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Foreword

This Executive Summary provides a synthesis of findings from the 72nd semiannual meeting of the National Institute on Drug Abuse (NIDA) Community Epidemiology Work Group (CEWG) held in La Quinta, California, on June 5–7, 2012. The CEWG is a network of researchers from sentinel sites throughout the United States. It meets semiannually to provide ongoing community-level public health surveillance of drug abuse through presentation and discussion of quantitative and qualitative data. CEWG representatives access multiple sources of existing data from their local areas to report on drug abuse patterns and consequences in their areas and to provide an alert to potentially emerging new issues. Local area data are supplemented, as possible, with data available from federally supported projects, such as the Substance Abuse and Mental Health Services Administration (SAMHSA), Drug Abuse Warning Network (DAWN); Drug Enforcement Administration (DEA), National Forensic Laboratory Information System (NFLIS); the Arrestee Drug Abuse Monitoring (ADAM) II program; and the DEA, Heroin Domestic Monitor Program (HDMP). This descriptive and analytic information is used to inform the health and scientific communities and the general public about the current nature and patterns of drug abuse, emerging trends, and consequences of drug abuse.

The CEWG convenes twice yearly, in January and June. For the June meetings, CEWG representatives prepare full reports on drug abuse patterns and trends in their areas. After the meeting, the *Proceedings of the Community Epidemiology Work Group* is published in two volumes: a Highlights and Executive Summary Report (Volume I) and this volume, which includes the full CEWG area reports and international reports.

The majority of the June 2012 meeting was devoted to the CEWG area reports and presentations. CEWG area representatives presented data on local drug abuse patterns and trends. Presentations on drug abuse patterns and issues were also provided by guest researchers from Australia, Canada, the European Centre for Drugs and Drug Monitoring, Latin America (the Inter-American Drug Abuse Control Commission, Office of American States), and New Zealand. Other highlights of the meeting included presentations by DEA representatives Jeffrey H. Comparin, on the forensic chemistry of drugs of concern, and Sarah Bourne, who gave a drug trafficking update; an update from the Office of National Drug Control Policy on the ADAM II data system by M. Fe Caces, Ph.D.; and a presentation by U.S. Food and Drug Administration representative James Hunter, R.Ph., M.P.H., on the challenges in evaluating abuse deterrent drug product formulations. Presentations on community-based prescription drug abuse research included “Prescription Opioid Diversion: Mechanisms, Street Prices, and Prevention Measures,” by Steven Kurtz, Ph.D., Nova Southeastern University; “Initiation to Prescription Drug Use: Social Contexts of Use,” by Sheigla Murphy, Ph.D., Center for Substance Abuse Studies, Institute for Scientific Analysis; “Prescription Drug Misuse Among High-Risk Young Adults: Findings from New York and Los Angeles,” by Stephen Lankenau, Ph.D., Drexel University; “Prescription Drug Misuse Among Socially Active Urban Young Adults,” by Brian Kelly, Ph.D., Purdue University; and “Drug Use Practices Among Illicit Users of Pharmaceutical Opioids,” by Robert Carlson, Ph.D., Wright State University.

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. 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 information to develop research hypotheses that might explain social, behavioral, and biological issues related to drug abuse.

Moira P. O'Brien

Division of Epidemiology, Services and Prevention Research
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National Institutes of Health
Department of Health and Human Services

Introduction

The CEWG Network: Roles, Functions, and Data Sources

The 72nd semiannual meeting of the Community Epidemiology Work Group (CEWG) was held on June 5–7, 2012, in La Quinta, California. During the meeting, researchers from 20 geographically dispersed areas in the United States reported on current trends and emerging issues in their areas. In addition to the information provided for 18 sentinel areas that have contributed to the network for many years, and two additional areas (Colorado and Broward County, Florida, in the Miami Metropolitan Statistical Area), guest researchers from Cincinnati and Maine provided data from their respective areas. International representatives from Australia, Canada, the European Centre for Drugs and Drug Monitoring, Latin America (the Inter-American Drug Abuse Control Commission, Office of American States), and New Zealand reported on drug trends and issues in their respective countries or regions.

The CEWG Network

The CEWG is a unique epidemiology network that has functioned since 1976 as a drug abuse surveillance system to identify and assess current and emerging drug abuse patterns, trends, and issues, using multiple sources of information. Each source 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 hospital emergency departments, admitted to drug treatment programs, or died with drugs found in their bodies). Data on items submitted for forensic chemical analysis serve as indicators of 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. The CEWG areas on which presentations were made at the June 2012 meeting are depicted in the map above, with one area presentation including data on Baltimore, Maryland, and Washington, DC.

CEWG Meetings

The CEWG convenes semiannually; these meetings continue to be a major and distinguishing feature of the workgroup. CEWG representatives and guest researchers present information on drug abuse patterns and trends in their areas, and personnel from Federal agencies provide updates of data sets used by the CEWG. In addition, 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

At the semiannual meetings, CEWG representatives address issues identified in prior meetings and, subsequently, identify drug abuse issues for followup in the future. In addition to CEWG area presentations, 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
- Updates by Federal personnel on key data sets used by CEWG representatives
- Drug abuse patterns and trends in other countries

Identification of changing drug abuse patterns is part of the discussions at each CEWG meeting. Through this process, CEWG representatives can alert one another to the emergence of a potentially new drug of abuse. The CEWG is uniquely positioned to bring crucial perspectives to bear on urgent drug abuse issues in a timely fashion and to illuminate their various facets within the local context through its semiannual meetings and post-meeting communications.

Data Sources

To assess drug abuse patterns and trends, city- and State-specific data were compiled from a variety of health and other drug abuse indicator sources. Such sources include public health agencies; medical and treatment facilities; ethnographic research; key informant discussions; criminal justice, correctional, and other law enforcement agencies; surveys; and other sources unique to local areas.

Availability of data varies by area, so reporting varies by area. Examples of data reviewed by CEWG representatives to derive drug abuse indicators include, but are not limited to, the following:

- Admissions to drug abuse treatment programs by primary substance of abuse or primary reason for treatment admission reported by clients at admission
- Drug-related emergency department (ED) reports of drugs mentioned in ED records in the Drug Abuse Warning Network (DAWN) *Live!* data system, along with weighted estimates from the DAWN system
- Seizure, average price, average purity, and related data obtained from the Drug Enforcement Administration (DEA) and from State and local law enforcement agencies
- Drug-related deaths reported by medical examiner (ME) or local coroner offices or State public health agencies
- Arrestee urinalysis results and other toxicology data
- Surveys of drug use
- Poison control center data¹
- Other data sources cited in this report were local data accessed and analyzed by CEWG representatives. The sources included local law enforcement (e.g., data on drug arrests, impaired driver data, or law enforcement seizures); local DEA offices; High Intensity Drug Trafficking Area (HIDTA) reports; help lines; local and State surveys; information from prescription drug monitoring programs; and key informants and ethnographers.

¹Poison control center data are reported here as they are reported by area representatives in their full area reports and slide presentations. The terminology used by area representatives in this report does not necessarily mean that particular substances, such as cannabimimetics (also known as synthetic cannabinoids) and substituted (or synthetic) cathinones, are chemically verified.

**EPIDEMIOLOGY
OF
DRUG
ABUSE:**

**CEWG
AREA
REPORTS**

Patterns and Trends of Drug Use in Atlanta: 2011

Mary Wolfe, M.P.H., CHES¹

ABSTRACT

The following report provides patterns and trends of drug abuse in the Atlanta metropolitan area in 2011. According to the available indicators, cocaine use in Atlanta continued to decline. Cocaine primary public treatment admissions decreased from 12.8 percent in 2010 to 10.8 percent in 2011. The State Medical Examiner (ME)'s office reported a slight decrease in the count of cocaine-related deaths. Reports of poisoning by cocaine declined, following an increase in 2010. Cocaine reports among drug items seized and analyzed in National Forensic Laboratory Information System (NFLIS) laboratories decreased from 47 percent in 2009 to 34 percent in 2011. Despite this, cocaine continued to constitute the highest percentage of reports. Arrestee Drug Abuse Monitoring (ADAM) II program data indicated self-reported use of and treatment for crack and cocaine increased and remained high among male arrestees. Alcohol (defined as alcohol only and in combination) was the most commonly reported drug used in Atlanta, based on available sources. It contributed to nearly one-half of all treatment admissions. Public treatment data indicated that alcohol was the most commonly used secondary drug among cocaine, heroin, and marijuana users. Alcohol crisis line call numbers remained high and unchanged in Atlanta. According to public treatment admissions data, marijuana remained stable (at 17 percent), making marijuana the most commonly used illicit drug in Atlanta. Methamphetamine abuse remained stable at low levels. The proportion of treatment admissions for methamphetamine (5.7 percent) was only 0.5 percent higher than the proportion in 2010. The State ME office reported a slight decrease in methamphetamine-related deaths in fiscal year (FY) 2011 compared with FY 2010. NFLIS data also indicated a slight decrease in methamphetamine reports among seized and analyzed drug items. Heroin abuse indicators continued to be stable, with heroin constituting only 3.3 percent of total primary treatment admissions. As indicated by ADAM II data, self-reported heroin use and treatment percentages among male arrestees decreased from 2009 (84.4 percent) to 2011 (56.2 percent). Percentages of heroin drug reports among items seized and analyzed in NFLIS laboratories increased slightly from 2010. In 2011, oxycodone was the most reported prescription drug in the Atlanta area. Treatment admissions data demonstrated that oxycodone might have been stabilizing in 2011, at 2.8 percent of total admissions, after proportions increased consistently since 2007. State ME data showed a slight decrease in oxycodone postmortem result entries. NFLIS data indicated a small increase in oxycodone reports among seized and analyzed drug items. Alprazolam, the most commonly reported benzodiazepine, displayed similar trends, with stable proportions of treatment admissions and a slight increase in reports among drug items seized and analyzed in NFLIS laboratories. The State ME's office reported a slight increase in deaths with alprazolam involved. State ME data indicated an increase in the number of deaths associated with

¹The author is affiliated with Emory University.

hydrocodone, while NFLIS reported a stable proportion of reports among seized and analyzed drug items. MDMA (3,4-methylenedioxymethamphetamine) trends continued to show declines. MDMA accounted for less than 0.1 percent of total treatment admissions. State ME and NFLIS data also indicated a continued decrease in MDMA in those indicators. According to NFLIS, BZP (1-benzylpiperazine) reports among seized and analyzed drug items doubled in 2010 but declined again in 2011. Reports of TFMPP (1-3-(trifluoromethylphenyl)piperazine) among drug items seized and analyzed in NFLIS laboratories were unchanged in 2011. Other drug trend changes included increasing use of synthetic (substituted) cathinones and cannabimimetics, as reported by the Georgia Poison Center. Males constituted approximately 7 out of 10 substituted cathinone and cannabimimetic poison exposure cases. These drugs were most predominantly used by 18- to 24-year-olds. While prescription medications and synthetic drugs mentioned in this report are present in Atlanta, they constitute a small percentage of local drug abuse.

INTRODUCTION

Area Description

The Atlanta Metropolitan Statistical Area (MSA) encompasses 28 of the State's 159 counties. As previously reported, the Atlanta MSA population steadily increased over the past decade, to an estimated 5,475,213 in 2009. However, the population reduced slightly to the actual figure of 5,268,860 in 2010 (U.S. Census Bureau, 2011). After an increase in the estimated population by 300,000 from 2008 to 2009, the State of Georgia's population decreased to 9,687,653, which was similar to the 2008 estimated population (U.S. Census Bureau, 2011). The population of Atlanta reflected a similar pattern, with a population of 420,003 in 2010, reflecting a decrease of approximately 120,000 since 2009. The city of Atlanta is located in parts of two main counties. Fulton and DeKalb Counties include the city of Atlanta and represent 19 percent of the State's population. Cobb, Gwinnett, and Clayton Counties surround these two counties and represent approximately 18 percent of the State's population.

The racial composition of the city of Atlanta and the State of Georgia continued to reflect a reversal in ratio of Whites to African-Americans. The most recent data available indicated that the percentages of Whites living in the city of Atlanta (38.4 percent) and the State as a whole (60.0 percent) in 2010 were unchanged from 2006 estimates (U.S. Census Bureau, 2011). Similarly, the percentages of African-Americans living in the city of Atlanta (54.0 percent) and the State (30.5 percent) remained consistent with previous years. The estimated per capita family income of city residents was \$30,688 in 2010, representing a \$6,000 decrease since 2009. The State of Georgia also followed a similar trend, with the per capita family income decreasing slightly to \$23,383. Additionally, the estimated percentage of persons living below the Federal poverty level was higher in the city of Atlanta (26.1 percent) than in the State (17.9 percent) in 2010. These figures have been consistent from 2006 for the city of Atlanta, but they represent a decrease for the State of Georgia as a whole since 2008, when 14.7 percent were classified as living below the Federal poverty level. Housing vacancy continued to be more frequent inside the city, at 17.6 percent, compared with 12.3 percent for the State as a whole in 2010. Both of these numbers reflect reductions from 19.4 percent in the city of Atlanta and 14.6 percent for the State as a whole in 2009. Available unemployment data indicated that the rate of employment in the city of Atlanta and the State has increased as a whole between 2008 and 2010. The rate in the city (11.0 percent) was slightly higher than for the State (10.2 percent).

Data Sources:

- **Demographic and population data** were from the U.S. Census Bureau. Additional unemployment data were provided by the Georgia Department of Labor.
- **Drug abuse treatment program data** were from the Georgia Department of Human Resources for primary and secondary drugs of abuse among clients admitted to Atlanta's public drug treatment programs from January 2000 through December 2011.
- **Crisis and access line call data** were from the Georgia Department of Human Resources (Georgia Crisis and Access Line) and represent the number of telephone calls from persons seeking information about and/or admission to Georgia's public substance abuse treatment centers. Data, obtained for June 2006 through December 2011, were classified by drug type.
- **Drug purity and price data** (for heroin) came from the Drug Enforcement Administration (DEA)'s 2010 Heroin Domestic Monitor Program (HDMP) drug intelligence report.
- **Forensic drug analysis data** came from the National Forensic Laboratory Information System (NFLIS) and represent evidence seized in suspected drug cases throughout metropolitan Atlanta that were tested by the Georgia Bureau of Investigation for 2009–2011. NFLIS methodology allows for the accounting of up to three drugs per item submitted for analysis. The data presented are a combined count including primary, secondary, and tertiary reports for each drug analyzed. NFLIS data are subject to change. The longer the time after the calendar year for which data are extracted, the less likely there will be large changes in the number of drug reports. Therefore, data for 2011 are more likely to be subject to change than data for earlier years, and trends stated in this report are subject to change.
- **State drug-related mortality data** were obtained from the Georgia Medical Examiner (ME) Office. Data represent the number of postmortem specimens that tested positive for a particular drug and were collected for fiscal years (FYs) 2008 through 2012.
- **Acquired immunodeficiency syndrome (AIDS) and human immunodeficiency virus (HIV) data** came from the Department of Human Resources, Division of Public Health and the Department of Human Resources, Division of Community Health and represent prevalence of and HIV and AIDS cases in Georgia in 2008 and 2010.
- **Poison exposure call data** were pulled using general terms from the Georgia Poison Center and represent the count of exposure drug exposure calls by drug for 2006 to 2011.
- **Arrestee Drug Abuse Monitoring (ADAM) II data** are self-reported use and receipt of treatment from male arrestee interviews from two sites (the Atlanta Detention Center and the Fulton County Jail) for years 2007 through 2011. Additionally, the percentage of male arrestees testing urinalysis positive for several drugs from the same two sites are included.

DRUG ABUSE PATTERNS AND TRENDS

Cocaine/Crack

In 2011, cocaine was the second most frequently mentioned illicit primary drug of choice for individuals seeking assistance at publicly funded treatment centers in metropolitan Atlanta. The number of primary admissions in metropolitan Atlanta in 2011 for cocaine or crack ($n=985$) declined by nearly 166 admissions from the previous year, reflecting a continuation of a steady decrease since 2000. In 2011, cocaine-related admissions constituted 10.8 percent of the total number of primary admissions (including alcohol only treatment admissions), representing a 2-percent decrease from 2010 (exhibit 1). The ratio of males to females in treatment for cocaine rose in 2011 to 1.29:1. While treatment data for the last 3 years revealed identical proportions by gender, 2011 data indicated males were representing a higher proportion of cocaine treatment admissions. Cocaine admissions continued to be predominately African-American, with African-Americans constituting 74.2 percent of cocaine treatment admissions. Clients older than 35 accounted for the highest number of cocaine admissions across all age groups (75.3 percent) in 2011. This represents a slight increase from 2010. The majority of crack cocaine primary admissions reported that they smoked the drug, while powder cocaine admissions were mostly divided between snorting and smoking the drug as their primary route of administration. Among the 45.3 percent of clients seeking treatment who reported secondary drugs of choice, the percentage of clients who indicated that they used crack or powder cocaine remained stable at 24.1 percent. Georgia Crisis Line calls for cocaine in 2011 reflected a slight increase in both the first and second half of the year. Although calls regarding cocaine increased in 2011, the numbers were consistent with previous years (exhibit 2).

Cocaine reports accounted for 34.2 percent ($n=3,913$ reports) of total reports ($n=11,442$ reports) among drug items seized in suspected drug cases that were analyzed in NFLIS laboratories in 2011 (exhibit 3); this represented a continuing downward trend. After representing a fairly consistent number of all Georgia's postmortem samples tested by the Georgia State ME Office between FYs 2008 and 2010, the number of specimens containing cocaine in FY 2012 declined (exhibit 4). Additionally, cocaine exposure calls to the Georgia Poison Center decreased slightly from 2010 ($n=118$) to 2011 ($n=104$) (exhibit 5).

The percentage of self-reported drug use, along with receipt of treatment, among male arrestees increased from 2010 to 2011 for both crack and powder cocaine. The rise in the proportion of arrestees reporting powder cocaine use (28.4 to 47.0 percent) was similar to the increase in the proportion reporting crack cocaine use (51.6 to 68.5 percent). The percentage of male arrestees testing urinalysis positive for cocaine has been declining steadily since 2008 (39.8 percent in 2008 versus 31.7 percent in 2011).

Alcohol (In Combination and Alcohol Only)

In 2011, alcohol (defined as alcohol only and alcohol in combination with other drugs) was the most commonly reported drug among publicly funded treatment admissions in Atlanta. It constituted approximately 50 percent of treatment admissions. Since 2007, the percentage of alcohol in combination treatment admissions has remained relatively stable at 25 percent (exhibit 1). Of these clients seeking treatment for alcohol in combination, the most frequently used drugs combined with alcohol were marijuana (34.9 percent) and crack cocaine (32.6 percent). Among the clients seeking

drug treatment who reported a secondary drug of choice (45.3 percent of clients seeking treatment), 26.0 percent listed alcohol as their second drug of choice. Alcohol in combination admissions continued to be most commonly male (68.1 percent) and older than 35 (63.4 percent). The proportion of African-Americans seeking treatment for alcohol in combination with other drugs stayed consistent at 52.0 percent.

While proportions of treatment admissions for alcohol in combination have remained stable in recent years, the percentage of alcohol only treatment admissions has steadily increased, from 18.5 percent in 2007 to 25.7 percent in 2011 (exhibit 1). Clients seeking treatment for alcohol only were predominantly male (67.2 percent) and older than 35 (72.8 percent). Unlike alcohol in combination, Whites constituted a higher proportion of treatment admissions, at 62.4 percent.

Georgia Crisis and Access Line data in 2011 indicated that the number of calls regarding alcohol rose slightly from 2010 to 2011, but the overall proportion of alcohol-related calls stayed stable at 54 percent. (exhibit 2). Drug exposure calls to the Georgia Poison Center showed that the number of calls regarding alcohol (defined as alcohol in combination) have increased steadily from 2009 ($n=567$) to 2011 ($n=629$) (exhibit 5).

Heroin

In 2011, treatment admissions for individuals who reported heroin as their primary drug of choice accounted for 3.3 percent of public treatment program admissions (including alcohol only treatment admissions) in the Atlanta MSA; this was consistent with the proportion in 2010 (exhibit 1). Treatment admission percentages were higher for males (65.7 percent) than for females (34.3 percent). Among the 45.3 percent of users admitted to treatment for other primary drugs that reported secondary drugs, 2.1 percent indicated that heroin was a secondary drug of choice.

Whites constituted 65.0 percent of heroin treatment admissions. African-Americans made up the next highest proportion, at 31.4 percent. Approximately 40 percent of the treatment admissions (38.8 percent) were for clients age 35 and older, which was 10 percent lower than 2010 (48.4 percent). Clients age 18–25 represented 29.1 percent of admissions for heroin, and clients age 26–34 represented 31.7 percent of admissions. Seventy-eight percent of clients admitted to public treatment for heroin preferred to inject the drug. The most commonly reported secondary drugs of choice were powder cocaine (16.6 percent) and alcohol (15.0 percent).

According to the HDMP, 32 heroin samples were purchased in Atlanta in 2010. Of those, 29 were South American (SA) heroin, and 3 were Mexican (MEX) heroin. The SA heroin was less pure than in 2009, at 29.1 percent pure, and it was priced at \$1.01 per milligram pure, slightly higher than the previous year. MEX heroin was 10.1 percent pure and was priced at \$0.99 per milligram pure.

Heroin constituted approximately 2.9 percent ($n=328$ reports) of the total drug reports among items seized and analyzed by NFLIS laboratories in 2011 (exhibit 3). This was a slightly higher percentage of reports identified as heroin in the NFLIS system than the percentage in 2010. Self-reported drug use of heroin, along with receipt of treatment, among male arrestees has declined steadily from 84.4 percent in 2009 to 56.2 percent in 2011. Heroin-related exposure calls to the Georgia Poison Center have remained at relatively low levels; however, the numbers of calls increased from 29 in 2010 to 43 in 2011 (exhibit 5).

Other Opiates/Narcotics

As previously stated in the June 2011 report, the Georgia Department of Human Resources started reporting primary treatment admissions for prescription opiates/narcotics in 2007. Georgia officials hope to have a new Prescription Drug Monitoring Program operational by January 2013.

Oxycodone accounted for 2.8 percent of primary treatment admissions in 2011 (including alcohol only treatment admissions), which was four times the percentage in 2007 (0.9 percent). Among the 45.3 percent of treatment admissions who reported a secondary drug of choice, 3.0 percent indicated oxycodone as a secondary drug of choice. Thirty-nine percent of treatment admissions for oxycodone were age 26–34; this represented an increase from the previous year. The second largest age group was 18–25 (31.5 percent), indicating a reversal for these two age categories when compared with the previous year. This was followed by clients 35 and older (28.7 percent). Only two clients were younger than 18. The proportion of female admissions (45.7 percent) was lower than the proportion of males, but it represented a similar share of admissions in 2011 compared with 2010 (39 percent).

Drug reports for oxycodone and hydrocodone among drug items seized and analyzed by NFLIS laboratories indicated an increase for both oxycodone and hydrocodone from 2009. In 2011, a total of 930 reports were identified as containing oxycodone, compared with 765 reports in 2010 and 528 reports in 2009. Drug reports identified as containing hydrocodone among items seized and analyzed totaled 564 reports in 2011, which represents a slight decrease from 581 reports in 2010; there were 516 reports for hydrocodone in 2009. The number of deaths in which oxycodone was found totaled 386 in FY 2011; this number then declined to 340 in FY 2012 (exhibit 4). There were 332 deaths with hydrocodone detected in FY 2012, which was relatively consistent with previous years. Calls to the Georgia Crisis and Access Line indicated a small decrease in calls regarding opioids/narcotics in 2011 compared with 2010 (exhibit 2). Opiate/narcotic-related calls to the Georgia Poison Center also declined, with 103 calls in 2010 and 11 calls in 2011 (exhibit 5). The proportion of male arrestees testing urinalysis positive for opiates (possibly including heroin) was 2.4 percent in 2009, 5.1 percent in 2010, and 6.2 percent in 2011.

Depressants

Benzodiazepine indicators in the 28-county MSA were mixed. The most commonly reported benzodiazepine was alprazolam. Although primary treatment admissions for alprazolam constitute a small proportion of the primary treatment data, admissions for alprazolam have been increasing gradually since 2007. The percentage of clients with alprazolam as their primary drug admitted for treatment doubled from 2007 (0.8 percent) to 2010 (1.5 percent) and then stabilized at 1.5 percent in 2011 (including alcohol only treatment admissions). Additionally, alprazolam constituted 4.9 percent of all secondary drugs of choice among 2011 treatment admissions. Other benzodiazepines, including clonazepam and diazepam, constituted less than 1.0 percent of all primary treatment admissions. Calls to the Georgia Crisis Line for benzodiazepines rose from 2 percent in the first half of 2008 to 5 percent in the second half of 2011. Exposure calls to the Georgia Poison Center regarding benzodiazepines continued to constitute the highest proportion of drug-related exposure calls in 2011, with 45.5 percent of the total calls. However, the number of benzodiazepine-related calls rose only slightly from 2010 ($n=900$) to 2011 ($n=929$) (exhibit 5).

Based on data provided by the State ME Office, postmortem result entries for alprazolam remained relatively stable between FY 2010 ($n=517$) and FY 2011 ($n=582$), but then decreased to 528 in FY 2012 (exhibit 4). According to NFLIS data, reports identified as containing alprazolam among drug items analyzed in forensic laboratories increased from 603 in 2010 to 682 in 2011.

Stimulants

Treatment admissions for methamphetamine have been stable, between 5 and 6 percent since 2009, representing a reduction from the first half of the decade (exhibit 1). Nearly 6 percent of the 45.3 percent of clients who reported secondary drugs of choice reported methamphetamine as their secondary drug. The percentage of female treatment admissions in metropolitan Atlanta reporting methamphetamine as their primary drug decreased slightly in 2011 from the 2010 proportion, to 57.3 percent. Clients continued to be predominantly White (93.5 percent). The age distribution of people seeking treatment for methamphetamine continued to be fairly evenly split across age groups, with approximately 40 percent of clients age 26–34 and a slightly lower percentage of clients age 35 and older. The majority of metropolitan Atlanta treatment admissions clients preferred to smoke methamphetamine (55.0 percent). The percentage of methamphetamine injectors increased very slightly, from 20.1 percent in 2010 to 22.3 percent in 2011.

After an increase in 2009, the number of drug reports identified by NFLIS laboratories as methamphetamine among items seized and analyzed stabilized to a similar level as 2010, representing 23.3 percent of the total number of drug reports (exhibit 3). Self-reported drug use, along with receipt of treatment for methamphetamine, among male arrestees rose (the proportion was 43.8 percent in 2011) after declining over the previous 2 years (the proportion was 33.3 percent in 2009). Calls to the Georgia Crisis and Access Line in 2010 for amphetamines represented 5.0 percent of the total calls (exhibit 2). Methamphetamine exposure calls to the Georgia Poison Center remained relatively unchanged from 2010, with 63 calls in 2011 (exhibit 5).

Marijuana/Cannabis

Approximately 17 percent of public treatment admissions in 2011 in metropolitan Atlanta (excluding alcohol only treatment admissions) were for clients who considered marijuana their primary drug of choice (exhibit 1). This proportion was only slightly less than in 2010 (18.7 percent). Additionally, marijuana was reported by 32.1 percent of treatment admissions as the secondary drug of choice among the 45.3 percent of treatment admissions who reported a secondary drug of choice. Alcohol continued to be the most popular secondary drug of choice for marijuana users, with approximately 30 percent of clients continuing to report it as their secondary drug of choice. The proportion of male admissions for marijuana was higher than females, at 67.1 percent. The proportion of African-Americans who identified marijuana as their primary drug of choice remained stable since 2010 at 58.6 percent. Whites accounted for 32.9 percent of treatment admissions for marijuana. The proportion of younger users has steadily decreased over the past 3 years, with 55.6 percent of clients being younger than 26 in 2011, compared with 63.0 percent in 2009.

Although Georgia Crisis and Access Line calls addressing marijuana increased in 2011, the proportion of calls (14.0 percent) was consistent with the proportion of calls in 2010 (14.0 percent) (exhibit 2). The proportion of calls to the Georgia Poison Center regarding marijuana remained at approximately 2.0 percent, and the total number of calls rose only slightly from 2010 ($n=38$) to 2011 ($n=49$) (exhibit 5).

In 2011, 3.4 percent ($n=389$) of all drug-related reports among items analyzed by NFLIS laboratories were identified as containing marijuana/cannabis (exhibit 3). This represents a small increase from 2009 ($n=310$). However, it is important to note that these results are only estimates due to changes in statewide drug seizure testing for marijuana.

The proportion of male arrestees testing urinalysis positive for marijuana was consistent over the past 3 years: 44.9 percent in 2009; 42.2 percent in 2010; and 44.2 percent in 2011. There was a similar lack of variation in the proportion of self-reported use along with receipt of treatment: 27.1 percent in 2009; 20.6 percent in 2010; and 27.7 percent in 2011.

Other Drugs

MDMA or Ecstasy

A decrease in the use of MDMA (3,4-methylenedioxymethamphetamine) or ecstasy in the Atlanta area was reflected across all epidemiologic indicators for which it appeared. There were only 4 clients who reported MDMA as their primary reason for public drug treatment, and 13 individuals were admitted who listed MDMA as their secondary drug of choice. Only 0.9 percent ($n=99$ reports) of drug reports among items seized and analyzed were identified by NFLIS laboratories as containing MDMA in 2011, which reflects a decrease in reports since 2010 ($n=260$ reports). There was only one call to the Georgia Poison Center regarding MDMA in 2011.

GHB

There was only one client who reported GHB (gamma hydroxybutyrate) among primary treatment admissions; GHB was indicated three times among secondary treatment admissions. Only seven drug reports were identified as GHB among items seized and analyzed by NFLIS laboratories in 2011.

BZP and TFMPP

Drug reports identified by NFLIS laboratories as BZP (1-benzylpiperazine) among items seized and analyzed more than doubled from 2009 ($n=35$) to 2010 ($n=118$) but then returned to a level similar to 2009, with 25 reports in 2011. Drug reports identified as containing TFMPP (1-3-(trifluoromethylphenyl)piperazine) declined from 207 in 2009 to 195 in 2010 but then increased again to 164 in 2011.

Hallucinogens

In 2011, there was only one report of PCP (phencyclidine) among primary treatment admissions for the 28-county Atlanta MSA. LSD (lysergic acid diethylamide) was identified by NFLIS laboratories among seized and analyzed items in only 15 reports, and it was mentioned only 5 times among primary treatment admissions. There were only two LSD mentions among secondary treatment admissions. Georgia Poison Center data indicated that there were only six LSD-related exposure calls in 2011.

Synthetic Drugs (Substituted Cathinones and Cannabimimetics)

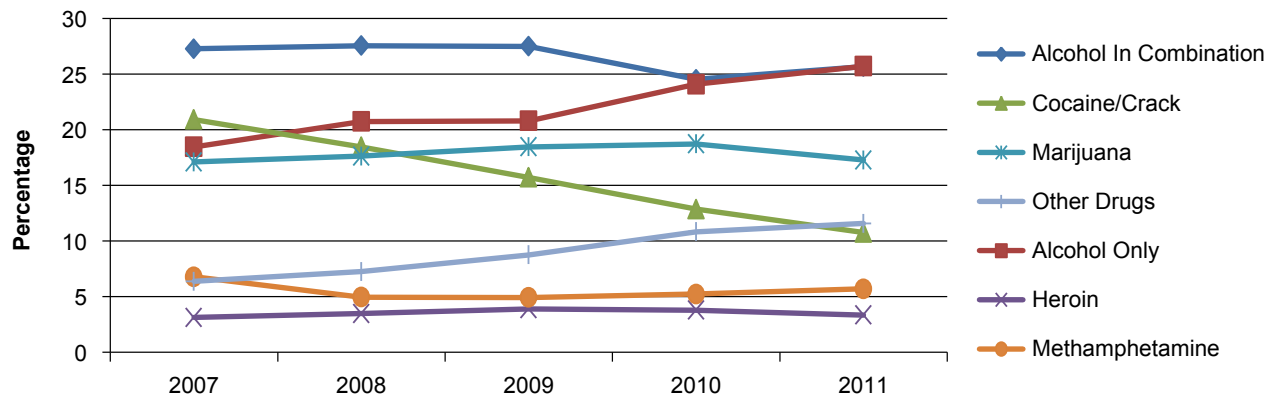
Other drug trend changes included increasing use of synthetic (substituted) cathinones and cannabimimetics, as reported by the Georgia Poison Center. Over the past 3 years, the number of substituted cathinone-related exposure calls rose from 3 calls in 2010 to 54 calls in 2011 (exhibit 5). Similarly, exposure calls regarding cannabimimetics increased sharply from 3 calls 2010 to 154 calls in 2011 (exhibit 5). While calls to the Georgia Poison Center for synthetic drugs have increased, they still represent a small proportion of the total number of exposure calls. Approximately 7 out of 10 substituted cathinone and cannabimimetic poison exposure cases were males. These drugs were most predominantly used by 18- to 24-year-olds. Both substituted cathinones and cannabimimetics are illegal in Georgia.

INFECTIOUS DISEASES RELATED TO DRUG ABUSE

In 2010, there were 18,353 people living with HIV and 23,451 people living with AIDS in the State of Georgia. There were fewer people living with HIV ($n=17,368$) and AIDS ($n=22,960$) in 2009. The counties with highest prevalence of people living with HIV and AIDS continued to be Fulton and DeKalb Counties. Three-quarters of people living with HIV/AIDS in Georgia were African-American; this was consistent with previous years. In 2009, 2.0 percent of people living with HIV were female injection drug users (IDUs) and another 2.4 percent were male IDUs, which was unchanged from 2009. The proportions of male and female IDUs living with AIDS were 6.4 percent and 3.2 percent, respectively. These percentages are consistent with previous years. The proportion of men who have sex with men (MSM)/IDUs living with HIV/AIDS also remained stable from 2009 (when 2.1 percent of MSM/IDUs were living with HIV and 3.2 percent were living with AIDS) to 2010 (when 2.4 percent of MSM/IDUs were living with HIV and 4.8 percent were living with AIDS).

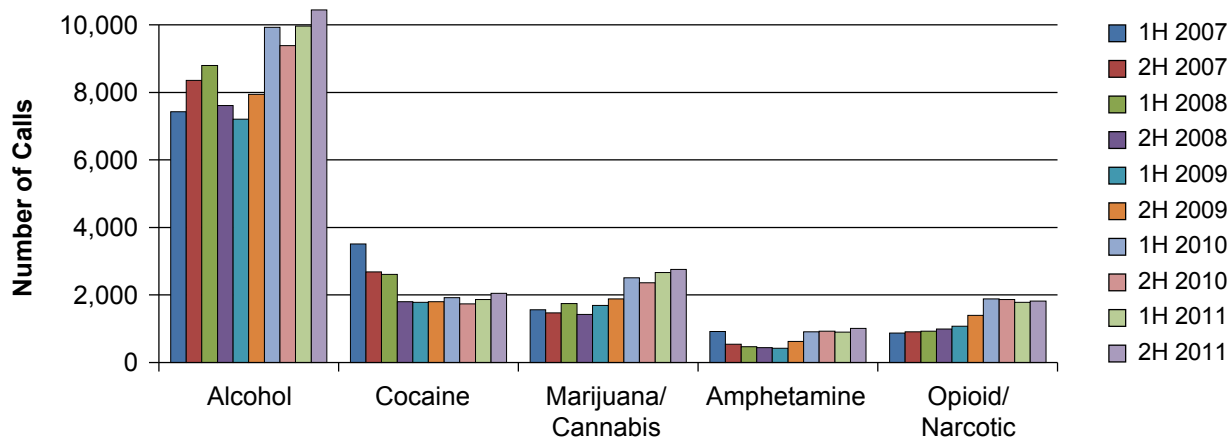
For inquiries regarding this report, contact Mary Wolfe, M.P.H., CHES, Public Health Program Associate, Department of Behavioral Sciences and Health Education, Rollins School of Public Health, Emory University, Room 734, 1518 Clifton Road, Atlanta, Georgia, 30322, Phone: 610-207-8564, Fax: 404-727-1369, E-mail: mewolfe@emory.edu.

Exhibit 1. Percentage of Primary Public Substance Abuse Treatment Admissions¹ in the Metropolitan Atlanta Area: 2007–2011



¹Treatment data denominator does not include alcohol only.
 SOURCE: Georgia Department of Human Resources

Exhibit 2. Number of Calls to the Georgia Crisis and Access Line, by Drug, in Georgia: First Half (1H) 2007–Second Half (2H) 2011



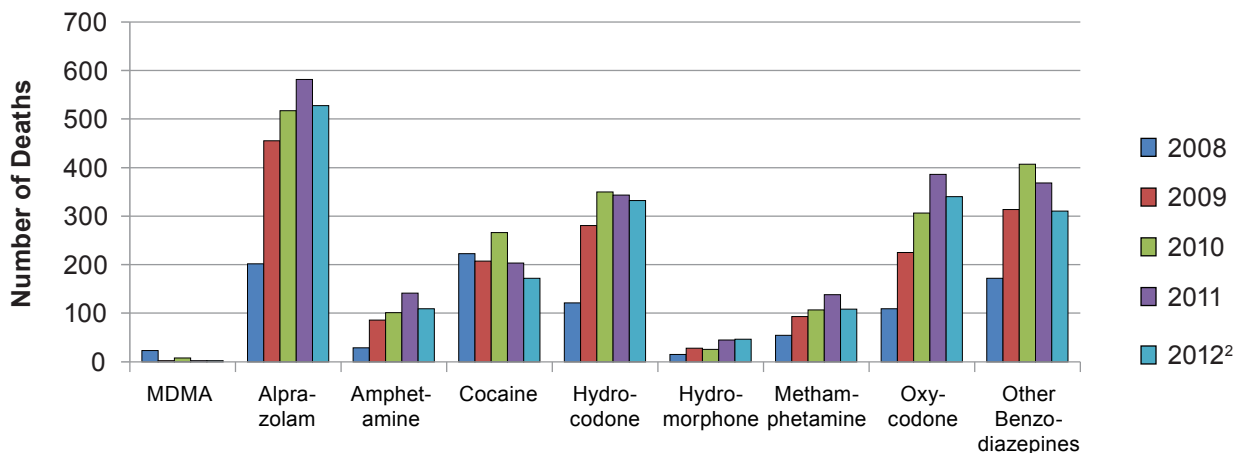
SOURCE: Georgia Crisis Line

Exhibit 3. Percentage of Analyzed Reports¹, by Drug, in NFLIS Laboratories in the Atlanta Area: 2009–2011²



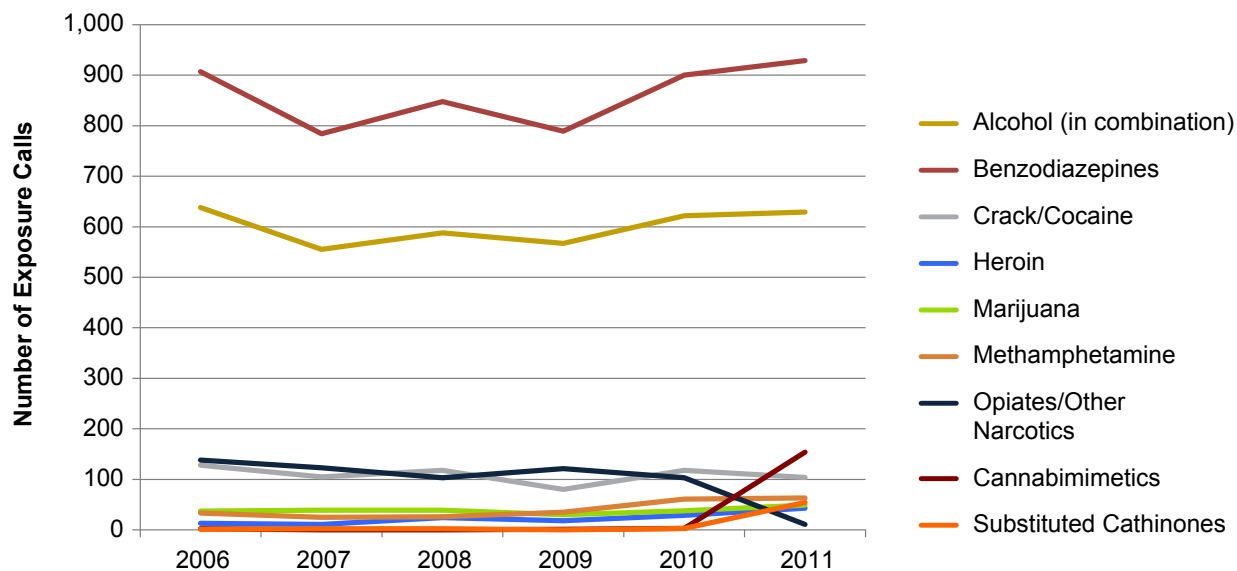
¹NFLIS methodology allows for the accounting of up to three drug reports per item submitted for analysis. The data presented are a combined count including primary, secondary, and tertiary reports for each drug item for the selected drugs.
²2011 data may be incomplete and are subject to change; data prior to 2009 are not provided due to a change in the unit of analysis.
 SOURCE: NFLIS, DEA

Exhibit 4: Number of Deaths Reported by the State Medical Examiner, by Drug, in Georgia: FYs 2008–2012¹



¹FYs are July 1 through June 30 for each year.
²2012 data are for 11 months, and are missing the last month of the fiscal year.
 SOURCE: Georgia State Medical Examiner's Office

Exhibit 5. Number of Exposure Calls to the Georgia Poison Center, by Drug, in Georgia: 2006–2011



SOURCE: Georgia Poison Center

Patterns and Trends of Drug Abuse in the Baltimore/ Maryland/Washington, DC, Metropolitan Area—Epidemiology and Trends: 2002–2011

Erin Artigiani, M.A., and Eric D. Wish, Ph.D.¹

ABSTRACT

Throughout the Washington, DC, and Maryland region, cocaine, marijuana, and heroin continued to be the primary illicit drug problems in 2011. In general, indicators for marijuana and other opiates/opioids were increasing across the region, while indicators for cocaine were decreasing. Heroin indicators were mixed. PCP (phencyclidine) indicators were increasing in Washington, DC, and newer drugs such as synthetic marijuana (cannabimimetics), “bath salts” (substituted cathinones), and 5-MeO-DIPT (Foxy methoxy) were starting to appear in reports for drug items analyzed by National Forensic Laboratory Information System (NFLIS) laboratories. The use of methamphetamine remained low throughout Maryland and Washington, DC, and was confined to isolated communities. In Washington, DC, in 2011, cocaine/crack, marijuana, and heroin continued to be the primary illicit drug problems. Cocaine remained one of the most serious drugs of abuse in Washington, DC, as evidenced by the fact that more adult arrestees tested urinalysis positive for cocaine than for any other drug in 2011, and more NFLIS reports were positive for cocaine than for any other substance in 2009 and 2010. In preliminary 2011 NFLIS data, however, more reports were positive for marijuana than for cocaine. However, the percentage of adult arrestees testing urinalysis positive for cocaine in Washington, DC, appeared to be continuing to decrease. In comparison, the percentage testing urinalysis positive for opiates remained about the same, and the percentage positive for PCP increased slightly. In 2011, 21.5 percent of adult arrestees tested positive for cocaine, and approximately 8–10 percent tested positive for opiates and/or PCP. During the first 4 months of 2012, however, the percentages testing positive for cocaine and opiates decreased. In 2011, 25.7 percent of reports in drugs seized and analyzed by NFLIS laboratories were positive for marijuana, 19.3 percent were positive for cocaine, and 6.3 percent were positive for heroin. Several new drugs began to show up in the NFLIS reports in Washington, DC. Possible levamisole ranked third, outranking heroin, among the top 10 drug reports identified among drug items each year from 2009 to 2011. Synthetic marijuana (cannabimimetics) and “bath salts” (substituted cathinones) first began to appear in NFLIS data in 2010, and 3.7 percent of reports were positive for 5-MeO-DIPT and 5-MeO-DPT in 2011, ranking the drug seventh among the top 10 drug reports in that area. Overdose deaths in Washington, DC, increased from 90 in 2007 to 105 in 2008 and decreased in 2010 to 79. They were more likely to be related to cocaine (58.0 percent) than to any drug other than alcohol, although the total number of cocaine-related deaths decreased, as did the total number of morphine-related

¹The authors are affiliated with the Center for Substance Abuse Research, University of Maryland, College Park, Maryland. Some background material was taken from previous CEWG reports.

deaths. During 2011, juvenile arrestees were more likely to test urinalysis positive for marijuana (50.2 percent) than for any other drug, but the percentage decreased in the first 4 months of 2012 to 47.3 percent. In comparison, the percentage of youth testing positive for cocaine decreased to less than 1.0 percent (1.0 percent in 2011 and 0.4 percent in the first 4 months of 2012). The percentage of adult and juvenile offenders in Washington, DC, testing urinalysis positive for amphetamines remained considerably lower than for other drugs (at approximately 1.0 percent) in 2011. In Maryland, there were 52,466 primary enrollments to certified publicly funded treatment programs in 2011. This was an increase statewide, but there was a slight decrease in Baltimore City. Enrollments in Maryland most frequently involved alcohol, heroin, marijuana, crack/other cocaine, and other opiates/opioids. Treatment enrollments involving marijuana and other opiates/opioids appeared to be continuing to increase, while treatment enrollments involving heroin and crack cocaine were decreasing. Enrollments in Baltimore City showed similar trends. Baltimore City accounted for more than one-half (56.0 percent) of heroin enrollments in Maryland and approximately one-third of cocaine enrollments but only 10.0 percent of the other opiate enrollments. Cocaine and marijuana accounted for nearly three-quarters of the positive reports from drug items seized and analyzed in NFLIS laboratories in 2011 in Maryland and Baltimore City. Positive reports for marijuana and other opiates/opioids increased from 2009 to 2010 in Maryland, while positive reports for cocaine and heroin decreased. Approximately 14 percent of reports statewide were positive for heroin and more than three-quarters of these reports (87.0 percent) were from Baltimore City. Several new drugs were being identified in the Baltimore City area. "Bath salts" (substituted cathinones) and 5-MeO-DIPT first appeared in Maryland and Baltimore City in 2011, and synthetic marijuana (cannabimimetics) first appeared in Maryland and Baltimore County in 2010. The number of types of synthetic marijuana (cannabimimetics) found in Maryland reports increased from none in 2009 to 10 in 2011. Preliminary analyses indicate that there were 682 drug intoxication deaths in Maryland during 2011. The most frequently involved drugs were heroin/morphine, methadone, oxycodone, and cocaine. Heroin/morphine- and cocaine-related deaths increased in 2011 after decreasing in 2010. Methadone-related deaths decreased, and oxycodone-related deaths appeared to be continuing to increase. Both methadone- and oxycodone-related deaths outnumbered cocaine-related deaths in 2011. Buprenorphine-related deaths, however, cannot be estimated in Maryland because the Office of the Chief Medical Examiner does not routinely test for it.

INTRODUCTION

This report addresses drug trends in both Maryland (including Baltimore City) and Washington, DC. It is organized to provide area descriptions and drug use overviews of both regions. For each drug assessed in the Drug Abuse Patterns and Trends section, a region-wide overview is provided, followed by data specific to each jurisdiction.

