.
- **Forensic drug analysis data** for 2006 are from the National Forensic Laboratory Information System (NFLIS), DEA.
- **Clandestine lab data** are from the National Clandestine Laboratory Database, DEA, for 1999 through 2006.
- **Human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS)** data are from the Arizona Department of Health Services, Bureau of Epidemiology and Disease Control, Office of HIV/STD Services, *HIV/AIDS Annual Report*, February 2007. The data cover 5-year incremental data from 1990 through 2005.
- **Income change data** are from the Economic Policy Institute.
- **Population data** are from the U.S. Census Bureau.

#### DRUG ABUSE PATTERNS AND TRENDS

##### Cocaine/Crack

In Maricopa County, cocaine was the fifth most common primary drug ( $n=408$ ) identified at the time of treatment admission (exhibit 2). Counts of cocaine treatment admissions were slightly higher in 2006 than in 2005 (exhibit 3).

Cocaine-related inpatient hospital admissions in Maricopa County rose in 2006, reaching their highest level since 2000 (exhibit 4). Nevertheless, they were lower than heroin/opioid and amphetamine-related admissions (amphetamine admissions include methamphetamine). Cocaine-related inpatient hospital admissions also rose sharply in Pima County (Tucson

area) (exhibit 5). Cocaine admissions in Arizona's rural counties changed little in 2006 (exhibit 6).

About one in five positive urine screening tests for adults in Maricopa County's Diversion program involved cocaine, making it the third most common drug identified in those tests (exhibit 7). Among urine screens for Maricopa County juveniles, cocaine essentially tied with amphetamines as the second most common drug identified in those tests (exhibit 8). The percentage of positive tests for cocaine among juveniles declined from the third quarter of 2005 to the third quarter of 2006 to the first quarter of 2007 (exhibit 9).

The most common items reported by NFLIS for Maricopa County (exhibit 10) were those containing cocaine, though cannabis and methamphetamine items were submitted to NFLIS at almost the same level. The price of an ounce of crack cocaine was about \$600–\$650. The price of an ounce of powder cocaine was about \$500–\$700 (exhibit 11).

The lifetime use of cocaine among high school students in Maricopa County changed little from 2004 to 2006 (exhibit 12).

##### Heroin

ADHS/DBHS data indicate that primary heroin treatment admissions ( $n=447$ ) in Maricopa County in 2006 slightly outnumbered cocaine admissions (exhibit 2). Counts of heroin treatment admissions rose in 2006 compared with 2005 ( $n=366$ ) (exhibit 13).

Heroin/opioid-related inpatient hospital admissions in Maricopa County rose in 2006, reaching their highest level since 2000 (exhibit 4). In 2006, heroin/opioid hospital admissions in Arizona's rural counties also rose (exhibit 6). Heroin/opioid admissions in Pima County (Tucson area) were flat (exhibit 5).

About 16 percent of the positive urine screening tests for adults in Maricopa County's Diversion program involved opiates (including heroin), making them the fourth most common drug identified in those tests (exhibit 7). Among positive urine screens for Maricopa County juveniles, only about 2 percent involved opiates (exhibit 8). The percentage of positive tests for opiates among juveniles changed little from the third quarter of 2005 to the third quarter of 2006 to the first quarter of 2007 (exhibit 9).

In 2006, 312 heroin items were reported by NFLIS—less than one-fifth the number of cocaine items submitted, but substantially more than for any of the other opioids, including hydrocodone and oxycodone

(exhibit 10). The price of an ounce of heroin was reported to be about \$800 (exhibit 11).

The lifetime use of heroin among high school students in Maricopa County appears to have decreased slightly from 2004 to 2006 (exhibit 12). Statistical significance tests for examining change in lifetime use were not available at the time of this report.

### **Other Opiates/Narcotics**

Approximately 3 percent of the treatment admissions in Maricopa County had opioids other than heroin/morphine identified as the primary drug of abuse (exhibit 2). Hydrocodone and oxycodone were the sixth and seventh most common items, respectively, reported by NFLIS (exhibit 10).

### **Methamphetamine/Amphetamines**

The number of methamphetamine treatment admissions ( $n=1136$ ) in Maricopa County in 2006 was more than double that for any of the other illicit drugs, including cocaine, marijuana, and heroin/morphine (exhibit 2). The number of methamphetamine treatment admissions in 2006 was about the same as that in 2005 (exhibit 14).

Amphetamine-related inpatient hospital admissions (which include admissions related to methamphetamine) in Maricopa County in 2006 were about the same as those in 2005, the first time since 2000 that such admissions remained essentially stable from one year to the next (exhibit 4). Amphetamine-related hospital admissions in Pima County and the rural counties also changed little in 2006 compared with 2005 (exhibits 5 and 6).

About one in three positive urine screening tests for adults in Maricopa County's diversion program involved amphetamines, making it the most common drug identified in those tests (exhibit 7). Among urine screens for Maricopa County juveniles, detection of amphetamines was far less common than marijuana and about the same as for cocaine (exhibit 8). The percentage of positive tests for amphetamines among juveniles was about the same in the first quarter of 2007 as it was in the third quarter of 2006 (exhibit 9).

Methamphetamine was among the three most common drugs submitted to NFLIS (exhibit 10). The price of an ounce of methamphetamine was about \$650–\$900 (exhibit 11).

Clandestine laboratory incidents in Arizona as reported to the National Clandestine Laboratory

Database have been declining steadily since 2000, with only 14 incidents reported in 2006 (exhibit 15).

In Arizona, seizures of methamphetamine decreased in 2006 compared with 2005. However, the decrease may have been offset by an increase in California (exhibit 16).

In 2006, approximately 2.3 percent of 8th graders in Maricopa County reported lifetime use of methamphetamine; about 4.1 percent of 10th graders reported such use; and about 6.1 percent of the 12th graders reported such use (exhibit 12).

Source and intelligence information received by the DEA during the first quarter of 2007 indicates that methamphetamine is being smuggled across the Arizona border in liquid and solid form, possibly in equal proportions, by major trafficking organizations from Mexico. For transportation in liquid form, methamphetamine is being dissolved in water and then placed in containers, including liquor bottles and over-the-counter medicine bottles. Once the liquid methamphetamine is shipped across the border, traffickers boil the water away, leaving methamphetamine in solid form.

### **Marijuana**

In 2006, 13 percent ( $n=499$ ) of treatment admissions reported marijuana as the primary drug of abuse, slightly higher than heroin/morphine admissions (exhibit 2). Marijuana treatment admissions in Maricopa County rose in 2006 compared with 2005, from 387 to 499 (exhibit 17).

About 22 percent of the positive urine screening tests for adults in Maricopa County's Diversion program involved marijuana (THC—tetrahydrocannabinol), making it the second most common drug identified in those tests (exhibit 7). Among positive urine screens for Maricopa County juveniles, about three-quarters of the tests involved marijuana (exhibit 8), making it the most common drug identified in those tests. The percentage of positive tests for marijuana changed little from the third quarter of 2005 to the third quarter of 2006 to the first quarter of 2007 (exhibit 9).

Marijuana was among the three most common drugs submitted to NFLIS (exhibit 10). The price of an ounce of marijuana was about \$65–\$100 (exhibit 11).

Approximately 350,000 kilograms of marijuana were seized by Federal authorities in Arizona in 2006, more than twice the amount seized in California (exhibit 18).



Reports of lifetime use of marijuana by Maricopa County High School students appear to have decreased in recent years (exhibit 12). For example, among 12th graders, self-reports of lifetime use decreased from 53.5 percent in 2002 to 43.0 percent in 2004 to 41.0 percent in 2006. Statistical significance tests for examining changes in lifetime use were not available at the time of this report.

### **Club Drugs**

Ecstasy was not identified in the urine screening tests for adults in Maricopa County's Diversion program. Sixty-nine items containing MDMA were reported by NFLIS (exhibit 10). Reports of lifetime use of ecstasy by Maricopa County high school students appear to have decreased in recent years (exhibit 12). For example, among 12th graders, self-reports of lifetime use decreased from 15.4 percent in 2002 to 6.0 percent in 2004 to 4.3 percent in 2006. Statistical significance tests for examining changes in lifetime use were not available at the time of this report.

LSD was not found in the urine screening tests for adults in Maricopa County's Diversion program. LSD urine screening tests for juveniles were not reported. There were no reports of LSD items being submitted to NFLIS.

### **Phencyclidine (PCP)**

PCP was not found in the urine screening tests for adults in Maricopa County's Diversion program.

Only 0.02 percent of the urine screening tests for Maricopa County juveniles indicated PCP (exhibit 8). Fourteen items containing PCP were reported by NFLIS (exhibit 10).

### **Benzodiazepines/Barbiturates**

Benzodiazepine was found in 0.3 percent of the urine screening tests for adults in Maricopa County's Diversion program (exhibit 7). No barbiturates were found in those tests.

### **Other Drugs**

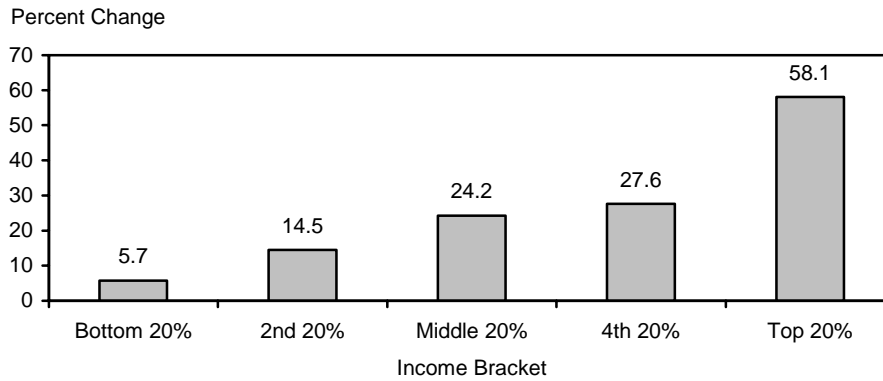
DEA intelligence indicates that some high school students in Maricopa County are "Roboing," mixing stimulants, depressants, or hallucinogenics with Robitussin, a nonprescription cough medicine. The active ingredient in Robitussin is dextromethorphan (DXM). The specific controlled substances mixed with Robitussin are selected depending on the desired effect.

### **HIV/AIDS**

In Arizona, 5-year emergent HIV/AIDS rates related to injection drug use appear to have declined slowly but steadily over the past several years (exhibit 19).

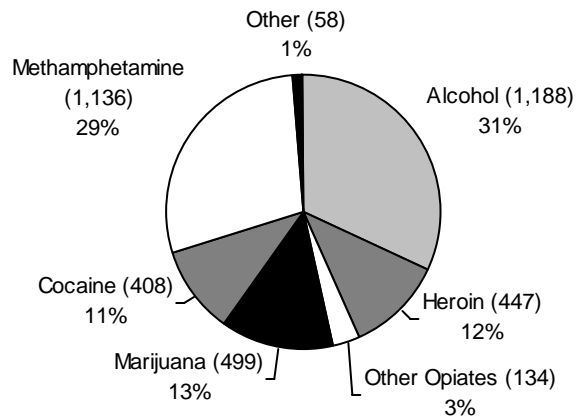
*For inquiries concerning this report, please contact James K. Cunningham, Ph.D., Department of Family and Community Medicine College of Medicine The University of Arizona, 1450 N Cherry Avenue, Tucson, AZ 85719, Phone: 520.615.5080, Fax: 520.577.1864, E-mail: jkcunnin@email.arizona.edu.*

**Exhibit 1. Percent Change in Family Income Gains from 1980 to 2000 in Arizona**



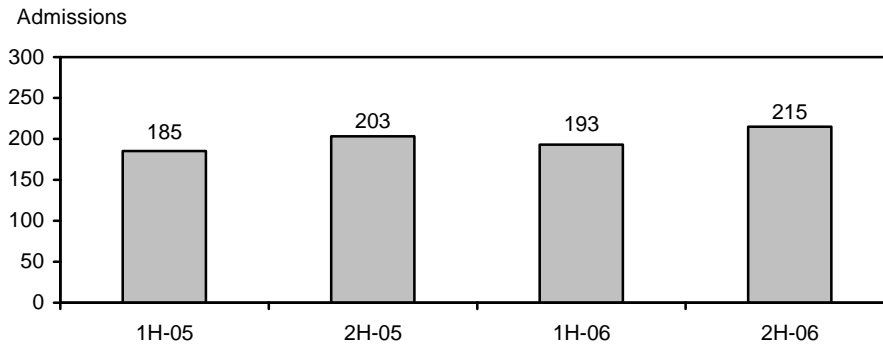
SOURCE: Economic Policy Institute

**Exhibit 2. Maricopa County Treatment Admissions by Primary Substance Used: 2006**



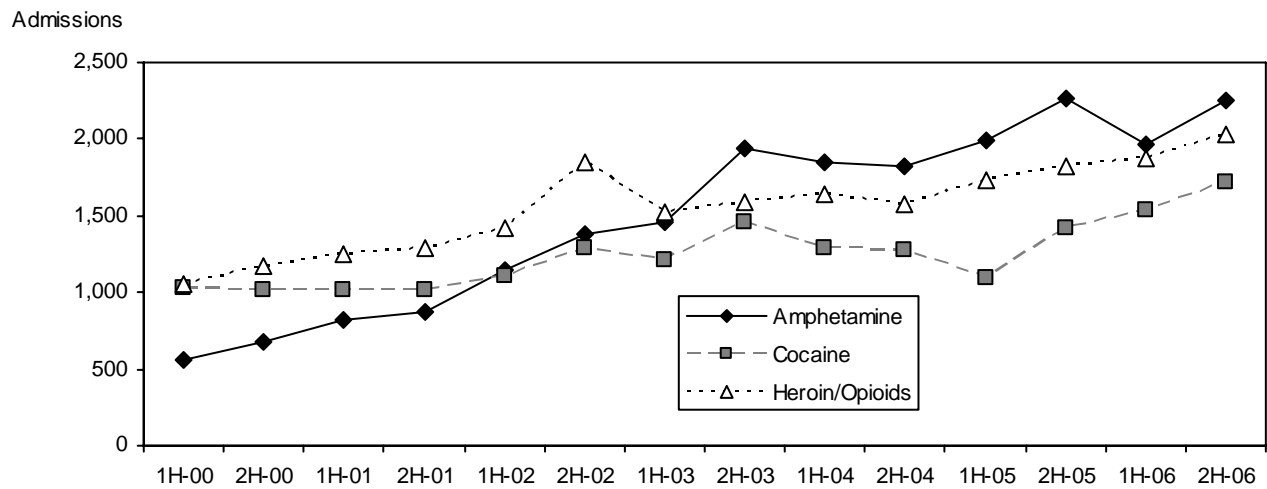
SOURCE: Arizona Department of Health Services

**Exhibit 3. Cocaine Treatment Admissions in Maricopa County: 2005–2006**



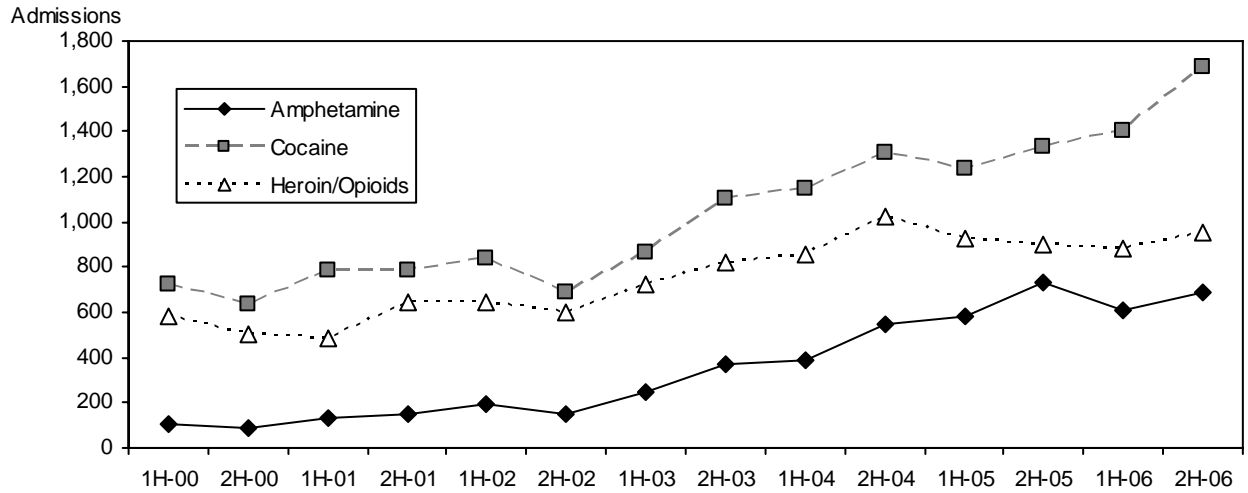
SOURCE: Arizona Department of Health Services

**Exhibit 4. Maricopa County—Amphetamine, Cocaine, and Heroin/Opioid-Related Hospital Admissions: 2000–2006**



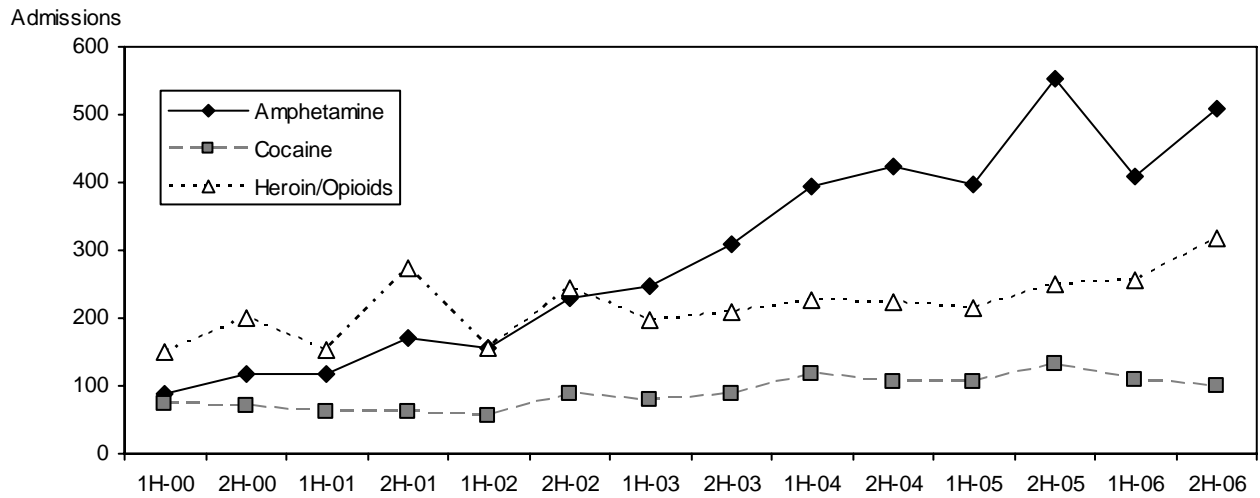
SOURCE: The University of Arizona, Department of Family and Community Medicine

**Exhibit 5. Pima County—Amphetamine, Cocaine, and Heroin/Opioid-Related Hospital Admissions: 2000–2006**



SOURCE: The University of Arizona, Department of Family and Community Medicine

**Exhibit 6. Arizona Rural Counties—Amphetamine, Cocaine, and Heroin/Opioid-Related Hospital Admissions: 2000–2006**



SOURCE: The University of Arizona, Department of Family and Community Medicine

**Exhibit 7. Percentage of Positive Client Drug Tests: Maricopa County Diversion Adults: January 1–March 31, 2007**

<b>Drug Test-Positive</b>	<b>Percent</b>
Alcohol	0.7
Amphetamines	34.7
Barbiturate	0.0
Benzodiazepine	0.3
Cocaine	19.5
Ecstasy	0.0
ETG (Alcohol)	6.3
LSD	0.0
Opiates	16.3
PCP	0.0
Propoxyphene	0.2
THC	21.9

SOURCE: Treatment Assessment Screening Center, Inc.

**Exhibit 8. Percentage of Positive Client Drug Tests: Maricopa County Juveniles: January 1–March 31, 2007**

<b>Drug Test-Positive</b>	<b>Percent</b>
Alcohol	0.02
Amphetamines	10.51
Cocaine	10.13
ETG (Alcohol)	1.01
Opiates	1.94
PCP	0.02
THC	76.37

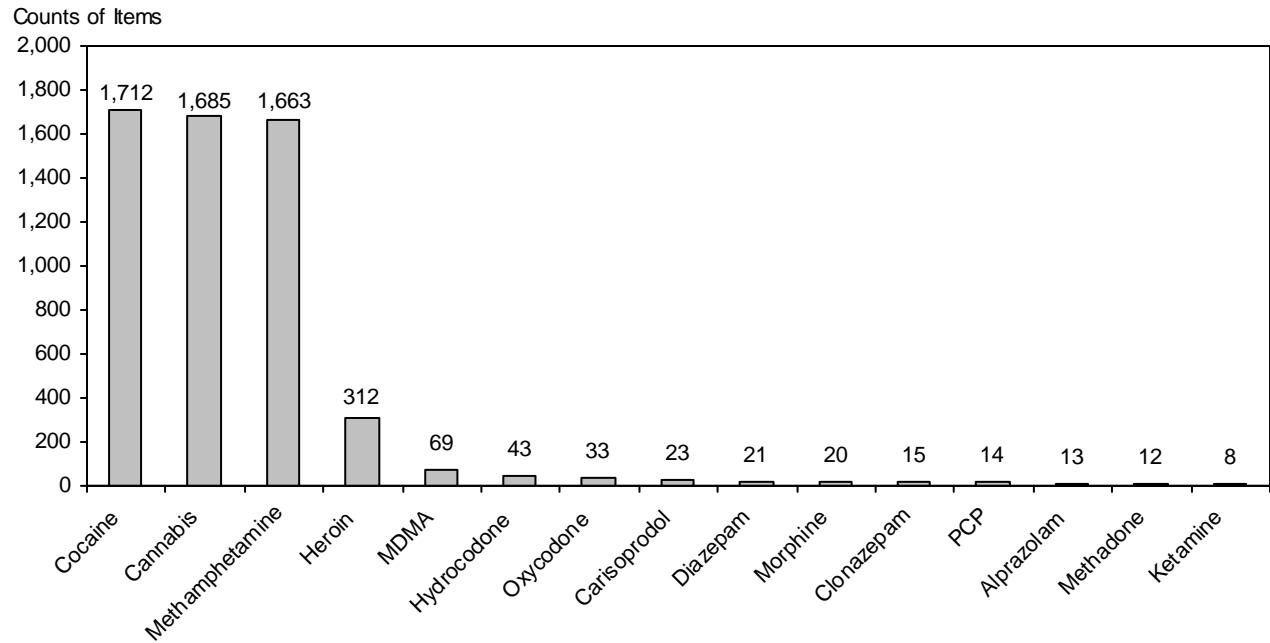
SOURCE: Treatment Assessment Screening Center, Inc.

**Exhibit 9. Type of Drug as a Percentage of Positive Screenings Among Maricopa County Juvenile Arrestees: 3Q 2005, 3Q 2006, and 1Q 2007**

<b>Drug Test-Positive</b>	<b>3rd Quarter 2005</b>	<b>3rd Quarter 2006</b>	<b>1st Quarter 2007</b>
Marijuana	75.6	76.2	76.4
Cocaine	15.2	11.6	10.1
Amphetamines	7.9	10.4	10.5
Opiates	1.3	1.8	1.9

SOURCE: Treatment Assessment Screening Center, Inc.

**Exhibit 10. Counts of Drug Items by Forensic Labs—Phoenix Metropolitan Area: 2006**



SOURCE: NFLIS, DEA

**Exhibit 11. Heroin, Methamphetamine, Cocaine, and Marijuana Retail Prices per Ounce—Central/Southern Arizona Area: 2006**

	Heroin	Methamphetamine	Crack	Cocaine	Marijuana
<b>Price per Ounce</b>	\$800	\$650–\$900	\$600–\$650	\$500–\$700	\$65–\$100

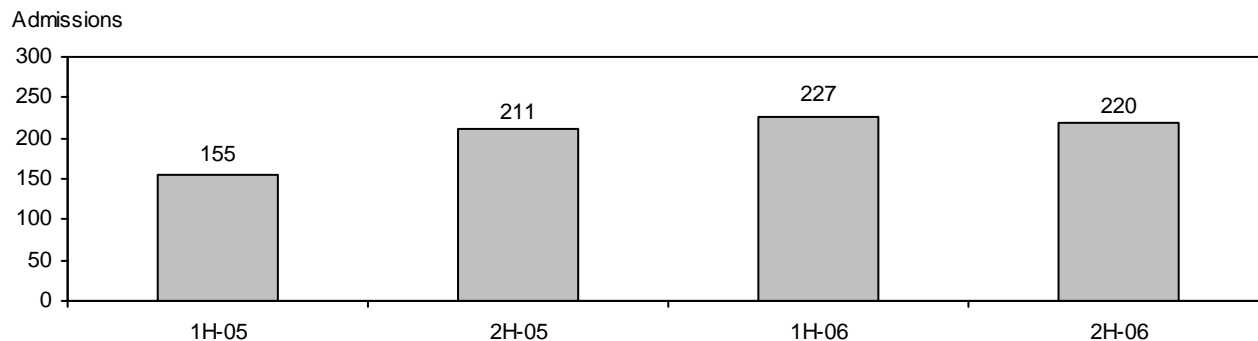
SOURCES: Arizona Department of Public Safety, Phoenix Police Department, Tucson Police Department, Yuma Police Department, Nogales Police Department as well as CS information and information received in the course of DEA case investigations

**Exhibit 12. Percentage of Maricopa County Students (Grades 8, 10, and 12) Reporting the Use of Various Drugs During Their Lifetime: 2002, 2004, 2006<sup>1</sup>**

Drug Used	Grade 8			Grade 10			Grade 12		
	2002	2004	2006	2002	2004	2006	2002	2004	2006
Alcohol	55.4	50.2	49.1	71.8	68.3	64.7	81.3	76.1	72.8
Cigarettes	38.0	29.7	28.0	47.8	41.2	39.8	62.1	49.9	47.4
Chewing Tobacco	5.8	5.3	6.5	9.0	8.9	9.6	15.4	15.2	13.6
Marijuana	23.6	18.7	16.6	41.6	34.2	31.0	53.5	43.0	41.0
Inhalants	12.5	12.6	14.6	10.8	10.0	10.8	10.3	8.8	9.2
Hallucinogens	2.8	2.2	1.8	9.0	5.0	3.7	15.2	8.1	5.4
Cocaine	4.3	3.2	3.4	8.1	6.8	6.3	13.8	10.4	10.8
Methamphetamine <sup>1</sup>	2.9	--	2.3	7.1	--	4.1	9.5	--	6.1
Heroin	1.9	1.3	1.3	3.4	2.4	2.0	4.0	3.4	3.0
Sedatives	--	10.2	9.6	--	16.5	14.0	--	21.9	18.2
Ecstasy	5.3	2.2	1.7	8.8	3.7	2.8	15.4	6.0	4.3
Steroids	--	--	1.6	--	--	1.9	--	--	2.4
Prescription Drugs	--	--	9.4	--	--	15.8	--	--	20.8

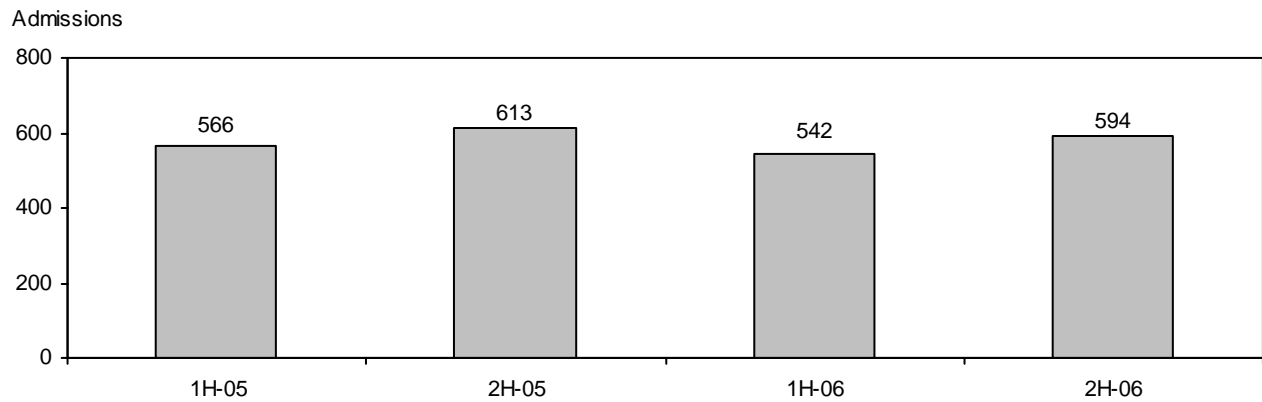
<sup>1</sup>In 2002, the question used was "On how many occasions, if any, have you used methamphetamines (meth, crystal, crank)?" In 2006, the question was, "On how many occasions, if any, have you used methamphetamines (meth, crystal, crank, or crystal meth)?"

SOURCE: Arizona Criminal Justice Commission

**Exhibit 13. Heroin Treatment Admissions in Maricopa County: 2005–2006**

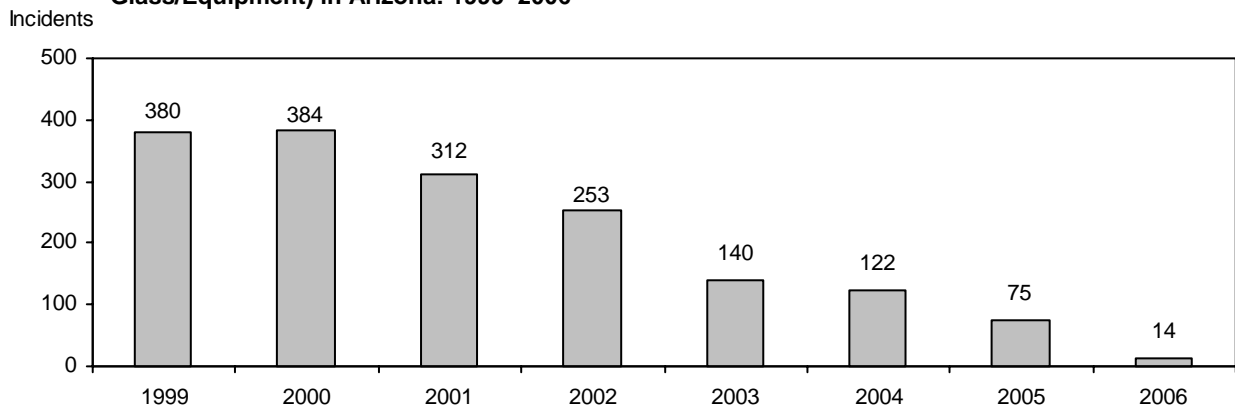
SOURCE: Arizona Department of Health Services

**Exhibit 14. Methamphetamine Treatment Admissions in Maricopa County: 2005–2006**



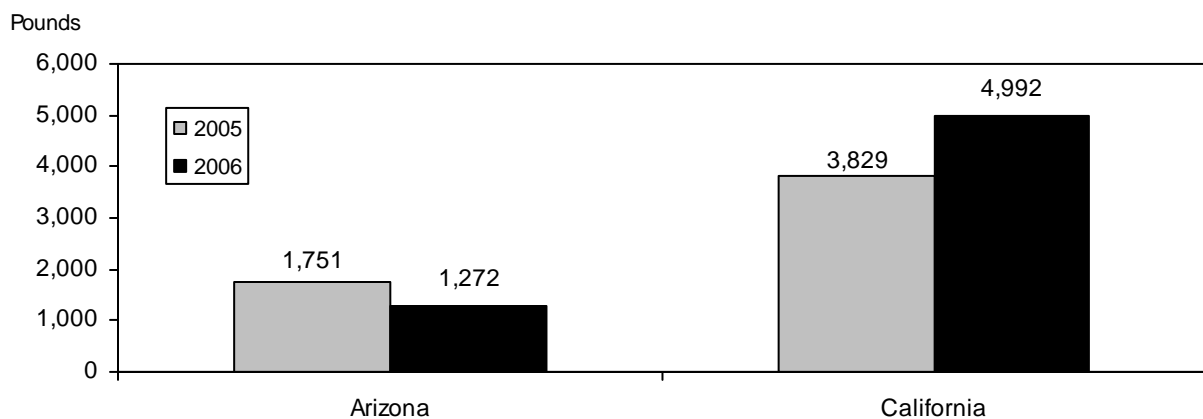
SOURCE: Arizona Department of Health Services

**Exhibit 15. Methamphetamine Clandestine Laboratory Incidents (Including Labs, Dumpsites, Chemical/Glass/Equipment) in Arizona: 1999–2006**



SOURCE: National Clandestine Laboratory Database, DEA

**Exhibit 16. Arizona and California Methamphetamine FDIN<sup>1</sup> Seizures, in Pounds: 2005 and 2006**

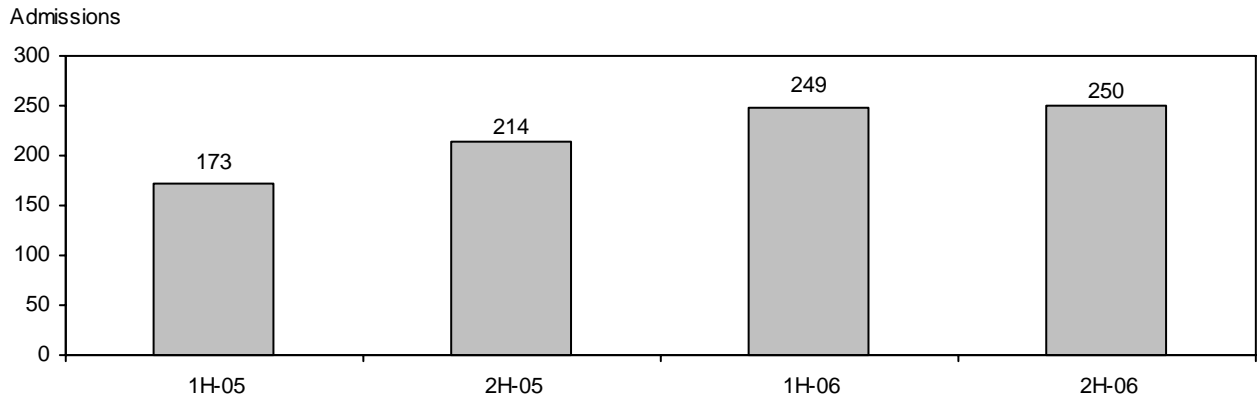


<sup>1</sup>Federal Drug Identification Number criteria.

SOURCE: DEA

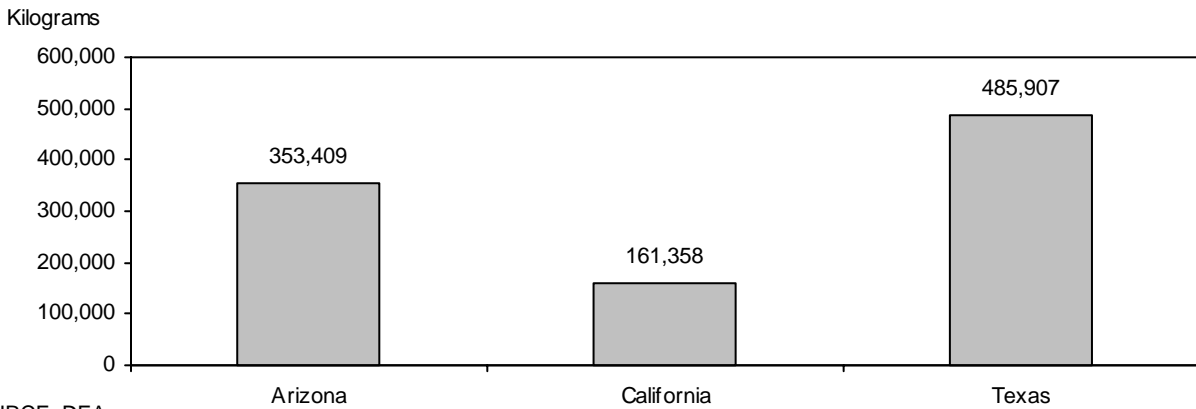


**Exhibit 17. Marijuana Treatment Admissions in Maricopa County: 2005–2006**



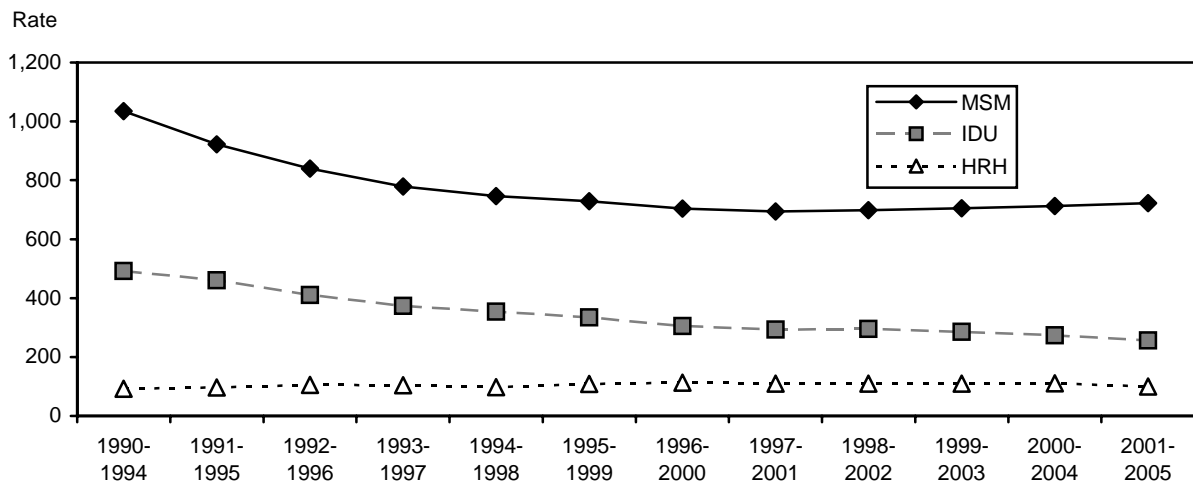
SOURCE: Arizona Department of Health Services

**Exhibit 18. Federal Marijuana Seizures in Arizona, California, and Texas, in Kilograms: 2006**



SOURCE: DEA

**Exhibit 19. Five-Year Emergent HIV/AIDS Rates per 100,000 Population in Arizona, by Reported Risk: 1990–2005<sup>1</sup>**



<sup>1</sup>MSM=Men who have sex with men; IDU=Injection drug use; HRH=High risk heterosexual activity.  
SOURCE: Arizona Department of Health Services

# Patterns and Trends in Drug Abuse in St. Louis

Heidi Israel, Ph.D., R.N., L.C.S.W.,<sup>1</sup> and James Topolski, Ph.D.<sup>2</sup>

## ABSTRACT

*Methamphetamine use has stabilized in St. Louis, and the drug no longer produces the clandestine laboratory issues discussed in previous CEWG presentations. Legislation has reduced access to pseudoephedrine-based cold medications and has reduced the clandestine lab activity. Clandestine lab incidents dropped more than 50 percent from the previous year. However, access to methamphetamine from Mexico and the Southwest is considered to be the major component of the methamphetamine problem in the city and county of St. Louis and the surrounding five Missouri counties, but it is not nearly as significant a problem as the “ice” that is available in Kansas City. Treatment admissions in the St. Louis area for methamphetamine abuse decreased 25 percent from 2005 to 2006. A problem of immediate concern is both the heroin availability and use of prescription opiates. It is clear that heroin activity has become more widespread. Three types of heroin are currently available in the St. Louis metropolitan statistical area. The other opiate problem involves the abuse of narcotic analgesics. Crack cocaine continued to be the stimulant problem in the area, but most indicators have remained relatively stable, with treatment admissions down slightly. Marijuana indicators continue to increase. Club drug abuse continued to be sparse and decreasing. In the St. Louis area, less than 10 percent of HIV cases had a risk factor of injection drug use, with most new cases identified among men who have sex with men or among minority women.*

## INTRODUCTION

### Area Description

The St. Louis metropolitan statistical area (MSA) includes approximately 2.7 million people and is the 18th largest MSA in the country. Most of the population live in the city of St. Louis and St. Louis County; others live in the surrounding rural Missouri counties of Franklin, Jefferson, Lincoln, St. Charles, and War-

ren. Recent redefinition of the MSA has resulted in an area that includes a total of eight Missouri counties and eight Illinois counties, reflecting the population sprawl since the last census. St. Louis City's population had continued to decrease to less than 350,000, many of whom are indigent and minorities. However, recent increases to the city's population have been noted. Violent crime increased in 2005, and it remains high in drug-trafficking areas. St. Louis County, which surrounds St. Louis City, has more than 1 million residents, many of whom fled the inner city. The county is a mix of established affluent neighborhoods and middle and lower class housing areas on the north and south sides. The most rapidly expanding population areas are in St. Charles and Jefferson Counties in Missouri and St. Clair and Madison Counties in southern Illinois, which have a mixture of classes and both small towns and farming areas. The populations in these rural counties total more than 800,000. The living conditions and cultural differences have resulted in contrasting drug use patterns.

Much of the information included in this report is specific to St. Louis City and County, with caveats that apply to the total MSA. Anecdotal information and some treatment data are provided for rural areas and for the State. Limited data are available for other parts of Missouri and most of the Illinois counties and offer a contrast to the St. Louis drug use picture.

### Policy Issues

Methamphetamine production and use has been a major concern for both law enforcement and the legislature. In 2005, the State legislature took bold moves to require precursor drugs, such as pseudoephedrine, that are sold in local retail stores to be locked up or placed behind pharmacy counters. This policy has slowed local producers, but high rates of methamphetamine use continue for several reasons. First, the policy does not address the major source of methamphetamine in the Midwest—Mexico. Increasing availability of Mexican “ice” from the southwestern region of the country has maintained drug supply. Second, the legislation requires purchasers of products containing pseudoephedrine to sign log books documenting the transaction. Unfortunately, there is no electronic database of these log entries, so someone purchasing at multiple sites from noncomputer-based pharmacies can not be readily detected. There is some evidence that local cooks may be collaborating and pooling resources. Illinois has recently passed similar legislation addressing access to pseudoephedrine. Attention to methamphetamine has masked ongoing problems with cocaine, opiates, and marijuana.

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Missouri has been in a budget crisis for years, resulting in cuts in services, particularly in health services, including drug treatment and mental health. Limited treatment continues to be available for drug abusers. The addiction model as understood through experience and research has shown that treatment services are cost effective to both society and the individual, yet the trend is to offer these services on a limited outpatient basis. The result is that some of these indicators cannot fully reflect the degree of use or abuse of the substances tracked.

While Missouri maintains its State Epidemiology Work Group (SEWG), an additional work group has been created as part of the Strategic Prevention Framework – State Incentive Grant (SPF-SIG) sponsored by the Center for Substance Abuse Prevention. Hopefully, these groups can be used to provide additional perspectives for future reports. In addition, there are a number of research projects being conducted in the area that may soon provide useful information about drug trends.

#### Data Sources

The sources used in this report are indicated below:

- **Drug treatment data** were derived from the Treatment Episode Data Set (TEDS) database for calendar year 2006. Private treatment programs in the county provided anecdotal information.
- **Price and purity information** on heroin was provided by the Drug Enforcement Administration (DEA), Domestic Monitor Program (DMP), through 2006; price data on other drugs are from the CEA and the National Drug Intelligence Center (NDIC) for 2006.
- **Drug-related mortality data** were provided by the St. Louis City and County Medical Examiner's Office for 2005 and 2006. All 2006 data reported in this paper are preliminary.
- **Intelligence data** were provided by the Missouri State Highway Patrol; Aubrey Grant, Program Specialist/Policy Bureau, Office of the Illinois Attorney General; and the DEA.
- **Forensic laboratory data** were provided by the National Forensic Laboratory Information System (NFLIS) for 2006.
- **Toxicology laboratory drug testing results** for probation and parole offenders were provided by the Missouri Department of Corrections for 2006.

- **Human immunodeficiency virus (HIV), acquired immunodeficiency syndrome (AIDS), and sexually transmitted disease (STD) data** were derived from the St. Louis Metropolitan Health Department and the Missouri Department of Health and Senior Services.

The number of hospitals in the St. Louis area reporting to the Drug Abuse Warning Network system is insufficient to produce reliable and valid emergency department estimates for the city. It is hoped that another source of hospital emergency room, admissions, or discharge data will be found to fill this information gap. Finally, a change in the treatment data capture system has some implementation problems and may underreport treatment data for 2006. A review of these results is currently being conducted.

#### DRUG ABUSE PATTERNS AND TRENDS

Cocaine indicators are stable in St. Louis. While methamphetamine has become a prominent drug of abuse in other cities and in the rural areas of Missouri, cocaine has retained its dominance in the St. Louis urban area. Possible reasons for this situation include racial differences, with Caucasians using methamphetamine and African-Americans using cocaine, and the strong influence of the distribution networks. The distribution of cocaine and heroin is primarily conducted by African-Americans. Most of the methamphetamine is imported into St. Louis from Mexico.

Three types of heroin have continued to be available in the area, but the heroin is not as pure and is more expensive when compared with other cities. This midwestern city is a destination market, with small entrepreneurial groups marketing the drug. Heroin is available in the suburbs and in some of the surrounding rural areas on a limited basis, thus illustrating that this drug is not confined to the lower socioeconomic strata in the city. St. Louis was one of several cities affected by the availability of heroin/fentanyl combinations. There have been numerous media reports of overdoses attributed to fentanyl-laced heroin. However, publicly available indicators verifying these deaths as related to fentanyl have been difficult to obtain.

Drug education and prevention activities have continued at the community level. The National Council on Alcoholism and Drug Abuse (NCADA) and other local education programs target prevention of drug use in the area. Faith-based initiatives are also involved in prevention. These groups are particularly active in the surrounding counties of St. Louis. The poor city economy continues to foster drug abuse and distribution. Marijuana continues to be a very popular drug of abuse among younger adults. Gangs continue

to be involved in the drug trade and related violence, with Latino, African-American, and Asian youth and young adults involved in these groups. Interdiction programs include Operation Jetway and Operation Pipeline.

While not reported separately, alcohol abuse and underage use of alcohol are community concerns. Many traffic accidents and violence against persons include alcohol use in the situation. In St. Louis, 17.1 percent of treatment admissions are for alcohol alone, with alcohol used in combination with other drugs in another 11.9 percent of the treatment admissions in 2005.

With the severe cuts in services in this State, the treatment admissions data, an important indicator of longer-term use of drugs, may not accurately reflect the severity of the drug abuse problem.

### **Cocaine/Crack**

The preliminary Medical Examiner (ME) data report for 2005 for the St. Louis area showed that cocaine was the most cited drug, with 106 mentions out of 339 deaths (or 31 percent of all cases) (exhibit 1a). In 2006, cocaine accounted for 42 deaths, but the death data are incomplete.

Among treatment admissions for illicit drug abuse in 2006, the number for primary cocaine abuse reflected a 20-percent decrease compared with 2005. Cocaine remained the most common primary drug of abuse among all admissions (25.6 percent), followed by marijuana (20.7 percent) and heroin (13.2 percent) (exhibit 1a). In 2006, males constituted 57.3 percent and females represented 42.7 percent of cocaine admissions. Admissions for African-Americans (68.9 percent) were about 2½ times the proportion for White cocaine abusers (29.9 percent). Most of those admitted were age 35 or older (70.1 percent). Marijuana and alcohol were the most frequently cited secondary and tertiary drugs of abuse.

Although the DEA's emphasis has shifted from cocaine to methamphetamine and heroin, law enforcement sources, the DEA, and street informants continued to report high quality, wide availability, and low prices for cocaine. Cocaine is used and most available in the urban areas. In 2006, powder cocaine grams sold for \$60–\$80; purity averaged 70 percent (exhibit 1b). Crack prices remained at \$20 per rock on the street corner. All cocaine in St. Louis is initially in the powder form and is converted to crack for distribution. Cocaine was readily available on the street corner in rocks or grams. The price of a gram of crack in Kansas City was higher than in St. Louis (at \$100–\$200). The "rock" price is the same in

smaller cities outside St. Louis when it is available, but the gram price is higher.

NFLIS data indicated that 2,548 (42.7 percent) drug items analyzed in 2006 contained cocaine. This was a small decrease in the number of items over 2005.