Area Descriptions

Washington, DC (the District), a 68-square mile area, shares boundaries with the States of Maryland and Virginia. The Nation's capital is home to approximately 601,723 people residing in eight wards; 18.4 percent live below the Federal poverty level. Two-thirds (66.7 percent) are in the labor force, a slight improvement from previous years (U.S. Bureau of the Census, 2009 [poverty, labor force] and 2010 [population] estimates). As in prior years, slightly more females than males live

in Washington, DC. However, the percentage of the District's population that is African-American decreased by 11.1 percent (to 50.7 percent), while the Hispanic and Asian population subgroups increased (Hispanics increased by 21.8, to 9.1 percent, and Asians increased by 38.6, to 3.5 percent). Approximately 81 percent of the population in Washington, DC, is age 18 and older, which is higher than the Nation's population. One in five residents are younger than 18, and 11.7 percent are age 65 and older. Nearly one-half (48.5 percent) of adults age 25 or older have at least a bachelor's degree (U.S. Bureau of the Census, 2009 [education, poverty, labor force] and 2010 [population] estimates).

The State of Maryland is home to approximately 5,773,552 people residing in 24 jurisdictions. The State has slightly more females than males, and the majority of the State's population is White (58.2 percent), although this percentage has decreased. Approximately 29.4 percent of Maryland's population are African-American; 8.2 percent are Hispanic or Latino; and 5.5 percent are Asian. Maryland's total population increased by 11 percent from 1990 to 2000 and increased again in the 2010 census. Minority populations in the State continued to increase during this time, while the White population decreased slightly in 2010. Increases were noted among the African-American population (by 15.1 percent), Asians (by 51.2 percent), and Hispanics (by 106.5 percent). Approximately three-quarters (76.3 percent) of the State's population are age 18 and older, comparable to the national average of 75.7 percent. Approximately 12 percent of Maryland's population are 65 and older, slightly lower than the national average. More than three-quarters (88.2 percent) of the State's residents are high school graduates or higher, and more than one in three (35.7 percent) have a bachelor's degree or higher—an education level higher than that of the Nation's general population. Nearly 10 percent (9.1 percent) live below the Federal poverty level; 69.9 percent are in the labor force, a slight improvement from previous years (U.S. Bureau of the Census, 2009 [education, poverty, labor force] and 2010 [population] estimates).

Baltimore City is home to 620,961 residents; the majority are African-American (63.7 percent). The percentage living below the Federal poverty level (21 percent) is higher than in the State, while the percentage in the labor force (61.5 percent) and the mean household income are lower (\$56,658 in Baltimore City versus \$90,879 in the State).

Drug Use Overview

Regional Overview. Throughout the Washington, DC, and Maryland region, cocaine, marijuana, and heroin continued to be the primary illicit drug problems in 2011. In general, indicators for marijuana and other opiates/opioids (other than heroin) were increasing across the region, while indicators for cocaine were decreasing. Heroin indicators were mixed. PCP (phencyclidine) indicators were increasing in Washington, DC, and newer drugs such as synthetic marijuana (cannabimimetics), "bath salts" (substituted cathinones), and 5-MeO-DIPT (Foxy methoxy) were starting to appear among reports detected in drug items seized and analyzed in National Forensic Laboratory Information System (NFLIS) laboratories. The total number of enrollments to publicly funded alcohol and drug treatment programs in Maryland increased, as did those related to marijuana and to other opiates/opioids. The retail distribution of the opioids oxycodone and buprenorphine also continued to increase in Baltimore City and County and Washington, DC. Total intoxication/overdose deaths in Maryland (2011) and Washington, DC, (2010) decreased. Notably, heroin/morphine- and cocaine-related deaths decreased in both jurisdictions in 2010, but appeared to have increased in Maryland in 2011.

W/B HIDTA Region Overview. The primary drugs identified across the region by the Washington/Baltimore High Intensity Drug Trafficking Area (W/B HIDTA) in 2011 were crack and powder cocaine and heroin. These drugs have remained consistent for more than 10 years. The percentage of local law enforcement, treatment, and prevention officials reporting that these drugs cause extreme or significant harm was 86 percent for crack cocaine, 72 percent for heroin, and 43 percent for powder cocaine (W/B HIDTA 2011 Annual Report). A higher percentage of the professionals surveyed reported that prescription narcotics (65 percent) were causing more extreme or significant harm than cocaine. Treatment and prevention professionals also reported benzodiazepines as an increasing problem throughout the region.

Washington, DC: According to the National Survey on Drug Use and Health (NSDUH) annual State averages for 2008–2009, an estimated 10.5 percent of Washington, DC, residents age 12 or older reported past-month illicit drug use. The primary indicators assessed in this report for Washington, DC, are arrestee urinalysis results, overdose deaths, and law enforcement seizures. Arrestee urinalysis results from DC Pretrial Services indicate that adult arrestees were most likely to test positive for cocaine and juvenile arrestees were more likely to test positive for marijuana, but the percentages testing positive continued to decrease in 2011. In fact, the percentage of adult arrestees testing positive for cocaine reached the lowest point since 1985. Drug overdose deaths most frequently involved alcohol, cocaine, or morphine in 2010. Morphine- and cocaine-related deaths decreased to the lowest number in 6 years. The most frequently identified substances in NFLIS reports for drug items seized and analyzed in forensic laboratories in 2011 were marijuana, cocaine, and “possible levamisole.” From 2009 to 2010, reports involving marijuana increased, while reports involving cocaine and heroin decreased. Reports involving PCP and “possible levamisole” were more likely in Washington, DC, than in other parts of the region and were increasing.

Maryland: In Maryland, an estimated 6.8 percent of residents age 12 or older reported past-month illicit drug use, according to the NSDUH. The primary indicators assessed in this report are enrollments in publicly funded treatment programs, intoxication deaths, and law enforcement seizures. Statewide, public treatment enrollments most frequently involved alcohol, heroin, marijuana, and cocaine as the primary drugs mentioned in 2011. Increases in enrollments occurred for primary mentions of other opiates/opioids (other than heroin), marijuana, and alcohol, while decreases occurred for heroin and crack cocaine. Preliminary analyses indicate that the total number of drug intoxication deaths in Maryland decreased in 2011. Intoxication deaths most frequently involved heroin/morphine, methadone, oxycodone, alcohol, and cocaine. Cocaine- and heroin/morphine-related deaths increased in 2011 after decreasing in 2010. Oxycodone-related deaths continued to increase in 2011. Buprenorphine-related deaths, however, cannot be estimated in Maryland because the Office of Chief Medical Examiner (OCME) does not routinely test for it. The most frequently found reports in drug items seized and analyzed in NFLIS laboratories in 2011 were marijuana, cocaine, heroin, and oxycodone. From 2009 to 2010, reports involving marijuana and oxycodone increased, while reports involving cocaine and heroin decreased.

Baltimore City: In Baltimore City, an estimated 9.9 percent of residents age 12 or older reported past-month illicit drug use. The primary indicators assessed in this report are enrollments in publicly funded treatment programs, intoxication deaths, and law enforcement seizures. Baltimore City enrollments in publicly funded treatment programs in 2011 were more likely to involve heroin as the primary drug mentioned than any other drug, but the total number of such enrollments continued

to decrease. In comparison, primary mentions of marijuana and other opiates/opioids (other than heroin) increased. Baltimore City accounted for more than one-half (56 percent) of primary heroin enrollments and approximately one-third (34 percent) of primary cocaine/crack enrollments. Preliminary analyses of 2011 data indicate that Baltimore City accounted for 28 percent of all intoxication deaths in Maryland, 35 percent of heroin/morphine-related deaths, and 42 percent of methadone-related deaths. The most frequently found drugs in NFLIS reports in drugs seized and analyzed in 2011 were marijuana, cocaine, and heroin. From 2009 to 2010, reports for marijuana increased, while reports for cocaine and heroin decreased.

Data Sources

A number of sources were used to obtain comprehensive information regarding drug use trends and patterns in Maryland and Washington, DC. Data for this report were obtained from the sources listed below.

- **Test results on drug reports** analyzed by local crime laboratories were obtained from NFLIS for calendar years (CYs) 2009–2011 (exhibits 1a and 1b). NFLIS methodology allows for accounting up to three drugs per item submitted for analysis. The data presented are a combined count including primary, secondary, and tertiary reports for each drug item for the selected drugs. Data for 2011 are provisional and are subject to change.
- **Drug-related death data** for Washington, DC, were obtained from the 2005 through 2010 Annual Reports prepared by the District's OCME. Drug-related death data for Maryland were from special data runs conducted by the Maryland OCME through 2011. Exhibits 2a and 2b show the number of drug overdose and drug-positive deaths by drug in Washington, DC, and exhibit 2c shows the number of drug intoxication deaths in Maryland.
- **Arrestee demographic and urinalysis data** for Washington, DC, were provided by the Arrestee Drug Abuse Monitoring (ADAM) II system. The ADAM II program conducts interviews and urinalyses with a subset of adult male arrestees. The Washington, DC, 2011 sample included an eligible sample of 418 male arrestees in 4 facilities. There was a response rate of 73 percent ($n=287$) for the interviews and a response rate of 77 percent ($n=221$) for the urinalysis. Additional arrestee urinalysis data were provided by the District of Columbia Pretrial Services Agency for adult arrestees (which include all willing adult arrestees [$n=18,353$ in 2011]) and juvenile arrestees for 1984 through April 2012 (exhibits 3a, 3b, 4a, and 4b).
- **Treatment data** for Maryland and Baltimore City were provided by the Maryland Alcohol and Drug Abuse Administration (ADAA) (exhibit 5a and 5b). It is important to note that the Maryland ADAA recently changed its treatment data reporting. ADAA now reports treatment enrollments rather than admissions. Data presented in this report have been modified from previous CEWG reports and are based on enrollment data. Comparisons across years with data within this report are appropriate, but data in this report should not be compared to data in reports prior to 2011. It should be noted that to the extent that waiting lists exist, the number of treatment enrollments may be an indicator of treatment capacity rather than demand. An enrollment in the treatment data does not necessarily represent a unique individual, since some individuals are enrolled to treatment more than once in a given period.

- **Drug trafficking trends** were obtained from the W/B HIDTA Threat Assessment report for program year 2012, along with the 2008 to 2011 annual reports.
- **Census data** for Maryland, Baltimore City, and Washington, DC, were derived from the U.S. Census Bureau.
- **Additional information** came from several sources. Data on the human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS) were provided by the Maryland Infectious Disease and Environmental Health Administration and the Washington, DC, HIV/AIDS, Hepatitis, STD, and TB Administration; retail distribution data were derived from the Drug Enforcement Administration (DEA)'s Automation of Reports and Consolidated Orders System (ARCOS) (exhibits 6a, 6b, 7a, 7b, and 8).

DRUG ABUSE PATTERNS AND TRENDS

Cocaine/Crack

Cocaine, particularly in the form of crack, remained the most serious drug of abuse in the District, accounting for more adult arrestee urinalysis positive drug tests than any other drug, as well as more deaths than any other illicit drug. The number of cocaine overdose deaths continued to decrease in 2010, and they were lower than the number of alcohol-related deaths for the first time in 6 years. Cocaine also continued to be a primary concern in Maryland. However, indicators across the jurisdictions appeared to indicate a decrease in negative consequences from the use of cocaine.

Preliminary data for CY 2011 showed that 19.3 percent of primary, secondary, and tertiary drug reports among drug items seized and analyzed in NFLIS laboratories in the District tested positive for cocaine, while 20.0 percent of the drug reports identified among drug items analyzed in Maryland and 29.4 percent of the drug items analyzed in Baltimore City tested positive for cocaine (exhibits 1a and 1b). Cocaine was the second most frequently found drug after marijuana. The percentage of reports in analyzed drug items testing positive for cocaine decreased from 2009 to 2010 in all three jurisdictions. There was a decline in the amount of powder cocaine seized by HIDTA initiatives throughout the W/B HIDTA region from 2007 to 2009, followed by increases in 2010 and 2011. The total amount seized (239 kilograms) in 2011 was still considerably lower than the seizures in 2007 and 2008 (W/B HIDTA 2011 Annual Reports). A breakdown by regions within the W/B HIDTA indicated that the increase was due to increases in Maryland and Washington, DC. Baltimore City accounted for 30 percent of the cocaine seized, while Prince George's County (a Washington, DC, suburb in Maryland) accounted for 40 percent of the seizures.

Cocaine overdose deaths in the District totaled 46 in 2010, higher than deaths caused by any drug other than alcohol (exhibit 2a). This number has fluctuated in recent years. The number of cocaine-positive deaths ($n=89$) was surpassed only by alcohol-positive deaths in the District in 2010 ($n=180$) (exhibit 2b). Approximately one-half of all traffic-related deaths analyzed by the OCME tested positive for at least one drug. Approximately 8 percent of these cases were positive for cocaine. In Maryland, the total number of intoxication deaths fluctuated in recent years, and it decreased by approximately 13 percent in 2011 (exhibit 2c). Preliminary analyses indicate that cocaine was the fifth most frequently found drug in intoxication deaths statewide in 2011, after heroin/morphine, methadone, alcohol, and oxycodone (exhibit 2d). In Baltimore City, the number of cocaine-related

intoxication deaths ($n=46$) remained about the same from 2010 to 2011, and cocaine was the third most frequently found drug after heroin/morphine and methadone.

In the District, reports from the Pretrial Services Agency indicated that the percentages of adult arrestees testing urinalysis positive for cocaine continued to decrease in 2011 (from 28.7 percent in 2009, to 24.0 percent in 2010, and to 21.5 percent in 2011) and in the first 4 months of 2012. During the first 4 months of 2012, the percentage reached the lowest point (17.2 percent) since testing began in 1984. The percentage of juveniles, however, remained low and steady from 2009 through 2011 at approximately 1 percent. During the first 4 months of 2012, however, the percentage positive for cocaine decreased to 0.4 percent (exhibits 3a to 4b). Approximately 21 percent of arrestees in the ADAM II program tested urinalysis positive for cocaine, a proportion similar to the percentage cited above from the Pretrial Services tests.

For Maryland, primary crack enrollments to certified publicly funded Maryland alcohol and drug abuse treatment programs decreased steadily from 2007 to 2011 (by 36.8 percent). Primary crack mentions at enrollment also decreased in Baltimore City, from 2008 to 2011 (by 22.6 percent). In contrast, primary mentions for other cocaine increased by approximately 12 percent in Baltimore City and by 14 percent statewide in 2011 after decreasing steadily from 2006 to 2010. Baltimore City residents accounted for approximately one-third of the crack and other cocaine enrollments in the State in 2011 (exhibits 5a and 5b).

Heroin

Heroin represented one of the three primary illicit drugs of abuse in Maryland and in the District, along with cocaine and marijuana. In general, heroin was more prevalent in Baltimore City, while cocaine was more prevalent in the District. Although the amount of heroin seized by HIDTA initiatives fluctuated from 2008 to 2011, there was a decrease from a high of 90 kilograms in 2010 to a low of 67 kilograms in 2011 (W/B HIDTA 2008–2011 Annual Reports). A breakdown by regions within the W/B HIDTA indicates that the Baltimore metropolitan area accounted for 41.3 percent of the wholesale value of the heroin seized, while the Washington, DC, metropolitan area accounted for 19.7 percent of the wholesale value.

Preliminary data for CY 2011 showed that 6.3 percent of primary, secondary, and tertiary drug reports identified among drug items seized and analyzed in NFLIS laboratories in the District tested positive for heroin, while 12.0 percent of the drug reports identified among drug items analyzed in Maryland and 21.7 percent in Baltimore City tested positive for heroin. Heroin was the third most frequently found drug, after marijuana and cocaine, in Maryland and Baltimore City and the fifth most frequently found drug in Washington, DC. The percentage of reports in analyzed drug items testing positive for heroin decreased from 2009 to 2010 in all three jurisdictions (exhibits 1a and 1b). More than three times as many heroin-positive reports were identified in Baltimore City as in Washington, DC.

The number of overdose deaths involving heroin/morphine in the District decreased sharply in 2007 (from 50 deaths in 2006 to 32 deaths in 2007), increased again in 2008 and 2009 (from 39 to 44 deaths, respectively), and then decreased by 34 percent in 2010 to 29 deaths. As in prior years, heroin/morphine was the third most likely drug to cause an overdose death (exhibit 2a). Heroin/morphine was the third most frequently found drug in all drug-positive cases in Washington, DC, in

2010 (found in 87 cases) (exhibit 2b). In Maryland, heroin/morphine was the most frequently found drug in intoxication deaths in 2009–2011. The number of heroin/morphine-related deaths increased by approximately 30 percent from 196 deaths in 2008 to 254 deaths in 2009 (exhibit 2d). Baltimore City experienced a much larger increase (by 46 percent), from 72 deaths in 2008 to 105 deaths in 2009. However, in 2010, there was a sharp decrease in heroin/morphine-related deaths both statewide and in Baltimore City (by 29 percent in Maryland and by 32 percent in Baltimore). Preliminary analyses indicate that heroin/morphine-related deaths increased again in 2011 (by 11 percent statewide and by 61 percent in Baltimore City). In 2011, approximately 36 percent (similar to the 2010 percentage) of the heroin/morphine-related intoxication deaths in the State occurred in Baltimore City. Other Maryland jurisdictions showing increases were suburban counties in the Baltimore and Washington, DC, metropolitan areas.

Reports from the Pretrial Services Agency in the District indicated that the percentage of adult arrestees testing positive for opiates remained about the same for 2001 through 2009. In 2010, 8.7 percent of adult arrestees tested positive for opiates (including heroin); the percentage testing positive continued to decrease in 2011 (to 7.9 percent) and the first 4 months of 2012 (to 6.4 percent) (exhibits 3a and 3b). Juvenile arrestees were not tested for opiates during this time period. In ADAM II urinalyses, 9 percent of the adult arrestees tested positive for opiates, which is similar to the percentage found by Pretrial Services.

Heroin was the most frequently used illicit drug among publicly funded Maryland treatment enrollments (exhibit 5a). Primary enrollments for heroin to certified publicly funded Maryland alcohol and drug abuse treatment programs increased steadily from 2007 to 2009, then decreased in 2010 and 2011. These enrollments were highest in Baltimore City in 2011, where they also decreased (by 5.7 percent statewide and 11 percent in Baltimore City from 2010 to 2011) (exhibit 5b). Nearly one-half (47 percent) of Baltimore City enrollments mentioned heroin as the primary substance of abuse, and Baltimore City residents accounted for 56.0 percent of the enrollments in the State.

Other Opiates/Opioids

The number of drug overdose deaths in Washington, DC, involving methadone fluctuated between 10 and 12 from 2007 to 2010. Twenty-nine drug-positive cases involved methadone in 2010, and 10 of these cases were classified as overdose deaths. The number of methadone intoxication deaths decreased steadily statewide in Maryland from 2007 ($n=215$) to 2009 ($n=135$), increased by 27.4 percent in 2010 (to 172 deaths), and then decreased again in 2011 (to 164 deaths) (exhibit 2d). Baltimore City accounted for nearly one-half (42 percent) of the methadone-related intoxication deaths in Maryland in 2011. Preliminary analyses indicate that methadone deaths increased from 52 to 69 deaths in Baltimore City from 2008 to 2011. The number of oxycodone-positive deaths in Washington, DC, tripled from 2007 to 2008 (from $n=6$ to $n=18$) and continued to increase in 2009 (to 20), but they were still lower than in 2006 (when there were 23 deaths) (exhibit 2b). In 2010, oxycodone-positive deaths dropped to 13. Oxycodone-related overdose deaths ranged from none in 2007 and 2008 to eight in 2009. There were three deaths in 2010. In Maryland, oxycodone-related intoxication deaths increased from 81 in 2008 to 152 in 2011 (exhibit 2d). The number of methadone- and oxycodone-related intoxication deaths statewide was higher than the number of cocaine-related intoxication deaths. The number of oxycodone-related intoxication deaths in Baltimore City increased from 7 in 2008 to 11 in 2009 and then decreased again to 8 in 2010. These deaths more than doubled in 2011 to 20. It should be noted that the number of unspecified narcotics deaths

were decreasing. Therefore, the changes in methadone- and oxycodone-related deaths could be the result of a true increase, more accurate or complete reporting, or both. Buprenorphine-related deaths, however, cannot be estimated in Maryland because the OCME does not routinely test for it.

Oxycodone, methadone, and buprenorphine combined accounted for approximately 3.2 percent of the drug reports among drug items seized and analyzed by NFLIS laboratories in 2010 in Baltimore City and 1.7 percent in Washington, DC. The numbers of buprenorphine and oxycodone reports increased in Baltimore City from 2009 to 2010, while the number of methadone reports stayed about the same. Baltimore City accounted for 55.0 percent of the buprenorphine reports in Maryland in 2010. Preliminary reports for 2011 indicated similar results.

The DEA's ARCOS reports showed that the retail distribution of oxycodone and buprenorphine in Washington, DC, Baltimore City, and Baltimore County (212 ZIP Codes™ only) increased sharply from 2000 to 2010 (exhibits 6a and 6b). All of these drugs were distributed in higher quantities in Baltimore City and County than in Washington, DC. Oxycodone was distributed in higher quantities in both cities than buprenorphine. Oxycodone distribution more than doubled in Washington, DC, from 31,964 grams in 2000 to 74,255 grams in 2010, and it continued to increase in 2011 to 83,657 grams. Distribution more than tripled in Baltimore City and County, from 141,803 grams in 2000 to 433,147 grams in 2010 and continued to increase in 2011 to 462,104 grams. Buprenorphine distribution increased from 224 grams in 2005 to 2,767 grams in Washington, DC, in 2011 and from 2,623 grams in 2005 to 25,885 grams in 2011 in Baltimore City and County.

In Maryland, primary enrollments for other opiates/opioids to publicly funded drug and alcohol treatment programs more than tripled, from 1,624 in 2006 to 5,349 in 2010 (exhibit 5a). Enrollments continued to increase in 2011 by nearly 20 percent ($n=6,395$). These enrollments nearly doubled in Baltimore City from 2006 to 2010 and continued to increase in 2011 by 33 percent (to 635) (exhibit 5b). Approximately 1 in 10 enrollments involving other opiates/opioids in the State were Baltimore City residents.

Marijuana

Marijuana was widely available in the District and Maryland, but local production (indoor and outdoor) has historically been limited. According to the W/B HIDTA 2011 Annual Report, however, seizures of marijuana increased more than fourfold, to more than 2 tons. The number of plants seized increased from 21 in 2008 to 1,157 in 2011. In total, 4,114.21 kilograms of marijuana were seized. Although the majority of the marijuana seized by HIDTA initiatives was in northern Virginia, the total value of marijuana seized in the Baltimore area increased slightly in 2011, and the total value in the Washington, DC, area remained about the same.

NFLIS data for CY 2010 showed that approximately 23 percent of the drug reports identified among drug items analyzed by NFLIS laboratories in Washington, DC, tested positive for marijuana/cannabis, while 49 percent of the reports identified among drug items analyzed in Maryland tested positive for marijuana/cannabis (exhibits 1a and 1b). This represented an increase in both areas from 2009, and it made marijuana/cannabis the most frequently found drug in the Baltimore/Maryland area. It was the second most frequently found drug in Washington, DC. The percentage of reports in analyzed drug items testing positive for marijuana/cannabis (25.7 percent) in Washington, DC, edged out cocaine (19.3 percent) for the first time in 2011.

No marijuana-related deaths were reported by the District's or Maryland's OCME in recent years, but marijuana was the fourth most frequently found illicit drug in Washington, DC, traffic-related deaths testing positive for illicit drugs in 2010 (after alcohol, morphine, and cocaine). Marijuana was found in 5.4 percent of these cases (data not shown). There were 59 marijuana metabolite positive deaths in Washington, DC, in 2010.

The DC Pretrial Services Agency does not test adult arrestees for marijuana, but marijuana was the most frequently found drug among juveniles. The proportion of juveniles testing urinalysis-positive for marijuana positive fluctuated in recent years. The percentage increased from 2004 to 2007, after decreasing steadily for 5 years, then decreased slightly in 2008 and 2009, and increased again in 2010 (exhibits 4a and 4b). Approximately 50.2 percent of juvenile arrestees tested positive in 2011, and 47.9 percent were marijuana-positive during the first 4 months of 2012. ADAM II does test adults for marijuana. Results in 2011 indicated that 43 percent of the adult arrestees tested urinalysis positive for marijuana.

Primary marijuana enrollments to certified publicly funded Maryland treatment programs increased by 29.2 percent from 2006 ($n=8,109$) to 2011 ($n=10,476$) (exhibit 5a). Marijuana enrollments also increased in Baltimore City from 2007 to 2010 (by 50.6 percent, from 1,519 to 2,288 enrollments) (exhibit 5b).

Methamphetamine and MDMA

No drug overdose deaths in 2009 or 2010 were reported due methamphetamine, MDMA (3,4-methylenedioxymethamphetamine) (ecstasy), or MDA (3,4-methylenedioxyamphetamine) in Washington, DC (exhibit 2b). In Maryland, there were no intoxication deaths involving methamphetamine or MDMA in 2009 or 2010 and only one each in 2011. Methamphetamine and MDMA accounted for 1.6 percent of the primary drug mentions at enrollment to treatment in certified publicly funded Maryland drug treatment programs.

Methamphetamine and MDMA were not perceived as widespread or significant threats in the W/B HIDTA region. Methamphetamine seizures throughout the W/B HIDTA regions remained low in comparison with other drugs and decreased in 2011, due primarily to a large decrease in the Baltimore area (W/B HIDTA 2011 Annual Report). MDMA/"club drugs"/other hallucinogen seizures, in contrast, increased across the region, due primarily to large seizures of ecstasy in Fairfax County, Virginia, and synthetic marijuana such as "K2" and "Spice" (cannabimimetics) in Anne Arundel County, Maryland.

NFLIS data for 2009 showed that slightly more reports in analyzed drug items tested positive for methamphetamine (1.2 percent) than for MDMA/MDA (0.76 percent) in Washington, DC. In 2010, and in the preliminary data for 2011, less than 1.0 percent tested positive for either drug. In Maryland, less than 1.0 percent of the reports among drug items analyzed in NFLIS laboratories were positive for methamphetamine or MDMA/MDA in 2009 and 2010.

The DC Pretrial Services Agency began testing for amphetamines in August 2006. The percentage of adult arrestees testing urinalysis positive for amphetamines decreased from 3.7 percent in 2007 to 1.1 percent in 2009 and has remained about the same since. During the first 4 months of 2012, 0.9 percent tested positive (exhibit 3b). The percentage of juvenile arrestees testing positive for

amphetamines also decreased, from 2.7 percent in 2007 to 0.4 percent in 2010. During 2011, 0.9 percent of juvenile arrestees were positive for amphetamines, and during the first 4 months of 2012, 0.4 percent were positive (exhibits 3b and 4b). ADAM II results for 2011 also showed a very low percentage of arrestees testing positive for amphetamines (less than 1.0 percent).

PCP

The W/B HIDTA 2011 threat assessment survey found that PCP is not widely used in the HIDTA region, but where it is found it can have a profound effect. PCP can be used alone or in combination with other drugs, most often marijuana.

NFLIS data showed that the percentage of reports in Washington, DC, testing positive for PCP among drug items analyzed in NFLIS laboratories increased from 3.6 percent in 2009 to 4.4 percent in 2010. A similar percentage tested positive in the preliminary data for 2011 (4.8 percent). However, very few PCP reports were identified in analyzed drug items in Baltimore City or Maryland in any of these years (0.6 percent or less).

Thirty-three PCP-positive deaths occurred in Washington, DC, in 2009, an increase from 28 deaths in 2008 (exhibit 2b). There were 30 PCP-positive deaths in 2010. Six overdose deaths in Washington, DC, involved PCP in 2008, none involved PCP in 2009, and four were PCP-related in 2010. In Maryland, intoxication deaths involving PCP were low but increasing; there were 5 such deaths involving PCP in 2009, 6 in 2010, and 10 in 2011.

Data from the DC Pretrial Services Agency showed a rise in PCP urinalysis positives among adult arrestees in Washington, DC, 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 among adult arrestees then increased from 6.2 percent in 2004 to 9.6 percent in 2008, and they have remained fairly stable since then between approximately 9 and 11 percent. In 2011, 10.5 percent of adults tested urinalysis positive for PCP, and during the first 4 months of 2012, 10.7 percent tested positive. Trend data for 1987 to the present indicated that PCP use among the juvenile arrestee population fluctuated greatly between 1987 and 2004 and then leveled off at approximately 2 to 3 percent each year through 2008. The percent testing urinalysis positive decreased from 2.8 percent in 2008 to 1.4 percent in 2011 (exhibits 4a and 4b). The percentage testing positive for PCP during the first 4 months of 2012 remained low (at 0.6 percent).

Primary treatment enrollments involving PCP in Maryland—although much lower than those for other drugs—more than doubled between 2006 ($n=247$) and 2011 ($n=586$) (exhibit 5a). Enrollments involving PCP in Baltimore City remained low—from three to nine each year.

Emerging Drugs of Abuse

NFLIS data in Washington, DC, indicated an increase in the prevalence of drugs and other substances used to cut cocaine and heroin. The most frequently found was “possible levamisole.” Levamisole is used as a dewormer in animals such as cattle, sheep, pigs, and tropical fish. “Possible levamisole” ranked third among the top 10 drug reports found among drug items analyzed by NFLIS laboratories in Washington, DC, each year, outranking heroin, from 2009 to 2011. The DC OCME 2010 annual report included a list of all drugs found in accidental deaths. Levamisole was

found in 15 accidental deaths and 22 deaths overall. This was double the number of deaths in which levamisole was found in 2009 (11 deaths were positive for levamisole). Cocaine was also found in each of the accidental deaths.

Several new drugs were beginning to show up across the region. Synthetic marijuana (cannabimimetics) and “bath salts” (substituted cathinones) first appeared in Washington, DC, in 2010. In 2011, 3.6 percent of reports among items analyzed in Washington, DC, NFLIS laboratories were positive for 5-MeO-DIPT (Foxy methoxy), ranking it seventh among the top 10 drug reports among items seized and analyzed in NFLIS laboratories. “Bath salts” (substituted cathinones) and 5-MeO-DIPT first appeared in Maryland and Baltimore City in drug reports among items analyzed in NFLIS laboratories in 2011, and synthetic marijuana (cannabimimetics) first appeared in Maryland and Baltimore County in 2010. The number of types of synthetic marijuana (cannabimimetics) found in Maryland drug reports among items analyzed in NFLIS laboratories increased from none in 2009 to 10 in 2011.

INFECTIOUS DISEASES RELATED TO DRUG ABUSE

Washington, DC, and Maryland both moved from a code-based reporting system to a name-based reporting system for HIV cases, as required by the Centers for Disease Control and Prevention (CDC). The *HIV/AIDS Epidemiology Annual Report 2010* indicated that the rate of newly reported HIV cases in Washington, DC, decreased by 37 percent, from 1,332 in 2007 to 835 in 2010. Newly reported HIV cases among injection drug users (IDUs) in Washington, DC, decreased by 72 percent, from 150 in 2007 to 42 in 2010 (exhibit 7a). Men who have sex with men (MSM)/IDUs fluctuated during this time but decreased overall from 33 in 2006 to 15 in 2010. Nearly three-quarters of all new HIV diagnoses were male, and more than three-quarters were African-American each year from 2006 to 2010. The age breakdown was spread across three groups in 2010: age 20–29 (29.5 percent), age 30–39 (23.7 percent), and age 40–49 (23.6 percent). However, the percentage age 20–29 increased from 18.3 percent in 2006 to 29.5 percent in 2010 (data not shown). The total number of HIV deaths among adults and adolescents decreased from 423 in 2007 to 207 in 2010 (exhibit 7b). IDUs and MSM/IDUs accounted for a higher percentage of these deaths each year from 2006 to 2010 than any other mode of transmission. However, the percentage decreased from 45 percent in 2008 to 31 percent in 2010. The rate of newly reported AIDS cases, and newly reported AIDS cases with injection drug use as a mode of transmission, also decreased (exhibit 7c).

Researchers at the DC HIV/AIDS, Hepatitis, STD, and TB Administration and the George Washington University School of Public Health and Health Services released a special report in 2011 on injection drug use and HIV infection in Washington, DC. They found that 13 percent of the IDUs in the study ($N=553$) were HIV positive and nearly one-third (30 percent) were unaware of their HIV diagnosis prior to the study. Many also engaged in HIV risk behaviors, including sharing needles (20 percent with last injecting partner), sharing works (74 percent), using noninjection drugs in addition to injection drugs (67 percent), and not using condoms (68 percent). Nearly one in four of those newly diagnosed with HIV shared needles in the past year, and females were far more likely (2.5 times) than males to share needles. The most frequently used injection drugs were heroin (99.5 percent) and speedballs (heroin and cocaine together) (51.7 percent). The most frequently reported noninjection drugs were crack cocaine (72 percent), heroin (71 percent), and marijuana (64 percent). A new study from the same researchers on heterosexual relationships and HIV found that the rate of HIV among females increased from 6.3 percent in 2008 to 12.1 percent in 2010. More than 60 percent of the participants reported noninjection drug use in the past 12 months. The most

frequently reported drugs were marijuana (51.2 percent), crack cocaine (21.5 percent), ecstasy (18.6 percent), pain killers (13.4 percent), and heroin (12.3 percent). One in four reported alcohol use at last sex, 6.3 percent reported using drugs at last sex, and 20.9 percent reported using alcohol and drugs. Females were more likely to report drug use at last sex, while males were more likely to report alcohol use at last sex. Females were also more likely to report that their last partner ever injected drugs.

In Maryland, reported HIV and AIDS cases decreased by approximately one-third from 2008 to 2009 (from 2,261 in 2008 to 1,521 in 2009 for HIV, and from 1,020 to 692 for AIDS). HIV cases related to injection drug use in Maryland also decreased steadily from 2001 to 2009, but the percentage of MSM/IDU-related HIV cases fluctuated slightly (exhibit 8). The *Second Quarter 2011 Maryland HIV/AIDS Epidemiological Profile* shows that there were 1,535 HIV diagnoses and 755 reported AIDS diagnoses among adults and adolescents in FY 2010. Nearly one-third of the HIV diagnoses in FY 2010 were from Baltimore City, and approximately one-quarter were from Prince George's County. The only other jurisdictions accounting for more than 5 percent of the cases were Baltimore County (18 percent) and Montgomery County (10 percent). Similarly, one-third of the new AIDS diagnoses were from Baltimore City, approximately 19 percent were from Baltimore County, and approximately 19 percent were from Prince George's County. Nearly one-half of those living with HIV without AIDS (46 percent) and approximately 44 percent of those living with HIV and AIDS were from Baltimore City. In 2009, the majority of new HIV diagnoses in Maryland were male and African-American. Nearly three-quarters were age 20–49. The majority of new AIDS diagnoses were also male and African-American, but they were slightly older (76.9 percent were age 30–59).

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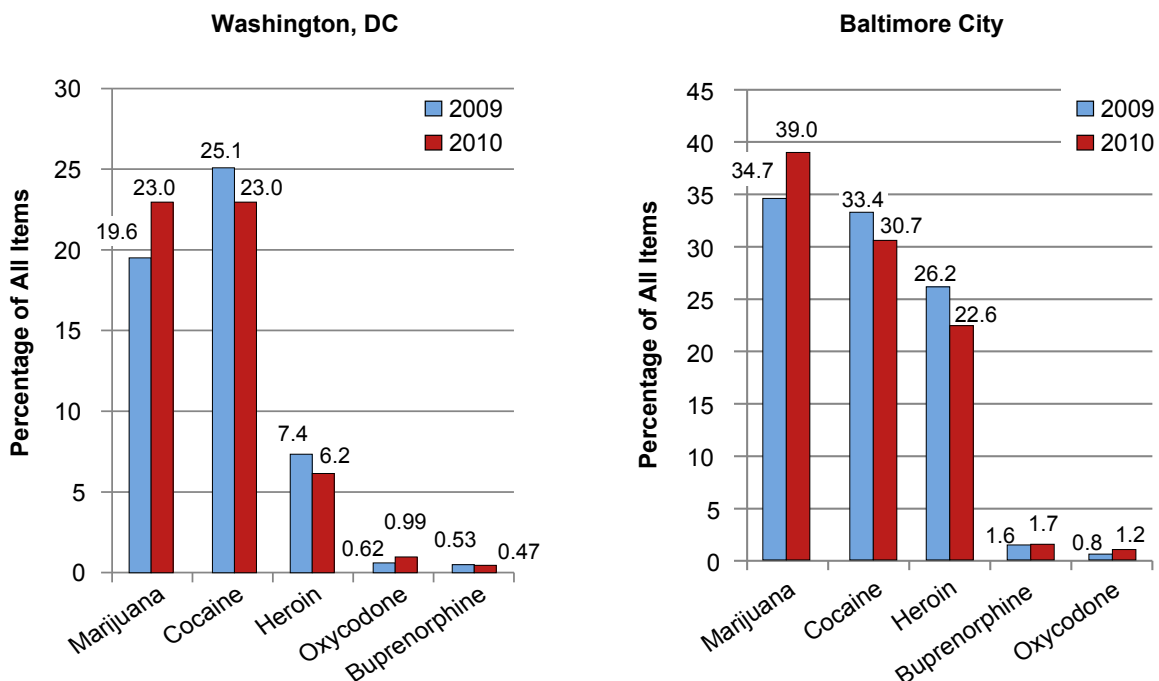
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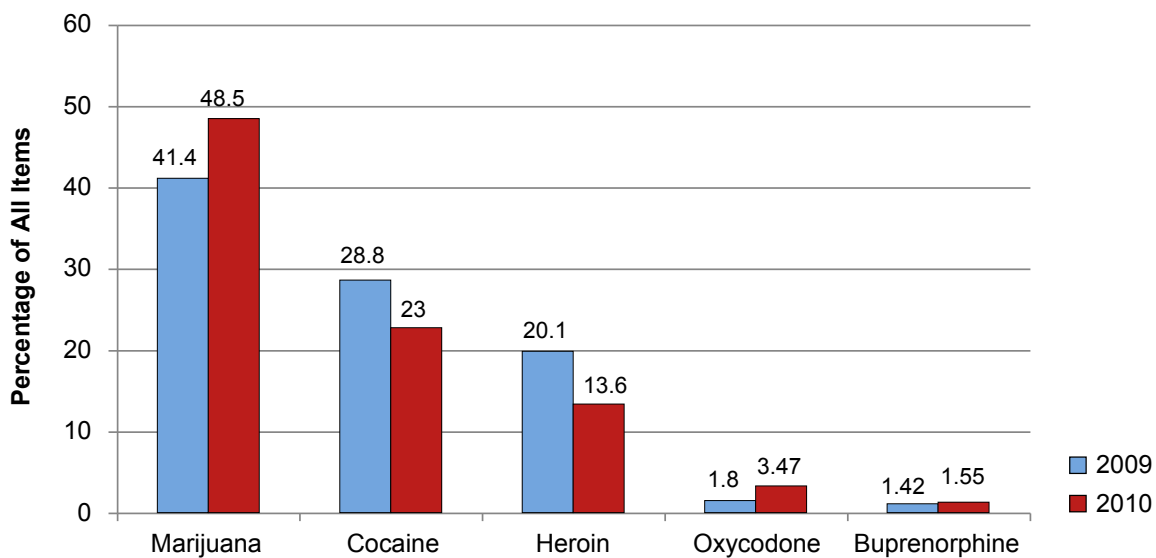
For inquiries concerning this report, contact Erin Artigiani, M.A., Deputy Director for Policy, Center for Substance Abuse Research, University of Maryland, 4321 Hartwick Road, Suite 501, College Park, MD 20740, Phone: 301-405-9794, Fax: 301-403-8342, E-mail: eartigia@umd.edu.

Exhibit 1a. Percentage of Drug-Positive Reports Identified in NFLIS Analyses¹, for Selected Drugs, in Washington, DC, and Baltimore City: 2009–2010



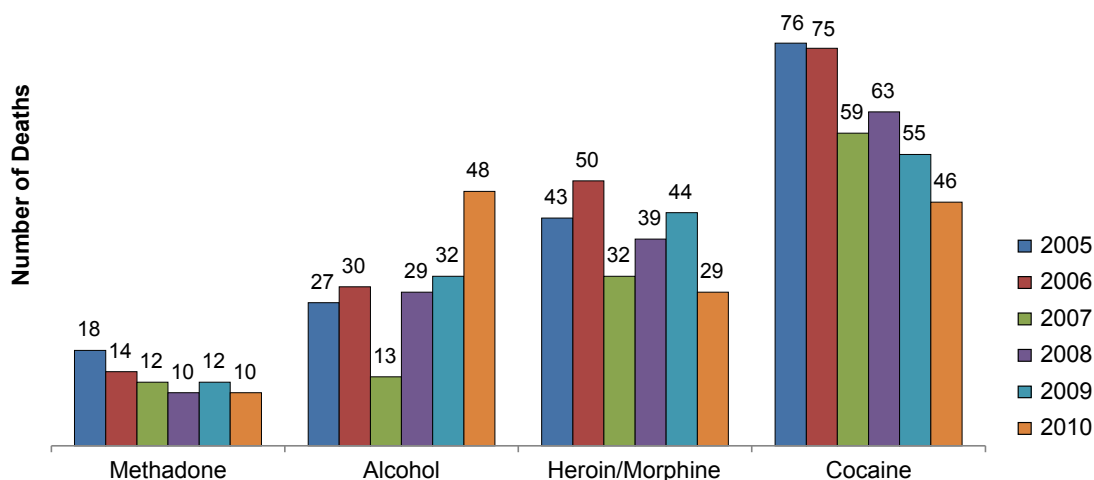
Note: Data for 2011 are provisional and subject to change, and are therefore not included in this exhibit.
¹Washington, DC: In 2009, N=7,618 total reports; in 2010, N=7,677 total reports; Baltimore, MD: In 2009, N=39,278 total reports; in 2010, N=35,050.
 SOURCE: NFLIS, DEA, special data runs May 2012

Exhibit 1b. Percentage of Drug-Positive Reports Identified in NFLIS Analyses¹, for Selected Drugs, in Maryland: 2009–2010



Note: Data for 2011 are provisional and subject to change, and are therefore not included in this exhibit.
¹In 2009, N=58,981 total reports; in 2010, N=71,579.
 SOURCE: NFLIS, DEA, special data runs May 2012

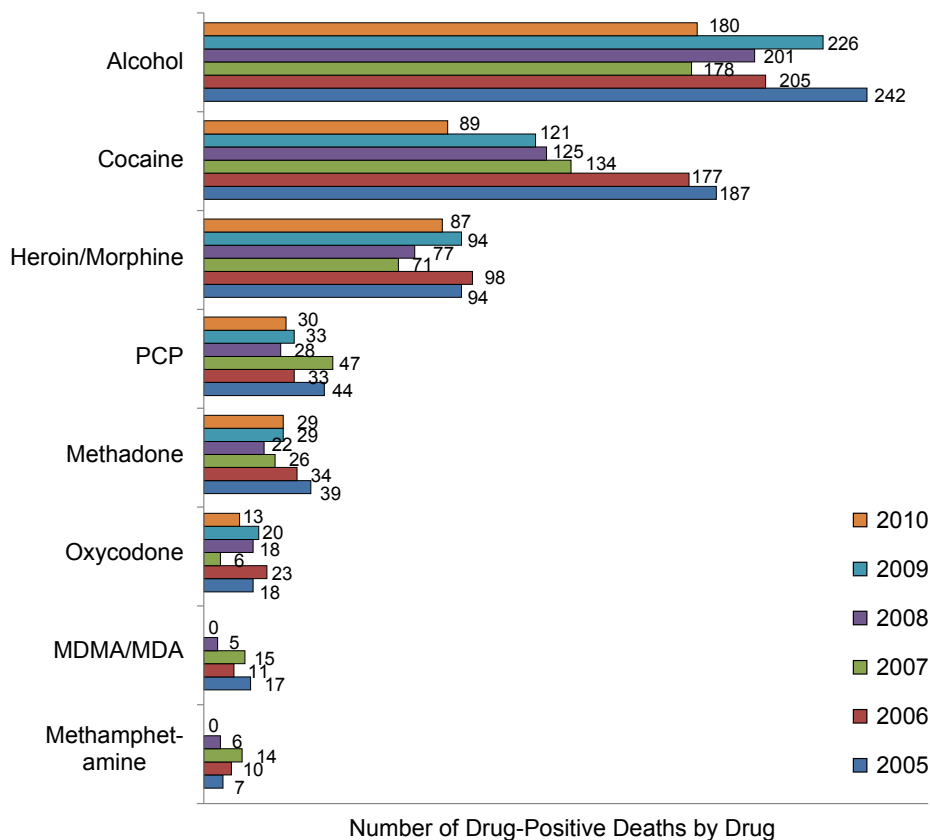
Exhibit 2a. Number of Drug Overdose Deaths, by Drug¹, in Washington, DC: 2005–2010



¹In 2005, N=119 deaths; in 2006, N=111; in 2007, N=93; in 2008, N=105; in 2009, N=103; in 2010, N=79.

SOURCE: Adapted by the Center for Substance Abuse Research (CESAR) from data from the Office of the Chief Medical Examiner, Washington, DC, Annual Reports 2005, 2006, 2007, 2008, 2009, and 2010

Exhibit 2b. Number of Drug-Positive Deaths, by Drug¹, in Washington, DC: 2005–2010²

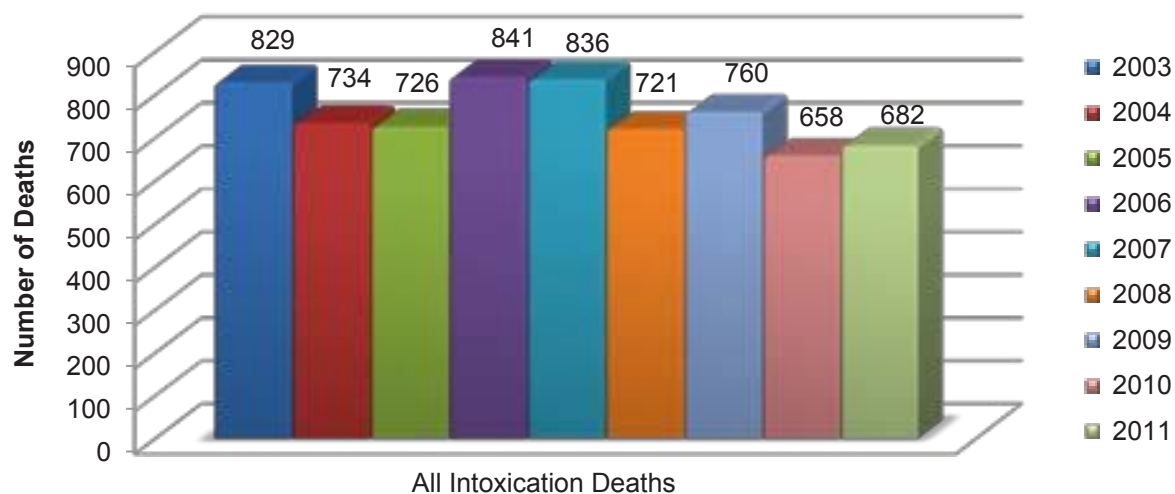


¹In 2005, N=631 positive cases; in 2006, N=503; in 2007, N=447; in 2008, N=500; in 2009, N=821; in 2010, N=545. Some decedents tested positive for multiple drugs.

²Positive cases for MDMA/MDA and methamphetamine were not included in the 2009 or 2010 annual reports.