The Missouri Department of Corrections probation and parole toxicology data indicated that the Eastern Region, which includes the St. Louis area, had the highest percentage of positive tests for cocaine among this population in 2005. However, there is much variation in the area. Of probation and parolees testing positive for any drug, those in the city of St. Louis (38.4 percent) were more likely than those in St. Louis County (34.0 percent) or those in the surrounding Missouri counties (20.5 percent) to test positive for cocaine.

The continued use of cocaine has potentially severe long-term consequences by contributing to the spread of STDs through multiple partners. Crack cocaine is considered to be a primary risk for HIV in many research trials.

Most cocaine users smoke crack cocaine, though some use powder cocaine. Eighty-nine percent of primary cocaine abusers admitted for treatment in 2006 smoked the drug. Only injection drug users (IDUs) who combine cocaine and heroin ("speedball") use cocaine intravenously. Younger users tend to smoke cocaine. Polydrug use is also evident in the treatment data. The reported use of marijuana, heroin, and alcohol in addition to cocaine suggests this trend will likely continue.

### **Heroin**

The ME data report for 2005 for the St. Louis area showed that heroin was cited in 31 out of 339 deaths, or 9 percent of all cases (exhibit 1a). In 2006, preliminary data show that heroin accounted for 47 deaths. While available primarily in the St. Louis and Kansas City areas, heroin is found among small pockets of IDUs who reside in small university towns throughout the State as well as small rural towns along major highways in both Missouri and Illinois areas of the MSA. Heroin consistently appears in all indicators. St. Louis has been one of several cities recently experiencing a sharp rise in opiate overdose deaths, many attributed to fentanyl use (exhibit 2). Meanwhile, this problem has gained the attention of prevention, treatment, and law enforcement.

While heroin treatment admissions increased dramatically as a proportion of all admissions between 1996 and 2000, they leveled off in 2001–2003. How-

ever, admissions increased 43.2 percent from 2004 to 2005. Admissions appear to have decreased again by 17 percent, but they are still higher than the 2004 admissions data. Whether this is an artificial decrease related to the change in treatment data capture is yet unknown. Admissions to some available treatment depended on “ability to pay.” Some heroin abusers in need of treatment utilize “private pay” methadone programs. Rapid detoxification, using naltrexone or buprenorphine, is still a treatment option at private centers, but it is expensive. About 30.7 percent of heroin admissions were younger than 25. Of the methods of administration, inhalation accounted for 44 percent of the admissions, while intravenous use was 53 percent. The increased availability of higher purity heroin and the resulting ability to either snort or smoke the heroin, has led to a wider acceptance of the drug in social circles.

In 2006, males accounted for 61.7 percent and females represented 38.3 percent of heroin treatment admissions. Admissions for African-Americans (51.3 percent) were more common than those for White heroin abusers (47.4 percent). Most of those admitted were younger than 35 (69.2 percent). Cocaine and marijuana were the most frequently cited secondary and tertiary drugs of abuse. Most persons entering treatment referred themselves or were referred by the courts.

A steady supply of Mexican heroin remains available. The DEA has made buys of heroin in the region in addition to buys through the DMP. Mexican black tar heroin showed a peak of 24.0 percent purity in 1998; purity dropped to 19.0 percent in 2006. South American (Colombian) heroin averaged around 17.6 percent. Southwest Asian heroin had a purity of 16.0 percent. While these purities are lower than in many cities, the consistent higher purity allows for expansion of usage into a larger market where a more conventional method of administration can be used. Most heroin is purchased in aluminum foil or in the number-5 gel capsule (one-tenth-gram packages of heroin in plastic wrap and aluminum foil) for \$10 (exhibit 1b).

The city is an end-user market and is dependent on transportation of the heroin from points of entry into the Midwest. The wholesale price remains at \$100–\$400 per gram, depending on heroin type. On street corners, heroin sells for \$200 per gram. Most business is handled by cellular phone, which has decreased the seller’s need to have a regular location. Runners continue to be used as “middlemen” between users and sellers to deliver small quantities of drug. In St. Louis and other smaller urban areas, small distribution networks sell heroin.

NFLIS reported that 10.9 percent of the items analyzed in 2006 were heroin. The Missouri Department of Corrections probation and parole toxicology data indicated that the Southeast Region had the highest percentage of positive tests for opiates among this population. While heroin is present in the Southeast region, it is believed that this high percentage may reflect the abuse of narcotic analgesics in this area. Results for the Eastern Region in 2005 indicated that 18.8 percent of the positive screens in the city of St. Louis probation and parole offices indicated opiate use. In St. Louis County, the percentage of positive screens identifying opiates was similar, at 18.2 percent. Positive screens at the probation and parole offices in the surrounding Missouri counties showed 16.2 percent positive for opiates. It is important to remember that positive screens for opiates might indicate use of any of the opiate type drugs: heroin, illegally obtained narcotic analgesics, or legitimate use of narcotic analgesics.

Kansas City’s heroin supply differs from that of St. Louis. Most heroin in Kansas City is black tar and is typically of poorer quality. At this time, white heroin does not appear to be available in the Kansas City metropolitan area.

#### **Other Opiates/Narcotics**

Other opiates represented slightly more than 0.5 percent of all treatment admissions in 2006, reversing a small trend of a gradual increase in these admissions. Of these 43 admissions, 51 percent were female, 86 percent were White, and 44 percent were older than 35. Methadone remains available, which is probably a result of prescription abuse as well as patient diversion. NFLIS data for 2006 indicated that oxycodone (0.9 percent) and hydrocodone (0.6 percent) were the two most frequently analyzed opiates following heroin.

OxyContin (a long-lasting, time-release version of oxycodone) abuse remained a concern for treatment providers and law enforcement officials. Prescription practices are closely monitored for abuse, and isolated deaths have been reported, but no consistent reports are available on the magnitude of this potential problem. OxyContin costs \$40 for an 80-milligram tablet on the street (exhibit 3b). The use of hydromorphone (Dilaudid) remained common among a small population of White chronic addicts. The drug costs \$50–\$80 per 4-milligram pill.

The fentanyl overdose problem that struck many cities in the spring and summer of 2006 has abated in St. Louis, with only an occasional overdose death noted as of late fall 2006 (exhibit 2). The coordination of information across many law enforcement

departments, medical examiner offices, and officials was difficult, and it was complicated by the time lag on reporting final drug analysis results. Rapid response in this kind of epidemic will be difficult. The number of deaths in St. Louis City and County was 70; additional outlying county reports are still being reviewed.

## Marijuana

Marijuana treatment admissions more than doubled from 1997 (1,573 admissions) to 2001 (3,210 admissions), possibly reflecting the increased utilization of the treatment system by the criminal justice system. Admissions in 2006 accounted for 20.7 percent of all admissions in the St. Louis region (exhibit 1a) and represented a decrease of 17.3 percent over 2005. Marijuana, viewed by young adults as acceptable to use, is often combined with alcohol, and alcohol was identified as the most popular secondary drug of abuse (24.9 percent of admissions). Almost two-thirds of persons admitted to treatment were referred by the courts. The 25-and-younger age group accounted for 60.3 percent of primary marijuana treatment admissions in 2006. Some of the prevention organizations report a resurgence in marijuana popularity and a belief by users that it is not harmful. Prevention programs are targeting this belief through education.

Because of the heroin, cocaine, and methamphetamine abuse problems in St. Louis, law enforcement officials have focused less attention on marijuana abuse. Limited resources require establishing enforcement priorities. Often, probation for marijuana offenders requires participation in treatment for younger users who do not identify themselves as drug dependent.

Marijuana from Mexico is classed as lower grade and less expensive (\$100 per ounce); all indoor grown marijuana is higher grade and also more expensive (\$1,400 per ounce) (exhibit 1b). Marijuana is available from Mexico or domestic indoor growing operations. Indoor production makes it possible to produce marijuana throughout the year. In addition to the Highway Patrol Pipeline program, which monitors the transportation of all types of drugs on interstate highways, Operations Green Merchant and Cash Crop identify and eradicate crops. Much of the marijuana grown in Missouri is shipped out of the State. NFLIS reported that 35.7 percent of the drug items analyzed in 2006 were cannabis, slightly lower than the proportion in 2005.

The Missouri Department of Corrections probation and parole toxicology data indicated that the Central

Region had the highest percentage of positive tests for marijuana among this population. Results for the Eastern Region indicated that the percentage of positive screens identifying marijuana use at probation and parole offices was relatively consistent at the offices in the city of St. Louis (60.9 percent of positive screens), in St. Louis County (57.1 percent), and in the surrounding Missouri counties (52.9 percent). Marijuana was the most frequently identified substance statewide.

## Stimulants

Methamphetamine, along with alcohol, remained a primary drug of abuse in both the outlying rural areas and statewide. (Most of Missouri, outside of St. Louis and Kansas City, is rural.) Methamphetamine continued to be identified as a huge problem in rural communities.

Methamphetamine (“crystal” or “speed”) was found at very low levels in city indicators in 1995, but reported use has slowly increased over the last 9 years. In rural areas, methamphetamine appeared regularly in the treatment data, but methamphetamine has been identified as a problem in all parts of the State. The urban, street-level distributors in St. Louis deal in cocaine, so methamphetamine use is not as widespread in the St. Louis area; this could indicate differences in dealing networks and access. However, an increase in availability and purity of Mexican methamphetamine and a growth in Hispanic groups in the St. Louis metropolitan area may change this trend. With the pseudoephedrine-access laws, these sources may replace “homegrown” supplies. Methamphetamine use is reported in the gay male and club communities in the city. An increase in treatment admissions may signal this change. Traditionally, cocaine and methamphetamine use have been split along racial lines in the State. The number of methamphetamine treatment admissions in St. Louis was 323 (3.0 percent of total admissions) in 2006 (exhibit 1a). In rural treatment programs, methamphetamine was the drug of choice after alcohol. Statewide, treatment admissions have continued to increase.

In 2006, the percentage of females entering treatment was slightly lower than the percentage of males (48.6 vs. 51.4) (exhibit 1a). Admissions for African-Americans were almost nonexistent (1.6 percent), as most methamphetamine admissions were White (98.1 percent). Many of those admitted were age 26–34 (36.8 percent), reflecting a younger population of users than that of cocaine and heroin abusers entering treatment. Methamphetamine admissions, however, were slightly older than the most frequently reported age group entering for marijuana abuse. Marijuana and alcohol were the most frequently cited secondary

and tertiary drugs of abuse. Persons entering treatment were typically referred by the courts or self-referred.

The Midwest Field Division of the DEA decreased its cleanup of clandestine methamphetamine labs after training local enforcement groups. Data for 2005 indicate that recent legislation has had an impact on the number of clandestine lab incidents, which fell to approximately 2,252. In 2006, this number decreased further to 1,258. This decrease in incidents was attributed to Senate Bill 10, the pseudoephedrine control law signed into law in June and in effect on July 14, 2005. During the first full month of implementation, methamphetamine incidents (chemicals, glassware, dumpsites, and operational labs) decreased 54 percent compared with the same month in 2004. However, the number of lab incidents had started to fall prior to implementation of Senate Bill 10. This may be related to the increased availability of higher potency ice imported from Mexico and the southwestern region of the country.

In the current methamphetamine scene, Hispanic traffickers are the predominant distributors. Shipments from “super labs” in the Southwest are trucked in via the interstate highway system. This network is in contrast to the old local “mom and pop” labs that had fueled much of the methamphetamine debate in the State over the past 5 years. Most of the currently available methamphetamine is produced in Mexico and trafficked through the Hispanic traffickers. The purity of the methamphetamine obtained through this source has improved in recent years. While much of the law enforcement resources and personnel are directed at the local production, most of the methamphetamine that is available in the area comes through these Hispanic organizations. Crystallized methamphetamine has been noted in the local market, usually indicating increased purity in the product; this crystallized form or “ice” is readily available in Kansas City.

The term “ice” has been applied to all methamphetamine with a crystalline appearance. Methamphetamine sold for \$700–\$1,300 per ounce in St. Louis and for as little as \$100–\$120 per gram in some areas (exhibit 1b). Methamphetamine was represented in less than 1 percent of the NFLIS analyses in 2006, as was pseudoephedrine.

The Missouri Department of Corrections probation and parole toxicology data indicated that the Southwest Region had the highest percentage of positive tests for amphetamines among this population. Results for the Eastern Region for 2005 are indicative of the diversity of amphetamine use in the area, with a

lower percentage of positive screens identifying amphetamine in the city of St. Louis (2.2 percent) and a higher percentage of positive screens (21.2 percent) identifying the drug in the five Missouri counties surrounding the St. Louis City and County.

Use of methamphetamine and its derivatives has become more widespread among high school and college students, who do not consider these drugs as dangerous as others. Because methamphetamine is so inexpensive and appeals to a wide audience, it is likely that its use will continue.

### **Depressants**

The remaining few private treatment programs often provide treatment for benzodiazepine, antidepressant, and alcohol abusers. Social setting detoxification has become the treatment of choice for individuals who abuse these substances. Since many of the private treatment admissions are polysubstance abusers, particular drug problems are not clearly identified.

### **Hallucinogens**

Over the years, lysergic acid diethylamide (LSD) has sporadically reappeared in local high schools and rural areas. Blotters sell for \$20 per 50-microgram dose (exhibit 1b).

Phencyclidine (PCP) has been available in limited quantities in the inner city and has generally been used as a dip on marijuana joints. While PCP is not seen in quantity, it remains in most indicator data and police exhibits and as a secondary drug in ME data. Few items (0.27 percent) were identified in 2006 as PCP by NFLIS. The Missouri Department of Corrections probation and parole toxicology data indicated that the Western Region had the highest percentage of positive tests for PCP among this population. PCP appears to be more readily available and used in Kansas City. Most of the users of this drug in the inner city are African-American.

### **Club Drugs**

MDMA accounted for 4 percent of items identified in the 2006 NFLIS for St. Louis. The 248 items analyzed ranked fourth among all substances analyzed in St. Louis area laboratories. Reports of other club drugs were almost nonexistent, with few items analyzed in 2006. MDMA is less available at dance parties and costs \$10 per tablet. Most of the reports about MDMA abuse are anecdotal or are part of a polydrug user’s history.

## INFECTIOUS DISEASES RELATED TO DRUG ABUSE

**HIV**

HIV seropositivity among IDUs remained low in St. Louis. While the predominant number of cases occurs among men who have sex with men (MSM), the largest increase was found among young African-American females, who were infected through heterosexual or bisexual contact, and young homosexual African-American males. As a result, increased specialized minority prevention efforts have been initiated.

Of the total—nearly 7,100 persons living with HIV disease identified through the first quarter of 2007—10 percent total were either IDUs or men who have sex with men and are also IDUs (MSM/IDUs) (exhibit 3b). The number of infected African-Americans was increasing disproportionately among males and females.

**STDs and Hepatitis C**

A resurgence of syphilis among MSM has led to increased surveillance and targeted prevention pro-

grams to this population. Rates of gonorrhea and chlamydia remain stable and high in the urban STD clinics. St. Louis ranks third in the country for gonorrhea, with cases remaining at approximately 1,000 per year, and second for chlamydia. HIV and syphilis/gonorrhea rates are high in neighborhoods known to have high levels of drug abuse, underscoring the concept of assortative mixing in cohorts. Inconsistent reporting of hepatitis C has made estimation of the problem and tracking of hepatitis C cases difficult (exhibit 3b).

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**Exhibit 1a. Indicators for Cocaine, Heroin, Marijuana, and Methamphetamine in St. Louis: 1996–2006**

Indicator	Cocaine	Heroin	Marijuana	Methamphetamine
Number of Deaths by Year				
1996	93	51	NA <sup>1</sup>	9
1997	43	67	NA	11
1998	47	56	NA	9
1999	51	44	NA	4
2000	66	47	NA	9
2001	75	20	NA	3
2002	76	50	NA	–
2003	78	61	NA	–
2004	38	64	NA	–
2005	106	31	NA	–
2006 (preliminary)	42	47	NA	–
Treatment Admissions Data				
Percent of All Admissions (2006)	25.6	13.2	20.7	3.0
Percent of All Admissions (2005)	27.8	13.3	24.0	4.8
Gender (%) (2006)				
Male	57.3	61.7	70.5	51.4
Female	42.7	38.3	29.5	48.6
Age (%) (2006)				
12–17	1.4	0.7	28.2	2.9
18–25	14.9	30.0	32.1	22.6
26–34	19.7	38.5	23.8	36.8
35 and older	64.0	30.8	15.9	37.7
Race/Ethnicity (%) (2006)				
White	29.9	47.4	44.9	98.1
African-American	68.9	51.3	51.9	1.6
Hispanic	1.2	2.3	1.3	0.6
Route of Administration (%) (2006)				
Smoking	89.3	1.5	96.6	53.2
Intranasal	7.2	44.3	0.2	10.8
Injecting	1.5	52.6	0.1	27.6
Oral/other	2.0	1.6	3.1	8.4

<sup>1</sup>NA=Not applicable.

SOURCES St. Louis City/County Medical Examiner's Office (data for 2006 are complete); TEDS database

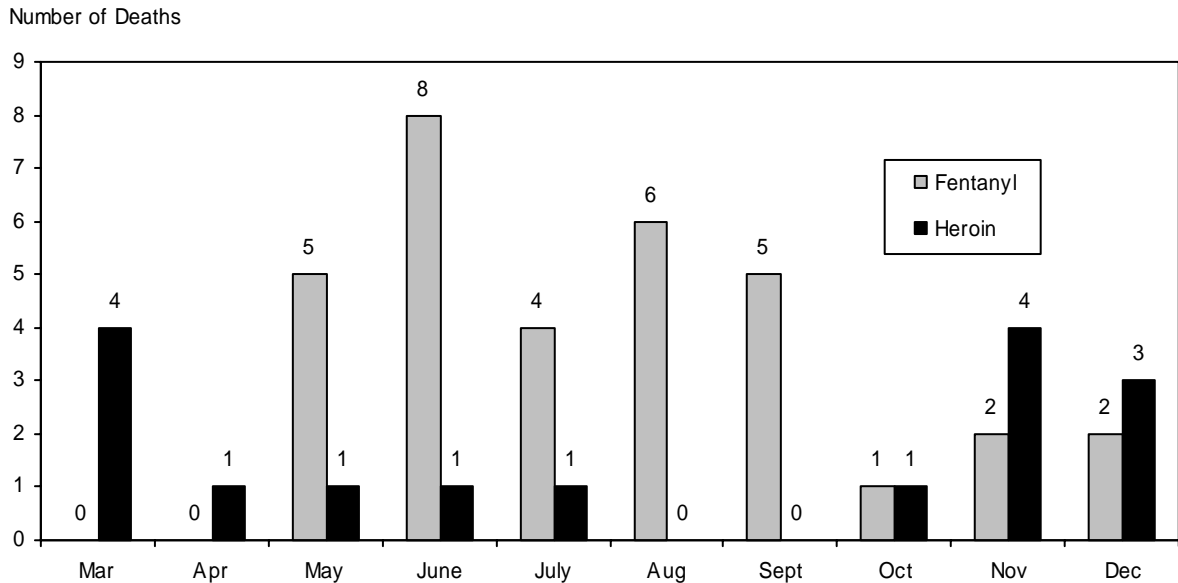
**Exhibit 1b. Other Combined Indicators for Cocaine, Heroin, Marijuana, and Methamphetamine in St. Louis: 2002–2006**

Indicator	Cocaine	Heroin	Marijuana	Methamphetamine and Other Drugs
Multisubstance Combinations	Older users combine with heroin, alcohol	Older users combine with cocaine, alcohol	Alcohol	Marijuana commonly used in combination, alcohol use common
Market Data (2006)	Powder \$60–\$80/g, 70% pure; Crack \$20/rock, 50–90% pure; 8-ball \$200	\$20/cap or foil; \$10 per number-5 gel capsule; based on whether MBT, SA, SWA, \$100–\$400/g, 16–19% pure	Low grade: \$100/oz; High grade (indoor grow, includes various types): \$1,400/oz	Methamphetamine \$100/g, Mexican (80%) and local (80% pure); hydromorphone \$80/4-mg pill; LSD blotters \$20–50 microgram; OxyContin \$40
Qualitative Data	Readily available, urban choice	Younger users, 1/3 younger than 25, general availability	Readily available, younger users in treatment	Rural/suburban users of amphetamine
Other Data of Note	N/R <sup>1</sup>	Mexican black tar, South American, Southwest Asian; young users smoke/snort	N/R	Methamphetamine lab seizures decreasing; fewer mom/pop labs; producers are super-labs controlled by Hispanic groups

<sup>1</sup>N/R=Not reported.

SOURCES: DEA; client ethnographic information

**Exhibit 2. Fentanyl and Heroin Deaths in St Louis: 2006**



SOURCE: St. Louis City/County Medical Examiner's Office

**Exhibit 3a. New HIV and Hepatitis C Cases in St. Louis City: 2002–2006**

New Cases	HIV	Hepatitis C
2002	178	227
2003	197	488
2004	122	540
2005	171	512
2006	227	305

SOURCE: St. Louis City Health Department

**Exhibit 3b. Persons Living with HIV Disease in St. Louis Metropolitan Area by Exposure Category, Gender, Race/Ethnicity, and Age: Year-to-Date and Cumulative Totals Reported Through June 2004<sup>1</sup>**

Category	Cumulative Through June 2004	
	Number	Percent
Exposure Category		
MSM	4,583	70.0
IDU	301	5.0
IDU/MSM	319	5.0
Hemophilia	58	1.0
Heterosexual	920	14.0
Blood transfusion	34	0.2
Perinatal	41	1.0
Unknown	416	6.0
Total	6,672	
Gender and Race/Ethnicity		
Male		
White	2,914	45.0
African-American	2,582	40.0
Hispanic	79	1.0
Other	19	0.0
Unknown	208	3.0
Female		
White	170	2.0
African-American	671	10.0
Hispanic	15	0.0
Other	13	0.0
Age		
12 and younger	53	1.0
13–19	160	2.4
20–29	1,644	25.2
30–39	2,799	43.0
40–49	1,332	20.4
50 and older	522	8.0
Unknown	162	2.0
Total	6,672	

<sup>1</sup>The cumulative total through 2006 was 7,070; data by category for the 2005–2006 time period were not available at the time this report was prepared.

SOURCE: St. Louis Metropolitan AIDS Program

# Drug Abuse Patterns and Trends in San Diego County, California

Robin Pollini, Ph.D., MPH, and Steffanie Strathdee, Ph.D.<sup>1</sup>

## ABSTRACT

*Methamphetamine continues to be the primary drug of abuse in San Diego, but there are some early signs that persistent increases in indicators of use and abuse may be abating. Methamphetamine accounted for 49 percent of all primary drug treatment admissions (excluding alcohol) between January and June 2006 (compared with 50 percent during the same period in 2005), followed by heroin (22 percent) and marijuana (17 percent). The number of admissions—both overall and for specific drugs—was generally unchanged compared with the first half of 2005. Preliminary arrestee monitoring estimates for 2006 show that methamphetamine was the most commonly detected drug among female adult arrestees (47 percent) and ranked second (below marijuana) for male adults (36 percent) and juveniles (10 percent). However, methamphetamine prevalence was lower across all three groups compared with 2005. New data from the San Diego County Health and Human Services Agency show that opiates (including heroin) accounted for the largest number of ED and hospital visits involving drug dependence, while amphetamines (including methamphetamine), cannabis, and cocaine all accounted for more visits involving drug abuse.*

## INTRODUCTION

### Area Description

San Diego County is the southwestern-most county of California and shares 80 miles of border with Mexico. The San Ysidro border crossing, which links San Diego with its sister city of Tijuana, Mexico, is the busiest border crossing in the world, accommodating more than 41 million legal crossings annually. San Ysidro and the surrounding border region are also busy locations for illicit drug smuggling, with San Diego County serving as a major transshipment point for both marijuana and methamphetamine shipments from Mexico. Metham-

phetamine has been the drug of primary concern in San Diego County for a number of years, and it leads other drugs in most of the indicator categories presented in this report.

The population of San Diego County is increasing and is home to a growing Hispanic (predominantly Mexican) population (exhibit 1). The county's total population was estimated at 3.1 million in 2006, up from 2.8 million in 2000. Just over one-half (51 percent) of the population is White non-Hispanic, followed by 29 percent Hispanic. The remaining 20 percent of the population is comprised of Asian/Pacific Islanders (10 percent), African-Americans (5 percent), and other races/ethnicities.

### Data Sources

- **Forensic laboratory data** were provided by the National Forensic Laboratory Information System (NFLIS), Drug Enforcement Administration (DEA), for calendar year 2006. There were 20,240 drug items analyzed by local forensic laboratories between January and December 2006.
- **Treatment data** were provided by the San Diego Department of Alcohol and Drug Programs (ADP), using the California Outcomes Measurement System (CalOMS). CalOMS is a new statewide client-based data collection and outcomes measurements system that requires reporting from all counties and direct providers of treatment services that receive State ADP funds. Data on all patient admissions for drug and alcohol treatment—not just patients receiving treatment paid for using public funding sources—are included in the CalOMS data set. Readers should note that data presented in this report for years prior to 2006 were obtained from the California Alcohol and Drug Data System (CADDs); although CADDs and CalOMS use similar data collection methodologies, treatment admissions data collected under these two systems may not be directly comparable. This report presents admissions data from January to June 2006—the most recent data available—and makes comparisons with the same calendar period from prior years.
- **Arrestee data** were obtained from the San Diego Association of Governments (SANDAG) Substance Abuse Monitoring (SAM) program, a regional continuation of the Federal Arrestee Drug Abuse Monitoring (ADAM) program that was discontinued in 2003. In 2005, 808 adult and 178 juvenile arrestees completed interviews for

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the SAM program, and 96 percent and 93 percent, respectively, provided a valid urine sample.

- **Drug price and purity data** are from the San Diego/Imperial County Regional Narcotic Information Network, based on available data for 2006.
- **Acquired immunodeficiency syndrome (AIDS) data and human immunodeficiency virus (HIV) data** were taken from the San Diego County Health and Human Services Agency.

## DRUG ABUSE PATTERNS AND TRENDS

### Methamphetamine

In the first half of 2006, primary methamphetamine abuse accounted for more illicit drug treatment admissions in San Diego County than any other drug (exhibit 2). Overall, 2,724 (49 percent) of treatment admissions cited methamphetamine as their primary drug of abuse. Methamphetamine has accounted for the highest proportion of treatment admissions since 2002 and, along with nonheroin opiates, is the only drug category for which the overall number of treatment admissions has increased in San Diego County since 2001 (an 8.4-percent increase). However, notably, there was no change in the overall number of treatment admissions from 2005 to 2006; like several of the other drugs covered in this report, methamphetamine admissions appear to be leveling off after decreasing substantially between 2002 to 2004 (exhibit 2). Compared with other admissions, primary methamphetamine admissions in 2006 were characterized by a higher proportion of females (45.6 percent) and White non-Hispanics (53.7 percent). These admissions also tended to be among younger users compared with users of cocaine and heroin, with 58.9 percent of admissions attributed to individuals younger than 36. Most (74 percent) reported that smoking was their primary mode of administration (exhibit 4). A trend toward smoking methamphetamine and away from injection or inhalation has been observed consistently since 2001.

Methamphetamine was also the most commonly detected drug among arrestees in San Diego County in 2005 (exhibit 5). More than one-half (51 percent) of adult females tested positive for methamphetamine, as did 44 percent of adult males and 21 percent of juveniles. The prevalence of methamphetamine in the adult arrestee population has risen substantially since 2001, increasing 38 percent among both male and female adults. Of major concern in 2005 was the documented increase in prevalence among juvenile arrestees, 1 in 5 of whom

tested positive for methamphetamine—an almost twofold increase since 2001.

Among items tested in forensic labs and entered into NFLIS (exhibit 6), 6,276 (31.0 percent) contained methamphetamine, which ranked second only to cannabis (8,844 items).

Methamphetamine continues to be relatively inexpensive in San Diego, no doubt because of the county's close proximity to Mexico and its status as the first U.S. stop for shipments headed to more northern and eastern destinations of the United States. Prices have remained stable through 2006, with some indications of upward price pressures. One-quarter gram sold for approximately \$20–\$25 in 2006, and the gram price was approximately \$50–\$100 (exhibit 7).

### Cocaine/Crack

Although treatment admissions for primary cocaine abuse have decreased substantially since the first half of 2001, they were unchanged from the first half of 2005 ( $n=457$ ) to 2006 ( $n=458$ ). Cocaine accounted for only 8.2 percent of nonalcohol drug treatment admissions in the first half of 2006 (exhibit 2). Treatment data suggest that cocaine use in San Diego County is centered in the African-American population. Although African-Americans account for only 5.3 percent of the county's population, they made up 64.0 percent of all primary cocaine treatment admissions in the first half of 2006 (exhibit 3). In addition, cocaine accounted for more than one-third (36.7 percent) of all primary drug treatment admissions among African-Americans. Notably, clients admitted for primary cocaine abuse were older than those entering treatment for any other drug, with 75.1 percent admitted to treatment at age 36 or older. This suggests an aging, predominantly African-American cocaine-using population.

Prevalence of cocaine decreased slightly from 2001 to 2005 among both male and female arrestees, although notably there was substantial variation from year to year among female arrestees (exhibit 5). The year 2005 was only the second year of testing juvenile arrestees for cocaine, and prevalence in this younger group remained unchanged at 6 percent.

Of the drug items analyzed by forensic labs in 2006, 14.3 percent were cocaine items—an increase over the 13.5 percent reported in 2004 (exhibit 6).

### Heroin

The proportion of treatment admissions attributed to primary heroin abuse remained relatively unchanged

from the first half of 2005 to the first half of 2006, despite a decrease of more than 50 percent in the overall number of primary heroin treatment admissions since 2001 (exhibit 2). More than one-half of the heroin treatment admissions in the first half of 2006 were among White non-Hispanics (51.0 percent), followed by Hispanics (38.7 percent) and African-Americans (5.0 percent) (exhibit 3). Clients admitted for heroin also tended to be older; 59.5 percent were age 36 or older. Notably, the majority of heroin admissions were for injection heroin use (85.2 percent), reflecting the dominance of Mexican black tar heroin in San Diego County (exhibit 4).

Prevalence of heroin use among arrestees has not changed markedly since 2001. Opiates, including heroin, were the least frequently detected drug among male (5 percent) and female (9 percent) adult arrestees as well as juvenile arrestees (2 percent) in 2005 (exhibit 5).

Heroin accounted for only 2.6 percent of drug items analyzed by forensic labs in 2006.

### Other Opiates/Narcotics

Drug treatment admissions for primary abuse of opiates, excluding heroin, accounted for 2.9 percent of illicit drug treatment admissions in the first half of 2006; although relatively small, this drug category had the largest increase in drug treatment admissions from 2001 to 2005 (49.5 percent) (exhibit 2). Admissions for primary abuse of other opiates were 64.4 percent male and predominantly White non-Hispanic (91.3 percent); a majority (59.5 percent) were at least 36 years old (exhibit 3).

Among the 20,240 items analyzed by forensic laboratories, 256 (1.3 percent) contained hydrocodone, 91 (0.5 percent) contained oxycodone, 39 (0.2 percent) contained morphine, and 33 (0.2 percent) contained codeine.

### Marijuana

Marijuana ranked third behind methamphetamine and heroin among primary drugs of abuse at treatment entry (16.6 percent) (exhibit 2). Overall, the number of treatment admissions for primary marijuana abuse decreased by more than 40 percent since 2001. Primary marijuana admissions in the first half of 2006 were most commonly male (71.2 percent), Hispanic (40.5 percent), or White non-Hispanic (37.0 percent), and younger than 18 (46.2 percent) (exhibit 3).

Among arrestees, marijuana ranked second in prevalence among adults (behind methamphetamine)

and first among adolescents (44 percent) in 2005 (exhibit 5). Among adults, 34 percent of males and 31 percent of females tested positive for marijuana.

Marijuana accounted for 8,844 (43.7 percent) of all items analyzed by forensic labs in 2006—more items than any other drug (exhibit 6).

### Other Drugs

Drugs in the “other” category include club drugs, benzodiazepines and other prescription drugs (excluding narcotic analgesics), and drugs not otherwise specified. These drugs accounted for less than 1 percent of drug treatment admissions in the first half of 2006 (exhibit 2).

Phencyclidine (PCP) accounted for 19 forensic items in 2006.

In the benzodiazepine category, alprazolam accounted for 0.4 percent ( $n=76$ ) of forensic items in 2006, followed closely by 0.4 percent clonazepam (75) and 0.1 percent lorazepam (18).

### Alcohol

There were 1,179 primary alcohol treatment admissions in San Diego County in the first half of 2006. More than one-half (55.2 percent) of these admissions cited methamphetamine as a secondary substance of abuse. The majority of primary alcohol admissions were male (67.0 percent), White non-Hispanic (63.4 percent), and younger than 40 (53.7 percent).

## INFECTIOUS DISEASES RELATED TO DRUG ABUSE

### AIDS

There were 13,015 cumulative AIDS cases in San Diego County through December 31, 2006, including 6,140 currently living with AIDS. The burden of injection drug use-related disease is substantially higher among women, with more than one-half of all cumulative AIDS cases attributed either directly or indirectly to injection drug use; 35 percent are attributed to injection drug use, and another 21 percent are attributed to sex with an injection drug user (IDU). In contrast, 7 percent of cases among men are attributed to injection drug use, and 11 percent of cases involve male IDUs who had sex with men (MSM). There are also racial and ethnic differences regarding IDU-associated AIDS cases. Thirty-five percent of AIDS cases diagnosed among White women between 2002 and 2006 were attributed to injection drug use, compared with 22

percent among Black women and 13 percent among Hispanic women. Among men, Blacks carried the highest burden of injection-related AIDS cases, with 25 percent attributing their infection to injection drug use or homosexual sex and injection drug use, compared with 20 percent among White men and 12 percent among Hispanic men.

## **HIV**

In 2006, the State of California transitioned to names-based reporting of HIV cases, consistent with Centers for Disease Control and Prevention (CDC) recommendations. Effective April 2006, the State stopped reporting updated statistical information on HIV cases reported before implementation of the names-based system. Accordingly, cumulative HIV case

counts now reflect unduplicated HIV case counts reported by name to the California Department of Health Services Office of AIDS beginning April 17, 2006. From April 17 through December 31, there were 1,311 HIV cases reported in San Diego County. Eleven percent of cases among males were attributed to injection drug use or male-to-male sex and injection drug use. Twenty-two percent of cases among females were attributed directly to injection drug use, and 7 percent were attributed to sex with an IDU.

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**Exhibit 1. San Diego County Population Demographics, by Percent: 2006**

Race/Ethnicity	2006 (N=3,066,820)
White	51.4
Black or African-American	5.3
Asian/Pacific Islander	10.2
American Indian	0.5
Other Race	3.5
Hispanic/Latino (of any race)	29.1
Median Age	34.3 years
Median Household Income (adjusted)	\$50,710

SOURCE San Diego Association of Governments Population and Housing Estimates

**Exhibit 2. Primary Drug Treatment Admissions in San Diego County: January–June 2001–2006**

Drug (Excludes Alcohol)	Jan–June 2001 (%)	Jan–June 2002 (%)	Jan–June 2003 (%)	Jan–June 2004 (%)	Jan–June 2005 (%)	Jan–June 2006 (%)	Percent Change 1H01–1H06
Cocaine	729 (9.5)	799 (8.9)	624 (8.1)	546 (8.7)	457 (8.2)	458 (8.2)	-37.2
Heroin	2,646 (34.4)	2,295 (25.7)	1,547 (20.0)	1,468 (23.4)	1,266 (22.8)	1,239 (22.3)	-53.2
Other Opiates	107 (1.4)	90 (1.0)	114 (1.5)	103 (1.6)	126 (2.3)	160 (2.9)	49.5
Marijuana/Hashish	1,558 (20.3)	1,876 (21.0)	1,830 (23.6)	1,268 (20.2)	856 (15.4)	925 (16.6)	-40.6
Methamphetamine	2,513 (32.7)	3,706 (41.5)	3,501 (45.2)	2,800 (44.6)	2,785 (50.2)	2,724 (49.0)	8.4
All Other Drugs	133 (1.7)	166 (1.9)	134 (1.7)	94 (1.5)	62 (1.1)	57 (0.9)	-57.1
Drug Total	7,686 (100.0)	8,932 (100.0)	7,750 (100.0)	6,279 (100.0)	5,552 (100.0)	5,563 (100.0)	0.0

SOURCE: California Alcohol and Drug Data System (CADDs) & California Outcomes Measurement System (CalOMS)



**Exhibit 3. Characteristics of Clients Admitted to Treatment, San Diego County: January–June 2006**

Characteristic	Cocaine (%)	Heroin (%)	Other opiates (%)	Marijuana/hashish (%)	Methamphetamine (%)	All other (%)	Total (%)
Total Admissions	458 (8.2)	1,239 (22.3)	160 (2.9)	925 (16.6)	2,724 (49.0)	57 (0.9)	5,563 (100.0)
Sex							
Male	294 (64.2)	869 (70.1)	103 (64.4)	659 (71.2)	1,481 (54.4)	818 (66.2)	4,224 (62.7)
Female	164 (35.8)	370 (29.9)	57 (35.6)	266 (28.8)	1,243 (45.6)	418 (33.8)	2,518 (37.4)
Race/Ethnicity							
White (non-Hispanic)	109 (23.8)	632 (51.0)	146 (91.3)	342 (37.0)	1,462 (53.7)	769 (62.2)	3,460 (51.3)
African-American	293 (64.0)	62 (5.0)	2 (1.3)	148 (16.0)	153 (5.6)	141 (11.4)	799 (11.9)
American Indian	3 (0.7)	29 (2.3)	0 (0.0)	12 (1.3)	41 (1.5)	36 (2.9)	121 (1.8)
Asian/Pacific Islander	5 (1.1)	18 (1.5)	0 (0.0)	32 (3.5)	149 (5.5)	31 (2.5)	235 (3.5)
Hispanic	44 (9.6)	480 (38.7)	10 (6.3)	375 (40.5)	876 (32.2)	250 (20.2)	2,035 (30.2)
Age Group							
17 and younger	15 (3.3)	2 (0.2)	0 (0.0)	427 (46.2)	105 (3.9)	76 (6.1)	625 (9.3)
18–25	28 (6.1)	201 (16.2)	46 (28.8)	234 (25.3)	667 (24.5)	139 (11.2)	1,315 (19.5)
26–35	71 (15.5)	299 (24.1)	66 (41.3)	141 (15.2)	832 (30.5)	248 (20.1)	1,657 (24.6)
36 and older	344 (75.1)	737 (59.5)	48 (30.0)	123 (13.3)	1,120 (41.1)	773 (62.5)	3,145 (46.6)

SOURCE: California Alcohol and Drug Data System (CADDs) and California Outcomes Measurement System (CalOMS)

**Exhibit 4. Route of Drug Administration for Clients Admitted to Treatment in San Diego County: January–June 2006**

Route	Cocaine (%)	Heroin (%)	Other Opiates (%)	Marijuana (%)	Methamphetamine (%)	All Other (%)	Total (%)
Oral	3 (0.7)	8 (0.7)	127 (79.4)	13 (1.4)	45 (1.7)	1,215 (98.3)	1,411 (20.9)
Smoking	389 (84.9)	121 (9.8)	3 (1.9)	909 (98.3)	2,015 (74.0)	21 (1.7)	3,458 (51.3)
Inhalation	56 (12.2)	50 (4.0)	13 (8.1)	3 (0.3)	284 (10.4)	1 (0.0)	407 (6.0)
Injection	10 (2.2)	1055 (85.2)	16 (10.0)	0 (0.0)	375 (13.8)	0 (0.0)	1,456 (21.6)
Unknown/ Other	0 (0.0)	5 (0.4)	1 (0.6)	0 (0.0)	4 (0.2)	0 (0.0)	10 (0.2)
Total	458 (6.8)	1,239 (18.4)	160 (2.4)	925 (13.7)	2,724 (40.4)	1,236 (18.3)	6,742 (100.0)

SOURCE: California Outcomes Measurement System (CalOMS)

**Exhibit 5. Percent Positive Tests for Illicit Drugs Among Adult and Juvenile Arrestees in San Diego County: 2001–2005**

Drug/Group	2001	2002	2003	2004	2005	Percent Change
Methamphetamine						
Male adults	32	34	38	42	44	38
Female adults	37	37	47	43	51	38
Juveniles	11	12	15	13	21	91
Cocaine						
Male adults	14	12	10	11	11	-21
Female adults	16	21	15	23	15	-6
Juveniles	--	--	--	6	6	-
Heroin <sup>1</sup>						
Male adults	8	5	6	5	5	-38
Female adults	9	6	9	7	9	0
Juveniles	--	--	--	1	2	-
Marijuana						
Male adults	36	37	39	38	34	-6
Female adults	28	33	29	28	31	11
Juveniles	45	46	49	42	44	-2

<sup>1</sup>While drug testing is done for the presence of opiates, the term heroin is used because the most commonly abused opiate is heroin.

SOURCE: SANDAG Substance Abuse Monitoring Program

**Exhibit 6. Number and Percentage of Selected Items Analyzed by Forensic Laboratories in San Diego County: 2006**

<b>Drug</b>	<b>Number</b>	<b>Percent</b>
Cocaine	2,892	14.3
Heroin	530	2.6
Cannabis	8,844	43.7
Methamphetamines	6,276	31.0
All Other Drugs	1,697	8.4
Total	20,240	100.0

SOURCE: NFLIS, DEA

**Exhibit 7: Retail Prices for Selected Drugs in San Diego County: 2006**

<b>Drug</b>	<b>Price</b>	<b>Unit and Type</b>
Cocaine	\$60-\$160	Gram
	\$30-\$100	One-quarter gram
	\$10-\$25	One-tenth gram
Heroin	\$50-\$100	Gram (black tar)
	\$20	One-quarter gram (black tar)
	\$80-\$100	Gram (powder)
Marijuana	\$80-\$100	Ounce
Methamphetamine	\$50-\$100	Gram
	\$20-\$25	One-quarter gram
	\$150-\$300	One-quarter ounce

SOURCE: San Diego/Imperial County Regional Narcotic Information Network

# Patterns and Trends of Drug Use in the San Francisco Bay Area

John A. Newmeyer, Ph.D.<sup>1</sup>

## ABSTRACT

*Indicators suggest a modest decline in cocaine abuse since 2003. Problem users—those admitted to treatment or emergency departments (EDs)—remain predominantly Black and smokers of ‘crack.’ About one-half of all ED cocaine patients in the 2006 DAWN Live! unweighted reports were older than 40. Heroin abuse is level after substantial declines from 2000 through 2004. Among ED patients in the unweighted DAWN Live! data in 2006, Whites predominated; the median age was older than 40. Injection was the preferred route of heroin use for well over 90 percent of patients for whom route of administration was reported. Heroin is cheaper than it was 5 years ago. There were about 11,100 heroin users in San Francisco County in 2006, about one-fifth fewer than in 2001. Local methamphetamine users remain predominantly male, overwhelmingly White, and of a median age well over 30. Injection is still the dominant route of methamphetamine use. Prevalence of methamphetamine use appears to have eased off after steep rises through 2004, especially among gay men. For bay area residents, recent use of marijuana is almost as common as that of tobacco. Marijuana was somewhat cheaper in 2006 than in 2004. The drug has recently become less commonly reported among treatment program admissions. Overall, marijuana use seems to have peaked in 2001, declined during 2002–2004, and then leveled off in the most recent 2 years. Use of club drugs and hallucinogens remains rare. The Consensus Group estimated that, in San Francisco in 2006, 13.5 percent of 7,100 heterosexual male IDUs, 10.5 percent of 4,000 female IDUs, and 42.0 percent of 5,200 MSM/IDUs were HIV-positive. The group also estimated very low annual HIV incidence rates for heterosexual men and women (0.5 percent each) but higher incidence rates for MSM/IDUs (2.6 percent).*

## INTRODUCTION

### Area Description

The San Francisco Bay area consists of the following counties: San Francisco, San Mateo, Alameda, Contra

Costa, and Marin. The population was 4,337,000 as of July 2006, an increase of 6 percent since the 2000 census. The population is among the most multicultural of any urban region of the United States, with a particularly large, varied, and long-established Asian-American representation (19 percent of the total). The Hispanic population represents a wide cross-section of persons of Latin American origin. Blacks account for some 11 percent of bay area residents. San Francisco County has long been a mecca for gays: gay men constitute more than 15 percent of the adult male population.

The bay area experienced its initial growth during the California gold rush. In the succeeding century and a half, it expanded greatly as a center for shipping, manufacturing, finance, and tourism. In recent years, Pacific Basin trade and high technology, such as software and biotechnology development, have led to further expansion and to a highly diversified economy. The bay area is thus like Boston and Seattle in its strong presence of “knowledge-based” companies.

From 1994 to 2001, there was a steep rise in the cost of rental housing in the bay area, especially in San Francisco, Marin, and San Mateo Counties. This caused significant out-migration of lower income people, which may have exerted downward pressure on local drug-use prevalence. Unemployment rose from 2 to 6 percent during the “dot-com bust” of 2001–2003, and rental rates declined significantly during those years. From 2003 through mid-2007, the economy of the bay area gradually recovered: unemployment is down almost to 4 percent and housing costs, both for renters and buyers, are higher than ever.

### Data Sources

The sources of data for the drug abuse indicators within this report are described below:

- **Treatment admissions data** were available for all five bay area counties for 2000 through the first half of 2005. These data were compiled by the California Department of Alcohol and Drug Programs (DADP). In addition, admissions data for San Francisco County were provided by the San Francisco Department of Public Health for fiscal years (FYs) 2002 through 2006 and also for the first half of FY 2007.
- **Emergency department (ED) data** are from the Drug Abuse Warning Network (DAWN), Substance Abuse and Mental Health Services Administration (SAMHSA). Data for 2006 are for three counties of the San Francisco Bay area

<sup>1</sup>The author is affiliated with Haight-Ashbury Free Clinics, Inc., in San Francisco, California.

(San Francisco, Marin, and San Mateo). Seventeen of the 18 eligible hospitals in the area are in the DAWN sample, with 19 emergency departments. In 2006, between 7 and 12 EDs reported data each month, with most reporting data that were basically complete (90 percent or greater; see exhibit 1). Unweighted DAWN *Live!* data for calendar 2006 were accessed on May 25, 2007, to examine the sociodemographic characteristics of this preliminary and partial 2006 caseload. DAWN *Live!* cannot be compared with weighted DAWN data. Only weighted ED data released by SAMHSA can be used for trend analysis. The data represent drug reports involved in drug-related visits for illicit drugs (derived from the category of “major substances of abuse,” excluding alcohol) and the nonmedical use of selected prescription drugs (derived from the category of “other substances”). Drug reports exceed the number of ED visits because a patient may report use of multiple drugs (up to six drugs plus alcohol). A full description of the DAWN system can be found at the DAWN Web site <<http://dawninfo.samhsa.gov>>.

- **Medical examiner (ME) data on drug mentions** in decedents were provided by the San Francisco County Medical Examiner for that county for FYs 2000 through 2004.
- **Reports of arrests for drug law violations and counts of reported burglaries** were provided by the San Francisco Police Department (SFPD) for 2001 through 2006.
- **Price and purity data** came from the Drug Enforcement Administration (DEA), Domestic Monitor Program (DMP), and referenced heroin “buys,” mostly made in San Francisco County. Data for 2005 were compared with those for 1994–2004. Data on trafficking in heroin and other drugs were available from the National Drug Intelligence Center and pertained to wholesale, midlevel, and retail prices prevailing in San Francisco in December 2006.
- **Population sizes and human immunodeficiency virus (HIV) prevalence and incidence rates** were estimated by the “Consensus Group,” a large body of local experts. These estimates were for San Francisco County for 2006.
- **Acquired immunodeficiency syndrome (AIDS) surveillance data** were provided by the San Francisco Department of Public Health (SFDPH) and covered the period through March 31, 2007.
- **Hepatitis B (HBV) data** for San Francisco County were available for 1996 through 2005 and were provided by the SFDPH.
- **Hepatitis C (HBC) virus prevalence** estimates were provided by the Urban Health Study for 2003.
- **The National Survey on Drug Use and Health (NSDUH)** provided two reports: use of drug, alcohol, and tobacco by substate areas for 2002–2004 and use in the 15 largest metropolitan statistical areas for 2002–2005.
- **Surveys of gay and bisexual men** in San Francisco were conducted in 2003 and 2005 by the Stop AIDS Project.

#### DRUG ABUSE PATTERNS AND TRENDS

##### Cocaine/Crack

The indicators suggest a modest decline in cocaine use since 2003. Problem cocaine/crack users—those admitted to treatment or emergency departments—remain predominantly Black and smokers of “crack.” About one-half of all problem cocaine/crack users are older than 40.

In the five-county bay area, the overall number of admissions for drug treatment, other than alcohol, fluctuated within a fairly narrow range between 2001 and the first half of 2005 (exhibit 2). No clear trend is evident. The proportion of cocaine/crack admissions among these admissions rose from 24 percent to 26 percent between 2001 and 2005, although the actual number declined from 7,428 to a projected 6,942. Among these admissions, more than 87 percent cited smoking, presumably of crack, as the preferred route of use. The proportion of cocaine/crack admissions among all drug admissions in San Francisco County was 27 percent in FY 2003, 29 percent in FY 2006, and 26 percent in the first half of 2007 (exhibit 3). Of the most recent admissions, 71 percent reported smoking, and 25 percent reported injecting as the preferred route of cocaine use. Blacks remained predominant among primary cocaine admissions (67 percent, in a city whose Black population is now well under 10 percent of the total.)

The unweighted DAWN *Live!* cocaine reports in 2006 show that 48 percent were Black and 69 percent were male. There were more than twice as many patients older than 45 (37 percent) as younger than 30 (18 percent). For those whose preferred route of use was known, about 58 percent smoked the drug.

Cocaine-related deaths in San Francisco County declined by 32 percent (95 to 65) between FY 2000 and FY 2004. In FY 2004, these decedents were 69 percent male, 60 percent White, and 29 percent Black; the mean age was 42.

There were about 3,800 arrests for cocaine-related charges in San Francisco in 2004 and about 3,170 in 2005.

Prices of cocaine were about the same as in 2002, according to the NDIC. Local prices for powder cocaine in 2006 were \$14,000–\$18,000 per kilogram, \$500–\$550 per ounce, and \$50–\$60 per gram. Crack prices were \$150 per quarter-ounce and \$20 per “rock.”

### Heroin

Overall, the indicators suggest that heroin use is level after declines during 2000 through 2004. Among heroin problem users—those in treatment or in EDs—Whites predominated, the median age was over 40, and injection was the preferred route of use for well over 90 percent. Heroin was cheaper than 5 years ago. There were about 11,100 heterosexual heroin injectors in San Francisco County in 2006, about one-fifth fewer than in 2001.

The number of treatment admissions for primary heroin problems in the five-county bay area fell by nearly one-half between 2000 and the first half of 2005 (exhibit 2). That decline may have slowed in the last 2 years. As a proportion of all primary drug admissions excluding alcohol, heroin constituted 64 percent in 1994, 55 percent in 1999, and only 33 percent in early 2005. Injection remained by far the predominant route of use: 80 percent reported that route, compared with 14 percent who reported inhalation as the preferred route. San Francisco County heroin admissions, as a proportion of all drug admissions, rose from 44 percent in FY 2003 to 48 percent in the first half of FY 2007 (exhibit 3). Fully 93 percent of the most recent San Francisco admissions cited injection as their preferred route of use.

Unweighted DAWN *Live!* data for 2006 showed heroin-related visits were made by patients who were 69 percent male and 56 percent White. Thirty-seven percent were older than 45, and only 19 percent were younger than 30. For 94 percent, injection was the preferred route of use among those for whom data were available.

Between FY 2000 and FY 2004 in San Francisco County, heroin-related deaths declined by 53 percent (122 to 57). In FY 2004, decedents were 74 percent

male, 70 percent White, and 18 percent Black; the mean age was 43.

Arrests in San Francisco for narcotics-related offenses reached a peak of 6,136 in 2002. This was followed by a steep decline, such that the count in 2005 was 66 percent below that of 2002.

Because many heroin users support their habits through property crimes, reported burglaries may be a good indicator of use. The number of such reports in San Francisco fell by 49 percent between 1993 and 1999 (11,164 to 5,704). After that low point, the count rose to 6,706 in 2001, fell to 5,507 in 2003, and rose again to nearly the 2001 level in 2004. The counts for 2005 and 2006 were 7,002 and 6,919, respectively, the highest in nearly a decade. These changes may reflect the price of heroin more than the prevalence of users; it is noteworthy that reported burglaries and the local price of heroin are both barely one-quarter of what they were 20 years ago.

The DMP tested heroin bought on the street in the San Francisco area during 2005. The 17 samples from that year, all Mexican “brown,” averaged 12 percent pure and \$0.89 per pure milligram (exhibit 4). This represents a modest downward trend from 2002–2004.

Prices of Mexican black tar heroin were \$7,000 per kilogram and from \$190 to \$400 per ounce in 2006. Gram prices ranged from \$35 to \$60. These prices represented significant decreases: in 2002, prices were \$16,000–\$30,000 per kilogram, \$450–\$850 per ounce, and around \$60 per gram.

The Consensus Group estimated a resident population of 11,100 heterosexual injection drug users (IDUs) in San Francisco in 2006, down from an estimated 13,850 in 2001. The present author reckons that more than 90 percent of injectors are primary heroin users, which suggests a heroin user prevalence of about 11,100.

### Other Opiates/Narcotics

NSDUH data showed that the bay area was equal to the Nation as a whole in recent “nonmedical use of pain relievers” in 2002–2004: roughly 4.7 percent reported such usage. However, usage in nonmetropolitan areas of northern California was significantly higher, at around 6 or 7 percent.

### Methamphetamine/Amphetamines

Indicators suggest that local methamphetamine users remain predominantly male, overwhelmingly White,

and of a median age well over 30. Injection is still the dominant route of use, at least among those in treatment or at EDs. Prevalence of use appears to have eased off after steep rises until 2004 or 2005, especially among gay men.

The number of treatment admissions for primary “speed” (amphetamine) problems in the five-county bay area increased steadily between 2000 and the first half of 2005 (exhibit 2). The increase may have slowed somewhat during 2004–2005. The proportion of primary speed users among all nonalcohol drug admissions rose from 14 percent in 2000 to 26 percent in early 2005. The percentage of all drug treatment admissions that were for primary amphetamine use in San Francisco County rose for several years, from 12.0 percent in FY 2002 to 14.5 percent in FY 2004 and to 16.0 percent in FY 2006, but then declined to 13.1 percent in the first half of FY 2007 (exhibit 3).

Unweighted DAWN ED methamphetamine reports for 2006 showed these patients were 80 percent male and 63 percent White; 69 percent were older than 30. For those whose route of use was known, 69 percent were injectors and only 25 percent were smokers.

In San Francisco County, amphetamine-related deaths rose from 15 to 28 between FY 2000 and FY 2003, but then fell back to 21 in FY 2004. In FY 2004, decedents were 81 percent male and 86 percent White; the mean age was 43.

In San Francisco in 2006, pounds of “ice” methamphetamine sold in the \$8,000–\$12,000 range, ounces sold in the \$600–\$1,200 range, and “sixteenths” sold for \$60 to \$80. These prices were lower than in 2004, but not as low as they were in 1999.

The Consensus Group arrived at a “best estimate” of 5,234 males who were both injection drug users (IDUs) and had sex with males (MSM/IDU) and resided in San Francisco in 2006. For at least 90 percent of this population, “speed” was the preferred drug.

Proposition 36, passed by California voters in 2000, has had a major impact on the prison population of the State. That population had been projected to reach 180,000 by 2005, but because so many drug-law offenders have instead been diverted to treatment, the 2005 prison population was only 164,000. A study by researchers at the University of California at Los

Angeles estimates that taxpayers saved \$2.50 for each \$1.00 invested in Proposition 36; extrapolating from these data and including the obviated cost of a now unneeded prison, the Drug Policy Alliance

estimates total taxpayer savings at \$1.7 billion. Methamphetamine was the preferred drug for approximately one-half of all drug-law offenders involved with Proposition 36 diversion.

The Stop AIDS Project, in surveying gay and bisexual men as to use of crystal methamphetamine in the prior 6 months, found that only 10 percent admitted to such use in 2005, compared with 18 percent in 2003. Recent use of “speed” is frequent among gay/bisexual men in treatment for HIV disease: some 40 percent report such use in the prior 3 months.

## Marijuana

Among bay area residents, recent use of marijuana is almost as common as that of tobacco. Marijuana was somewhat cheaper in 2006 than in 2004. The drug has recently become less commonly reported among treatment program admissions. Overall, marijuana use seems to have peaked in 2001, declined during 2002–2004, and then leveled off in the most recent 2 years.

The percentage of all drug treatment admissions that were for primary marijuana use in San Francisco County fell from 13.2 percent in FY 2003 to 8.9 percent in the first half of FY 2007 (exhibit 3).

Arrests for marijuana-related offenses in San Francisco County numbered 1,736 in 2000, then ranged between 1,300 and 1,450 in the next 3 years before returning to the 2000 level in 2004. Only 1,141 arrests were reported in 2005, a 35 percent drop from 2004. The arrest count in 2006 dropped slightly more to 1,080.

According to the NDIC in 2006, pound prices of sinsemilla marijuana were \$3,200–\$4,200, and domestic prices were \$2,700–\$3,500. This compares with 2004 prices of \$3,000–\$6,000 for sinsemilla and \$4,000–\$5,000 for domestic marijuana. A large and increasing quantity of marijuana is sold legally from medical marijuana outlets to certified purchasers. These outlets offer a great variety of products—smokable and edible, mild or strong, local or imported—with the retail price evidently closely correlated with THC content.

An NSDUH study found that among the 15 largest MSAs in the Nation, the San Francisco/Oakland MSA had the highest recent use of illicit drugs (12.7

percent) among adults during 2002–2005. That study also found that the San Francisco/Oakland MSA had the *lowest* recent use of tobacco (17.9 percent) among the 15 MSAs. The likeliest explanation is that the bay

area has more older adults using illicit drugs, especially marijuana, than most U.S. cities; fully 84 percent of FY 2005 treatment admissions in San Francisco County were 26 or older. A somewhat earlier (2002–2004) compendium of NSDUH data found that recent use of any illicit drug in the five bay area counties was significantly higher (10.9 percent) than for California as a whole (9.1 percent) or the Nation as a whole (8.1 percent). Data for any illicit drug use *but* marijuana, however, showed the bay area (3.9 percent) hardly differed from California (3.8 percent) or the Nation (3.6 percent). Thus, marijuana use evidently “drives” much or all of the bay area’s excess of illicit drug use patterns as compared with the rest of the State or the Nation.

The NSDUH study also found that reported illicit drug use among nonmetropolitan areas of Northern California was even greater than that in the bay area; this suggests that an out-migration of substance use patterns may have occurred. Marijuana use was “driving” most, but not all, of this excess.

### Club Drugs

The NDIC reports that in 2006, street prices of MDMA (methylenedioxyamphetamine) were \$20 per tablet, and wholesale prices were \$3.50 per tablet.

### Phencyclidine (PCP)

During the first half of FY 2006, only 29 (0.5 percent) of all drug admissions in San Francisco were for primary abuse of hallucinogens, including PCP and lysergic acid diethylamide (LSD). Of the PCP ED reports in *DAWN Live!* in 2006, one-half were Hispanic and 70 percent were age 35 or older.

## INFECTIOUS DISEASES RELATED TO DRUG ABUSE

### AIDS

San Francisco County had a cumulative total of 27,080 AIDS cases of residents through March 2007. Of these cases, 2,014 (7.4 percent) were heterosexual IDUs. Another 3,807 AIDS cases (14.1 percent) were men who had sex with other men and also injected drugs (MSM/IDUs). There were just 44 reported cases among lesbian IDUs, barely one-hundredth the number among MSM/IDUs. A total of 360 AIDS cases have been reported for transgender San Franciscans.

Since March 31, 2006, cumulative AIDS cases have increased by 1.7 percent, heterosexual IDU cases by 2.3 percent, and MSM/IDU cases by 3.1 percent,

transgender cases by 6.8 percent. However, MSM (non-IDU) cases increased by only 1.1 percent. Except for transgenders, these rates of increase were all less than in the previous year. Nonetheless, the MSM/IDU population clearly remains a “hot spot” for AIDS incidence.

Among San Franciscans diagnosed in 2003 through 2007, heterosexual IDUs accounted for 13 percent, as compared with 10 percent among those diagnosed in 1994–1996, 14 percent of those diagnosed in 1997–1999, and 14 percent of those diagnosed in 2000–2002. The overall case numbers in 2003–2007 were far lower than those of the late 1980s and early 1990s. The AIDS epidemic, therefore, appears to be easing among heterosexual IDUs, whose proportion among the cumulative caseload will probably not increase significantly from the current level of 7.4 percent.

The demography of the cumulative heterosexual IDU caseload with AIDS has changed very little in the past 16 years. This caseload is 67 percent male, 50 percent Black, 35 percent White, 11 percent Hispanic, and 2 percent Asian/Pacific Islander. By contrast, the gay/bisexual IDU caseload is 71.0 percent White, 16.0 percent Black, 10.0 percent Hispanic, and 1.6 percent Asian/Pacific Islander. The heterosexual IDU demography is like that of heroin users except for an overrepresentation of Blacks, while the gay male IDU demography is similar to that for male speed users.

The Consensus Group estimated that in San Francisco in 2006, 13.5 percent of 7,100 heterosexual male IDUs, 10.5 percent of 4,000 female IDUs, and 42.0 percent of 5,200 MSM-IDUs were HIV-positive. The Consensus Group also estimated very low annual HIV-incidence rates for heterosexual men and women (0.5 percent each) but higher incidence rates for MSM/IDUs (2.6 percent).

### Hepatitis B

From 1997 through 2001, reported cases of HBV in San Francisco County rarely deviated from a pace of a bit more than one per week. The pace dropped in 2002 and 2003 to about one every 10 days, then dropped further in 2004 and 2005 to about one every 14 days.

### Hepatitis C

UHS data from 2003 disclosed that fully two-thirds of all IDUs in the sample self-reported HCV seropositivity. UHS staff believe, on the basis of earlier HCV antibody testing, that true prevalence is between 90 and 95 percent. This has enormous



implications for the long-term health of San Francisco's IDU population—not only the current user population, but also the possibly much larger number with past (or future) injection drug use.

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### Exhibit 1. DAWN ED Sample and Reporting Information in the San Francisco Metropolitan Area: 2006<sup>1</sup>

Total Eligible Hospitals	No. of Hospitals in DAWN Sample	Total EDs in DAWN Sample	No. of EDs Reporting per Month: Completeness of Data (%)			No. of EDs Not Reporting
			90–100%	50–89%	< 50%	
18	17	19	7–11	0–1	0–3	7–11

<sup>1</sup>Represents short-term, general, non-Federal hospitals with 24-hour emergency departments based on the American Hospital Association Annual Survey. Some hospitals have more than one ED.

SOURCE: DAWN, OAS, SAMHSA

### Exhibit 2. Admissions to Drug Treatment Programs in the 5-County San Francisco Bay Area, by Primary Drug of Abuse (Excluding Alcohol Admissions): 2000–2005

Drug	2000	2001	2002	2003	2004	2005 <sup>1</sup>
Cocaine	7,718	7,428	6,746	7,114	6,814	6,942
Heroin	17,416	14,673	11,461	9,898	9,089	8,872
Amphetamine <sup>2</sup>	4,469	5,073	5,636	6,438	6,701	6,822
All Drugs	32,034	30,920	28,329	27,626	26,381	26,620

<sup>1</sup>Data for 2005 are projected from the first half of the year.

<sup>2</sup>Includes methamphetamine.

SOURCE: California Department of Alcohol and Drug Programs (DADP)

### Exhibit 3. Admissions to Drug Treatment Programs in San Francisco County, by Primary Drug of Abuse (Excluding Alcohol Admissions): FY 2002–FY2007

Drug	FY2002	FY2003	FY2004	FY2005	FY 2006	FY 2007 <sup>1</sup>
Cocaine	2,440	2,274	2,527	2,350	2,314	1,417
Heroin	4,002	3,700	3,646	3,589	3,309	2,637
Amphetamine <sup>2</sup>	1,053	1,144	1,235	1,242	1,260	720
Marijuana	1,067	1,110	950	822	843	493
All Drugs	8,764	8,406	8,520	8,759	7,871	5,509

<sup>1</sup>Data for FY 2007 are July–December only.

<sup>2</sup>Includes methamphetamine.

SOURCE: San Francisco Department of Public Health

**Exhibit 4. Price and Purity of Heroin Samples: 1994–2005**

Year	Price per Milligram Pure	Purity (Percent)
1994	\$0.95	29
1995	\$0.83	35
1996	\$0.83	24
1997	\$0.63	26
1998	\$0.33	26
1999	\$0.47	20

Year	Price per Milligram Pure	Purity (Percent)
2000	\$0.70	15
2001	\$1.40	10
2002	\$0.99	12
2003	\$0.98	11
2004	\$0.98	11
2005	\$0.89	12

SOURCE: DMP, DEA

# Recent Drug Abuse Trends in the Seattle-King County Area

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## ABSTRACT

*Cocaine continues to be associated with substantial morbidity and mortality. The most common drug in emergency department reports is cocaine, and cocaine-involved deaths are at their highest level in at least a decade—111 drug-caused deaths involved cocaine and 43 of these deaths had no other drug detected. Prescription-type opiate-involved drug-caused deaths continue to increase, totaling 148, with nearly 90 percent of these deaths involving multiple drugs. Treatment admissions with prescription-type opiates as the primary drug continue to increase. Treatment admissions and drug overdoses involving heroin dropped slightly in 2006, with treatment admissions second only to cocaine among the illegal drugs and fatalities less prevalent than cocaine or prescription-type opiates. Methamphetamine indicators appear to be leveling off at moderate levels in King County, with about 12 percent of adults entering drug treatment indicating methamphetamine as their primary drug, 18 deaths related to the drug, and fewer ED reports than the other major drugs of abuse. Manufacturing of methamphetamine continues its rapid descent throughout Washington State. MDMA use continues at modest levels, with some morbidity and mortality. However, seizures of MDMA entering the United States via Washington are at high levels; 394 pieces of evidence submitted by local law enforcement throughout the State tested positive for MDMA, more than double the number from 2005. Marijuana use continues at high levels. Research conducted by the county health department indicates a decrease in the prevalence of hepatitis B and C and a continued low prevalence of HIV among 18–20-year-old Seattle-area injection drug users.*

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## INTRODUCTION

### Area Description

Located on Puget Sound in western Washington, King County spans 2,126 square miles, of which the city of Seattle occupies 84 square miles. The combined ports of Seattle and nearby Tacoma make Puget Sound the second largest combined cargo loading center in the United States. Seattle-Tacoma International Airport, located in King County, is the largest airport in the Pacific Northwest. The Interstate 5 corridor runs from Tijuana, Mexico, in the south, passes through King County, and continues northward to Canada. Interstate 90's western terminus is in Seattle; it runs east over the Cascade Mountain range, through Spokane, and across the United States to Boston.

The estimated 2006 population of King County is 1,826,732. King County's population was the 12th largest in the United States in 2000. Of Washington's 6.4 million residents, 29 percent live in King County. The city of Seattle's population was 569,101 as of 2003; the suburban population of King County is growing at a faster rate than Seattle itself.

The county's population is 76.2 percent White, 12.9 percent Asian/Pacific Islander, 6.7 percent Hispanic, 5.9 percent African-American, 1.0 percent Native American or Alaska Native, and 0.6 percent Native Hawaiian and Other Pacific Islander. Those reporting two or more races constitute 3.4 percent of the population. Income statistics show that 10 percent of persons in the county live below the Federal poverty level, lower than the State average of 11.6 percent.

### Data Sources

Information for this report was obtained from the sources described below:

- **Treatment data** were extracted from the Washington State Department of Social and Health Services, Division of Alcohol and Substance Abuse's Treatment and Assessment Report Generation Tool (TARGET) via the Treatment Analyzer system. TARGET is the department's statewide alcohol/drug treatment activity database system. Data were compiled for King County residents from January 1, 1999, through December 31, 2006. Data are included for all treatment admissions that had any public funding. Department of Corrections (DOC) and private pay clients (at methadone treatment programs) are also included. Small numbers are suppressed for youth treatment admissions.

- **Emergency department (ED) drug data** are from two sources. One is the Drug Abuse Warning Network (DAWN) *Live!* system administered by the Office of Applied Studies (OAS), Substance Abuse and Mental Health Services Administration (SAMHSA). Preliminary, unweighted data for 2006 are presented, based on an update accessed on March 13, 2007. Eligible hospitals in the area totaled 23; hospitals in the DAWN sample totaled 23. A total of 25 emergency departments have been selected for inclusion in the sample (some hospitals have more than 1 ED). During 2006, between 8 and 12 hospitals reported data each month. Data were incomplete, with less than 50 percent complete data for 0–3 of these hospitals in each month (see exhibit 9). These data are preliminary, meaning that they may change. Data represent drug reports, are unweighted, and are not estimates for the reporting area. Data are utilized for descriptive purposes only. Available data are for King and neighboring Snohomish Counties combined; Pierce County is part of the statistical sample, but no EDs in Pierce were reporting during 2006. The most relevant case type presented here is the “other” case type, which includes “all ED visits related to recreational use, drug abuse, drug dependence, withdrawal, and any misuse” not classified in other categories, such as overmedication and seeking detox/treatment. For the sake of clarity, “other” will be referred to as “drug abuse/other” in this report.

The second source of ED drug data is the Washington State Screening, Brief Intervention and Treatment Project (WASBIRT) for October 2005 through September 2006. Data presented here were from Harborview Medical Center, which is immediately adjacent to downtown Seattle; it is the major trauma center for the Pacific Northwest and where drug overdoses for most of Seattle are brought in by medics. It serves primarily a low-income population. WASBIRT data were also collected in five other EDs throughout the State (data not shown). The numbers shown are among those screened at the ED who presented for any reason and who agreed to be interviewed. The source of these data is the following: S. Estee, L. He, S. Yang, J. Doane, N. Ellsworth, and T. Carter. "Substance Use Patterns, All WASBIRT Sites, October 2005 - September 2006" in Stephen O'Neil and Sharon Estee, *Washington State Screening, Brief Intervention, Referral and Treatment Project: Preliminary Results*, Washington State Department of Social and Health Services, Division of

Alcohol and Substance Abuse and Research and Data Analysis Division, May 2007.

- **Drug-related mortality data** were provided by the King County Medical Examiner (ME). Data for 2006 are preliminary. The data include deaths directly caused by licit or illicit drug overdose and exclude deaths caused by antidepressants and other nonabusable drugs in isolation. Totals may differ slightly from drug death reports published by the King County ME's office, which include fatal poisonings. Because more than one drug is often identified per individual drug overdose death, the total number of drugs identified exceeds the number of actual deaths.
- **Drug-related Help Line data** are from the Washington State Alcohol/Drug Help Line (ADHL), which provides confidential 24-hour telephone-based treatment referral and assistance for Washington State. Data are presented for 2001 to 2006 for calls originating within King County. Data presented are for drugs mentioned. A caller may refer to multiple drugs; therefore, there are more drug mentions than there are calls. The data exclude information on alcohol and nicotine, which account for more than one-half of the calls. The youth category includes persons 19 and younger. Proportions are shown for 2004 through 2006; these drug categories remained consistent for these years. The relatively large proportion of “unknown” drug types may obscure some trends.
- **Washington State Healthy Youth Survey** was administered in October 2006 to students in grades 6, 8, 10, and 12, with estimates available at the State level as well as for King County. The descriptive statistics presented are based on final, cleaned data. The survey is a collaborative effort of the Office of the Superintendent of Public Instruction, the Department of Health, the Department of Social and Health Services's Division of Alcohol and Substance Abuse, the Community Trade and Economic Development, and the Family Policy Council.
- **Forensic drug analysis data** are from the Washington State Patrol's Toxicology Laboratories solid state chemistry unit and represent drug test results on local law enforcement seizures. Data are presented for all of Washington State for calendar years 2002 through 2006.
- **Law enforcement data** were provided by the Northwest High Intensity Drug Trafficking Area (HIDTA) officials and include the Federal-wide

Drug Seizure System (FDSS), which tallies all Federal law enforcement drug seizures in the State of Washington (e.g., Drug Enforcement Administration and U.S. Customs) for calendar years 2001–2006 as well as the NW HIDTA’s survey of local law enforcement seizures.

- **Methamphetamine production data** are from the Washington State Department of Ecology (DOE), which is mandated to respond to and document all “Methamphetamine Incidents,” including operating labs, dump sites, and other sites associated with the manufacture of methamphetamine.
- **Data on infectious diseases related to drug use and injection drug use**, including the human immunodeficiency virus (HIV), acquired immunodeficiency syndrome (AIDS), and hepatitis, were provided by Public Health—Seattle & King County (PHSKC). Data on HIV cases (including exposure related to injection drug use) in Seattle-King County (2001 through 2006) were obtained from the “HIV/AIDS Epidemiology Report.” Additional information on infectious disease trends is utilized from a recently published article: R.D. Burt, H. Hagan, R.S. Garfein, K. Sabin, C. Weinbaum, and H. Thiede, “Trends in Hepatitis B Virus, Hepatitis C Virus, and Human Immunodeficiency Virus Prevalence, Risk Behaviors, and Preventive Measures among Seattle Injection Drug Users Aged 18-30 Years, 1994–2004.” *Journal of Urban Health*, May 2007;84:436–54.
- **Findings of a Centers for Disease Control and Prevention tuberculosis outbreak investigation**, *Tuberculosis outbreak among people using methamphetamines in Snohomish County, Washington, 2005–2006* were utilized; these data were originally presented by Eric Pevzner, with the CDC’s Epidemic Intelligence Service, at the American Public Health Association Annual Meeting November 7, 2006.
- **Key informant data** were obtained from discussions with treatment center staff, street outreach workers, and drug users.

#### DRUG ABUSE PATTERNS AND TRENDS

##### Cocaine/Crack

Drug-caused deaths involving cocaine totaled 111 in 2006, the highest number and rate in at least the past decade (exhibits 1 and 2). Of particular note, 43 of these deaths involved only cocaine, of which 30 were

African-American; most were older than 50 and most were male. The reason for this substantial increase in cocaine-only deaths is unknown, though it may be in part related to an aging cohort of users for whom the cumulative physiological effects of cocaine are taking their toll. The impression of the medical examiner is that most of these deaths involved crack cocaine. Polydrug deaths involving cocaine totaled 68 in 2006, similar to recent years and somewhat higher than opiate/heroin, alcohol, and benzo-diazepine-involved deaths.

Drug treatment admissions for youth with cocaine as primary drug remained low and steady (exhibit 4). Adult admissions for cocaine totaled 1,909 in 2006, similar to 2005, but represented a substantial increase from prior years (exhibit 5). For adults, one in four calls to the Help Line in 2006 were related to cocaine (exhibit 6), a constant level in recent years; cocaine was the most common illegal or prescription drug mentioned. About one in eight youth-related calls to the Help Line were for cocaine over the prior 3 years (exhibit 7).

Both emergency department data sources indicate that cocaine is a major drug reported by patients. WASBIRT data for all types of ED visits screened at Seattle’s Harborview Medical Center indicate that cocaine is the second most common drug reported after marijuana (exhibit 8). Relative to five other EDs in the WASBIRT project across the State, Harborview had by far the highest proportion of cocaine cases, 25 percent, out of all intakes conducted. DAWN *Live!* data indicate that cocaine is the most common drug associated with drug-related ED visits, with unweighted 2006 numbers totaling 5,080 for King and Snohomish County EDs in the sample (exhibit 10).

Cocaine seizures by local and Federal law enforcement totaled 1,577 kilograms in 2006, up from recent years (exhibits 11 and 12). Much of the cocaine seized by Federal law enforcement is at the Canadian border, where cocaine from Central America is smuggled into Canada in cars and trucks. Local law enforcement evidence tested by the State Toxicology Lab totaled nearly 4,000 positive submissions, similar to recent years and second only to methamphetamine (exhibit 13). In 2006, as in past years, the Seattle area has had a higher proportion of cocaine-positive submissions than the rest of the State (data not shown).

##### Heroin

Drug-caused deaths in which heroin was definitely involved totaled 56 in 2006 (data not shown).

Beginning in mid-2005, the King County Medical Examiner's office began regular coding of a "heroin-related" variable. The classification of heroin-involved deaths is complicated by the fact that the definitive metabolite of heroin (6-monoacetylmorphine) is present in only a minority of cases in which heroin is ingested. Further complicating matters, morphine is the major metabolite of heroin and is routinely present in heroin-involved cases; however, the source of morphine could also be a prescription form of morphine. Prescriptions for morphine increased 223 percent in Washington State from 1997 to 2005 according to the DEA ARCOS system. Data presented in exhibits 1 and 2 are for "opiate," which includes references to opiate, morphine, and/or heroin. In the late 1990s, this opiate category was a reasonable proxy for heroin; however, given the increase in morphine prescribing and prescription-type opiate misuse, it is clear that this category somewhat overrepresents heroin-likely cases in recent years. Despite changes over time, it is clear that heroin-involved drug-caused deaths have declined from their peak in 1998, but they remain an ongoing issue (exhibits 1 and 2). The majority of drug-caused deaths involving heroin continue to be polydrug.

The number of adult drug treatment admissions to all modalities of care for which heroin was the primary drug totaled 1,589 in 2006, a drop from the 2 most recent years (exhibit 5). The proportion of publicly funded admissions to opiate treatment programs (using opiate replacement medications) for heroin as the primary drug decreased from 95 to 80 percent from 1999 to 2006, while the change among private pay clients was from 94 to 51 percent (number of admissions shown in exhibit 14). A greater proportional decrease in heroin primary admissions was seen outside of King County among public pay clients. Youth treatment admissions rarely involve heroin; a total of 71 were admitted to all treatment modalities from 1999 to 2006, with no discernable trends and data suppressed due to small numbers.

Adult Help Line calls for heroin totaled 594 in 2006, higher than in 2005 and similar to earlier years (exhibit 6). Heroin was infrequently mentioned for youth-related calls (exhibit 7).

ED visits for heroin are common. WASBIRT data for an ED adjacent to downtown Seattle indicate that heroin was mentioned in 422 intakes (exhibit 8), representing 9 percent of all intakes—more than double the proportion of any of the 5 other EDs from around the State. DAWN *Live!* data for heroin indicate 2,310 unweighted reports, second only to cocaine among the illegal drugs (exhibit 10).

Compared with the volume of other drugs seized by law enforcement, heroin remains at a relatively low level; 42 kilograms were seized by Federal and local law enforcement in 2006, a level generally similar to previous years (exhibits 11 and 12). Very little heroin is believed to move across the U.S.-Canada border, as opposed to drugs such as methylenedioxymethamphetamine (MDMA), cocaine, and marijuana. Testing of local law enforcement evidence indicated 868 positive samples, similar to prior years and well below that for methamphetamine, cocaine, and marijuana (exhibit 13).

The dominant source of heroin is reportedly Mexican, mostly black tar or brown powder. Injecting is by far the most common route of ingestion for the low-purity heroin available throughout Washington.

### Other Opiates/Prescription-Type Opiates

For the purposes of this report, "other opiates/prescription-type opiates" include codeine, fentanyl, hydrocodone (e.g., Vicodin), methadone, oxycodone (e.g., Percocet and OxyContin), propoxyphene (e.g., Darvon), sufentanil, tramadol (e.g., Ultram), hydromorphone (e.g., Dilaudid), meperidine (e.g., Demerol), pharmaceutical morphine, acetylmethadol, and the "narcotic analgesics/combinations" reported in the DAWN ED data. Codeine is excluded from medical examiner data reports because it is usually present as a result of heroin use and is rarely detected at fatal levels. Information on buprenorphine is virtually unavailable: almost all treatment admissions are privately funded, with no data available, and buprenorphine cannot be detected by the State Toxicology Laboratory. Source information for methadone, whether pain medication, opiate treatment program, or street/acquaintance, is rarely available.

Drug-caused deaths with prescription-type opiates detected continue to increase and totaled 148 overall, making them the most common substance type detected in 2006 (exhibits 1 and 2). There were 18 single-drug deaths, second only to cocaine, and 130 polydrug deaths, more than double the number for cocaine—the next most common drug detected. The 130 polydrug-caused deaths involving prescription-type opiates in 2006 exceeded the peak of 117 opiate/heroin polydrug deaths in 1998. An enhanced death investigation conducted in 2005 by the King County Medical Examiner's office of prescription opiate-involved drug-caused accidental deaths indicated a mixture of sources for prescription-type opiates, including prescriptions to the decedent, street, "unknown," and a small minority with methadone from opiate treatment programs. Virtually

all deaths involved multiple drugs, with an average of five CNS-active drugs present. The majority of cases had overt indications of a history of drug abuse, with about one in five involving both a pain condition and a history of drug abuse.

Youth treatment admissions for prescription-type opiates are infrequent, totaling 42 admissions in which these drugs were the primary and 69 where they were the secondary drug from 1999 to 2006 (data not shown). Adult treatment admissions for prescription-type opiates have increased substantially, with differential patterns by geography and funding source. Across all treatment modalities, prescription-type opiates as the primary drug increased from 87 to 452 admissions from 1999 to 2006 (exhibit 5). The majority of these admissions have been to opiate treatment programs (OTP) that use opiate substitute medications, primarily methadone. Publicly funded admissions to OTP increased from 24 to 177 from 1999 to 2006, while privately funded admissions increased from 16 to 149. Exhibit 14 shows the number of admissions by funding source to OTPs. The proportion of prescription-type opiates is much higher among privately funded than publicly funded admissions: 44 versus 18 percent, respectively, in 2006. OTP programs outside of King County report the same trend and even higher proportions of prescription-type opiates as primary (data not shown).

Help Line calls for prescription-type opiates (OxyContin and prescription-type [Rx] Pain Pills) accounted for a relatively high proportion of calls for both youth and adults, though categorization changes in recent years limit trend analysis. A total of 934 adult calls were in regard to prescription-type opiates in 2006, representing 16 percent of calls, similar to the proportion for methamphetamine (exhibit 6). The number and proportion of calls for prescription-type opiates have both increased consistently since 2004, the first full year in which these new categories were utilized. An additional 199 adult calls were regarding methadone in 2006, an unknown proportion of which were inquiries about obtaining methadone maintenance drug treatment or misuse of methadone. A similar pattern for prescription-type opiates is evident for youth-related calls, which totaled 72 in 2006, representing 12 percent of calls (exhibit 7).

DAWN *Live!* ED unweighted reports involving prescription-type opiates totaled 3,529 (exhibit 10), of which 54 percent were drug abuse/other case types, followed by adverse reaction, overmedication, seeking detox/treatment, and suicide attempts (exhibit 15). This compares to a total of 2,310 reports for heroin for all case types. WASBIRT intakes at

Harborview Medical Center in Seattle totaled 367 for prescription-type opiates, lower than the 422 for heroin (exhibit 8). The difference in ranking for heroin and prescription-type opiates in these two data sources is logical given the broader geographic region covered by DAWN *Live!* and the high level of heroin use near downtown Seattle and Harborview Medical Center, where these WASBIRT data were obtained.

According to the Healthy Youth Survey, 7.2 percent (+/- 2.0 percent) of 12th graders had used “a pain killer to get high, like Vicodin, OxyContin (sometimes called Oxy or OC) or Percocet (sometimes called Percs)” in the past 30 days (exhibit 16). This proportion was lower than the State estimate of 11.6 percent (+/- 2.0 percent). This was the first year this question was asked on the survey.

Local law enforcement agencies report that prescription-type opiate possession, diversion, and distribution cases are at low levels, but that they are increasing staffing to investigate such cases. NW HIDTA’s 2006 Threat Assessment survey indicates that approximately four out of five law enforcement jurisdictions throughout Washington report that diverted pharmaceuticals are available at moderate to high levels and that a total of 15,253 dosage units were seized (historical data are unavailable). Testing of local law enforcement seizures for all of Washington indicates 440 submissions were positive for oxycodone in 2006, up from prior years (exhibit 13). In past years, hydrocodone cases exceeded oxycodone, with methadone and morphine positives each lower than for oxycodone (data not shown).

### **Stimulants Including Methamphetamine/Amphetamine**

Stimulants include a range of drugs, such as methamphetamine, which is used and abused primarily in its nonpharmaceutical form. Amphetamines are primarily prescription drugs: dextroamphetamine (e.g., Dexedrine) for weight control and dl amphetamine (e.g., Adderall) for Attention-Deficit/ Hyperactivity Disorder (ADD/ADHD). Another prescription medication for ADD/ADHD is methylphenidate (e.g., Ritalin). MDMA is a type of methylated amphetamine; however, its typical patterns of use led it to be included in the behaviorally based category of drugs discussed below as Club Drugs.

Methamphetamine drug-caused deaths totaled 18 in 2006, similar to the prior 2 years and a substantial increase from a decade ago (exhibits 1 and 2). Eight of these drug-caused deaths in 2006 were single drug,

a relatively high proportion compared with other substances.

Methamphetamine primary treatment admissions for youth appear to have declined in 2006 to 36, about one-half the number seen in recent years (exhibit 4). Adult treatment admissions totaled 1,304 in 2006, similar to the prior year but up substantially from earlier years (exhibit 5). Among the illegal drugs, methamphetamine admissions rank behind cocaine and heroin but above marijuana.

Methamphetamine incidents in King County, as reported to the State Department of Ecology, totaled 63 in 2006, one-half the number in the prior year and down from a peak of 271 in 2001 (exhibit 17). Pierce County, to the south of King County, also saw a decline, though it continues to have much higher numbers of methamphetamine incidents despite its smaller population. Overall, State numbers have declined continuously since 2001. Super labs are rare in Washington State, and local production overall is reportedly down. The supply of methamphetamine from Mexico is reportedly up in recent years, according to Federal law enforcement sources.

Methamphetamine continues to be commonly mentioned by adult callers to the Help Line, with about 16 percent of calls involving methamphetamine in recent years (exhibit 6). Methamphetamine constitutes a somewhat smaller proportion of youth calls—12 percent in 2006 (exhibit 7). Amphetamines are mentioned in less than 1 percent of youth and adult calls.

Seattle/Harborview ED data from WASBIRT show that 9 percent of intakes (exhibit 8) mentioned methamphetamine, similar to the rest of the State. The percentage of methamphetamine mentions is similar to that of heroin and much lower than that for cocaine. Unweighted DAWN *Live!* data indicate 1,388 reports of methamphetamine, lower than the 2,310 reports for heroin and much lower than the 5,080 reports for cocaine (exhibit 10).

A survey of 12th graders showed higher levels of use of Ritalin “without a doctor’s order” at 4.1 percent ( $\pm 1.4$  percent), than use of methamphetamine 1.9 percent ( $\pm 1.0$  percent) in the past 30 days (exhibit 16). Both estimates were similar to the State average.

Methamphetamine seizures by local and Federal law enforcement totaled 82 kilograms, down from previous years (exhibits 11 and 12). The number of submissions testing positive for methamphetamine totaled 8,421 in 2006, up from recent years; methamphetamine was the most common drug

detected statewide (exhibit 13). The proportion of submissions testing positive for methamphetamine has been lower in the Seattle-area laboratory compared with the rest of the State for the past 5 years (data not shown).

## Marijuana

Youth treatment admissions for marijuana continued to decline in 2006 (exhibit 4), though marijuana remained the most prevalent primary drug of abuse among youth, with 707 admissions (61 percent). Marijuana has consistently been the most common secondary drug, with about one in five youth mentioning marijuana. Adult primary marijuana admissions were steady the prior 3 years, at about 11 percent, though the number of admissions were nearly double the level in 1999 (exhibit 5). Adults have consistently mentioned marijuana as their secondary drug about 20 percent of the time.

Fifteen percent of adult Help Line calls involved marijuana in 2006, similar to prior years (exhibit 6). Marijuana is by far the most common drug mentioned during youth-related Help Line calls, accounting for 41 percent of calls in 2006 (exhibit 7).

Marijuana was the most common illegal drug mentioned at the Seattle/Harborview ED in 2006, with 1,359 reports at intake in the WASBIRT project (exhibit 8). However, unweighted DAWN *Live!* ED reports totaled just 1,775 for King and Snohomish Counties combined, and it ranked below cocaine, heroin, prescription-type opiates, and benzodiazepines/sedatives (exhibit 10). This difference in ranking is likely related to the fact that DAWN *Live!* ED data only include cases in which substance use was part of the reason for the ED visit, while WASBIRT data are for all willing participants entering the ED regardless of reason. Acute medical reactions to marijuana are less common than those for other major drugs of abuse, though the prevalence of use is higher.

Marijuana remains the most common illegal drug reported by high school seniors, with 20 percent reporting past-month use ( $\pm 4.1$  percent) (exhibit 16). A substantial proportion, 6.4 percent ( $\pm 1.8$  percent), reported using marijuana 10 or more days in the past month. More high school seniors reported any use of marijuana than cigarettes, 16.6 percent ( $\pm 2.9$  percent). None of these estimates was significantly different than State averages.

Law enforcement seizure data for marijuana are inconsistently available over time; however, seizures are common with 12,110 kilograms (exhibits 11 and



12) and well over 100,000 plants seized in 2006 by local and Federal law enforcement. Marijuana is often seized at the Canadian border, where it is brought into the United States. Local growing, in and outdoors, is common as well. Marijuana is the third most common drug detected in local law enforcement evidence submitted to the State toxicology laboratory, with 2,967 positive submissions in 2006 (exhibit 13).

### **Club Drugs—MDMA/Ecstasy, LSD, Psychedelic Mushrooms (Psilocybin)**

MDMA (or ecstasy) is reported infrequently in mortality data, with a total of 15 drug-caused deaths positive for MDMA from 1999 to 2006; the 2 MDMA-involved deaths in 2006 both involved other drugs as well (data not shown).

Treatment data do not list specific club drugs as distinct categories. The category “hallucinogens” includes MDMA, LSD (lysergic acid diethylamide), and mushrooms (psilocybin). As a primary drug type, this category is rarely cited, with just 1.1 percent ( $n=119$ ) of youth admitted to treatment from 1999 to 2006 citing hallucinogens as their primary drug. However, it was more commonly cited as a secondary drug, with 238 such youth mentions from 1999 to 2006. An even smaller proportion of adults reported hallucinogens as their primary drug (0.2 percent) or secondary drug (0.5 percent) from 1999 to 2006. No trends are evident over time for youth, though adult admissions appear to be increasing slightly.

Adult Help Line calls specifically involving ecstasy totaled 62 in 2006, one-half the number reported in 2001 (exhibit 6). Mentions of PCP and LSD are even less frequent. Youth ecstasy calls were also at their peak in 2001 with 101 calls; the number declined to 43 in 2006, when the drug represented 7 percent of youth calls (exhibit 7).

Mentions of hallucinogens at Seattle’s Harborview Medical Center ED totaled 233, or 5 percent of intakes (exhibit 8). A similar proportion of intakes for the WASBIRT project involved hallucinogens in several other EDs throughout the State, though levels varied (data not shown). Unweighted DAWN *Live!* ED data, for the larger King and Snohomish County regions show 162 reports for MDMA, 52 for LSD, and 56 for miscellaneous hallucinogens (including psychedelic mushrooms) (data not shown).

Local and Federal law enforcement seizures for MDMA are at an all time high, with 5,331,191 dosage units seized in 2006 (exhibits 11 and 12). A substantial proportion of these seizures were made at

the Canadian border, where MDMA is being brought into the United States. Washington State had the highest level of seizures of MDMA in the United States from 2004 through 2006. It is believed that Washington is a major transshipment point through which MDMA flows. Submissions testing positive for MDMA from local law enforcement totaled 394 in 2006, more than double those for the previous year (exhibit 13). Local law enforcement indicates that MDMA continues to be used in the Seattle area and is generally more available in urban areas.

### **Benzodiazepines/Barbiturates**

Benzodiazepines (e.g., alprazolam/Xanax and diazepam/Valium) and barbiturates (e.g., secobarbital/Seconal and phenobarbital/Luminal) appear to usually be secondary drugs of abuse.

Benzodiazepines are rarely the only drug present in drug-caused deaths, with a total of just three single-drug deaths over the past decade. Conversely, benzodiazepines are the drug with the highest proportion of involvement in polydrug deaths, totaling 52 in 2006, the highest number to date (exhibits 1 and 2). Benzodiazepines are commonly detected in combination with prescription-type opiates.

Benzodiazepines and barbiturates are rarely mentioned as primary or secondary drugs by youth entering treatment, with less than half a dozen mentions in any year. These classes of drugs are also rarely mentioned as primary for adults; benzodiazepines are the most common class of these drugs, with 20 mentions in 2006 and no apparent trend over time. However, benzodiazepines in particular are somewhat more common secondary drugs of abuse; 121 admissions involved benzodiazepines as the secondary drug in 2006, about 1 percent of admissions, similar to prior years. A larger proportion, about 4 percent, mentioned benzodiazepines as their second drug of choice when entering opiate treatment programs in 2006.

Adult Help Line callers mentioned benzodiazepines about 2 percent of the time in recent years (exhibit 6). Only a handful of youth callers mention benzodiazepines in any given year (exhibit 7). Harborview/Seattle ED data indicate that the category of tranquilizers totaled 235 mentions (5 percent), somewhat higher than the State average and similar to hallucinogens, but much less than for marijuana or cocaine (exhibit 8). The combined category of benzodiazepine/sedatives was mentioned in 2,266 unweighted drug reports from DAWN *Live!* ED data for King and Snohomish counties in 2006, similar to

the number of reports for heroin and less than for cocaine and prescription-type opiates (exhibit 10).

Benzodiazepines and barbiturates are rarely mentioned in law enforcement data sources.

**INFECTIOUS DISEASES RELATED TO DRUG ABUSE AND INJECTION DRUG USE TRENDS**

The proportion of HIV infections among those with injection drug use as an exposure risk totaled 14 percent for the period from 2004 through 2006, statistically unchanged since the emergence of HIV in 1981 (exhibit 18). The Seattle area has several syringe exchanges located throughout the city, numerous syringe drop boxes, and a State law that permits pharmacy-based sales of syringes to drug-injectors.

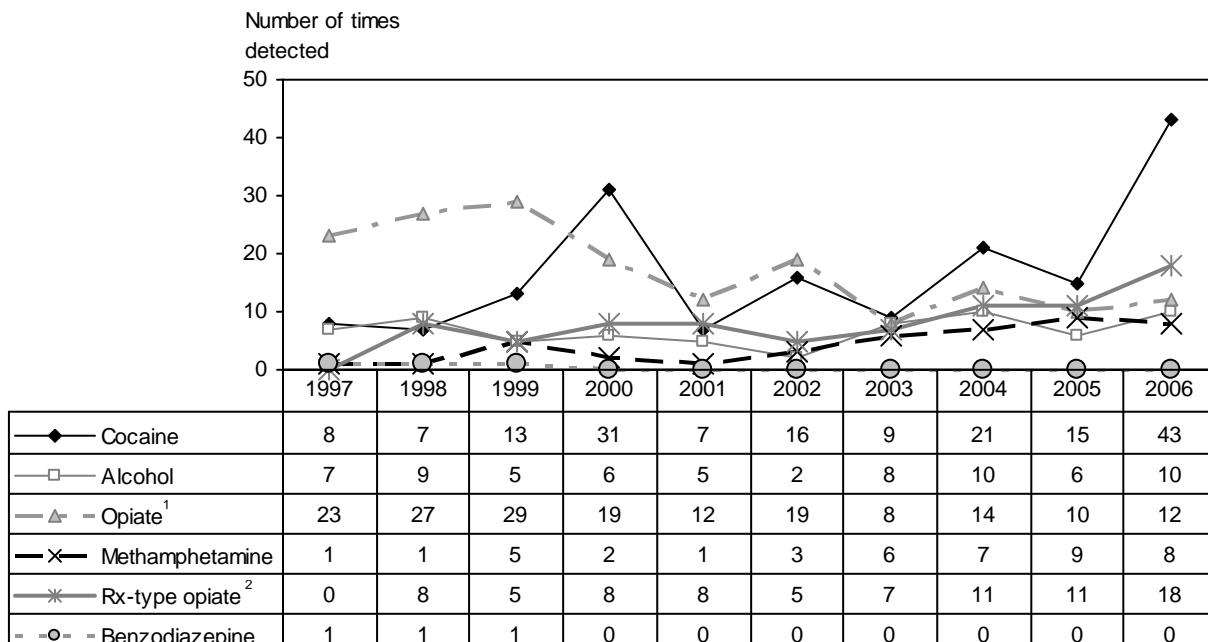
A recent article in the *Journal of Urban Health*, co-authored by PHSKC HIV/AIDS epidemiology staff (Burt et al. 2007) reports a statistically significant decrease in the prevalence of hepatitis B and C and a

continued low prevalence of HIV among 18–30-year-old Seattle-area injection drug users. Findings did not show a significant decrease in risky drug injection behaviors; however, there were increases in measures taken to prevent the transmission of these viruses, including use of needle exchange and hepatitis B vaccinations. The authors emphasize the importance of continuing prevention programs for this population to further reduce the impact of these infections.