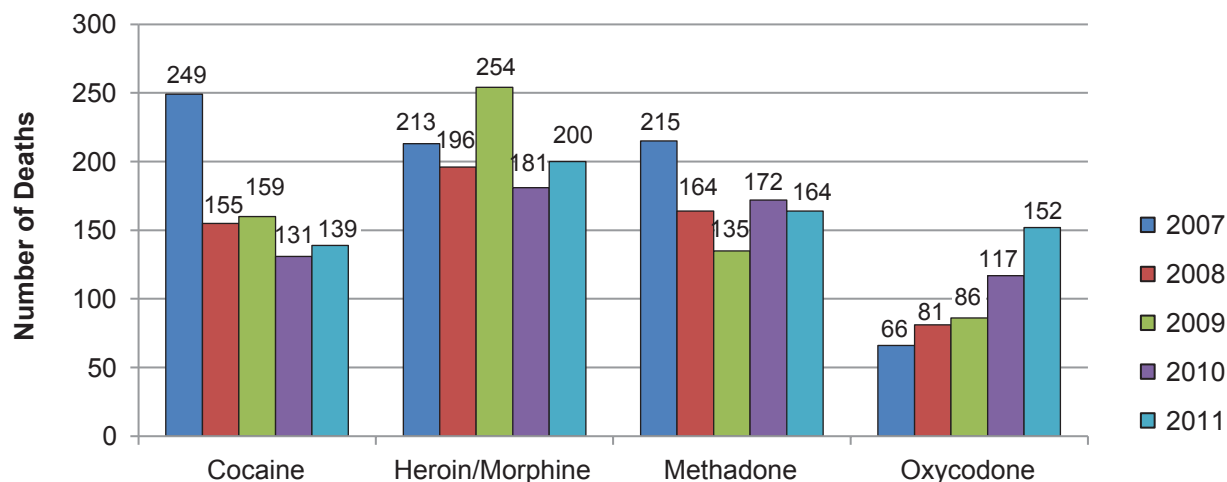
SOURCE: Office of the Chief Medical Examiner, Washington, DC, Annual Reports 2005, 2006, 2007, 2008, 2009, and 2010

Exhibit 2c. Total Number of Drug Intoxication Deaths, by Year, in Maryland: 2003–2011



SOURCE: Adapted by the Center for Substance Abuse Research (CESAR) from data from *Office of the Chief Medical Examiner, Maryland, 2006 Annual Report* and data runs June 2008, May 2009, May 2010, December 2010, May 2011, and May 2012

Exhibit 2d. Number of Drug Intoxication Deaths for Selected Drugs in Maryland: 2007–2011¹



¹2011 data reflect preliminary analyses.

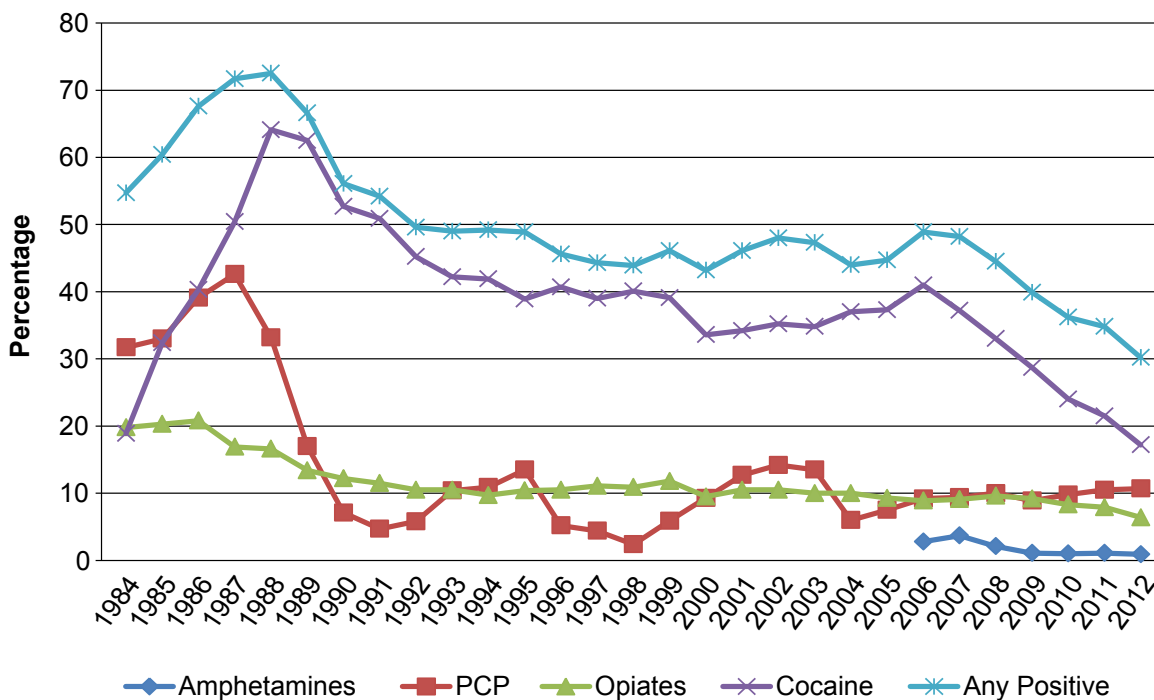
SOURCE: Office of the Chief Medical Examiner, special data run May 2009, March 2010, May 2011, and May 2012

Exhibit 3a. Percentage of Adult Arrestees Testing Positive for Selected Drugs in Washington, DC: 2000–2011

Drug	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
(N=)	15,630	17,350	17,952	17,742	19,531	19,867	23,271	22,800	24,375	22,319	20,078	18,353
Cocaine	33.6	34.2	35.2	34.8	36.6	37.3	41.0	37.2	33.0	28.7	24.0	21.5
PCP	9.3	12.7	14.2	13.5	6.2	7.5	9.2	9.4	9.6	8.9	9.8	10.5
Opiates	9.5	10.5	10.5	10.0	9.8	9.3	8.9	9.1	10.0	9.2	8.7	7.9
Any Drug	43.2	46.1	48.0	47.3	43.5	44.7	48.9	48.2	44.5	39.9	36.2	34.8

SOURCE: District of Columbia Pretrial Services Agency

Exhibit 3b. Percentage of Adult Arrestees Testing Positive for Any Drug, Cocaine, PCP, Opiates, and Amphetamines in Washington, DC: 1984–2012¹



¹Amphetamines testing started in August 2006; 2012 includes January–April only. For all drug categories, 2012 data are for January–April only.

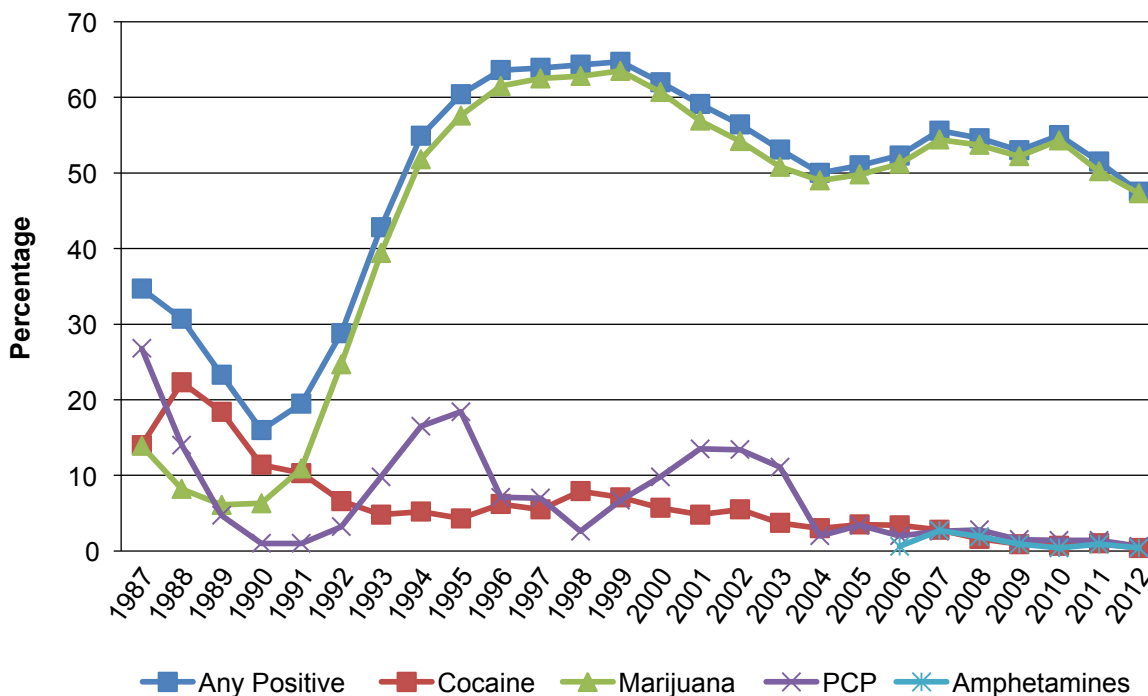
SOURCE: Adapted by the Center for Substance Abuse Research (CESAR) from data from the District of Columbia Pretrial Services Agency

Exhibit 4a. Percentage of Juvenile Arrestees Testing Positive for Selected Drugs in Washington, DC: 2000–2011

Drug	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
(N=)	2,162	2,165	1,896	1,899	2,001	2,319	2,379	2,248	2,566	2,614	2,103	1,918
Marijuana	60.7	56.9	54.2	50.8	49.0	49.8	51.2	54.4	53.7	52.2	54.3	50.2
Cocaine	5.7	4.8	5.5	3.7	3.3	3.5	3.4	2.8	1.6	0.9	0.7	1.0
PCP	9.8	13.5	13.4	11.1	1.9	3.4	2.0	2.6	2.8	1.5	1.4	1.4
Any Drug	62.0	59.1	56.4	53.1	49.6	51.0	52.3	55.6	54.6	53.0	55	51.5

SOURCE: District of Columbia Pretrial Services Agency

Exhibit 4b. Percentage of Juvenile Arrestees Testing Positive for Any Drug¹, Cocaine, PCP, Marijuana, and Amphetamines in Washington, DC: 1987–2012²

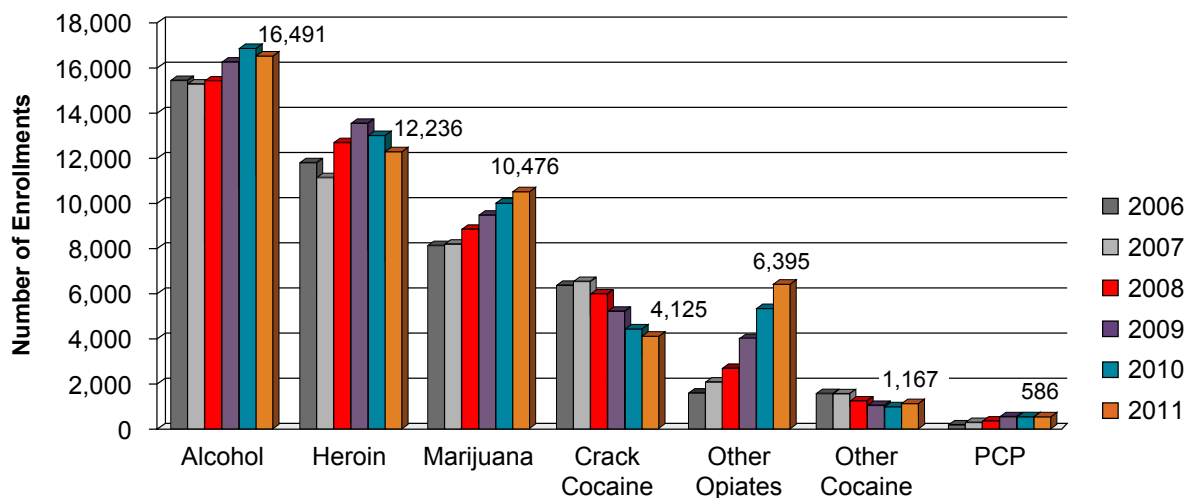


¹Any positive includes opiates from 1987 through mid-1994 (less than 1.0 percent).

²Amphetamines testing started in August 2006; 2012 includes January–April only.

SOURCE: Adapted by the Center for Substance Abuse Research (CESAR) from data from the District of Columbia Pretrial Services Agency

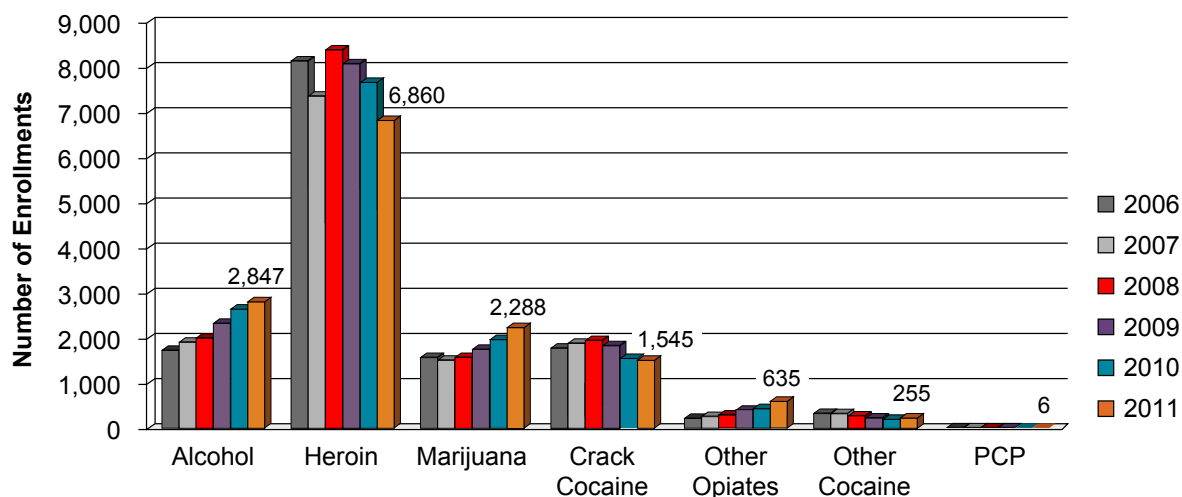
Exhibit 5a. Number of Primary Enrollments¹ to Certified Publicly Funded Alcohol and Drug Treatment Programs in Maryland: 2006–2011



¹In 2006, N=45,554 total enrollments; in 2007, N=45,657; in 2008, N=47,848; in 2009, N=50,774; in 2010, N=52,027; in 2011, N=52,466.

SOURCE: Adapted by the Center for Substance Abuse Research (CESAR) from data provided by the Alcohol and Drug Abuse Administration, Department of Health and Mental Hygiene, SMART System

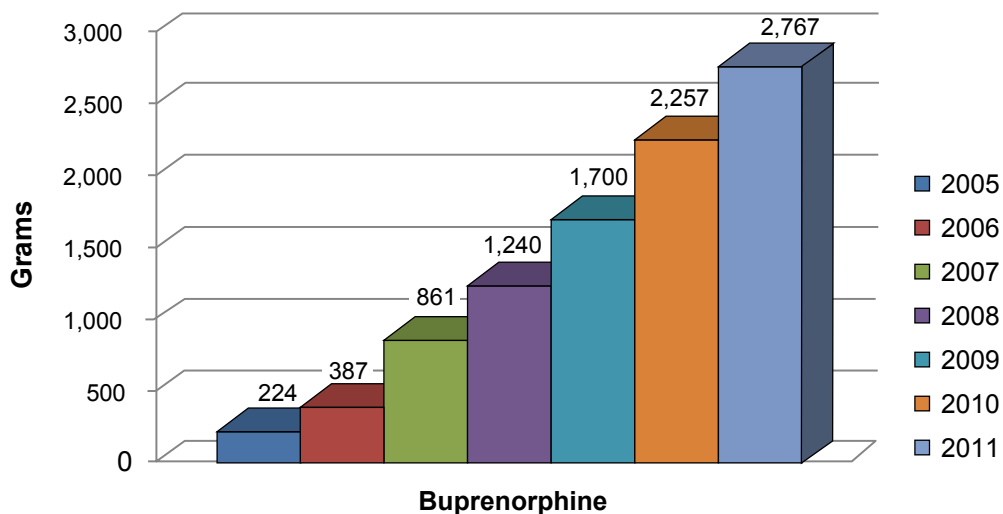
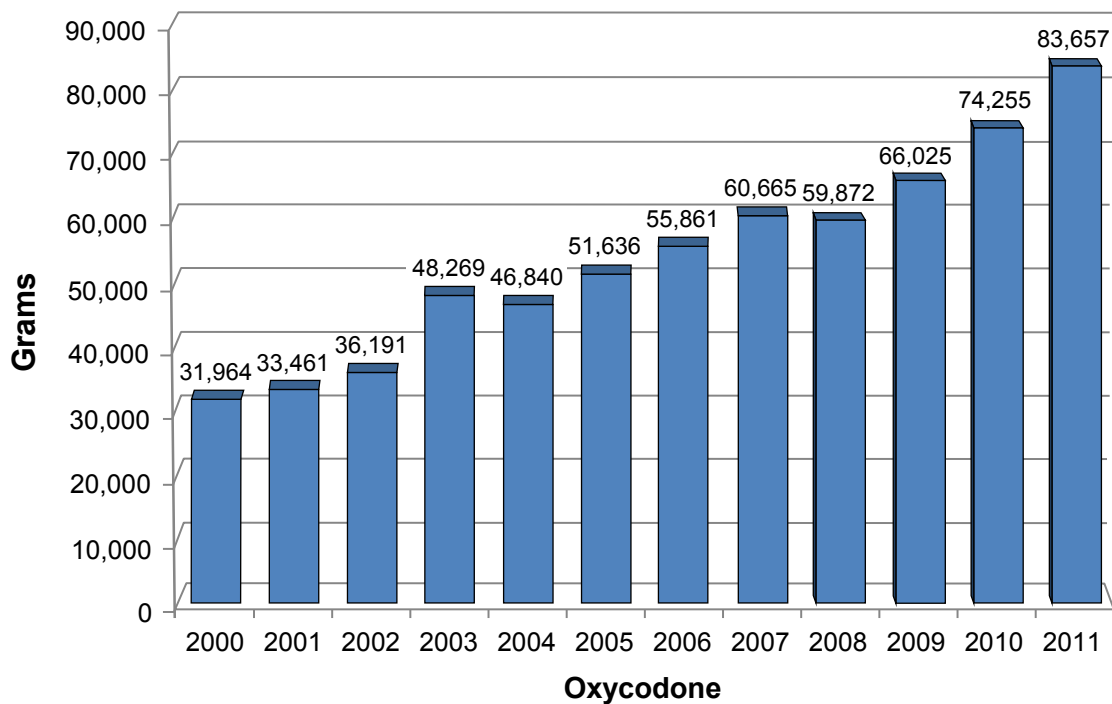
Exhibit 5b. Number of Primary Enrollments¹ to Certified Publicly Funded Alcohol and Drug Treatment Programs in Baltimore City: 2006–2011



¹In 2006, N=14,018 total enrollments; 2007, N=13,467; in 2008, N=14,756; in 2009, N=14,957; in 2010, N=14,857; in 2011, N=14,643.

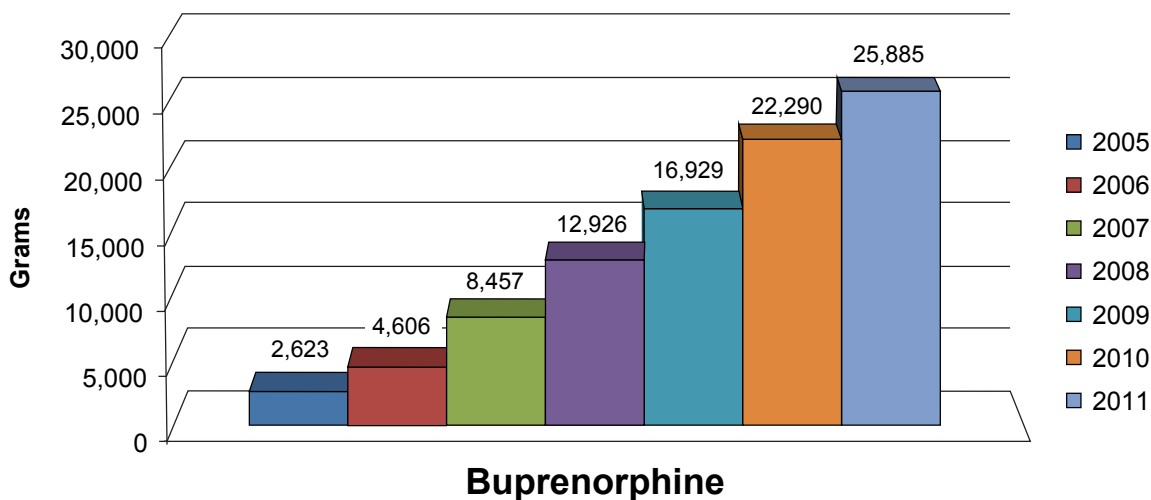
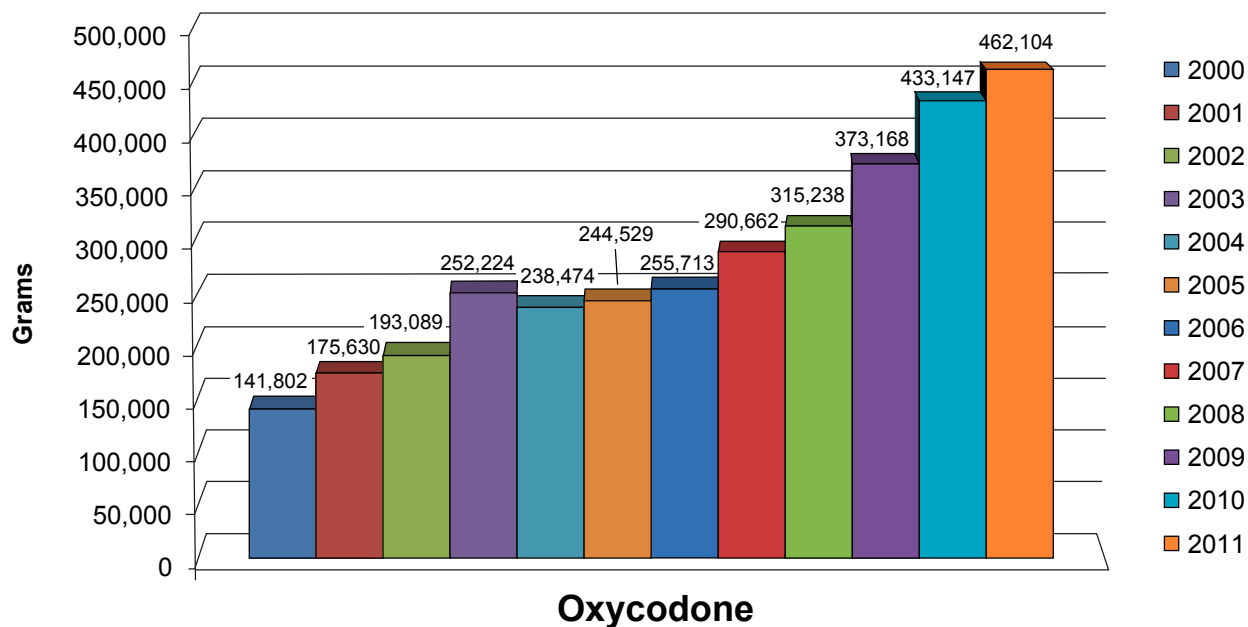
SOURCE: Adapted by the Center for Substance Abuse Research (CESAR) from data provided by the Alcohol and Drug Abuse Administration, Department of Health and Mental Hygiene, SMART System

Exhibit 6a. Retail Distribution of Oxycodone and Buprenorphine, by Year and Drug¹, in Grams in Washington, DC: 2000–2011



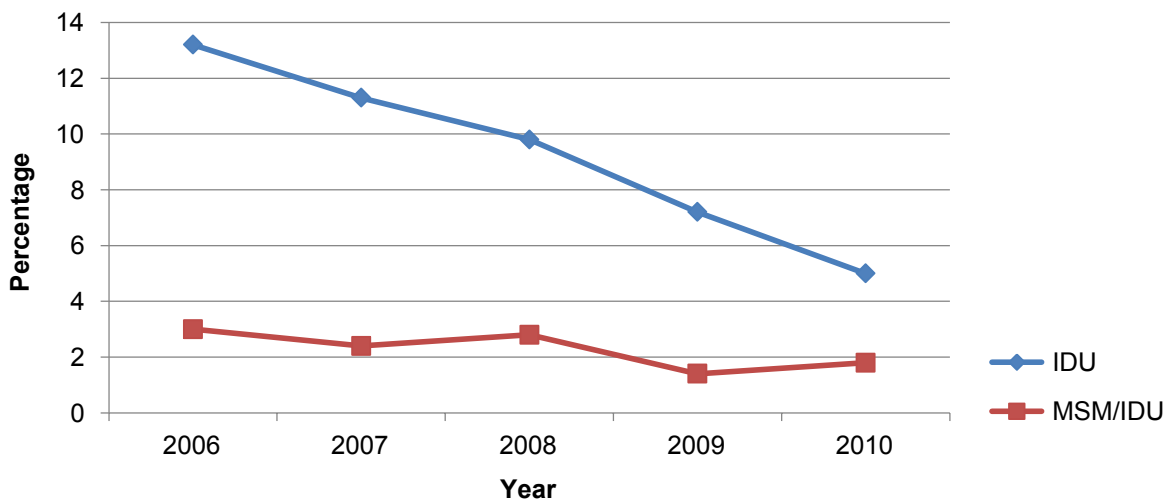
¹Buprenorphine first became available for treating heroin addiction in May 2003.
SOURCE: ARCOS, DEA, Retail Drug Summaries and special data runs

Exhibit 6b. Retail Distribution of Oxycodone and Buprenorphine, by Year and Drug¹, in Grams in Baltimore City and County: 2000–2011



¹Buprenorphine first became available for treating heroin addiction in May 2003.
SOURCE: ARCOS, DEA, Retail Drug Summaries and special data runs

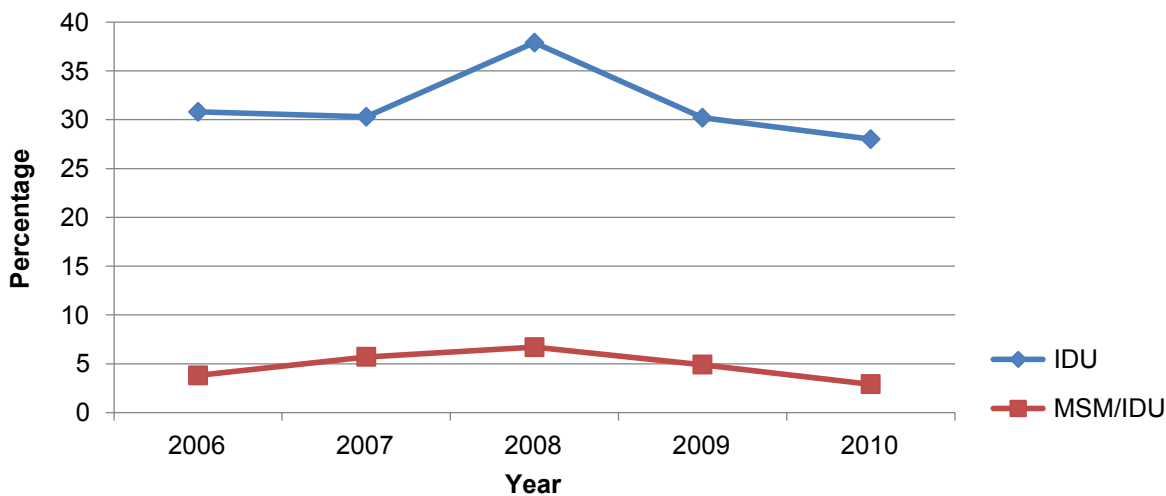
Exhibit 7a. Newly Diagnosed IDU and MSM/IDU-Related HIV Cases, as a Percentage of All New HIV Diagnoses, by Year of Diagnosis, in Washington, DC: 2006–2010



Note: IDU=injection drug user; MSM=men who have sex with men.

SOURCE: *District of Columbia HIV/AIDS, Hepatitis, STD, and TB Annual Report 2011*, DC Department of Health

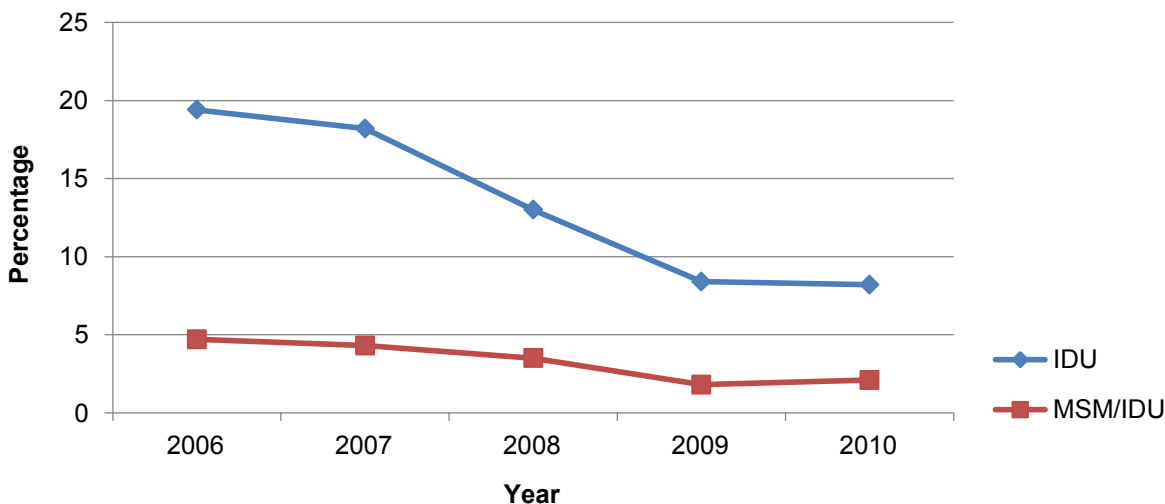
Exhibit 7b. HIV Deaths among Adults and Adolescents with IDU and MSM/IDU as Mode of Transmission, as a Percentage of All HIV Deaths, by Year of Death, in Washington, DC: 2006–2010



Note: IDU=injection drug user; MSM=men who have sex with men.

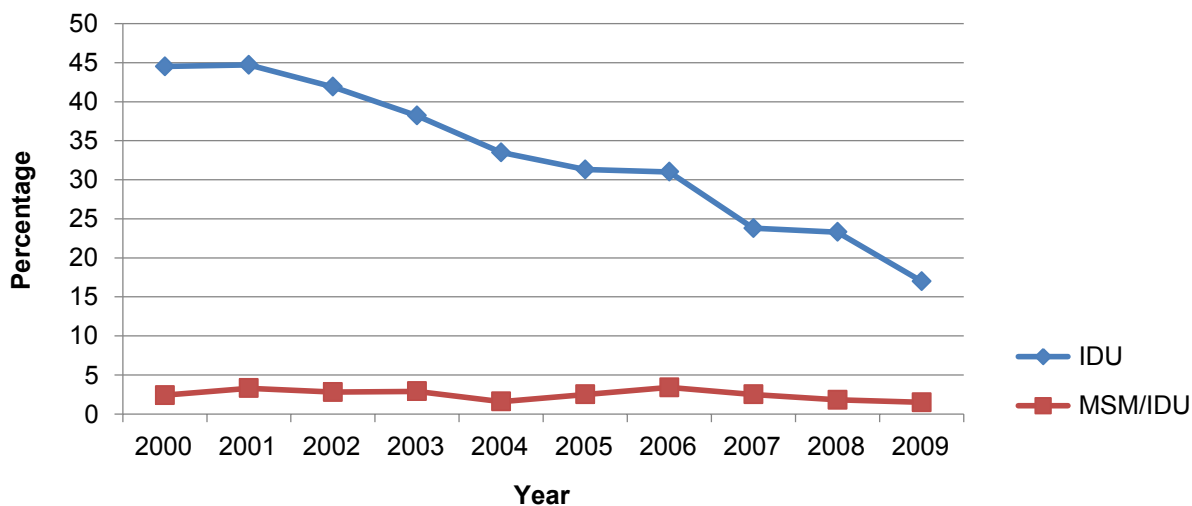
SOURCE: *District of Columbia HIV/AIDS, Hepatitis, STD, and TB Annual Report 2011*, DC Department of Health

Exhibit 7c. Newly Diagnosed IDU- and MSM/IDU-Related AIDS Cases, as a Percentage of All New AIDS Diagnoses, by Year of Diagnosis, in Washington, DC: 2006–2010



Note: IDU=injection drug user; MSM=men who have sex with men.
 SOURCE: *District of Columbia HIV/AIDS, Hepatitis, STD, and TB Annual Report 2011*, DC Department of Health

Exhibit 8. Newly Diagnosed IDU- and MSM/IDU-Related HIV Cases With or Without an AIDS Diagnosis and with Reported Exposure Category, as a Percentage of New HIV Diagnoses, by Year of HIV Diagnosis, in Maryland: 2000–2009



Note: IDU=injection drug user; MSM=men who have sex with men.
 SOURCE: *Maryland HIV/AIDS Epidemiological Profile Fourth Quarter 2010*, Infectious Disease and Environmental Health Administration, Maryland Department of Health and Mental Hygiene

Greater Boston Patterns and Trends in Drug Abuse: 2011

Daniel P. Dooley¹

ABSTRACT

Boston's cocaine indicators were mostly decreasing in 2011, but they remained at high levels. As a proportion of primary drug treatment admissions, cocaine (including crack) decreased steadily from 9 percent in 2005 and 2006, to 5 percent in 2010 and 2011. From 2010 to 2011, the number of cocaine (including crack) primary admissions decreased by 12 percent. The decrease was higher for powder cocaine (with a 20-percent decrease) than for crack (with a 4-percent decrease). Additionally, 27 percent of all treatment admissions identified cocaine (including crack) as a primary, secondary, or tertiary drug in 2011, compared with 29 percent in 2010 and 37 percent in 2006. The proportion of Class B drug arrests (mainly cocaine) was between 48 and 49 percent from 2009 to 2011, and the proportion of cocaine drug reports detected among drug items in National Forensic Laboratory Information System (NFLIS) laboratories decreased from 25 percent of total reports in 2009 to 24 percent in 2010. Preliminary 2011 NFLIS data identified cocaine in 22 percent of drug reports among items analyzed in NFLIS laboratories. Heroin abuse indicators were mostly increasing at high levels in 2011. The proportion of primary heroin treatment admissions remained fairly stable at or above 50 percent of total admissions from 2008 to 2011. Heroin primary admissions increased, however, from 50 percent of all admissions in 2010 to 52 percent of the total in 2011. Additionally, 56 percent of all treatment admissions identified heroin as a primary, secondary, or tertiary drug in 2011. In 2011, 86 percent of all primary heroin admissions (more than four-fifths) reported injection drug use as their primary route of drug administration. The proportion of Class A drug arrests (mainly heroin) increased from 22 percent of the total in 2009 and 2010 to 25 percent in 2011. From 2009 to 2010, the proportion of heroin drug reports among drug items seized and analyzed in NFLIS laboratories decreased slightly (from 15 to 13 percent), but preliminary data from 2011 indicated 15 percent of drug reports among items analyzed were identified as containing heroin. The Drug Enforcement Administration's Heroin Domestic Monitoring Program reported that street-level heroin remained at 15 percent pure average purity from 2009 to 2010, but the price increased by 61 percent per milligram pure during the period. Indicators for other opioids were mixed at moderate levels. The proportion of primary other opioid treatment admissions was stable at 5 percent from 2010 to 2011. Additionally, 11 percent of all treatment admissions identified other opioids as primary, secondary, or tertiary drugs in 2010 and 2011. The proportion of drug reports for oxycodone among items analyzed by NFLIS laboratories increased from 6 percent in 2009 to 8 percent in 2010. Preliminary NFLIS data for 2011 indicated oxycodone accounted for 10 percent of total reports among analyzed drug items. Benzodiazepine abuse indicators were mixed (with some indicators increasing and some stable) at moderate levels. Although the proportion of benzodiazepines cited as the primary drug among treatment admissions remained low,

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

at 1 percent of all admissions from 2009 to 2011, the proportion of treatment clients citing benzodiazepines as either primary, secondary, or tertiary drugs of abuse increased, from 6 percent in 2002 to 12 percent in 2011. From 2009 to 2011, 2 of the top 10 drugs identified in reports among drug items seized and analyzed by NFLIS laboratories—clonazepam and alprazolam—were benzodiazepines. Together with diazepam and lorazepam, these four benzodiazepines accounted for 6 percent of all NFLIS drug reports detected among drug items seized and analyzed by NFLIS laboratories in the Boston area in 2010 and in preliminary 2011 data. Marijuana indicators were mixed at moderate levels in 2011. Treatment admissions citing marijuana as the primary drug of abuse ranged from 4 to 5 percent from 2001 to 2011, but the proportion of clients citing marijuana as a primary, secondary, or tertiary drug decreased from 23 to 16 percent during the same period. The proportion of Class D drug arrests (mainly marijuana) decreased from 21 percent in 2009 to 18 percent in 2011. The proportion of drug reports identified as marijuana/cannabis among seized drug items analyzed in NFLIS laboratories increased from 21 to 23 percent between 2009 and 2010. Methamphetamine indicators remained relatively low overall in Boston (below 1 percent for all data sources). In 2011, 52 of 17,847 treatment admissions identified methamphetamine as the primary drug, and 80 treatment admissions cited methamphetamine as either a primary, secondary, or tertiary drug of abuse. Methamphetamine ranked 21st among all drug reports detected in drug items seized and analyzed by NFLIS laboratories in 2010; methamphetamine drug reports totaled 77 in 2009, 97 in 2010, and 62 in preliminary 2011 data.

INTRODUCTION

Area Description

According to the 2010 U.S. Census, the city of Boston has a population of 617,594. A larger metropolitan Boston region (Community Health Network Area [CHNA] 19) consisting of the cities of Boston, Brookline, Chelsea, Revere, and Winthrop has a population of 780,755, and the seven-county Boston Metropolitan Statistical Area (MSA) has a population of 4,552,402. The racial composition for the city of Boston includes 47 percent White non-Hispanic residents, 22 percent Black non-Hispanic residents, 17 percent who are Hispanic/Latino, and 9 percent who are Asian. The racial composition of the larger metropolitan Boston region (CHNA 19) is similar to the city of Boston. The racial composition for the Boston MSA includes 75 percent White non-Hispanic residents, 7 percent Black non-Hispanic residents, 9 percent Hispanic/Latino residents, and 6 percent who are Asian. The age distribution for the city of Boston includes 36 percent age 24 and younger, 36 percent age 25–44, and 28 percent age 45 and older. The age distribution of the larger metropolitan Boston region (CHNA 19) is similar to the city of Boston. The age distribution for the Boston MSA includes 32 percent age 24 and younger, 27 percent age 25–44, and 41 percent age 45 and older.

Several characteristics influence drug trends in Boston and throughout Massachusetts:

- Boston shares borders with five neighboring States (Rhode Island, Connecticut, New York, Vermont, and New Hampshire); they are linked by a network of State and interstate highways.
- Boston's proximity to Interstate 95 connects the metropolitan area to all major cities on the east coast, particularly New York City.

- The city of Boston has a public transportation system that provides easy access to communities in eastern Massachusetts.
- Both the greater Boston area and western Massachusetts have large populations of college students.
- Massachusetts has several seaport cities with major fishing industries and harbor areas.
- Logan International Airport and several regional airports are located within a 1-hour drive of Boston.
- There are a high number of homeless individuals seeking shelter in the Boston area.

Data Sources

This report presents data from a number of different sources with varied Boston area geographical parameters (i.e., city of Boston, metropolitan Boston, and the Boston MSA). For this reason, additional 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 of the report. 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, changes in policing priorities may affect the number and type of drug-related arrests, or changes in treatment funding may affect overall treatment capacity as well as capacity differences across treatment modalities. Identifying factors that likely influence data differences over time is a difficult task. To what extent such systemic factors influence totals and subpopulation differences observed within a data source is difficult to determine and is often unknown. Conclusions drawn from these data sources are subject to such limitations. At best, the data presented here offer a partial picture of Boston’s collective drug abuse experience. Overall understanding of drug use and abuse patterns improves as current data sources improve, new data sources develop, and the collective knowledge of drug abuse epidemiology improves.

Data sources used in this report include the following:

- **Drug-related hospital emergency department (ED) visit data** for city of Boston residents for fiscal years (FYs) (October–September) 2007–2010 were provided by the Massachusetts Division of Health Care Finance and Policy. Hospital ED data for FY 2011 were not available at the time of this report. The total number of unique patient drug-related visits ranged between 4,709 and 4,829 from 2007 to 2010 (exhibit 1).
- **State-funded substance abuse treatment admissions data** for the Boston region that includes the cities of Boston, Brookline, Chelsea, Revere, and Winthrop (CHNA 19) for calendar years (CYs) 2001–2011 were provided by the Massachusetts Department of Public Health (MDPH), Bureau of Substance Abuse Services. All treatment data refer to treatment admissions of clients who may or may not have been admitted more than once within a calendar year. The total number of treatment admissions ranged between 17,847 and 22,988 annually from 2001 to 2011 (exhibits 2–3d).

- **Drug arrest data** for the city of Boston for 2001–2011 were provided by the Boston Police Department, Drug Control Unit and Office of Research and Evaluation. For arrests data only, Black and White racial designations include those who identify themselves as Hispanic. Also, due to a 2009 change in Massachusetts' marijuana possession law, drug class trending considerations are confined to observed changes from 2009 to 2011 (exhibit 4). The total number of drug arrests decreased from 3,190 in 2009 to 2,405 in 2011.
- **Crime laboratory data** for the seven-county Boston MSA, which includes the Massachusetts counties of Essex, Middlesex, Norfolk, Plymouth, and Suffolk, as well as Rockingham and Strafford Counties in New Hampshire, for 2009–2011, were provided by the National Forensic Laboratory Information System (NFLIS) Data Query System (DQS), Drug Enforcement Administration (DEA). As of June 2012, data for 2011 were considered preliminary. NFLIS methodology allows for the accounting of up to three drugs per item submitted for analysis. The total number of drug reports among items analyzed in Boston area NFLIS laboratories increased from 23,547 in 2009 to 27,409 in 2010. Preliminary data for 2011 indicated a total of 21,920 drug reports (exhibit 5).
- **Drug price, purity, and availability information** for the second half of 2011 for New England were provided by the DEA's New England Field Division Intelligence Group, as of May 2012 (exhibit 6), and the DEA's Heroin Domestic Monitoring Program (HDMP).
- **High school student drug use data** for Boston public high school students were provided by the Youth Risk Behavior Survey (YRBS) 2011, Boston Public School Department and the Centers for Disease Control (CDC).

DRUG ABUSE PATTERNS AND TRENDS

Cocaine/Crack

Cocaine (including crack) was one of the most heavily abused drugs in Boston in 2011. Cocaine/crack indicators for 2011 were mostly decreasing but remained at high levels of use and abuse. In 2010, there were 1,429 unique patient cocaine-related ED visits among Boston residents. The annual rate of unique patient cocaine visits decreased steadily from 28.2 per 10,000 residents in 2007 to 23.1 in 2010 (exhibit 1). In 2010, the rate of cocaine visits for Black residents (47.5) was nearly three times that for White residents (16.8) and more than twice the rate for Latinos (20.9). The rate for Asians (2.2 per 10,000 residents) was much lower than for other racial/ethnic groups (demographic ED data not shown).

In 2011, 923 treatment admissions (5 percent of all admissions) reported cocaine/crack as the primary drug, and there were an additional 3,817 admissions (21 percent² of all admissions) with cocaine/crack reported as a secondary or tertiary drug (exhibit 2). Of the cocaine/crack primary admissions, 58 percent identified crack and 42 percent identified powder cocaine as the primary drug. The proportion of admissions reporting cocaine/crack as the primary drug has steadily decreased from 9 percent in 2005 to 5 percent in 2011 (exhibit 2). This percentage decrease was driven by a 50-percent decrease in the number of crack primary admissions and a 43-percent decrease in the

²The difference in the percentage shown here from the proportions shown in exhibit 2 is due to rounding.

number of powder cocaine admissions. The proportion of admissions reporting cocaine/crack as a primary, secondary, or tertiary drug decreased from 37 percent in 2006 to 27 percent in 2011 (exhibit 2). Twenty-five percent of the 923 cocaine/crack primary drug admissions reported no other secondary drug in 2011. Of the 631 cocaine/crack primary drug admissions reporting a different secondary drug, 48 percent reported alcohol, 26 percent reported heroin, and 19 percent reported marijuana as the secondary drug (data not shown).

The gender distribution of cocaine/crack primary drug treatment admissions in 2011 (54 percent male, 46 percent female, and less than 1 percent transgender) reflected an increase in the proportion of females (from 36 percent in 2005 and 40 percent in 2010) and a decrease in the proportion of males (from 64 percent in 2005 and 59 percent in 2010) (exhibit 3a). In 2011, the gender distribution of powder cocaine primary admissions was different than for crack primary admissions, with powder cocaine admissions mostly male (62 versus 38 percent female) and crack admissions mostly female (52 versus 48 percent male).

In 2011, 9 percent of cocaine/crack treatment admissions were younger than 26, 23 percent were age 26–34, and 68 percent were 35 and older. This age distribution changed very little from 2005 to 2011. During the years 2001 to 2003, there was a higher proportion of the 26–34 age group and a lower proportion of the 35 and older age group (exhibit 3a). The 2010 racial/ethnic group distribution for cocaine/crack admissions (42 percent Black, 37 percent White, 18 percent Latino) revealed a shift to higher Latino proportions (an increase from 11 percent in 2002) and continued lower Black proportions (a decrease from 59 percent in 2002) (exhibit 3a).

There were 1,178 Class B (mainly cocaine and crack) drug arrests in 2011 (exhibit 4). Class B arrests accounted for the largest proportion of drug arrests (49 percent) in the city of Boston in 2011. Although the number of Class B arrests decreased by 25 percent from 2009 to 2011, the proportion of Class B arrests was stable during the same time period. In 2011, 87 percent of Class B arrestees were male and 13 percent were female. The gender distribution has remained overwhelming male from 2002 to 2011, with the percentage of females ranging from 11 to 15 percent during the time period. The age distribution of Class B arrestees was as follows: 23 percent were younger than 25, 46 percent were age 25–39, and 31 percent were age 40 or older. Since 2006, the proportion of Class B arrestees age 40 and older has remained fairly level near 30 percent annually. Previously, from 2002 to 2005, the percentage age 40 and older remained near 25 percent annually. The racial/ethnic distribution of Class B arrestees in 2011 was 38 percent White (including Hispanic), 61 percent Black (including Hispanic), and 19 percent Hispanic. From 2004 to 2011, the proportion of Black arrestees decreased from 68 to 61 percent, while the proportion of White arrestees increased from 31 to 38 percent (arrestee demographic data not shown).

In 2011, there were 4,766 cocaine/crack reports among drug items seized and analyzed by NFLIS laboratories. The proportion of cocaine/crack reports among all drug reports decreased from 25 percent in 2009, to 24 percent in 2010, and to 22 percent in preliminary 2011 data (exhibit 5).