In 2006, Epidemic Intelligence Service officers from the Centers for Disease Control and Prevention investigated a tuberculosis (TB) outbreak that began in 2005 in Snohomish County (immediately north of King County). Active disease and latent TB infections were strongly associated with both methamphetamine use and a known drug house.

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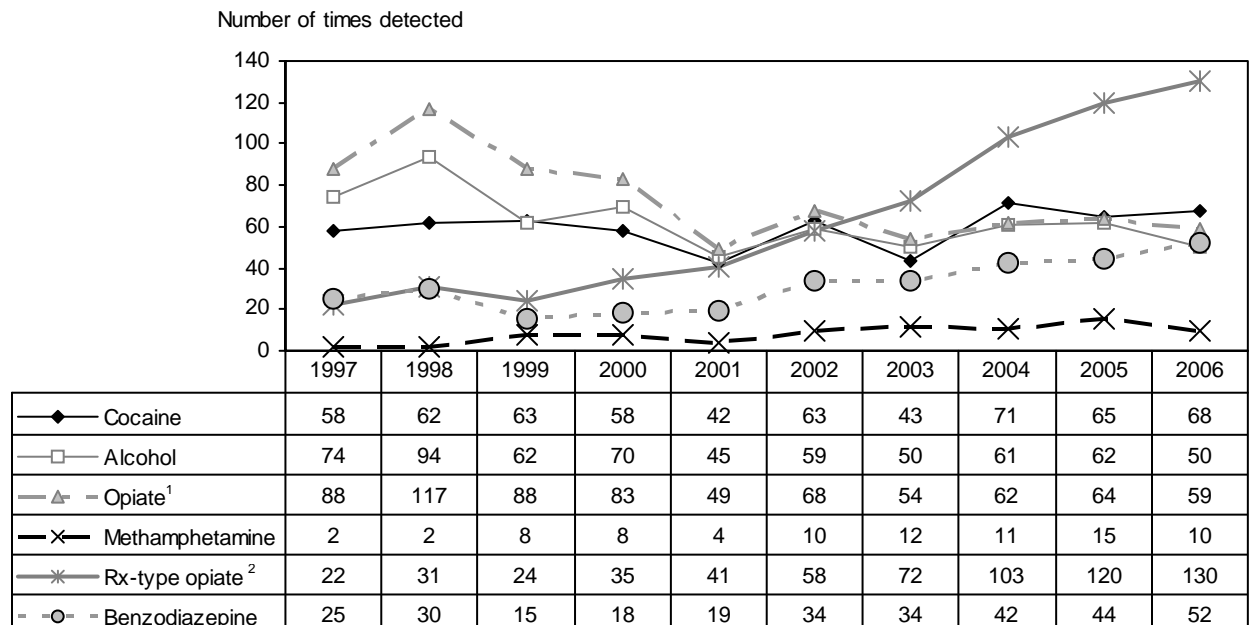
**Exhibit 1. Drug-Caused Deaths in King County, Washington—Single Drug: 1997–2006**



<sup>1</sup>Opiate=heroin, "opiate" or morphine.

<sup>2</sup>Prescription (Rx)-type opiate excludes morphine and codeine.

SOURCE: King County Medical Examiner, Public Health – Seattle & King County; analysis and figures by Alcohol & Drug Abuse Institute, University of Washington

**Exhibit 2. Drug-Caused Deaths in King County, Washington—Multiple Drugs Involved: 1997–2006**

<sup>1</sup>Opiate=heroin, "opiate" or morphine.

<sup>2</sup>Prescription (Rx)-type opiate excludes morphine and codeine.

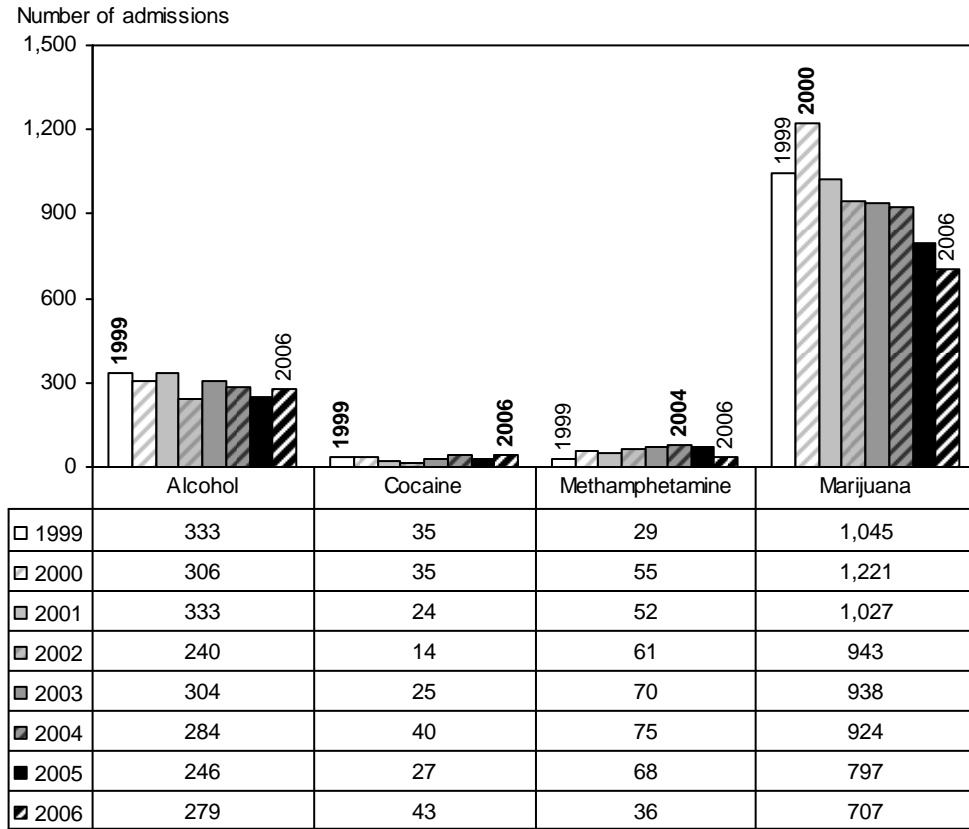
SOURCE: King County Medical Examiner, Public Health – Seattle & King County; analysis and figures by Alcohol & Drug Abuse Institute, University of Washington

**Exhibit 3. Drug-Caused Deaths—Number, Rate, and Manner, King County, Washington: 1997–2006**

Drug-Caused Deaths	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Total Drug-Caused Deaths (N)	(179)	(222)	(205)	(220)	(152)	(195)	(186)	(253)	(240)	(286)
Drug-Caused Death Rate (per 100,000)	10.6	13.0	11.9	12.7	8.7	11.1	10.5	14.2	13.4	15.7
Manner of Death Among Drug-Caused Deaths: Rate (per 100,000 persons)										
Accident	9.0	9.8	9.3	9.8	6.5	9.3	8.2	11.6	11.4	14.0
Suicide	1.2	1.4	1.9	1.3	1.1	0.9	1.1	1.5	1.5	1.3
Undetermined	0.1	1.6	0.6	1.5	1.1	0.9	1.3	1.1	0.5	0.4

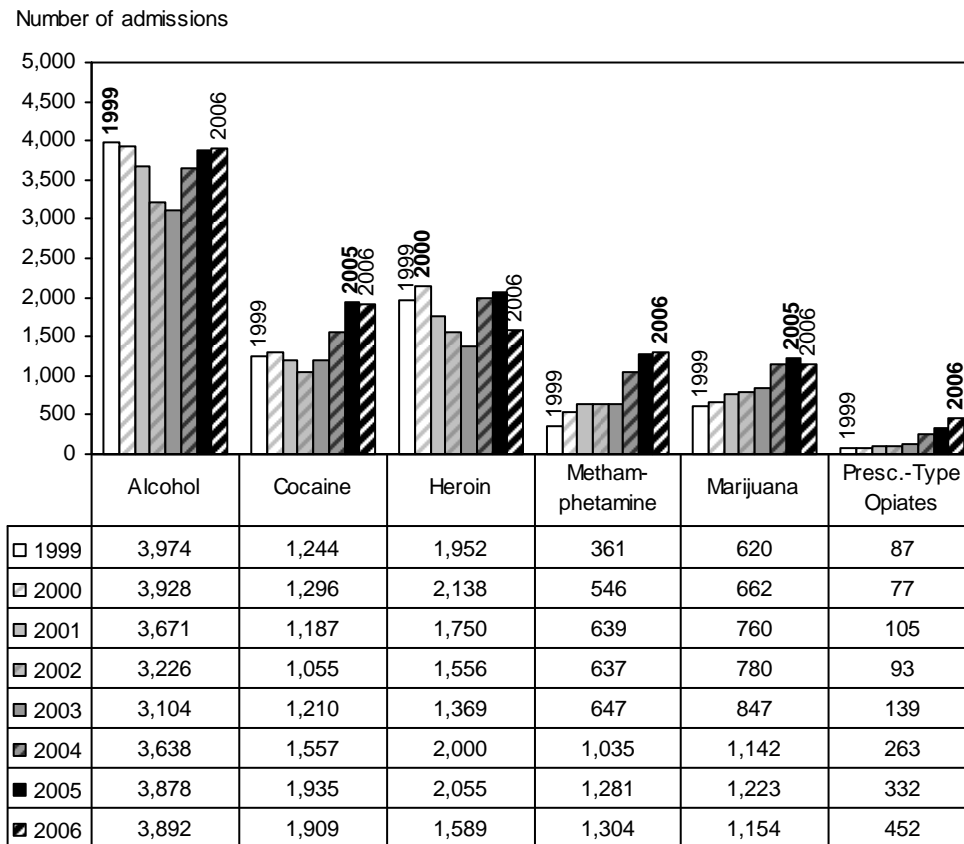
SOURCE: King County Medical Examiner, Public Health – Seattle & King County

**Exhibit 4. Number of Youth Treatment Admissions for Selected Drugs,<sup>1</sup> All Modalities, in King County, Washington, by Primary Drug: 1999–2006**



<sup>1</sup>All modalities in publicly funded and private pay methadone maintenance treatment.  
 SOURCE: Washington State Department of Social and Health Services, Division of Alcohol and Substance Abuse's Treatment and Assessment Report Generation Tool

**Exhibit 5. Number of Adult Treatment Admissions for Selected Drugs,<sup>1</sup> All Modalities, King County, Washington, by Primary Drug: 1999–2006**



<sup>1</sup>All modalities in publicly funded and private pay methadone maintenance treatment.  
 SOURCE: Washington State Department of Social and Health Services, Division of Alcohol and Substance Abuse's Treatment and Assessment Report Generation Tool

**Exhibit 6. Adult-Related Calls<sup>1</sup> to Help Line in King County, Washington: 2001–2006**

Drug	2001	2002	2003	2004		2005		2006	
	<i>n</i>	<i>n</i>	<i>n</i>	<i>n</i>	(%)	<i>n</i>	(%)	<i>n</i>	(%)
Cocaine	1,088	1,124	1,142	1,259	(27)	1,095	(25)	1,426	(24)
Methamphetamine	842	743	627	732	(16)	745	(17)	942	(16)
Marijuana	972	967	637	814	(17)	608	(14)	907	(15)
Heroin	521	584	561	588	(13)	470	(11)	594	(10)
Unknown	424	531	89	82	(2)	174	(4)	346	(6)
Prescription-type	442	523	190	175	(4)	184	(4)	219	(4)
Methadone	94	93	112	157	(3)	149	(3)	199	(3)
Other	55	63	76	64	(1)	64	(1)	137	(2)
Ecstasy	117	69	34	47	(1)	44	(1)	62	(1)
Hallucinogens	29	30	21	30	(1)	10	(0)	21	(0)
LSD	22	4	4	5	(0)	2	(0)	11	(0)
Over-the-Counter	19	9	10	9	(0)	9	(0)	10	(0)
Inhalant	9	15	2	5	(0)	9	(0)	9	(0)
PCP	5	5	3	11	(0)	4	(0)	4	(0)
<b>Newer Drug Categories</b>									
OxyContin			20	198	(4)	228	(5)	401	(7)
Prescription Pain Pills			366	397	(8)	492	(11)	533	(9)
Amphetamine			31	18	(0)	39	(1)	25	(0)
Benzodiazepine			59	81	(2)	102	(2)	121	(2)
<b>Total</b>	<b>4,639</b>	<b>4,760</b>	<b>3,984</b>	<b>4,672</b>	<b>(100)</b>	<b>4,428</b>	<b>(100)</b>	<b>5,967</b>	<b>(100)</b>

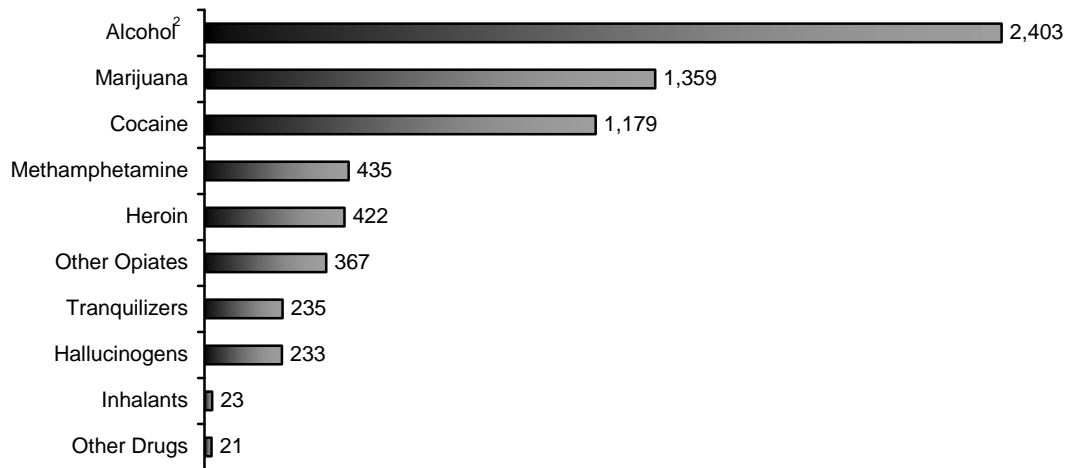
<sup>1</sup>Percentages of total calls are shown only for 2004–2006 because these drug categories remained consistent during those years.  
SOURCE: Washington State Alcohol/Drug Helpline (ADHL)

**Exhibit 7. Youth-Related Calls<sup>1</sup> to Help Line in King County, Washington: 2001–2006**

Drug	2001	2002	2003	2004		2005		2006	
	<i>n</i>	<i>n</i>	<i>n</i>	<i>n</i>	(%)	<i>n</i>	(%)	<i>n</i>	(%)
Marijuana	491	353	302	277	(49)	202	(39)	250	(41)
Cocaine	91	69	56	64	(11)	64	(12)	74	(12)
Methamphetamine	198	110	99	97	(17)	75	(14)	74	(12)
Ecstasy	101	35	19	24	(4)	38	(7)	43	(7)
Heroin	22	12	14	21	(4)	19	(4)	29	(5)
Unknown	131	78	21	21	(4)	12	(2)	21	(3)
Prescription-type	48	22	17	13	(2)	8	(2)	17	(3)
Other	11	14	14	9	(2)	15	(3)	7	(1)
Hallucinogens	44	7	14	9	(2)	12	(2)	7	(1)
Inhalant	12	7	4	1	(0)	11	(2)	6	(1)
Methadone	6	0	2	0	(0)	3	(1)	4	(1)
LSD	-	0	0	3	(1)	2	(0)	3	(0)
Over-the-Counter	7	4	7	5	(1)	2	(0)	2	(0)
PCP	-	0	2	3	(1)	1	(0)	0	(0)
<b>Newer Drug Categories</b>									
OxyContin			16	9	(2)	29	(6)	49	(8)
Prescription Pain Pills			16	6	(1)	20	(4)	23	(4)
Amphetamine			2	0	(0)	1	(0)	3	(0)
Benzodiazepine			1	1	(0)	5	(1)	1	(0)
<b>Total</b>	<b>1,162</b>	<b>711</b>	<b>606</b>	<b>563</b>	<b>(100)</b>	<b>519</b>	<b>(100)</b>	<b>613</b>	<b>(100)</b>

<sup>1</sup>Percentages of total calls are shown only for 2004–2006 because these drug categories remained consistent during those years.  
SOURCE: Washington State Alcohol/Drug Helpline (ADHL)

**Exhibit 8. Drugs Mentioned at Harborview ED in Seattle, Washington, Among all ED Visit Types<sup>1</sup>: October 2005–September 2006**



<sup>1</sup>4,712 intakes; some patients may have been screened more than once.

<sup>2</sup>Alcohol represents AUDIT Score  $\geq 7$  for females, 8 for males or evidence of binge drinking.

SOURCE: Washington State Screening, Brief Intervention, Referral and Treatment Project: Preliminary Results. WA DSHS, DASA, RDA, May 2007

**Exhibit 9. DAWN Live! ED Sample and Reporting Information for King and Snohomish Counties: 2006**

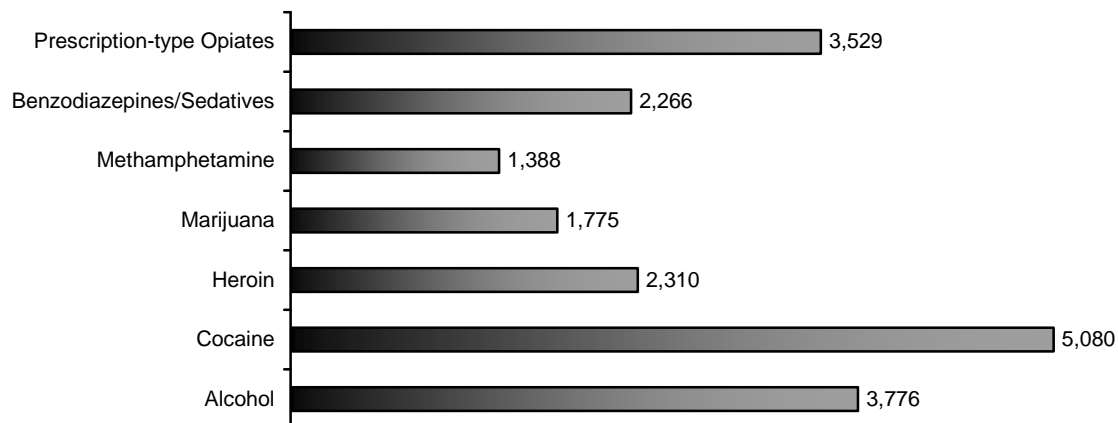
CEWG Area	Total Eligible Hospitals <sup>1</sup>	No. of Hospitals in DAWN Sample	Total EDs in DAWN Sample <sup>2</sup>	No. of EDs Reporting per Month: Completeness of Data (%)			No. of EDs Not Reporting
				90–100%	50–89%	<50%	
Seattle	23	23	25	5–12	0–2	0–3	13–17

<sup>1</sup>Short-term, general, non-Federal hospitals with 24-hour emergency departments based on the American Hospital Association Annual Survey.

<sup>2</sup>Some hospitals have more than one emergency department.

SOURCE: DAWN Live!, OAS, SAMHSA, updated 3/13/2007

**Exhibit 10. Types of Substances in DAWN Live! ED Reports Among Drug-Related Visits in King and Snohomish Counties, Washington (Unweighted<sup>1</sup>): 2006**



<sup>1</sup>Unweighted data are from 8 to 12 EDs reporting to DAWN. All DAWN cases are reviewed for quality control. Based on the review, cases may be deleted or corrected, and, therefore, are subject to change.

SOURCE: DAWN, OAS, SAMHSA, updated 3/13/2007

**Exhibit 11. Number of Local Law Enforcement Drug Seizures in Washington State: 2001–2006**

Drug	2001	2002	2003	2004	2005	2006
Heroin (kilograms)				39	20	30
Metham. (kilograms)	86	223	200	112	68	18
Cocaine (kilograms)					729	952
Marijuana (kilograms)					13,214	7,753
MDMA (dosage units)			23,835	461,444	1,267,296	2,866,935

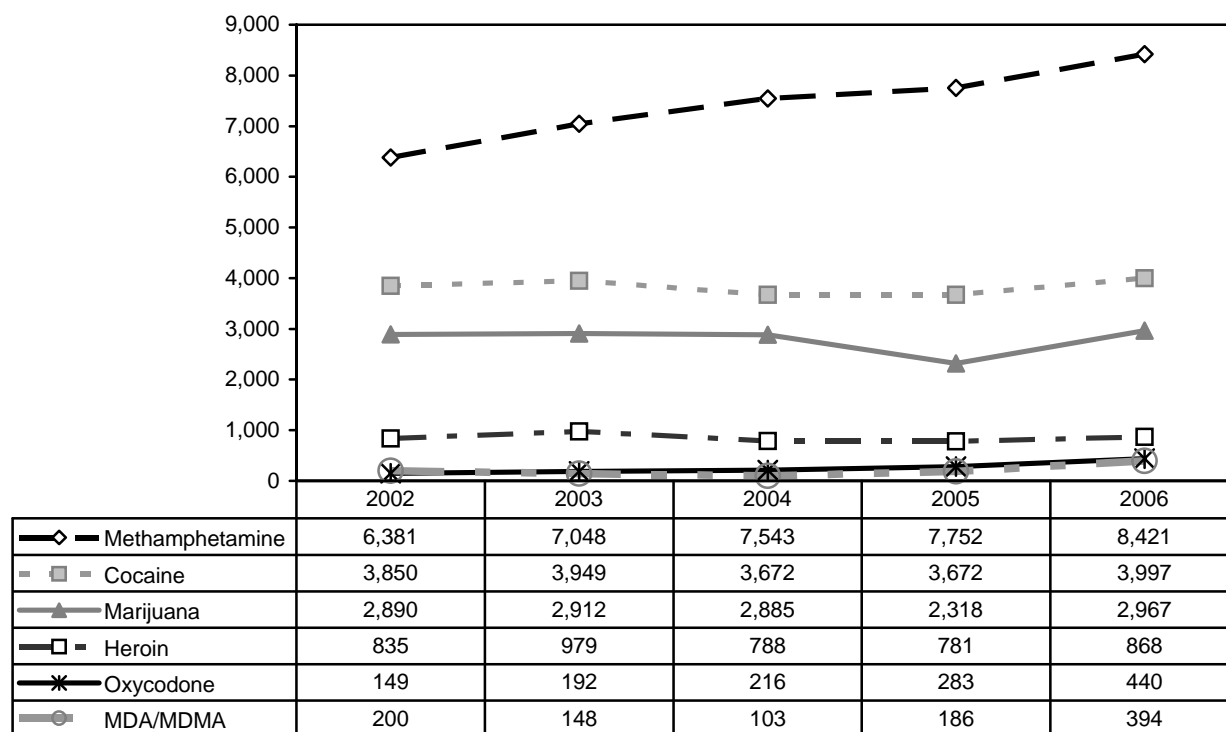
SOURCE: NW HIDTA 2006 Threat Assessment

**Exhibit 12. Federal-wide Drug Seizure System (FDSS) Data for Washington State: 2001–2006**

Drug	2001	2002	2003	2004	2005	2006
Heroin (kilograms)	15	82	15	36	8	12
Metham. (kilograms)	47	41	206	83	76	64
Cocaine (kilograms)	123	263	475	318	522	625
Marijuana (kilograms)	4,070	5,527	10,004	11,580	9,875	4,357
MDMA (dosage units)	30,711	79,751	6,641	510,374	1,745,096	2,464,256

SOURCE: Federal-wide Drug Seizure System, cited in NW HIDTA 2006 Threat Assessment

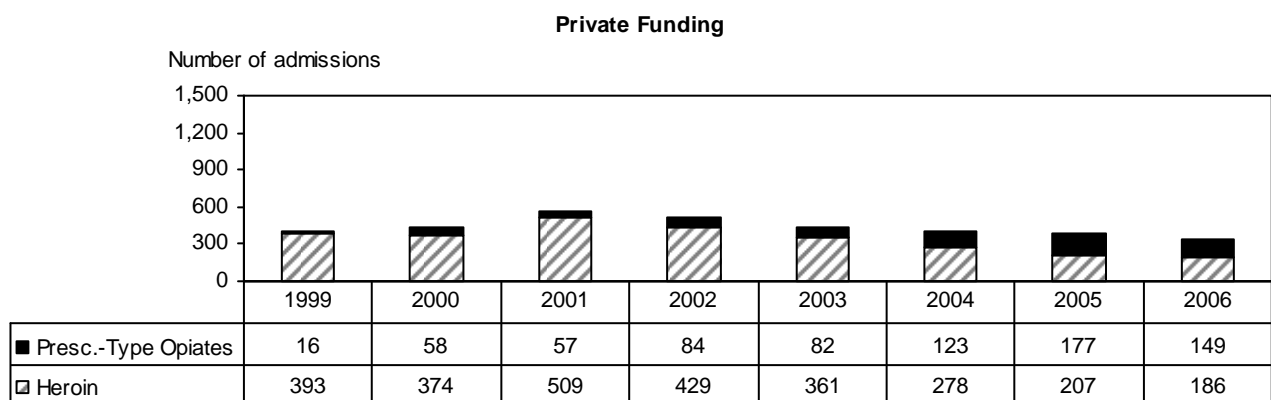
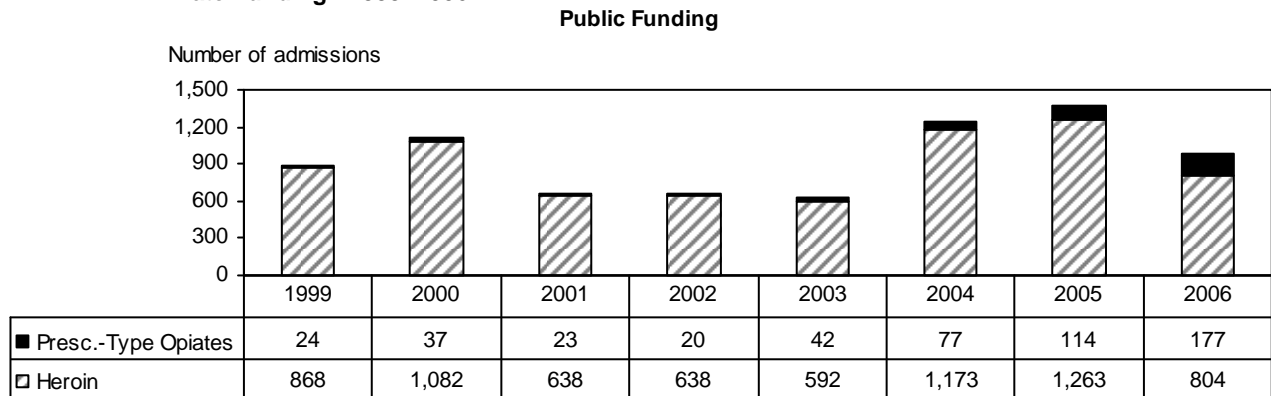
**Exhibit 13. Number of Submissions Positive for Selected Substances by Local Law Enforcement Testing in Washington State: 2002–2006**



SOURCE: Washington State Patrol, Forensic Laboratory Services Bureau, Solid State Chemistry

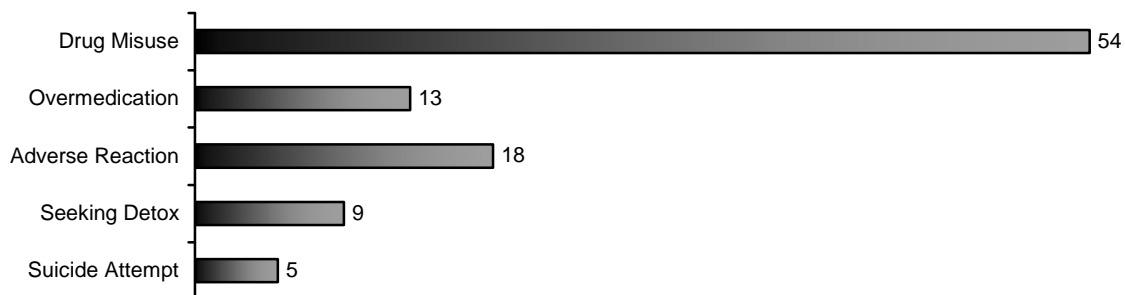


**Exhibit 14. Number of Opiate Treatment Program Admissions in King County, Washington, by Public and Private Funding: 1999–2006**



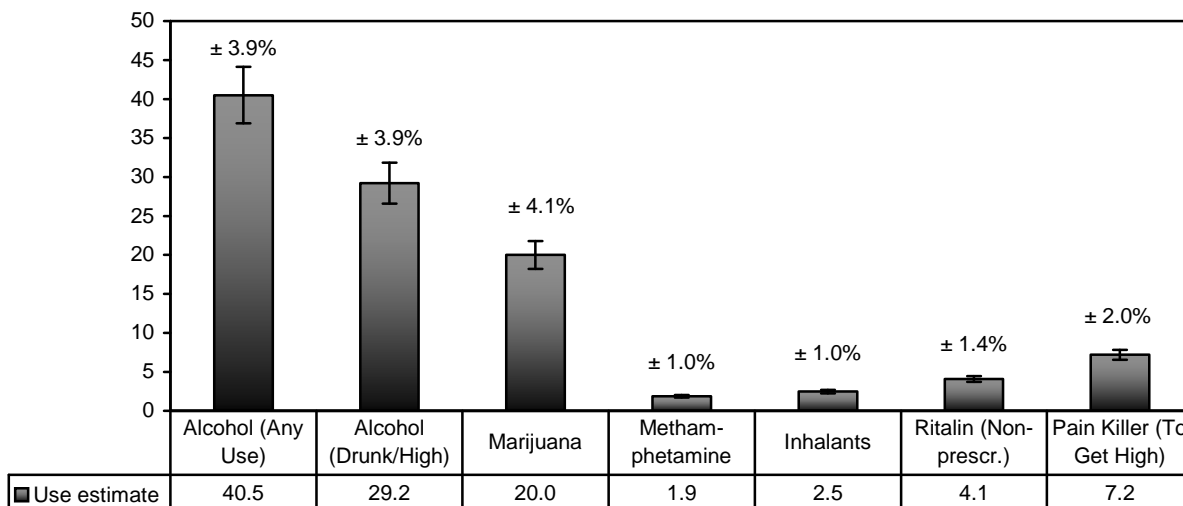
SOURCE: Washington State Department of Social and Health Services, Division of Alcohol and Substance Abuse's Treatment and Assessment Report Generation Tool

**Exhibit 15. Prescription-Type Opiates Case Types in DAWN Live/ ED Reports for King and Snohomish Counties, Washington, by Percent (Unweighted<sup>1</sup>): 2006**



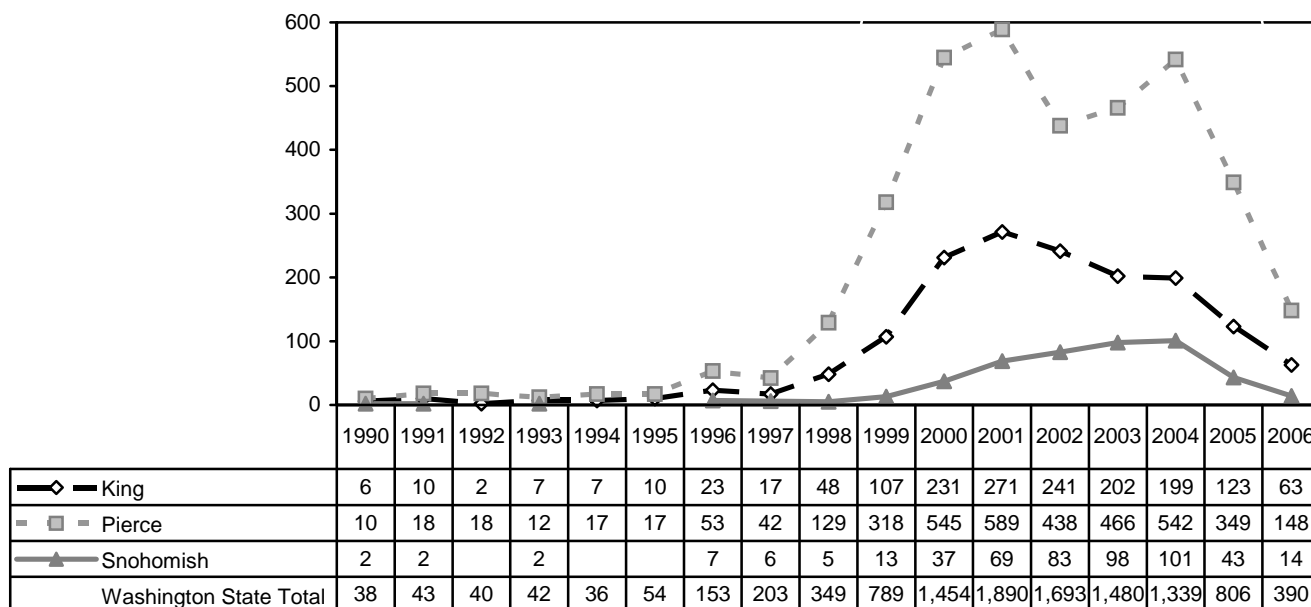
<sup>1</sup>Unweighted data are from 8 to 12 EDs reporting to DAWN. All DAWN cases are reviewed for quality control. Based on the review, cases may be deleted or corrected, and, therefore, are subject to change.  
SOURCE: DAWN, OAS, SAMHSA, accessed 3/13/2007

**Exhibit 16. School Survey of 12th Graders in King County, Washington, Past-30-Day Use Estimates and 95% Confidence Intervals: 2006**



SOURCE: 2006 Washington State Healthy Youth Survey

**Exhibit 17. Methamphetamine Incidents, Labs and Dump Sites, by County and State Total: 1990–2006**



SOURCE: Washington State Department of Ecology

**Exhibit 18. Demographic Characteristics of King County Residents Diagnosed and Reported Through 12/31/2006, by Date of HIV Diagnosis: 1981–2006**

Demographic Characteristic	1981–1997		1998–2000		2001–2003		2004–2006 <sup>1</sup>		Trend <sup>2</sup> 1998–2006
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	
<b>Total</b>	<b>7,040</b>	<b>(100)</b>	<b>1,175</b>	<b>(100)</b>	<b>1,092</b>	<b>(100)</b>	<b>966</b>	<b>(100)</b>	
<b>HIV Exposure Category</b>									
Men who have sex with men (MSM)	5,324	(76)	786	(67)	709	(65)	594	(61)	down
Injection drug user (IDU)	391	(6)	79	(7)	69	(6)	58	(6)	
MSM-IDU	740	(11)	92	(8)	85	(8)	80	(8)	
Heterosexual contact	256	(4)	106	(9)	124	(11)	74	(8)	
Blood product exposure	91	(1)	6	(1)	5	(0)	4	(0)	
Perinatal exposure	22	(0)	5	(0)	0	(0)	0	(0)	
<i>SUBTOTAL- known risk</i>	<i>6,824</i>		<i>1,074</i>		<i>992</i>		<i>810</i>		
Undetermined/other <sup>3</sup>	216	(3)	101	(9)	100	(9)	156	(16)	up
<b>Sex and Race/Ethnicity</b>									
<b>Male</b>	6,646	(94)	1,036	(88)	968	(89)	859	(89)	down
White male <sup>4</sup>	5,463	(78)	709	(60)	648	(59)	528	(55)	
Black male <sup>4</sup>	605	(9)	163	(14)	150	(14)	150	(16)	
Hispanic male	373	(5)	108	(9)	113	(10)	104	(11)	
Other male <sup>4</sup>	205	(3)	56	(5)	57	(5)	77	(8)	up
<b>Female</b>	394	(6)	139	(12)	124	(11)	107	(11)	
White female <sup>4</sup>	210	(3)	55	(5)	31	(3)	31	(3)	
Black female <sup>4</sup>	125	(2)	64	(5)	70	(6)	59	(6)	
Hispanic female	25	(0)	12	(1)	10	(1)	7	(1)	
Other female <sup>4</sup>	34	(0)	8	(1)	13	(1)	10	(1)	
<b>Race/Ethnicity</b>									
White <sup>4</sup>	5,673	(81)	764	(65)	679	(62)	559	(58)	down
Black <sup>4</sup>	730	(10)	227	(19)	220	(20)	209	(22)	
Hispanic	398	(6)	120	(10)	123	(11)	111	(11)	
Asian or Pacific Islander <sup>4</sup>	111	(2)	35	(3)	34	(3)	45	(5)	up
Native American or Alaskan Native <sup>4</sup>	98	(1)	17	(1)	20	(2)	10	(1)	
Multiple Race <sup>4</sup>	26	(0)	6	(1)	13	(1)	19	(2)	up
Unknown Race <sup>4</sup>	4	(0)	6	(1)	3	(0)	13	(1)	up
<b>Place of Birth</b>									
Born in U.S. or Territories	6,455	(92)	922	(78)	849	(78)	708	(73)	down
Born outside U.S.	429	(6)	178	(15)	221	(20)	194	(20)	up
Birthplace unknown	156	(2)	75	(6)	22	(2)	64	(7)	
<b>Age at Diagnosis of HIV</b>									
0–19 years	129	(2)	24	(2)	14	(1)	7	(1)	down
20–24 years	556	(8)	82	(7)	91	(8)	87	(8)	
25–29 years	1,414	(20)	179	(15)	143	(13)	140	(14)	
30–34 years	1,684	(24)	263	(22)	250	(23)	170	(18)	down
35–39 years	1,440	(20)	262	(22)	269	(25)	200	(21)	
40–44 years	867	(12)	187	(16)	163	(15)	166	(17)	
45–49 years	496	(7)	95	(8)	78	(7)	106	(11)	up
50–54 years	231	(3)	52	(4)	51	(5)	43	(4)	
55–59 years	136	(2)	19	(2)	18	(2)	30	(3)	up
60–64 years	48	(1)	5	(0)	9	(1)	10	(1)	
65+ years	39	(1)	7	(1)	6	(1)	7	(1)	
<b>Residence</b>									
Seattle residence	6,101	(87)	985	(84)	862	(79)	729	(75)	down
King Co. residence outside Seattle	939	(13)	190	(16)	230	(21)	237	(25)	up

<sup>1</sup>Because of delays in reporting, data from recent years are incomplete.

<sup>2</sup>Statistical trends ( $p < 0.05$ ) were identified from the chi-square test for trend, calculated for the periods 1998–2000, 2001–2003, and 2004–2006.

<sup>3</sup>Includes persons for whom exposure information is incomplete (because of death, refusal to be interviewed, or loss to follow-up), patients still under investigation, patients whose mode of exposure remains undetermined.

<sup>4</sup>And not Hispanic. The groups Asian, Native Hawaiian, and Other Pacific Islanders were grouped due to small cell sizes. All race and ethnicity categories are mutually exclusive.

SOURCE: Public Health – Seattle & King County

# Substance Abuse Trends in Texas

Jane Carlisle Maxwell, Ph.D.<sup>1</sup>

## ABSTRACT

*Cocaine is the primary illicit drug for which Texans enter treatment, and it is a major problem on the border with Mexico. Indicators of cocaine use remain stable or are increasing slightly, although methamphetamine and ice are becoming more popular than cocaine in some areas. Crack cocaine admissions are more likely to be White or Hispanic. Heroin-dependent clients entering treatment are primarily injectors, but the proportion who are inhaling or sniffing heroin is increasing, which is reflected in the finding that the age of treatment admissions is decreasing and the proportion of Hispanics is increasing. ‘Cheese heroin,’ a mixture of Tylenol PM and heroin, is a problem in some Dallas schools. Hydrocodone is a larger problem than oxycodone or methadone, and problems with fentanyl patches fluctuate from year to year. Methadone indicators are increasing, and most adverse events are related to methadone pain pills. Codeine cough syrup, ‘Lean,’ continues to be abused. Marijuana indicators are mixed, and treatment admissions referred from the criminal justice system are less impaired than those who enter treatment voluntarily. Methamphetamine indicators are varied because of decreased ‘cooking’ in Texas, but the situation is expected to worsen with increased importation of very pure methamphetamine and ice from Mexico. Smoking ice is now the major route of administration for persons entering methamphetamine treatment. Abuse of alprazolam (Xanax) and carisoprodol (Soma) is increasing. All indicators of ecstasy use are increasing as the drug spreads from the club scene to the street. PCP indicators are rising, and dextromethorphan use by adolescents is increasing. Different types of inhalants are used by different users. HIV and AIDS cases are more likely to be persons of color, and the proportions of HIV and AIDS cases related to male-to-male sex are increasing. The heterosexual mode of transmission exceeded injection drug use among both HIV and AIDS cases in 2005. Overall, the proportion of injectors entering treatment is decreasing.*

<sup>1</sup>The author is affiliated with the Gulf Coast Addiction Technology Transfer Center, The University of Texas at Austin, Austin, Texas.

## INTRODUCTION

### Area Description

The population of Texas in 2006 was 23,507,783, with 49 percent White, 12 percent Black, 36 percent Hispanic, and 4 percent “Other.” Illicit drugs continue to enter from Mexico through cities such as El Paso, Laredo, McAllen, and Brownsville, as well as through smaller towns along the border. The drugs then move northward for distribution through Dallas/Fort Worth and Houston. In addition, drugs move eastward from San Diego through Lubbock and from El Paso to Amarillo and Dallas/Fort Worth.

### Data Sources

*Substance Abuse Trends in Texas* is an ongoing series that is prepared every 6 months as a report for the Community Epidemiology Work Group meetings sponsored by the National Institute on Drug Abuse (NIDA). This report updates the June 2006 report. To compare the June 2007 report with earlier periods, please access <<http://www.utexas.edu/research/cswr/gcattc/drugtrends.html>>. Data for this report are from the sources shown below:

- **Student substance use data** for 2006 came from the *Texas School Survey of Substance Abuse: Grades 7-12, 2006* and the *Texas School Survey of Substance Abuse: Grades 4-6, 2006*, which are authored by L.Y. Liu and published by the Department of State Health Services (DSHS), formerly the Texas Commission on Alcohol and Drug Abuse. Data on Texas college students came from the *2005 Texas Survey of Substance Use Among College Students: Main Findings*, also written by L.Y. Liu and published by the Department of State Health Services. For 2005, the data for high school students in grades 9–12 came from the Youth Risk Behavior Surveillance (YRBS)—United States, 2005, *MMWR Surveillance Summaries*, June 9, 2006/55(SS05); 1–108.
- **Data on drug use by Texans age 12 and older** came from the Substance Abuse and Mental Health Services Administration’s (SAMHSA) National Surveys on Drug Use and Health (NSDUH). The State estimates of use of illicit drugs lifetime, past year, and past month for the population age 12 and older are based on the 2004–2005 surveys, and the estimates for Dallas and Houston metropolitan areas are based on the 2002–2005 surveys.
- **Poison control center data** came from the Texas Poison Center Network, DSHS, for 1998

through 2006. Analysis was provided by Mathias Forrester, epidemiologist with the Texas Poison Center Network, and by the author. In addition, findings from five papers authored by Forrester were used in this report: “Carisoprodol Abuse in Texas, 1998-2003,” “Flunitrazepam Abuse and Malicious Use in Texas, 1998-2003,” “Oxycodone Abuse in Texas, 1998-2003,” “Methylphenidate Abuse in Texas, 1998-2004,” and “Alprazolam Abuse in Texas: 1998-2004,” *Journal of Toxicology and Environmental Health, Part A*, 69:237–243, 2006.

- **Treatment data** were provided by DSHS’s client data system on clients admitted to treatment in DSHS-funded facilities from January 1, 1987, through December 31, 2006. For most drugs, the characteristics of clients entering with a primary problem with the drug are discussed, but in the case of club drugs, information is provided on any client with a primary, secondary, or tertiary problem with that drug. Analysis was by the author. Data on substance use on the border was also drawn from Maxwell, J.C., et al., “Drug Use and Risk of HIV/AIDS on the Mexico-USA Border: A Comparison of Treatment Admissions in Both Countries,” *Drug and Alcohol Dependence*, 82 Suppl. 1, S85-S93, 2006.
- **Information on drug-involved deaths** through 2005 came from death certificates from the Bureau of Vital Statistics, DSHS; analysis was by the author. Because justices of the peace, who have no medical training, can sign death certificates, the actual drugs involved may not be reported. Instead, a notation such as “drug abuse” is used. The 2003 death cases are incomplete.
- **Drug and alcohol arrest data** come from the Uniform Crime Reports of the Texas Department of Public Safety (DPS).
- **Information on drugs identified by laboratory tests** is from the Texas Department of Public Safety, which reported results from toxicological analyses of substances submitted in law enforcement operations for 1998 through December 2006 to the National Forensic Laboratory Information System (NFLIS) of the Drug Enforcement Administration (DEA). Analysis was by the author on data downloaded from NFLIS on April 8, 2007.
- **Information on forms of methadone** is from DEA’s Automation of Reports and Consolidated Orders System (ARCOS) for 2000–2006.

- **Price, purity, trafficking, distribution, and supply** information was provided by second quarter fiscal year (FY) 2007 reports on trends in trafficking from the Dallas, El Paso, and Houston Field Divisions of the DEA and from DEA’s 2005 Domestic Monitor Program (DMP).
- **Reports by users and street outreach workers** on drug trends for the first two quarters of FY 2007 were reported to DSHS by workers at local human immunodeficiency virus (HIV) counseling and testing programs across the State.
- **Sexually transmitted disease (STD), HIV, and acquired immunodeficiency syndrome (AIDS) data** were provided by DSHS for annual periods through December 2006, and the HIV cases exclude any that later seroconverted to AIDS. Data also come from Maxwell, J.C., and Spence, R.T. (2006), An exploratory study of inhalers and injectors who used black tar heroin, *Journal of Maintenance in the Addictions*, 3(1), 61–81.

#### DRUG ABUSE PATTERNS AND TRENDS

##### Cocaine/Crack

The *Texas School Survey of Substance Abuse: Grades 7-12, 2006* reported that lifetime use of powder and crack cocaine had dropped from a high of 9 percent in 1998 to 8 percent in 2006, while past-month use dropped from 4 percent in 1998 to 3 percent in 2006. Some 7 percent of students in nonborder counties had ever used powder or crack cocaine, and 2 percent had used it in the past month. In comparison, students in schools on the Texas border reported higher levels of cocaine use: 12 percent lifetime and 5 percent past month. Percentages are shown for grades 7–12 in exhibit 1. The 2005 YRBS reported that 12 percent of Texas high school students (grades 9–12) had ever used cocaine, and 6 percent had used in the past month. The 2005 Texas college survey reported that 10 percent had ever used cocaine or crack, and 2 percent had used in the past month. The 2004–2005 NSDUH estimated that 2 percent of Texans age 12 and older had used any form of cocaine in the past year.

Texas Poison Center Network calls involving the use of cocaine increased from 497 in 1998 to 1,410 in 2006 (exhibit 2). Some 59 percent of the cases in 2006 were male, and the average age was 31.

Cocaine (crack and powder together) represented 24 percent of all admissions to DSHS-funded treatment programs in 2006 (exhibit 2), down from 32 percent in 1995. Powder cocaine users made up 10 percent of

all admissions to treatment. Among all cocaine admissions, cocaine inhalers were the youngest and most likely to be Hispanic and involved in the criminal justice or legal systems (exhibit 3). Cocaine injectors were older than inhalers but younger than crack smokers; they were most likely to be White.

The term “lag” refers to the period from first consistent or regular use of a drug to the date of admission to treatment. Powder cocaine inhalers averaged 9 years between first regular use and entrance to treatment, while injectors averaged 15 years of use before they entered treatment.

Between 1987 and 2006, the percentage of Hispanic treatment admissions using powder cocaine increased from 23 to 50 percent, while for Whites and Blacks, the percentages dropped from 48 to 32 percent and from 28 to 16 percent, respectively. Exhibit 4 shows these changes between 1993 and 2006 by route of administration. The proportion of Blacks among crack cocaine admissions fell from 75 percent in 1993 to 46 percent in 2006, while the proportion of Whites increased from 20 percent in 1993 to 36 percent in 2006. Hispanic crack admissions rose from 5 to 17 percent in the same time period.