The DEA reported that retail “street-level” cocaine cost between \$18 and \$120 per gram in 2011, compared with a range of \$50 to \$100 per gram in 2010 (exhibit 6). A rock of crack cost \$10–\$100. Cocaine was considered available at variable levels of purity in Boston and throughout New England. According to the 2011 YRBS, 3 percent of Boston public high school students reported having used cocaine during their lifetime.

Heroin

Heroin remained one of the most heavily abused drugs in Boston. Overall in 2011, heroin indicators were mostly increasing and remained at very high levels. In 2010, there were 1,919 unique patient opioid-related (including heroin) ED visits among Boston residents. The annual rate of unique patient opioid visits increased from 31.2 per 10,000 residents in 2008 to 33.6 in 2009 before decreasing to 31.1 in 2010 (exhibit 1). In 2010, the rate of opioid visits for White residents (40.0) was approximately 45 percent higher than the rate for Black residents (27.4) and Latinos (27.6). The rate for Asians (2.4 per 10,000 residents) was much lower than for other racial/ethnic groups (demographic ED data not shown).

In 2011, 9,291 treatment admissions (52 percent of all admissions) reported heroin as the primary drug, and there were an additional 752 admissions (4 percent of all admissions) with heroin reported as either a secondary or tertiary drug (exhibit 2). The proportion of admissions with heroin reported as the primary drug ranged from 41 to 46 percent between 2001 and 2006 and 49 to 51 percent between 2007 and 2010. In 2011, the proportion of primary heroin admissions reached the highest level in 11 years of data, at 52 percent (exhibit 2). The proportion of admissions reporting heroin as a primary, secondary, or tertiary drug remained between 55 and 56 percent from 2008 to 2011 (exhibit 2). Forty-six percent of the 9,291 heroin primary drug admissions in 2011 reported no secondary drug. Of the 5,034 heroin primary drug admissions reporting a secondary drug, 35 percent reported cocaine, 24 percent reported benzodiazepines, 22 percent reported alcohol, and 12 percent reported another opioid as the secondary drug (data not shown).

Exhibit 3b shows demographic characteristics of heroin primary treatment admissions in Boston. From 2001 to 2011, approximately three-fourths of heroin admissions were male and approximately one-fourth were female clients. Compared with each of the previous 10 years, the age distribution in 2011 most resembled the age distribution in 2001, with 19 percent of heroin admissions younger than 26 and 81 percent age 26 and older. During those years, the age group younger than 26 increased from 20 percent in 2001 to a high of 27 percent in 2005 before decreasing to 19 percent in 2011. Since 2005, increasing proportions of older client admissions offer evidence of an aging heroin treatment cohort.

The racial distribution for heroin admissions has shifted over time as well, with increasing percentages of White client admissions (from 48 percent in 2001 to 69 percent in 2009–2011), decreasing percentages of Black client admissions (from 21 percent in 2001 to 10–11 percent in 2010–2011), and decreasing Latino client admissions (from 28 percent in 2001 to 17–18 percent in 2008–2011 (exhibit 3b). The percentage of heroin primary admissions reporting injecting as the preferred route of administration increased steadily from 66 percent in 2001 to 86 percent in 2010–2011. Only 60 percent of Black heroin primary drug client admissions reported injection drug use as the preferred route of administration in 2011, compared with 95 percent of Asian clients, 87 percent of Latino clients, and 90 percent of White clients.

There were 592 Class A (mainly heroin and other opiates) drug arrests in 2011 (exhibit 4). The proportion of Class A arrests increased from 22 percent in 2009 and 2010 to 25 percent in 2011. The gender distribution of Class A arrestees has remained fairly stable from 2001 to 2011, with males accounting for more than four-fifths each year (arrestee demographic data not shown). The racial/ethnic distribution of Class A arrestees was 69 percent White (including Hispanic), 30 percent Black

(including Hispanic) and 42 percent Hispanic in 2011. The proportion of White (including Hispanic) Class A arrestees increased from 63 percent in 2010 to 69 percent in 2011.

In 2011, there were 3,361 heroin reports among drug items seized and analyzed in NFLIS laboratories. The proportion of heroin reports among all drug reports increased slightly, from 13 percent in 2010 to 15 percent in preliminary 2011 data (exhibit 5).

Data from the DEA's HDMP reveal that heroin purchased in Boston and throughout New England is predominantly South American in origin and distributed in clear or colored glassine or wax packets. The DEA's New England Field Division reported that heroin remained readily available from source countries, including Columbia, the Dominican Republic, and Guatemala. Documented supply sources have routed heroin through New York and New Jersey to Boston and other New England cities and towns. The average purity of street purchases has decreased from 50 percent pure in 2002, to 29 percent pure in 2005, to 18 percent pure in 2006, and 15 percent pure in 2009 and 2010. The street-level price for heroin increased from 2009 to 2010 by 62 percent. From 2005 to 2006, the price nearly doubled (\$0.88–\$1.63 per milligram pure, respectively) and remained in a higher price range (\$1.37–\$2.22 per milligram pure) from 2006 to 2010. The most recent DEA data (for the second half of 2011) indicated that in Boston, street heroin typically cost \$5–\$50 per bag and \$50–\$300 per gram (exhibit 6). According to the 2011 YRBS, 2 percent of Boston public high school students reported having used heroin during their lifetime.

Narcotic Analgesics

Narcotic analgesic abuse indicators (for nonheroin opiates/opioids) were stable and increasing at moderate levels. In 2011, 865 treatment admissions (5 percent of all admissions) reported other opioids as primary drugs, and 1,943 admissions (11 percent of all admissions) reported other opioids as primary, secondary, or tertiary drugs (exhibit 2). The proportion of other opiod primary drug treatment admissions fluctuated between 3 and 4 percent from 2001 to 2009 before increasing to 5 percent in 2010 and 2011 (exhibit 2). The proportion of admissions reporting other opiates/synthetics as primary, secondary, or tertiary drugs has remained at 11 percent from 2009 to 2011 (exhibit 2). Thirty-five percent of the 865 other opiod primary drug admissions reported no secondary drug. Of the 565 other opiod primary drug admissions citing a secondary drug, 23 percent reported alcohol, 22 percent reported heroin, 18 percent reported benzodiazepines, 15 percent reported cocaine, 11 percent reported marijuana, and 10 percent reported another opiod as the secondary drug.

Exhibit 3c shows demographic characteristics of other opiod primary treatment admissions in Boston. Close to two-thirds of admissions were male and one-third were female between 2002 and 2011. The proportion of younger client admissions (age 18–25) decreased from 47 percent in 2002 to 23 percent in 2010. The proportion of other opiod clients age 26–34 increased from 24 percent in 2005 to 33–34 percent in 2010 and 2011. Similarly, the proportion of older treatment clients (age 35 and older) increased from 27 percent in 2003 to 44 percent in 2011. The proportion of White client admissions decreased from 95 percent in 2003 to 87 percent in 2008–2011. In 2011, 5 percent of primary other opiod treatment admissions were Black, 6 percent were Latino, and 2 percent were Asian.

In preliminary 2011 data, there were 2,088 drug reports identified as oxycodone among drug items seized and analyzed by NFLIS laboratories (10 percent of all drug reports), making oxycodone the fourth most reported drug among laboratory reports in drug items for that year. The proportion of oxycodone reports increased from 6 percent in 2009 to 10 percent in preliminary 2011 data (exhibit 5). Other opioids ranking among the top 20 reports in preliminary 2011 NFLIS drug reports included buprenorphine ($n=768$, ranking 5th), hydrocodone ($n=137$, ranking 13th), methadone ($n=116$, ranking 15th), and morphine ($n=97$, ranking 18th).

The DEA reported that availability of narcotic analgesics was high throughout New England. An 80-milligram OxyContin® tablet typically cost between \$29 and \$120 in the second half of 2011 (exhibit 6). The price of an 80-milligram generic oxycodone tablet was \$25–\$125, and a 30-milligram Percocet® tablet cost \$14–\$30.

Benzodiazepines

Benzodiazepine abuse indicators were mixed (stable and increasing) at moderate levels. In 2010, there were 218 unique patient benzodiazepine-related ED visits among Boston residents. The annual rate of unique patient benzodiazepine visits was stable from 3.2 per 10,000 residents in 2007 to 3.5 in 2010 (exhibit 1). In 2010, the rate of benzodiazepine visits for White residents (5.6) was more than twice that for Black residents (2.0) and Latinos (1.9) (demographic ED data not shown).

Although the proportion of benzodiazepines cited as primary drug among treatment admissions remained low, at 1 percent of all admissions from 2009 to 2011, the proportion of admissions citing benzodiazepines as either primary, secondary, or tertiary drugs increased from 7 percent in 2005 to 12 percent in 2011 (exhibit 2).

In preliminary 2011 data, there were 597 drug reports identified as clonazepam (3 percent of all drug reports) and 371 reports identified as alprazolam among drug items seized and analyzed in NFLIS laboratories. Clonazepam ranked sixth and alprazolam ranked eighth among drug reports detected in drug items seized analyzed in NFLIS laboratories. Other benzodiazepines ranking among the top 20 NFLIS drug reports in 2011 included lorazepam ($n=119$, ranking 14th) and diazepam ($n=95$, ranking 19th) (exhibit 5). Arrest data were not available for benzodiazepines.

Methamphetamine/Amphetamines

Methamphetamine abuse indicators remained low overall in Boston. From 2001 to 2011, less than 1 percent of all treatment admissions identified methamphetamine as a primary, secondary, or tertiary drug. Methamphetamine ranked 24th among all reports detected in drug items seized and analyzed in NFLIS laboratories in Boston in 2011 (data not shown). Methamphetamine drug reports totaled 77 in 2009, 97 in 2010, and 62 in preliminary 2011 data (exhibit 5). The DEA reported that the cost of methamphetamine decreased from \$150–\$250 per gram in July–December 2009 to \$90–\$200 per gram in 2010 and 2011. According to the 2011 Youth Risk Behavior Survey (YRBS), 2 percent of Boston public high school students reported having used methamphetamine during their lifetime.

Marijuana

Marijuana indicators were mixed at varied levels of use and abuse. In 2010, there were 702 unique patient marijuana-related ED visits among Boston residents. The annual rate of unique patient marijuana visits increased from 6.7 per 10,000 residents in 2007 to 11.4 in 2010 (exhibit 1). In 2010, the rate of marijuana visits for Black residents (22.8) was three times that for White residents (7.6) and twice the rate for Latinos (11.1) (demographic ED data not shown).

In 2011, 691 treatment admissions (4 percent of all admissions) reported marijuana as their primary drug, and 2,231 admissions (13 percent of the total) reported marijuana as either a primary, secondary, or tertiary drug (exhibit 2). The proportion of all treatment client admissions that reported marijuana as their primary drug remained relatively stable from 2001 to 2011, accounting for 3–4 percent of total admissions. The proportion reporting marijuana as a primary, secondary, or tertiary drug remained between 14 and 15 percent from 2004 to 2010 before decreasing to 13 percent in 2011 (exhibit 2). Thirty-eight percent of the 691 total marijuana primary drug treatment admissions reported no secondary drug in 2011. Of the 429 marijuana primary drug admissions citing a secondary drug in 2011, 69 percent reported alcohol, 16 percent reported cocaine/crack, 6 percent reported heroin, and 4 percent reported other opioids as their secondary drug (data not shown).

Exhibit 3d shows demographic characteristics of marijuana primary treatment admissions in Boston. From 2009 to 2011, the proportion of male admissions decreased from 81 to 73 percent, and the proportion of female admissions increased from 19 to 27 percent. The proportion of marijuana primary treatment clients younger than 26 decreased from 68 percent in 2001 to 57 percent in 2011. The proportion of clients age 35 and older increased from 13 percent in 2001 to 21 percent in 2004 to 23 percent in 2011. Black client admissions, having accounted for nearly one-half of all marijuana primary drug admissions for most years from 2001 to 2011, decreased from 49 percent in 2010 to 39 percent in 2011. From 2010 to 2011, the percentage of White client admissions increased from 22 to 28 percent (exhibit 3d).

There were 431 Class D (mainly marijuana) drug arrests in 2011 (exhibit 4). In 2009, Massachusetts adopted a new marijuana possession law that decriminalized possession of small amounts of marijuana (up to 1 ounce). Primarily as a consequence of the marijuana possession law change, the proportion of Class D arrests among all drug arrests decreased from 35 percent in 2008, to 21 percent in 2009 and 2010, and to 18 percent in 2011. The percentage of female Class D arrestees increased from 5 percent in 2010 to 12 percent in 2011 (arrestee demographic data not shown). The proportion of Black (including Hispanic) Class D arrestees has remained relatively stable near 70 percent from 2004 to 2011. The proportion of Hispanic Class D arrestees increased from 20 percent in 2009 to 26 and 25 percent in 2010 and 2011, respectively.

In preliminary 2011 data, there were 5,067 marijuana reports among drug items seized and analyzed in NFLIS laboratories in Boston. The proportion of marijuana reports among all drug reports increased slightly from 21 percent in 2009 to 23 percent in 2010 and preliminary 2011 data (exhibit 5). The DEA reported that marijuana remained readily available throughout the New England States and sold for \$80–\$400 per ounce in the second half of 2011 (exhibit 6). According to the 2011 YRBS, 40 percent of Boston public high school students reported having used marijuana during their lifetime. The percentage reporting past-month use increased from 22 percent in 2009 to 27 percent in 2011.

Other Drugs

MDMA (3,4-Methylenedioxymethamphetamine)

MDMA or ecstasy indicators showed low levels of abuse. There were only 88 MDMA drug reports among drug items analyzed in NFLIS laboratories in preliminary 2011 data, compared with 216 reports in 2010 and 187 reports in 2009 (exhibit 5).

MDMA was “widely available” in New England, according to DEA reports, and it cost between \$15 and \$40 per tablet retail, with lower prices available when purchasing the drug in bulk (more than 50 dosage units) in the second half of 2011 (exhibit 6). MDMA is primarily distributed and abused by teenagers and young adults at nightclubs, raves, and private parties. According to the 2011 YRBS, 3 percent of Boston public high school students reported having used MDMA during their lifetime.

Ketamine

There were 25 ketamine drug reports among items seized and analyzed in NFLIS laboratories in preliminary 2011 data, compared with 34 reports in 2010 and 21 reports in 2009 (data not shown). The DEA reported that a vial of ketamine cost \$75–\$100 per dosage unit in Springfield, Massachusetts, and \$40 per dosage unit in Hartford, Connecticut in the second half of 2011 (exhibit 6).

PCP (Phencyclidine)

There were 16 PCP reports among drug items seized and analyzed in NFLIS laboratories in preliminary 2011 data, compared with 10 reports in 2010 and 15 reports in 2009 (data not shown). The DEA reported that PCP cost between \$10 and \$20 per tea leaf bag (1–2 grams) in the second half of 2011 (exhibit 6).

BZP (1-Benzylpiperazine)

There were 115 PCP drug reports among items seized and analyzed in NFLIS laboratories in preliminary 2011 data, compared with 87 reports in 2010 and 113 reports in 2009 (exhibit 5).

LSD (Lysergic Acid Diethylamide)

There were 23 LSD drug reports among items seized and analyzed in NFLIS laboratories in preliminary 2011 data, compared with 3 reports in 2010 and 14 reports in 2009 (data not shown).

Psilocybin/Psilocin (mushrooms)

There were 73 psilocybin/psilocin drug reports among items seized and analyzed in NFLIS laboratories in preliminary 2011 data, compared with 68 reports in 2010 and 79 reports in 2009 (data not shown).

Other Drugs, Continued

Of 21,920 drug reports among drug items in preliminary 2011 NFLIS data, there were:

- 181 reports of Phenylimidothiazole Isomer Undetermined (Possible Levamisole)
- 16 reports of 5-MeO-DIPT or Foxy methoxy (5-Methoxy-N,N-diisopropoltryptamine)
- 11 reports of MDPV (3,4-Methylenedioxyprovalerone)
- 7 reports of Methydone (N-Methyl-3,4-Methylenedioxcathinone)
- 2 reports of TFMPP (1-(3-Trifluoromethylphenyl)piperazine)
- 2 reports of Mephedrone (4-Methylmethcthinone or 4-MMC)
- 2 reports of JWH-018 (1-Pentyl-3-(1-Naphthoyl)Indole)
- 2 reports of Metronidazole
- 1 report of JWH-073 (1-Butyl-3-(1-Naphthoyl)Indole)

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Exhibit 1. Resident Unique Patient Drug-Related Hospital Emergency Department Visits¹ in Boston: FYs 2007–2010

Drug	2007	2008	2009	2010
	Rate (number)	Rate (number)	Rate (number)	Rate (number)
Heroin/Opioids	30.5 (1,859)	31.2 (1,909)	33.6 (2,066)	31.1 (1,919)
Cocaine/Crack	28.2 (1,716)	26.8 (1,638)	24.9 (1,530)	23.1 (1,429)
Marijuana	6.7 (407)	7.9 (481)	10.4 (641)	11.4 (702)
Benzodiazepines	3.2 (196)	3.7 (225)	3.1 (189)	3.5 (218)
Barbiturates/Sedatives	2.3 (141)	2.9 (177)	3.3 (201)	4.1 (255)
Antidepressants	1.9 (114)	1.9 (116)	2.1 (127)	2.4 (149)
Amphetamine	0.9 (54)	1.0 (63)	1.2 (74)	1.5 (94)
Total Number of Unique Patient Drug Related Visits	78.3 (4,769)	77.0 (4,709)	78.6 (4,829)	77.0 (4,754)

¹Rate of unique patient visits per 10,000 residents (defined by unique patient identifications among all drug-related visits within a given fiscal year, October–September). Rate denominators are based on estimates derived from 2000 and 2010 U.S. Census data for Boston.

SOURCE: Massachusetts Division of Health Care Finance and Policy Data Analysis; Boston Public Health Commission Research Office

Exhibit 2. Admissions to State-Funded Substance Abuse Treatment Programs by Primary, Secondary, and Tertiary Drug, as Percentage of Total Admissions, in Greater Boston¹: 2001–2011

Treatment Admissions	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Primary Drug	%	%	%	%	%	%	%	%	%	%	%
Alcohol	40	37	36	35	34	35	34	32	35	34	32
Heroin/Other Opioids	44	48	49	52	51	50	52	54	55	55	57
Heroin	41	45	46	49	46	46	49	50	51	50	52
Other Opioids	3	3	4	4	4	4	3	4	4	5	5
Cocaine and/or Crack	9	9	8	7	9	9	8	8	7	5	5
Cocaine (powder)	4	4	4	3	4	4	3	4	3	2	2
Crack	5	5	5	4	6	5	5	4	4	3	3
Marijuana	5	5	5	4	4	4	4	4	5	4	4
Benzodiazepines	<1	<1	1	1	1	1	1	1	1	1	1
Other ²	<1	<1	<1	<1	1	<1	<1	<1	<1	<1	<1
Primary, Secondary, or Tertiary	%	%	%	%	%	%	%	%	%	%	%
Alcohol	64	62	59	56	55	56	52	51	50	50	48
Heroin	48	50	51	53	51	51	54	55	56	55	56
Other Opioids ³	6	7	8	9	9	9	9	10	11	11	11
Cocaine or Crack ³	36	34	33	33	35	37	35	35	31	29	27
Marijuana	19	17	17	15	15	15	14	14	15	15	13
Benzodiazepines ³	6	6	7	7	7	8	9	10	10	11	12
Total Primary Admissions (N)	21,912	22,988	19,277	18,492	18,931	18,915	19,600	19,828	20,003	19,643	17,847

¹Percentages and number totals are based on total admissions with known primary drug.

²Other includes barbiturates, other sedatives, tranquilizers, hallucinogens, amphetamines, methamphetamine, “over-the-counter,” and other drugs.

³Primary, secondary, or tertiary percentages for other opiates/synthetics, cocaine or crack, and benzodiazepines may not result from summing individual components because some admissions list the same drug category among primary, secondary, and/or tertiary designations (e.g., primary powder cocaine + secondary crack).

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 Client Admissions in State-Funded Substance Abuse Treatment Programs with a Primary Problem with Cocaine/Crack, by Percentage, in the Greater Boston Area: 2001–2011

Characteristic	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Gender	%	%	%	%	%	%	%	%	%	%	%
Male	64	60	55	59	64	61	59	59	59	59	54
Female	35	40	45	41	36	39	41	41	40	40	46
Transgender	*** ¹	***	***	***	***	***	***	***	<1	<1	***
Race	%	%	%	%	%	%	%	%	%	%	%
White	26	27	28	28	29	33	36	39	38	39	37
Black	58	59	58	53	53	50	45	44	44	40	42
Latino	13	11	12	16	16	15	16	14	14	17	18
Asian	***	1	<1	***	***	***	<1	***	1	1	***
Other	3	2	2	2	2	2	3	2	3	3	3
Age at Admission	%	%	%	%	%	%	%	%	%	%	%
14–17	***	<1	1	***	<1	1	1	***	***	***	1
18–25	9	8	8	7	10	11	12	10	9	10	8
26–34	33	33	30	27	23	22	21	22	22	24	23
35 and older	58	59	61	65	67	67	66	68	69	67	68
Total (N)	2,074	2,017	1,608	1,380	1,738	1,656	1,604	1,578	1,360	1,046	923

¹Fewer than six admissions.

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 Client Admissions in State-Funded Substance Abuse Treatment Programs with a Primary Problem with Heroin, by Percentage, in the Greater Boston Area: 2001–2011

Characteristic	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Gender	%	%	%	%	%	%	%	%	%	%	%
Male	76	76	72	72	73	74	72	72	72	72	73
Female	24	2%	28	28	27	26	28	28	28	27	27
Transgender	*** ¹	***	***	***	***	<1	***	<1	<1	<1	***
Race	%	%	%	%	%	%	%	%	%	%	%
White	48	53	57	61	62	64	67	68	69	69	69
Black	21	20	18	15	14	14	12	12	12	10	11
Latino	28	24	23	22	21	19	19	18	17	17	18
Asian	2	2	1	1	1	1	1	1	1	1	1
Other	1	2	1	11	1	2	1	1	1	2	1
Age at Admission	%	%	%	%	%	%	%	%	%	%	%
14–17	<1	1	1	1	<1	<1	<1	<1	<1	<1	<1
18–25	20	21	21	24	27	26	26	25	24	23	19
26–34	34	31	30	31	29	31	33	33	34	36	37
35 and older	47	48	48	45	44	43	41	42	42	41	44
Total (N)	9,065	10,298	8,775	8,966	8,774	8,706	9,638	9,947	10,173	9,795	9,284

¹Fewer than six admissions.

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 Client Admissions in State-Funded Substance Abuse Treatment Programs with a Primary Problem with Other Opioids, by Percentage, in the Greater Boston Area: 2001–2011

Characteristic	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Gender	%	%	%	%	%	%	%	%	%	%	%
Male	74	69	67	66	64	65	60	66	62	65	65
Female	26	31	33	34	36	35	40	34	38	35	35
Transgender	*** ¹	***	***	***	***	***	***	***	***	***	***
Race	%	%	%	%	%	%	%	%	%	%	%
White	95	94	95	93	93	93	89	87	87	87	87
Black	2	2	2	3	4	4	5	5	4	6	5
Latino	3	3	2	3	3	2	5	6	5	5	6
Asian	***	***	***	***	***	***	***	***	1	***	***
Other	***	***	***	1	1	***	1	1	3	3	2
Age at Admission	%	%	%	%	%	%	%	%	%	%	%
14–17	1	3	4	4	3	1	***	1	***	***	***
18–25	44	47	44	40	37	38	33	30	26	27	23
26–34	28	21	25	25	24	26	26	29	32	34	33
35 and older	27	29	27	32	36	36	41	40	42	39	44
Total (N)	623	739	690	723	767	701	637	789	876	958	865

¹Fewer than six admissions.

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

Exhibit 3d. Demographic Characteristics of Client Admissions in State-Funded Substance Abuse Treatment Programs with a Primary Problem with Marijuana, by Percentage, in the Greater Boston Area: 2001–2011

Characteristic	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Gender	%	%	%	%	%	%	%	%	%	%	%
Male	80	77	77	70	79	76	74	75	81	76	73
Female	20	23	23	30	21	24	26	25	19	24	27
Transgender	*** ¹	***	***	***	***	***	***	***	***	***	***
Race	%	%	%	%	%	%	%	%	%	%	%
White	30	26	28	26	25	28	23	26	22	22	28
Black	47	51	46	49	49	46	49	44	50	49	39
Latino	20	21	22	20	21	23	24	24	24	25	27
Asian	***	1	1	1	1	***	***	1	***	***	***
Other	2	2	3	3	4	2	3	5	4	3	6
Age at Admission	%	%	%	%	%	%	%	%	%	%	%
14–17	23	18	18	8	15	9	6	9	7	10	16
18–25	45	48	46	46	44	46	49	46	43	44	41
26–34	19	20	21	25	21	24	25	25	28	25	21
35 and Older	13	13	15	21	20	21	19	20	22	21	23
Total (N)	1,128	1,062	972	770	808	834	809	778	919	877	691

¹Fewer than six admissions.

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

Exhibit 4. Police Department Arrests by Drug Class¹, by Percentage and Number, in Boston: 2009–2011

Drug Class	2009	2010	2011
	% (number)	% (number)	% (number)
A (Mostly Heroin)	22.4 (716)	21.7 (623)	24.6 (592)
B (Mostly Cocaine)	49.4 (1,575)	47.9 (1,376)	49.0 (1,178)
D (Mostly Marijuana)	21.2 (677)	21.3 (613)	17.9 (431)
Other	7.0 (222)	9.1 (263)	8.5 (204)
Total Drug Arrests	3,190	2,875	2,405

¹Includes 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 5. Drug Reports Among Seized Drug Items Analyzed in NFLIS Laboratories, by Substance¹ and Percentage of Total, in the Boston MSA: 2009–2011

Top 10 Drugs	2009	2010	2011 ²
	%	%	%
Cannabis	20.7	23.2	23.1
Cocaine/Crack	25.4	24.2	21.7
Heroin	14.6	13.1	15.3
Oxycodone	6.3	8.3	9.5
Buprenorphine	2.5	3.2	3.5
Clonazepam	2.6	2.7	2.7
Naloxone	0.6	1.2	1.7
Alprazolam	1.5	1.9	1.6
Gabapentin	0.6	1.0	1.1
Amphetamine	0.7	1.2	1.0
Select Other (Not Top 10) Drugs of Interest	2009	2010	2011 ²
	%	%	%
Phenylimidothiazole Isomer Undetermined (Possible Levamisole)	2.9	0.8	0.8
Hydrocodone	0.9	0.9	0.6
MDMA (3,4-Methylenedioxy- methamphetamine)	0.8	0.8	0.4
BZP (1-Benzylpiperazine)	0.5	0.3	0.5
Methamphetamine	0.3	0.4	0.3
Total Number of Reports	23,547	27,409	21,920

¹Percentages based on total number of drug reports.

²2011 data are considered preliminary as of May 2012.

SOURCE: NFLIS, DEA

Exhibit 6. Drug Street Price, Purity, and Availability in New England: Second Half of 2011¹

Drug	Price	Availability
Heroin	\$50–\$300 per gram \$70–\$85 per bundle \$5–\$50 per bag	Readily Available
Cocaine (Powder)	\$18–\$120 per gram	Available
Crack	\$10–\$100 per rock	Available
Marijuana	\$80–\$400 per ounce	Readily Available
Methamphetamine	\$90–\$200 per gram	Low-Moderate
MDMA (Ecstasy)	\$15–\$40 per tablet	Widely Available
OxyContin®	\$29–\$120 per 80-milligram tablet	Readily Available
Percocet®	\$14–\$30 per 30-milligram tablet	Readily Available
PCP (Phencyclidine)	\$10–\$20 per tea leaf bag (1–2 grams)	Available
Ketamine	\$40–\$120 per vial	Available
GHB (Gamma hydroxybutyrate)	\$150 per ounce	Available
Psilocybin (Mushrooms)	\$10 per dosage unit	Limited

¹July–December 2011.

SOURCE: New England Field Division, DEA

Patterns and Trends of Drug Abuse in Chicago: 2011

Lawrence J. Ouellet, Ph.D.¹

ABSTRACT

Epidemiological indicators suggest that heroin, cocaine, and marijuana continued to be the most commonly used illicit substances in Chicago in 2011. These were the drugs most frequently seized by law enforcement (Illinois State Police) in 2011; the three drugs accounted for 91 percent of all items seized and identified. Heroin continued to be the major opiate abused in the Chicago region, and many heroin-use indicators were increasing or maintaining levels that had been elevated since the mid-1990s. Drug treatment episodes for heroin surpassed those for cocaine in fiscal year (FY) 2001 as the leading reason for entering publicly funded treatment programs. The number of episodes peaked in FY 2005 at 33,662 episodes and then declined and leveled at about 27,000 episodes in FY 2006 and FY 2007. Interpreting the continuing decline to 13,312 episodes in 2011 is difficult due to the effect of budget reductions for drug treatment services. Heroin purity increased from 2006 to 2009, but experienced a decline in 2011. Cocaine indicators continued to suggest a decline in use. Cocaine fell to fourth behind heroin, alcohol, and marijuana among primary drugs of abuse cited by clients entering publicly funded treatment programs in FY 2011, although the decline may have been influenced by budget cuts. According to the 2011 Youth Risk Behavior Survey (YRBS), marijuana use by 9th–12th grade students in Chicago increased slightly, after a continuous decline since it peaked in 2001. In 2011, there was a statistically significant increase in the inhalation of glue, paint, and the content of aerosol cans by 9th–12th grade students, according to the YRBS. Methamphetamine indicators suggested little use in the city of Chicago. Beyond Chicago, methamphetamine use was most common in downstate and western Illinois. Indicators for MDMA (3,4-methylenedioxymethamphetamine) suggested low levels of use, but there were several increases, including increases in use among 9th–12th grade students. Ethnographic and survey reports suggested that drugs sold as MDMA were popular among young, low-income African-Americans, and the drug was available in street drug markets. LSD (lysergic acid diethylamide) and PCP (phencyclidine) indicators continued to show low levels of use, although use of PCP may have increased, according to some indicators. African-American injection drug users were an aging cohort, while new cohorts of young heroin injectors continued to emerge among Whites.

INTRODUCTION

This report is produced for the Community Epidemiology Work Group (CEWG) of the National Institute on Drug Abuse (NIDA). As part of this epidemiological surveillance network, researchers from 20 U.S. areas monitor trends in drug abuse using the most recent data from multiple sources.

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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 2010 U.S. Census estimated the population of Chicago at 2.7 million. This represented a decline of 7 percent since 2000, and it was the city's lowest population since 1910. Census figures for mid-2011, however, indicated a slight population increase (by 0.5 percent). The population of non-Hispanic African-Americans and Whites decreased, by 17 and 6 percent, respectively, while Hispanics experienced a modest increase of 3 percent. The population of Chicago is 32.4 percent non-Hispanic African-American, 31.7 percent non-Hispanic White, and 28.9 percent Hispanic. Cook County, which includes Chicago, had a population of 5.2 million in 2010, which was a decline of 3 percent from 2000. The Chicago-Naperville-Michigan City, IL-IN-WI Metropolitan Statistical Area (MSA) had a population of 9.4 million in 2010, and it was the third largest MSA in the United States. Among U.S. cities, Chicago has the third largest Mexican-American and second largest Puerto Rican populations.

The U.S. Bureau of Labor Statistics estimated unemployment for the Chicago MSA to be 8.6 percent in May 2012, down from 9.8 percent in May 2011 and the peak of 11.3 percent in December 2009. The census estimated that the proportion of Chicago residents living below the Federal poverty level increased from 20 percent in 2000 to 23 percent in 2010.

Data Sources

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

- **Treatment episode data** for the State of Illinois and Chicago for fiscal years (FYs) 2002–2011 (July 1–June 30) were provided by the Illinois Division of Alcoholism and Substance Abuse (DASA).
- **Data on drug reports among items seized and analyzed in forensic laboratories** are from the Drug Enforcement Administration (DEA)'s National Forensic Laboratory Information System (NFLIS). Data are for the Chicago-Naperville-Michigan City, IL-IN-WI MSA. NFLIS methodology allows for the accounting of up to three drugs per item submitted for analysis. The data presented are a combined count including primary, secondary, and tertiary reports for each drug for calendar years (CYs) 2009–2011. Data for 2011 are preliminary and are subject to change. Drug seizure data also came from the Illinois State Police (ISP), Division of Forensic Science.
- **Arrestee drug use data** were derived from the Arrestee Drug Abuse Monitoring (ADAM) II program, sponsored by the Office of National Drug Control Policy. ADAM II collected data regarding drug use and related issues from adult male booked arrestees in 10 counties across the country. ADAM II data come from two sources—a 20–25 minute face-to-face interview and urinalysis of a test sample for the presence of 10 different drugs. Participation in both the interview and the urine test is voluntary and confidential. In 2011, 5,051 completed interviews were conducted with booked arrestees from all 10 sites. Of these interview respondents, 4,412 provided a urine specimen. Data were collected over two quarters in 2011 and then statistically annualized to represent the entire year.

- **Drug-related mortality data** on deaths in Will County were reported by the Coroner's Office.
- **Price and purity data** for heroin were provided by the DEA's Heroin Domestic Monitor Program (HDMP) for 2001–2011. Drug price data are reported from the February 2010 report of *National Illicit Drug Prices* by the National Drug Intelligence Center (NDIC) and from preliminary HDMP 2011 data from the DEA. 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, The University of Illinois at Chicago (UIC).
- **Survey data on student populations** were derived from the 2011 Youth Risk Behavior Survey (YRBS), prepared by the Centers for Disease Control and Prevention (CDC). These data provided drug use data representative of students in grades 9 through 12 in Chicago public schools.
- **Recent drug use estimates** were derived from the National Institute on Drug Abuse (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 both males and females 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. Participants in this study ($n=4,344$) 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. Data for Chicago were obtained from the *Health Chicago STI/HIV Surveillance Report*, Chicago Department of Public Health (CDPH), fall 2011, and from a presentation, *Current State of the HIV/AIDS Epidemic in Chicago*, by Nikhil Prachand, CDPH, STI/HIV/AIDS Division, March 2010. Illinois Department of Public Health surveillance reports provided statistics on sexually transmitted infections (STI)/HIV infections from June 2007 to January 2011 for the State of Illinois.

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.

DRUG ABUSE PATTERNS AND TRENDS

Although this report of drug abuse patterns and trends is organized by major pharmacologic categories, readers are reminded 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.

Cocaine/Crack

The majority of quantitative and qualitative cocaine indicators suggested that cocaine/crack use was declining, although it remained at high levels in Chicago. Cocaine continued to constitute a serious drug problem for Chicago.

The number of treatment episodes for primary cocaine use in Chicago continued to decline from the 2006 peak of 17,764, to 7,272 in FY 2010, and to 5,558 in FY 2011 (exhibit 1). However, budget cuts in treatment funds contributed to these reductions. The majority of clients (89 percent) reported treatment for crack cocaine use (exhibit 2). Cocaine was the most commonly mentioned secondary drug among clients treated for primary alcohol, heroin, and other opioid-related problems. In FY 2011, African-Americans remained the largest group treated (at 82 percent) for cocaine abuse; more males sought services (64 percent) than females (exhibit 2).

Among the 574 male jail arrestees sampled in 2011 by ADAM II at the Cook County Jail, 525 (94 percent) consented to interviews, and 504 of them (96 percent) provided a urine sample for drug testing. Most of the arrestees (81 percent) tested positive for at least one illicit drug; 31 percent were positive for multiple drugs. Twenty-five percent were urinalysis positive for cocaine. This proportion was significantly lower ($p < .01$) than in 2007 (41 percent) and 2008 (44 percent). Self-reported crack use in the 30 days before arrest also was significantly lower ($p \leq .01$) in 2011 (at 11 percent) compared with 2007 and 2008 (at 23 percent in both years). Chicago arrestees were among the least likely (at 6 percent) to report using powdered cocaine in the 30 days before arrest.

Cocaine reports among drug items seized and analyzed by NFLIS laboratories ranked second among all drug reports in 2011, following marijuana/cannabis, and constituting 19 percent of total drug reports. This represented a decline from 22 percent in 2009 and 20 percent in 2010 (exhibit 3).

The DEA reported a substantial increase in the wholesale price of a kilogram of powder cocaine in Chicago, from \$17,000–\$25,000 in 2007 to \$21,000–\$34,500 in the first half of 2011. Ethnographic sources noted kilogram prices as high as \$35,000–\$40,000 in 2012. Ounce prices reported by the DEA in 2011 ranged from \$650 to \$1,300, and ethnographic sources reported a range of \$600–\$1,000 for 1 ounce in 2012. Prices in 2011 and 2012 for 1 ounce of crack cocaine ranged from \$500 to \$1,500, according to the DEA and ethnographic sources. Ethnographic reports indicated that crack cocaine remained readily available in street markets, although there continued to be reports of areas with only moderate availability. Crack typically sold for \$5–\$20 per bag; this price has been stable for many years.

The ISP analyzed 106,012 grams of cocaine in Cook County (which includes Chicago) in 2011, an amount down substantially from 190,827 grams in 2010 and 197,112 grams in 2009. Of these seizures, 63 percent were identified as crack cocaine. Overall, the DEA reported that the number and quantity of cocaine seizures notably decreased from the previous year.

Ethnographic reports suggested that the quality of cocaine may be becoming more variable, as police pressure on drug dealing organizations causes decentralization in organizational structures. Police have effectively targeted leaders in highly centralized drug-dealing gangs. Consequently, as they have been sent to prison, drug sales are more often made by smaller cliques of younger people who have more control over the product they sell, including how the product is mixed. Ethnographic reports indicated that the use of powdered cocaine in Chicago nightclubs notably declined.

When participants in the 2011 ADAM II study were asked about their most recent purchase of crack cocaine, 42 percent said they used an outdoor drug market. This was well below levels reported in 2007, 2008, and 2009 (at 62, 69, and 65 percent, respectively).

The 2011 YRBS assessed current (previous 30 days) and lifetime cocaine use among public school students in grades 9–12 in the city of Chicago. In 2011, 2.2 percent (1.6–3.1, 95-percent confidence interval [CI]) of Chicago students reported cocaine use in the past 30 days, down from 3.4 percent in 2010. Lifetime use for these students increased from 4.2 percent (CI=2.4–7.3) in 2005 to 6.7 percent (CI=4.3–10.1) in 2009, the highest level since the first YRBS survey in 1991 (exhibit 4). This declined to 5.9 percent (CI=4.7–9.4) in 2011.

Heroin

Heroin abuse indicators in this reporting period continued to suggest high levels of use in the Chicago area. Most heroin in Chicago comes from Colombia and Mexico, and its distribution locally is controlled by Mexican cartels. Heroin in Chicago is most often sold in a powdered form and is available in robust, easily accessed outdoor markets. Tar heroin is available, although mostly in neighborhoods where residents are predominately of Mexican descent.

During FY 2011, heroin use was the most frequently reported reason for seeking addiction treatment in Chicago. Among these treatment episodes, the most common secondary substances reported were cocaine (43 percent) and alcohol (9 percent). The number of primary heroin treatment episodes in Chicago declined markedly from 19,909 in FY 2009 to 13,312 in FY 2011 (exhibit 1). Similar to cocaine treatment services, officials attribute a substantial proportion of this decline to budget reductions. The number of clients treated for heroin use in State-supported programs increased considerably from FY 2002 to a high in FY 2005 of 33,662 clients. Numbers then decreased to about 27,000 in both FYs 2006 and 2007. Heroin use accounted for 38 percent of all treatment episodes in FY 2011, and it was the most common reason for seeking treatment in Chicago (exhibit 2). The proportion reporting inhalation (“snorting”) as the primary route of administration declined from 81 percent in 2009 to 74 percent in both FYs 2010 and 2011. The proportion reporting injection as the primary route of administration increased from 14 percent in FY 2007, to 17 percent in FY 2009, to 19 percent in FY 2010, and to 22 percent in FY 2011 (exhibit 2). In contrast, clients entering treatment programs outside of Chicago were more likely to report injection as the primary route of administration; this proportion increased markedly from 46 percent in FY 2007 to 64 percent in FY 2011. Recent research indicated that injection was declining among African-Americans and was perhaps increasing among Whites (Armstrong, 2007; Broz and Ouellet, 2008; Cooper et al, 2008), which may account for some of this difference in injection prevalence. While clients entering treatment in Chicago were more likely to be African-American (72 percent) (exhibit 2), clients from the remainder of Illinois were more likely to be White (68 percent).

ADAM II data indicated that 18.6 percent of male arrestees at the Cook County Jail tested urinalysis positive for opiates in 2011; this represented an increase from 2010 (14.4 percent) and 2009 (17.6 percent), but the proportion was significantly lower ($p<.01$) than in 2008 (29 percent). This was the highest level among the 10 ADAM II sites nationally. Males older than 35 were much more likely to test positive for an opiate than were younger male arrestees. Among Chicago arrestees who used heroin, only 21 percent said they injected the drug (fewer than in any other city in the ADAM II study). When Chicago participants in the 2011 ADAM II study were asked about their most recent purchase of heroin, 51 percent said they used an outdoor drug market. This proportion was well below the level reported in 2010 (81 percent), but it was close to the proportions for 2007 and 2008 (at 55 and 54 percent, respectively).

The purity of street-level heroin peaked in 1997, at about 31 percent pure, and then began a steady decline to 12.6 percent pure in 2006 (exhibit 5). However, the average price per milligram pure was \$0.49 in 2006, which was among the lowest prices in CEWG cities nationally. Purity rebounded to 21 percent pure in 2007, 24 percent pure in 2008, and 27 percent pure in 2009, and then declined to approximately 11 percent pure in 2011 (preliminary data). This change was accompanied by a decline in the average price to \$0.37 per milligram pure in 2008 and 2009; information regarding price per milligram pure was not available in 2011.

The amount of heroin analyzed in Cook County by the ISP laboratory increased from 12 kilograms in 2002 to 21 kilograms 2003. The amount remained at this level in both 2004 and 2005, and then declined to less than 20 kilograms in 2006. In 2007, the amount of heroin analyzed by the ISP increased again to almost 23 kilograms, then dropped to 19 kilograms in 2008, increased to 38 kilograms in both 2009 and 2010, and increased again to 44 kilograms in 2011. Cook County accounted for 87 percent of the heroin seized by the ISP in 2011. According to NFLIS, heroin was the third most often identified drug report among items seized and analyzed in the Chicago MSA in 2011, accounting for 15.5 percent of all reports among items analyzed (exhibit 3).

The YRBS reported increases for lifetime use of heroin among Chicago public high school students from 2.0 percent (CI=0.9–4.4) in 2005 to 4.7 percent (CI=3.0–7.2) in 2009. However, there was a decline to 3.9 percent (CI=2.9–5.2) in 2011 (exhibit 4). More use was reported among male (5.1 percent) than among female (2.2 percent) students.

Heroin prices varied depending on type and origin. Heroin was commonly sold on the street in \$10 and \$20 units (bags), although bags for as little as \$5 were available. Heroin was also sold in bundles (“jabs”), typically 12–13 “dime” bags for \$100. According to the December 2008 NDIC report, wholesale prices for a kilogram dropped to \$35,000–\$50,000 from about \$60,000 in 2007 for Mexican brown powder heroin, and prices dropped to \$30,000–\$80,000 from \$45,000 to \$80,000 per kilogram of Mexican black tar heroin. Preliminary data from the DEA for 2011 reported kilogram price ranges of \$54,000–\$60,000 for white South American heroin, \$45,000–\$90,000 for Mexican black tar, and \$50,000–\$80,000 for Mexican brown heroin. Ethnographic reports in 2012 regarding prices for the three types of heroin were around \$100,000, \$80,000, and \$60,000, respectively. In comparison, kilogram prices in 2003 ranged from \$100,000 to \$125,000.

Ethnographic reports of ounce prices in the first half of 2012 for white and brown heroin averaged \$1,800–\$2,500, higher than reported in 2011. DEA reports indicated gram prices for brown and tar heroin typically ranged from \$70 to \$110, while ethnographic reports in 2012 indicated that prices ranged from \$80 to \$150 for white heroin, \$80–\$120 for brown heroin, and \$50–\$150 for black tar heroin.

In June 2012, the DEA and local police departments reported arrests of persons alleged to be members of a drug trafficking organization based in Mexico that culminated in the seizure of 35.5 kilograms of heroin, 21.5 kilograms of cocaine, and \$2.8 million in cash. Overall, the DEA reported that the number and quantity of seizures of heroin notably increased in the past year.

A substantial problem with heroin use began in the 1990s across many of Chicago’s suburbs. In local studies conducted of people age 30 and younger who injected drugs, almost all of whom primarily injected heroin, the proportion residing in the suburbs has risen. These proportions increased

from negligible levels in the early-1990s, to 30–50 percent in the late 1990s-to-mid 2000s (Boodram et al, 2010; Thorpe et al, 2001), and to 75 percent in the late 2000s (Mackesy-Amiti et al, in press). As another indicator of increasing heroin use in Chicago's suburbs, the number of heroin purchases and seizures by the DuPage Metropolitan Enforcement Group in 2011 was more than 3 times greater than in 2008 (59 in 2011, compared with 16 in 2008), and the amount of heroin seized was more than 16 times greater in 2011 (1,835 grams). In Will County, heroin overdose deaths reported by the Coroner's office increased from 6 in 1999 to 26 in 2011; 11 of the decedents were younger than 30. Illinois enacted a "Good Samaritan" law in June 2012, which provides limited protections from prosecution for drug possession for persons seeking emergency medical assistance for themselves or other persons in response to a drug overdose.

Other Opiates/Opioids

Drug treatment episodes for other opiates/opioids as the primary drug of abuse decreased from 788 episodes in FY 2006 to 496 in FY 2007; this represents a 37-percent decline. A continuing decrease to 197 episodes in FY 2011 may reflect budget reductions rather than diminished demand. Treatment episodes for other opiates/opioids in 2011 more often involved females (at 52 percent) and White clients (at 59 percent) (exhibit 2). Clients older than 34 constituted the largest age group, but this proportion was substantially lower in FY 2011 (51 percent) than in FY 2007 (76 percent). Oral ingestion was reported as the most frequent route of administration (with 79 percent reporting that route of administration), and cocaine was reported to be the most common secondary drug. In other areas of the State, females (at 53 percent) and Whites (at 91 percent) constituted the majority of treatment episodes; the largest age group was age 26–34 (40 percent); oral ingestion was reported as the most frequent route of administration by 78 percent; and marijuana was reported as the most common secondary drug (21 percent).

Of the top 25 drugs identified in reports among drug items seized and analyzed by NFLIS laboratories in 2011, 5 were opiates/opioids other than heroin: hydrocodone ($n=641$), buprenorphine ($n=156$), oxycodone ($n=128$), methadone ($n=102$), and codeine ($n=90$).

Benzodiazepines/Barbiturates

In Chicago, depressants such as benzodiazepines and barbiturates are commonly taken with narcotics to enhance the effect of opiates, frequently heroin. Depressants may also be taken with stimulants to moderate the undesirable side effects of chronic stimulant abuse, or when concluding "runs," to help induce sleep and to reduce the craving for more stimulants.

In FY 2011, DASA reported 30 treatment episodes for benzodiazepines and 9 episodes for other prescription depressants in Chicago. Females (77 percent) and Whites (73 percent) constituted the majority of treatment episodes. NFLIS data indicated alprazolam (Xanax®) was the eighth most often identified drug report among drug items seized and analyzed in the Chicago MSA, and ethnographic reports indicated it was the benzodiazepine most often used by persons who used heroin or cocaine.

As stated in past Chicago CEWG reports, alprazolam typically sold for \$2–\$3 for 0.5-milligram tablets and \$5–\$10 for 1-milligram tablets, although there were reports of 2-milligram "bars" that sold for \$3–\$5.

Methamphetamine/Amphetamines

Primary methamphetamine treatment episodes in Chicago steadily increased from 29 episodes in FY 2002 to 139 in FY 2006, before declining to 114 in FY 2007, 81 in FY 2009, and then to 59 and 60 in FYs 2010 and 2011, respectively. Recent declines, however, may to some extent reflect budget reductions. After a substantial increase in the proportion of episodes involving African-Americans seeking treatment for methamphetamine abuse, from 15 percent in FY 2005 to 47 percent in FY 2006, there was a decline to 30 percent in FY 2007 and 10 percent in FY 2011 (exhibit 2). Males (representing 85 percent) continued to be more likely to seek treatment than females, probably because the use of methamphetamine in Chicago has been concentrated among the MSM population. Smoking was the most frequently reported primary route of administration in FY 2011 (at 65 percent), followed by injection (at 20 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 a peak in FY 2005 at 5,134, but they declined to 4,879 in FY 2006 and then to 3,029 in FY 2007. There were 1,388 episodes in FY 2011. Marijuana was the predominant secondary drug used with methamphetamine in both Chicago (17 percent) and elsewhere in the State (37 percent), followed by alcohol (13 and 19 percent, respectively).

Primary methamphetamine treatment episodes outnumbered those for amphetamine in Chicago and in the rest of the State. In FY 2011, there were 23 amphetamine episodes reported in Chicago. Amphetamine treatment episodes in the rest of the State numbered 335 in FY 2007, 127 in FY 2009, and 145 in FY 2011. Treatment for amphetamine use in Chicago more often involved males (70 percent) than females; there was little racial/ethnic variation. Elsewhere in the State, treatment episodes were almost evenly split among males and females, and 89 percent were White. Marijuana was the predominant secondary drug used with amphetamine in both in Chicago (26 percent) and elsewhere in the State (39 percent).

ADAM II data indicated that in 2011, only 1.0 percent of male arrestees at the Cook County Jail tested urinalysis positive for methamphetamine. This was among the lowest proportions for methamphetamine found at ADAM II study sites nationally.

Methamphetamine seizures in all counties in Illinois declined by 52 percent in 2006 and by another 53 percent in 2007 (to 9.1 kilograms). Methamphetamine seizures then increased to 12.8 kilograms in 2008, 15.2 kilograms in 2009, and 20.4 kilograms in 2010, before declining in 2011 to 12.2 kilograms. In 35 percent of Illinois counties, the amount of methamphetamine seized was greater than the amount of heroin or cocaine seized. The amount of methamphetamine received by ISP from Cook County in 2011 decreased considerably from 11,897 grams in 2010 to 5,591 grams in 2011. According to NFLIS, 0.4 percent of drug reports among items seized and analyzed in Chicago in 2011 were identified as methamphetamine (exhibit 3).

According to the YRBS, lifetime use of methamphetamine among Chicago public high school students increased considerably from 1.5 percent in 2005 to 4.7 percent in 2007 before declining slightly in 2009 to 4.3 percent and again in 2011 to 3.4 percent (CI=2.7–4.3) (exhibit 4). Use was greater ($p=0.03$) among male students (4.4 percent) than among female students (2.0 percent). Interestingly, methamphetamine use among high school students was less prevalent in the State of Illinois than in the city of Chicago in 2007 (2.6 percent; CI=2.0–3.4), although this difference could be due to chance. For the State as a whole, use was lower among African-Americans (2.0 percent) than among Whites (2.9 percent) and Hispanics (2.5 percent).

Within Chicago, a low but stable prevalence of methamphetamine use has been reported for a number of years in the North Side gay community. During the last reporting period, COIP staff for the first time heard of modest availability of methamphetamine in some South Side African-American neighborhoods. In this reporting period, unconfirmed reports were received of substitutions of methamphetamine for crack cocaine among some North Side users.

Preliminary price data from the DEA for the first half of 2011 reported methamphetamine prices ranging from \$14,000 to \$18,000 for a pound of “ice” methamphetamine in Chicago. In comparison, a pound of ice methamphetamine ranged in price from \$8,000 to \$16,000 in 2007 and increased in 2008 to \$10,000–\$14,000. Prices for a pound of powdered methamphetamine in the first half of 2011 ranged from \$20,000 to \$30,000, according to the DEA.

Marijuana

Marijuana continued to be the most widely available and used illicit drug in Chicago and in Illinois. Marijuana users represented 18 percent (6,279) of all treatment episodes in Chicago in FY 2011 and 29 percent of episodes elsewhere in the State. This number and proportion were similar to those for FY 2007, FY 2009, and FY 2010. Marijuana-related episodes increased as a percentage of total episodes in Chicago between FY 2002 and FY 2007, reaching a peak number of 9,639 episodes in 2007. Alcohol remained the most commonly reported secondary drug among clients receiving treatment for marijuana (at 33 percent). In Chicago, there were higher proportions of primary marijuana treatment episodes for males (82 percent) than females and for African-Americans (71 percent) than for other ethnicities (exhibit 2).

Among arrestees in the ADAM II study, 56 percent tested urinalysis positive for marijuana; this was the second highest proportion in the Nation, although it was slightly lower than in 2007 (52 percent). Males age 30 and younger were more likely to test positive for marijuana than older male arrestees. When participants in the 2011 ADAM II survey were asked about their most recent purchase of marijuana, 69 percent said they used an outdoor drug market; this was a lower proportion than in 2010 survey reports (81 percent) but close to the 2008 and 2009 proportions (66 and 63 percent, respectively).

According to the DEA, the bulk of marijuana shipments were transported by Mexico-based poly-drug trafficking organizations. The primary wholesalers of marijuana were the same Mexico-based organizations that supplied most of the cocaine, methamphetamine, and heroin in the Midwest. In addition, high-quality marijuana was brought from the west coast to Chicago by Whites involved in trafficking and from Canada by Chinese, Vietnamese, and Albanian traffickers. The DEA and the Chicago Police Department also reported increases in the number of local grow houses and the availability of marijuana produced locally (both indoor and outdoor).

The abundance and popularity of marijuana across the city has led to an array of types, quality, and prices. Marijuana prices may have increased since 2003. According to preliminary data from the DEA for mid-2011, the price for 1 pound of marijuana in Chicago generally ranged from \$525 to \$900 for Mexican, and \$3,000 to \$6,000 for sinsemilla, hydroponic, “kush,” and Canadian marijuana. Ethnographic reports in mid-2011 indicated the same price range as that reported by the NDIC for 2009—\$750–\$1,400 for commercial grade marijuana and a range of \$3,200–\$5,000 for high-grade marijuana. Cost for 1 ounce of high-grade marijuana was reported to be around \$300

in 2011 (ethnographic data) and \$400 in mid-2009 (NDIC), while lesser grades sold for \$80–\$175 (ethnographic reports). On the street, marijuana was most often sold in bags for \$5–\$20 or as blunt cigars. Both ISP and NFLIS laboratories analyzed more marijuana samples than samples for any other drug in 2011. Sixty percent of drug reports among items analyzed by NFLIS laboratories in Chicago in 2011 were identified as marijuana/cannabis (exhibit 3), a substantially larger proportion than for the Nation as a whole (34 percent).

According to the 2011 YRBS, lifetime marijuana use among 9th–12th grade public school students in Chicago had declined by 14 percent since its 2001 peak of 49.3 percent. In 2011, 42.6 percent of students reported ever smoking marijuana. Marijuana use in the past 30 days was reported by 25 percent of students in 2011 (CI=21.4–28.9), which was a slight increase from 22.2 percent (CI=19.2–25.5) in 2009. In 2011, male students were somewhat more likely to report lifetime use than female students (45.8 and 40.0 percent, respectively). For Illinois as a whole, 45.4 (CI=40.2–50.7) of African-American students, 41.9 percent (CI=37.6–46.4) of Hispanic students, and 35.5 percent (CI=30.7–40.6) of White students reported lifetime marijuana use. Compared with 2001, the proportion of students who first smoked marijuana at an age younger than 13 significantly declined ($p=.04$), from 15.5 percent in 2001 to 11.9 percent in 2011, although between 2009 and 2011 there was a nonsignificant increase from 9.6 to 11.9 percent.

Cannabimimetics

In 2011, there were 223 reports among drug items seized and analyzed in NFLIS laboratories identified as compounds designed to mimic marijuana (cannabimimetics). These included JWH-122, JWH-018, AM-2201, JWH-073, JWH-210, JWH-081, JWH-250, and JWH-203. The sale of such drugs was banned in Chicago, beginning January 1, 2012, and can result in a \$1,000 fine and the loss of a business license. In July 2012, Illinois designated some of these cannabinoid-mimicking drugs as Schedule I controlled substances.

Other Drugs

MDMA

In the Chicago area, MDMA (3,4-methylenedioxymethamphetamine) or “ecstasy” continued to be the most prominently identified of the “club drugs,” and its use in Chicago appeared to be most common among African-Americans. In FY 2011, there were only 44 treatment episodes for MDMA use in Chicago and 68 in other areas of Illinois. Treatment episodes in Chicago more often involved males (89 percent), African-Americans (77 percent), and clients age 18–25 (57 percent). In other areas of Illinois, treatment episodes most often involved males (71 percent), Whites (47 percent) and African-Americans (43 percent), and clients age 18–25 (51 percent). In Chicago and other areas of Illinois, the most commonly reported secondary drug was marijuana (52 and 41 percent, respectively)

According to the YRBS, lifetime use of MDMA among 9th–12th grade students in Chicago increased from 3.3 percent in 2005 to 6.4 percent in 2007, leveled at 6.5 percent (95-percent CI=4.6–9.0) in 2009, and increased slightly again in 2011 to 6.9 percent (CI=5.6–8.4) (exhibit 5). Hispanic students were more likely to report lifetime MDMA use (7.4 percent) than were African-American students (4.8 percent). The percentage of male students who reported lifetime use of MDMA was greater

than the percentage of female students (8.7 versus 5.1 percent). None of these differences, however, were statistically significant.

MDMA samples sent to the ISP laboratory from Cook County decreased from 4.6 kilograms in 2007, to 3.3 kilograms in 2008, and to 3.0 kilograms in 2009; they then increased to 3.8 kilograms in 2010 before declining to 2.4 kilograms in 2011. NFLIS reported an increase in the proportion of reports among drug items seized and analyzed for Chicago that were MDMA, from 0.78 percent in 2006 to 1.6 percent in 2009 and 2010; this was followed by a decline to 0.9 percent in 2011 (exhibit 3). BZP (1-benzylpiperazine) is a drug often sold as, or in combination with, MDMA. Following large increases in the number of samples of BZP from 15 in 2007, to 380 in 2008, to 1,188 in 2009, reports of BZP among drug items seized and analyzed by NFLIS laboratories declined to 542 samples in 2010 and 461 in 2011 (exhibit 3).

Ecstasy was generally reported to be easily acquired in street drug markets, although availability varied across the city. In some areas, ecstasy was reported by street sources to be sold by the same persons who sold heroin and cocaine. In other markets, it was sold by sellers who specialized in ecstasy. Ecstasy continued to be sold in pill or capsule form, and, according to the NDIC, prices have been decreasing slightly in recent years. In 2003, per-tablet wholesale prices ranged from \$10 to \$12, but they declined to \$5 per tablet in 2006. In 2008, per-tablet wholesale prices ranged from \$5 to \$10; no wholesale prices were available for 2011. The retail price in 2008 was \$20 per tablet, according to the NDIC, which compares with the low end of the 2007 range of \$20–\$40. Ethnographic reports indicated that mid-2011 retail prices ranged from \$5 to \$30 per pill, and a “jar” of 1,000 tablets cost \$1,200.

There have been increasing reports during the past few years of ecstasy use from participants in local studies of drug users. These reports indicate a ready presence of ecstasy—or drugs thought to be MDMA—in African-American neighborhoods. The principal users are in their teens and twenties, but some are 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. Marijuana and alcohol are the drugs most often intentionally consumed in combination with ecstasy. Users commonly claim that ecstasy exists in “upper” and “downer” forms, which suggests the tablets include different combinations of drugs. Some users describe their experience with MDMA as a “rollercoaster,” meaning the effects of the drugs vary considerably from purchase to purchase. However, the decline in BZP reports observed in NFLIS data (exhibit 3) suggests that MDMA may more often be present in ecstasy drugs purchased as MDMA than in the past.

Foxy methoxy

“Foxy methoxy” (5-methoxy-N,N-diisopropyltryptamine [5-MeO-DIPT]), a tryptamine that produces an hallucinogenic experience for users, was the ninth ($n=380$) most frequently identified drug report among drug items seized and analyzed by NFLIS laboratories in 2011. There were also 23 reports of dimethyltryptamine (DMT) in that year.

Substituted Cathinones

In 2011, there were 159 reports of psychoactive drugs commonly found in substances marketed as “bath salts” (substituted cathinones) among analyzed drug items: 138 reports of MDPV

(3,4-methylenedioxypropylone), 19 reports of methylone (n-methyl-3,4-methylenedioxypropylone), and 2 reports of mephedrone (4-methylmethcathinone). In June 2012, Illinois enacted a law that added MDPV to the Schedule I list of controlled substances (indicating that there is a high potential for abuse, no currently accepted medical use in the United States, and a lack of accepted safety for use under medical supervision).

GHB

GHB (gamma hydroxybutyrate) is a central nervous system depressant with hallucinogenic effects. There were only seven GHB reports among drug items seized and analyzed by NFLIS laboratories in Chicago in 2011. GHB is not tracked in most other quantitative indicators, but its use is perceived to be low in the Chicago areas compared with ecstasy. Ethnographic reports in mid-2011 indicated the use of GHB in nightclubs was uncommon. GHB is sold as a liquid (“Liquid G”), in amounts ranging from drops to capsules. Prices for a capsule have been reported at \$10 and have remained level. Ethnographic reports for mid-2011 indicated prices for bottles ranged from \$50 to \$120 (20 ounces for \$120). Compared with other drugs in the club drugs category, overdoses are more frequent with GHB, especially when used in combination with alcohol.

Ketamine

Ketamine, an animal tranquilizer, is another depressant with hallucinogenic properties that is often referred to as “Special K,” among other names. DASA did not report anyone treated for ketamine use in FY 2011 in publicly funded treatment programs in Illinois. The number of ketamine reports identified among drug items seized and analyzed by NFLIS laboratories declined from 63 in 2007, to 41 in 2008, to 28 in 2009, and then to 11 in 2010. GHB reports increased, however, to 50 reports in 2011 (exhibit 3). Ketamine was usually sold in \$5–\$30 bags of powder or in liquid form; this price range has been stable since at least 2004. The only report of a gram price in mid-2011 was \$90.

PCP, LSD, and Other Hallucinogens

In FY 2007, treatment episodes for PCP (phencyclidine) totaled 60, and “other hallucinogens,” which includes LSD (lysergic acid diethylamide), totaled 25. PCP episodes increased to 126 in 2009, declined to 65 in 2010, and then increased to 148 in 2011. There were 14 treatment episodes for other hallucinogens in 2010 and 23 treatment episodes in 2011. The majority of treatment episodes for PCP occurred among African-Americans (69 percent) and females (55 percent).

In general, both PCP and LSD use in Chicago remained low, although street reports suggested PCP use was fairly common in some neighborhoods. The amount of PCP samples from Cook County received by the ISP laboratory for analysis decreased considerably between 2002 and 2006, from 4.2 to 0.16 kilograms, but PCP samples have remained fairly constant since then around the 2011 level of 0.5 kilograms. NFLIS reports for PCP and LSD among drug items seized and analyzed totaled 0.42 and 0.05 percent, respectively, of all reports in 2011 (exhibit 3). Only 1.4 percent of arrestees sampled for ADAM II in 2011 tested urinalysis positive for PCP.

Ethnographic reports on PCP use in mid-2012 suggested that PCP “sticks” about the size of toothpicks were reportedly available for \$5–\$20, with the most common price being \$10. LSD hits typically cost \$10–\$15. LSD was available in the city and suburbs.

INFECTIOUS DISEASES RELATED TO DRUG ABUSE

While Chicago accounts for 23 percent of Illinois' population, approximately 75 percent of the State's diagnosed HIV infections in 2009 were from Chicago, and 84 percent were from metropolitan Chicago (Cook County and the collar counties of DuPage, Kane, Lake, McHenry, and Will Counties).

There were 20,391 persons known to be living with HIV/AIDS in Chicago in 2009, and an estimated total of 25,000 persons infected when undiagnosed infections are included. Of the 1,092 new cases of HIV (not AIDS) diagnosed in 2009, only 14 percent cited injection drug use as a risk factor; this proportion was well below the 26 percent reported in 2000. MSM sexual contact continued to be the leading single mode of transmission (at 62 percent) of new HIV infections. Non-Hispanic African-Americans constituted 59 percent of new HIV diagnoses, despite constituting about 33 percent of the city's population, while non-Hispanic Whites and Hispanics constituted 19 and 17 percent of new infections, respectively. While there have been declines since 2001 in new HIV infections among females that were attributed to either drug injection or to heterosexual contact, the latter began increasing after 2005, while injection-related cases continued to decline. SATH-CAP data suggest that noninjection use of heroin and cocaine is a predictor of heterosexual HIV infection.

A considerable proportion of Chicago students in grades 9–12 continued to report behavior that may place them at risk for sexually transmitted infections. Data from the 2011 YRBS suggested that 52 percent have had sexual intercourse, 36 percent did not use a condom during their last intercourse (despite only 12 percent using birth control pills), and 21 percent consumed alcohol or drugs before their last sexual intercourse. Many students also live in neighborhoods with a high background prevalence of HIV and other sexually transmitted diseases (STD), which increases their chances of having a sexual partner who is HIV/STD positive.

The prevalence of HIV infection among the mostly low-income participants in the SATH-CAP study was about 7 percent. Prevalence was highest (47 percent) among males who reported only male sex partners in the past 6 months. HIV prevalence was only slightly higher among injection drug users compared with noninjection drug users, which reflects declines in infections among the former and increases among the latter.

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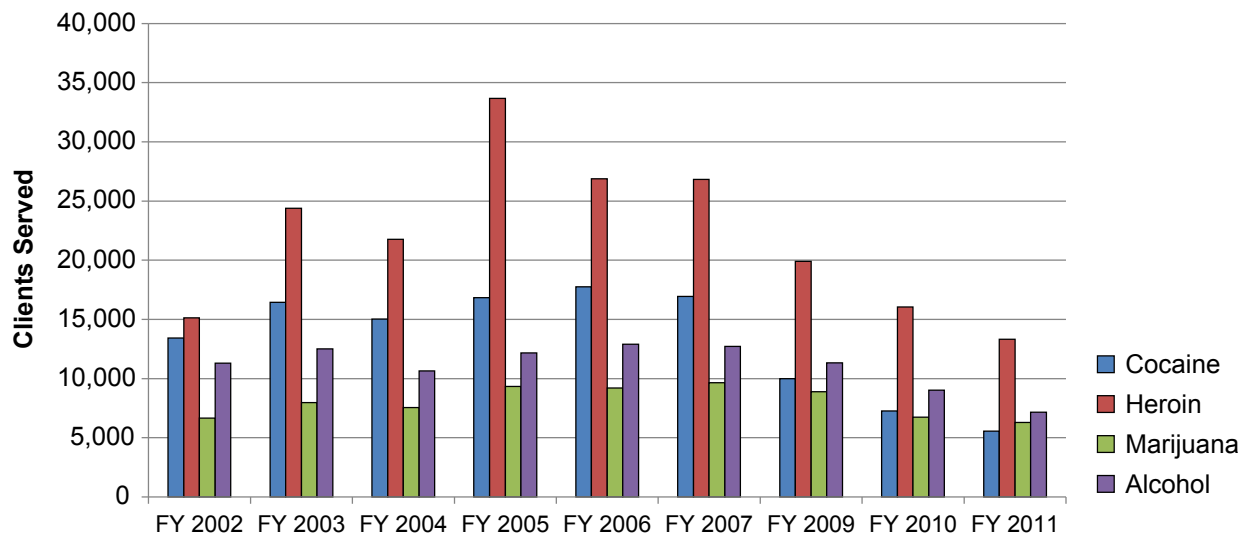
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Exhibit 1. Clients Served in Publicly Funded Treatment Program, by Primary Substance, in Chicago: FYs¹ 2002–2011



Notes: Methamphetamine values are not shown in this graph because they were much lower than those for other drugs. There were: FY 2002, $n=29$; FY 2003, $n=35$; FY 2004, $n=47$; FY 2005, $n=78$; FY 2006, $n=139$; FY 2007, $n=114$; FY 2009, $n=81$; FY 2010, $n=59$; and FY 2011, $n=60$. Data for FY 2008 are not available. Declines in persons served for cocaine and heroin treatment reflect reductions in funding.

¹FY=July 1–June 30 of each year.

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

Exhibit 2. Demographic Characteristics of Clients Served in Publicly Funded Treatment Programs, by Primary Substance and Percentage, in Chicago: Fiscal Year (FY) 2011

Characteristics N=50,424	Heroin n=13,312	Cocaine n=5,558	Alcohol n=7,150	Marijuana n=6,279	Other Opioids n=197	Metham- phetamine n=60
Percent of Total	38	16	21	18	1	<1
Gender						
Male	55	64	74	82	48	85
Female	45	36	26	18	52	15
Race/Ethnicity						
White	15	9	22	7	59	72
African-American	72	82	55	71	24	10
Hispanic	10	7	19	18	14	7
Other	<1	<1	1	1	<1	3
Other single race	3	3	2	3	3	8
Age						
17 or younger	<1	<1	2	38	2	2
18–25	5	4	10	34	9	5
26–34	12	11	21	17	38	52
35 and older	83	84	67	11	51	42
Route of Administration						
Oral	1	2	100	2	79	8
Smoking	3	89	—	97	3	65
Inhalation	74	8	—	1	8	7
Injection	22	1	—	<1	10	20
Secondary Drug	Cocaine 30	Alcohol 37	Cocaine 22	Alcohol 33	Cocaine 15	Marijuana 17

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

Exhibit 3. Drug Reports Among Items Seized and Analyzed by Forensic Laboratories, for Select Drugs, by Number and Percentage of Total, in the Chicago MSA: CYs¹ 2009–2011

Selected Substance	CY 2009		CY 2010		CY 2011	
	Count	Percent	Count	Percent	Count	Percent
Marijuana/Cannabis	47,212	58.67	47,710	59.25	41,165	56.97
Cocaine	17,803	22.12	16,122	20.01	13,727	19.00
Heroin	10,671	13.26	11,637	14.45	11,214	15.52
Clonidine	21	0.03	6	0.00	6	0.00
Methamphetamine	457	0.57	290	0.36	287	0.40
MDMA (3,4 Methyleneoxy-methamphetamine)	1,314	1.63	1,250	1.55	677	0.94
BZP (1-Benzylpiperazine)	1,188	1.48	542	0.67	461	0.64
PCP (Phencyclidine)	215	0.27	303	0.38	306	0.42
Hydrocodone	508	0.63	516	0.64	641	0.89
Methadone	113	0.14	105	0.13	102	0.14
Alprazolam	321	0.40	372	0.46	419	0.58
Psilocin	114	0.14	115	0.14	94	0.13
Codeine	64	0.08	62	0.08	90	0.12
Diazepam	69	0.09	51	0.06	69	0.10
Clonazepam	61	0.08	90	0.11	85	0.12
Oxycodone	102	0.13	94	0.12	128	0.18
Amphetamine	65	0.08	120	0.15	149	0.21
Ketamine	28	0.03	11	0.01	50	0.07
Propoxyphene	NA ²	0.00	16	0.02	9	0.00
Morphine	57	0.07	47	0.06	76	0.11
Psilocybin	32	0.04	22	0.03	22	0.03
Lorazepam	24	0.03	23	0.03	25	0.03
Pseudoephedrine	11	0.01	21	0.03	13	0.02
Chlordiazepoxide	NA	NA	2	0.00	1	0.00
LSD (Lysergic acid diethylamide)	33	0.04	51	0.06	39	0.05
Total Items Reported	77,456	100.0	80,530	100.0	72,261	100.0

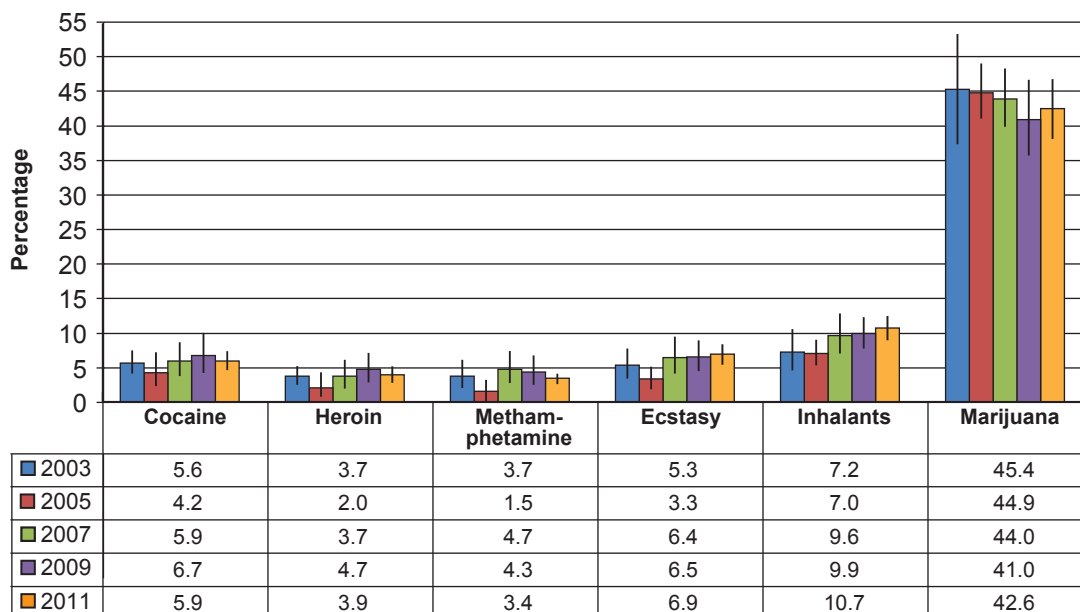
Note: Percentages may not sum to the total due to rounding.

¹Drug reports in items seized and analyzed between January 1 and December 31 of each year. Data for 2011 are preliminary and subject to change.

²NA=data not available.

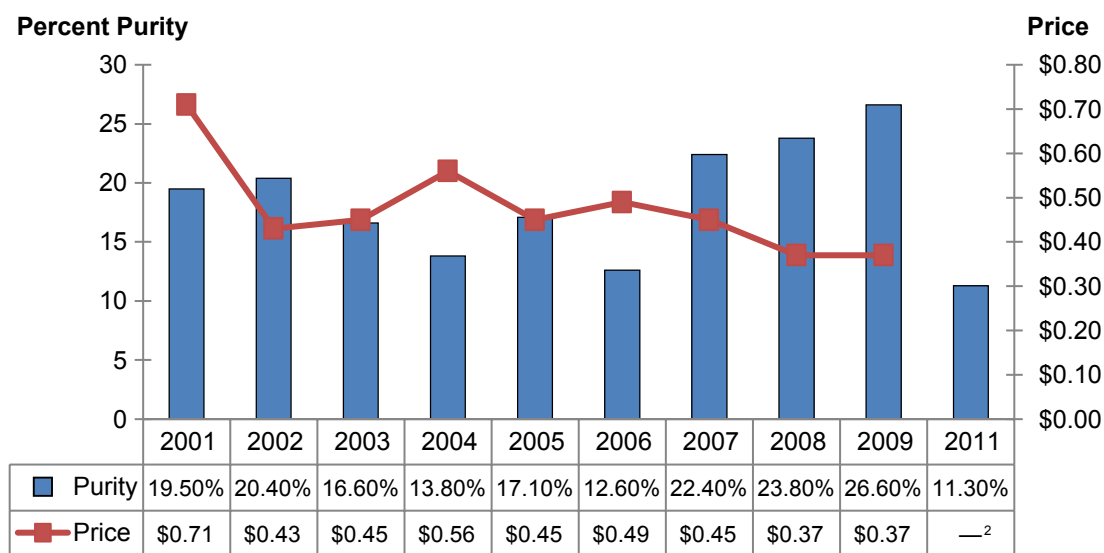
SOURCE: NFLIS, DEA

Exhibit 4. Percentage (With 95-Percent Confidence Intervals) of Lifetime Illicit Drug Use Among Public High School Students, by Survey Year, in Chicago: 2003, 2005, 2007, 2009, and 2011



SOURCE: YRBS, CDC

Exhibit 5. Heroin¹ Price and Purity Trends in Chicago: 2001–2011



¹South American heroin.

²Information regarding price per milligram pure was not available in 2011.

SOURCE: HDMP, DEA

Drug Abuse Patterns and Trends in Cincinnati, Ohio: 2011

Jan Scaglione, B.S., M.T., Pharm.D., D.ABAT¹

ABSTRACT

In 2011, the predominant drug issues in Cincinnati involved marijuana and heroin as the primary drugs of abuse. Indicators for heroin continued to increase during 2011 compared with the previous 3 years. Treatment admissions for primary heroin use were not delineated from other opiate/opioid admissions; together they accounted for 24.2 percent of all admissions. Reports identified as heroin among drug items submitted for forensic analysis increased by 16.7 percent in 2011 from 2010, and by 63.5 percent from 2009. In 2011, the Medical Examiner recorded a 33.3-percent increase from 2010 in deaths attributed to heroin and a 55-percent increase from 2009. Indicators for marijuana in the Cincinnati region remained stable at high levels. Marijuana dominated all other reported illicit drugs among treatment admissions, accounting for 30.4 percent of total admissions during calendar year (CY) 2011. Marijuana also accounted for 39.3 percent of drug reports among items submitted for forensic analysis for Hamilton County. Indicators for crack and powder cocaine began decreasing in 2008. This decrease continued through 2010 but started to show a slight upward trend in 2011. Both the supply and quality of cocaine/crack cocaine on the street in Cincinnati dropped in 2008 as larger drug seizures were recorded by law enforcement; the effect carried over through 2010. Subjective data sources indicated that cocaine dealers switched to selling heroin due to the short supply and higher profit. Methamphetamine indicators were low in Cincinnati compared with other drugs of abuse. There was a 16.4-percent decrease in the number of clandestine methamphetamine laboratory seizures discovered during 2011 compared with 2010, but that number was suspected to be lower due to loss of funding for law enforcement needed to clean up these sites. Methamphetamine encountered in the Cincinnati area is primarily locally produced using the “one-pot” method. Indicators for MDMA (3,4-methylenedioxymethamphetamine) remained at a low level in Cincinnati during 2011 compared with 2010. Abuse of prescription drugs, specifically benzodiazepine-based tranquilizers and opioid narcotics, continued to be an ongoing drug issue in Cincinnati. Qualitative indicators pointed to relative high availability, with some indication of stabilization occurring between 2010 and 2011. According to both users and law enforcement, alprazolam continued to be the most abused benzodiazepine, with clonazepam following closely behind. There was a 20.6-percent decrease in 2011 from 2010 in human exposure cases reported to Ohio poison control centers involving buprenorphine-containing pharmaceuticals. Forty-one percent of these exposures involved children age 3 or younger. There was an increase in 2011 in the number of exposures reported to poison control centers involving the abuse of buprenorphine; buprenorphine exposures represented 31 percent of the total cases recorded. A low, but increasing, number of human exposures reported to poison control centers regarding oxymorphone continued to be an area for future monitoring. The Cincinnati Drug and Poison Information Center recorded 156 human exposures to THC (tetrahydrocannabinol) homologs

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(cannabimimetics) and 352 exposures to synthetic (substituted) cathinones for the last quarter of 2010 through May 2012. The abuse of synthetic drugs continued to be an area of high concern and monitoring due to the adverse effects reported with use, including death.

INTRODUCTION

Area Description

The city of Cincinnati is 1 of 36 municipalities in Hamilton County, which is 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 U.S. 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 Cincinnati residents in 2003, along with 823,472 residents in Hamilton County. A challenge from the mayor of Cincinnati to the U.S. Census Bureau resulted in a revision to these population projections. The revised projections indicated 331,310 residents in Cincinnati and 860,652 residents in Hamilton County (a 4.3-percent increase). The census list released in May 2011, showed Cincinnati losing population again; it ranked the city fourth among cities losing the most number of residents since 2000. The U.S. Census Bureau estimations from the 2010 census showed 296,943 residents in the city of Cincinnati, a loss of more than 10 percent from the previous projection. The Cincinnati population distribution shifted slightly to show a 3.7-percent decline of Whites (to 49.3 percent) and a 1.8-percent increase in African-Americans (to 44.8 percent). The Hispanic population constituted 2.8 percent of the city's population; this represented a 1.5-percent increase. By comparison, residents of Hamilton County were 71.6 percent White, 24.9 percent African-American, and 2.2 percent Hispanic.

Various factors were identified by law enforcement as influences on drug trafficking and substance abuse in the Cincinnati region and the State of Ohio. Ground travel is the predominant source of drugs to the city of Cincinnati and the State. Many major thoroughfares pass through the State, making transport relatively easy across the State line. Law enforcement recently identified over-the-road truckers as a significant source of bulk drug shipments into Cincinnati from interstate routes connecting through Indianapolis, Indiana. Most drug shipments coming from this particular route were identified as having originated from the Mexico border.

Cincinnati is within close proximity of the Northern Kentucky/Cincinnati International Airport to the south and the Dayton International Airport to the north. There are 164 public use airports, along with 661 privately owned/private use airports and heliports, throughout the State. Canada has become a source for drug traffic into Ohio as well. Smaller amounts of drug were reported to be coming through these routes of travel into the State.

Data Sources

The primary sources of data/information for this report are as follows:

- **Treatment data** were provided by the Hamilton County Mental Health and Recovery Services Board for fiscal years (FYs) 2005–2009 and calendar years (CYs) 2010–2011 for publicly funded treatment programs within Hamilton County only. Primary drugs of use at admission were determined through billing data submitted by reporting agencies. Data are captured by group classification and not necessarily by specific drug type or route of administration. Data methodology

capture, beginning in 2007, differed from previous reporting periods and does not provide for direct comparison to previous reports. Treatment data for 2007–2009 may be comparable, and those for 2010–2011 may be comparable, but may not correlate with previous data since the timeframe of the latter data capture was calendar year rather than fiscal year data.

- **Poison control center data** were provided by the Cincinnati Drug and Poison Information Center (DPIC) for CYs 2005 through 2011. Only human case data captured for purposes of illustration of drug exposures were reported. 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, health care professionals, businesses, and government officials. The information obtained from DPIC includes exposures to illicit substances (e.g., heroin, cocaine, and MDMA [3,4-methylenedioxymethamphetamine]), 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. All human exposure calls, regardless of exposure type, that referenced buprenorphine-containing pharmaceuticals were accessed for purposes of this report. Additional data regarding human exposures to buprenorphine-containing pharmaceuticals were obtained from the other Ohio poison control centers—the Central Ohio Poison Control Center and the Northern Ohio Poison Control Center—for CYs 2007–2011. Additional data regarding human exposures to synthetic drugs of abuse, specifically synthetic (substituted) cathinones and THC (tetrahydrocannabinol) homologs (cannabimimetics), were provided for CYs 2010–2011 and the first 5 months of 2012.
- **Crime laboratory drug analyses data** for Hamilton County were provided by the National Forensic Laboratory Information System (NFLIS), Drug Enforcement Administration (DEA) for 2009–2011 and the Hamilton County Coroner’s Office for 2011. NFLIS methodology allows for the accounting of up to three drugs per item submitted for analysis. The data presented are a combined count including primary, secondary, and tertiary reports for each drug for 2009–2011. Data for 2011 are provisional and subject to change.
- **Drug seizure data** were provided by the Cincinnati Regional Enforcement Narcotics Unit (RENU) for CYs 2006–2011.
- **Mortality data** were provided by the Hamilton County Coroner’s Office for CYs 2006–2011.
- **Drug purity and cost data** came from the DEA’s Cincinnati Resident Office, the Greater Warren County Drug Task Force, and the Ohio Substance Abuse Monitoring (OSAM) Network for CYs 2006–2011 where applicable.
- **Methamphetamine clandestine laboratory seizure data** were provided by the Ohio Bureau of Criminal Investigation and Identification (BCI&I) for FYs 2000–2011.
- **Qualitative data** came from focus group interviews conducted for the OSAM Project, funded by the Ohio Department of Alcohol and Drug Addiction Services. Focus group interview data were provided through December 2011.

DRUG ABUSE PATTERNS AND TRENDS

Cocaine/Crack

Cocaine continued to be a primary substance of abuse in Cincinnati. Evidence of lower cocaine availability and use continued to be reported, but some indicators edged upward during 2011. Primary cocaine accounted for 9.1 percent of total treatment admissions during CY 2011 (exhibit 1). The majority of admissions involved males who were older than 35.

Poison control center data recorded a total of 80 cocaine (salt/crack) human exposure calls captured by the Cincinnati DPIC during 2011. This was a 42.8-percent increase from 56 calls in the previous year (exhibit 2). All cases involved the intentional use of cocaine (salt/crack).

The Hamilton County Coroner's Office recorded 50 deaths in which evidence of cocaine/ crack use was documented by the Medical Examiner (ME) during 2011. This represented a 51-percent increase from 33 such deaths in the previous year (exhibit 3). Deaths were recorded in one of three categories: accidental, suicide, or homicide. Evidence of cocaine was not necessarily reported as cause of death.

The Cincinnati RENU removed more than 19,000 grams of cocaine from the streets of Cincinnati during 2011 (exhibit 4). Qualitative data also indicated decreased street availability of both powder and crack cocaine during 2011. The quality of available powder or crack cocaine was described as "poor," having decreased during 2011 from the previous 2 years. Analysis of the purity of cocaine samples seized by the local DEA in 2011 showed that the average purity of crack cocaine was 70.2 percent, whereas the purity of cocaine hydrochloride (powder cocaine) ranged between 18.6 and 62.5 percent (exhibit 5). Impurities detected in the submitted items included tetramisole, diltiazem, ibuprofen, dimethylsulfone, diphenhydramine, and heroin. Tetramisole (levamisole) was detected in 9 of 10 (90 percent) items submitted during 2011. A high number of users reported that it was commonplace to "re-rock" crack cocaine after a purchase to remove as many impurities as possible.

Of the 10,893 drug reports among items analyzed by NFLIS laboratories for Hamilton County in 2011, 27.7 percent were identified as containing cocaine (exhibit 6). The retail (street) price of powder cocaine ranged from \$40 to \$100 per gram in 2011 (exhibit 7). Mid-level prices for powder cocaine ranged from \$800 to \$1,000 per ounce, and wholesale prices ranged from \$30,000 to \$35,000 per kilogram. The retail prices of crack cocaine ranged from \$50 to \$60 per gram in 2011. Mid-level prices for crack cocaine ranged from \$700 to \$900 per ounce.

Heroin

Indicators for heroin abuse continued to increase from the previous year in 2011. Heroin and prescription opioid abuse accounted for 24.2 percent (1,210 admissions) of all primary treatment admissions during CY 2011 (exhibit 1). The number of heroin and opioid admissions to treatment has been rising steadily since 2007, surpassing treatment admissions for cocaine in 2009. More than one-half of admissions for opioids were female, and more than 70 percent were between the ages of 18 and 34. Qualitative data indicated a moderate to high availability of heroin during 2011. Mexican brown powder heroin was the most available form of heroin, but reports of availability of both Mexican black tar heroin and South American white powder heroin continued in the Cincinnati area.

Poison control center data showed that there were 77 heroin exposure calls related to intentional abuse reported during 2011, representing a decrease of just 3.8 percent from the 80 human exposure

calls reported in 2010 (exhibit 2). The Hamilton County Coroner's Office recorded 56 deaths with evidence of heroin abuse as manner of death during 2011 (exhibit 3). This number represented a 33.3-percent increase over the previous year and a 460-percent increase since 2006 (when there were 10 deaths with evidence of heroin abuse). All of the deaths were ruled accidental in nature by the Coroner's Office.

The RENU seized more than 2,100 grams of heroin during 2011 (exhibit 8). Qualitative data indicated that a shift in the heroin market may have contributed to higher heroin availability, as young dealers shifted from dealing cocaine/crack to heroin.

Heroin accounted for 20.5 percent of reports among seized drug items analyzed by NFLIS laboratories in 2011. This was an increase of 47.8 percent from the previous year, when heroin reports constituted 13.9 percent of all reports (exhibit 6). The purity of heroin varied greatly, ranging from 4.2 to 51.9 percent pure during 2011 (exhibit 5). Impurities discovered in heroin samples submitted for analysis included caffeine, methorphan isomer/salt, acetaminophen, lidocaine, phenobarbital, quetiapine, quinine, cocaine, diphenhydramine, alprazolam, niacinamide, chloroquine, diazepam, sodium bicarbonate, methadone, dextromethorphan, and hydroxyphenamate. The number of impurities reported in heroin samples was concerning in light of the fact that 13 of 17 impurities discovered may contribute to increased central nervous system depression and potentially lead to a harmful outcome for a user. Heroin could be purchased at the street level for \$200–\$250 per gram for Mexican brown powder (exhibit 7). Mid-level prices for heroin ranged from \$1,200 to \$2,500 per ounce for Mexican brown powder heroin. Wholesale prices for a kilogram of heroin were reported at \$60,000–\$65,000 per kilogram.

Other Opiates/Opioids

Primary admissions in CY 2011 for prescription opioid abuse were not separated from heroin users; together they accounted for 24.2 percent (1,210 admissions) of total admissions (exhibit 1). Qualitative data continued to indicate availability of pharmaceutical opioids at a moderately high but stable level. While most opioids are ingested, according to users, OxyContin®, Opana®, and immediate-release oxycodone products were the most likely opioid pharmaceuticals to be crushed and insufflated or injected.

Poison control center data showed that hydrocodone and oxycodone pharmaceutical products were more likely to be abused than other opiates/opioids available (exhibit 9). There were a total of 288 exposure calls for intentional abuse, including suicide, of oxycodone products during CY 2011, representing a decrease of nearly 15 percent from 2010. The number of hydrocodone-combination narcotic exposures in 2011 for intentional abuse, including suicide, totaled 332, representing a 4.4-percent increase from 2010. The number of methadone cases recorded during 2011 was 43; this was a decrease of 10.4 percent from the previous year. The number of oxymorphone cases recorded in 2011 was 37; this was an increase of 85 percent from the previous year.

Among drug items analyzed by NFLIS laboratories in 2011, oxycodone accounted for 3.0 percent of the total reports, a decrease from 7.4 percent in the previous year. Hydrocodone represented 1.5 percent of all reports, and other opiates/opioids accounted for 1.7 percent of the reports among analyzed drug items in 2011 (exhibit 6).

The Hamilton County Coroner's Office recorded 117 deaths during 2011 that had evidence of prescription opioid use on the part of the decedent, representing a 21.9-percent increase from the 96

deaths with evidence of prescription opioid use in 2010 (exhibit 3). In addition to these pharmaceutical opioid deaths, there were five deaths specifically attributed to methadone and eight to fentanyl (exhibit 10).

The reformulation of OxyContin® with added abuse deterrent technology, introduced in the fall of 2010, resulted in a shift in use patterns since users found the drug harder to abuse. Qualitative data, corroborated by law enforcement, showed that users switched from OxyContin® to one of three substances: immediate-release oxycodone, Opana®, or heroin. While diversion of OxyContin® to the street continued to be reported, the desirability of the new formulation decreased substantially, causing a drop in prices in 2010. OxyContin® sold on the streets of Cincinnati for \$30–\$50 for 80 milligrams (exhibit 7). The diversion and increased abuse of Opana® caused a shift in the prices upwards to \$30–\$40 for 20 milligrams and \$50–\$80 for 40 milligrams (exhibit 7). It is expected that the recent reformulation of Opana® ER will cause another shift in opioid abuse patterns. This will be an area for future monitoring.

Methamphetamine/Amphetamines

Methamphetamine abuse indicators in the Cincinnati area and in the State of Ohio remained low and showed stabilization in 2011 from the previous year. Of the primary illicit drug admissions in CY 2011, methamphetamine/amphetamines (including MDMA) accounted for only 0.1 percent ($n=7$) of all admissions (exhibit 1). Poison control data indicated a total of 20 intentional abuse exposures, including suicide, to methamphetamine reported in 2011.

Methamphetamine reports among drug items seized and analyzed by NFLIS laboratories in 2011 totaled 26, accounting for only 0.2 percent of the total drug reports (exhibit 6). In 2011, the retail price for methamphetamine was \$60–\$100 per gram for locally produced powder methamphetamine. Mid-level prices for methamphetamine were unavailable (exhibit 7).

There were 300 methamphetamine incidents involving laboratories, dumpsites, and chemical/glass findings throughout Ohio reported in 2011. However, this number is difficult to assess, as law enforcement lost funding in February 2011 that provided needed money to clean up methamphetamine laboratory sites in (exhibit 11). Funding for cleanup of these laboratories prompted a paper trail for better data capture of methamphetamine manufacture throughout the State. Methamphetamine in the Cincinnati area is locally produced using the “one pot” or “shake-n-bake” method.

On November 3, 2009, Ohio voters approves a constitutional amendment to allow casinos to be built and operated in four cities in the State—Cincinnati, Cleveland, Columbus, and Toledo. To date, the Cleveland and Toledo casinos have opened, the Columbus casino will open in November 2012, and the Cincinnati casino is due to open in February 2013. Law enforcement officials in Cincinnati expressed concern that an influx of Mexican-produced methamphetamine may be trafficked in the Cincinnati area and other areas in the State of Ohio after the casinos open and operate within the State. Methamphetamine will continue to be an area for future monitoring.

Marijuana

Marijuana continued to be a primary drug problem in the Cincinnati region in 2011, and it was reported as both widely available and widely used. Marijuana accounted for 30 percent (1,522 admissions) of total treatment admissions in CY 2011 (exhibit 1). Poison control center data reported 81 human exposure cases involving intentional abuse of marijuana, including suicide, in 2011 (exhibit 2).

Marijuana/cannabis was the most frequently reported drug identified among items analyzed by NFLIS laboratories, representing 39.3 percent of the total drug reports for 2011 (exhibit 6). The Cincinnati RENU recorded seizures of nearly 292 kilograms of marijuana during 2011 (exhibit 12).

Retail prices for high-grade marijuana were \$20–\$40 per gram (exhibit 7). The mid-level price for high-grade marijuana was \$350–\$400 per ounce. The wholesale price for commercial grade marijuana was \$1,200–\$1,300 per pound, and the wholesale price for high-grade marijuana was \$3,600–\$5,000 per pound.

Benzodiazepines

Primary treatment admissions for benzodiazepines accounted for 0.4 percent ($n=21$) of all admissions for CY 2011 (exhibit 1). Benzodiazepine reports among drug items seized and analyzed by NFLIS laboratories in 2011 totaled 2.6 percent of total reports (exhibit 6). The Hamilton County Coroner's Office recorded three cases in which tranquilizers were found in decedents in 2011 (exhibit 10). Poison control center data showed 1,089 intentional human exposure cases reported with benzodiazepine use in 2011; 31.5 percent of the cases involved alprazolam, and another 35.6 percent involved clonazepam.