Cocaine is a problem on the border. Twenty-six percent of all admissions to programs on the Texas side and 22 percent of all admissions on the Mexico side in 2003 were for powder or crack cocaine. Some 34 percent of the Texas cocaine admissions and 26 percent of the Mexican cocaine admissions smoked crack cocaine (Maxwell et al. 2006).

The number of deaths statewide in which cocaine was mentioned increased from 223 in 1992 to 723 in 2005 (exhibit 5). The average age of the decedents in 2005 was 41; 40 percent were White, 27 percent were Hispanic, and 33 percent were Black. Seventy-six percent were male.

Exhibit 2 shows that the proportion of substances identified as cocaine by the DPS labs is decreasing. In 1998, cocaine accounted for 40 percent of all items examined, compared with 34 percent in 2006.

In the Dallas DEA Field Division, the purity of seized cocaine increased from 61 percent in the first quarter of FY 2006 to 77 percent in the second quarter of FY 2007. In Tyler, cocaine has reemerged. Ice users are reportedly concerned about the effects of using ice, and they are using cocaine instead of ice in some instances. Crack continues to be popular in South Dallas and Oak Cliff.

According to the El Paso DEA Field Division, cocaine is trafficked from Mexico through El Paso to the Chicago/Northwest Indiana area, and it is readily available. It is reported to be 80–95 percent pure.

Cocaine continues to be available, but the price range increased in the first half of 2007 (exhibit 6). A gram of powder cocaine costs \$50–\$60 in El Paso and \$100 in Amarillo and Lubbock. An ounce costs \$500 in McAllen, \$400–\$800 in Houston, \$400–\$700 in Midland, \$500 in El Paso, \$500–\$700 in San Antonio, and \$400–\$500 in Laredo. A kilogram of cocaine costs \$15,500 in Dallas, \$11,000–\$22,500 in El Paso, \$13,000–\$17,000 in Houston, \$11,000–\$13,000 in Laredo, \$10,000–\$13,500 in McAllen, and \$12,000–\$16,000 in San Antonio.

Crack cocaine users in north Austin report that the crack they smoke is causing them to itch, while in the 11th–12th street area in east Austin, crack cocaine is being cut with Palmolive bar soap. It is clear, not brittle, and does not crumble easily. In the East 2nd and Holly Street area, the crack is being cut with vitamin B-12, Drano, and cake mixes. Crack injectors in Austin are continuing to use vinegar and/or lemon juice to break down the crack before injecting it, even though citric acid is available in bleach and water kits. Crack and marijuana are plentiful in the Rundburg area of north Austin, with most dealers being young Black men. Powder cocaine is plentiful and of good quality; it is being sold in large “hard” pieces instead of powder. A piece sells for \$10, and a gram sells for \$20–\$25. An “8-ball” sells for \$75. In the Gulf Coast area, crack users are reported to be injecting crack, and in the Dallas area, the older homeless population is using crack. In the Corpus Christi area, cocaine is reported to be mixed with albuterol, which is said to produce a longer lasting high and euphoria. Also, at-risk youth are smoking crack rather than snorting cocaine.

### **Alcohol**

Alcohol is the primary drug of abuse in Texas. In 2006, 66 percent of Texas secondary school students (grades 7–12) had ever used alcohol, and 32 percent had drunk alcohol in the last month. Of particular concern is heavy consumption of alcohol, or binge drinking, which is defined as drinking five or more drinks at one time. In 2006, 13 percent of all secondary students said that when they drank, they usually drank five or more beers at one time, and 12 percent reported binge drinking of liquor. Binge drinking increased with grade level. Among seniors, 28 percent binged on beer and 21 percent binged on liquor. While the percentage of binge drinking of beer has fallen over the years, the level of binge

drinking of hard liquor has remained relatively stable since 1994 (exhibit 7). Among students in grades 4–6 in 2006, 22 percent had ever drunk alcohol, and 14 percent had drunk alcohol in the past school year. Use increased with grade level, as 9 percent of fourth graders had used alcohol in the school year, compared with 19 percent of sixth graders. The 2005 YRBS reported 80 percent of Texas high school students in grades 9–12 had ever drunk alcohol, 47 percent had drunk in the past month, and 30 percent had drunk five or more drinks in a row in the last month. Some 33 percent of boys and 26 percent of girls reported this binge drinking behavior.

The 2005 Texas college survey found that 84 percent had drunk alcohol in their lifetimes, and 66 percent had drunk in the past month. Almost 30 percent of college students reported binge drinking (38 percent males and 23 percent females). Although the legal drinking age is 21, 58 percent of college students ages 18 to 20 reported drinking an alcoholic beverage in the past month. The 2004–2005 NSDUH estimated that 49 percent of Texans age 12 and older had drunk alcohol in the past month, and 24 percent had drunk five or more drinks on at least 1 day (binge drinking) in the past month. Twenty-eight percent of individuals who were ages 12 to 20 reported past-month alcohol use, and 18 percent reported past-month binge drinking. The 2002–2005 NSDUH reported that 22 percent of residents in the Dallas metropolitan area ages 12 and older reported past-month binge drinking, as did 26 percent of Houston residents.

In 2006, 25 percent of all clients admitted to publicly funded treatment programs had a primary problem with alcohol (exhibit 33). The characteristics of alcohol admissions have changed over the years. In 1988, 82 percent of the clients were male, compared with 70 percent in 2006. The proportion of White clients declined from 63 percent in 1988 to 56 percent in 2006, and the proportion of Hispanic clients increased from 28 to 30 percent. During the same period, the proportion of Black clients increased from 7 to 13 percent. The average age increased from 33 to 37 years. The proportion of alcohol clients reporting no secondary drug problem dropped from 67 to 50 percent, but the proportion with a problem with cocaine (powder or crack) increased from 7 to 24 percent. Consuming cocaine and alcohol at the same time produces cocaethylene, which intensifies cocaine's euphoric effects.

### Heroin

The proportion of Texas secondary students reporting lifetime use of heroin dropped from 2.4

percent in 1998 to 1.5 percent in 2006. The 2005 YRBS found 3 percent of Texas high school students had ever used heroin, and the 2005 college survey found 5 percent of students had ever used heroin or other opiates. The 2002–2004 NSDUH reported 0.1 percent of Texans age 12 and older had used heroin in the past year.

Calls to the Texas Poison Center Network involving confirmed exposures to heroin ranged from 181 in 1998 to a high of 296 in 2000 but dropped to 195 in 2006 (exhibit 8). Fifteen percent of the 2006 heroin exposures involved inhalation (snorting or smoking), an increase from 9 percent in 2005.

Heroin is the primary drug of abuse for 10 percent of clients admitted to treatment. The characteristics of these addicts vary by route of administration, as exhibit 9 illustrates. Most heroin addicts entering treatment inject it, but the proportion inhaling heroin has increased from 4 percent of all heroin admissions in 1996 to 17 percent in 2006. During that time, the proportion of inhalers who are Hispanic has increased from 26 percent to 59 percent, and the average age of inhalers has decreased from 30 to 27 years. While the number of individuals who inhale heroin is small, note that the lag period between first use and seeking treatment for this group is 7 years, compared with 15 years for injectors. This shorter lag period means that, contrary to the street rumors that “sniffing or inhaling is not addictive,” inhalers can become dependent on heroin. They will either enter treatment sooner while still inhaling, or they will shift to injecting, thus increasing their risk of hepatitis C and HIV infection, becoming more impaired, and entering treatment later. In addition to the increase in inhaling, the age of all heroin admissions has decreased from 37 in 1996 to 34 in 2006. This increase in inhalers and decrease in age at admission is evidence of the emergence of younger heroin users. The proportion of all treatment clients with a primary problem with heroin who are Hispanic increased from 23 percent in 1996 to 52 percent in 2006 (exhibit 10).

In 2005, there were 421 deaths in Texas in which the death certificate included a mention of heroin, narcotics, opiates, or morphine (terms used by justices of the peace were not always as specific as desired) (exhibit 11). Some 57 percent were White, 33 percent were Hispanic, and 9 percent were Black; 78 percent were male. The average age was nearly 40.

Exhibit 8 shows that the proportion of items identified as heroin by DPS labs has remained low at 1–2 percent over the years. The predominant form of heroin in Texas is black tar, which has a dark

gummy, oily texture that can be diluted with water and injected. Exhibit 12 shows the decline in price over the years. Depending on the location, black tar heroin sells on the street for \$10–\$20 per capsule, \$100–\$300 per gram, \$1,000–\$4,500 per ounce, and \$25,000–\$40,000 per kilogram. An ounce of black tar costs \$1,000 in El Paso, \$3,600–\$4,000 in Midland, \$3,400–\$4,500 in Lubbock and Amarillo, \$1,000–\$2,500 in Houston, \$2,400 in Galveston, \$1,300 in Laredo, \$1,500 in McAllen, \$1,200–\$1,600 in Austin, and \$1,200–\$2,400 in San Antonio. Black tar heroin costs \$40,000–\$62,000 per kilogram in Dallas, \$25,000 in El Paso, \$33,000–\$50,000 in Houston, \$25,000–\$40,000 in McAllen, and \$50,000–\$62,000 in San Antonio.

Mexican brown heroin, which is black tar heroin that has been cut with lactose, diphenhydramine, or another substance and then turned into a powder to inject or snort, costs \$10 per cap and \$80–\$150 per gram. An ounce costs \$500–\$800 in San Antonio, \$800 in McAllen, \$1,000–\$1,500 in Houston, \$1,200–\$1,600 in Austin, and \$3,400–\$4,000 in Lubbock.

Colombian heroin sells for \$60–\$80 per gram and \$1,200 per ounce in McAllen and \$55,000–\$80,000 per kilogram in Houston.

Over time, the purity of Mexican heroin in Texas has increased, and the price has decreased. Exhibit 13 shows the purity and price of heroin purchased by the DEA in four Texas cities under the DMP. Heroin is much purer at the border in El Paso and decreases in purity as it moves north, since it is “cut” with other products as it passes through the chain of dealers. Although not shown in exhibit 13, there were two buys of South American heroin in Houston, with a purity of 84.1 percent and a price per milligram pure of \$0.45.

In the Dallas area, black tar heroin is readily available and purity is increasing, according to the DEA Field Division. The purity rose from 26.4 percent in FY 2005 to 69 percent in the second quarter of FY 2007.

In El Paso in 2007, heroin use is reported as low. Black tar heroin was reported by the DEA as being the predominant type available. Limited amounts of brown heroin have been seized at the border, and there have been no reports of South American, Southeast Asian, or Southwest Asian heroin.

The DEA Houston Field Division reported the supply of brown and black tar heroin was stable. Colombian heroin is transported through Houston to

the northeastern United States. There have been seizures of white heroin during the second quarter of 2006, but the origin of the heroin has not been specified.

There has been an outbreak among young Hispanics in Dallas of “Cheese heroin,” which is black tar heroin turned into brown heroin powder by mixing the tar with Tylenol PM, which is acetaminophen and diphenhydramine (such as Benadryl). Diphenhydramine has traditionally been used as a “cut” to turn tar into powder, but there seems to be no explanation why “Cheese” heroin contains the more expensive Tylenol PM rather than the generic diphenhydramine. Cheese heroin has resulted in 10 human exposure cases reported to poison control centers in 2006 and 4 through April 2007, as well as 237 heroin inhaler cases entering treatment in Dallas in 2005, 268 in 2006, and 195 through May 2007. Of the 2007 cases through May, 60 percent were male, 71 percent were Hispanic, and the average age was 26. Some 39 percent of the 2007 Dallas heroin inhaler cases were age 19 and younger. A similar mixture of heroin, Tylenol, and Sudafed and also called “Cheese” has been reported in Amarillo. In the Corpus Christi area, heroin injectors are adding Tylenol PM to the heroin to “keep them down for a longer period of time.”

In Austin, black tar heroin is plentiful and of good quality. It sells for \$100 per gram. Balloons sell for \$20. In the Holly Street and East 2nd area, the heroin is being cut with vitamin B and dried coffee in what is reported to be 60 percent heroin and 40 percent cut. However, some “good quality” heroin that sells for \$20 per balloon is being snorted by Anglo and Hispanic users who are younger than 30. There are also reports that black tar heroin from Chicago is being sold; it is reported to be a brownish-red color and so potent that some users are using less of this form of heroin to avoid an overdose. In the south Austin area, a strong powdered heroin that is being cut with an unknown dark powder is causing abscesses. In the same area, there is a good quality tar heroin that smells like vinegar when it is being cooked down. Powder heroin is selling for the same price as black tar, and there are reports of inhaling heroin dissolved in water (“aqua de chango”).

### Other Opiates

This group excludes heroin but includes opiates such as methadone, codeine, hydrocodone (Vicodin, Tussionex), oxycodone (OxyContin, Percodan, Percocet-5, Tylox), d-propoxyphene (Darvon), hydromorphone (Dilaudid), morphine, meperidine (Demerol), and opium.



The 2006 Texas secondary school survey found that 8 percent reported ever having drunk codeine cough syrup to get high, and 3 percent drank it in the past month. Lifetime use increased with grade level from 3 percent of 7th graders to 12 percent of 12th graders. The 2003–2004 NSDUH results reported that 4.6 percent of Texans aged 12 and older had used pain relievers, and 0.3 percent had used OxyContin for nonmedical purposes in the past year.

Hydrocodone is a larger problem in Texas than is oxycodone, but use of oxycodone is growing, as exhibit 14 shows. A study of oxycodone cases reported through the Texas Poison Center Network found that the proportion of calls that involved abuse of the drug more than doubled from 1998 to 2003. Oxycodone abuse cases tended to involve males, adolescents, exposures at other residences and public areas, referral by the poison center to a health care facility, and some sort of clinical effect; one-half involved no other substance (Forrester 2004).

Poison control cases involving methadone are increasing. Methadone overdoses could be occurring among new patients in narcotic treatment programs; they could be due to liquid methadone, which has been diverted from treatment; they could be caused by pain pills diverted from pain patients; or they could be overdoses by pain patients who took too many of the pills or took other drugs in combination with the methadone pills. Methadone is used in liquid and 40-milligram diskette forms in narcotic treatment programs, and the 40-milligram diskettes are also used in pain management. In addition, 5- and 10-milligram tablets are used for pain management. DEA's ARCOS reported that between 2000 and 2006 in Texas, the number of 5–10-gram methadone tablets distributed increased from 270 grams per 100,000 population to 1,019 per 100,000. Eighty-six percent of these tablets were distributed through pharmacies, and 13 percent were distributed through hospitals. The amount of 40-milligram diskettes increased from 276 grams per 100,000 in 2000 to 706 per 100,000 in 2006; 64 percent of the diskettes were distributed through narcotic treatment programs, and 35 percent were distributed through pharmacies to pain patients. The amount of methadone liquid distributed increased from 573 grams per 100,000 population in 2000 to 1,591 grams per 100,000 in 2006. Some 98 percent of the liquid methadone was distributed to narcotic treatment programs.

Between 1998 and 2006, the total number of calls to the poison control centers to identify substances or to seek advice or report abuse or misuse cases that involved methadone pills increased from 29 to 729,

while the number involving liquid as used in narcotic treatment programs rose from 5 to 13. Calls for unknown formulations increased from 51 to 192, and 40-milligram diskettes used in pain or in some narcotic treatment programs increased from 4 to 53.

Of the fentanyl calls in 2006, 89 involved patches, 26 involved lozenges, and 28 were unknown formulation.

Nearly 5 percent of all clients who entered publicly funded treatment during 2006 used opiates other than heroin. Of these, 101 used illegal methadone and 3,903 used other opiate drugs (exhibit 14). Those who reported a primary problem with other opiates were different from those who reported a problem with heroin. They were much more likely to be female, to be White, to have recently visited an emergency department, and to report more health and psychological or emotional problems in the month prior to entering treatment.

Of the 269 deaths with a mention of hydrocodone statewide in 2005, 55 percent were male, 85 percent were White, 6 percent were Black, 9 percent were Hispanic, and the average age was 42 (exhibit 14). Of the 62 deaths with a mention of oxycodone, 74 percent were male, 82 percent were White, 5 percent were Black, 13 percent were Hispanic, and the average age was 40. Of the 201 deaths with a mention of methadone, 66 percent were male, 82 percent were White, 3 percent were Black, 12 percent were Hispanic, and the average age was 39. There were 30 deaths with a mention of fentanyl in 2005. Of these, 57 percent were male, 90 percent were White, 3 percent were Black, 7 percent were Hispanic, and the average age was 43.

In the Dallas DEA Field Division, hydrocodone (10/325 milligrams), alprazolam (2 milligrams), and promethazine with codeine are the drugs most often diverted, followed by carisoprodol, diazepam (10 milligrams), Adderall (10 milligrams), methadone, and OxyContin (20 milligrams). In the Houston Field Division, hydrocodone, promethazine with codeine, and other codeine cough syrups are the most commonly abused pharmaceutical drugs. In the El Paso Field Division, morphine, Demerol, darvocet, codeine, Vicodin cough syrup, and fentanyl are the major diverted pharmaceutical drugs.

In Houston, promethazine or phenergan cough syrup with codeine sells for \$250 per pint, while an ounce sells for \$40 in Waco and \$20 in San Antonio. In the Houston Field Division, hydrocodone sells for \$2–\$10 per pill, and OxyContin costs \$1 per milligram. Dilaudid sells for \$10–\$15 per dose in McAllen.

DPS labs report increases in the number of exhibits of hydrocodone and methadone each year from 1998 through 2006, while the number of fentanyl exhibits has varied over the years (exhibit 14).

Methadone popsicles are being sold in East Texas for \$33. Ten-milligram methadone pills prescribed for cancer patients sell on the street for \$3 in Austin. Clonopin is being used to “enhance” the effects of methadone. OxyContin sells for \$3–\$4 per pill around the homeless shelters in Austin. In the Gulf Coast region, codeine cough syrup (“Lean”) remains the drug of choice for young Blacks, and liquid methadone is being sold on the streets for \$0.50 to \$1.00 per milliliter; 100 milliliters of methadone sell for \$30. It is unknown whether the methadone is being diluted with water. OxyContin is highly available in Bastrop County, which adjoins Travis County (Austin). Twenty milligrams of OxyContin sell for \$5–\$10 per pill, 40 milligrams sell for \$10–\$20, and 80 milligrams cost \$10–\$40. In the Dripping Springs area west of Austin, 7.5-milligram hydrocodone tablets sell for \$4.50. In the Houston area, use of OxyContin and hydrocodone is increasing, with more demand for detoxification and methadone treatment as a result. In the Dallas area, there is an increase in the use of Xanax and Valium among methadone clients.

### **Marijuana**

Among Texas students in 2006 in grades 4–6, 1.8 percent had ever used marijuana, with 1.2 percent reporting use in the past school year. Among Texas secondary students (grades 7–12), 26 percent had ever tried marijuana, and 11 percent had used in the past month. Percentages are shown by grade level in exhibit 16. In 2005, the YRBS reported that 42 percent of Texas high school students in grades 9–12 had ever smoked marijuana, and 22 percent had used in the past month. The 2005 Texas college survey reported that 37 percent of students had ever used marijuana, and 11 percent had used in the past month. The 2004–2005 NSDUH estimated that 9 percent of Texans age 12 and older had used marijuana in the past year, with 5 percent using in the past month.

The Texas Poison Center Network reported there were 133 calls confirming exposure to marijuana in 1998, compared with 544 in 2006 (exhibit 15).

Marijuana was the primary problem for 21 percent of admissions to treatment programs in 2006 (exhibit 33). The average age was 22. Some 41 percent were Hispanic, 30 percent were White, and 27 percent were Black. Seventy-nine percent had legal problems

or had been referred from the criminal justice system; these clients were less frequent users of marijuana than those who came to treatment for other reasons, and they reported fewer days of problems in the month prior to admission as measured on the Addiction Severity Index (ASI).

Cannabis was identified in 33 percent of all the exhibits analyzed by DPS laboratories in 2000 but in only 23 percent in 2006 (exhibit 15).

Exhibit 17 shows the decline in the price of a pound of marijuana since 1992.

The Houston DEA Field Division reports hydroponic marijuana is available, especially in Asian communities. In the Dallas-Fort Worth area, Mexican marijuana is readily available, and there are continuing seizures of domestically grown marijuana (both indoor and outdoor grown). In Austin, “dip” joints dipped in embalming fluid are available. In El Paso, Mexican-grown marijuana predominates.

Hydroponic marijuana sells for \$3,500–\$4,000 per pound in Houston, \$4,600 in McAllen, \$3,000–\$4,500 in Austin, and \$3,000–\$5,000 in San Antonio. In Austin, “Hydro Weed” sells for \$4,000 a pound and is reported to be “top of the line” quality. Blunts sell for \$15–\$20. The average price for a pound of commercial grade marijuana is \$140–\$160 in Laredo, \$180 in McAllen, \$330–\$450 in San Antonio, \$300–\$500 in Houston, \$200 in El Paso, \$375–\$600 in Midland, \$259–\$650 in Alpine, and \$340 in the Dallas-Fort Worth area.

### **Stimulants**

Amphetamine-type substances come in different forms and with different names. “Speed” (“meth,” “crank”) is a powdered methamphetamine of relatively low purity and is sold in grams or ounces. It can be snorted or injected. “Pills” can be pharmaceutical grade stimulants such as dextroamphetamine, Dexedrine, Adderall, or Ritalin (methylphenidate), or they can be methamphetamine powder that has been pressed into tablets and sold as amphetamines, “Yaba,” or ecstasy. Pills can be taken orally, crushed for inhalation, or dissolved in water for injection. There is also a damp, sticky powder of higher purity than “speed” that is known as “Base” in Australia and “Peanut Butter” in parts of the United States. “Ice,” also known as “crystal” or “Tina,” is methamphetamine that has been “washed” in a solvent to remove impurities; it has longer-lasting physical effects and purity levels above 80 percent. Ice can be smoked in a glass pipe, “chased” on aluminum foil, mixed with marijuana and smoked through a bong, or injected.

The Texas secondary school survey reported that lifetime use of “uppers” was 6 percent, and past-month use was 25 percent in 2006. The 2005 YRBS reported lifetime use of methamphetamine by Texas high school students was 8 percent. The 2005 Texas college survey reported that 10 percent had ever used stimulants and 2 percent had used in the past month. The 2002–2004 NSDUH reported that past-year non-medical use of stimulants (which included amphetamines, methamphetamine, methylphenidate, and prescription diet pills) in Texas was 1.4 percent, and past-year use of methamphetamine was 0.7 percent.

There were 144 calls to Texas poison control centers involving exposure to methamphetamine in 1998 and 336 in 2006 (exhibit 18). Of the 2006 calls, there were 50 mentions of ice or crystal. There were also 183 calls involving abuse or misuse of amphetamine pills, phentermine, Adderall, or Ritalin. Forrester’s study of all calls involving Ritalin to poison control centers in Texas between 1998 and 2004 found that 8.5 percent involved misuse and abuse. Of these Ritalin abuse/misuse calls, 62 percent involved males, 20 percent were younger than 13, 55 percent were age 13–19, and 25 percent were older than 19. Ninety-three percent had swallowed the drug, 7 percent had inhaled it, and 67 percent of these abuse/misuse callers also had used other substances. Compared with nonabuse calls, abusers were significantly more likely to be older, to have misused the drug while at school, and to suffer minor, moderate, or major effects from using the drug.

Methamphetamine/amphetamine admissions to treatment programs increased from 5 percent of all admissions in 2000 to 12 percent in 2006 (exhibit 18), and the average age of clients admitted for a primary problem with stimulants increased. In 1985, the average age was 26; in 2006, it was 30 (exhibit 19). The proportion of White clients rose from 80 percent in 1985 to 86 percent in 2006, while the proportion of Hispanics stayed at 11 percent, and the proportion of Blacks dropped from 9 to 1 percent. Unlike the other drug categories, more than one-half of these clients entering treatment were women (exhibit 33).

Users of amphetamines or methamphetamine tend to differ depending on their route of administration, as exhibit 19 shows. Methamphetamine injectors were more likely to have been in treatment before (62 percent readmissions) than amphetamine pill takers (43 percent), ice smokers (43 percent), or inhalers (40 percent).

More clients now smoke ice than inject speed (exhibit 20). The proportion smoking ice increased from less

than 1 percent in 1988 to 49 percent in 2006, and the percentage of clients injecting the drug dropped from 84 percent in 1988 to 36 percent in 2006.

Statewide, there were 17 deaths in which amphetamines or methamphetamines were mentioned in 1997, compared with 177 in 2005 (exhibit 18). Of the decedents in 2005, 69 percent were male, 85 percent were White, 14 percent were Hispanic, and the average age was 37.

Methamphetamine and amphetamine together represented 16 percent of all items examined by DPS laboratories in 2000, but the percentage increased to 23 percent in 2006 (exhibit 18). Twenty-two percent of the exhibits were methamphetamine, and 1 percent was amphetamine.

Methamphetamine is more of a problem in the northern half of the State, as exhibit 21 shows. Labs in the northern part of the State were also more likely to report analyzing substances that were ammonia or pseudoephedrine, chemicals used in the manufacture of methamphetamine. However, the proportions of methamphetamine exhibits elsewhere in the State are increasing each year, as shown by the changes between 2001 and 2006. As the source of methamphetamine shifts to Mexico, the problem will increase along the border and in southern Texas. In February 2007, the DEA reported its lab in Dallas had identified multiple submissions of large quantities of 99 percent pure ice along the lower Texas border.

A pound of domestic methamphetamine sells for \$6,000–\$8,000 in San Antonio, \$6,000–\$10,000 in Austin, \$6,000–\$7,500 in Laredo, and \$6,000–\$10,000 in Houston. An ounce of domestic methamphetamine sells for \$375–\$900 in Houston, \$800 in Midland, and \$700–\$1,000 in San Antonio.

A pound of ice sells for \$8,000–\$15,000 in Houston, \$8,000–\$12,000 in San Antonio, \$6,000–\$10,000 in Austin, and \$6,000–\$8,500 in McAllen. An ounce of ice sells for \$700–\$1,400 in Houston, \$1,000–\$1,500 in San Antonio, \$500–\$1,000 in Austin, and \$700 in McAllen.

The amount of methamphetamine produced in local laboratories is decreasing, although some local cooks are reported to be using pseudoephedrine from a product called “Breathing Blocks,” which may be an alias for “Tri-Hist Granules.” These granules come in 20-ounce bottles and contain 600 milligrams of pseudoephedrine per ounce. It is a soluble, edible corn-meal base utilized by veterinarians.

Statewide, the purity of methamphetamine has dropped from 56 percent in 2004 to 47 percent in 2006 because it is cut with methylsulfonylmethane (MSM). MSM is available in five-gallon quantities at local feed stores, and it is added to melted ice. The mixture is then spread out to dry like peanut brittle and then crushed up to look like a pure ice mixture.

The Dallas DEA Field Division reports that the availability of methamphetamine is decreasing and price is rising because of tighter border security. The price of a pound of methamphetamine has increased from \$10,500 to \$13,500 in Dallas. In Lubbock, the DEA reports ice is the primary threat in the area; methamphetamine use is reported in all ethnic and social/economic groups. In Tyler, methamphetamine continues to dominate the market, but there is a resurgence of powder cocaine, which ice smokers switch to in hopes of buffering the harmful effects of methamphetamine.

The Houston Field Division reports that users are increasingly turning to the purer Mexican methamphetamine. In Beaumont, the number of laboratories has decreased, and the domestic production that is occurring is by outlaw motorcycle gangs and independent producers. The El Paso Field Division reports methamphetamine traffickers operate out of California, Arizona, and Texas, with sources of supply being Mexico and California. Local street gangs distribute methamphetamine, and local production continues.

Ice use continues to increase in the Amarillo area, where it is the drug of choice and is injected or smoked. In Austin, methamphetamine sells for \$1,250 per ounce and \$120 per gram. In the Leander area, it sells for \$80 per gram and \$20 per "¼ bag." Ice in South Austin sells for \$120 for a "16th" (3/4 gram). The Lake Bastrop area is reported to be ranked fifth in terms of methamphetamine production in Texas. The methamphetamine from this area is made from Sudafed, phosphorus, and P2P and sells for \$100 per gram and \$1,400 per ounce. In the Gulf Coast areas of Harris, Angelina, and Brazoria Counties, the number of methamphetamine users is increasing. In the Corpus Christi area, use of methamphetamine and ice is increasing, with users reported to be eating it, smoking it, snorting it, and injecting it; the proportion of Hispanic users is increasing. There are also reports of a methamphetamine capsule from Mexico that is being called "Yaba," as well as a very strong "Turbo Meth" from Mexico that is said to be 25 times as strong as street methamphetamine. Methamphetamine is also seen in the Dallas area among homeless youths and among White injectors in rural areas north of Dallas.

## Depressants

This "downer" category includes three groups of drugs: barbiturates, such as phenobarbital and secobarbital (Seconal); nonbarbiturate sedatives, such as methaqualone, over-the-counter sleeping aids, chloral hydrate, and tranquilizers; and benzodiazepines, such as diazepam (Valium), alprazolam (Xanax), flunitrazepam (Rohypnol), clonazepam (Klonopin or Rivotril), flurazepam (Dalmane), lorazepam (Ativan), and chlordiazepoxide (Librium and Librax). Rohypnol is discussed separately in the Club Drugs section of this report.

The 2006 Texas secondary school survey reported lifetime use of downers was 6 percent, and past-month use was 36 percent. The 2005 Texas college survey reported 9 percent had ever used sedatives, and 2 percent had used them in the past month. The 2002–2004 NSDUH reported 0.2 percent of Texans age 12 and older had used sedatives in the past year.

A study of patterns of alprazolam abuse and drug identification (ID) calls received by several poison control centers between 1998 and 2004 found that of 25,954 alprazolam calls received, 42 percent were drug identification calls and 51 percent were human exposure calls, of which 18 percent were abuse calls. The number of drug ID calls and the number of abuse calls both increased during the 7-year period. Male patients accounted for 54 percent of abuse calls, and females accounted for 66 percent of nonabuse calls. Adolescents represented 43 percent of abuse calls but only 12 percent of nonabuse calls. Although the majority of both types of human exposures occurred at the patient's own residence, abuse exposures were more likely than other exposures to occur at school (9 vs. 1 percent) and public areas (6 vs. 1 percent) (Forrester 2006).

About 1 percent of the clients entering DSHS-funded treatment in 2006 had a primary problem with barbiturates, sedatives, or tranquilizers. These clients were the most likely to be female and they were highly impaired, based on their ASI scores (see exhibit 33).

Alprazolam, clonazepam, and diazepam are among the 15 most commonly identified substances according to DPS lab reports, although none of them represent more than 5 percent of all items examined in a year. Alprazolam (Xanax) cases outnumbered other benzodiazepine cases (exhibit 22).

In Austin, clonopin sells for \$1 per 100-milligram pill and \$2 per 200-milligram pill. Alprazolam sells for \$5 in San Antonio, \$2–\$4 in Houston, and \$20 in

McAllen. Outreach workers in the Galveston area report increasing abuse of alprazolam by women.

### Club Drugs and Hallucinogens

Exhibit 23 shows the demographic characteristics of clients entering DSHS-funded treatment programs statewide with a problem with a club drug. The row “Primary Drug” shows the percentage of clients citing a primary problem with the club drug shown at the top of the column. The rows under the heading “Other Primary Drug” show the percentage of clients who had a primary problem with another drug, such as marijuana, but who had a secondary or tertiary problem with one of the club drugs shown at the top of the table. Note that the treatment data uses a broader category, “Hallucinogens,” that includes lysergic acid diethylamide (LSD), dimethyltryptamine (DMT), STP, mescaline, psilocybin, and peyote.

Among the clients shown in exhibit 23, hallucinogen admissions were more likely to be male, gamma hydroxybutyrate (GHB) clients were the most likely to be White, phencyclidine (PCP) clients were the most likely to be Black, Rohypnol clients were the youngest, and GHB clients were the oldest. Users of PCP were the most likely to have a primary problem with PCP (49 percent); users of Rohypnol, ecstasy, and hallucinogens were more likely to have primary problems with marijuana. Users of GHB and ketamine tended to have a primary problem with methamphetamine (61 and 38 percent, respectively).

### Dextromethorphan

The most popular dextromethorphan (DXM) products are Robitussin-DM, Tussin, and Coricidin Cough and Cold Tablets HBP, which can be purchased over the counter and can produce hallucinogenic effects if taken in large quantities. Coricidin HBP pills are known as “Triple C’s” or “Skittles.”

The 2006 Texas school survey reported that 5 percent of secondary students indicated they had ever used DXM, and 2 percent had used in the past year. Past-month use peaked at 2 percent in the 10th grade. The 2005 Texas college survey found that 5 percent of the students had ever used DXM, and less than 1 percent had used in the past month.

Poison control centers reported the number of abuse and misuse cases involving DXM rose from 99 in 1998 to 213 in 2006. The average age was 22. The numbers of cases involving abuse or misuse of Coricidin HBP were 7 in 1998, 189 in 2005, and 567 in 2006. The average age in 2006 was 16, which

shows that youth can easily access and misuse this substance.

There were two deaths in 2005 in which dextromethorphan was one of the substances mentioned on the death certificate.

DPS labs examined 2 substances in 1998 that were DXM, compared with 13 in 1999, 36 in 2000, 18 in 2001, 42 in 2002, 10 in 2003, 15 in 2004, 10 in 2005, and 12 in 2006.

### Ecstasy (Methylenedioxymethamphetamine or MDMA)

The 2006 Texas secondary school survey reported that lifetime ecstasy use dropped from a high of 9 percent in 2002 to 5 percent in 2006, while past-year use dropped from 3 to 2 percent during that time. The 2005 YRBS reported that 8 percent of Texas high school students had ever used ecstasy; the 2005 Texas college survey found that 9 percent of college students had ever used ecstasy, and less than 1 percent had used in the past year. The 2002–2004 NSDUH survey reported 1.1 percent of Texans had used ecstasy in the past year.

The Texas Poison Center Network reported 23 calls involving misuse or abuse of ecstasy in 1998, compared with 46 in 1999, 119 in 2000, 155 in 2001, 172 in 2002, 284 in 2003, 302 in 2004, 343 in 2005, and 292 in 2006 (exhibit 24). In 2006, the average age was 21.

Exhibit 24 shows the number of persons admitted to treatment with a primary problem with ecstasy. Ecstasy is often used in combination with other drugs, and the increase in use and abuse of the drug is demonstrated in the increases in the numbers of persons seeking treatment who report a primary, secondary, or tertiary problem with ecstasy. In 1998, there were 63 of these polydrug admissions, as compared with 114 in 1999, 199 in 2000, 349 in 2001, 521 in 2002, 502 in 2003, 561 in 2004, 640 in 2005, and 1,212 in 2006 (exhibit 24). Exhibit 25 shows that ecstasy has spread outside the White club scene and into the Hispanic and Black communities, as evidenced by the declining proportion of White treatment clients.

In 1999, there were two death certificates that mentioned ecstasy or MDMA in Texas. There was 1 such death in 2000, compared with 5 in 2001, 5 in 2002, 2 in 2003, 9 in 2004, and 11 in 2005 (exhibit 24). Of the 2005 deaths, 60 percent were male, 55 percent were White, and the average age was 25; four mentioned cocaine as well as MDMA.

Exhibit 24 shows the substances identified by DPS labs. The labs identified MDMA in 5 exhibits in 1998, 107 exhibits in 1999, 387 in 2000, 817 in 2001, 632 in 2002, 490 in 2003, 737 in 2004, 821 in 2005, and 1,173 in 2006. Methylenedioxymphetamine (MDA) was identified in no exhibits in 1998, 31 in 1999, 27 in 2000, 60 in 2001, 106 in 2002, 94 in 2003, 67 in 2004, 85 in 2005, and 80 in 2006.

According to the Houston DEA Field Division, ecstasy is readily available at clubs, raves, and gyms, and use is stable among Galveston and Beaumont college students. While most tablets contain MDMA, some have high concentrations of caffeine or methamphetamine, with traces of ketamine in some tablets. Ecstasy is available in downtown Austin nightclubs, and use is stable. The primary source is Canada, but ecstasy also comes into South Texas from Mexico. Asian gangs in Houston control distribution.

In Austin, a new type of ecstasy called “White Nothing” sells for \$30–\$33. It has no markings or stamps on it and is reported to be “pure MDMA” and to be double or triple-stacked pills. A capsule pill that reportedly gives the same effects as ecstasy sells for \$5–\$20. It is said to be made of mixed chemicals, and it is called by names such as “2CI,” “2CB,” “2CE,” and “4 Dot.” This pill may be “Nexus” (4-Bromo-2,5-dimethoxyphenethylamine). The Dallas DEA Field Division reports that the drug is not only found in the club scene but is also sold on the street along with other illicit drugs.

Single dosage units of ecstasy sell for \$10–\$30 in Houston, \$25 in McAllen, \$20 in Laredo, and \$20 in Galveston.

#### *GHB, Gamma Butyrate Lactone (GBL), 1-4 Butanediol (1,4 BD)*

The 2005 Texas college survey reported that 2 percent of the students had ever used GHB, and 0 percent reported past-month use.

The number of cases of misuse or abuse of GHB or its precursors reported to the Texas Poison Center Network was 110 in 1998, 150 in 1999, 120 in 2000, 119 in 2001, 100 in 2002, 66 in 2003, 84 in 2004, 62 in 2005, and 43 in 2006. The average age of the abusers in 2006 was 31.

Adults and adolescents with a primary, secondary, or tertiary problem with GHB, GBL, or 1,4 BD are seen in treatment. In 1998, 2 were admitted, compared with 17 in 1999, 12 in 2000, 19 in 2001, 33 in 2002, 31 in 2003, 45 in 2004, 48 in 2005, and 111 in 2006.

In 2006, clients who used GHB tended to be the oldest of all the club drug users (average age 30) and were the most likely to be White (82 percent) (exhibit 23). GHB users were more likely to have used the so-called “hard-core” drugs; 43 percent had a history of injection drug use and 61 percent had a primary problem with amphetamines or methamphetamine. Because of the sleep-inducing properties of GHB, users will also use methamphetamine so they can stay awake while they are “high” on GHB, or they use GHB to “come down” from their use of methamphetamine.

There were three deaths that involved GHB in 1999, compared with five in 2000, three in 2001, two in 2002, two in 2003, three in 2004, and three in 2005. In 2005, one was male, all were White, and the average age was 39.

There were 18 items identified by DPS labs as being GHB in 1998, compared with 112 in 1999, 45 in 2000, 34 in 2001, 110 in 2002, 150 in 2003, 99 in 2004, 92 in 2005, and 89 in 2006. In 2006, 76 percent of the GHB items were identified in the DPS lab in the Dallas area, which shows use of GHB is centered in this area of the State. There were no items identified as GBL in 1998, compared with four in 1999, seven in 2000, seven in 2001, nine in 2002, five in 2003, two in 2004, one in 2005, and nine in 2006. There were no items identified as 1,4 BD in 1988, compared with 4 in 1989, 4 in 2000, 19 in 2001, 5 in 2002, and none in 2003, 2004, 2005, and 2006. In Houston, GHB sells for \$5–\$10 per dosage unit and \$725–\$1,000 per gallon.

#### *Ketamine*

The 2005 Texas college survey found that 2 percent of the students had ever used ketamine, and 0 percent reported past-month use.

Eight cases of misuse or abuse of ketamine were reported to Texas Poison Control Centers in 1998, compared with 7 in 1999, 15 in 2000, 14 in 2001, 10 in 2002, 17 in 2003, 7 in 2004, 5 in 2005, and 3 in 2006.

In 2006, there were 29 admissions to treatment with a primary, secondary, or tertiary problem with ketamine. The average age was 29; 52 percent were male; 33 percent had a history of injection drug use; 48 percent were White; 33 percent were Hispanic; and 18 percent were Black (exhibit 23). While nearly one-quarter had a primary problem with ketamine, 38 percent had a primary problem with methamphetamine and a secondary or tertiary problem with ketamine.

There were two deaths in 1999 that involved use of ketamine, compared with none in 2000, one in 2001, one in 2002, none in 2003, two in 2004, and one in 2005.

In 1998, two substances were identified as ketamine by DPS labs. There were 26 in 1999, 49 in 2000, 120 in 2001, 116 in 2002, 85 in 2003, 79 in 2004, 19 in 2005, and 140 in 2006.

Ketamine costs \$2,200–\$2,500 per liter in Fort Worth and \$65 per vial in Tyler, with a dose selling for \$20 per pill or gram.

### *LSD and Other Hallucinogens*

The Texas secondary school survey shows that use of hallucinogens (defined as LSD, PCP, mushrooms, etc.) continues to decrease. Lifetime use peaked at 7.4 percent in 1996 and dropped to 4.7 percent in 2006. Past-month use dropped from a peak of 2.5 percent in 1998 to 1.4 percent in 2006. The 2005 Texas college survey found that 10 percent of college students had ever used hallucinogens, and less than 1 percent had used in the past month. The 2002–2004 NSDUH reported past-year use by Texans age 12 and older at 0.3 percent.

The Texas Poison Center Network reported 82 mentions of abuse or misuse of LSD in 1998, compared with 113 in 1999, 97 in 2000, 70 in 2001, 129 in 2002, 20 in 2003, 22 in 2004, 38 in 2005, and 332 in 2006. There were also 98 cases of intentional misuse or abuse of hallucinogenic mushrooms reported in 1998, 73 in 1999, 110 in 2000, 94 in 2001, 151 in 2002, 130 in 2003, 172 in 2004, 82 in 2005, and 96 in 2006. The average age in 2006 was 19 for the LSD cases and 21 for the mushroom cases.

The number of adults and youths with a primary, secondary, or tertiary problem with hallucinogens entering treatment was decreasing but increased in 2006. There were 636 such admissions in 2000, 486 in 2001, 436 in 2002, 319 in 2003, 266 in 2004, 223 in 2005, and 338 in 2006. Of the hallucinogens admissions in 2006, the average age was 25; 69 percent were male; 60 percent were White; 14 percent were Hispanic; and 24 percent were Black (exhibit 23). Seventy-two percent were referred from the criminal justice or legal system, and 22 percent had a history of injection drug use.

Statewide, there were two deaths in 1999 with a mention of LSD. No deaths with a mention of LSD have been reported since then.

DPS labs identified 69 substances as LSD in 1998, compared with 406 in 1999, 234 in 2000, 122 in 2001, 11 in 2002, 10 in 2003, 25 in 2004, 14 in 2005, and 1 in 2006.

A dosage unit of LSD sells for \$5–\$7 in Austin and \$8–\$12 in San Antonio.

### *PCP*

The 2002–2004 NSDUH reported past-year use of PCP in Texas at 0.1 percent.

The Texas Poison Center Network reported cases of “Fry,” “Amp,” “Water,” “Wack,” “PCP,” or formaldehyde. Often, marijuana joints are dipped in formaldehyde that contains PCP, or PCP is sprinkled on the joint or cigarette. The number of poison cases involving PCP increased from 102 in 1998 to 182 in 2006 (exhibit 26).

Exhibit 26 shows the number of persons entering treatment with a primary problem with PCP. Of the clients in 2006, 82 percent were Black; 42 percent were male; and 56 percent were involved in the criminal justice system (exhibit 23). While 49 percent reported a primary problem with PCP, another 17 percent reported a primary problem with marijuana, which demonstrates the link between these two drugs as “Fry,” “Amp,” or “Water.”

There were three death certificates in 1999 and eight in 2005 that mentioned PCP (exhibit 26). Among these decedents in 2005, 87 percent were male, 87 percent were Black, and the average age was 29.

DPS labs identified 10 substances as PCP in 1998 and 168 in 2006 (exhibit 26).

According to the DEA, PCP costs \$30 per dosage unit in McAllen and \$45–\$80 per ounce in San Antonio.

### *Rohypnol*

Rohypnol (flunitrazepam) is a benzodiazepine that was never approved for use in the United States. The drug is legal in Mexico, but since 1996, it has been illegal to bring it into the United States. Rohypnol continues to be a problem along the Texas-Mexico border. As shown in exhibit 27, the 2006 secondary school survey found that students from the border area were about three times more likely to report Rohypnol use than those living elsewhere in the State (6 vs. 2 percent lifetime, and 2 vs. 1 percent

current use). Use in both the border and nonborder areas has declined since its peak in 1998. Among Texas college students in 2005, 1 percent reported lifetime use of Rohypnol, and 0 percent reported past-month use.

The number of confirmed exposures to Rohypnol reported to the Texas Poison Control Centers peaked at 102 in 1998; 22 cases were reported in 2005, and 10 were reported in 2006. The average age in 2006 was 18; 44 percent were male, and 70 percent lived in counties on the border. A study of all the exposure calls between 1998 and 2003 found that a significantly higher proportion of flunitrazepam abuse and malicious use calls occurred in border counties. The majority of the abuse calls involved males, while the majority of malicious use calls involved females. Most abuse calls involved adolescents, while the majority of the malicious use calls involved adults. Abuse cases occurred most frequently at the patient's own residence or at school, while malicious use occurred most often in public areas, with the patient's own residence ranking second (Forrester 2004). This analysis provides evidence of two patterns of Rohypnol use: (1) recreational use and abuse by adolescent males and (2) use of the drug with criminal intent on adult women.

The number of youths and adults admitted into treatment with a primary, secondary, or tertiary problem with Rohypnol has varied: 247 in 1998, 364 in 1999, 324 in 2000, 397 in 2001, 368 in 2002, 331 in 2003, 221 in 2004, 198 in 2005, and 278 in 2006. In 2006, clients abusing Rohypnol were among the youngest of the club drug patients (age 20), and they were Hispanic (95 percent), which reflects the availability and use of this drug along the border (exhibit 23). Some 68 percent were involved with the criminal justice or legal system. While 12 percent of these clients said that Rohypnol was their primary problem drug, 44 percent reported a primary problem with marijuana, and 22 percent had a problem with heroin.

DPS lab exhibits for Rohypnol numbered 43 in 1988, 56 in 1999, 32 in 2000, 33 in 2001, 26 in 2002, 17 in 2003, 17 in 2004, 10 in 2005, and 9 in 2006. This decline in the number of Rohypnol seizures parallels the declines seen in other indicators.

Although Roche is reported to no longer be making the 2-milligram Rohypnol tablet (a favorite with abusers), generic versions are still produced, and the blue dye added to the Rohypnol tablet to warn potential victims is not in the generic version. Unfortunately, the dye is not proving effective, since people intent on committing sexual assault may

employ blue tropical drinks and blue punches into which Rohypnol can be slipped.

Rohypnol sells for \$2–\$4 per pill in San Antonio.

### Other Abused Substances

#### *Inhalants*

The 2006 elementary school survey found that 10 percent of students in grades 4–6 had ever used inhalants, and 7 percent had used in the school year. The 2006 secondary school survey found that 17 percent of students in grades 7–12 had ever used inhalants, and 6 percent had used in the past month. Inhalant use exhibits a peculiar age pattern not observed with any other substance. The prevalence of lifetime and past-month inhalant use was higher in the lower grades and lower in the upper grades (exhibit 28). This decrease in inhalant use as students age may be partially related to the fact that inhalant users drop out of school early and hence are not in school in later grades to respond to school-based surveys. In addition, the Texas school surveys have consistently found that 8th graders reported use of more different kinds of inhalants than any other grade, and this may be a factor that exacerbates the damaging effects of inhalants and leads to dropping out. The 2005 YRBS reported that 13 percent of Texas high school students had ever used inhalants. Respondents to the 2005 Texas college survey reported 4 percent lifetime and 0.3 percent past-month use of inhalants. The 2002–2004 NSDUH estimate was that 0.7 percent of Texas age 12 and older had used inhalants in the past year.

The poison control center data for 2006 show that there were 16 calls for exposure to automotive products such as carburetor cleaner, transmission fluid, and gasoline; the average age was 22. There were 15 calls for misuse of air fresheners or dusting sprays (average age of 21); 20 calls for abuse or misuse of paint or toluene (average age 30); 15 calls for misuse of Freon (average age 26); and 8 calls involving gases such as butane, helium, nitrous oxide, and propane (average age 33).

Inhalant abusers represented 0.1 percent of the admissions to treatment programs in 2006. The clients tended to be male (62 percent) and Hispanic (77 percent). The overrepresentation of Hispanics is related to the fact that DSHS developed and funded treatment programs targeted specifically to this group. The average age of the clients was 25. Seventy percent were involved with the criminal justice system; the average education was 9.2 years;



12 percent were homeless; and 30 percent had a history of injection drug use.