MDMA

Indicators for MDMA abuse stabilized at a low level in 2011. Primary treatment admissions for stimulants, including MDMA, for CY 2011, accounted for only 0.1 percent (seven admissions) of the total (exhibit 1).

Qualitative data indicated that MDMA availability stabilized at a low level during 2011. Poison control center data reported a total of 25 intentional abuse exposures to MDMA for 2011; this was a 25-percent increase from 2010.

There were 32 MDMA reports among drug items seized and analyzed by NFLIS laboratories in 2011, accounting for 0.3 percent of total reports. BZP (1-benzylpiperazine), a piperazine derivative sold as MDMA in the United States, accounted for 31 reports among drug items submitted to NFLIS laboratories for analysis (0.3 percent of total reports) (exhibit 6). MDMA sold at the retail level for \$7–\$20 for a single tablet in 2011 (exhibit 7).

Emerging Patterns

Patterns of use of buprenorphine-containing pharmaceuticals began to become more evident in 2011. There were 55 buprenorphine reports among drug items seized and analyzed in NFLIS laboratories in 2011 (exhibit 6), ranking buprenorphine as eighth among all drug reports among drug items seized and analyzed in Hamilton County for 2011.

Human exposure data collected from all three Ohio poison control centers revealed a total number of 196 buprenorphine-related cases reported in 2011. This was a 20.6-percent decrease from the 247 exposure calls in the previous year (exhibit 13). Drug identification calls to a poison control center act as a qualitative measure of diversion of a pharmaceutical drug to the street. In 2011, 856 identification calls were received by the DPIC for buprenorphine-containing pharmaceuticals, a 127.6-percent increase from the 376 calls in the previous year. Buprenorphine remains an area for increased education about storage practices, as 41 percent of the human exposures reported

to poison control centers in Ohio involved children younger than 3. In addition, 31 percent of the human exposures involved intentional misuse or abuse of buprenorphine; this was a 10-percent increase from the previous year.

Synthetic cannabinoid (cannabimimetic) products were heavily marketed during 2010, with adverse events related to use being reported to poison control centers throughout the United States. The Cincinnati DPIC recorded 16 calls related to synthetic cannabinoids (cannabimimetics) during 2010, 117 calls during 2011, and an additional 23 exposure calls in the first 5 months of 2012. A total number of 156 exposures were reported by the DPIC for these products. The majority of exposures involved males (75.6 percent) who were younger than 20 (52.5 percent). Commonly reported symptoms included tachycardia, agitation, hallucinations, confusion, drowsiness, and dilated pupils. The Synthetic Drug Abuse Prevention Act of 2012, passed in June 2012, scheduled several synthetic cannabinoids (cannabimimetics) as Schedule I drugs. There were 18 reports among drug items seized and analyzed by NFLIS laboratories in Hamilton County identified as synthetic cannabinoids (cannabimimetics) in 2011. Those identified included AM-2201, JWH-250, and RCS-4.

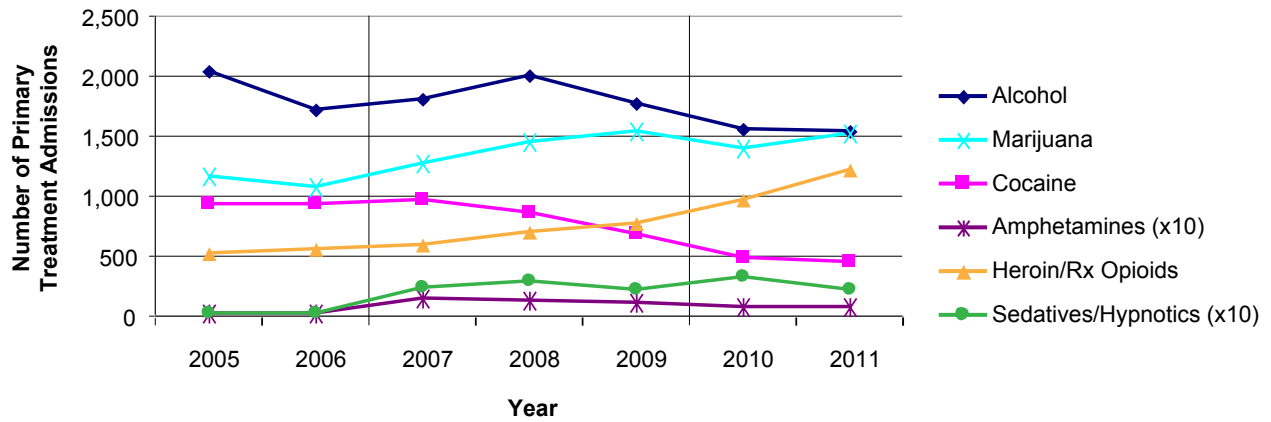
Human exposures to synthetic (substituted) cathinone products were recorded by the poison control centers during the last quarter of 2010 through 2011 and the first 5 months of 2012. The Cincinnati DPIC recorded 2 exposures in 2010, 329 cases during 2011, and 21 cases during the first 5 months of 2012. The majority of exposures involved males (68 percent) and individuals between the ages of 20 and 39 (67.9 percent). Insufflation was the primary route of administration of the synthetic (substituted) cathinone products (49 percent). Symptoms commonly reported included tachycardia, intense visual and auditory hallucinations, agitation, hypertension, and seizures. The Governor of the State of Ohio signed into law a bill banning six of the synthetic cathinones; it went into effect October 17, 2011. The six synthetic cathinones banned included mephedrone (4-methylmethcathinone), methylone (N-methy-3,4-methylenedioxycathinone), MDPV (3,4-methylenedioxypropylvalerone), 4-MMC (4-methoxymethcathinone), 3-FMC (3-fluoromethcathinone), and 4-FMC (4-fluoromethcathinone). There were six drug reports of synthetic (substituted) cathinones among drug items seized and analyzed by NFLIS laboratories in Hamilton County in 2010 and four (MDPV) in 2011. The synthetic drugs of abuse will be an area for continuous monitoring as these products have been associated with a high risk for harm to humans.

ACKNOWLEDGMENTS

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 Community Epidemiology Work Group would be vastly limited without the cooperation of local, State, and Federal agencies. In particular, the author thanks the late Dr. Anant Bhati and Terry Daly (Hamilton County Coroner's Office), Frank Younker and Richard Gelsomino (DEA, Cincinnati Resident Office), Erik Stewart (Hamilton County Mental Health and Recovery Services Board), Erin Durocher (Ohio Bureau of Criminal Investigation and Identification), and participating members of the Ohio poison control centers.

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Exhibit 1. Number of Primary Treatment Admissions, by Primary Drug of Abuse, in Hamilton County: FYs¹ 2005–2009², CYs 2010–2011³



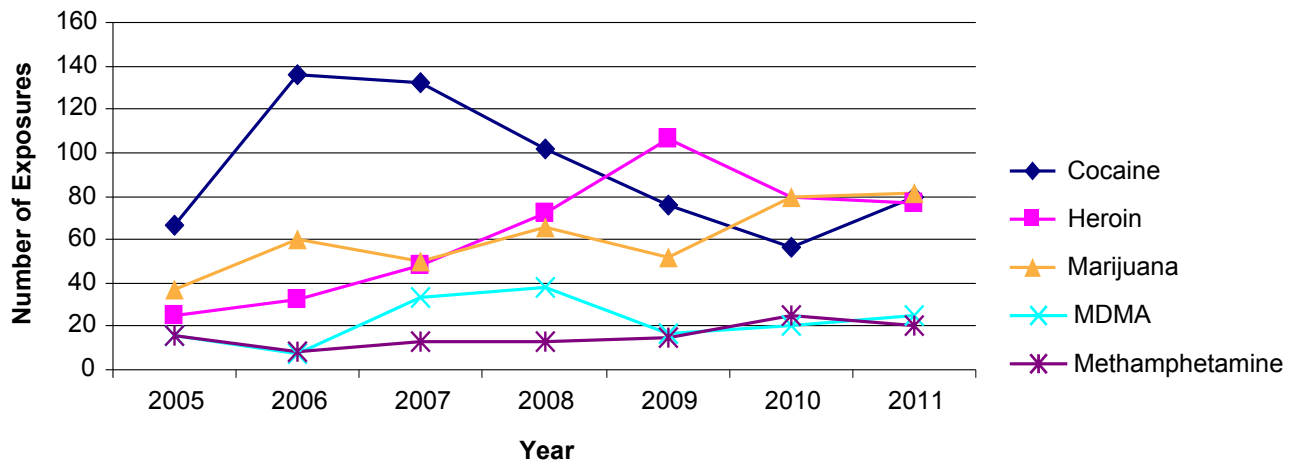
¹FY=July 1 to June 30.

²Treatment data methodology from 2007 to 2009 differed from the previous years, therefore direct comparison to years prior to 2007 cannot be made.

³Treatment data for 2010–2011 were captured as calendar year rather than fiscal year data, therefore direct comparison to previous years cannot be made.

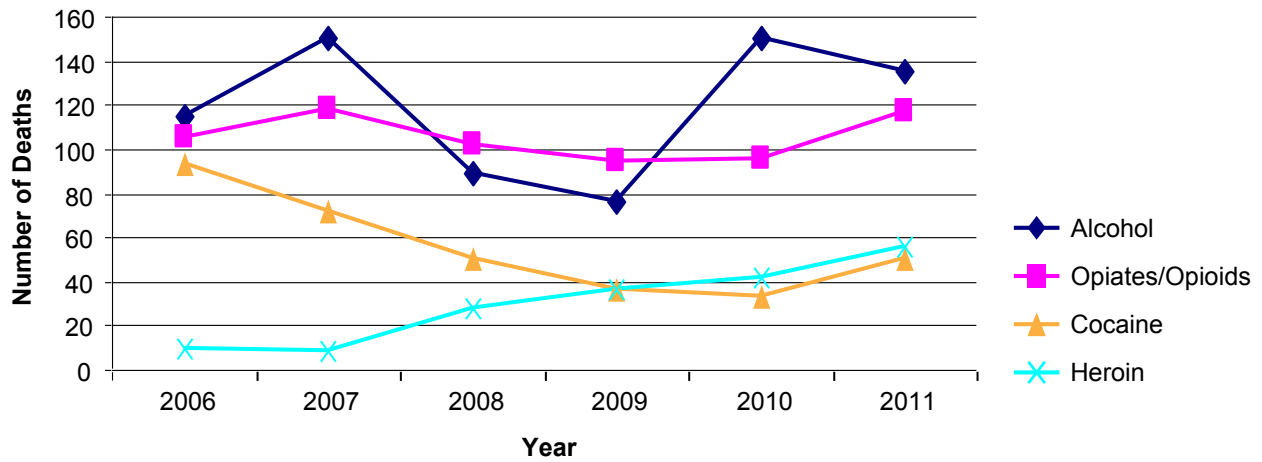
SOURCE: Hamilton County Mental Health and Recovery Services Board

Exhibit 2. Number of Human Exposure Poison Control Center Cases, for Select Drugs, in Cincinnati: 2005–2011



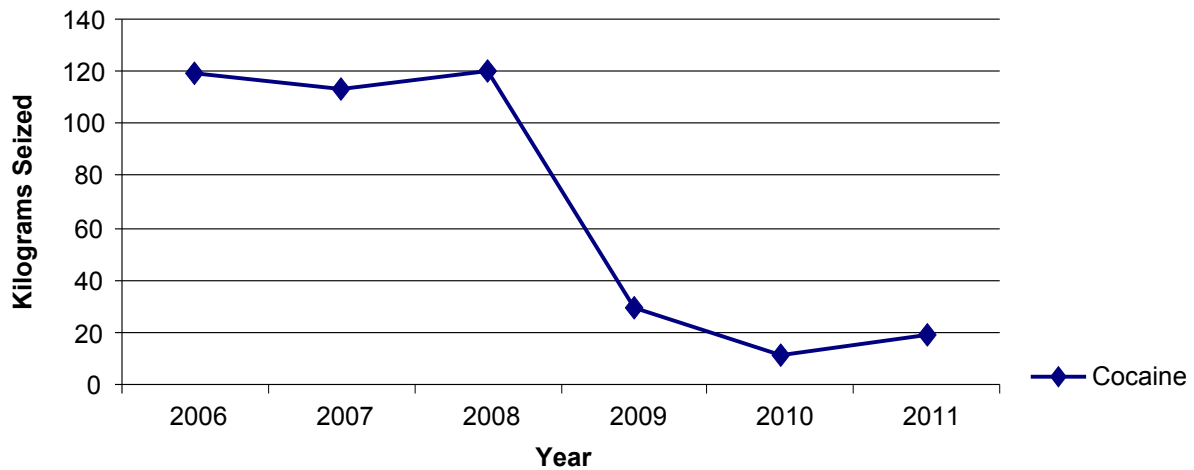
SOURCE: Cincinnati Drug and Poison Information Center

Exhibit 3. Number of Deaths, by Drugs Detected at Death, in Hamilton County: 2006–2011



SOURCE: Hamilton County Coroner's Office

Exhibit 4. Cocaine Seizures, in Kilograms, in Cincinnati: 2006–2011



SOURCE: Cincinnati Regional Enforcement Narcotics Unit (RENU)

Exhibit 5. Purity Analysis of Drug Seizures, by Percent, in Cincinnati: 2006–2011

Drug	2006 ¹	2007 ¹	2008 ¹	2009	2010	2011
	%	%	%	%	%	%
Powder Cocaine	80.5 ²	57.5	45.8 ³	29.1–73.4 ^{3,4}	27.7–53.6 ^{3,4}	18.6–62.5 ^{4,6}
Crack Cocaine	80.5 ²	77.0	39.2	39.4–77.5 ^{3,4}	24–81.5 ^{3,4}	70.2 ¹
Heroin	68.0	68.0	—	24.6–94.3 ⁴	15.7–78.8 ⁴	4.2–51.9 ^{4,7}
Methamphetamine	—	56.3 ⁵	49.3 ⁵	46.1 ^{1,5}	—	—

¹Purity analysis represented by an average percent of all submitted items.

²Purity analysis for powder and crack cocaine not delineated in reported data.

³Impurities detected: benzocaine, tetramisole, diltiazem, sodium bicarbonate, and caffeine.

⁴Purity analysis represented by range of purities analyzed for all items submitted.

⁵Impurities detected: dimethylsulfone (MSM).

⁶Impurities detected: tetramisole, diltiazem, ibuprofen, dimethylsulfone, diphenhydramine, and heroin.

⁷Impurities detected: caffeine, methorphan isomer/salt, acetaminophen, lidocaine, phenobarbital, quetiapine, quinine, cocaine, diphenhydramine, alprazolam, niacinamide, chloroquine, diazepam, sodium bicarbonate, methadone, dextromethorphan, and hydroxyphenamate.

SOURCE: Cincinnati Resident Office, DEA

Exhibit 6. Number and Percentage of Total Reports, for Selected Drugs, Among Drug Items Analyzed by Forensic Laboratories, in Hamilton County: 2009–2011

Drug	2009 ¹		2010 ²		2011 ³	
	Number	Percent of Total Items	Number	Percent of Total Items	Number	Percent of Total Items
Cocaine	4,107	32.64	3,637	26.37	3,022	27.74
Marijuana/Cannabis	5,282	41.98	5,448	39.51	4,284	39.33
Heroin	1,369	10.88	1,917	13.90	2,238	20.54
Oxycodone	404	3.21	1,016	7.37	324	2.97
Methamphetamine	92	0.73	98	0.71	26	0.24
Hydrocodone	211	1.68	347	2.52	167	1.53
Other Opiates/Opioids	155 ⁴	1.23	347 ⁵	2.52	188 ⁶	1.72
Benzodiazepines	331 ⁷	2.63	427 ⁸	3.10	280 ⁹	2.57
MDMA (3,4-Methylenedioxy-methamphetamine)	167	1.33	79	0.57	32	0.29
Amphetamines	46	0.36	73	0.53	34	0.31
BZP (1-Benzylpiperazine)	156	1.24	68	0.49	31	0.28

¹Total reports in items analyzed in 2009=12,582.

²Total reports in items analyzed in 2010=13,790.

³Total reports in items analyzed in 2011=10,893.

⁴Includes methadone (55), morphine (41), buprenorphine (24), codeine (14), hydromorphone (10), dextropropoxyphene (3), oxymorphone (3), tramadol (3), and fentanyl (2).

⁵Includes buprenorphine (106), morphine (74), methadone (68), codeine (26), tramadol (25), oxymorphone (17), hydromorphone (13), fentanyl (11), and dextropropoxyphene (7).

⁶Includes buprenorphine (55), methadone (38), morphine (37), oxymorphone (18), tramadol (15), codeine (13), hydromorphone (5), fentanyl (4), dextropropoxyphene (2), and 6-monoacetylmorphine (1).

⁷Includes alprazolam (169), clonazepam (83), diazepam (69), lorazepam (9), and chlordiazepoxide (1).

⁸Includes alprazolam (236), clonazepam (98), diazepam (72), lorazepam (16), oxazepam (2), temazepam (2), and chlordiazepoxide (1).

⁹Includes alprazolam (141), clonazepam (73), diazepam (54), lorazepam (10), and temazepam (2).

SOURCE: NFLIS, DEA

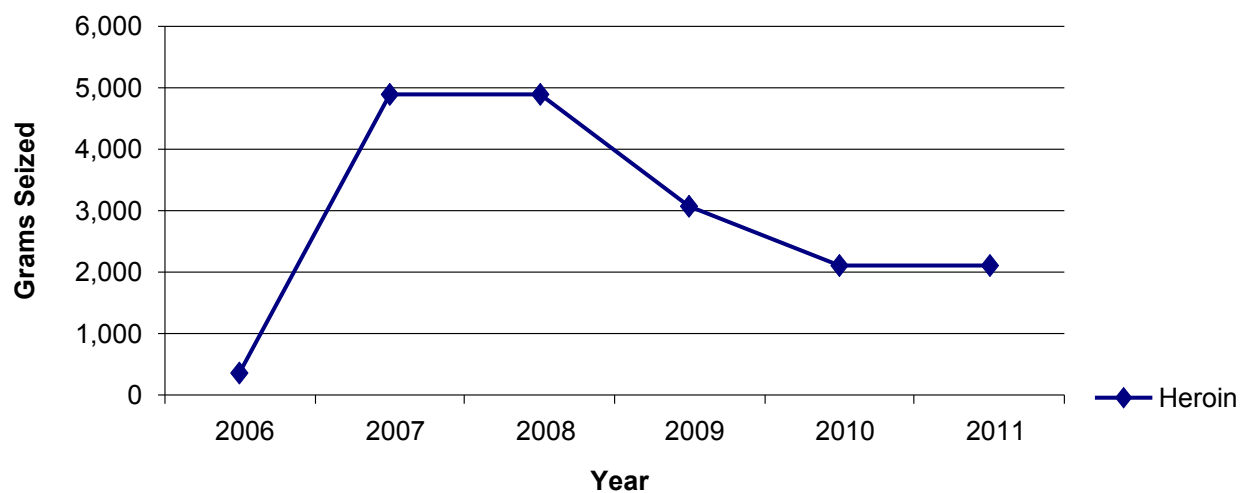
Exhibit 7. Prices for Selected Drugs¹, by Distribution Level and Quantity², in the Cincinnati Area: 2011

Drug	Wholesale	Mid-level	Retail
Powder Cocaine	\$30,000–\$35,000/kg	\$800–\$1,000/oz	\$40–\$100/g \$120–\$150/1/8 oz
Crack Cocaine	—	\$700–\$900/oz	\$5–\$10/rock \$50–\$60/g
Heroin	\$60,000–\$65,000/kg	\$1,200–\$2,500/oz	\$20/0.1g MBP \$200–\$250/g MBP
Marijuana	\$1,200–\$1,300/lb CM \$3,600–\$5,000 HG	\$350–\$400/oz HG	\$20–\$40/g HG
Methamphetamine	—	—	\$60–\$100/g LP
MDMA	—	—	\$7–\$20/tablet
OxyContin®	—	—	\$30–\$50/80 mg
Opana®	—	—	\$30–\$40/20 mg \$50–\$80/40 mg

¹Key: HG=high-grade; CM=commercial grade, LP=locally produced; MBP=Mexican brown powder.

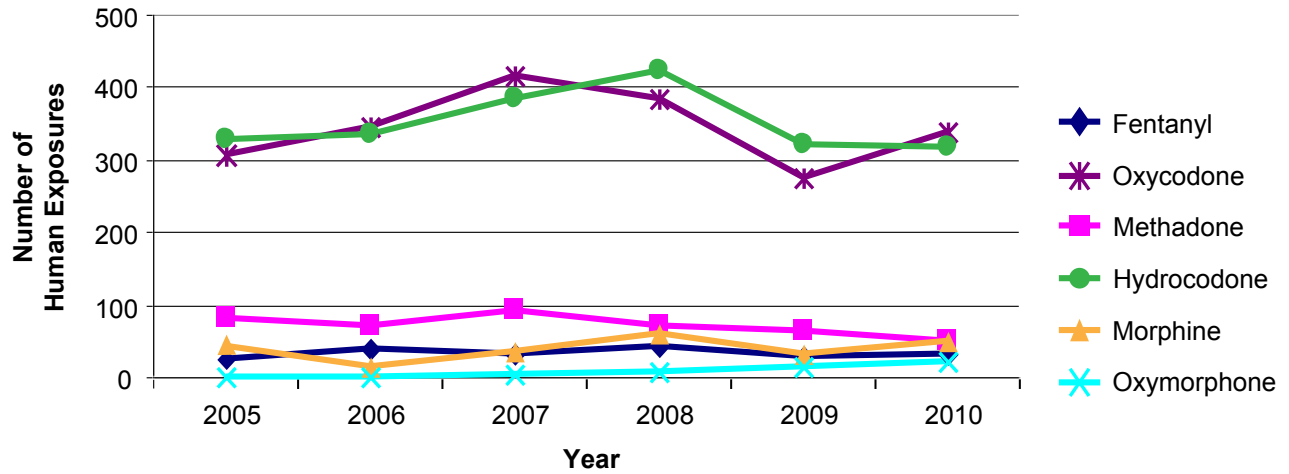
²kg=kilogram; lb=pound; oz=ounce; g=gram; mg=milligram.

SOURCES: Warren-Clinton County Drug Task Force, Ohio Substance Abuse Monitoring Network

Exhibit 8. Seizures of Heroin, in Grams, in Cincinnati: 2006–2011

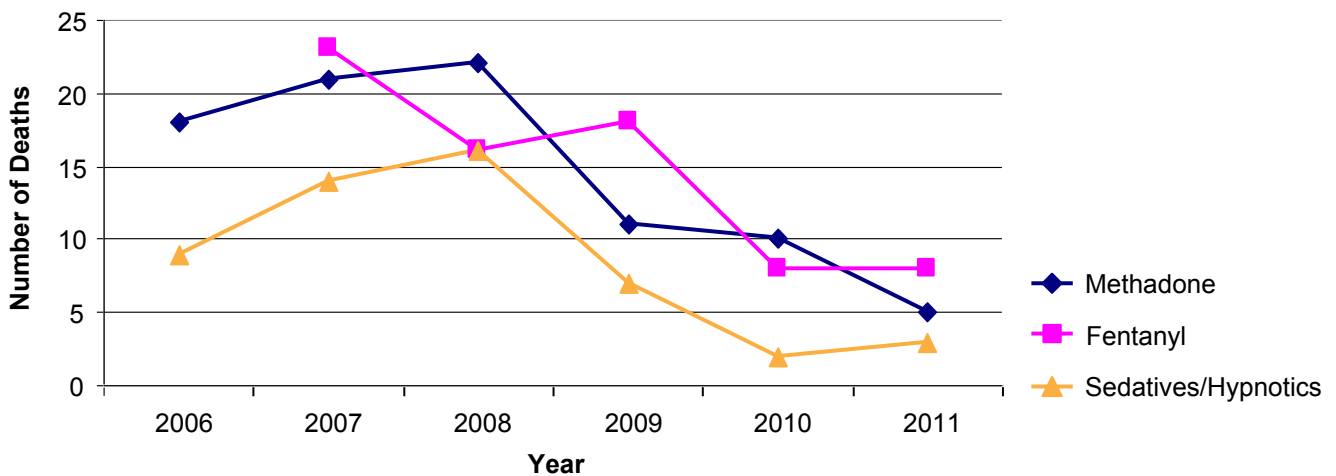
SOURCE: Regional Enforcement Narcotics Unit (RENU)

Exhibit 9. Number of Human Exposure Cases, for Select Drugs, in Cincinnati: 2005–2010



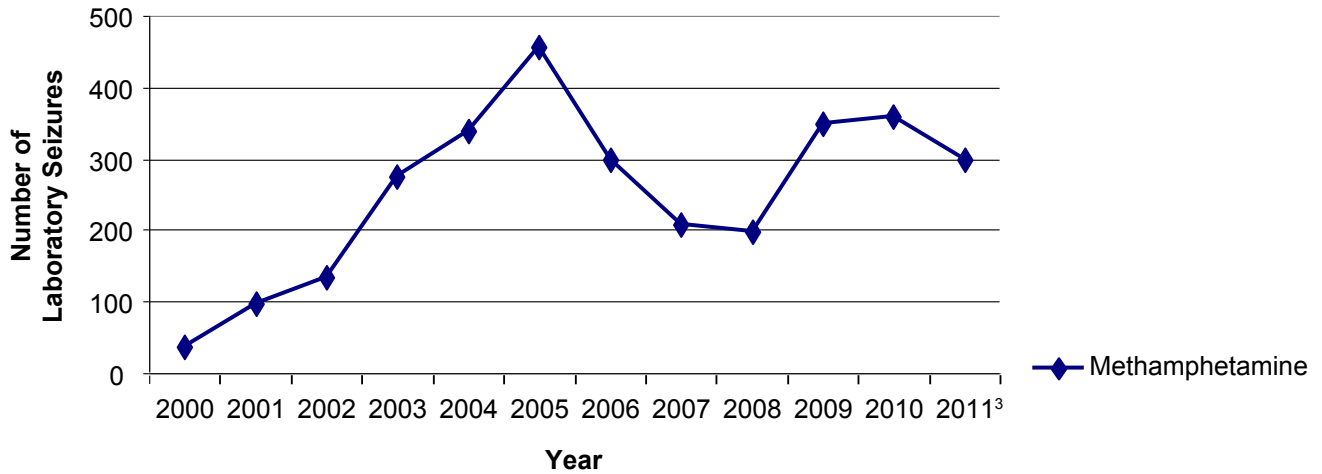
SOURCE: Cincinnati Drug and Poison Information Center

Exhibit 10. Number of Deaths, by Drugs Detected at Death, in Hamilton County: 2006–2011



SOURCE: Hamilton County Coroner's Office

Exhibit 11. Number of Methamphetamine Sites¹ in Ohio: FYs² 2000–2011



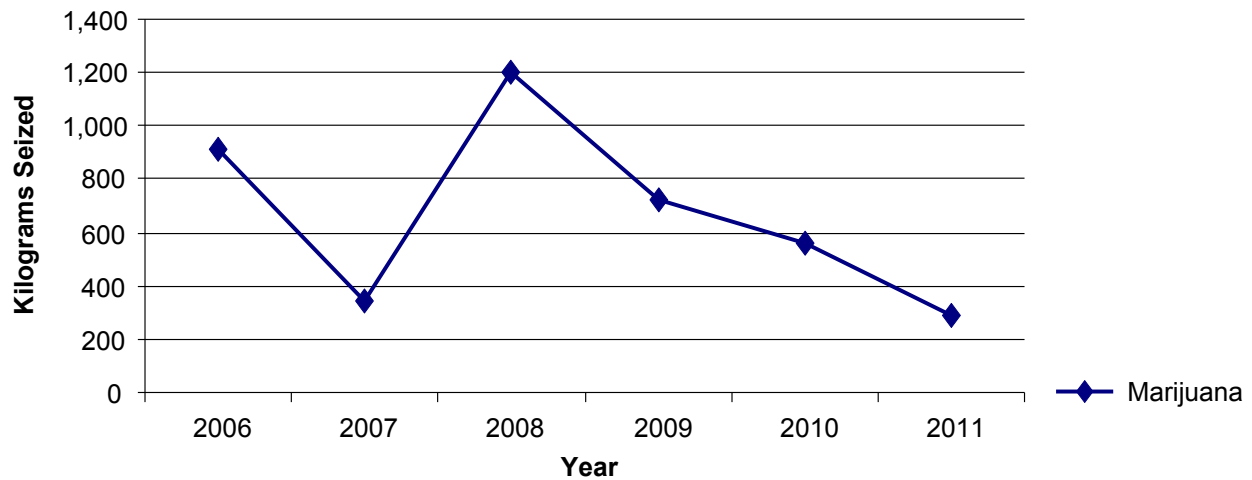
¹Includes laboratories, dumpsites, and chemical/glass/equipment findings.

²FY=July 1 to June 30.

³Loss of grant money for cleanup in February 2011 may reflect underreporting of discovered clandestine methamphetamine laboratories.

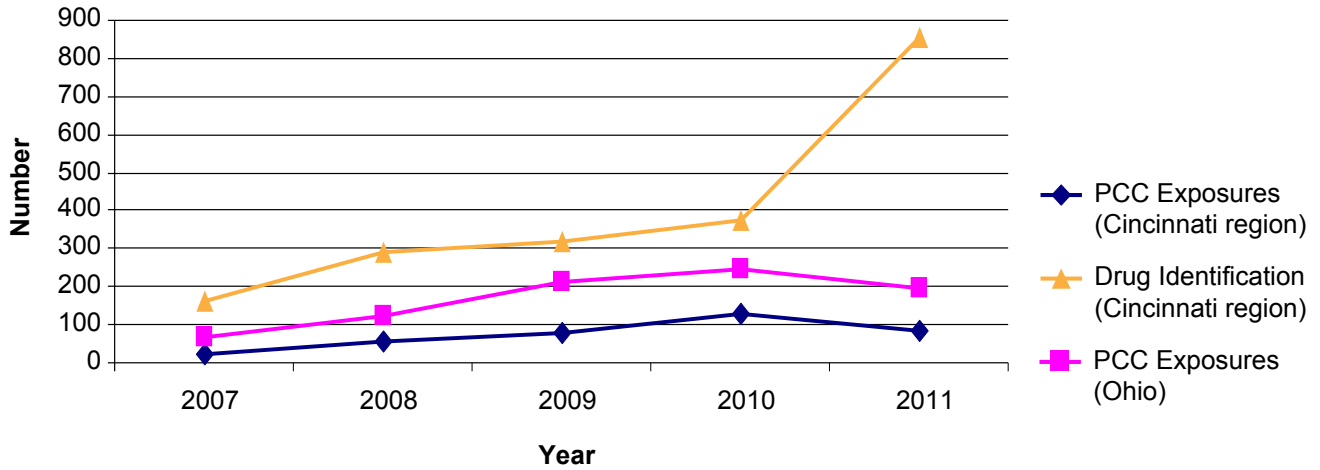
SOURCE: Ohio Bureau of Criminal Identification and Investigation

Exhibit 12. Marijuana Seizures, in Kilograms, in Cincinnati: 2006–2011



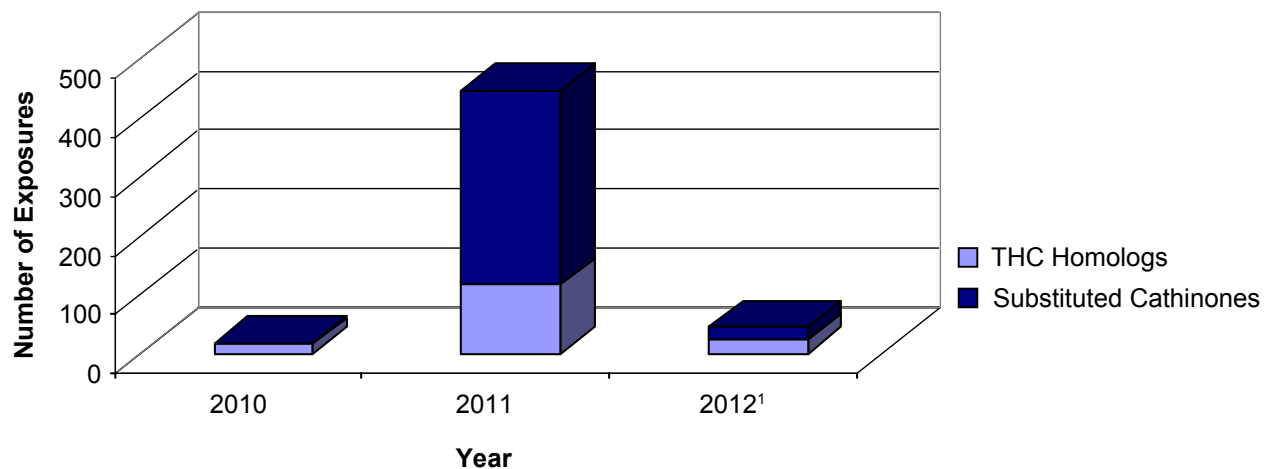
SOURCE: Cincinnati Regional Enforcement Narcotics Unit (RENU)

Exhibit 13. Number of Human Exposures and Drugs Identified as Buprenorphine by Poison Control Centers (PCCs) in Cincinnati and Ohio: 2007–2011



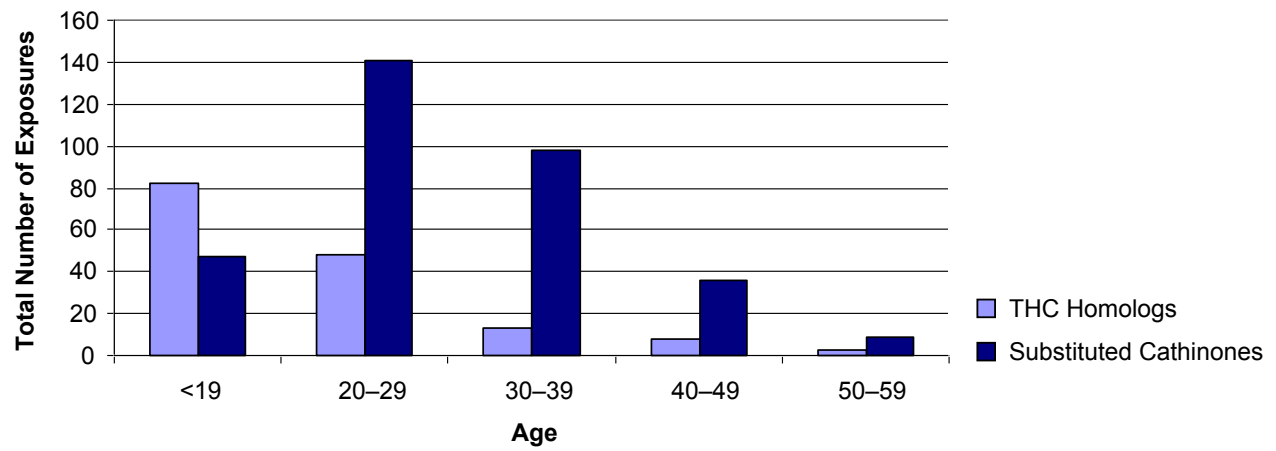
SOURCES: Central Ohio Poison Control Center, Northern Ohio Poison Control Center, and Cincinnati Drug and Poison Information Center

Exhibit 14. Number of Human Exposures to Synthetic (Substituted) Cathinones and THC Homologs (Cannabimimetics) in Cincinnati: 2010–2012¹



¹At time of reporting, 2012 data were captured through May 31, 2012, only.
SOURCE: Cincinnati Drug and Poison Information Center

Exhibit 15. Number of Human Exposures to Synthetic (Substituted) Cathinones and THC Homologs (Cannabimimetics), by Gender, in Cincinnati: Total for Years 2010–2012¹



¹At time of reporting, 2012 data were captured through May 31, 2012 only.
SOURCE: Cincinnati Drug and Poison Information Center

Patterns and Trends in Drug Abuse in Denver and Colorado: 2011

Kristen A. Dixon, M.A., L.P.C.¹

ABSTRACT

After alcohol, marijuana has continued to result in the highest number of treatment admissions in Denver and statewide in Colorado annually since 2000. Statewide, the proportion of primary marijuana treatment admissions has increased over the past several years; however, there was a slight decrease from 22.0 percent of all admissions in 2010 to 20.6 percent in 2011 (including alcohol). Similarly, Denver/Boulder metropolitan area (greater Denver) primary marijuana treatment admissions increased in recent years, but realized a decrease from 2010 (at 24.2 percent) to 2011 (at 21.6 percent). Increases were realized in the rate of marijuana hospital discharges in Denver from 2009 (220 per 100,000 population) to 2010 (292 per 100,000). Additionally, the Drug Abuse Warning Network weighted rate of Denver area emergency department (ED) visits involving marijuana increased significantly from 2004 (50 per 100,000) to 2009 (124 per 100,000). In the Denver area, marijuana/cannabis ranked second, at 23.5 percent, among drug reports detected in drug items seized and identified in 2011 in National Forensic Laboratory Information System (NFLIS) laboratories. Rocky Mountain Poison and Drug Center (RMPDC) marijuana calls ranked first (excluding alcohol) for the second year in a row, with 98 human exposure calls. Marijuana indicators had high rankings and remained a major drug of abuse. Some of the high ranking indicators for cocaine were beginning to decline in 2011, and were showing slight downward and mixed trends. In 2011, cocaine ranked third in statewide treatment admissions and dropped from third to fourth place in Denver metropolitan treatment admissions. Primary cocaine treatment admissions for both areas have steadily decreased over the past 5 years. Cocaine has accounted for the highest number and rate of illicit drug hospital discharges in Denver since 2000; however, in 2011, the number and rate of cocaine hospital discharges were surpassed by marijuana for the first time. Cocaine had the highest number and proportion of Denver area illicit drug ED reports since 2005; however, in 2009, cocaine ED visit rates fell below marijuana ED rates. Also, despite a declining trend, cocaine accounted for the second highest drug-related mortality percentage (of total drug-related mortality cases) in Denver from 2006 through 2010. In 2011, cocaine ranked second (behind marijuana) for statewide illicit drug-related calls to the RMPDC. In the Denver area, cocaine ranked first (at 34.3 percent) among drug reports detected in seized and analyzed items in 2011 in NFLIS laboratories. Most methamphetamine indicators remained fairly stable with some mixed trends. Methamphetamine has exceeded cocaine in numbers of statewide treatment admissions since 2003, and it was more common than all other drugs except marijuana among treatment admissions in the Denver/Boulder area in recent years. Although the proportion of statewide methamphetamine admissions steadily declined from 2005 to 2009, they have since remained fairly stable (at 14.3 percent in 2011). The proportion of Denver area methamphetamine admissions have shown slight

¹The author is affiliated with the State of Colorado, Division of Behavioral Health.

decreases since 2007 and represented 11.1 percent of treatment admissions in 2011. The Denver area weighted rate of methamphetamine-involved ED visits declined significantly from 2007 to 2009. The Denver rate of stimulant hospital discharges (which are predominantly methamphetamine) decreased steadily from 2005 (129 per 100,000) through 2008 (60 per 100,000). However, the Denver rate of stimulant hospital discharges increased slightly in 2009 (65 per 100,000) and again in 2010 (92 per 100,000). While clandestine methamphetamine laboratory closures have decreased steadily since 2003, methamphetamine was widely available, due to heavy trafficking from Mexico. Overall, heroin indicators had lower ranks with mostly increasing trends (with the exception of 2010 mortality data). Statewide and Denver area proportions of heroin treatment admissions have been increasing since 2008. Statewide heroin treatment admissions increased from 5.9 percent of all admissions in 2010 to 7.3 percent in 2011 (including alcohol). Denver area heroin treatment admissions increased also, from 8.7 percent of total admissions in 2010 to 10.4 percent in 2011 (including alcohol). The weighted rate of Denver area heroin-involved ED visits increased from 2004 (33 per 100,000) to 2009 (53 per 100,000). Denver heroin mortality represented a substantial percentage of total Denver drug mortality cases from 2003 through 2010. RMPDC calls related to heroin/morphine increased from 19 calls in 2010 to 47 calls in 2011. Other opioid indicators had mixed ranks with mostly increasing or stable trends. Both statewide and Denver area other opioid treatment admissions have continued to increase over recent years. In 2011, statewide other opioid treatment admissions increased slightly, from 5.8 percent of all admissions in 2010 to 6.4 percent in 2011. Denver area primary treatment admissions for other opioids also increased to 6.4 percent in 2011. The rate of Denver other opioid hospital discharges has steadily increased over recent years and other opioids were among the most common drugs found in Denver drug-related decedents in 2010. While numbers for benzodiazepines were low among statewide and Denver area treatment admissions, estimated benzodiazepine-involved ED visits in Denver increased from 2004 to 2009. Denver mortality cases remained stable in 2010. Synthetic cannabinoids such as “Spice,” “K2,” and “Black Mamba” (cannabimimetics) and “bath salts” marketed as “Cloud Nine,” “Vanilla Sky,” and “White Dove” (substituted cathinones) have been a recent growing concern. However, there are few indicators that have the ability to isolate and capture data for synthetic cannabinoids (cannabimimetics) and “bath salts” (substituted cathinones), making it difficult to determine actual usage levels. Synthetic cannabinoid (cannabimimetic) human exposure calls remained stable from 2010 to 2011, with 44 calls, according to RMPDC data. Additionally, there were 44 RMPDC calls related to “bath salts” (substituted cathinones) in 2011. The Denver Crime Laboratory reported an increase in “bath salts” (substituted cathinones) mixed with other drugs (e.g., MDMA [3,4-methylenedioxymethamphetamine], Foxy methoxy [5-MeO-DIPT], or heroin). Synthetic cannabinoids (cannabimimetics) were recently scheduled in Colorado, which may limit future availability and use. Beyond abuse of illicit drugs, alcohol remained Colorado’s most frequently abused substance and accounted for the most treatment admissions, estimated ED visits, poison control center calls, drug-related hospital discharges, and drug-related deaths in this reporting period.

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 Metropolitan Statistical Area through 2004, which accounted for 50 percent of the State's 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 State population (2,798,757 out of 5,029,196; 2010 census counts).

Excluding Gilpin and Clear Creek Counties (which are usually left out of Denver metropolitan area statistics), the median age of residents in the Denver area was 35.5 in 2010. Males constitute 50.7 percent of the population. Ethnic and racial characteristics of the area are as follows: Whites constitute 67 percent of the population; Black/African-Americans constitute 5 percent; 0.5 percent are American Indians; and 4 percent are Asian/Pacific Islanders. Those of Hispanic origin (of any race) represent 22 percent of the area's population.

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 facilitated by these highways, along with the following other factors, may influence drug use in Denver and Colorado, along with the following factors:

- 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.
- Remote, rural areas are ideal for the undetected manufacture, cultivation, and transport of illicit drugs.
- Several major universities and small colleges are located in the area.
- A young citizenry is drawn to the recreational lifestyle available in Colorado.

Data Sources

The data sources used in this report are listed below:

- **Treatment admissions data** were provided by the Drug/Alcohol Coordinated Data System (DACODS), which is maintained by the Division of Behavioral Health (DBH) 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 DBH. Treatment

admissions are reported by the primary drug of use (as reported by the client at admission), unless otherwise specified. Annual figures are given for calendar years (CYs) 2004–2011.

- **Drug-related emergency department (ED) data** for the Denver metropolitan area were provided through the Drug Abuse Warning Network (DAWN), Center for Behavioral Health Statistics and Quality (CBHSQ), Substance Abuse and Mental Health Services Administration (SAMHSA). Only weighted DAWN data released by SAMHSA can be used for trend analysis or to generalize to a population. To that end, weighted ED visits (as numbers and rates per 100,000) for selected drugs for 2004–2009 were prepared by CBHSQ and are included in this report. Because a patient may report more than one drug, the number of drug reports may exceed the number of cases. Data presented include the number of weighted DAWN estimated visits by drug and the percentage of total estimated visits for 2004–2009, with significant changes in visits ($p < .05$) between 2009 versus 2004, 2007, and 2008 noted (original table production date: October 5, 2010). These are the most recent data available at the time of this report. A full description of the DAWN system can be found at <http://dawninfo.samhsa.gov>.
- **Drug-related mortality data** for the city and county of Denver for CYs 2006–2010 came from the Denver Office of the Medical Examiner, courtesy of the Office of Drug Strategy. These are the most recent data available.
- **Hospital discharge data** for the Denver metropolitan area for 2005–2010 were provided by the Colorado Hospital Association, courtesy of the Denver Office of Drug Strategy. 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 (human exposure only) to the center regarding “street drugs” for 2007–2011. Also presented are 2011 human exposure call data for “THC homologs” (cannabinimetics) and “bath salts” (substituted cathinones).
- **National Forensic Laboratory Information System (NFLIS) data** for drug reports among drug items seized and analyzed in forensic laboratories are presented for Denver, Jefferson, and Arapahoe Counties for CY 2011. NFLIS is a Drug Enforcement Administration (DEA) program through the Office of Diversion Control that systematically collects drug identification results and associated information from drug cases analyzed by Federal, State, and local forensic laboratories. NFLIS methodology allows for the accounting of up to three drugs per item submitted for analysis. The data presented are a combined count including primary, secondary, and tertiary reports for each drug. Data for 2011 are preliminary and subject to change.
- **Statistics on prescriptions** filled for Denver residents by drug type, for the third quarter of 2007 through the third quarter of 2011, were obtained from the Colorado Prescription Drug Monitoring Program (PDMP), Colorado Department of Regulatory Agencies, Division of Registrations, Board of Pharmacy.
- **Availability and price data** were obtained from the February 2010 National Drug Intelligence Center (NDIC)’s report, *National Illicit Drug Prices, Mid-Year Report 2009*. These are the most recent data available. Information was also obtained from the “Proceedings of the Denver Epidemiology Work Group, April 2011.”

- **Heroin data** were obtained from the DEA's Heroin Domestic Monitoring Program (HDMP) 2010 drug intelligence report.
- **Intelligence data and qualitative data** were obtained from the Denver Epidemiology Work Group (DEWG), whose membership includes clinicians, outreach workers, researchers, medical examiner's office staff, public health officials, and regional and local law enforcement officials (including the Denver Police Department) (exhibit 1).
- **Acquired immunodeficiency syndrome (AIDS) data and human immunodeficiency virus (HIV) data** were obtained from the Colorado Department of Public Health and Environment (CDPHE) and are presented for 2007 through December 2011.
- **Population statistics** were obtained from the Division of Local Government, State Demography Office, Census 2010, including estimates and projections, and from factfinder2.census.gov.

DRUG ABUSE PATTERNS AND TRENDS

Cocaine

Of the five major drugs—cocaine, heroin, marijuana, methamphetamine, and other opioids—cocaine ranked third among statewide primary treatment admissions, fourth among Denver metropolitan area treatment admissions, second among statewide calls to the RMPDC, first among Denver County mortality cases, second among Denver hospital discharges, and first in the proportion of drug reports detected among items seized and analyzed in Denver metropolitan area NFLIS laboratories. Some of the once high ranking indicators were beginning to decline, with mostly downward and some mixed trends.