In 2000, there were 12 deaths involving misuse of inhalants, compared with 15 in 2001, 8 in 2002, 13 in 2003, 11 in 2004, and 17 in 2005. The categorization of inhalant deaths is difficult and leads to underreporting. However, of those reported in 2005, the average age was 38; 88 percent were male; 59 percent were White; 24 percent were Hispanic.

### *Steroids*

The Texas school survey reported that 2 percent of all secondary students surveyed in 2006 had ever used steroids, and less than 1 percent had used steroids during the month before the survey. The 2005 Texas college survey found less than 1 percent had ever used steroids, and 0.1 percent had used in the past month.

There were 36 persons admitted to DSHS-funded treatment in 2006 with a primary, secondary, or tertiary problem with steroids. Forty-two percent were male, 78 percent were White, and 14 percent were Hispanic; the average age was 31. Some 75 percent were involved with the criminal justice or legal system; 50 percent had a primary problem with steroids; and 22 percent had a primary problem with marijuana.

The NFLIS data for Texas reported testosterone was the steroid most likely to be seized and submitted for forensic testing, although it only constituted 0.19 percent of all the items tested in 2006. Most of the steroid seizures were tested in DPS laboratories located on the border.

Anabolic steroids cost \$1–\$3 per tablet and \$5–\$10 per milliliter in Houston.

### *Carisoprodol (Soma)*

Poison control centers confirmed that exposure cases of intentional misuse or abuse of the muscle relaxant carisoprodol (Soma) increased from 83 in 1998 to 282 in 2006. Forrester's study of carisoprodol cases reported to Texas poison control centers between 1998 and 2003 found that 51 percent of these cases involved males, and 83 percent involved persons older than 19. Carisoprodol is a substance that tends to be abused in combination with other substances. Only 39 percent of the cases involved that one drug; all the others involved combinations of drugs (Forrester 2004).

In 2005, carisoprodol was mentioned on 99 death certificates, up from 51 in 2003. Only four of the death certificates mentioned only carisoprodol. Hydrocodone and alprazolam were substances most often mentioned along with carisoprodol on the other death certificates. Of the 2005 deaths, 49 percent were male, 87 percent were White, 8 percent were Hispanic, 3 percent were Black, and the average age was 40.

DPS lab exhibits of carisoprodol reported to NFLIS increased from 13 in 1998 to 90 in 1999, 153 in 2000, 202 in 2001, 232 in 2002, 277 in 2003, 253 in 2004, 336 in 2005, and 558 in 2006.

According to the Dallas DEA Field Division, Soma sells for \$4 per tablet, and Soma with codeine sells for \$2–\$5.

### INFECTIOUS DISEASES RELATED TO DRUG ABUSE

Forty-eight percent of the 200 clients in Texas narcotic treatment programs said they were positive for hepatitis C, and 54 percent said a doctor had told them they had liver problems (Maxwell and Spence 2006).

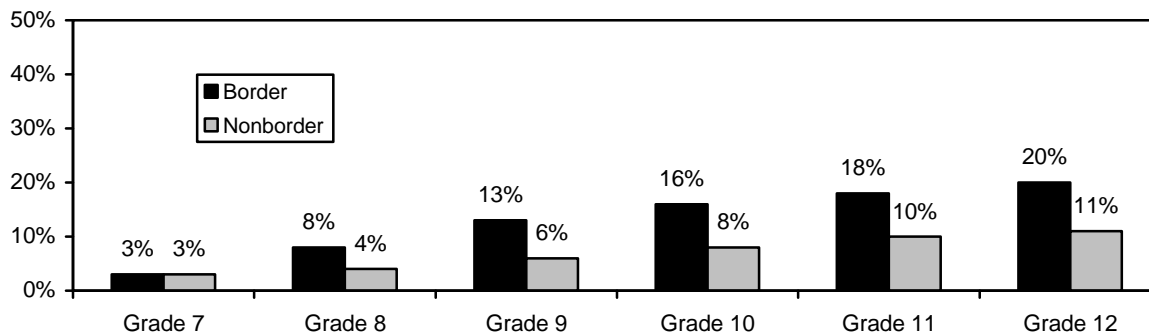
The proportion of HIV cases among men having sex with men increased from 46 percent in 1999 to 63 percent in 2005 (exhibit 29), and the proportion of AIDS cases among men having sex with men increased from 50 percent in 1999 to 54 percent in 2005 (exhibit 30). Of the HIV cases in 2005, 20 percent were heterosexual mode of exposure, and 12 percent were among injection drug users (IDUs). Of the 2005 AIDS cases, 21 percent were heterosexual and 17 percent were IDUs. HIV cases that later seroconverted to AIDS are excluded from the HIV exhibits.

Persons infected with HIV or AIDS are more likely to be persons of color. Among HIV cases in 2005, 39 percent were Black, 34 percent were White, and 26 percent were Hispanic (exhibit 31). Among AIDS cases in 2005, 39 percent were Black, 31 percent were White, and 30 percent were Hispanic (exhibit 32).

The proportion of adult needle users entering DSHS-funded treatment programs decreased from 32 percent in 1988 to 16 percent in 2006. Sixty percent of heroin injectors were people of color, while injectors of stimulants and cocaine were far more likely to be White.

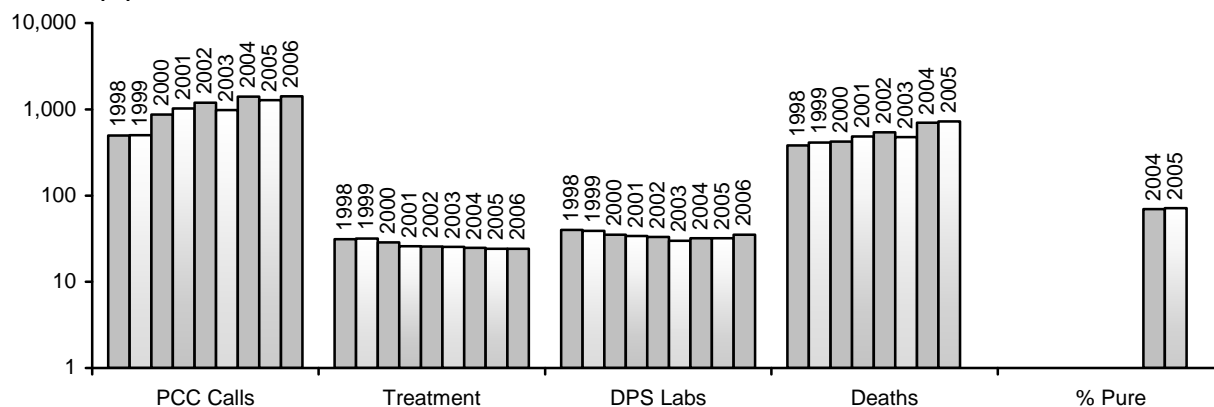
*For inquiries concerning this report, please contact Jane C. Maxwell, Ph.D., Senior Research Scientist, Gulf Coast Addictive Technology Transfer Center, University of Texas at Austin, Suite 333, 1717 West 6th Street, Austin, TX 78703, Phone : 512-232-0610, Fax: 512-232-0617, E-mail: <jcmaxwell@sbcglobal.net>.*

**Exhibit 1. Percentage of Border and Nonborder Texas Secondary Students Who Had Ever Used Powder or Crack Cocaine, by Grade: 2006**



SOURCE: Department of State Health Services

**Exhibit 2. Texas Poison Center (PC) Calls, Treatment Admissions (%), DPS Lab Exhibits, Deaths, and Purity (%) for Cocaine: 1998–2006**



SOURCES: Texas Poison Center Network; Department of State Health Services, Department of Public Safety, Bureau of Vital Statistics; and Drug Enforcement Administration

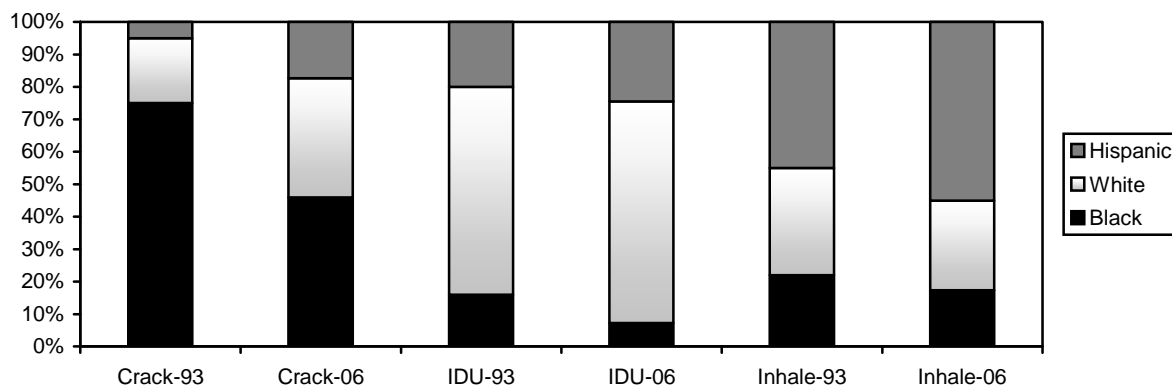
**Exhibit 3. Characteristics of Clients Admitted to TDSHS-Funded Treatment with a Primary Problem with Cocaine, by Route of Administration: 2006**

Characteristic	Crack Cocaine Smoke	Powder Cocaine Inject	Powder Cocaine Inhale	Cocaine All <sup>1</sup>
# Admissions	11,678	1,141	7,066	20,202
% of Cocaine Admits	58	6	35	100
Lag-1st Use to Tmt-Yrs.	13	15	9	11
Average Age	38	36	29	35
% Male	52	58	48	51
% Black	46	7	17	33
% White	36	67	27	34
% Hispanic	17	24	54	31
% CJ Involved	42	51	58	49
% Employed	16	16	35	23
% Homeless	19	14	5	14

<sup>1</sup>Total includes clients with "other" routes of administration.

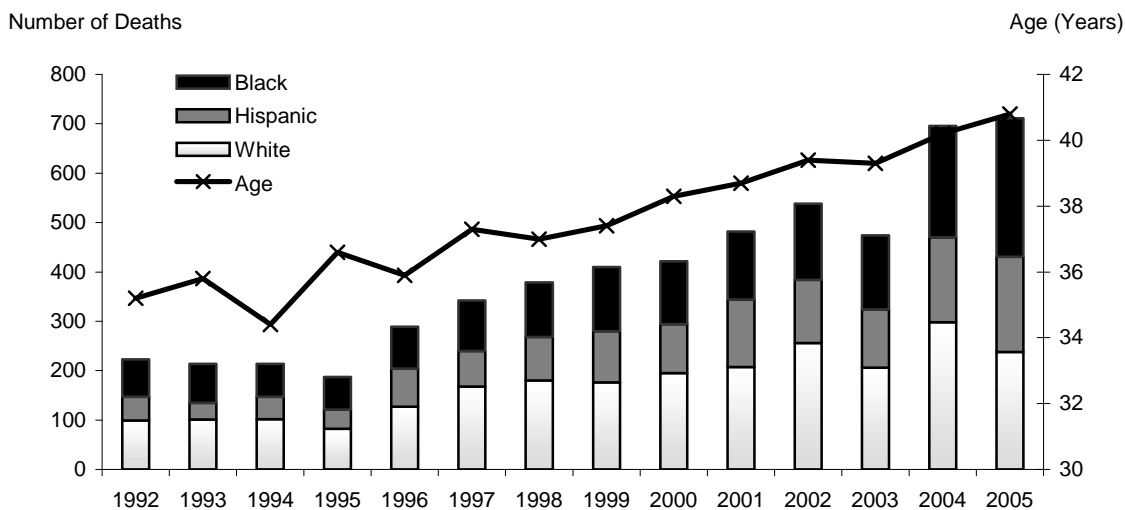
SOURCE: Department of State Health Services

**Exhibit 4. Routes of Administration of Cocaine by Race/Ethnicity from DSHS Treatment Admissions: 1993–2006**



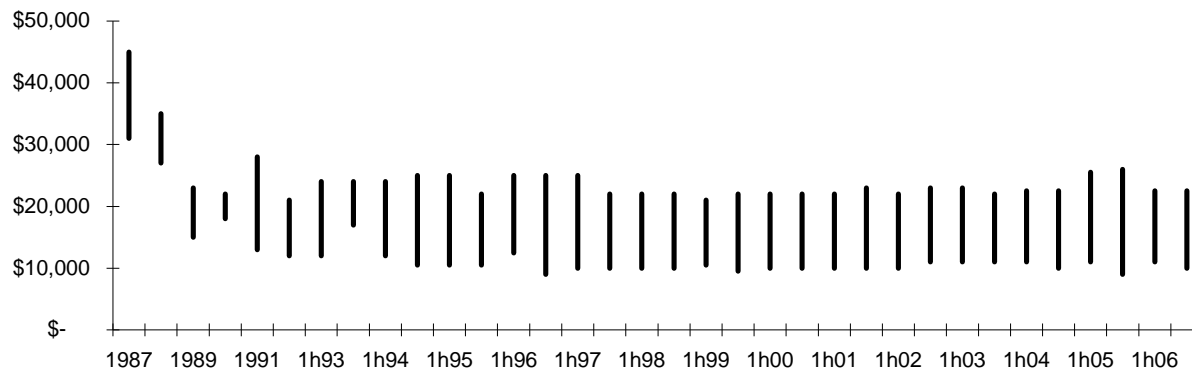
SOURCE: Department of State Health Services

**Exhibit 5. Age and Race/Ethnicity of Persons Dying with a Mention of Cocaine in Texas: 1992–2005**



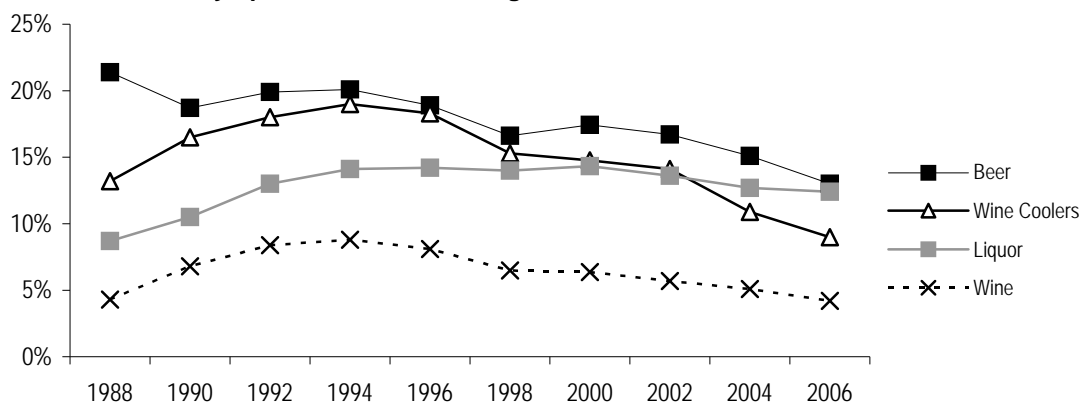
SOURCE: Department of State Health Services

**Exhibit 6. Price of a Kilogram of Cocaine in Texas as Reported by the DEA: 1987–2006<sup>1</sup>**



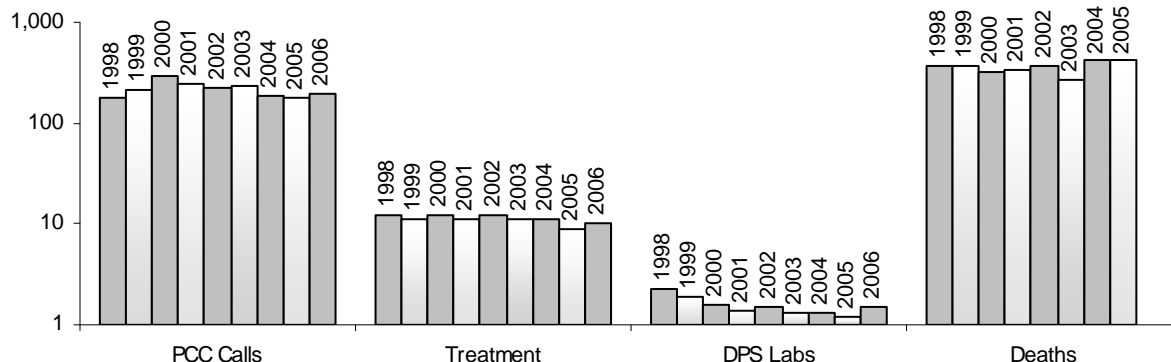
SOURCE: DEA

**Exhibit 7. Percentage of Texas Secondary Students Who Reported They Normally Consumed Five or More Drinks at One Time, by Specific Alcohol Beverage: 1988–2006**



SOURCE: Department of State Health Services

**Exhibit 8. Texas Poison Control Calls, Treatment Admissions, DPS Lab Exhibits, and Deaths for Heroin: 1998–2006**



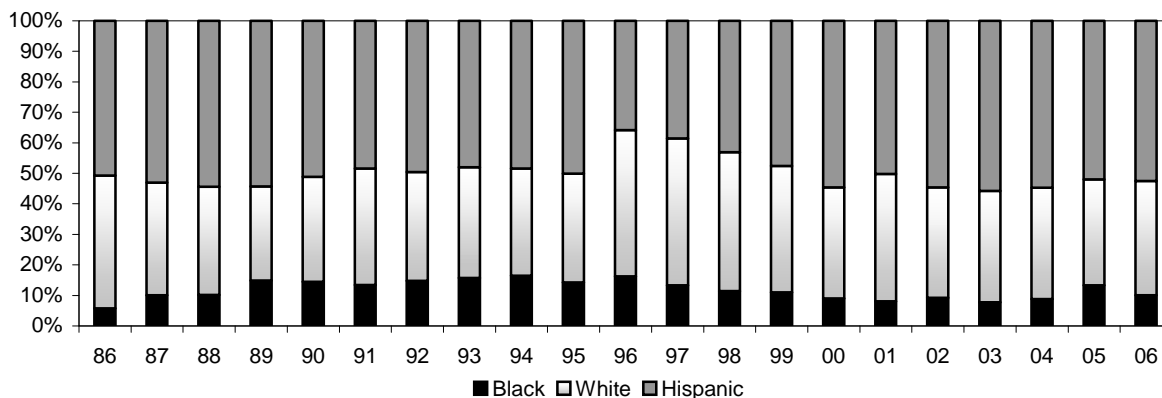
SOURCES: Texas Poison Center Network; Department of State Health Services; Department of Public Safety; and Bureau of Vital Statistics

**Exhibit 9. Characteristics of Clients Admitted to DSHS-Funded Treatment with a Primary Problem with Heroin, by Route of Administration: 2006**

Characteristic	Inject	Inhale	Smoke	All Routes <sup>1</sup>
# Admissions	6,418	1,358	82	7,922
% of Heroin Admits	81	17	1	100
Lag-1st Use to Tmt-Yrs.	15	7	10	13
Average Age	35	28	30	34
% Male	66	56	68	64
% Black	8	19	15	10
% White	40	21	54	37
% Hispanic	51	59	27	52
% CJ Involved	32	32	33	32
% Employed	12	20	15	14
% Homeless	13	7	23	12

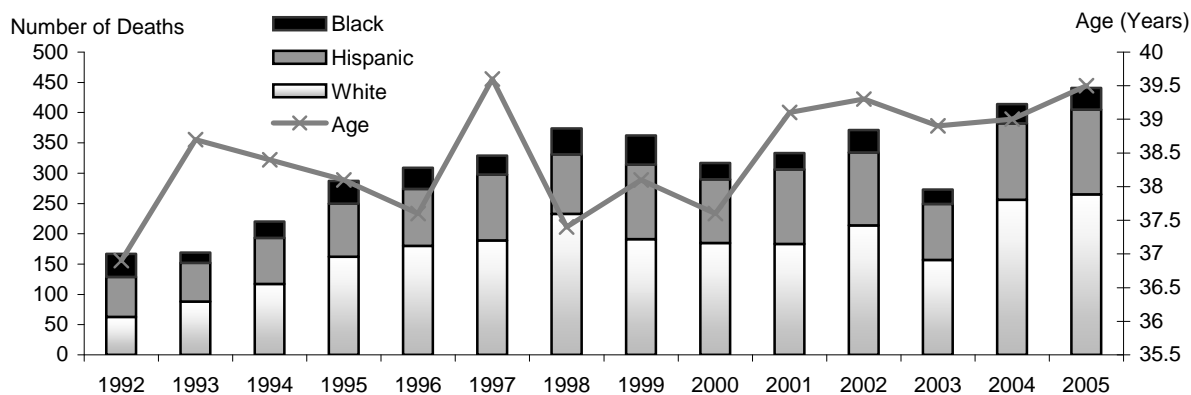
<sup>1</sup>Total includes clients with other routes of administration.  
SOURCE: Department of State Health Services

**Exhibit 10. Heroin Admissions to DSHS-Funded Treatment, by Race/Ethnicity: 1986–2006**



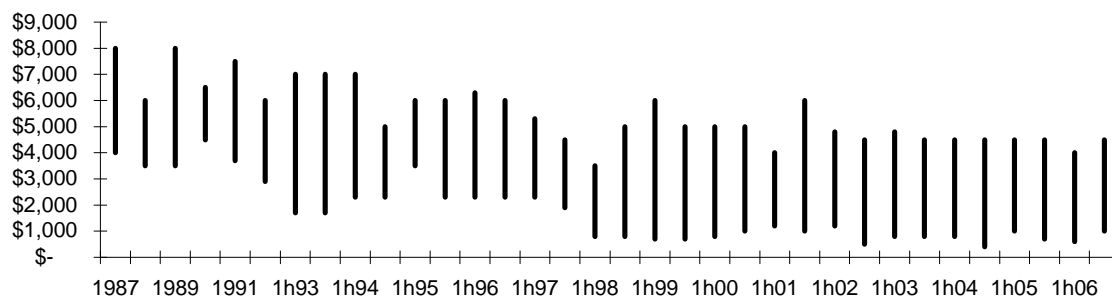
SOURCE: Department of State Health Services

**Exhibit 11. Age and Race/Ethnicity of Persons Dying with a Mention of Heroin in Texas: 1992–2005**



SOURCE: Department of State Health Services

**Exhibit 12. Price of an Ounce of Mexican Black Tar Heroin in Texas as Reported by the DEA: 1987–2006<sup>1</sup>**



SOURCE: DEA

**Exhibit 13. Price and Purity of Heroin Purchased in Dallas, El Paso, Houston, and San Antonio by the DEA: 1995–2005**

City/Price/Purity	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Dallas											
Purity (%)	6.8	3.5	7.0	11.8	14.0	16.0	13.4	17.2	13.3	16.3	11.6
Price/Milligram Pure	\$2.34	\$6.66	\$4.16	\$1.06	\$1.01	\$0.69	\$1.36	\$0.75	\$0.98	\$0.90	\$1.11
El Paso											
Purity (%)					56.7	50.8	41.8	40.3	44.7	50.5	44.7
Price/Milligram Pure					\$0.49	\$0.34	\$0.44	\$0.27	\$0.40	\$0.27	\$0.40
Houston											
Purity (%)	16.0	26.1	16.3	34.8	17.4	18.2	11.3	28.2	27.4	24.8	24.4
Price/Milligram Pure	\$1.36	\$2.15	\$2.20	\$2.43	\$1.24	\$1.14	\$1.51	\$0.64	\$0.45	\$0.44	\$1.11
San Antonio											
Purity (%)									8.2	6.4	11.2
Price/Milligram Pure									\$1.97	\$2.24	\$0.56

SOURCE: DMP, DEA

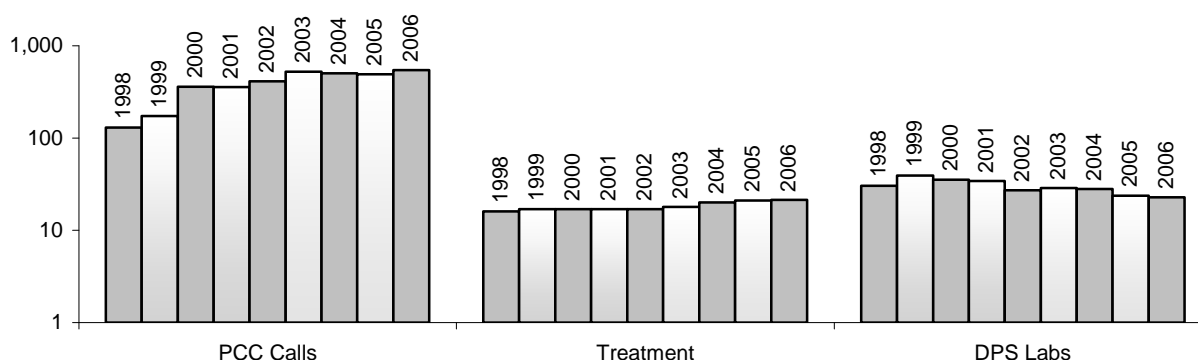
**Exhibit 14. Hydrocodone, Oxycodone, Methadone, and Fentanyl Indicators in Texas: 1998–2006**

Indicator	1998	1999	2000	2001	2002	2003	2004	2005	2006
Poison Center Network Cases of Abuse and Misuse									
Fentanyl			9	2	3	11	17	10	36
Hydrocodone	192	264	286	339	429	414	516	505	657
Methadone	17	15	30	27	50	41	69	69	73
Oxycodone	12	26	22	34	68	64	77	50	68
DSHS Treatment Admissions									
Methadone	55	69	44	52	75	86	63	91	101
"Other Opiates" <sup>1</sup>	553	815	890	1,386	2,084	2,794	3,433	3,482	3,903
Deaths with Mention of Substance (DSHS)									
Fentanyl	8	5	4	7	22	10	32	30	
Hydrocodone	5	25	52	107	168	140	201	269	
Methadone	30	32	62	90	134	122	164	201	
Oxycodone	1	8	20	40	56	60	66	62	
Drug Exhibits Identified by DPS Laboratories									
Fentanyl	0	3	1	7	4	2	14	7	14
Hydrocodone	52	479	629	771	747	1,212	1,598	1,789	2,324
Methadone	1	19	22	42	58	70	130	133	169
Oxycodone	10	36	72	115	106	174	270	237	264

<sup>1</sup>"Other Opiates" refers to those other than heroin.

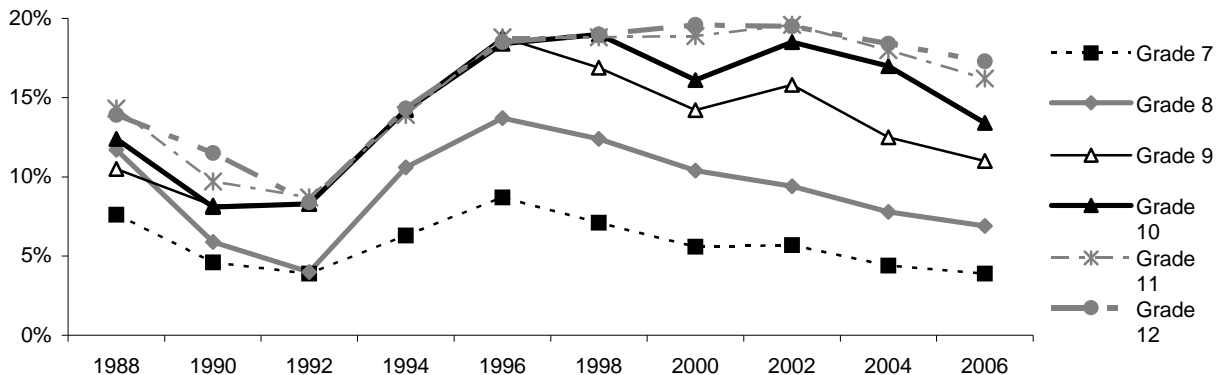
SOURCES: Texas Poison Center Network; Department of State Health Services; and Department of Public Safety

**Exhibit 15. Texas Poison Center (PC) Calls, Treatment Admissions (%), and DPS Lab Exhibits (%) for Cannabis: 1998–2006**



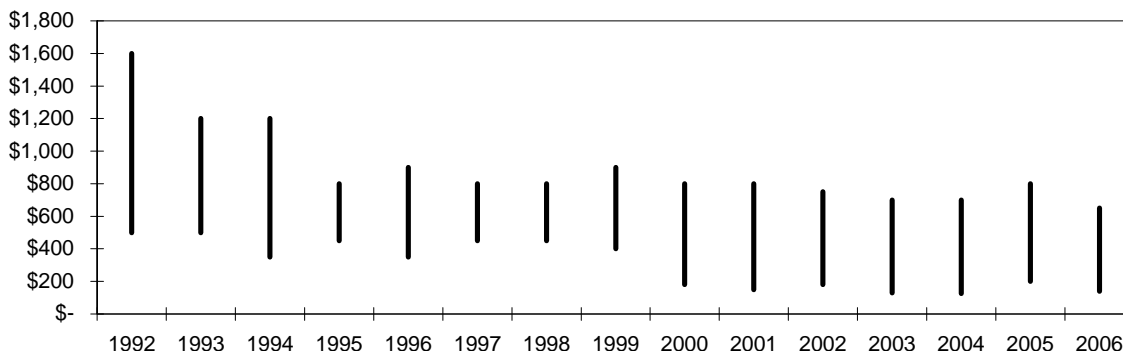
SOURCES: Texas Poison Center Network, Department of State Health Services, and Department of Public Safety

**Exhibit 16. Percentage of Texas Secondary Students Who Had Used Marijuana in the Past Month, by Grade: 1988–2006**



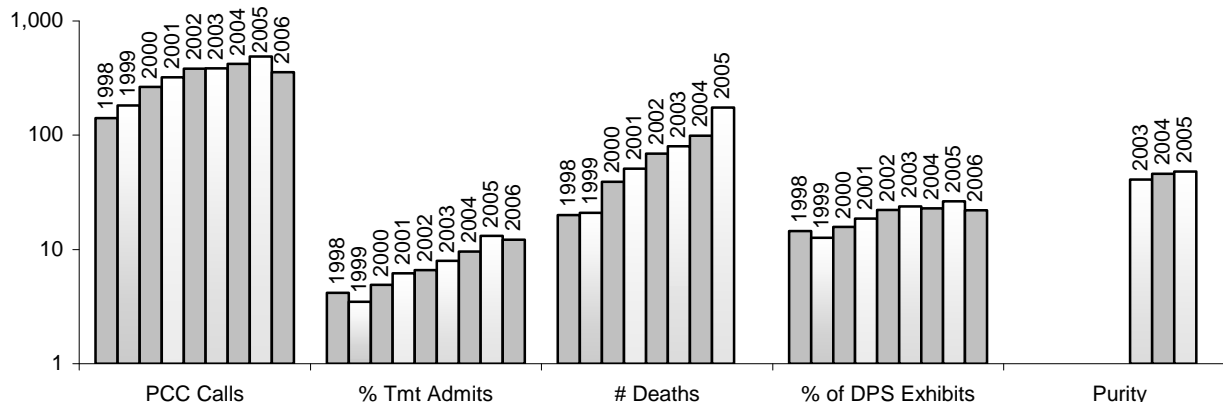
SOURCE: Department of State Health Services

**Exhibit 17. Price of a Pound of Commercial Grade Marijuana in Texas as Reported by the DEA: 1992–2006**



SOURCE: DEA

**Exhibit 18. Texas Poison Center (PC) Calls, Treatment Admissions (%), Deaths, DPS Lab Exhibits (%), and Methamphetamine Purity: 1998–2006**



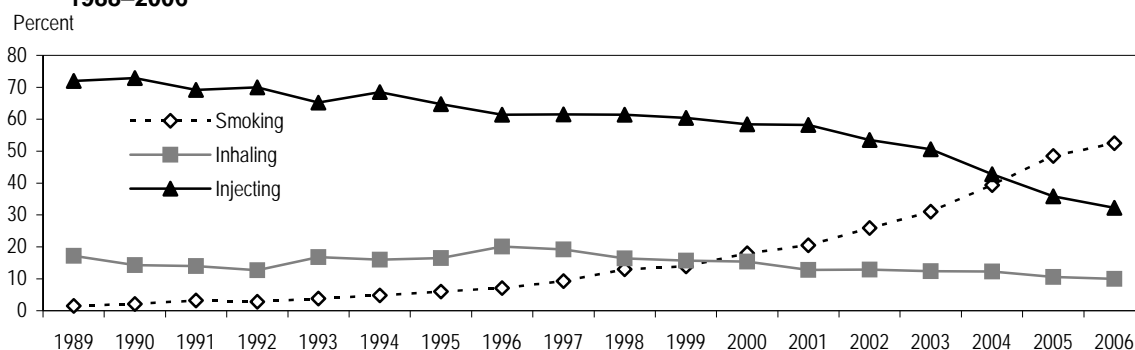
SOURCES: Texas Poison Center Network, Department of State Health Services, Bureau of Vital Statistics, and Department of Public Safety

**Exhibit 19. Characteristics of Clients Admitted to DSHS-Funded Treatment with a Primary Problem of Amphetamines or Methamphetamine, by Route of Administration: 2006**

Characteristic	Smoke	Inject	Inhale	Oral	All Routes <sup>1</sup>
# Admissions	5,301	3,255	1,012	520	10,096
% of Stimulant Admits	53	32	10	5	100
Lag-1st Use to Tmt-Yrs.	9	13	10	12	11
Average Age-Yrs.	29	32	31	33	30
% Male	41	47	44	50	44
% Black	2	1	1	3	1
% White	82	92	87	81	86
% Hispanic	5	6	10	14	11
% CJ Involved	58	62	67	67	61
% Employed	6	23	36	33	28
% Homeless	9	12	6	10	10

<sup>1</sup>Total includes clients with "other" routes of administration.  
SOURCE: Department of State Health Services

**Exhibit 20. Route of Administration of Methamphetamine by Clients Admitted to DSHS-Funded Programs: 1988–2006**



SOURCE: Department of State Health Services

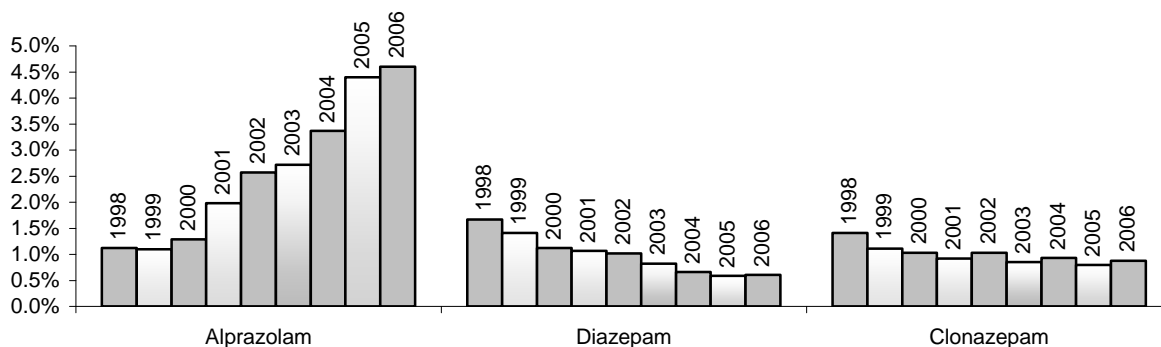
**Exhibit 21. Percent of Items Analyzed by Texas DPS Laboratories as Methamphetamine, by County and City: 2001 and 2006**

County/City	2001	2006
Hidalgo (McAllen)	0%	1%
Webb (Laredo)	1%	1%
El Paso (El Paso)	4%	3%
Nueces (Corpus Christi)	9%	12%
Harris (Houston)	6%	10%
Travis (Austin)	17%	25%
McLennan (Waco)	19%	27%
Smith (Tyler)	16%	28%
Dallas (Dallas)	32%	31%
Midland (Odessa)	12%	16%
Taylor (Abilene)	41%	45%
Lubbock (Lubbock)	23%	24%
Potter (Amarillo)	41%	37%

SOURCE: NFLIS



**Exhibit 22. Benzodiazepines Identified by DPS Labs in Texas: 1998–2006**



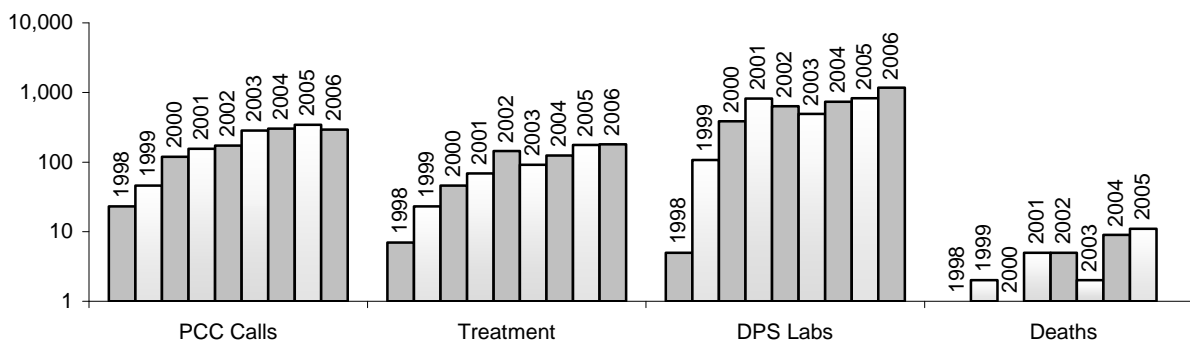
SOURCE: NFLIS

**Exhibit 23. Characteristics of Clients Admitted to DSHS-Funded Treatment with a Primary, Secondary, or Tertiary Problem with Club Drugs: 2006**

Characteristic	GHB	Hallucinogens	Ecstasy	PCP	Rohypnol	Ketamine
# Admissions	111	338	1,212	223	278	29
% Male	39	69	55	42	76	52
% White	82	60	47	12	4	48
% Hispanic	8	14	19	5	95	35
% Black	4	24	32	82	1	17
Average Age (Years)	30	25	23	26	20	29
% Criminal Justice Involved	65	72	74	56	68	62
% History Needle Use	43	22	7	5	19	35
% Primary Drug=Club Drug	21	22	15	49	12	24
Other Primary Drug						
% Marijuana	3	32	37	17	44	10
% Alcohol	6	11	8	3	4	0
%(Meth)amphetamines	61	16	14	2	0	38
% Powder Cocaine	1	10	14	13	16	3
% Crack Cocaine	3	5	6	10	1	0
% Heroin	3	1	1	0	22	21
% Other Opiates	1	2	1	2	1	0

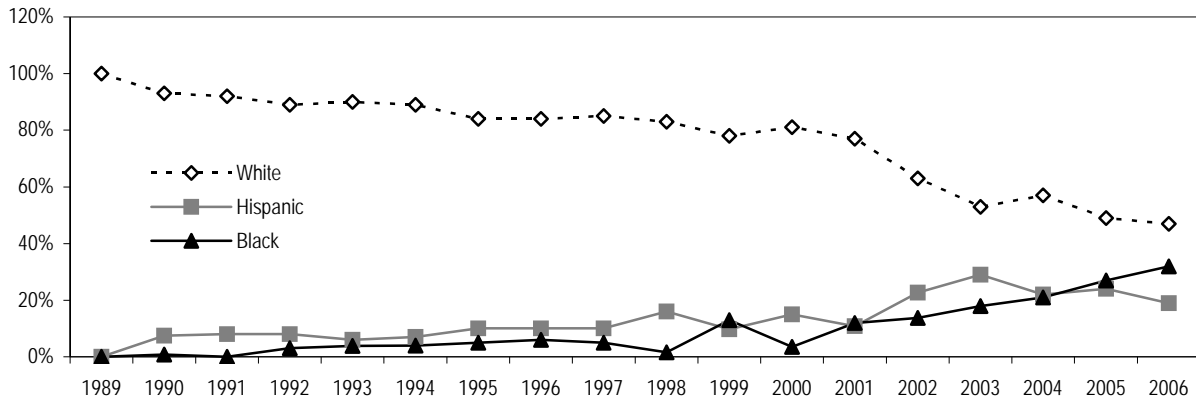
SOURCE: Department of State Health Services

**Exhibit 24. Texas Poison Center (PC) Calls, Treatment Admissions, DPS Lab Exhibits, and Deaths for Ecstasy: 1998–2006**



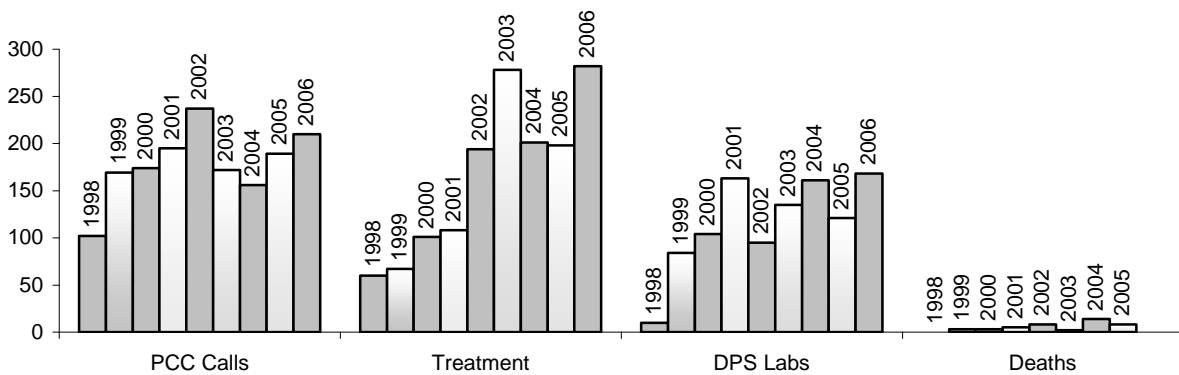
SOURCES: Texas Poison Center Network, Department of State Health Services, Department of Public Safety, and Bureau of Vital Statistics

**Exhibit 25. Characteristics of Clients Admitted to DSHS-Funded Treatment with a Problem with Ecstasy: 1989–2006**



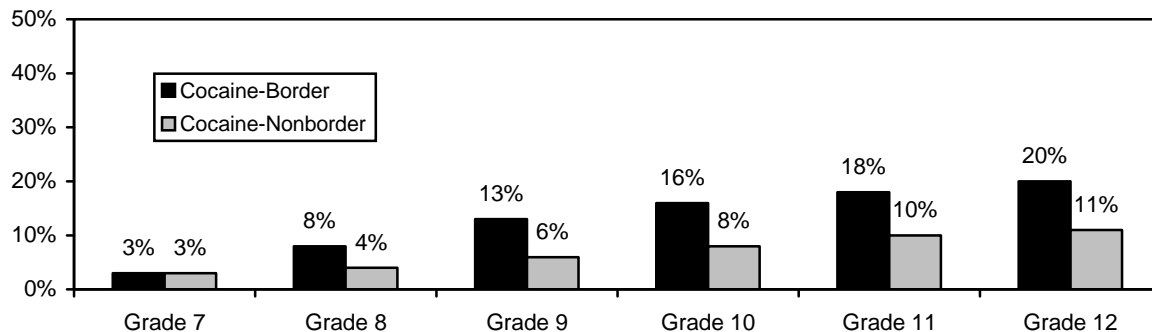
SOURCE: Department of State Health Services

**Exhibit 26. Texas Poison Center (PC) Calls, Treatment Admissions, DPS Lab Exhibits, and Deaths for PCP: 1998–2005**



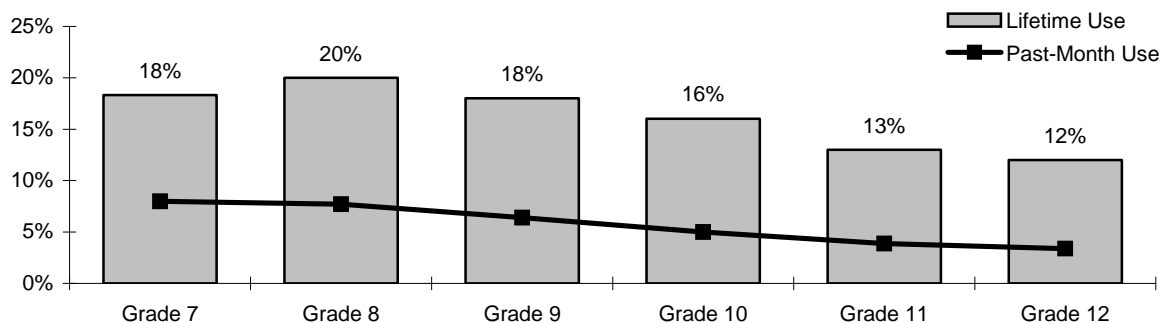
SOURCES: Texas Poison Center Network, Department of State Health Services, Department of Public Safety, and Bureau of Vital Statistics

**Exhibit 27. Percentage of Border and Nonborder Texas Secondary Students Who Had Ever Used Rohypnol, by Grade: 2006**



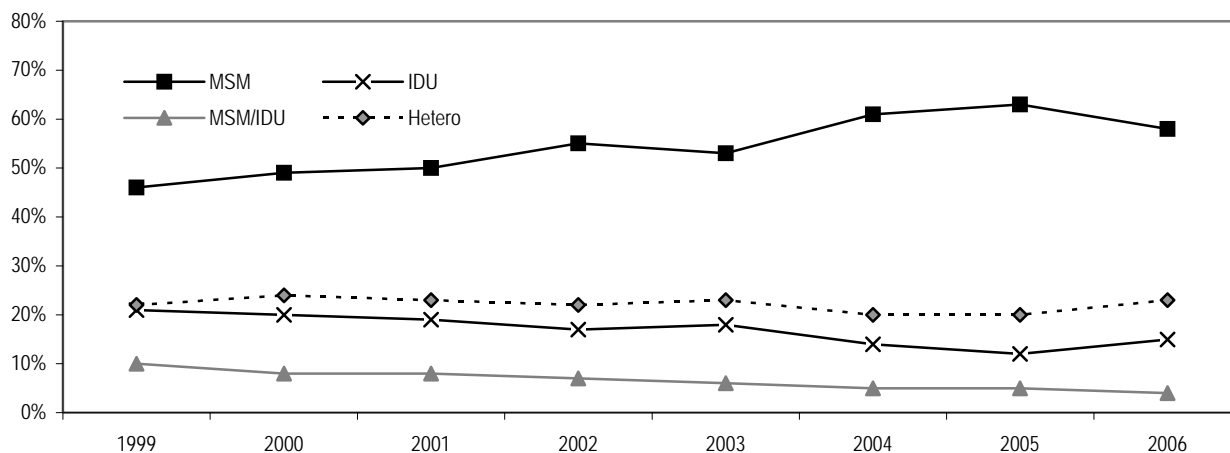
SOURCE: Department of State Health Services

**Exhibit 28. Percentage of Texas Secondary Students Who Had Used Inhalants Ever or in the Past Month, by Grade: 2006**



SOURCE: Department of State Health Services

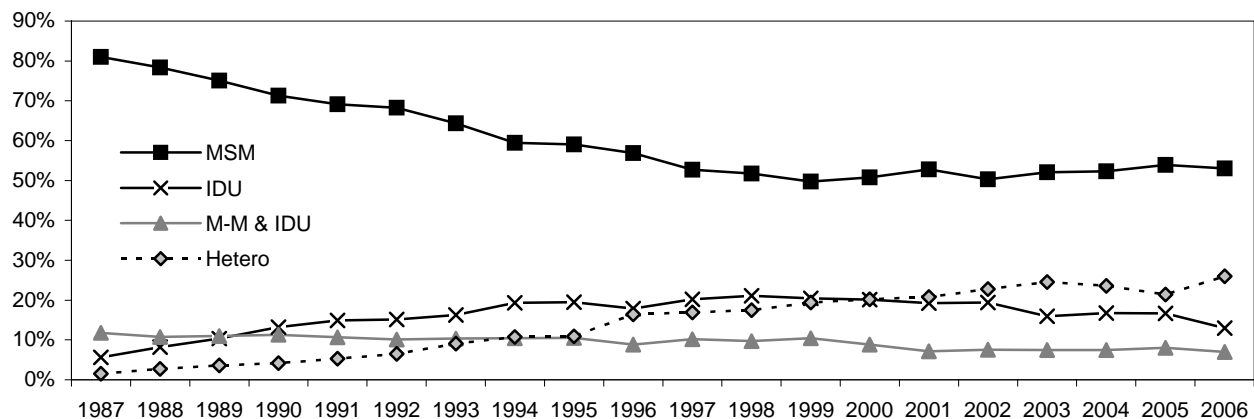
**Exhibit 29. Percentages of HIV Cases,<sup>1</sup> by Selected Modes of Exposure: 1999–2006**



<sup>1</sup>Cases with risk not classified excluded.

SOURCE: Department of State Health Services

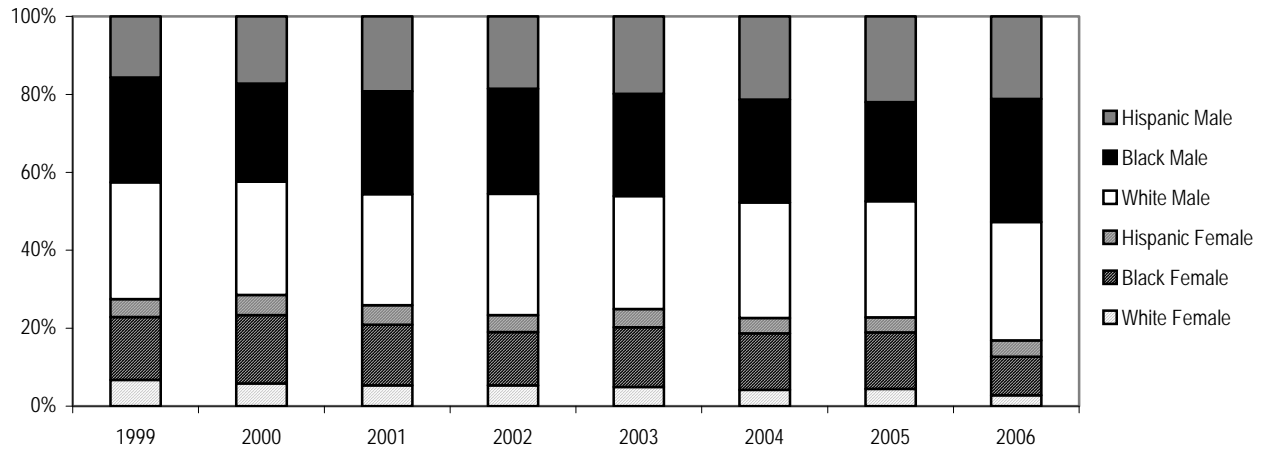
**Exhibit 30. AIDS Cases<sup>1</sup> in Texas, by Mode of Exposure: 1987–2006**



<sup>1</sup>Cases with risk not classified excluded.

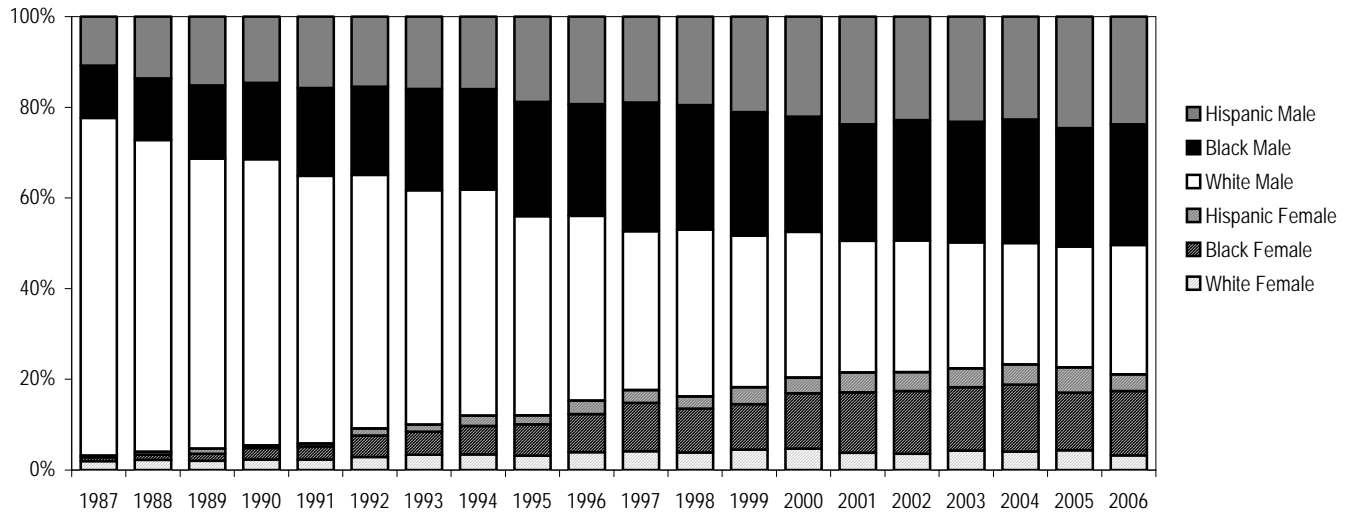
SOURCE: Department of State Health Services

**Exhibit 31. Texas Male and Female HIV Cases by Race/Ethnicity: 1999–2006**



SOURCE: Department of State Health Services

**Exhibit 32. Texas Male and Female AIDS Cases by Race/Ethnicity: 1987–2006**



SOURCE: Department of State Health Services

**Exhibit 33. Adult and Youth Admissions to DSHS-Funded Treatment Programs: 2006**

Primary Substance	Total Admissions	% of All Admissions	Avg. Age	Avg. Age 1 <sup>st</sup> Use	Avg Lag 1 <sup>st</sup> Use to Adm.	% No Prior Treatment	% Married	% Male
Total	85,646	100.0	31.8	19.0	13	49.0	20.0	60.2
Heroin	8,144	9.6	34.3	21.2	14	25.1	16.3	63.6
Non-Rx Methadone	101	0.1	31.9	25.4	7	34.7	22.8	55.4
Other opiates	3,903	4.6	34.7	25.0	10	36.0	24.3	44.3
Alcohol	21,536	25.3	37.0	15.9	22	47.7	20.5	70.3
Depressants	1,216	1.4	28.4	22.4	7	44.1	18.3	51.8
Amph./Metham.	10,456	12.2	30.4	20.4	11	51.1	18.3	43.9
Powder Cocaine	8,353	9.8	29.8	20.8	10	55.0	23.1	50.5
Crack Cocaine	12,331	14.4	37.6	25.4	13	36.8	17.4	51.6
Marijuana	18,381	21.4	22.2	14.2	9	68.5	21.8	71.0
Hallucinogens	359	0.1	28.0	19.0	10	48.6	16.2	67.6
Other	675	0.8	28.4	20.2	8	32.0	13.3	63.0

Primary Substance	% Using Needles	% IV Drug Use History	% Black	% White	% Hispanic	% Employed	Avg. Months Employed Over Last 12	% CJ/Legal System-Involved
Total	16.0	27.3	19.1	47.9	31.1	32.6	4.1	56.5
Heroin	79.1	82.8	10.2	36.5	51.8	14.3	2.4	32.2
Non-Rx Methadone	21.8	47.5	8.9	66.3	24.8	20.8	3.3	42.6
Other opiates	15.3	36.0	9.2	81.2	8.5	17.2	3.5	33.2
Alcohol	5.0	18.7	12.5	55.5	29.7	35.6	5.1	54.9
Depressants	5.6	20.6	9.0	70.6	18.3	26.8	3.1	54.9
Amph./Metham.	32.0	46.4	1.5	85.5	11.3	28.1	3.7	61.5
Powder Cocaine	12.8	19.6	15.7	31.8	50.4	32.9	4.2	58.5
Crack Cocaine	5.4	27.0	45.4	36.2	17.0	15.9	3.0	42.8
Marijuana	1.5	5.1	26.6	30.4	40.9	54.7	5.0	79.1
Hallucinogens	13.5	20.3	47.3	31.1	21.6	35.1	3.7	62.2
Other	4.9	11.1	17.6	34.7	46.5	26.7	3.8	71.3

Primary Substance	Avg. Education	% Homeless	Income at Admissions	No. Pregnant at Admission	% on Medication	% ER Visit	% Health Problems
Total	11.3	10.2	\$9,418	1,176	18.2	28.0	24.5
Heroin	11.3	11.5	\$4,048	211	27.4	28.4	32.1
Non-Rx Methadone	11.6	9.9	\$4,282	4	23.8	41.6	37.6
Other opiates	12.2	6.5	\$6,831	68	31.7	44.5	38.5
Alcohol	11.8	12.2	\$16,341	150	18.8	31.3	27.6
Depressants	11.6	5.7	\$9,569	33	28.6	35.0	32.4
Amph./Metham.	11.7	9.5	\$6,069	320	15.9	31.3	23.3
Powder Cocaine	11.1	5.7	\$7,810	264	14.5	28.2	20.0
Crack Cocaine	11.6	18.6	\$8,684	334	22.8	34.0	30.4
Marijuana	10.3	5.4	\$6,675	364	10.1	14.0	13.1
Hallucinogens	11.2	9.5	\$3,934	1	23.0	23.0	17.6
Other	11.1	5.9	\$11,589	16	51.6	14.2	16.7

Primary Substance	% Employment Problems	% Family/ Marital Problems	% Social/Peer Problems	% Psych./ Emotional Problems	% Reporting Drug/Alcohol Problems
Total	49.2	46.2	40.0	37.2	60.6
Heroin	5.9	11.8	11.8	11.8	5.9
Non-Rx Methadone	71.9	68.0	64.0	42.2	85.4
Other opiates	58.4	58.4	53.5	52.5	78.2
Alcohol	65.2	62.9	56.2	52.9	78.8
Depressants	49.7	46.7	42.2	39.8	65.5
Amph./Metham.	55.9	53.0	45.6	47.5	50.6
Powder Cocaine	49.3	47.3	37.7	42.7	59.8
Crack Cocaine	43.1	42.7	34.4	33.7	55.6
Marijuana	59.9	56.2	50.4	50.0	73.2
Hallucinogens	31.2	27.3	20.4	18.2	39.8
Other	41.9	41.9	40.5	28.4	48.6

SOURCE: Department of State Health Services

# Patterns and Trends of Drug Abuse in Washington, DC

Erin Artigiani, M.A.; Cindy Voss, M.A.; Maribeth Rezey, B.A.; Joseph Tedeschi; and Eric Wish, Ph.D.<sup>1</sup>

## ABSTRACT

*Cocaine/crack, marijuana, and heroin continued to be the main illicit drug problems in Washington, DC in 2006. The use and availability of PCP continues to fluctuate. Cocaine remained one of the most serious drugs of abuse in the District, as evidenced by the fact that more adult arrestees tested positive for cocaine than any other drug in 2006 and early 2007 (about 40 percent). Also, more seized items tested positive for cocaine (44 percent) than any other drug, as reported by NFLIS in CY 2006. Overdose deaths were also more likely to be related to cocaine than any other drug (64 percent) in 2005. Juvenile arrestees were more likely to test positive for marijuana than any other drug. The percentages of juveniles testing marijuana-positive have remained about the same for the past few years (around 50 percent). While other parts of the country have seen shifts in the use of methamphetamine, use remains low and confined to isolated communities in DC. The percentage of students reporting lifetime use of cocaine, marijuana, and methamphetamine in the DC YRBS decreased from 2003 to 2005. Marijuana and cocaine accounted for nearly all of the \$26 million worth of drugs seized by Washington/Baltimore High Intensity Drug Trafficking Area (W/B HIDTA) Initiatives in 2006. According to the W/B HIDTA, approximately 50 drug trafficking organizations (DTOs) (mostly African-American) were identified in 2005. The most frequent drugs trafficked by these DTOs were cocaine, marijuana, heroin, and PCP. Recent interviews with criminal justice and public health contacts confirm these trends. Findings show that biggest concerns among these key contacts are crack, heroin, PCP, and marijuana. New trends noted by these key contacts are blunts laced with amphetamines and other drugs, and the increase in gang activity in the Hispanic population. Misuse of pharmaceuticals among adolescents in the District and surrounding areas of Maryland and Virginia were also areas of concern.*

<sup>1</sup>The authors are affiliated with the Center for Substance Abuse Research, College Park, Maryland. Some background material was taken from prior CEWG reports.

## INTRODUCTION

### Area Description

The Nation's capital is home to approximately 581,530 people residing in 8 wards that remain largely distinguishable by race and economic status (U.S. Bureau of the Census, 2001 update; *Washington Post* May 17, 2007). The northwest part of the city tends to be home to residents who are wealthy and White, while the northeast and southeast tend to be home to residents who are poor and African-American. Slightly more females than males live in DC, and the majority of the District's population continues to be African-American (55 percent). Nearly one-third of the population are White (32 percent), and the remainder are primarily Hispanic or Asian (U.S. Bureau of the Census, 2000 Census; *Washington Post* May 17, 2007). The population of the District is slightly older than the Nation's general population. One in five residents are younger than 18, and slightly more than 12 percent are age 65 and older. More than one-third (39.1 percent) of adults age 25 or older have at least a bachelor's degree (Pach et al. 2002).

Data from the 2000 census reveal several key demographic changes since 1990. The total population decreased by 5.7 percent during the 1990s, from 606,900 in 1990 to 572,059 in 2000. The number of African-Americans decreased by 14.1 percent, the number of Asians increased by 38.6 percent, and the number of Hispanic residents grew by 37.4 percent. The White population also increased by a more modest 2 percent during this time period (Pach et al. 2002).

Alcohol abuse costs the District approximately \$700 million per year, and illicit drug use costs about \$500 million per year. In fiscal year (FY) 2005, the city spent approximately \$360 million to address the problem. According to the National Survey on Drug Use and Health, the percentage of DC residents reporting abuse or dependence on illicit drugs decreased 24 percent from 21,000 in 2002 to 16,000 in 2004; 45,000 reported past-year alcohol abuse or dependence, a slight decrease from 2002 (4 percent from 47,000) (SAMHSA, OAS, NSDUH 2002–2004). City officials report that many of these individuals have co-occurring substance abuse and mental health disorders. The DC Household Survey indicates that first-time drug use occurs at a younger age in the District than in the rest of the Nation (Citywide Comprehensive Substance Abuse Strategy for the District of Columbia 2003).

Reports involving substantiated substance abuse allegations were filed on 380 families in FY 2005 (exhibit 1). These reports involved 592 children. The number of children in families with substance abuse problems has stayed about the same since FY 2003, but the number of newborns testing positive or born addicted has nearly doubled from 80 in FY 2003 to 151 in FY 2005 (exhibit 1). This increase, however, may be more a product of changes in agency policies, thus making staff better able to identify these children, than an actual increase in newborns exposed to substance abuse.

Homicides in the District decreased sharply from 248 in 2003 to 198 in 2004 and continued to decline in 2005 to 196. The Metropolitan Police Department (MPD) reports that 1 in 10 homicides in 2005 were drug-related a decrease from 1 in 3 in 2002. Drugs were listed as the second most frequently mentioned motive in juvenile homicides after retaliation (MPD October 2006).

The Washington/Baltimore HIDTA has identified 50 drug trafficking organizations operating in Washington, DC (*Washington/Baltimore HIDTA 2008 Threat Assessment*). The major drug problems in the District continue to be cocaine/crack, marijuana, and heroin. The use and availability of phencyclidine (PCP) continues to fluctuate. The use of club drugs like methylenedioxymethamphetamine (MDMA) also appears to be continuing to decrease. However, there was a marked increase in the seizure of prescription drugs. Pain medications accounted for one-third of these seizures.

Information from the Department of Justice's National Drug Intelligence Center (NDIC) suggests that the District has a wide variety of drug transportation options, including an extensive highway system, three major airports, and rail and bus systems. While both NDIC and ethnographic information suggest that traffickers extensively use all of these options, Washington appears to be a secondary drug distribution center; most drugs intended for distribution in DC are distributed first to larger cities, such as New York and Miami (Pach et al. 2002). The street-level dealing in DC was described as less organized and more free-flowing than the organized networks in these larger cities.

### Data Sources

A number of sources were used to obtain comprehensive information regarding the drug use trends and patterns in Washington, DC. Data for this report were obtained from the sources shown below. In addition, interviews were conducted with a sample of

substance abuse professionals in the fields of criminal justice, public health, and recovery.

- **Drug-related death data** for 2005 were obtained from the District's Chief Medical Examiner's 2005 Annual Report. Exhibits 2a, 2b and 2c show the race and ages of drug-overdose (caused) decedents and the number of deaths by drug in the city for 2005, and the number of drug-positive cases by drug for 2005.
- **Student survey data** were adapted by the Center for Substance Abuse Research (CESAR) from the 2005 DC Public Schools Youth Risk Behavior Survey (YRBS).
- **Arrest, crime, and law enforcement action data** were derived from the Metropolitan Police Department (MPD) Web site, <www.mpdc.dc.gov>, which shows crime statistics and press releases pertaining to law enforcement action through December 2005, a special report on homicides, and a special data run.
- **Arrestee urinalysis data** were derived from the District of Columbia Pretrial Services Agency for adult and juvenile arrestees from 2000 through April 2007.
- **Drug prices and trafficking trends** were obtained from the Department of Justice *National Illicit Drug Prices December 2006*, the Washington-Baltimore High Intensity Drug Trafficking Area (HIDTA) "Washington/Baltimore Threat Assessment" reports released in 2006 and 2007, and the Drug Enforcement Administration (DEA) for the third quarter of 2005.
- **Test results on drug items analyzed** by local crime labs were obtained from the National Forensic Laboratory Information System (NFLIS) for calendar year (CY) 2006.
- **Regional counts on methamphetamine labs seized** were obtained from the El Paso Intelligence Center (EPIC), National Clandestine Laboratory Seizure Database, and the Washington/Baltimore HIDTA.
- **Census data** for the District of Columbia were derived from the "Council of the District of Columbia; Subcommittee on Labor, Voting Rights, and Redistricting; Testimony of the Office of Planning/State Data Center on Bill 14-137, The Ward Redistricting Amendment Act of 2002." Updates were taken from an article running in the *Washington Post* May 17, 2007.

- **Additional information**, including data on HIV/AIDS and child abuse/neglect cases, was provided by the Child and Family Services Agency, the HIV/AIDS Administration, and other members of the DC Epidemiological Outcomes Workgroup. The drug scan results are from a regional study conducted by CESAR with funding from the Washington/Baltimore HIDTA.

## DRUG ABUSE PATTERNS AND TRENDS

### Cocaine/Crack

Cocaine, particularly in the form of crack, remains the most serious drug of abuse in the District, accounting for more adult arrestee positive drug tests than any other drug, and more deaths than any drug besides opiates other than heroin. Only heroin accounted for a higher percentage of treatment admissions in 2003. Cocaine/crack continues to be sold at open-air markets in the poorer parts of the city and has changed little in price. In December of 2006, the NDIC reported that powder cocaine sold for \$23,000–\$27,000 per kilogram wholesale and \$800–\$1,200 per ounce midlevel during 2006. Crack sold for the same price ranges wholesale and midlevel and for \$10 per rock or \$100 per gram retail. NFLIS data for the 2006 calendar year show that 44 percent of analyzed drug items tested positive for cocaine, more than for any other drug.

Cocaine-caused overdose deaths totaled 76 in 2005 more than any other drug (exhibit 2b). The number of cocaine-positive cases (187) was surpassed only by alcohol (242) (exhibit 2c). More than three-quarters of the driving under the influence (DUI) cases analyzed by the OCME tested positive for at least one drug. One in four of these cases were positive for cocaine.

Reports from the Pretrial Services Agency for 2006 indicate that the percentage of adult arrestees testing positive for cocaine continued to increase from 33.6 percent in 2000 to 41.0 percent in 2006 (exhibits 3a and 3b). The percentage testing positive in 2007 through April was 39 percent. Nearly 4 percent (3.4 percent) of juvenile arrestees tested positive for cocaine in 2006 (exhibits 4a and 4b). This percentage remained about the same in 2007 through April (3.3 percent).

According to data from the MPD, drug-related arrests related to cocaine and crack increased substantially in 2004 and continued to increase in 2005. For the first time in 5 years, cocaine/crack-related arrests outnumbered marijuana-related arrests. These arrests increased substantially from 2003 to 2004 (26 and 43

percent, respectively) (exhibit 5). The majority of these arrests involved adults and the sale or manufacture of these drugs. The arrests of juveniles for the sale or manufacture of cocaine and crack increased slightly (data not shown) in 2004 but decreased again in 2005. According to the Washington/Baltimore HIDTA, 60 percent of cocaine seizures were less than 5 pounds in 2005.

The results of the 2005 YRBS indicate that the percentage of public school students in grades 9–12 reporting lifetime use of any form of cocaine decreased from 6.2 percent in 2003 to 2.1 percent in 2005 (exhibit 6a).

### Heroin

Heroin represents one of the three leading drug problems in the District, along with cocaine and marijuana. The MPD describes crack as a weekend drug, but heroin as having a more steady ongoing market. The NDIC reported that heroin sold for \$85,000–\$110,000 per kilogram wholesale, \$3,700–\$4,000 per ounce midlevel, and \$10 per bag (50–70 milligrams) retail in the District of Columbia. NFLIS data for the 2006 calendar year show that approximately 9 percent of analyzed drug items tested positive for heroin, making it the third most frequently found drug.

Forty-three overdose deaths involving heroin/morphine were reported by the medical examiner in 2005, making heroin/morphine the second most likely drug to cause an overdose (exhibit 2b). Heroin/morphine was the third most frequently found drug in all drug-positive cases ( $n=94$ ) (exhibit 2c).

As with cocaine, reports from the Pretrial Services Agency indicate that the percentage of adult arrestees testing positive for opiates remained about the same from 2001 through 2006. In 2006, 8.9 percent of adult arrestees tested positive for opiates; 8.3 percent tested positive during the first 4 months of 2007 (exhibits 3a and 3b). Juvenile arrestees were not tested for opiates during this time period.

According to the MPD, drug arrests in DC related to heroin were third in frequency after those for marijuana and cocaine from 2001 to 2005 (exhibit 5). Heroin arrests involving adults increased steadily from 2002 to 2004 (20 percent) but decreased slightly in 2005. More than one-half (53 percent) of these arrests involved the sale or manufacture of heroin, and nearly all involved adults. The number of arrests of juveniles for the sale or manufacture of heroin decreased from 14 in 2003 to 5 in 2004. There were seven such arrests in 2005 (data not shown).



## Other Opiates/Narcotics

In 2005, the Office of the Chief Medical Examiner reported several positive cases involving opiates other than heroin (exhibits 2a and 2b). Thirty-nine positive cases involved methadone and 18 of these cases were classified as overdose deaths. Twenty-four cases were codeine positive. Eighteen cases were oxycodone-positive and 7 of these were classified as overdose deaths.

Oxycodone and methadone combined accounted for approximately 2 percent of analyzed drug items reported to NFLIS in 2006. According to the DEA, the price per dosage unit ranged from \$4.50 for Percodan/Percocet® to \$5 for generic hydrocodone, to \$35 for OxyContin® during the third quarter of 2005.

## Marijuana

Marijuana is widely used in the District, as it is in many other jurisdictions. Commercial-grade and high-grade marijuana are available for wide-ranging but relatively stable prices. Most of the marijuana is transported into the District via either shipping companies or large cardboard barrels in trucks and hidden compartments in vehicles, according to the Washington/Baltimore HIDTA. The DEA reports that high quality marijuana is imported from Canada by Vietnamese groups. There are an increasing number of indoor grows as well. In fact, 233 plants (with an estimated street value of \$660,000), several weapons, and thousands of dollars worth of equipment were seized in an indoor grow bust in northeast DC in January 2006, according to HIDTA. During 2006, marijuana growers preferred the soilless hydroponic method to outdoor grows. In Maryland, for instance, more indoor grows were seized than outdoor grows. The Budget Year 2008 Threat Assessment reports that marijuana is often smoked in combination with other lethal drugs including PCP, methamphetamine, amphetamines, and other prescription/over-the-counter pharmaceuticals (*Washington/Baltimore HIDTA 2007 and 2008 Threat Assessments*).

In December 2006, the NDIC reported that hydroponic marijuana sold for \$3,500 per pound and commercial grade marijuana sold for \$1,200–\$1,600 per pound wholesale. Midlevel prices ranged from \$125 per ounce for commercial grade to \$300 per ounce for hydroponic. At the retail level, marijuana sold for \$10 per 1-gram bag. NFLIS data for the 2006 calendar year show that approximately 32 percent of analyzed drug items tested positive for marijuana, which made marijuana the second most frequently found drug.

No marijuana-involved deaths were reported by the Chief Medical Examiner in 2005, but marijuana was the most frequently found drug in the DUI cases testing positive. Marijuana was found in nearly one-half (44 percent) of these cases (data not shown).

The Pretrial Services Agency does not test adult arrestees for marijuana; however, more than one-half of juveniles tested positive for marijuana each year between 2000 and 2002. From 2003 through 2006, approximately one-half of juveniles tested positive for marijuana (exhibits 4a and 4b). Approximately 52 percent tested positive during the first 4 months of 2007.

According to data from the MPD, marijuana-related arrests accounted for 37 percent of all drug-related arrests in 2005 and more than one-half of possession arrests. These arrests increased substantially from 2002 to 2004 (30 percent) (exhibit 5). Nearly all of the 2005 arrests involved adults, and two-thirds (67 percent) involved the possession of marijuana. The arrests of juveniles for the possession and sale or manufacture of marijuana increased from 2003 to 2004 and decreased slightly in 2005 (data not shown).

The results of the 2005 YRBS also show a decrease in marijuana use by youth. The percentage of public school students in grades 9–12 reporting lifetime and past-month use decreased, respectively, from 41.7 and 23.5 percent respectively in 2003 to 27.2 and 14.5 percent respectively in 2005 (exhibits 6a and 6b).

## Phencyclidine

According to the MPD, the number of arrests related to PCP more than doubled from 2001 to 2003 (from 106 to 259) (exhibit 5). PCP was rapidly becoming the drug of choice at raves and nightclubs during this time, sometimes used in combination with marijuana and/or MDMA (ecstasy). In 2004, however, PCP use began to decline, and it continues to be well behind the use of crack and marijuana. PCP-related arrests declined 41 percent from 2003 to 2004, but they increased 13 percent in 2005, largely because of a 33-percent increase in possession arrests (exhibit 5).

According to the *Washington/Baltimore HIDTA 2007 Threat Assessment*, no major labs manufacturing PCP have been found in the Baltimore/Washington region since 2002. Law enforcement recently rated PCP as a secondary threat given its fluctuations in use. The DEA Washington field office reported that PCP can be sold alone or in combination with other drugs, most often marijuana.

NFLIS data for 2006 show that 5 percent of analyzed drug items tested positive for PCP, making it the

fourth most frequently found drug after cocaine, marijuana, and heroin.

Forty-four PCP-positive deaths occurred in DC in 2005 (exhibit 2c). However, no overdose deaths involved PCP. More than three-quarters of the DUI cases analyzed by the OCME tested positive for at least one drug. Nearly 30 percent of these cases were positive for PCP.

Data from the Pretrial Services Agency show a rise in PCP use among adult arrestees, from the low single digits in the late 1990s to the mid-teens in 2002 and 2003 (exhibits 3a and 3b). Positive tests for PCP use among adults declined, however, in 2004 to 6.2 percent, but they increased slightly to 7.5 percent in 2005 and then to 9.2 percent in 2006. The percentage remained at 9.1 percent for the first 4 months of 2007. Trend data from 1987 to the present indicate that PCP use among the juvenile arrestee population mirrored that in the adult arrestee population (exhibits 4a and 4b), with spikes in the late 1980s, mid-1990s, and again in the current decade. The proportion of juveniles testing positive for PCP decreased from 13.4 percent in 2002 to 1.9 percent in 2004, but increased in 2005 to 3.4 percent. Only 2.0 percent of juveniles tested positive in 2006 and 2.5 percent tested positive during the first 4 months of 2007.

### Amphetamines/Methamphetamine

Abuse of amphetamines and methamphetamine does not appear to be a major problem in the District. There were no drug overdose deaths due to either methamphetamine or amphetamine in 2004 or 2005. There were, however, 17 decedents testing positive for MDMA and 7 testing positive for methamphetamine at the time of their deaths.

The Washington/Baltimore HIDTA and other members of the DC Epidemiological Outcomes Workgroup report that methamphetamine use is established in the homosexual community. Substance abuse professionals surveyed for the Budget Year 2008 Threat Assessment from the District were more likely to rate methamphetamine as a threat than professionals in Maryland or Virginia. However, none of these professionals felt that methamphetamine was likely to become a primary drug of abuse. Methamphetamine is trafficked from California through Atlanta to DC. There was one methamphetamine lab in the District in 2005, one residential search, and four parcel interdictions, according to HIDTA.

NFLIS data for 2006 show that approximately 1.5 percent of analyzed drug items tested positive for methamphetamine, making it the sixth most frequently

found drug. This is significantly lower than the national percentage of 13 percent (third most frequently found drug). The NDIC reported that powder methamphetamine sold for \$40–\$150 per gram retail in June of 2006.

The Pretrial Services Agency began testing for amphetamines in August 2006. From August to December, adult positives ranged from 1.2 to 3.4 percent. The percentage was slightly higher during the first 4 months of 2007 (3 to 4 percent). Less than 1 percent (14 of 1244) of juveniles tested positive from August to December 2006. During the first 4 months of 2007, this percentage increased slightly to 2.7 percent (21) (data not shown).

Amphetamine-related arrests ranged from 4 to 10 each year from 2001 to 2004 (exhibit 5). All arrests during this time involved adults. In 2004, 6 of the 10 arrests involved the sale or manufacture of amphetamines and 4 involved possession. Eighteen arrests were recorded in 2005. However, this category now also contains barbiturates.

The results of the 2005 YRBS also indicate a very low level of methamphetamine use in DC. The percentage of public school students in grades 9–12 reporting lifetime use decreased from 5.7 percent in 2003 to 2.0 percent in 2005 (exhibit 6a).

Although some jurisdictions have reported signs of an increase in MDMA use, use in DC remains low. Less than 2 percent of cases reviewed by OCME were positive for MDMA. Slightly more NFLIS items tested positive for MDMA (2.8 percent) than methamphetamine.

### INFECTIOUS DISEASES RELATED TO DRUG ABUSE

The diagnosis of AIDS cases increased rapidly from 1981 to 1993, when cases peaked at 1,342. The number of cases decreased 49.0 percent from 1993 to 2001, but increased 37.5 percent in 2002. As of December 31, 2004, 16,165 cases had been identified in the District. Just about one-fifth (20.8 percent) involved men having sex with men (exhibit 7). Four-fifths (82 percent) of the AIDS cases were Black, and 14 percent were White (exhibit 7). Just under 34 percent of cases involved individuals between the ages of 20 and 34 and 40 percent were between 35 and 44 (data not shown). Nearly one-fourth (24.2 percent; 3,912 cases) of the cases were caused by injection drug use. Slightly more than three-fourths (78.7 percent) involved adult males. The rate of AIDS deaths per 100,000 population decreased from 47 in 1998 to 25 in 2003, according to the *HIV/AIDS Epidemiologic Profile for the District of Columbia 2004*.

The majority of hepatitis B and C cases are male and African-American. There was, however, a high percentage of “unknown race” for hepatitis C. The majority of hepatitis B cases were age 20 to 29 (32 percent), but more than three-quarters of the hepatitis C cases were age 40 to 59 (42 percent) (exhibit 8). In 2004, approximately 30 percent of hepatitis B cases (6 of 19) and 20 percent of hepatitis C cases (331 of 1655) were drug related.

#### REGIONAL DRUG SCAN: IDENTIFYING CURRENT DRUG TRENDS

The Regional Drug Scan is a qualitative analysis of area substance abuse professionals’ perceptions of the scope of drug use and drug trends in the Washington/Baltimore HIDTA Region, covering 18 jurisdictions between Baltimore, Maryland and Richmond, Virginia. Qualitative telephone interviews were conducted with 34 area contacts during the last months of 2006 and January 2007 to collect information on local drug trends. Contacts were selected because they were determined to possess indepth knowledge of drug issues, had been exposed to drug-related problems for more than one year, and were highly credible sources of information. They included professionals in treatment, education, prevention, criminal justice, and emergency medicine.

Contacts throughout the region overwhelmingly found marijuana, cocaine, and heroin use to be the most injurious and eminent drug threats to their communities. District contacts rated crack, heroin, PCP, and marijuana as the greatest threats to the city. Most were concerned about PCP due to constantly shifting trends and users’ difficulties stopping use. New trends identified by District contacts included blunts laced with amphetamines and other drugs and increased gang activity in the Hispanic population. Two drugs identified as potential future threats were methamphetamine and the misuse of prescription drugs by adolescents. Contacts in the Maryland and Virginia counties bordering DC reported increases in the misuse of prescription drugs.

The information collected through this study is anecdotal and can not provide true estimates of the level of drug use in the region. It is invaluable because it provides snapshots of current trends not captured in traditional indicators and identifies new trends that may be emerging. The full report is available upon request to <cesar@cesar.umd.edu>.

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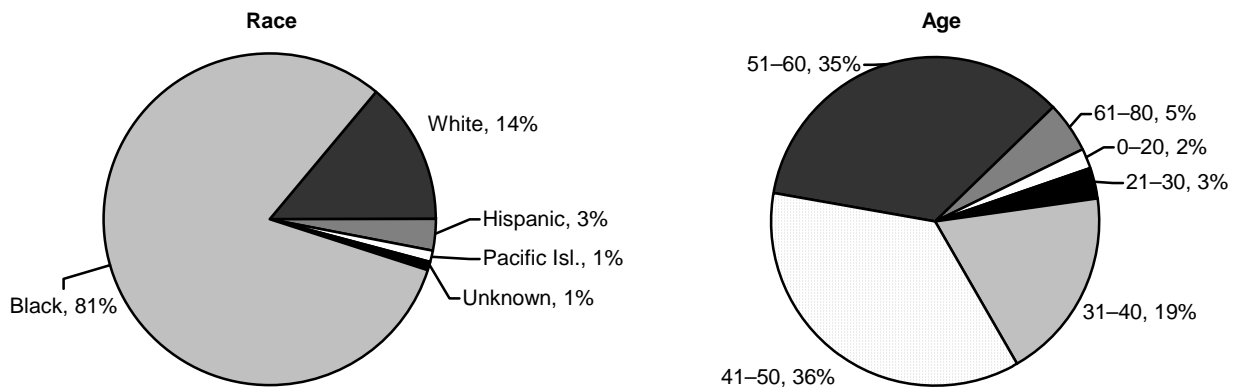
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**Exhibit 1. Number of Substantiated Substance Abuse Allegations and Children Affected: FY 2003–FY 2005**

Year	Number of Reports (Families)	Total Number of Children in Affected Families	Number of Children Exposed to Substance Abuse <sup>1</sup>
FY2003 (10/1/02-9/30/03)	328	594	80
FY2004 (10/1/03-9/30/04)	382	603	99
FY2005 (10/1/04-9/30/05)	380	592	151

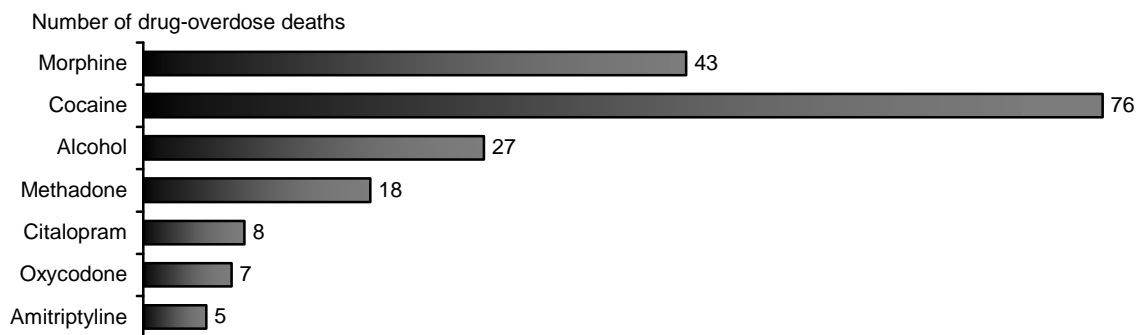
<sup>1</sup>A child is considered to have exposure to substance abuse if "Newborn w/ Positive Tox SW" or "Newborn w/ Addiction/Dependency SW" has been checked or if "Newborn w/Positive Tox" or "Newborn w/ Addiction or Dependency" is the maltreatment type.  
SOURCE: Child and Family Services Agency FACES Report

**Exhibit 2a. Percentage of Washington, DC, Drug-Overdose Deaths, by Race and Age: 2005**



N=119 deaths.  
SOURCE: Office of the Chief Medical Examiner, Washington, DC Annual Report 2005

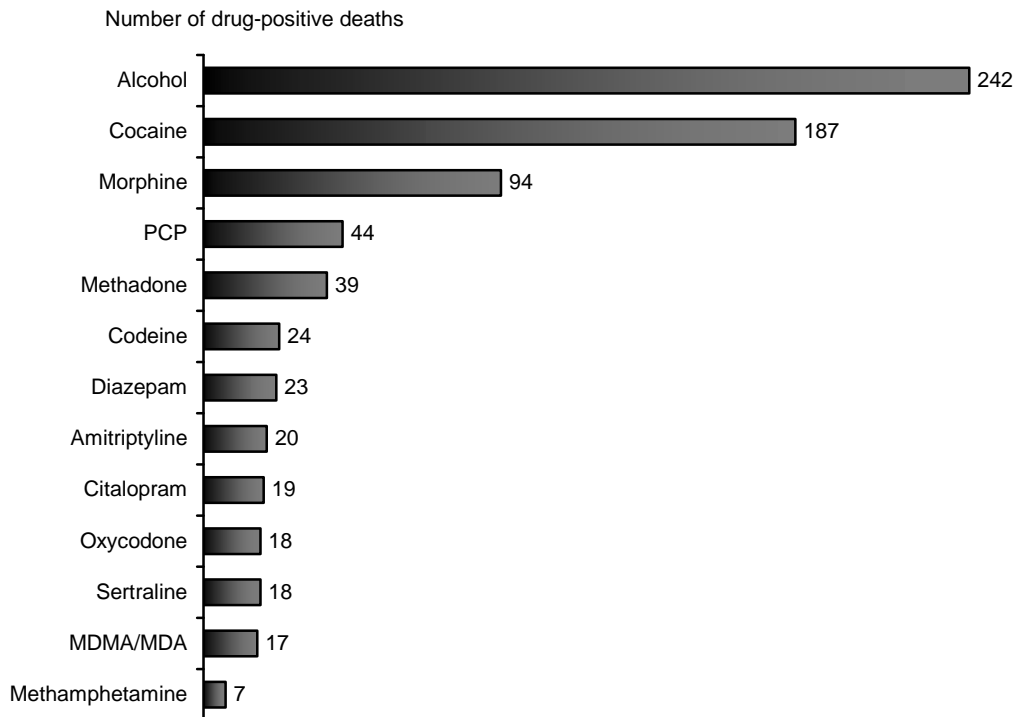
**Exhibit 2b. Number of Drug-Overdose Deaths in Washington, DC, by Drug: 2005**



N=119 deaths.

SOURCE: Adapted by CESAR from data from the Office of the Chief Medical Examiner, Washington, DC Annual Report 2005

**Exhibit 2c. Number of Drug-Positive Cases in Washington, DC, by Drug: 2005**



N=631 cases; some decedents tested positive for multiple drugs.

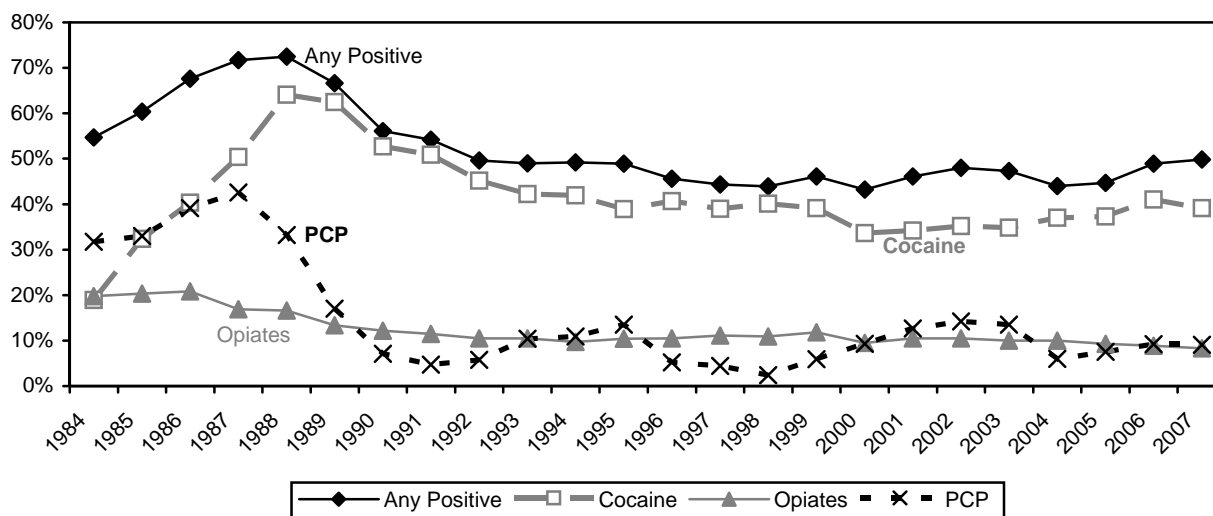
SOURCE: Office of the Chief Medical Examiner, Washington, DC 2005 Annual Report

**Exhibit 3a. Percentages of Adult Arrestees in Washington, DC, Testing Positive for Selected Drugs: 2000–2007<sup>1</sup>**

Drug	2000	2001	2002	2003	2004	2005	2006	2007 <sup>1</sup>
(N=)	(15,630)	(17,350)	(17,952)	(17,742)	(19,531)	(19,867)	(23,271)	(1,766)
Cocaine	33.6	34.2	35.2	34.8	36.6	37.3	41.0	39.1
PCP	9.3	12.7	14.2	13.5	6.2	7.5	9.2	9.1
Opiates	9.5	10.5	10.5	10.0	9.8	9.3	8.9	8.3
Any Drug	43.2	46.1	48.0	47.3	43.5	44.7	48.9	49.8

<sup>1</sup>2007 data are for January–April only.  
SOURCE: District of Columbia Pretrial Services Agency

**Exhibit 3b. Percentages of Washington, DC, Adult Arrestees Testing Positive for Any Drug, Cocaine, PCP, and Opiates: 1984–2007<sup>1</sup>**



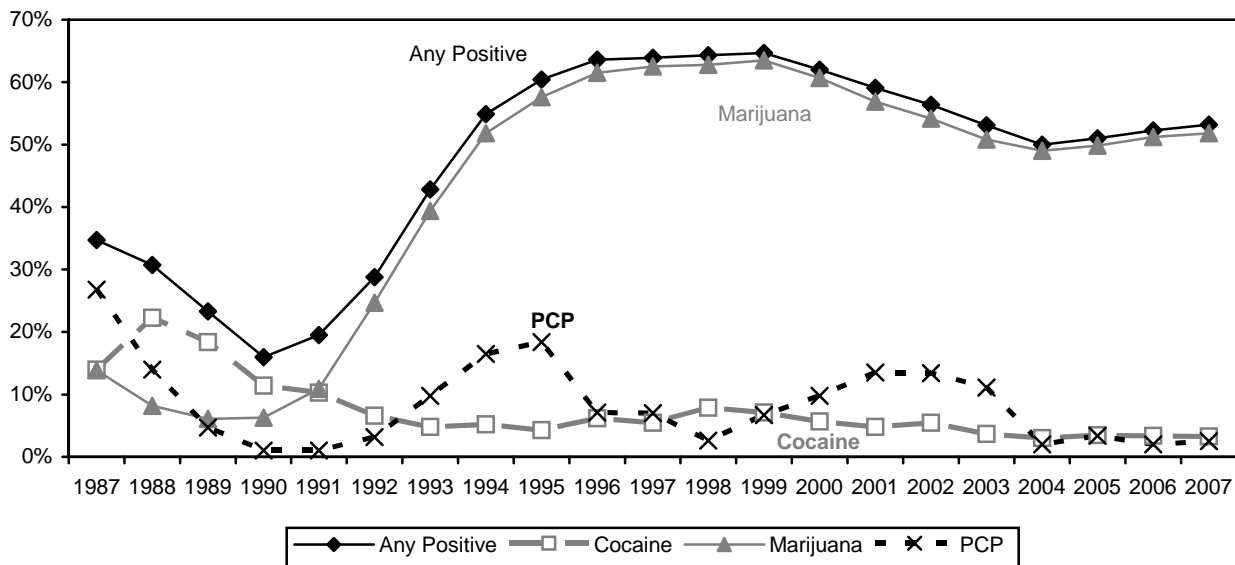
<sup>1</sup>2007 data are for January–April only.  
SOURCE: Adapted by CESAR from data from the District of Columbia Pretrial Services Agency

**Exhibit 4a. Percentages of Juvenile Arrestees in Washington, DC, Testing Positive for Selected Drugs: 2000–2007<sup>1</sup>**

Drug	2000	2001	2002	2003	2004	2005	2006	2007 <sup>1</sup>
(N=)	(2,162)	(2,165)	(1,896)	(1,899)	(2,001)	(2,319)	(2,379)	(196)
Marijuana	60.7	56.9	54.2	50.8	49	49.8	51.2	51.8
Cocaine	5.7	4.8	5.5	3.7	3.3	3.5	3.4	3.3
PCP	9.8	13.5	13.4	11.1	1.9	3.4	2.0	2.5
Any Drug	62.0	59.1	56.4	53.1	49.6	51.0	52.3	53.2

<sup>1</sup>2007 data are for January–April only.  
SOURCE: District of Columbia Pretrial Services Agency

**Exhibit 4b. Percentages of Washington, DC, Juvenile Arrestees Testing Positive for Any Drug,<sup>1</sup> Cocaine, PCP, and Marijuana: 1987–2007<sup>2</sup>**

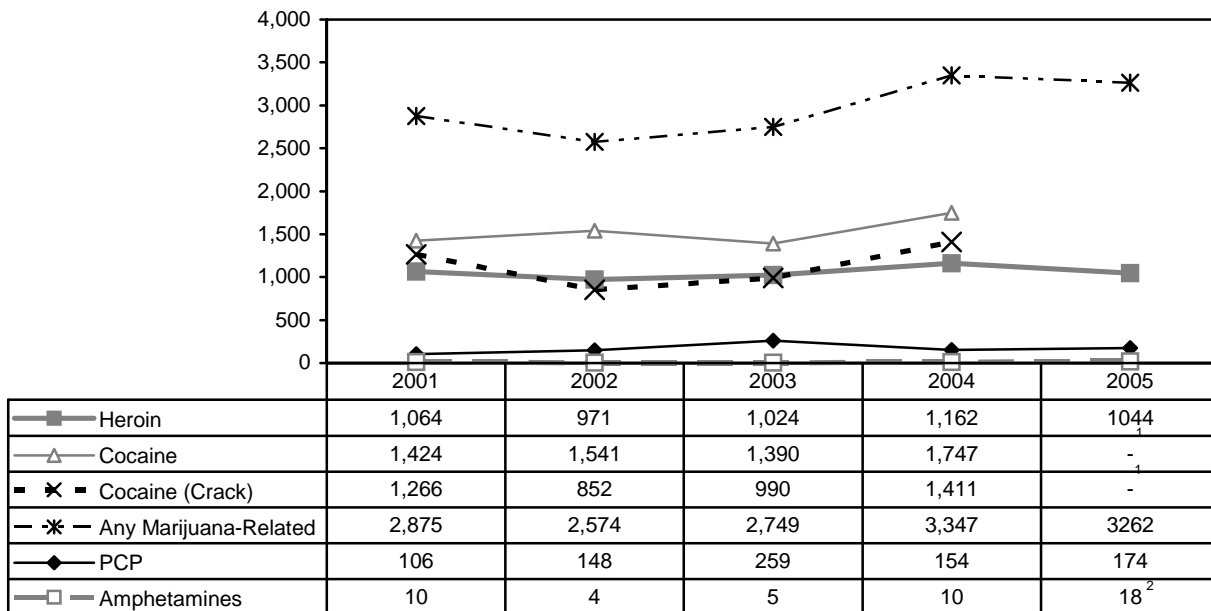


<sup>1</sup>Any Positive includes opiates from 1987 through mid 1994 (< 1%).

<sup>2</sup>2007 data are for January–April only.

SOURCE: Adapted by CESAR from data from the District of Columbia Pretrial Services Agency

**Exhibit 5. Number of Drug-Related Arrests in Washington, DC, by Year and Type of Drug: 2001–2005**



<sup>1</sup>In 2005, cocaine and crack were combined. The combined count is 3,433.

<sup>2</sup>In 2005, the amphetamines count also includes barbiturates.