During 2011, cocaine was reported as a primary drug in 7.7 percent of primary treatment admissions (including alcohol) statewide; this reflects a 12-year low (exhibit 2). Cocaine admissions statewide declined by 32 percent from 2007 to 2011. In the Denver metropolitan area, cocaine was reported in 9.5 percent of treatment admissions (including alcohol) during 2011 (exhibit 3).

Statewide, the proportion of male cocaine admissions (59.4 percent in 2011) remained relatively stable over the last 5 years (exhibit 4). In the Denver metropolitan area, the proportion of male cocaine admissions increased from 56.0 to 61.6 percent from 2008 to 2011 (exhibit 5). Historically, Whites have accounted for the largest proportion of cocaine admissions statewide (40.3 percent overall for 2007–2011). However, the proportion of White cocaine treatment admissions decreased from 43.3 percent in 2007 to 36.2 percent in 2011. The proportion of African-American cocaine treatment admissions increased from 18.3 percent in 2007 to 25.5 percent in 2011. Statewide, in 2011, the proportion of Hispanics/Latinos represented 33.4 percent of total admissions, and in Denver, Hispanic/Latinos represented 29.9 percent of cocaine admissions. From 2007 to 2011, the proportion of African-American treatment admissions increased, from 22.8 to 31.4 percent in the Denver metropolitan area.

Statewide, 1.1 percent of all primary cocaine admissions in 2011 were for clients younger than 18, and 9.6 percent were for clients age 18–24 (exhibit 4). The 25–44 age group's proportion of cocaine treatment admissions declined steadily, from 76.0 percent in 2000 to 57.0 percent in 2011, while the

proportion of admissions among clients older than 44 increased from 8.1 to 32.3 percent during that time. This is indicative of an aging cohort. The Denver metropolitan area showed similar trends. A decline was observed in cocaine admissions for clients age 25–44 (from 80.0 to 56.1 percent from 2000 to 2011), and there was a corresponding increase in clients older than 44 (from 7.5 percent in 2000 to 34.8 percent in 2011). There was also a decrease in Denver area admissions for clients age 18–24, from 14.3 percent in 2005 to 8.0 percent in 2011.

Statewide, in 2011, the proportions of all admitted clients who smoked, inhaled, or injected cocaine as their primary route of administration were 59.6, 32.1, and 6.3 percent, respectively (exhibit 4). The proportion who smoked remained fairly stable, from 58.3 percent in 2007 to 59.6 percent in 2011. The proportion of cocaine admissions inhaling cocaine increased from 25.7 percent in 2002 to 33.0 percent in 2007. In 2011, the proportion inhaling cocaine decreased slightly to 32.1 percent. The proportion injecting fell from 12.0 percent in 2002 to 6.3 percent in 2011. The 2011 Denver area proportions of cocaine users who smoked, inhaled, or injected the drug were 59.5, 33.3, and 5.8 percent, respectively (exhibit 5). Treatment admissions data showed that cocaine users most often used alcohol as a secondary drug (exhibits 4 and 5).

The weighted cocaine ED visit rate per 100,000 population for the Denver metropolitan area decreased from 168.5 in 2008 to 109.6 in 2009 (exhibit 6). This represents a statistically significant decrease of 34 percent. These are the most recent data available.

Excluding alcohol, cocaine was the most common drug found in Denver drug-related decedents from 2006 to 2010 (exhibit 7). As a proportion of total decedents, cocaine increased only slightly from 2009 (25.6 percent) to 2010 (27.0 percent).

Cocaine has been second only to alcohol among Denver drug-related hospital discharges since 2000. However, for the first time, cocaine ranked third in 2010 (after alcohol and marijuana) with a rate of 240 per 100,000 (exhibit 8).

During the 2007–2011 time period, cocaine was second only to alcohol in 3 of the 5 reporting years in the number of “street drug” calls to the RMPDC. In 2011, there were 96 calls related to cocaine, which represents fewer calls than those for alcohol and marijuana (exhibit 9).

Reports of drugs detected among items seized and analyzed in Federal, State, and local forensic laboratories and reported to the DEA’s NFLIS system are shown in exhibit 10 for 2011 for the Denver area (in this case consisting of Denver, Arapahoe, and Jefferson Counties); the data are compared with the United States. As indicated, drug reports identified as cocaine among seized and analyzed drug items were the most common among the top 10 drug reports analyzed in the Denver area, constituting more than 1 in 3 (34.3 percent of the total), compared with approximately 1 in 5 (at 19.5 percent) for the United States (where cocaine ranked second).

Cocaine continued to be supplied primarily by Mexican drug trafficking organizations (DTOs). In recent years, Denver police narcotic officers reported that inter- and intra-DTO warfare and pressure from the United States and Mexican governments have made it difficult for Mexican DTOs to bring cocaine across the border, which resulted in fluctuating supplies, price, and purity. The DEA’s Denver Division reported that the supply issue stabilized in 2011, and that the difficulties were no longer as apparent. This led to cocaine price and purity stability. Additionally, the DEA’s Denver

Division stated previously that large quantities of cocaine were going to Europe through trafficking systems that flowed through Africa.

The DEA stated that the gram price and purity levels of cocaine remained consistent in 2011. A kilogram of cocaine cost approximately \$25,000–\$26,000. Cocaine exhibits submitted between July and December 2011 averaged 56.9 percent pure. The Denver Crime Laboratory (DCL) reported cocaine purity to be at approximately 70 percent pure; however, some kilogram samples were 90 percent pure. The DCL continued to report the presence of the cutting agent levamisole in two-thirds to three-quarters of cocaine samples analyzed.

Based on the “Proceedings of the DEWG in 2011” and “Recent Drug Trends in the Denver Metropolitan Area through 2010,” authored by Bruce Mendelson, some Denver area clinicians and outreach workers reported that cocaine seemed less popular than it was a few years ago, especially among noninjecting street users. However, it remained popular among street injection drug users (IDUs), who used it for speedballs (i.e., cocaine and heroin injected at the same time). Adolescent treatment programs did not see much cocaine use, because other drugs were more available and cheaper (e.g., marijuana, “K2,” and “Spice” [cannabimimetics], MDMA [3,4-methylenedioxymethamphetamine], and methamphetamine). It was also apparent that the cohort of primary cocaine treatment clients was aging (exhibit 3).

Heroin

Of the five major drugs—cocaine, heroin, marijuana, methamphetamine, and other opioids—heroin ranked fourth among statewide treatment admissions, third among Denver metropolitan area treatment admissions, fifth among statewide calls to the RMPDC, second among Denver County mortality cases, and fourth in drug reports among items seized and identified in Denver metropolitan area NFLIS laboratories. Overall, heroin indicators had lower ranks with mostly increasing trends (with the exception of 2010 mortality data).

From 2007 to 2011, the proportion of heroin primary treatment admissions steadily increased, from 4.4 to 7.3 percent statewide and from 6.7 to 10.4 percent in the Denver area (exhibits 2 and 3). Heroin treatment admissions have been predominately male over the past few years in the State of Colorado and in the Denver area. However, the proportion of female admissions among all heroin admissions increased from 33.9 percent in 2010 to 35.1 percent in 2011 statewide; female heroin admissions also increased in the Denver area, from 34.3 percent in 2010 to 36.1 percent in 2011 (exhibits 4 and 5).

Over the past 5 years, White treatment admissions gradually increased statewide from 69.3 percent in 2007 to 77.6 percent in 2011. Statewide, the 2011 proportions of total admissions for Whites, Hispanics, and African-Americans, respectively, were 77.6, 16.2, and 2.7 percent. In Denver, in 2011, the proportions of White, Hispanic, and African-American admissions were 76.0, 15.6, and 3.7 percent, respectively.

Statewide, in 2011, the average age of heroin clients admitted to treatment was 31.4 (the median age was 28.0), down from 33.5 in 2010 (when the median age was 30.0). Since 2000, less than 1 percent of heroin users entering treatment were younger than 18; in 2011, the proportion younger than 18 was 1.9 percent. In recent years, the proportion of younger heroin treatment clients statewide

has been on the rise. Heroin users younger than 25 more than doubled from 2007 (14.6 percent) to 2011 (33.0 percent). In 2011, 14.3 percent of statewide heroin treatment admissions were for clients older than 44 (exhibit 4).

In Denver in 2011, the average age of heroin clients entering treatment was 32.6 (the median age was 29.0); this was down from 34.3 in 2010 (when the median age was 31.0). From 2007 to 2011, the Denver metropolitan area experienced a decline in heroin admissions of clients age 35–44 (from 23.4 percent in 2007 to 16.9 percent in 2011) and steady increases in clients younger than 25 (from 12.9 percent in 2007 to 28.3 percent in 2011) (exhibit 5).

Heroin is a drug that is predominantly injected. However, statewide, the proportion of heroin treatment clients who were injectors declined from 82.2 percent in 2007 to 79.5 percent in 2011 (exhibit 4). The proportion of clients smoking heroin continued a multiyear increase, increasing from 9.1 percent in 2010 to a new high of 14.7 percent in 2011. In 2011, 4.3 percent inhaled heroin statewide.

Denver area proportions were similar to statewide figures. The proportion of heroin treatment admissions injecting in Denver declined from 81.6 percent in 2007 to 78.5 percent in 2011 (exhibit 5). The proportion who smoked heroin was gradually increasing, from 9.5 percent in 2007 to 14.9 percent in 2009, to a high of 15.4 percent in 2010 and 2011. The proportion of heroin clients inhaling decreased from previous years to 4.5 percent in 2011 (exhibit 5). Overall, treatment admissions data showed that heroin treatment admissions most often used cocaine as a secondary drug, followed by other opioids (exhibits 4 and 5).

The Denver metropolitan area rate for heroin ED visits compared with the national rate is shown in exhibit 6. The Denver rate increased significantly from 33.1 to 51.7 per 100,000 population from 2004 to 2009 (by 72 percent). These are the most recent data available.

Based on Bruce Mendelson's analysis of the Denver mortality data, which was provided to the Denver Office of Drug Strategy by the Denver Medical Examiner's Office, heroin was found in 4.0 percent (2004) to 12.7 percent (2008) of Denver drug-related decedents from 2004 to 2008. However, it is likely that this percentage was much higher. Heroin is metabolized into 6-monoacetylmorphine (6-MAM), then into morphine. Also, heroin typically contains codeine, because codeine naturally occurs in the opium poppy plant (from which heroin is produced). The 6-MAM needs to be present to confirm that heroin was related to the cause of death. However, this metabolite has a very short half-life and may be undetectable by the time blood work is done as part of an autopsy, whereas morphine and codeine will very likely be present in the blood toxicology. This sometimes makes it difficult to determine whether heroin was the specific cause of a drug-related death. Often, an autopsy report will describe the circumstances surrounding a drug-related death, including information such as drug use history (e.g., decedent had history of heroin abuse). While such information cannot be used to specify heroin as a cause of death in the absence of 6-MAM, it does indicate that heroin is the likely "culprit." This proved to be true as represented by the 2009 data. Beginning in 2008 and reflected in the 2009 data, a new urine toxicology test is able to identify the presence of 6-MAM, a definitive marker for heroin. Therefore, the proportion of heroin Denver drug-related decedents increased from 12.7 percent in 2008 to 23.7 percent in 2009 (and remained relatively stable in 2010, at 23.0 percent) (exhibit 7). Additionally, as predicted, the percentage of codeine and morphine deaths decreased.

Denver metropolitan hospital discharge data for 2006–2010 combined all narcotic analgesics and other opioids, including heroin. While trends in this indicator for heroin alone cannot be assessed, the hospital discharge rate per 100,000 population for all opioids increased overall from 162 per 100,000 in 2006 to 219 per 100,000 in 2010; this represented a 44-percent increase from 916 reports in 2006 to 1,315 reports in 2010 (exhibit 8). During the 2007–2011 time period, statewide heroin/morphine drug-related calls to the RMPDC were behind those of alcohol, marijuana, cocaine, and methamphetamine. Heroin calls increased, however, from 19 calls in 2010 to 47 calls in 2011 (exhibit 9).

According to local law enforcement, the Colorado and Denver metropolitan area heroin was supplied by Mexican DTOs, with Mexican black tar and brown powder the predominant heroin types both statewide and in Denver. Much of the heroin was transported from source locations in Mexico through Arizona and southern California into Colorado and the Denver metropolitan area. From Denver, heroin was further distributed to markets in the Midwest and on the east coast. The Denver Division of the DEA reported that Denver, Colorado Springs, and Pueblo are large heroin markets. Heroin loads are smaller and easier to smuggle across the border undetected by law enforcement. Mexican heroin distributors are smaller, generally tight knit family-based organizations, largely independent of the well-known polydrug cartels.

According to the DEA's HDMP, the Mexican heroin purity decreased in 2010. The 41 qualified samples had an average purity of 19.7 percent pure and an average cost of \$0.71 per milligram pure. The Denver Division of the DEA reported black tar purity ranging from 15 to 25 percent pure, with a few pockets of 50 to 60 percent pure. Brown tar heroin was approximately 30 percent pure and sold for \$1,000 per ounce.

Based on the April 2011 "Proceedings of the DEWG", Denver area clinicians continued to see an increase in the number of young heroin users. It was not uncommon for young individuals who had been prescribed prescription opioids after an injury to start doctor shopping and ultimately buy prescription opioids off the street. Once the cost is prohibitive, they switch to heroin. Reportedly, new users start by smoking or snorting, but eventually begin to inject. This is a common pattern recognized by clinicians in the treatment field. As reported by one clinician, some new, younger heroin users are coming into treatment due to Suboxone® availability, and they are seeing a shift to younger, White, smokers; however, they do see a mix of smokers, inhalers, and injectors. Prescription drug suppliers also offer heroin sooner or later, and this is how some new users are introduced to heroin. Additionally, another treatment provider reported 10 new admissions for IDUs age 23–26 who had converted to heroin only within the last year, after approximately 6 or 7 years of prescription drug abuse. Most of these individuals reported that they switched from prescription drugs to heroin due to personal circumstances (e.g., job or housing loss). In summary, Denver area clinicians have noticed an increase of heroin treatment intakes and recognized the trend of new heroin users admitted as a result of a progression from prescription opioids to heroin, based on price and availability.

Other Opioids

The other opioids category excludes heroin and includes all other opiates/opioids, such as methadone, morphine, hydrocodone, hydromorphone, codeine, and oxycodone. Of the five major drugs—cocaine, heroin, marijuana, methamphetamine, and other opioids—other opioids ranked fifth among both statewide and Denver metropolitan area treatment admissions, third among Denver hospital

drug-related discharges, and first among Denver County mortality cases; oxycodone and hydrocodone ranked among the top 10 reports of drugs detected in seized items analyzed in NFLIS laboratories. Other opioid indicators had mixed ranks with mostly increasing or stable trends.

During 2011, opioids other than heroin were reported as primary drugs in 6.4 percent of statewide treatment admissions, including alcohol (exhibit 2); this proportion represented a steady increase from a low of 2.5 percent in 2004 and represented a 10-year high. In Denver, other opioids constituted between 3.2 and 6.4 percent of all treatment admissions (including alcohol) from 2004 to 2011. The proportion of other opioid primary treatment admissions increased from 5.9 percent in 2010 to a high of 6.4 percent of admissions in 2011 (exhibit 3).

Treatment admissions related to nonheroin opiates/opioids in Denver and the State of Colorado have always represented higher proportions of females than the other four major illicit drugs. Statewide, females constituted 49.6 percent of these admissions in 2011, while males constituted 50.4 percent (exhibit 4). In Denver, females accounted for 53.6 percent of other opioid admissions in 2011 (exhibit 5).

Statewide and in Denver, Whites accounted for the largest proportion of primary treatment admissions related to other opioids. Since 2007, the proportion of Whites fluctuated between 84.4 and 75.2 percent statewide; they represented a new low of 75.2 percent in 2011 (exhibit 4). African-American treatment admissions for other opioids have remained stable since 2007, at approximately 2 percent. The proportion of Hispanic other opioid admissions in Colorado reached a high of 19.9 percent in 2011 (they constituted 12.7 of all admissions in 2007).

In the Denver metropolitan area, the proportion of White other opioid admissions was 78.7 percent in 2011; this was an increase from 76.8 percent in 2010 (exhibit 5). In 2011, African-Americans represented 3.6 percent of admissions, down from a high of 7.0 percent in 2005. However, the moderate change in proportion is influenced by the small numbers of African-American other opioid admissions (numbering between 8 and 32 for 2000–2011). Hispanics reached a high of 14.7 percent of Denver area opioid admissions in 2010 and remained stable in 2011 (at 14.5 percent).

Like heroin users, treatment admission clients for other opioids tended to be older than other drug-using groups, although this appeared to be changing in 2011. Statewide, the average age of other opioid users entering treatment in 2011 was 32.0 (with a median age of 29); 3.2 percent were younger than 18, and 15.0 percent were older than 44. Two age ranges demonstrated a possible trend toward younger users. From 2007 to 2011, the proportion of clients age 18–34 increased from 49.2 to 65.1 percent, while clients 35 and older declined from 49.6 percent in 2007 to 31.7 percent in 2011 (exhibit 4). Similarly, in Denver, there was an overall increase in admissions for other opioids in clients age 18–34 (from 48.1 to 61.7 percent from 2007 to 2011) (exhibit 5).

Nonheroin opioids were most often taken orally. Statewide, in 2011, 71.6 percent of admissions for other opioids ingested the drugs orally, and 12.6 and 11.0 percent, respectively, inhaled and injected the drugs (exhibit 4). The proportion of clients inhaling the drugs increased from 4.7 percent in 2007 to 12.6 percent in 2011. The proportion injecting increased from 7.4 percent in 2009 to 11.0 percent in 2011.

Denver's proportions for preferred route of administration were similar to statewide figures. The proportion of other opioid admissions ingesting the drugs orally ranged from 89.0 percent in 2000 to 74.6 percent in 2011 (exhibit 5). The 2011 proportions of clients who inhaled and injected were 11.7 and 8.0 percent, respectively. Injection of other opioids in Denver has remained fairly stable since 2007. Inhalation in the Denver area reached a high of 14.2 percent in 2010, but it declined slightly to 11.7 percent in 2011. Treatment data, overall, showed that other opioid users most often used marijuana and alcohol as secondary and tertiary drugs (exhibits 4 and 5).

In exhibit 6, the Denver metropolitan area estimated ED visit rate (per 100,000 population) involving narcotic analgesics is compared with the national rate. The Denver rate increased significantly, from 30.1 to 104.4 visits per 100,000 population from 2004 to 2009.

Other opioids were among the most common drugs found in Denver drug-related decedents from 2005 to 2008. Morphine was involved in 22.6–37.9 percent of Denver drug-related deaths during the 2005–2008 time period, and codeine was involved in 9.0–21.3 percent of Denver drug-related deaths during the same time period. However, based on the prior discussion of the short half-life of the marker for heroin deaths (i.e., 6-MAM) and the fact that codeine and morphine are usually present in blood toxicology related to a heroin death, it is likely that a substantial proportion of morphine and codeine deaths were really heroin-related deaths. This is reflected in the 2009 data, with the urine toxicology test confirming the presence of 6-MAM. Both morphine and codeine proportions among decedents decreased in 2010, to 11.8 and 2.0 percent, respectively. Oxycodone accounted for only 4.1 percent of Denver drug-related deaths in 2006, but the proportion increased to 23.2 percent by 2009. In 2010, the proportion of oxycodone-related deaths decreased to 15.8 percent (exhibit 7). As noted earlier, Denver metropolitan hospital discharge data for 2006–2010 combined all opioids, including heroin. Heroin and other opioids among hospital cases increased by 44 percent, from 162 per 100,000 population in 2006 to 219 per 100,000 in 2010 (exhibit 8).

Data from the Colorado PDMP showed substantial increases in the number and rate of hydrocodone and oxycodone prescriptions filled for Denver residents. Exhibit 11 details hydrocodone prescriptions filled for Denver residents from the third quarter of 2007 through the third quarter of 2011. Hydrocodone prescriptions peaked at 49,205 (83.1 per 1,000 population) in the first quarter of 2011; there was an overall rate increase from 70.3 to 83.1 per 1,000, or by 21 percent, during this same time period. However, hydrocodone prescriptions decreased slightly through the third quarter of 2011. Oxycodone increased steadily from 47.6 to 72.6 prescriptions per 1,000 population, or by 57 percent, from the third quarter of 2007 to the third quarter of 2011 (exhibit 12). No poison control center call data were received for opiates other than heroin and morphine. Drug reports among items seized and analyzed by NFLIS laboratories in the Denver area that were identified as containing oxycodone (1.9 percent of all reports) and hydrocodone (1.1 percent of all reports) were among the top 10 drugs analyzed in 2011 in Arapahoe, Denver, and Jefferson Counties.

Based on the "Proceedings of the DEWG" and the "Recent Drug Trends in the Denver Metropolitan Area through 2010 Report," authored by Bruce Mendelson, local law enforcement and intelligence reported an increase in prescription opioid availability and use. Denver law enforcement described a "400-percent increase in reported diversion and drug seeking crimes such as fraudulent prescription writing." In general, local law enforcement believed that the availability and quality of prescription opioids has led to greater popularity and more addicts. The most common ways illicit users obtained prescription opioids were doctor and ED "shopping," and prescription forgery (Mendelson, 2011).

Law enforcement described several investigations of “organized groups writing or calling in fraudulent opioid orders.” The Internet was a less commonly used method to illegally obtain prescription opioids (Mendelson, 2011). Also contributing to the problem was the widespread availability of prescription medication, which can be found in medicine cabinets, sold at parties, and exchanged on the street between users. There appeared to be ignorance about the safety of prescription opioids, especially when mixing them with other substances, such as alcohol or benzodiazepines.

Denver area clinicians reported that their clients most commonly used oxycodone and hydrocodone, but most clients would take “anything they could get.” Many clients became addicted to pain medication after being prescribed opioids for a legitimate reason. However, younger clients began using prescription opioids as a recreational drug and did not realize how potent and dangerous they were. Adolescents and young adults often obtained prescription medications from their parents’ medicine cabinets. Clinicians also reported that clients acquired the prescription opioids through the same methods described by law enforcement (i.e., doctor shopping, EDs, and the Internet). Some Denver street outreach workers said that prescription opioids were not sold as often on the street except between users. This “business” was not typically run by street gangs, but rather by doctor shoppers who were able to obtain large quantities of prescription opioids. This “filters down” to the street addicts who trade pills with items stolen from stores in order to maintain their habits (Mendelson, 2010).

Based on the April 2011 “Proceedings of the DEWG,” Denver area clinicians reported that prescription abuse and diversion is a significant problem. Medical providers are increasingly stressed by patients demanding more potent painkillers in increasing doses. Patients are in pain, which is related to tolerance and withdrawal. Many individuals are addicted before they even realize their addiction. Some consumers are skilled at manipulating the system and also sell some of their prescription pills to make money. Additionally, the DEA, Denver Division, reported that prescription drug trafficking is very well organized and sophisticated, which leads to increased diversion and availability.

Benzodiazepines

Benzodiazepines are a class of psychoactive drugs with varying sedative, hypnotic, and antianxiety (i.e., anxiolytic) properties. Most common are the benzodiazepine tranquilizers (diazepam, alprazolam, lorazepam, and clonazepam). Benzodiazepines presented a “mixed picture” in the Denver metropolitan area drug scene in 2011. This drug category is not shown as a separate drug category on exhibits 2 or 3. From 2001 to 2011, benzodiazepines were somewhat infrequent among Colorado treatment admissions; there were 110 statewide benzodiazepine admissions in 2011, constituting 0.4 percent of all drug admissions, including alcohol. Denver metropolitan benzodiazepine admissions from 2001 to 2011 were also somewhat infrequent; there were 47 Denver metropolitan benzodiazepine admissions in 2011, constituting 0.4 percent of all drug admissions, including alcohol.

In exhibit 6, the Denver metropolitan area weighted rate for benzodiazepine-involved ED visits is compared with the national rate. The weighted visit rate per 100,000 involving benzodiazepines in Denver increased significantly by 224 percent from 2004 to 2009.

Taken together, alprazolam, clonazepam, and diazepam accounted for 1.6 percent of the drug reports among items seized and analyzed by NFLIS laboratories in 2011 in the Denver area, compared with 3.9 percent in the Nation.

While benzodiazepines were not among the most common drugs found in Denver drug-related decedents, diazepam accounted for 6.5 to 12.5 percent of Denver drug-related mortality cases from 2006 to 2010. Alprazolam constituted 3.0 to 7.9 percent of Denver drug-related mortality cases during the same time period (exhibit 7).

As reported by Denver area clinicians, benzodiazepines used with prescription opioids, heroin, or alcohol create a synergistic effect, increasing their desirability. This combination of substances also causes many unintentional overdoses. Most individuals who use benzodiazepines often obtain them through others who have prescriptions, and they are reportedly “pretty easy” to get from clinicians in therapeutic amounts.

The DCL reported that alprazolam (Xanax®) was the most frequently identified benzodiazepine. Denver area clinicians also reported that Xanax® was the most popular benzodiazepine. Clients enjoy the high, and it is the most addictive. One Denver area clinician reported that benzodiazepines were very popular with methadone patients and were sold near Denver area clinics. Another clinician reported that the social norms for benzodiazepines were similar to those for prescription opioids, and benzodiazepines were being prescribed freely for young patients with anxiety.

Methamphetamine

Of the five major drugs—cocaine, heroin, marijuana, methamphetamine, and other opioids—methamphetamine ranked second among both statewide and Denver metropolitan area treatment admissions. Historically, Denver area methamphetamine treatment admissions ranked third, behind marijuana and cocaine admissions. This change in rank broke a 10-year trend in 2009 and continued in 2010 and 2011. Methamphetamine ranked third among statewide calls to the RMPDC, fifth in the proportion of Denver metropolitan area weighted ED visits, fourth among Denver County mortality cases, and third in the proportion of drug reports among drug items seized and analyzed in Denver metropolitan area NFLIS laboratories. Most methamphetamine indicators remained fairly stable with some mixed trends.

In 2011, methamphetamine was the primary drug reported for 14.3 percent of all treatment admissions (including alcohol) statewide (exhibit 2); this proportion was relatively stable from 2010. Primary methamphetamine admissions have been second to marijuana admissions since 2003. In the Denver metropolitan area, methamphetamine represented a lower proportion of treatment admissions (11.1 percent in 2011) than it did among statewide admissions (exhibit 3). While the proportion of methamphetamine admissions (including alcohol) in Denver increased each year from 2004 to 2007 (from 12.0 to 13.9 percent), there was a decline from 2008 (12.7 percent) to 2011 (11.1 percent). In 2009, Denver area methamphetamine admissions slightly exceeded cocaine admissions, but this most likely can be attributed to the sizable decrease in Denver cocaine admissions rather than an increase in methamphetamine admissions. In 2011, numbers of methamphetamine admissions continued to surpass cocaine admissions in Denver.

After admissions for nonheroin opioids and sedatives, methamphetamine admissions had the highest proportion of female admissions statewide (46.2 percent) in 2011 (exhibit 4). In the Denver area, the proportions of female methamphetamine admissions represented 41.4 percent of all admissions in 2011 (exhibit 5). In 2011, methamphetamine admissions in Colorado and Denver were predominately White (exhibits 4 and 5). From 2000 to 2011, the proportion of White treatment admissions

declined, from 87.8 to 75.1 percent statewide and from 90.1 to 77.8 percent in the Denver area. During the same time period, the proportion of Hispanic methamphetamine admissions increased, from 8.5 to 19.5 percent statewide and from 7.0 to 14.9 percent in Denver.

Compared with cocaine, methamphetamine admissions tended to be younger. In 2011, the average age of clients entering treatment was 33.2 (with a median age of 32.0) statewide and 33.6 (with a median age of 33) for Denver admissions. Also, 16.6 percent of statewide admissions and 14.2 percent of Denver admissions were younger than 25. Statewide, in 2011, 71.2 percent of admissions were clients age 25–44, compared with 73.6 percent for the Denver area.

In 2011, the proportions of clients statewide who smoked, injected, or inhaled methamphetamine were 62.4, 27.0, and 7.7 percent, respectively (exhibit 4). The proportion who smoked decreased from 2007 (65.2 percent) to 2011 (62.4 percent), while the proportion who inhaled also decreased during that time, from 11.8 percent in 2007 to 7.7 percent in 2011. Injectors increased from 20.2 percent in 2005 to 27.0 percent in 2011. In 2011, in the Denver area, the proportions of treatment admissions who smoked, injected, or inhaled methamphetamine were 57.7, 29.4, and 9.2 percent, respectively (exhibit 5). As with the State overall, the proportion who smoked decreased from 2007 to 2011, from 61.4 to 57.7 percent. Similarly, the proportion of inhalers declined from 15.1 to 9.2 percent from 2007 to 2011 (a new low). Clients who injected increased from 20.1 to 29.4 percent from 2007 to 2011 (with an increase from 26.8 percent in 2010). Treatment data, overall, showed that methamphetamine clients most often used marijuana as a secondary drug, followed by alcohol (exhibits 4 and 5).

From 2005 to 2009, the Denver estimated ED rate per 100,000 population for methamphetamine-involved ED visits was substantially higher than the national rate (exhibit 6). However, the Denver rate declined significantly, from 49.7 per 100,000 in 2007 to 33.9 per 100,000 population in 2009.

While methamphetamine was not among the most common drugs found in Denver drug-related decedents, it accounted for 9.2 percent of drug-related deaths in 2010 (exhibit 7). Methamphetamine could not be identified separately, but rather it was included in the stimulants category in hospital discharge data. Denver metropolitan stimulant-related hospital discharges increased from 65 per 100,000 population in 2009 to 92 per 100,000 population in 2010 (exhibit 8).

Methamphetamine was third, after marijuana and cocaine (excluding alcohol calls), in the number of statewide drug-related calls to the RMPDC in 2011 (exhibit 9). Methamphetamine ranked first in RMPDC calls in 2005.

The proportion of drug reports among items seized and identified by NFLIS laboratories as containing methamphetamine accounted for 11.1 percent of all reports in the Denver area in 2011. Methamphetamine ranked third among the top 10 drug reports among items analyzed in 2011 in the Denver area, compared with 10.3 percent (also ranking third) across the Nation (exhibit 10).

Despite the precursor crackdown in Mexico, local law enforcement officials reported that most methamphetamine was produced and supplied by Mexican DTOs. The supply came from larger laboratories on the western side of Mexico controlled by organizations. Mexican DTOs obtain large batches of precursor chemicals from China, or they possibly change their recipe. In 2010, the Denver DEA Division reported that large loads of methamphetamine were transported from Mexico,

Texas, Arizona, and California to Colorado. In 2011, the Denver DEA reported that methamphetamine purity was very high; from July to December 2011, eight exhibits averaged 96 percent pure and four were 100 percent pure. The DCL also reported that they had only one case in 2011 in which the purity was below 90 percent. Prices were around \$900 per ounce and \$16,000–\$17,000 per pound in 2009 (inexpensive when compared with cocaine prices). This was the most recent data available.

Based on the “Proceedings of the DEWG,” methamphetamine was reported to be readily available, inexpensive, and longer lasting in 2011. Theories have surfaced indicating the possible “switch” of cocaine users to methamphetamine. There were continuing reports of substantial methamphetamine use in the gay community (especially among gay males), with many injecting rather than smoking the drug. The drug is reported to increase sexual desire and stamina, and it is often associated with risky sexual behavior. There were also reports that methamphetamine had made significant inroads into the Latino community (Mendelson, 2010). In a recent DEWG meeting (April 2011) there was some discussion related to the increased consequences for methamphetamine as a result of the increased and very high purity levels.

Marijuana

Of the five major drugs—cocaine, heroin, marijuana, methamphetamine, and other opioids—marijuana ranked first among both statewide and Denver metropolitan area treatment admissions, first among statewide calls to the RMPDC, first among Denver County hospital discharges, and second in the proportion of drug reports among items seized and analyzed by Denver metropolitan area NFLIS laboratories. Marijuana indicators ranked high, and the drug remained a major substance of abuse.

Statewide, the percentage of marijuana treatment admissions increased from 20.9 percent in 2007 to 22.0 percent in 2010; these decreased slightly in 2011 to 20.6 percent (exhibit 2). In Denver, the proportion of marijuana admissions increased, from 23.5 percent in 2007 to 24.2 percent in 2010; these decreased in 2011 to 21.6 percent (exhibit 3). Historically, marijuana admissions have represented the highest proportion of males among drug groups. In 2011, 76.6 percent of marijuana admissions statewide and 76.4 percent in Denver were male (exhibits 4 and 5).

In 2011, Whites, Hispanics, and African-Americans represented 48.2, 34.5, and 12.9 percent of marijuana admissions, respectively, statewide (exhibit 4). From 2007 to 2011, the proportion of White admissions decreased from 58.1 to 48.2 percent. Similarly, the statewide proportion of African-American marijuana admissions decreased slightly from 2007 (13.6 percent) to 2011 (12.9 percent). However, the proportion of Hispanics in statewide admissions increased from 30.2 to 34.5 percent from 2005 to 2011.

In Denver, White marijuana admissions remained fairly stable from 2007 to 2010, at 42–44 percent. In 2011, the proportion of White marijuana users was 42.3 percent (exhibit 5). Remaining stable in 2011, African-American admissions in the Denver area represented 18.5 percent of all admissions. Similar to the statewide trend, the proportion of Hispanics increased from 2007 to 2011 (32.3 to 34.1 percent).

In both Colorado and the Denver metropolitan area, marijuana clients were typically the youngest of the treatment admissions groups. In 2011, the average age of marijuana clients entering treatment was 25.1 statewide (with a median age of 23) and 24.4 in Denver (with a median age of 22). In 2009, both Colorado and Denver experienced declines in the median age of marijuana treatment admissions, to age 22 and 21, respectively; they remained stable in 2010. In 2011, the average ages and median ages in treatment increased slightly. Treatment data, overall, showed that marijuana users most often used alcohol as a secondary or tertiary drug (exhibits 4 and 5).

The Denver estimated ED visit rate involving marijuana increased significantly, tripling from 50.5 to 151.7 visits per 100,000 population from 2004 to 2008. In 2009, however, the rate for marijuana ED visits decreased significantly to 124.1 visits per 100,000, from 151.7 per 100,000 in 2008.

Marijuana ranked first in the number of State drug-related calls to the RMPDC in 2010 and in 2011 (excluding alcohol). In 2010, this was a change in rank as it was the first time marijuana led the number of statewide calls (exhibit 9). Among the Denver area reports for drug items seized and analyzed by NFLIS laboratories, the proportion identified as marijuana/cannabis ranked second as a proportion of all drug reports, at 23.5 percent; this is compared with 33.7 percent for the United States, where it ranked first (exhibit 10).

The supply of marijuana in Colorado and the Denver area has been impacted by a number of sources. The Denver DEA and NDIC reported in recent years that Mexican Nationals cultivated large marijuana grow sites on public land in Colorado. There were large scale “grows” and seizures in the Roosevelt National Forest in 2010. In 2011, the Denver DEA Division reported that marijuana was widely available throughout Colorado. The most abundant supply has traditionally been Mexican marijuana brought to Colorado by polydrug traffickers. However, high-potency marijuana has been increasingly grown in Colorado under the guise of medical marijuana. These indoor grow operations are sophisticated and produce high-grade marijuana which is in high demand. A substantial amount of this indoor grown marijuana is shipped out of the State. Mexican grown, low-grade marijuana sold for approximately \$300 per pound, but locally grown marijuana sold for \$3,000 per pound. The Colorado grown marijuana is sold at even higher prices as it is trafficked to other States.

The large influx of medical marijuana dispensaries appeared to be contributing to the availability and acceptability of marijuana use. For example, Denver area adolescent treatment providers reported caregivers, older peers, or family members of clients often have medical marijuana licenses, so more individuals have more accessibility. In 2010, the Denver police department reported that they were finding medical marijuana in schools and in the hands of people who were not medical marijuana patients. They found different forms of medical marijuana, such as marijuana candies. Most people do not realize the high potency of medical marijuana and the effects different strains can produce, which may lead to more adverse reactions. There were warehouses dedicated to producing medical marijuana in and around the Denver area. For example, the DEA reported there were cases of 1 million square footage of space rented out to marijuana growers; depending on the size, that may only represent 20 to 30 growers.

Based on the “Proceedings of the DEWG” and the “Recent Drug Trends in the Denver Metropolitan Area through 2010 Report,” authored by Bruce Mendelson, Denver street outreach workers and clinicians described a Denver scene in which medical marijuana dispensaries have made marijuana more available with less stigma, and with a lowered perceived risk. Most outreach workers reported

the “normalization of THC (tetrahydrocannabinol, the active ingredient in marijuana) use in the community, where users are more open about their use and dealers are more open about selling or trading.” In 2011, one Denver area clinician reported that youth on the street were using marijuana to help balance mental health issues.

MDMA

Morbidity and mortality for MDMA (3,4-methylenedioxymethamphetamine), or ecstasy, remained relatively low in Denver in 2011. Although the numbers of MDMA and other “club drug” treatment admissions (including Rohypnol®, ketamine, GHB [gamma hydroxybutyrate], and MDMA) were relatively small, they have been on the rise over recent years. Of the 177 statewide club drug treatment admissions shown in 2011 (exhibit 2), which represented 0.6 percent of total admissions, 171 were for MDMA. In the Denver metropolitan area, “club drugs” accounted for 77 treatment admissions in 2011 (0.6 percent of total admissions) (exhibit 3). Of these, 73 were for MDMA.

Exhibit 6 compares the Denver metropolitan area weighted rate for MDMA-involved ED visits with the national rate. The Denver rate more than doubled from 4.5 estimated visits per 100,000 population in 2004 to 11.6 visits per 100,000 in 2009. Drug reports identified as MDMA among items analyzed by NFLIS laboratories accounted for 1.9 percent of the total items submitted for testing in 2011 in the Denver area, compared with 0.7 percent for the Nation (exhibit 10).

As previously reported, according to law enforcement/intelligence, MDMA found in Colorado was produced primarily in Canadian laboratories. MDMA was mostly transported and distributed by Asian DTOs and continued to have a solid presence in the Denver club scene. In addition to the usual stamped tablet, there were different forms of MDMA, such as wafers and powder (which are easier and cheaper to produce). In general, law enforcement/intelligence reported an overall increase in MDMA distribution and seizures in Colorado. In 2009, MDMA sold in Colorado for \$3–\$6 per tablet wholesale, \$5–\$17 per tablet retail, and \$10–\$25 per tablet on the street. Prices in 2010 remained fairly constant depending on the quantity purchased (2010 data are the most recent available).

BZP

There were 39 drug reports (representing 0.6 percent of reports) among items seized and analyzed by NFLIS laboratories that were identified as containing BZP (1-benzylpiperazine). Unfortunately, several data sources—treatment admissions, ED data, mortality cases, and hospital discharge data—do not report BZP. It appeared that only the crime laboratories were isolating this drug, making it difficult to determine actual BZP usage levels. BZP was made a Schedule 1 controlled substance in Colorado as of July 1, 2009 (as referenced in HB 09-115) and, therefore, may be less available than it once was. In 2011, the DCL analyzed 18 BZP exhibits and 1 BZP/MDMA in combination exhibit, compared with 10 BZP exhibits, 14 BZP in combination exhibits, and 1 TFMPP (1-(3-trifluoromethylphenyl)piperazine) exhibit in 2010. Although probably not a substantial problem in Denver in terms of user numbers, research indicates that BZP and TFMPP, when taken together, have a synergistic effect on certain neurotransmitters (dopamine and serotonin), which may lead to seizures (Bauman, et al., 2005).

Emerging Synthetic Drugs

Synthetic Cannabinoids (Cannabimimetics)

Synthetic cannabinoids such as “Spice,” “K2,” and “Black Mamba” (cannabimimetics) have been a recent growing concern in the Denver area. However, there are few indicators that have the ability to isolate and capture the data, and it is difficult to determine actual usage levels. Synthetic cannabinoids (cannabimimetics) are designed to produce effects similar to marijuana and are marketed as a “legal high” or a natural alternative to marijuana. Previously legally sold at “head shops,” gas stations, and over the Internet, various brands of synthetic cannabinoids (cannabimimetics) are now illegal substances in Colorado. In June 2011, the Governor signed legislation making synthetic cannabinoids (cannabimimetics) a Schedule I drug in Colorado.

The DCL reported at the April 2011 Denver Epidemiology Work Group (DEWG) meeting that their current tasks related to synthetic cannabinoids (cannabimimetics) and the related legislation include finding a synthetic cannabinoid (cannabimimetic), identifying a synthetic cannabinoid (cannabimimetic), and then showing that it meets the criteria of being a synthetic cannabinoid (cannabimimetic) included under the Colorado legislation. This is a complicated and time consuming process, and they are reporting little continuity in product manufacturing. Different compounds are found in the same brand, depending on the when and where the products were purchased. The DCL also reported that these compounds are being mixed with other substances (e.g., substituted cathinones marketed as “bath salts” or MDMA). There are so many different compounds that make up K2 or Spice (or other synthetics) that each compound must be isolated, researched, and individually federally controlled. This process is difficult, and once one compound is controlled, manufacturers will move on to another compound. Several cannabimimetic agents are federally controlled as Schedule I drugs by the Synthetic Drug Abuse Prevention Act of 2012 (passed in June 2012). The DCL has received some exhibits marketed as being federally compliant and containing new compounds.

Synthetic cannabinoids (cannabimimetics) were, until recently, unable to be detected by drug screens, which made them appealing to individuals on probation or parole. There are now a few drug screens on the market that detect some of the synthetic cannabinoid (cannabimimetic) agents; however, they are expensive and the results take longer than drug screens for other drugs. Adolescents and young adults have reportedly been the primary users of these substances. However, one Denver area clinician reported that some clients do not see the benefit of using synthetic cannabinoids (cannabimimetics) when real marijuana is so accessible.

The RMPDC captured data on synthetic cannabinoids (cannabimimetics) in CY 2011. There were 44 human exposure calls, of which 34 were male and 10 were female. Individuals reported the following symptoms: tachycardia ($n=19$); agitated/irritable ($n=16$); confusion ($n=8$); hallucinations/delusions ($n=8$); hypertension ($n=7$); vomiting ($n=3$); seizures ($n=2$); and other symptoms ($n=13$). Additionally, there were 35 Denver area ED visits as a result of synthetic cannabinoid (cannabimimetic) use from the DAWN *Live!* system in 2010. These are the most recent data available. Excluding alcohol, synthetic cannabinoids (cannabimimetics) accounted for 0.6 percent of illicit drug-related ED reports in the unweighted DAWN *Live!* data for the Denver metropolitan area from January through December 2010.

Substituted Cathinones: Mephedrone and MDPV

“Bath salts” (substituted cathinones), with names like “Ivory Wave” or “Vanilla Sky,” are another synthetic drug category that is surfacing as an emerging concern in Colorado and the Denver area. They are marketed as “bath salts” or “plant food,” and they are labeled “not for human consumption.” However, these synthetic drugs actually are manufactured and sold in “head shops” and over the Internet for individuals to consume. They reportedly produce effects similar to methamphetamine, cocaine, and/or ecstasy. However, the drugs appear to have a wide range of effects on individuals. As indicated on Internet blogs, after the use of these substances users report a distinct smell emanating from their bodies, such as a fishy, vanilla, “bleachy,” stale urine, or electric smell. These “bath salts” (substituted cathinones) are dangerous because consumers are generally uninformed about the substances they are using. Two substituted cathinones, MDPV (3,4 methylenedioxypropylone) and mephedrone (4-methylmethcathinone), are now Schedule I drugs as of the passing of the Federal Synthetic Drug Abuse Prevention Act of 2012 in June 2012. At the time of this report, legislation (SB 12-116) to make these drugs illegal was under consideration in Colorado.

The RMPDC captured some initial data related to “bath salts” in 2011; it was the first institutional data for these substances available in Colorado. RMPDC reported 44 human exposure calls ($n=26$ male, $n=17$ female, 1 pregnant) from January 1, 2011, to December 31, 2011. The top clinical effects that were documented were as follows: agitated/irritable ($n=12$); tachycardia ($n=9$); vomiting ($n=9$); drowsiness/lethargy ($n=8$); confusion ($n=4$); seizure (single) ($n=4$); dizziness/vertigo ($n=4$); hallucinations/delusions ($n=4$); nausea ($n=4$); and other ($n=8$). The outcome of these exposures ranged from minor effects to potentially toxic exposures.

“Bath salts” (substituted cathinones) were present in the DCL for the first time in 2011. The DCL analyzed 14 exhibits (3 mephedrone, 1 mephedrone in combination with other drugs, 1 MDPV in combination with other drugs, 3 methylone, 3 methylone in combination with other drugs, 1 ethylone, and 2 butylone). Other than RMPDC and DCL data, most of the information available on “bath salts” (substituted cathinones) was anecdotal.

INFECTIOUS DISEASES RELATED TO DRUG ABUSE

HIV/AIDS and Injection Drug Use

Of the 10,108 cumulative AIDS cases reported in Colorado through December 31, 2011, 8.9 percent were classified as IDUs, and another 10.5 percent were classified as homosexual or bisexual males and IDUs (exhibit 13). The proportion of newly diagnosed HIV cases attributed to injection drug use has stayed fairly stable over the last several years; however, there was a slight increase to 5 percent in 2011. The proportion of newly diagnosed AIDS cases attributed to injection drug use has been less stable; the proportion ranged from 9 percent in 2009, to 2 percent in 2010, and back up to 8 percent in 2011. This sharp decrease and increase could possibly be related to a 2010 data issue, which will need to be further explored.