SOURCE: Adapted by CESAR from data from the Metropolitan Police Department 2005, June 2006

**Exhibit 6a. Lifetime Use of Tobacco and Other Drugs Among DC Public School Students in Grades 9–12, by Percent: 2003 and 2005**

Lifetime Use of Tobacco and Other Drugs	2003	2005
Cigarette Smoking	55.5	35.8
Marijuana	41.7	27.2
Any Form of Cocaine	6.2	2.1
Methamphetamine	5.7	2.0

SOURCE: Adapted by CESAR from data from DC Public Schools 2005 YRBS

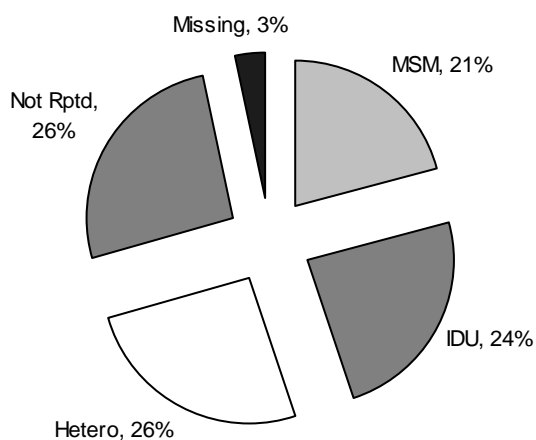
**Exhibit 6b. Past 30-Day Tobacco, Alcohol, and Other Drug Use Among DC Public School Students in Grades 9–12, by Percent: 2003 and 2005**

Past 30-Day Use of Tobacco, Alcohol, and Other Drugs	2003	2005
Cigarette Smoking	13.2	9.2
Alcohol Use	33.8	23.1
Marijuana Use	23.5	14.5
Binge Drinking	10.3	9.2
Offered, Sold, or Given an Illegal Drug on School Property	30.2	20.3

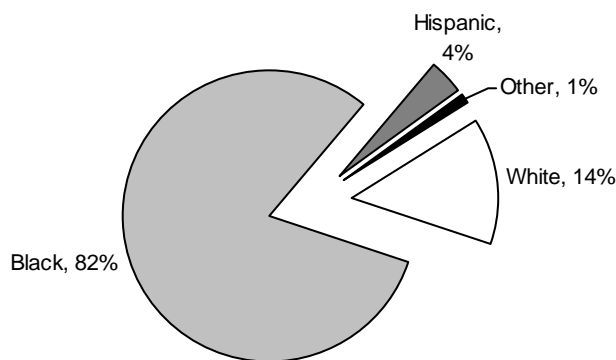
SOURCE: Adapted by CESAR from data from DC Public Schools 2005 YRBS

**Exhibit 7. District of Columbia Diagnosed AIDS Cases, by Race/Ethnicity, Mode of Transmission, and Percent: 1981–2004**

**DC AIDS Cases, by Mode of Transmission  
1981-2004**



**DC AIDS Cases, by Race/Ethnicity  
1981-2004**

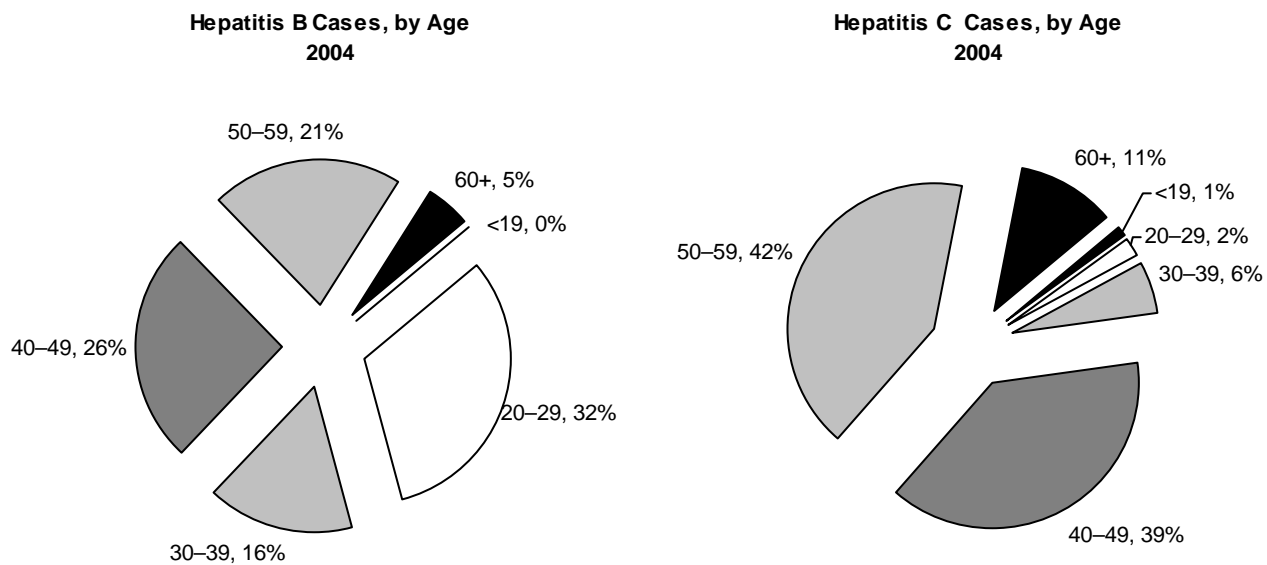


N=16,165 cases (3,912 IDU)

SOURCE: HIV/AIDS Surveillance and Epidemiology Division, Administration for HIV Policy and Programs, DC Department of Health



**Exhibit 8. District of Columbia Hepatitis B and C Cases, by Age and Percent: 2004**



N=19 hepatitis B; 1,655 hepatitis C.  
SOURCE: Viral Hepatitis Coordinator, DC DOH



SPECIAL  
PRESENTATION



# Drug Use Among Migrant Mexican Farmworkers

Victor Garcia, Ph.D.

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## ABSTRACT

*This CEWG presentation is based on a 2-year ethnographic study on drug use among transnational Mexican migrants employed in the mushroom industry of southeastern Pennsylvania. The objectives of the study, 'Drug Use among Migrant Mexican Farmworkers' (NIDA, Grant # R03 DA17915) are as follows:*

1. *To identify drug use "types" based on the patterns of drug use (i.e., drug combination types, quantities, and frequency of use) and the circumstances surrounding it (i.e., recreational, habitual, and/or work enhancement purposes).*
  2. *To describe the role of previous drug exposure (e.g., drug use or witness in Mexico or in U.S. urban areas), situational factors (e.g., migrant living arrangements, social isolation, peer pressure, and drug availability), and individual background characteristics (e.g., age, marital status, education level, and migration duration) in migrant drug use.*
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Transnational Mexican farmworkers work in the United States, but their permanent home base, where their families remain, is in Mexico. While in the United States, they live with other solo men like themselves for months, if not years. They are unable to visit their homes because of travel costs and, in the case of illegal or undocumented workers, the risks and dangers associated with crossing the U.S.-Mexico border.

This research was conducted in a major mushroom growing region of southeastern Pennsylvania from March 2005 to March 2007. A community ethnography, two focus groups, and field studies of 10 migrant cases (selected to represent the different types of drug users) were used to gather data on drug use norms and practices among this transnational labor force. Data were periodically analyzed in the field, and the generated information was used to write narratives on drug-related subjects. The final analysis is being completed at the time of this writing, and the final report will be completed soon.

Most of the drug users in the transnational Mexican farmworker population in the region range in age

from 18 to 38, although older workers also use or have experimented with drugs. Different types of drug users were identified among the transnational farmworkers. They are regular polydrug users (marijuana, cocaine, and alcohol), regular solo/single drug users (usually marijuana only), occasional poly- and solo/single drug users, and experimental users (cocaine, marijuana, and crack). The ethnographic nature and exploratory scope of the study did not allow for an approximation or an estimate of the number of drug users in general and in each category.

The transnational farmworkers consume marijuana, cocaine, crack, and amphetamines. There was no evidence of heroin use among them, and there were unsubstantiated rumors of methamphetamine use. Marijuana and cocaine are used more than other drugs. They are readily available and consumed in housing units, work sites, bars, and local Mexican dances. Marijuana and cocaine are consumed as either recreational or work enhancement drugs. When these drugs are consumed recreationally, they are combined with alcohol in a sequential fashion. The drug users start with alcohol, introduce marijuana after a few beers, and consume cocaine later in the process to continue their social drinking. Polydrug use also involves alcohol and marijuana without cocaine. Some of the younger workers (age 18–24) are avoiding traditional drinking circles in the housing units and are creating drug-using groups. The use of crack is not as common, and it is usually consumed only by regular cocaine users. When marijuana and cocaine are used as work enhancement drugs, they allow the workers to tolerate long and strenuous work days. Some of the men also use marijuana and cocaine at the end of the work day to overcome exhaustion. Amphetamines are the only drugs not combined with others, including alcohol, because they are strictly used as a work enhancement substance. The workers purchase drugs from housing and crew mates and from known drug dealers in the local Mexican community. Farmworkers who sell to their fellow compatriots obtain their drugs from local Mexican dealers and from dealers in Latino communities in Delaware.

The study concentrated on previous drug exposure, situational factors, and individual background characteristics as possible causes for drug use among the transnational workers. However, these factors alone, it was discovered, are not responsible for drug use. The majority of the farmworkers in the region are exposed to these factors, but not all of them use drugs. Some only drink alcohol, while others abstain altogether.

Nearly all of the key informants, including the case study participants ( $n=21$ ), were previously exposed to drug use in either Mexico or the United States. Workers who used drugs for the first time in their home communities were usually in their mid-twenties or younger. Those age 30 or older started using drugs in southeastern Pennsylvania, in other parts of the United States where they lived and worked, or, in some cases, in their hometowns in Mexico. Regardless of where the workers started using drugs, their drug use became more frequent in Pennsylvania. Drug-using farmworkers, especially regular users (i.e., those who consume drugs weekly), continue to use drugs when they return to their homeland, but in lesser amounts and less frequently. Transnational farmworkers with serious drug problems, those who can no longer work and have alienated friends and local kin, return to Mexico.

In regard to background characteristics, regular drug users among transnational Mexican farmworkers are mainly young and single, but young married workers are also regular users. Education level is not a major factor, but migration history, especially migration to areas that expose workers to drug use, is a major factor. In terms of situational factors, some of the living arrangements are more conducive to drug use than others. For example, drugs are available and used in housing units inhabited by unrelated young workers. Conversely, drug use is not encouraged or tolerated in the housing units of older occupants. Aware of this, drug users in these housing units are not open about their drug activities and use away from the group. Social isolation, especially among the younger workers with little or no experience living abroad and with limited kin in the area, is a contributing factor. Peer pressure from specific

individuals, such as close friends from their Mexican homeland, especially in certain contexts, such as celebration, also contributes to workers' drug use. A closer examination of the data reveals that other factors, in combination with situational factors and individual background characteristics, lead to drug use. Some of these other factors are exposure to and use of drugs at an early age, the availability of drugs through reciprocal practices, the availability of drugs and the existence of drug-using norms in their rural communities in Mexico, migration at an early age resulting in severe culture shock and disorientation in the United States, migrant kin members in the region who use drugs, traumas at U.S.-Mexico border crossings, and sexual and other forms of harassment in the housing units.

The findings reveal a need for a binational approach to the study of drug use among transnational Mexican farmworkers in order to obtain an accurate understanding of this activity. This research suggests that transnational migrants are at risk for drug use because of contributing factors on both sides of the U.S.-Mexico border. What is needed is a binational paradigm—one that considers factors on both sides of the border, particularly the transnational worker's previous exposure to drug use in Mexico, drug availability in Mexico, and hometown drug norms in Mexico.

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INTERNATIONAL  
PAPERS





# Update of the Epidemiologic Surveillance System of Addictions (SISVEA) in Mexico: 2006

*Roberto Tapia-Conyer, Ph.D., Patricia Cravioto, Ph.D., Pablo Kuri, M.D., Mario Cortés, M.Sc., and Fernando Galván, M.Sc.*

## INTRODUCTION

The Epidemiological Surveillance System of Addictions (SISVEA) was created in 1990 by the General Directorate of Epidemiology. SISVEA is a permanent system that monitors the use and abuse of tobacco, alcohol, and medical or illegal drugs, as well as their effects on morbidity and mortality and their juvenile arrestees. At the beginning, SISVEA operated in eight cities located at Mexico's northern border; since then, the system updates the diagnoses of drug consumption in Mexico. Currently, SISVEA provides information in 31 States of Mexico.

SISVEA was originally based conceptually and operatively on three strategies; these strategies evolved into the present system, which is sustained by four main indicators to give continuity to the original model. These indicators are summarized below, together with the data sources for each indicator:

- Consumption of tobacco, alcohol, and medical or illegal drugs (treatment centers)
- Diseases and accidental mortality (emergency rooms)
- Mortality among drug users (coroner's office)
- Crimes against health (law enforcement)

## Data Sources

The present report updates the activities of the SISVEA during 2006. The sources of data to construct different indicators are described below:

- **Treatment data** cover the characteristics and consumption patterns related to the first drug of use and primary drug of use. The data are obtained from nongovernment treatment centers (NGCs) that participate in SISVEA.

- **Drug consumption data** are collected for the general population and specific groups, such as juvenile arrestees.
- **Medical examiners (ME) data** cover drug-related deaths, including accidental or violent deaths (homicides or suicides) in cases in which drug abuse may be the direct cause of death or a contributing factor.

## DRUG ABUSE PATTERNS AND TRENDS

### Marijuana

According to data gathered from NGCs in 2006, marijuana was used primarily by male patients (95.6 percent); 26.0 percent were age 35 and older; 41.6 percent had a middle school education; and 59.6 percent were single (exhibit 1). The age of onset for marijuana use among these patients was between 10 and 14 (49.0 percent), and 80.0 percent reported daily use.

Marijuana ranked second (23.3 percent) as the drug of onset among treatment admissions in 2006 and fifth (8.4 percent) as the primary drug (exhibit 2).

The natural history of marijuana use reported by NGCs in 2006 shows that 7.7 percent of patients at treatment entry were "mono" (single) drug users; the remaining 92.3 percent had progressed to use of a second drug, which in order of importance were cocaine (28.0 percent) and alcohol (17.5 percent) (exhibit 3). Of those who used a second drug, 73.2 percent were using a third drug, mainly cocaine (21.4 percent), crystal methamphetamine (17.7 percent), or heroin (14.5 percent).

Information from the Juvenile Detention Centers shows that 28.5 percent of the 2,490 juveniles arrested during 2006 used marijuana (exhibit 4). Most of this population were male (94.9 percent). More than one-half (52.4 percent) had an elementary school education; 39.4 percent were subemployed; 34.6 percent had a tattoo; and 29.8 percent were gang members. Nearly 30.0 percent of the offenses were committed under intoxication, and 52.7 percent of the offenses were robberies.

Medical examiner data indicated that 3.5 percent of deaths reported were associated with marijuana; most were male (98.7 percent); and 24.7 percent were age 20–24 (20.8 percent) (exhibit 5). The main cause of death in these cases was asphyxia and fire arms (22.1 percent) and "run over" (13.0 percent). Most deaths occurred on the street (40.3 percent) or at home (36.4 percent).

## Inhalants

NGCs reported that of the 4,430 patients who used inhalants, most were male (93.7 percent); 30.9 percent were age 15–19. Some 52.5 percent had an elementary school education, and 70.6 percent were single (exhibit 1). More than one-half began using inhalants at age 10–14 (59.3 percent), and 78.6 percent reported daily use.

Inhalants ranked third (7.3 percent) as the drug of onset and sixth (5.2 percent) as a primary drug among NGC patients (exhibit 2).

Natural history data show that 69.3 percent of inhalants users at treatment entry had progressed to a second drug, primarily marijuana (51.6 percent), alcohol (15.8 percent), and cocaine (8.1 percent) (exhibit 6). Of these, 79.2 percent used a third drug, usually cocaine (24.6 percent), marijuana (17.1 percent), alcohol (14.6 percent), tranquilizers (8.6 percent), or heroin (8.5 percent).

According to Juvenile Detention Centers, 10.5 percent of the juvenile arrestees used inhalants (exhibit 4). Most were male (94.3 percent), had an elementary school education (59.9 percent), and were subemployed (42.7 percent). More than one-third (36.1 percent) had tattoos, and 36.1 percent belonged to a gang. Some 39.1 percent committed the offense while intoxicated, and robbery was the most common offense (50.4 percent).

## Alcohol

NGC data show that most of the 23,639 patients who abused alcohol in 2006 were male (91.5 percent) (exhibit 1). Nearly one-half (46.9 percent) were age 35 or older; 34.2 percent had only an elementary school education; 40.8 percent were single; 45.7 percent started using alcohol between the ages of 15 and 19; 47.4 percent reported daily alcohol use; and 38.9 percent used once a week.

Alcohol ranked first as the drug of onset (39.0 percent) and first as a current drug (27.2 percent) among NGC patients in 2006 (exhibit 2).

Natural history data for 2006 show that 32.5 percent of the alcohol patients were monodrug users; the remaining 67.5 percent used a second drug, typically marijuana (30.3 percent), cocaine (23.1 percent), or tobacco (15.9 percent). Nearly two-thirds (63.7 percent) had progressed to a third

drug, usually cocaine (28.2 percent), marijuana (18.1 percent), or crystal (11.5 percent) (exhibit 7).

Among juvenile arrestees, 17.1 percent reported alcohol use (exhibit 4). Most were male (93.3 percent); 45.6 percent had a middle school education; 43.9 percent were subemployed; 26.7 percent had tattoos; and 15.8 percent were gang members. One-third of the juveniles (33.2 percent) committed the offense while intoxicated, and robbery (45.0 percent) was the most common offense.

According to MEs, alcohol was involved in 84.5 percent of the substance-related deaths in 2006. Most decedents were male (93.3 percent), and 40.9 percent were 40 or older (exhibit 5). The main cause of death was traffic accident (20.3 percent), followed by asphyxia (17.2 percent). The most common places where deaths occurred were at home (34.2 percent) or on the street (33.3 percent).

## Cocaine

Of the cocaine users who attended NGCs in 2006, 91.9 percent were male; 26.4 percent were age 20–24; 40.7 percent had a middle school education; and 27.6 percent had elementary school education. Nearly one-half (48.9 percent) were single (exhibit 1). Of this group, 45.4 percent started using cocaine between the ages of 15 and 19; 61.1 percent reported daily cocaine use; and 28.2 percent reported weekly use. Cocaine ranked fourth as the drug of onset in 5.5 percent of the cases and third as current drug (11.9 percent) (exhibit 2).

The natural history of cocaine abuse reported by NGCs in 2006 shows that 27.8 percent were monodrug users at treatment entry, while 70.2 percent used a second drug, usually crystal (23.7 percent), marijuana (22.7 percent), alcohol (18.5 percent), or crack (12.0 percent). Of this multiple drug user group, 46.0 percent used using a third drug, primarily crystal (21.0 percent), alcohol (18.6 percent), or marijuana (16.8 percent) (exhibit 8).

Juvenile Detention Centers reported cocaine use among 13.2 percent of the young arrestees (exhibits 4). Most were male (93.6 percent); more than one-half had an elementary school education (55.7 percent); and 44.1 percent were subemployed. Also, 36.7 percent had tattoos, and 30.5 percent were gang members. More than one-fourth (30.5 percent) committed the offense under intoxication, and robbery was the most common offense (57.7 percent).

## Heroin

According to NGC data, heroin admissions in 2006 were mostly male (92.9 percent); 46.5 percent were age 35 and older; 39.7 percent had an elementary school education; and 51.4 percent were single (exhibit 1). The age of first use of heroin among these patients was between 15 and 19 (40.6 percent), and 94.9 percent reported daily use.

In 2006, heroin was the drug of onset for 1.4 percent of NGC patients; as a primary drug, heroin ranked third (11.7 percent) (exhibit 2).

Information from the Juvenile Detention Centers show that 0.5 percent of the juveniles arrested during 2006 used heroin (exhibit 4). Most were male (82.6 percent); 56.5 percent had an elementary school education. More than one-third (37.8 percent) were employed, had tattoos (39.1 percent), and were gang members (39.1 percent). Nearly one-half (47.8 percent) of the offenses were committed under intoxication. Robbery was the most common offense (50.0 percent).

## CONCLUSIONS

The SISVEA system needs to be strengthened with new software.

Alcohol continues to be the most frequent onset drug and primary drug among NGC patients, followed by crystal and cocaine. Natural history data from NGCs show an increasing use of crack cocaine.

Crystal methamphetamine abuse is most frequent in the western part of the northern border, heroin abuse is more common in the midborder areas, and cocaine abuse is more common in the eastern border area.

Arrestees in Juvenile Detention Centers continue to report marijuana as one of the most frequently used drugs.

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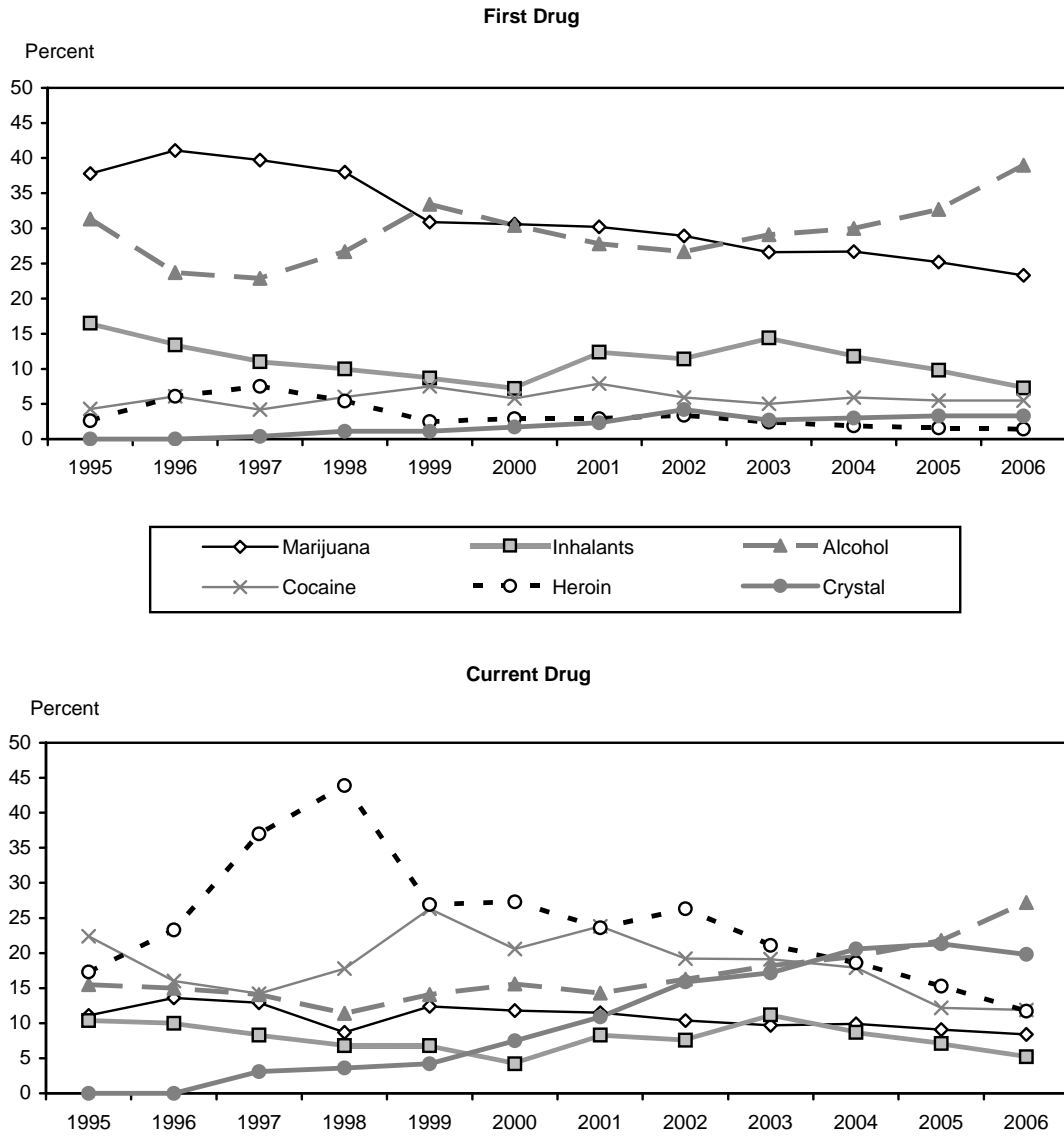
**Exhibit 1. Demographic Characteristics of NGC Patients in Mexico, by First Drug of Use and Percent: 2006**

Demographic Characteristic	Total N=60,631	Marijuana n=14,146	Inhalants n=4,430	Alcohol n=23,639	Cocaine <sup>1</sup> n=4,005	Heroin n=877	Tobacco n=10,497
Gender							
Male	91.8	95.6	93.7	91.5	91.9	92.9	88.5
Female	8.2	4.4	6.3	8.5	8.1	7.1	11.5
Age							
5–14	1.6	1.3	7.0	1.0	1.1	0.1	1.5
15–19	14.3	17.3	30.9	9.4	14.9	3.3	14.7
20–24	18.1	20.9	20.7	13.2	26.4	10.1	19.8
25–29	17.2	18.8	15.9	14.5	22.3	19.5	18.1
30–34	14.9	15.6	10.1	15.0	16.8	20.4	14.3
35 and older	33.9	26.0	15.3	46.9	18.5	46.5	31.6
Education							
Elementary school	34.9	34.3	52.5	34.2	27.6	39.7	32.9
Middle school	36.3	41.6	34.2	31.1	40.7	33.4	38.7
High school	18.4	18.2	6.5	19.2	23.1	19.6	19.7
College studies	5.1	2.6	0.6	7.9	5.3	2.3	4.7
No formal education	5.0	3.1	6.2	7.0	2.9	4.8	3.8
Other	0.4	0.1	0.1	0.7	0.4	0.1	0.3
Marital Status							
Single	51.0	59.6	70.6	40.8	48.9	51.4	52.6
Married	25.0	17.2	10.4	33.2	26.9	23.6	23.5
Divorced	4.0	3.4	1.7	4.9	3.8	4.2	4.0
Widowed	1.1	0.7	0.4	1.8	0.5	1.0	0.8
Living together	11.6	12.8	10.9	10.2	13.2	13.8	12.6
Other	7.3	6.2	5.9	9.1	6.6	5.9	6.5
Age of Onset							
9 and younger	4.9	4.8	10.1	4.0	1.3	0.3	7.3
10–14	40.9	49.0	59.3	34.3	22.3	15.8	51.0
15–19	41.0	40.1	27.4	45.7	45.4	40.6	36.0
20–24	7.9	4.3	2.4	9.7	16.1	21.3	4.0
25–29	2.9	1.1	0.5	3.4	8.1	10.5	1.0
30–34	1.4	0.4	0.2	1.5	3.9	5.8	0.3
35 and older	1.2	0.3	0.1	1.4	2.9	5.6	0.3
Frequency of Use							
Daily	67.9	80.0	78.6	47.4	61.1	94.9	89.3
Once a week	23.6	14.2	15.9	38.9	28.2	2.6	7.7
1–3 times per month	6.5	3.8	3.9	11.1	8.0	2.4	2.1
1–11 times per year	2.0	2.0	1.7	2.7	2.7	0.2	0.9

<sup>1</sup>Includes cocaine, basuco, and crack.

SOURCE: Nongovernment treatment centers

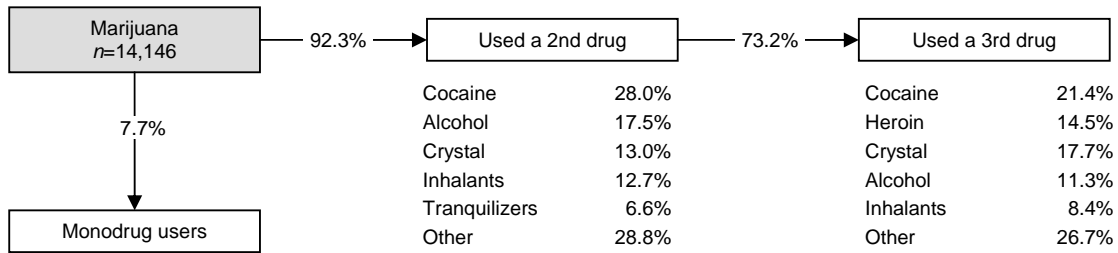
**Exhibit 2. Comparison Between First Drug of Use and Current Drug of Use Among NGC Patients in Mexico, by Percent: 1995–2006**



SOURCE: SISVEA—Nongovernment treatment centers

**Exhibit 3. Natural History of Marijuana Use Among NGC Patients in Mexico: 2006**

Nongovernment Treatment Centers



SOURCE: SISVEA—Nongovernment treatment centers

**Exhibit 4. Social Characteristics and Type of Offense Committed by Juvenile Drug-Using Arrestees, by Percent: 2006**

Total N=8,725	Marijuana n=2,490	Inhalants n=918	Alcohol n=1,498	Cocaine n=1,154	Heroin n=46
Male 91.1	Male 94.9	Male 94.3	Male 93.3	Male 93.6	Male 82.6
Elementary school 45.0	Elementary school 52.4	Elementary school 59.9	Elementary school 45.6	Elementary school 55.7	Elementary school 56.5
Subemployed 33.2	Subemployed 39.4	Subemployed 42.7	Subemployed 43.9	Subemployed 44.1	Employed 37.8
Tattoo 20.2	Tattoo 34.6	Tattoo 36.1	Tattoo 26.7	Tattoo 36.7	Tattoo 39.1
Belong to a gang 15.7	Belong to a gang 29.8	Belong to a gang 36.1	Belong to a gang 15.8	Belong to a gang 30.5	Belong to a gang 39.1
Offense under intoxication 17.4	Offense under intoxication 29.8	Offense under intoxication 39.1	Offense under intoxication 33.2	Offense under intoxication 30.5	Offense under intoxication 47.8
Frequent Offenses					
Robbery 47.0	Robbery 52.7	Robbery 50.4	Robbery 45.0	Robbery 57.7	Robbery 50.0
Against health 10.2	Against health 20.4	Against health 18.7	Injuries 12.0	Against health 19.6	Against health 21.7
Damages 8.2	Drug/consumption 8.4	Drug/consumption 16.6	Against health 8.3	Injuries 4.8	Damages 13.0
Injuries 9.9	Injuries 5.6	Injuries 4.5	Damages 7.5	Damages 4.0	Injuries 8.7
Other 24.7	Other 12.9	Others 9.8	Other 27.2	Others 13.9	Others 6.6

SOURCE: SISVEA—Juvenile Detention Centers

**Exhibit 5. Type of Death Under Intoxication of Drugs<sup>1</sup> in Mexico: 2006**

Number	Global N=2,142	Alcohol n=1,812	Marijuana n=77	Opioids <sup>2</sup> n=71
Gender				
Male	91.1	93.3	98.7	88.7
Female	8.9	6.7	1.3	11.3
Age Group				
10–14	0.7	0.5	0.0	0.0
15–19	6.9	6.4	10.4	1.4
20–24	13.8	13.9	24.7	12.7
25–29	14.5	14.3	11.7	23.9
30–34	13.0	13.4	20.8	8.5
35–39	11.2	10.5	13.0	33.8
40 and older	40.1	40.9	19.5	19.7
Cause of Death				
Run over	12.2	13.6	13.0	1.4
Traffic accident	18.3	20.3	6.5	0.0
Fall	5.2	5.6	3.9	0.0
Electrocuted	0.2	0.2	0.0	0.0
Burned	0.8	0.4	0.0	0.0
Beaten	2.4	2.5	6.5	0.0
Asphyxia	16.6	17.2	22.1	2.8
Crushed	0.4	0.2	1.3	0.0
Fire arm	10.1	9.9	22.1	4.2
Steel knife	4.8	5.1	5.2	0.0
Violation	0.0	0.1	0.0	0.0
Intoxicated	8.2	5.0	9.1	88.7
Poisoning	0.3	0.1	1.3	1.4
Other	20.6	19.8	9.1	1.4
Place of Death				
Traffic	20.1	21.8	10.4	0.0
Home	33.8	34.2	36.4	31.0
Street	32.2	33.3	40.3	38.0
Public baths	0.1	0.2	0.0	1.4
Recreational areas	0.2	0.1	0.0	0.0
At work	2.5	2.8	1.3	0.0
Service areas	1.0	0.9	1.3	0.0
School areas	6.4	3.4	5.2	28.2
Other	3.6	3.3	5.2	1.4

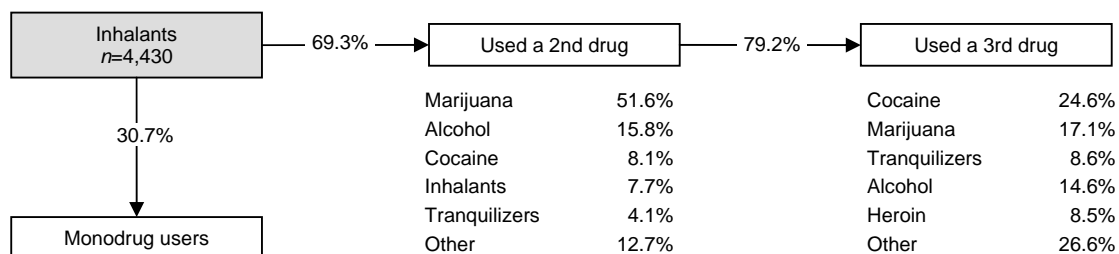
<sup>1</sup>Deaths from all causes totaled 11,056.

<sup>2</sup>Includes opium, morphine, and heroin.

SOURCE: SISVEA

**Exhibit 6. Natural History of Inhalant Use Among NGC Patients in Mexico: 2006**

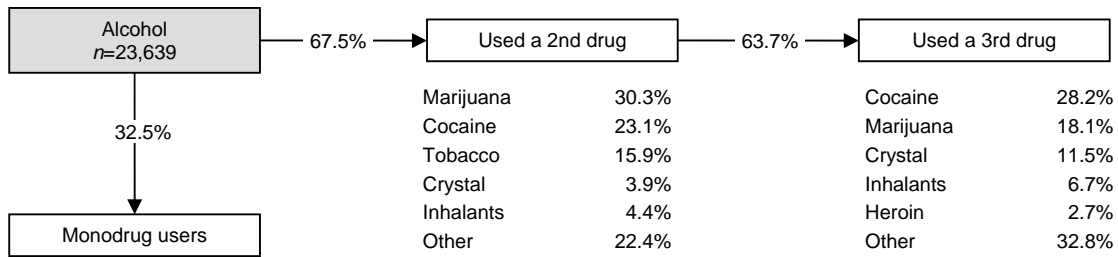
Nongovernment Treatment Centers



SOURCE: SISVEA—Nongovernment treatment centers

**Exhibit 7. Natural History of Alcohol Use Among NGC Patients in Mexico: 2006**

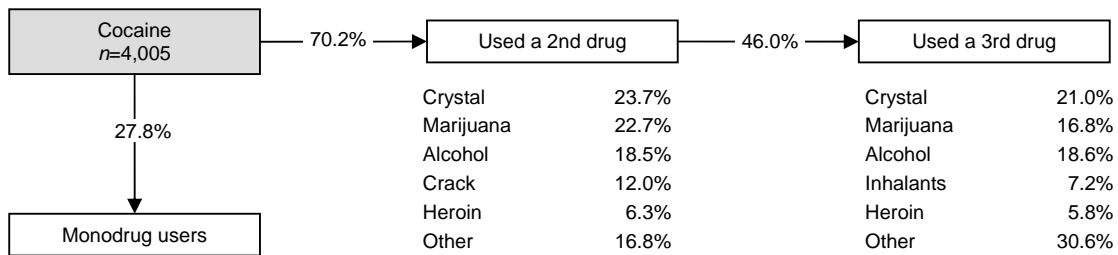
Nongovernment Treatment Centers



SOURCE: SISVEA—Nongovernment treatment centers

**Exhibit 8. Natural History of Cocaine Use Among NGC Patients in Mexico: 2006**

Nongovernment Treatment Centers



SOURCE: SISVEA—Nongovernment treatment centers



# Monitoring the Drug Situation in the Netherlands

Margriet van Laar, Ph.D.<sup>1</sup>

## Background

The Netherlands National Drug Monitor (NDM) is a working programme of the Trimbos Institute, the national knowledge institute for mental health care, addiction care, and social work. The Institute assumes responsibility for NDM data collection and data reporting tasks in close collaboration with the Scientific Research and Documentation Centre (WODC) of the Justice Ministry. The NDM was established by the Minister of Health, Welfare and Sport in 1999. Since 2002, the Ministry of Justice has also supported the NDM.

As one of the national centers of the European Monitoring Center for Drugs and Drug Addiction (EMCDDA), the NDM utilizes data sources and prepares annual epidemiological reports based on EMCDDA guidelines. The NDM is a coordinating body for monitoring substance use by promoting standardized research methods, compiling data from a variety of drug use indicators, and reporting to national authorities and international organizations (e.g., EMCDDA, the United Nations). In addition, based on data/information reported, the NDM provides advice on gaps in information needed to monitor substance use problems.

The six major NDM data sources include the following:

- Two surveys: The National Prevalence Survey on Substance Use, a survey of the general population, 15-64 years of age (conducted in 1997, 2001, 2005), and the School Survey on Substance Use Among Students, 12-18 years of age (1988, 1992, 1996, 1999, 2003, 2007).
- Three estimation methods (based on EMCDDA protocols) used to assess the numbers of drug users by type of drug, e.g., opiates, cocaine. These methods include a Treatment Multiplier, Multivariate Indicator analysis, and Capture-Recapture analysis.
- Treatment demand data from the National Alcohol and Drugs Information System (LADIS).

These data include the number of primary and secondary substances of abuse reported by unique clients (total number registered and first treatment). Treatment demand data also include primary and secondary diagnosis of abuse/dependence (based on ICD-9 codes) for drug-related admissions to general hospitals.

- Infectious disease data, including HIV sentinel surveillance data and hepatitis B and C prevalence surveys. HIV data are obtained from field surveys of injection drug users and data provided by the National Institute of Public Health and the Environment.
- Drug-related death data, including causes of death and total mortality estimations. Causes of death are based on ICD-10 codes (as of 1996), underlying causes of death mainly related to intoxications (overdose), unintentional, intentional, and undetermined deaths. For example, estimates of direct (overdoses) and indirect (accidents, lifestyle, diseases) deaths are based on the mortality rate among Amsterdam methadone patients multiplied by national prevalence of problem drug use.
- Sources of drug price and purity data include drugs delivered to prevention units of addiction care centers by consumers, and drug samples collected twice a year in a random sample of coffee shops (Drugs Information and Monitoring System).

## Cocaine and Crack

Cocaine is popular among trendsetting, socially successful party-goers (sniffing the HCL preparation), and among marginalized problem drug users (smoking crack). Uncontrolled obsessive use occurs more frequently in the crack-user group, although treatment demand data show that cocaine hydrochloric (HCL) users progressively experience more problems. Several outreach programs have been established to reach marginalized crack users, with the aim of reducing harm.

The general population survey, which mainly reaches individuals who are well integrated in society, show that on the national level the lifetime ("ever used") prevalence of cocaine use in 2005 (measured with the computer assisted personal interview technique) was 3.4 percent in the population age 15-64. This represents a significant increase from 1997 and 2001 when lifetime prevalence of cocaine use was 2.6 and 2.1 percent, respectively. However, the past-year prevalence remained at 0.7 percent in both 1997 and 2001,

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and the rate was 0.6 percent in 2005. Moreover, annual proportion of first-time users (incidence) significantly decreased from 0.4 percent in 2001 to 0.1 percent in 2005. The highest prevalence of lifetime cocaine use was found in individuals age 25–44 years (5.3 vs. 2.8 percent for the 15–24 age group).

The Dutch National School Survey, a repeated cross-sectional study, was conducted in 1988, 1992, 1996, 1999, and 2003. In 2003, lifetime prevalence of cocaine use was 2.2 percent. Cocaine use was more common among boys (2.8 percent) than girls (1.6 percent).

Treatment demand data show that from 1994 to 2004, the total number of clients entering outpatient treatment for cocaine abuse as a primary problem increased from 2,468 to 9,999 nationwide. However, 2005 treatment data show that the number of primary cocaine abusers entering treatment leveled off at 9,824.

Using TDI criteria (based on the EMCDDA protocol) for selecting clients, 35 percent of all drug clients entering treatment in 2005 had a primary cocaine problem. Of these clients, 15 percent were female and more than three-quarters were in the 20–39 age range. Administration of cocaine by injection was rare, reported by only 0.1 percent of the 2005 first treatment admissions. However, cocaine use was often accompanied by problematic use of other substances, with alcohol the most frequently used other substance.

Crack users were often referred to addiction care by the justice system. The common combinations were crack with cannabis or alcohol. More than one-half had used crack daily before entering treatment.

Cocaine abuse and cocaine dependence do not generally constitute the primary diagnosis at admission to general hospitals. Primary diagnoses are more likely to be attributed to injuries, respiratory disorders, poisonings, and diseases of the cardiovascular system. In 2005, there were...

- 101 hospital admissions for cocaine abuse as the primary diagnosis, slightly more than the 89 admitted in 2004
- 547 hospital admissions for cocaine as a secondary diagnosis, compared with 551 in 2004

The number of acute cocaine deaths increased between 1996 and 2002 and decreased slightly since 2002. However, numbers remained low throughout this period (less than 34 cases annually). From 2003

to 2005, 25 mortality cases were referred to the Netherlands Forensic Institute. These individuals reportedly died after swallowing cocaine pellets.

The number of cocaine powder samples analyzed by DIMS (Drugs Information and Monitoring System) increased to 640 in 2005, compared with 368 in 2004 and 229 in 2003. The majority (92 percent) contained cocaine, with an average concentration of 54 percent, similar to the percentages reported in 2004.

In recent years, the number of pharmacologically-active adulterants or diluents in cocaine powder increased. The most commonly detected was phenacetin, an analgesic withdrawn from the market because of serious kidney damage in chronic use with high doses. The proportion of cocaine samples containing this substance almost doubled from 8.5 percent in 2002 to 37.0 percent in 2005. In the first half of 2006, approximately 50 percent of the cocaine samples contained phenacetin.

Cocaine is considered a drug with an unacceptable risk for public health and is therefore placed on list 1 of the Opium Act. A distinction is made between smuggling, trafficking/preparation/production, and possession. Possession of a small amount (maximum of 0.5 grams) of cocaine for one's own use is a serious offense in the Netherlands, but has a low priority in law enforcement policy. (Note that possession of all drugs is illegal; the maximum penalty is 1 year imprisonment and/or €1250 fine.)

In 2005, cocaine trafficking and organized crime associated with it was defined as a major threat to Dutch society. In 2005, there was a mean of 290 drug couriers arrested each month, and 80 per month in 2006 (until week 29).

### Cannabis

The nationwide survey on substance use showed that in 2005 and prior years, cannabis was by far the most commonly consumed illicit drug in the Netherlands. In 2005, 22.6 percent of the Dutch population had ever used this drug, compared with 19.5 percent in 2001 and 19.1 percent in 1997. Last-year prevalence of marijuana use was 5.4 percent in 2005, compared with 5.5 percent in both 2001 and 1997. In 2005, the percentages of recent (last year) cannabis users decreased with age. One in 10 young people between the ages of 15 and 24 had consumed cannabis in the past year, compared to 1 in more than 50 persons between 45 and 64 years of age. The prevalence of last-year cannabis use was 2.5 times higher among men than women (7.8 vs. 3.1 percent).

Findings on cannabis from the Dutch National School Survey (pupils age 12–18) show that last-month prevalence of cannabis use significantly decreased from 14 percent in 1996 to 10 percent in 2003. This decrease was only apparent among boys; there was no significant change in cannabis use among girls. More recent data from the Health-Behaviour of School-Aged Children survey indicate that cannabis use remained stable between 2003 and 2005 (last-year prevalence 12.5 percent vs. 11.7 percent among pupils age 12–16).

According to the Dutch National School Survey conducted in 2003, cannabis was perceived to be the most easily available substance (30 percent). More than one-third (35 percent) of the pupils obtained cannabis in coffee shops. Dealers and indirect sources (e.g., other people) were mentioned by 12 and 10 percent of the pupils, respectively. Cannabis can be obtained in coffee shops that adhere to certain criteria. However, Dutch policy has focused on controlling public nuisance problems associated with coffee shops. As a result of strict enforcement and various administrative and judicial measures, the number of officially tolerated coffee shops has decreased in the recent years.

LADIS data show that the proportion of cannabis clients among drug clients in treatment increased from 14 percent in 1994 to 27 percent in 2005. Approximately 42 percent of the drug clients who entered treatment for the first time in 2005 were cannabis clients. The proportion of female cannabis clients in 2005 was 18 percent.

With regard to the primary diagnoses for hospital admissions, it is somewhat surprising that the average number of days during which patients stayed in the hospital for problems related to drug abuse and drug dependence in 2005, was highest for cannabis patients (10.5 days).

Since 1999, the Trimbos Institute has monitored the THC (tetrahydrocannabinol) content of cannabis. Samples of different cannabis products (about 1 gram each) are regularly procured from a random sample of 50 coffee shops and then chemically analyzed. Between 2000 and 2004, the percentage of THC in Dutch marijuana increased progressively each year. However, a significant decrease was reported in 2005 and 2006 when the average THC concentration was 17.5 and 17.7 percent, respectively. In 2006, the THC concentration of imported marijuana was 9 percent, and for imported hashish it was 19 percent.

## Amphetamines

In 2005, the lifetime prevalence of amphetamine use in the general population age 15–64, was 2.1 percent and last-year prevalence was 0.3 percent. The percentage of pupils reporting lifetime amphetamine use was 2.2 percent in 2003; last-month prevalence was 0.8 percent.

The proportion of amphetamine users among all drug clients entering addiction treatment increased from 1.5 percent in 2001 to 4.8 percent in 2005. Of all clients entering treatment for the first time in 2005, 7 percent were amphetamine users. Approximately 22 percent of the amphetamine clients were females.

Regarding drug seizures in 2005, about 1,600 kilograms, 1,000 tablets, 300 liters of amphetamine oil, and 200 kilograms of amphetamine paste were seized in the Netherlands.

## Ecstasy

A trend analysis based on the national general population survey shows that lifetime prevalence of ecstasy increased steadily in the general population from 2.3 percent in 1997 to 4.3 percent in 2005. The percentages of last-year users of ecstasy also increased between 1997 and 2001 and remained stable in 2005.

Based on the Dutch National School Survey data, the percentage of pupils using ecstasy peaked in 1996 and decreased since that year to 2003 to 2.9 percent.

From 1995 to 2005, ecstasy clients never accounted for more than 5 percent of the new clients in treatment. The proportion of new drug clients who were females was higher among ecstasy clients (36 percent) than other drug categories.

In 2005, the National Police Force reported the seizure of 200 kilograms (about 1.9 million tablets or about 10 litres) of ecstasy. Of drug samples delivered by consumers sent to the laboratory for chemical analysis, the total percentages of ecstasy tablets containing MDMA or an MDMA substitute (e.g., MDEA, MDA) increased over the years, while the percentages of tablets containing other psychoactive substances decreased.

## Heroin/Opiates

According to the 2005 National Prevalence Survey, the lifetime (0.6) and last-year prevalence rates (0.0)

for heroin were the lowest for the drug categories included in the survey. Based on data reported from the 2003 Dutch National School Survey, 1.1 percent of the students had ever used heroin and 0.5 percent had used it in the past year.

Despite the low heroin prevalence rates, relatively high proportions of the clients have been treated in the Netherlands treatment facilities over the past 12 years. However, the percentage of opiate clients among all new drug clients decreased from 62 percent in 1994 to 28 percent in 2005. Among the first treatment clients in 2005, the proportion of opiates clients was only 10 percent compared with 36 percent for cocaine clients and 42 percent for cannabis clients. The opiates clients, on average, were also the oldest of all types of drug users entering treatment in 2005. Approximately, 17 percent of the opiates clients were females.

Most opiate addicts are polydrug users. In many cases they also used cocaine, in most cases crack.

Of the total number ( $n=122$ ) of acute drug-related deaths reported in the Netherlands in 2005, 60 were recorded with opiates as the underlying cause.

The National Police Force reported that in 2005, about 900 kilograms of heroin were seized. Most were seized by the National Crime Squad. In addition, about 14,000 methadone tablets were seized.

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