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Exhibit 1. Denver Epidemiology Work Group Membership: 2011

Name	Agency	Field
Kendra Bernard	DAWN-WESTAT	Emergency department drug episodes
Candace Cadena	Denver Office of Drug Strategy	Prevention evaluator
Johnny Cohen	DEA	Illicit Prescription Drug Trafficking
Chris Conner	Denver Human Services	Denver's Road Home Program
Terry Demmel	Denver Police Department	Detective in Narcotics Bureau
Kevin Deitrick	Colorado Department of Transportation	Fatal Accident Reporting System analyst
Kristen Dixon	Division of Behavioral Health	Data analysis
Andrea Donato	Urban Peak	Street Outreach and HIV prevention
Vanessa Fenley	Denver Office of Drug Strategy	Director
Lt. Mark Fleecs	Denver Police and HIDTA	Drug control and intelligence
vacant	Peer Assistance Services	Prescription drug prevention program
Ron Gowins	Denver Health, Outpatient Behavioral Health Services	Substance abuse treatment
Jonathan Gray	Arapahoe House	Substance abuse treatment
April Hendrickson	OMNI Institute	Research and analysis
(Charles) Steve Hooper	Division of Motor Vehicles	Driver Control Director
Helen Kaupang	DEA Diversion Group Supervisor	Pharmaceutical controlled substances education, diversion, and regulatory matters
Charles Keep	Colorado Department of Transportation	Fatal Accident Reporting System analyst
Caitlin Kozicki	Peer Assistance Services	Workplace programs director
Eric Lavonas	Rocky Mountain Poison and Drug Center	Medical toxicology, Emergency medicine
Jodi Lockhart	Denver Office of Drug Strategy	Prevention Coordinator
John Lundin-Martinez	Denver Health, Outpatient Behavioral Health Services	Substance abuse treatment
M.R. Marandi	Colorado Department of Transportation	Fatal Accident Reporting System analyst
Amy Martin	Denver Office of Medical Examiner	Chief medical examiner
Andrew McClure	New Life Promises Recovery Center	Substance Abuse treatment
Bruce Mendelson	Denver Office of Drug Strategy	Substance use and abuse data analysis and Chair DEWG
Fred Morck	DEA	Drug control and intelligence
Amber Murray Anderson	OMNI Institute	Research
William Nagle	Denver Police Department	Vice Drug Control Bureau
Linda Orr	Denver Office of Drug Strategy	DODS Administrative Assistant
Marcela Paiz	IDEA Forum, Inc.	Substance abuse treatment
Katie Page	OMNI Institute	Research
Wendy Roewer	Drug Enforcement Administration	Drug control and intelligence
Allison Sabel-Soteres	Denver Health	Medical biostatistics
Donald Shriver	Denver Police Department Crime Laboratory	Technical Lead Forensic Chemistry Unit
Jamie Sims	Children's Hospital	Prevention
Christian Thurstone	Denver Health	Psychiatry
Audrey Vincent	Denver Health	Denver CARES Detoxification Unit
Dale Wallis	Denver Police Department	Narcotics
Michael Webster	DEA	Investigation of illicit prescription drug trafficking
Libby Whitmore	University of Colorado Denver-ARTS	Deputy Executive Director - Drug treatment and research
Stephanie Wood	Harm Reduction Action Center	Injection drug user harm reduction-program evaluation
Michelle Zucher	Urban Peak	Street Outreach

SOURCE: Denver Epidemiology Work Group, 2011

Exhibit 2. Number and Percentage of Treatment Admissions, by Primary Drug Type, in the State of Colorado: 2004–2011

Drug		2004	2005	2006	2007	2008	2009	2010	2011
Alcohol	<i>n</i>	9,873	10,189	11,481	10,977	11,755	12,040	12,364	12,179
	%	40.7	38.8	40.9	39.7	41.1	42.2	41.7	41.1
Marijuana	<i>n</i>	5,305	5,568	5,653	5,783	6,156	6,160	6,518	6,088
	%	21.9	21.2	20.1	20.9	21.5	21.6	22.0	20.6
	(excluding alcohol) %	36.8	34.7	34.0	34.7	36.6	37.4	37.7	35.0
Methamphetamine	<i>n</i>	3,846	5,084	5,053	4,914	4,543	4,123	4,322	4,226
	%	15.8	19.4	18.0	17.8	15.9	14.5	14.6	14.3
	(excluding alcohol) %	26.7	31.7	30.4	29.5	27.0	25.0	25.0	24.3
Cocaine	<i>n</i>	3,034	2,929	3,476	3,374	3,319	2,660	2,459	2,283
	%	12.5	11.2	12.4	12.2	11.6	9.3	8.3	7.7
	(excluding alcohol) %	21.1	18.3	20.9	20.3	19.7	16.2	14.2	13.1
Heroin	<i>n</i>	1,273	1,421	1,271	1,223	1,201	1,570	1,755	2,150
	%	5.2	5.4	4.5	4.4	4.2	5.5	5.9	7.3
	(excluding alcohol) %	8.8	8.9	7.6	7.3	7.1	9.5	10.2	12.3
Other Opioids ¹	<i>n</i>	614	713	824	961	1,113	1,475	1,715	1,894
	%	2.5	2.7	2.9	3.5	3.9	5.2	5.8	6.4
	(excluding alcohol) %	4.3	4.4	5.0	5.8	6.6	9.0	9.9	10.9
Depressants ²	<i>n</i>	101	97	121	127	141	143	120	140
	%	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.5
	(excluding alcohol) %	0.7	0.6	0.7	0.8	0.8	0.9	0.7	0.8
Other Amphetamines/ Stimulants	<i>n</i>	56	57	52	36	55	45	56	68
	%	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2
	(excluding alcohol) %	0.4	0.4	0.3	0.2	0.3	0.3	0.3	0.4
Hallucinogens ³	<i>n</i>	27	33	35	31	38	31	27	47
	%	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
	(excluding alcohol) %	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
Club Drugs ⁴	<i>n</i>	56	50	47	59	67	68	112	177
	%	0.2	0.2	0.2	0.2	0.2	0.2	0.4	.06
	(excluding alcohol) %	0.4	0.3	0.3	0.4	0.4	0.4	0.6	1.0
Other ⁵	<i>n</i>	90	92	88	142	181	195	191	346
	%	0.4	0.4	0.3	0.5	0.4	0.7	0.6	1.2
	(excluding alcohol) %	0.6	0.6	0.5	0.9	1.1	1.2	1.1	2.0
Total	N	24,275	26,233	28,101	27,627	28,569	28,510	29,639	29,598
(excluding alcohol)	N	14,402	16,044	16,620	16,650	16,814	16,470	17,275	17,419

¹Includes nonprescription methadone and other opiates and synthetic opiates.

²Includes barbiturates, benzodiazepine tranquilizers, clonazepam, and other sedatives.

³Includes LSD (lysergic acid diethylamide), PCP (phencyclidine), and other hallucinogens.

⁴Includes Rohypnol®, ketamine (Special K), GHB, and MDMA (ecstasy).

⁵Includes inhalants, over-the-counter drugs, and other drugs not specified.

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

Exhibit 3. Number and Percentage of Treatment Admissions, by Primary Drug Type, In the Denver/Boulder Metropolitan Area: 2004–2011

Drug		2004	2005	2006	2007	2008	2009	2010	2011
Alcohol	<i>n</i>	3,551	3,575	4,408	4,321	4,586	4,597	4,826	4,782
	%	33.6	33.1	36.0	35.9	37.8	38.5	37.3	37.9
Marijuana	<i>n</i>	2,703	2,695	2,901	2,824	2,882	2,787	3,133	2,726
	%	25.6	24.9	23.7	23.5	23.7	23.3	24.2	21.6
	<i>(excluding alcohol)</i>	%	38.5	37.2	37.0	36.6	38.2	37.9	38.6
Methamphetamine	<i>n</i>	1,271	1,494	1,696	1,672	1,540	1,373	1,520	1,400
	%	12.0	13.8	13.8	13.9	12.7	11.5	11.7	11.1
	<i>(excluding alcohol)</i>	%	18.1	20.6	21.6	21.7	20.4	18.7	18.7
Cocaine	<i>n</i>	1,619	1,460	1,849	1,807	1,662	1,333	1,315	1,199
	%	15.3	13.5	15.1	15.0	13.7	11.2	10.2	9.5
	<i>(excluding alcohol)</i>	%	23.1	20.2	23.6	23.4	22.0	18.1	16.2
Heroin	<i>n</i>	922	1,007	810	807	761	960	1,130	1,314
	%	8.7	9.3	6.6	6.7	6.3	8.0	8.7	10.4
	<i>(excluding alcohol)</i>	%	13.1	13.9	10.3	10.5	10.1	13.1	13.9
Other Opioids ¹	<i>n</i>	340	434	412	400	472	627	762	814
	%	3.2	4.0	3.4	3.3	3.9	5.2	5.9	6.4
	<i>(excluding alcohol)</i>	%	4.8	6.0	5.3	5.2	6.3	8.5	9.4
Depressants ²	<i>n</i>	47	45	57	48	62	57	44	63
	%	0.4	0.4	0.5	0.4	0.5	0.5	0.3	.05
	<i>(excluding alcohol)</i>	%	0.7	0.6	0.7	0.6	0.8	0.8	0.5
Other Amphetamines/ Stimulants	<i>n</i>	24	21	34	17	28	21	31	30
	%	0.2	0.2	0.3	0.1	0.2	0.2	0.2	0.2
	<i>(excluding alcohol)</i>	%	0.3	0.3	0.4	0.2	0.4	0.3	0.4
Hallucinogens ³	<i>n</i>	16	17	25	17	16	15	9	19
	%	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2
	<i>(excluding alcohol)</i>	%	0.2	0.2	0.3	0.2	0.2	0.2	0.1
Club Drugs ⁴	<i>n</i>	29	24	24	39	42	35	63	77
	%	0.3	0.2	0.2	0.3	0.3	0.3	0.5	0.6
	<i>(excluding alcohol)</i>	%	0.4	0.3	0.3	0.5	0.6	0.5	0.8
Other ⁵	<i>n</i>	41	40	37	75	87	142	115	198
	%	0.4	0.4	0.3	0.6	0.7	1.2	0.9	1.6
	<i>(excluding alcohol)</i>	%	0.6	0.6	0.5	1.0	1.2	1.9	1.4
Total	N	10,563	10,812	12,253	12,027	12,138	11,947	12,948	12,622
<i>(excluding alcohol)</i>	N	7,012	7,237	7,845	7,706	7,552	7,350	8,122	7,840

¹Includes nonprescription methadone and other opiates and synthetic opiates.

²Includes barbiturates, benzodiazepine tranquilizers, clonazepam, and other sedatives.

³Includes LSD, PCP, and other hallucinogens.

⁴Includes Rohypnol®, ketamine (Special K), GHB, and MDMA (ecstasy).

⁵Includes inhalants, over-the-counter drugs, 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, by Percentage, in the State of Colorado: 2011

Characteristics	Alcohol ¹ Only or in Combination	Marijuana (MJ)	Cocaine	Meth- amphet- amine	Heroin	Other Opioids	Sedatives	Other Stimu- lants ²	Hallu- cinogens	Club Drugs	All Other ³
Total (N=29,598)	(12,179)	(6,088)	(2,283)	(4,226)	(2,150)	(1,894)	(140)	(68)	(47)	(177)	(346)
Gender	%	%	%	%	%	%	%	%	%	%	%
Male	67.7	76.6	59.4	53.8	64.9	50.4	41.4	54.4	80.9	68.9	72.8
Female	32.3	23.4	40.6	46.2	35.1	49.6	58.6	45.6	19.1	31.1	27.2
Race/Ethnicity	%	%	%	%	%	%	%	%	%	%	%
White	64.7	48.2	36.2	75.1	77.6	75.2	82.1	86.8	72.3	79.1	53.2
African-American	6.0	12.9	25.5	2.3	2.7	2.4	1.4	1.5	12.8	4.5	12.7
Hispanic	23.9	34.5	33.4	19.5	16.2	19.9	11.4	10.3	12.8	13.6	27.7
Other	5.4	4.4	4.9	3.2	3.6	2.5	5.0	1.5	2.1	2.8	6.4
Age at Admission											
Younger than 18	2.5	30.1	1.1	1.2	1.9	3.2	1.4	5.9	27.7	10.7	11.0
18–24	16.3	27.1	9.6	15.4	31.1	24.6	17.1	27.9	44.7	22.0	17.6
25–34	30.9	26.6	28.1	44.4	36.9	40.5	28.6	26.5	14.9	31.6	33.2
35–44	23.3	10.4	28.9	26.8	15.8	16.7	24.3	20.6	8.5	22.3	17.6
45–54	19.8	4.7	26.8	10.9	9.0	9.8	20.0	16.2	4.3	9.6	12.7
55 and Older	7.2	1.2	5.5	1.3	5.3	5.2	8.6	2.9	0.0	2.8	7.8
Route of Administration											
Smoking	0.5	94.4	59.6	62.4	14.7	4.8	4.2	3.6	8.5	46.3	6.1
Inhaling	0.3	3.0	32.1	7.7	4.3	12.6	3.3	5.0	6.4	8.5	12.4
Injecting	0.1	0.0	6.3	27.0	79.5	11.0	0.8	2.1	2.1	17.5	0.6
Oral/Other	99.1	2.6	2.0	2.9	1.5	71.6	91.7	89.3	83.0	27.7	80.9
Secondary Drug	MJ	Alcohol	Alcohol	MJ	Cocaine, Other Opioids	MJ, Alcohol	Other opioid, Alcohol	Alcohol & MJ	MJ	MJ	Alcohol
Tertiary Drug											
	23.6	39.4	30.9	29.3	23.5, 16.1	17.2, 15.6	20.0, 19.3	20.6, 14.7	36.2	29.9	7.8
	MJ	Alcohol	MJ	Alcohol & MJ	MJ	Alcohol & MJ	MJ & Alcohol	MJ & Alcohol	Alcohol & MJ	Alcohol & MJ	MJ & Alcohol
	4.2	6.6	10.6	11.4, 8.5	10.4	6.9, 6.7	12.9, 7.9	8.8	21.3, 14.9	13.6, 10.7	3.5, 2.6

¹Includes alcohol only or in combination with other drugs.

²Includes other stimulants (e.g., Ritalin®) and amphetamines (e.g., Benzadrine®, Dexadrine®, Desoyn®).

³Includes over-the-counter drugs, inhalants, anabolic steroids, and other nonclassified 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, by Percentage, in the Denver/Boulder Metropolitan Area: 2011

Characteristics	Alcohol ¹ Only or in Combination	Marijuana (MJ)	Cocaine	Meth- amphet- amine	Heroin	Other Opioids	Sedatives	Other Stimu- lants ²	Hallu- cinogens	Club Drugs	All Other ³
Total (N=12,622)	(4,782) %	(2,726) %	(1,199) %	(1,400) %	(1,314) %	(814) %	(63) %	(30) %	(19) %	(77) %	(198) %
Gender											
Male	64.5	76.4	61.6	58.6	63.9	46.4	47.6	60.0	94.7	72.7	75.8
Female	35.5	23.6	38.4	41.4	36.1	53.6	52.4	40.0	5.3	27.3	24.2
Race/Ethnicity											
White	63.6	42.3	32.8	77.8	76.0	78.7	87.3	86.7	68.4	76.6	48.0
African-American	8.6	18.5	31.4	2.9	3.7	3.6	1.6	0.0	21.1	6.5	17.2
Hispanic	22.0	34.1	29.9	14.9	15.6	14.5	6.3	10.0	10.5	11.7	30.8
Other	5.8	5.1	6.0	4.4	4.6	3.2	4.8	3.3	0.0	5.2	4.0
Age at Admission											
Younger than 18	2.1	35.4	1.1	1.1	1.5	2.9	3.2	6.7	26.3	20.8	8.1
18–24	14.4	25.3	8.0	13.1	26.8	20.8	20.6	23.3	42.1	18.2	16.2
25–34	29.9	24.3	27.2	43.3	38.1	40.9	27.0	23.3	15.8	28.6	33.8
35–44	25.3	9.6	28.9	30.3	16.9	18.8	25.4	23.3	15.8	20.8	20.7
45–54	20.8	4.4	28.9	11.2	10.0	11.4	17.5	23.3	0.0	9.1	13.1
55 and Older	7.6	0.9	5.9	1.1	6.7	5.2	6.3	0.0	0.0	2.6	8.1
Route of Administration											
Smoking	0.5	93.5	59.5	57.5	15.4	5.7	4.8	13.3	15.8	36.4	5.6
Inhaling	0.6	4.4	33.3	9.2	4.5	11.7	6.3	10.0	5.3	7.8	8.6
Injecting	0.1	0.0	5.8	29.4	78.5	8.0	1.6	10.0	0.0	13.0	0.5
Oral/Other	98.8	2.0	1.4	3.7	1.6	74.6	87.3	66.7	78.8	42.8	85.3
Secondary Drug	MJ	Alcohol	Alcohol & MJ	MJ & Alcohol	Cocaine, Other Opioids	Alcohol & MJ	Alcohol, Other Opioid	Alcohol	MJ	MJ	Alcohol
	23.1	39.7	31.5, 22.9	26.9, 19.8	25.7, 14.8	17.3, 16.5	23.8, 20.6	26.7	31.6	31.2	5.6
Tertiary Drug	MJ & Cocaine	Alcohol, Cocaine	MJ	Alcohol	MJ	Alcohol, MJ	MJ	MJ	MJ	Alcohol	MJ
	4.3, 4.1	6.1, 5.0	11.6	11.4	11.4	7.5, 5.8	14.3	10.0	21.1	16.9	2.5

¹Includes alcohol only or in combination with other drugs.

²Includes other stimulants (e.g., Ritalin®) and amphetamines (e.g., Benzedrine®, Dexadrine®, Desoyn®).

³Includes over-the-counter drugs, inhalants, anabolic steroids, and other nonclassified substances.

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

Exhibit 6. Weighted DAWN Rates per 100,000 Population for Selected Estimated Drug-Involved Visits, in the Denver Metropolitan Area and the United States: 2004–2009

ED Visit Rates per 100,000	2004	2005	2006	2007	2008	2009
Cocaine:						
Denver Metropolitan Rate	93.2	173.3	205.9	205.2	168.5	109.6
U.S. Rate	162.2	163.6	183.7	183.5	158.4	137.7
Heroin:						
Denver Metropolitan Rate	33.1	44.8	53	53.4	52.8	51.7
U.S. Rate	73.2	63.4	63.6	62.4	65.9	69.4
Marijuana:						
Denver Metropolitan Rate	50.5	90.3	137	147.2	151.7	124.1
U.S. Rate	96.1	94.6	97.3	102.3	123.0	122.6
Methamphetamine:						
Denver Metropolitan Rate	32.5	76.2	57.6	49.7	35.6	33.9
U.S. Rate	45.2	37.1	26.8	22.5	21.8	20.9
Narcotic Analgesics:						
Denver Metropolitan Rate	30.1	53.1	67.6	87.7	104.6	104.4
U.S. Rate	49.4	56.9	67.4	78.6	100.5	111.6
MDMA:						
Denver Metropolitan Rate	4.5	6.9	10	11.1	14.2	11.6
U.S. Rate	3.5	3.8	5.6	4.2	5.9	7.4
Benzodiazepines:						
Denver Metropolitan Rate	23.7	44.6	57.5	68.9	72	69.8
U.S. Rate	49	64.1	65.5	72.5	89.3	101.9

SOURCE: DAWN, CBHSQ, SAMHSA, weighted data, updated 10/5/2010

Exhibit 7. Most Common Drugs Identified in Drug-Related Decedents, by Percentage of All Cases, in Denver: 2006–2010

Drug Contributing to Cause of Death	2006		2007		2008		2009		2010	
	N	%	N	%	N	%	N	%	N	%
Cocaine	85	50.3	75	39.7	60	28.3	53	25.6	41	27.0
Morphine	64	37.9	43	22.8	48	22.6	26	12.6	18	11.8
Alcohol	65	38.5	66	34.9	75	35.4	72	34.8	52	34.2
Codeine	36	21.3	18	9.5	19	9.0	11	5.3	3	2.0
Heroin	17	10.1	18	9.5	27	12.7	49	23.7	35	23.0
Methadone	16	9.5	14	7.4	15	7.1	15	7.2	11	7.2
Oxycodone	7	4.1	38	20.1	33	15.6	48	23.2	24	15.8
Methamphetamine	9	5.3	12	6.3	15	7.1	10	4.8	14	9.2
Acetaminophen	2	1.2	14	7.4	13	6.1	4	1.9	8	5.3
Diazepam	11	6.5	19	10.1	16	7.5	23	11.1	19	12.5
Alprazolam	5	3.0	13	6.9	15	7.1	20	9.7	12	7.9
Hydrocodone	10	5.9	8	4.2	22	10.4	18	8.7	10	6.6
Diphenhydramine	1	0.6	11	5.8	11	5.2	3	1.4	9	5.9
Clonazepam	0	0	1	0.5	4	1.9	8	3.9	7	4.6
Fentanyl	3	1.8	5	2.6	5	2.4	13	6.3	5	3.3
Decedents ¹	169	—	189	—	212	—	207	—	152	—

¹Drug totals will not sum to decedents because more than one drug may be found in each individual's toxicology.

SOURCE: Denver Medical Examiner's Office Autopsy Reports, courtesy of Bruce Mendelson, Denver Office of Drug Strategy

Exhibit 8. Number and Rate per 100,000 Population of Drug-Related Hospital Discharge Reports, for Selected Drugs, in Denver: 2006–2010

Drug	2006	2007	2008	2009	2010
Alcohol (n)	10,288	10,116	11,361	11,750	12,573
Rate	1,828	1,773	1,952	1,937	2,095
Stimulants (n)	489	438	350	389	550
Rate	87	77	60	65	92
Cocaine (n)	1,862	1,634	1,502	1,399	1,439
Rate	331	286	258	235	240
Marijuana (n)	1,188	1,050	1,218	1,309	1,755
Rate	211	184	209	220	292
Opioid ¹ (n)	916	1,038	1,040	1,193	1,315
Rate	162	182	179	200	219
Population	562,862	570,347	581,903	595,573	600,158

¹Opioid category includes all narcotic analgesics and other opioids, including heroin.

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

Exhibit 9. Number of Statewide Drug-Related Calls to the Rocky Mountain Poison and Drug Center (Human Exposure Calls Only) in Denver: 2007–2011

Drug	2007	2008	2009	2010	2011
Alcohol	858	916	840	913	991
Cocaine/Crack	91	104	63	64	96
Heroin/Morphine	21	23	29	19	47
Marijuana	70	61	54	107	98
Methamphetamine	31	51	60	72	78
Club Drugs ¹	49	55	46	48	53

¹Club Drugs include GHB and MDMA.

SOURCE: Rocky Mountain Poison and Drug Center (RMPDC)

Exhibit 10. Number and Percentage of NFLIS Reports Among Drug Items Analyzed, by Drug Type, Based on Denver Top 10 Drugs, in Denver¹ and United States: CY 2011²

Drug	Denver Area		United States	
	N	%	N	%
Cocaine	2,129	34.6	260,045	19.5
Marijuana/Cannabis	1,460	23.5	448,935	33.7
Methamphetamine	691	11.1	137,591	10.3
Heroin	602	9.7	98,341	7.4
MDMA	117	1.9	9,567 ³	0.7
Oxycodone	117	1.9	53,661	4.0
Hydrocodone	70	1.1	39,213	2.9
Psilocin	63	1.0	2,750 ³	0.2
Phenylimidothiazole Isomer Undetermined (possible levamisole)	48	0.6	12,755	1.0
Alprazolam	43	0.7	36,334	2.7

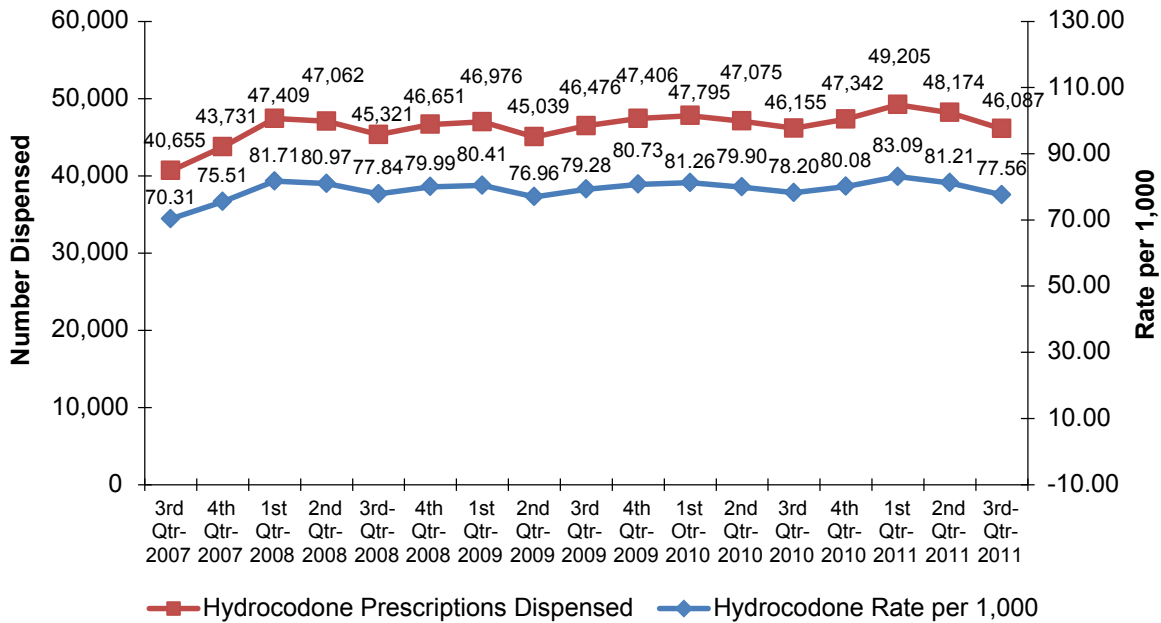
¹Denver area in this comparison includes Denver, Jefferson, and Arapahoe Counties.

²Data are for January–December 2011, and include primary, secondary, and tertiary reports; data for 2011 are preliminary and subject to change.

³Not in U.S. top 10.

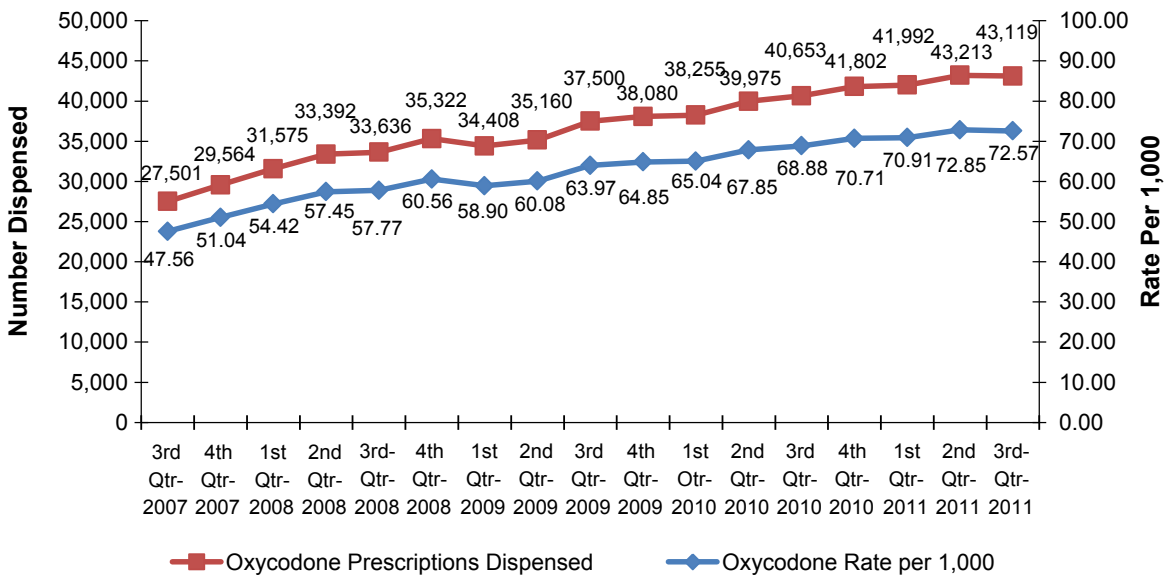
SOURCE: NFLIS, DEA, May 8, 2011

Exhibit 11. Number of Hydrocodone Prescriptions Filled, and Rate per 1,000 Population, in Denver: Third Quarter 2007 Through Third Quarter 2011



SOURCE: Prescription Drug Monitoring Program, Colorado Department of Regulatory Agencies, Division of Registrations, Board of Pharmacy

Exhibit 12. Number of Oxycodone Prescriptions Filled, and Rate per 1,000 Population, in Denver: Third Quarter 2007 Through Third Quarter 2011



SOURCE: Prescription Drug Monitoring Program, Colorado Department of Regulatory Agencies, Division of Registrations, Board of Pharmacy

Exhibit 13. Number and Percentage of AIDS Cases, by Exposure Category, in Colorado: Cumulative Through December 31, 2011

Exposure Category	AIDS Cases	
	Number	Percentage
MSM	6,636	65.7
IDU	895	8.9
MSM/IDU	1,064	10.5
Heterosexual	790	7.8
Other Risk Factor Not Identified	723	7.2
Total	10,108	100.0

Note: MSM=men who have sex with men; IDU=injection drug user.
SOURCE: Colorado Department of Public Health and Environment

Drug Abuse in Detroit, Wayne County, and Michigan: 2011

Cynthia L. Arfken, Ph.D.¹

ABSTRACT

Proportions of primary cocaine treatment admissions were stable at 17.3 percent of Detroit publicly funded admissions in the first half of fiscal year (FY) 2012 compared with 17.4 percent for FY 2011. More than 91 percent of these admissions were for crack cocaine. Of the total cocaine admissions, 64.3 percent were male; 90.9 percent were African-American; and 88.5 percent were older than 35. People admitted for cocaine as the primary drug of abuse were most likely to be homeless (at 39.9 percent). Cocaine accounted for the second highest percentage of drug reports among drug items seized and analyzed by National Forensic Laboratory Information System (NFLIS) laboratories in Wayne County and the State of Michigan for 2011. Calls to the Poison Control Center about intentional use of cocaine by humans declined to 111 in 2011 from 137 in 2010. In the first half of FY 2012, primary heroin treatment admissions increased to 33.6 percent of Detroit publicly funded admissions, compared with 31.4 percent for FY 2011. Of the heroin admissions, 66.0 percent were male; 77.7 percent were African-American; and 86.1 percent were older than 35. In Detroit, White clients had a lower mean age and were more likely to inject heroin than African-American clients: 37.8 versus 52 years, respectively, and 75.2 versus 33.8 percent, respectively. In the rest of the State, White clients also had a lower mean age and were more likely to inject heroin than African-American clients: 29.9 versus 48.5 years, respectively, and 88.9 versus 57.3 percent, respectively. The proportion of treatment admissions in Detroit for heroin has remained stable since 2003, at 31 percent of total admissions in calendar year (CY) 2003 and 31.4 percent in CY 2011. In comparison, for out-State² Michigan, the increase was from 9.4 to 16.6 percent. Also during this time there was an increase among people admitted for heroin in the proportion who were younger than 30. In Detroit, clients younger than 30 constituted 4.9 percent of heroin admissions in CY 2003; this proportion increased to 7.8 percent in CY 2011. Clients younger than 30 constituted 27.6 percent of heroin admissions out-State in CY 2003; this proportion increased to 54.6 percent in CY 2011. Heroin accounted for the third highest percentage of drug reports identified among drug items seized and analyzed in NFLIS laboratories in Wayne County and the State of Michigan for 2011. Calls to the Poison Control Center about intentional use of heroin by humans increased to 100 in 2011, compared with 84 in 2010. Treatment admissions for marijuana fell to 13.5 percent of the publicly funded admissions during the first half of FY 2012, compared with 15 percent in FY 2011. Of the marijuana admissions, 70.1 percent were male; 92.7 percent were African-American; and 22.1 percent were younger than 18. There was criminal justice involvement in 48.2 percent of the marijuana admissions. Marijuana accounted for the highest percentage of drug reports among drug items seized and analyzed by NFLIS laboratories in Wayne County and the State

¹The author is a Professor at Wayne State University in Detroit.

²Out-State includes any urban, suburban, or rural area in Michigan not included in the city of Detroit, including residents of Wayne County who do not live in Detroit.

of Michigan for 2011. Calls to the Poison Control Center about intentional use of marijuana by humans climbed to 112 in 2011, compared with 98 in 2010. Treatment admissions for other opiate use were lower in Detroit (at 2.9 percent) than for the rest of the State (at 15.9 percent). The proportion of treatment admissions in Detroit for other opiates increased from 1.4 in CY 2003 to 3 percent in CY 2011. In comparison, for out-State Michigan the increase has been from 4.4 to 16.7 percent. Also during that time, there was an increase among people admitted for other opiates in the proportion who were younger than 30. In Detroit, clients younger than 30 constituted 21.3 percent of treatment admissions for other opiates in CY 2003; this proportion increased to 28.5 percent in CY 2011. Out-State, 39.7 percent of treatment admissions in CY 2003 were younger than 30; this proportion increased to 50.4 percent in CY 2011. For the State of Michigan, prescriptions filled in 2011 increased for Schedule II, III, and IV drugs. During 2011, 33.3 percent of all prescriptions filled were for Vicodin®; this proportion represented a steady increase in the percentage for this drug since monitoring began. Prescriptions filled for all strengths of OxyContin® declined in 2011 from the previous year. This decline was also apparent in the Automation of Reports and Consolidated Orders System (ARCOS) maintained by the Drug Enforcement Administration. According to ARCOS, Michigan ranked 44th out of all States for grams of oxycodone distributed per capita to the retail level. Out-State treatment admissions were more likely to have criminal justice involvement and less likely to be homeless: 21.4 versus 52 percent, and 28.7 versus 8.3 percent, respectively. The out-State treatment admissions also contained a higher percentage of admissions younger than 30 for heroin (54.2 percent compared with 8.1 percent in Detroit), other opiates (50.2 percent compared with 32.6 percent in Detroit), and heroin or other opiates (52.3 percent compared with 10.0 percent in Detroit). Indicators for methamphetamine and ecstasy remained low. Calls to the Poison Control Center increased for synthetic cannabinoids (cannabinimimetics) from 2010 to 2011. Reports for these substances were also increasing among drug items seized and analyzed by NFLIS laboratories from 2010 to 2011 in Wayne County.

INTRODUCTION

Area Description

Detroit and surrounding Wayne County are located in the southeast corner of Michigan's Lower Peninsula. In 2010, the Wayne County population totaled fewer than 2 million residents (39 percent live in Detroit) and represented 18.4 percent of Michigan's 9.9 million population. Michigan was the only State in the 2010 census to lose population over the decade.

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 by 25 percent to 713,777 (the State is currently ranked 18th). The racial distribution did not change substantially. The six-county Metropolitan Statistical Area ranked 11th in total 2010 population in the country. Detroit has the highest percentage of African-Americans (82 percent in 2000) 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 in Detroit, 10 other large airports that also have international flights, and 235 public and private small airports.

- The State shares a 700-mile international border with Ontario, Canada. There are land crossings at Detroit (a 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 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, three 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 United States border with Canada. Detroit and Port Huron have nearly 10,000 trains entering from Canada each year.

Additional factors influencing substance use in Detroit include the following:

- The percentage of individuals living below the Federal poverty level in 2000 (at 26.1 percent) increased to 34.5 percent in 2010; this was a 32.2-percent increase.
- At the State level, the unemployment rate has been among the highest in the country since 2002. As of May 2012, the unemployment rate had declined to 8.5 percent. Within the State, Detroit has one of the lowest rates of employed adults.

Data Sources

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

- **Treatment admissions data** for the first half of fiscal year (FY) 2012³ 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 those clients whose treatment was covered by Medicaid or Block Grant funds. It therefore underestimates the total number of people receiving treatment as it does not include treatment paid by cash or covered by private insurance. Additionally, the data do not include admissions funded by the Michigan 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).
- **Heroin purity data** were provided by the Drug Enforcement Administration (DEA) for 2010.
- **Drug intelligence data** were provided by the DEA.
- **Data on drug reports among drug items seized and identified** in Wayne County and the State of Michigan were provided by the National Forensic Laboratory Information System (NFLIS) for calendar years (CYs) 2009–2011, as reported in May 2012. The total reports include primary, secondary, and tertiary substances detected. The totals are preliminary and subject to change. Data for 2011 lack 2 months of reporting from the Michigan State Police laboratory.

³Treatment data for Detroit for 2011 contained in this report differ from those in the cross-area treatment tables in Volume I of the June 2012 CEWG report; data here are for the first half of FY 2012 (October 2011–March 2012), while data in Volume I are for calendar year (CY) 2011 (January–December 2011). Treatment admissions trend data in this report comparing 2003 with 2011 also reflect CY data.

- **Poison control case data** from contact data on cases of intentional abuse of substances for CY 2011 were provided by the Children's Hospital of Michigan Poison Control Center in Detroit. This center is now the only poison control center in Michigan. To provide trend data, the report covers the eastern portion of the State.
- **Numbers of prescriptions filled in the State of Michigan** for 2011 were provided by the Board of Pharmacy, MDCH.
- **Prescription drug retail distribution data** were provided by the Automation of Reports and Consolidated Orders System (ARCOS).
- **Drug-related infectious disease data** were provided by the MDCH on newly diagnosed cases of acquired immunodeficiency syndrome (AIDS) and human immunodeficiency virus (HIV) for 2011.
- **Youth Risk Behavior Survey (YRBS) data** are from the 2011 survey conducted by the Centers for Disease Control and Prevention in high school students.

DRUG ABUSE PATTERNS AND TRENDS

Cocaine

For the first half of FY 2012, 17.3 percent of all Detroit publicly funded treatment admissions listed either powder cocaine or crack cocaine as the primary drug of abuse (exhibit 1); this was similar to the FY 2011 proportion, at 17.4 percent. Of the current cocaine treatment admissions, 91.3 percent were for crack cocaine. Clients seeking treatment for cocaine were predominately male (64.3 percent), African-American (90.9 percent), and older (88.5 percent were 35 or older). There was criminal justice involvement in 16.3 percent of the cocaine admissions, and 39.9 percent were homeless at the time of admission. Cocaine ranked second in the percentage of drug reports among drug items seized and identified in Wayne County and in the State of Michigan by NFLIS forensic laboratories in 2011 (exhibit 2). The number of calls for intentional human use of cocaine to the Poison Control Center decreased from 137 in 2010 to 111 in 2011. The percentage of high school students who reported ever using cocaine (at 4.1 percent) was not significantly different from the national estimate.

Heroin

In the first half of FY 2012, 33.6 percent of Detroit publicly funded treatment admissions reported heroin as the primary drug of abuse (exhibit 1), compared with 31.4 percent in FY 2011. Clients seeking treatment for heroin were likely to be male (66 percent), African-American (77.7 percent), and older (86.1 percent were 35 or older). There was criminal justice involvement in 10.5 percent of the heroin admissions, and 27.9 percent reported being homeless at the time of admission. White clients had a younger mean age and were more likely to inject heroin than African-American clients. White primary heroin admissions had a mean age of 37.8 years, compared with 52 years among African-American admissions. While 75.2 percent of Whites reported injection as the main route of administration, 33.8 percent of African-American heroin admissions reported injection as the main route of heroin administration in the first half of FY 2012. Heroin ranked third among the number of drug reports from drug items seized and identified in Wayne County and the State of Michigan by

NFLIS laboratories during 2011 (exhibit 2). Calls to the Poison Control Center for intentional human use of heroin continued to increase, from 84 in CY 2010 to 100 in CY 2011. The percentage of high school students who reported ever using heroin in 2011 (2.4 percent) was significantly lower than the 11.1 percent reported in 2009 by Detroit students.

Unlike Detroit, heroin admissions in the rest of the State showed the majority were younger than 30 (54.2 percent). In Detroit, 8.1 percent of the admissions with heroin as the primary drug of abuse were younger than 30. Since CY 2003, the proportion of treatment admissions in Detroit for heroin has remained stable (at 31.0 percent in 2003 and 31.4 percent in 2011). In comparison, for out-State Michigan, the increase has been from 9.4 to 16.6 percent. Also during this time there was an increase among clients admitted for heroin in the proportion who were younger than 30. In Detroit, such admissions increased from 4.9 percent in CY 2003 to 7.8 percent in CY 2011; out-State admissions for this age group increased from 27.6 percent in 2003 to 54.6 percent in 2011.

Data from 2010 suggest that heroin street prices remained stable and relatively low in Detroit. A wide range of purity could also be found, but it averaged 36.4 percent pure in 2010 for South American and 48.3 percent pure for Southwest Asian heroin. South America remained the dominant source, although heroin was found from Southwest Asia and unidentified locations.

Other Opiates

Other opiates represented 2.9 percent of primary treatment admissions in Detroit during the first half of FY 2012 (exhibit 1). Of the 138 admissions, only 6 were for diverted methadone, with the remainder categorized as other opioids. In Detroit, clients younger than 30 constituted 32.6 percent of the admissions with other opiates as the primary drug of abuse. Admissions for other opiates in the rest of the State showed the majority were clients younger than 30 (at 50.2 percent). The proportion of treatment admissions in Detroit for other opiates increased from 1.4 in CY 2003 to 3 percent in CY 2011. In comparison, for out-State Michigan, there was an increase from 4.4 percent in CY 2003 to 16.7 percent in CY 2011. Also during this time there was an increase among people admitted for other opiates in the proportion who were younger than 30. In Detroit, admissions in this age group increased from 21.3 percent in CY 2003 to 28.5 percent in CY 2011. Out-State clients in this age group increased from 39.7 percent in 2003 to 50.4 percent in 2011.

Two opioids—hydrocodone (with 296 reports) and oxycodone (with 62 reports)—were among the top 10 drugs reported from drug items seized and analyzed in NFLIS laboratories in Wayne County in 2011 (exhibit 2). For the State of Michigan, hydrocodone and morphine were among the top 10 drugs reported from analyzed drug items. These data are missing 2 months of data, and they are subject to change.

Numbers of Poison Control Center calls for intentional human usage of hydrocodone increased from 2009 to 2011 ($n=732$ in 2011, compared with $n=541$ in 2009). Calls for intentional human usage of oxycodone also increased. They numbered 127 in 2011, compared with 105 in 2010. Calls for intentional human usage of methadone declined from 60 in 2010 to 49 in 2011.

The number of prescriptions filled in Michigan across different schedules, including for opioids, continued to climb in 2011. For Schedule II medications, the number of prescriptions filled increased from 3,540,701 in 2010 to 3,838,174 in 2011. For Schedule III medications, the number of prescriptions

filled increased from 7,065,485 in 2010 to 8,059,758 in 2011. Hydrocodone accounted for 33.3 percent all prescriptions filled for scheduled medications in Michigan. Prescriptions for all strengths of OxyContin® declined from the previous year. The decline was also apparent in ARCOS data for 2011. According to ARCOS, Michigan ranked 12th among the States in grams of hydrocodone distributed per capita and 44th among the States in grams of oxycodone distributed.

Methamphetamine

In Detroit during the first half of FY 2012, treatment data showed that admissions for stimulants other than cocaine as primary drugs of abuse included two admissions for methamphetamine and two for other amphetamines. Admissions with methamphetamine as the primary drug of abuse totaled 337 in the rest of the State of Michigan (or 1.4 percent of total admissions). The Poison Control Center recorded seven calls for intentional human usage of methamphetamine in CY 2011. Methamphetamine was not among the top 10 drugs reported from drug items seized in Wayne County or the State of Michigan and identified by forensic laboratories (exhibit 2). The percentage of high school students who reported ever using methamphetamine in 2011 (3.3 percent) was significantly lower than the 12.2 percent reported in 2009 by Detroit students.

Marijuana

Marijuana indicators remained mostly stable but at elevated levels in Detroit in 2011. Domestic, Canadian, and Mexican marijuana remained widely available. Among all publicly funded substance abuse admissions in Detroit, marijuana declined to 13.5 percent in the first half of FY 2012 from 15.0 percent in FY 2011 (exhibit 1). Clients seeking treatment for marijuana were more likely to be male (70.1 percent), African-American (92.7 percent), and have criminal justice involvement (48.2 percent, a decline from 54.4 in FY 2011). Approximately one-fifth of the admissions in the first half of FY 2012 (22.1 percent) were younger than 18, a substantial decline from FY 2007, when they constituted 38.7 percent of all admissions.

Marijuana was the most frequently identified drug reported among drug items seized and analyzed by NFLIS laboratories in Wayne County and the State of Michigan in 2011 (exhibit 2). The number of Poison Control Center calls for human intentional exposure to marijuana increased to 112 in 2011 compared with 98 in 2010. The percentage of high school students who reported ever using marijuana in 2011 (47.9 percent) was significantly higher than the 36.4 percent reported by Detroit students in 2009.

Michigan voters approved a Medical Marijuana referendum in the 2008 election with implementation in April 2009. Local area media have reported arrests of owners of dispensaries and growing operations. However, the cases have not gone to court as of the writing of this report.

Hallucinogens and Emerging Psychoactive Drugs

The “club drugs” category includes MDMA (3,4-methylenedioxymethamphetamine) or ecstasy, GHB (gamma hydroxybutyrate), flunitrazepam (Rohypnol®), ketamine, PCP (phencyclidine), and hallucinogens. There were five treatment admissions in Detroit for club drugs during FY 2010. Such admissions decreased to one during the first half of FY 2012. In the State of Michigan, there were 32 such admissions for the first half of FY 2012. MDMA did not rank among the top 10 NFLIS drugs

reported from drug items seized in Wayne County and identified by NFLIS laboratories in 2011 (exhibit 2).

Synthetic drugs, including substances identified as synthetic cannabinoids (cannabimimetics) and synthetic (substituted) cathinones, were emerging as a public health threat. The threat was realized due to calls to poison control centers reporting intentional human usage and hospitalizations, both in the State of Michigan and nationally. In the State of Michigan, there were 164 calls in 2011 for synthetic (substituted) cathinones and 26 calls through March 2012. There were 224 calls in 2011 for synthetic cannabinoids (cannabimimetics) and 126 calls through March 2012 in Michigan. Based on this information and the lack of safety data for human consumption, the State of Michigan scheduled specific synthetic (substituted) cathinones and synthetic cannabinoids (cannabimimetics). In 2012, some Michigan counties, including Wayne County, declared a public health emergency of synthetic cannabinoids (cannabimimetics) and synthetic (substituted) cathinones. A bill to restrict sale of these synthetic substances at the State level was under consideration at the time of this writing.

INFECTIOUS DISEASES RELATED TO DRUG ABUSE

During 2011, there were 92 newly diagnosed cases of HIV/AIDS in Michigan. These newly diagnosed people were disproportionately African-American, male, and located in the five-county metropolitan Detroit area. The percentage of newly diagnosed cases with a history of injecting drugs appeared to be stable, at 5 percent.

For inquiries concerning this report, contact Cynthia L. Arfken, Ph.D., Professor, Wayne State University, 2761 E. Jefferson Avenue, Detroit, Michigan 48207, Phone: 313-577-5062, Fax: 313-993-1370, E-mail: carfken@med.wayne.edu.

Exhibit 1. Percentage of Treatment Admissions¹, by Primary and Secondary Drugs of Abuse, in Detroit: First Half of FY 2012²

Drug	Primary Drug of Abuse (%)	Secondary Drug of Abuse (%)
NONE	—	56.0
Alcohol	32.2	12.6
Heroin	33.6	1.8
Cocaine	17.3	17.5
Other Opiates	2.9	1.6
Marijuana	13.5	9.5
Other Drugs	0.3	1.0

¹N=4,745; 91.3 percent of the cocaine is crack. Five entries without a primary drug of abuse were eliminated from the analysis.

²Data are for October 2011–March 2012.

SOURCE: Michigan Department of Community Health, Division of Substance Abuse and Gambling Services, Bureau of Substance Abuse and Addiction Services

Exhibit 2. Number and Percentage of Most Commonly Identified Drugs Among Reports¹ From Drug Items Seized and Analyzed in NFLIS laboratories in Wayne County: CY 2011²

Substance	Number of Reports	Percent of Reports³
Marijuana/Cannabis	3,254	45.7
Cocaine	1,464	20.6
Heroin	919	12.9
Hydrocodone	296	4.2
Alprazolam	193	2.7
Oxycodone	62	0.9
Possible levamisole	53	0.7
TFMPP (1-3-(trifluoromethylphenyl)piperazine)	51	0.7
Caffeine	50	0.7
BZP (1-benzylpiperazine)	46	0.6
Other	735	10.3
Total Items Reported	7,123	100.0

¹NFLIS methodology allows the accounting of up to three drug reports per item submitted for analysis. The data presented are a combined count including primary, secondary, and tertiary reports for each drug item for the selected drugs.

²Data are for January–December 2011. Data are incomplete and subject to change.

³Percentages may not sum to the total due to rounding.

SOURCE: NFLIS, DEA

Drug Abuse Trends in Honolulu and the State of Hawaii: 2011

D. William Wood, M.P.H., Ph.D.¹

ABSTRACT

This report presents 2011 data on drug use in Honolulu and the State of Hawaii. Statewide, primary treatment admissions for cocaine increased. Honolulu Police Department (HPD) estimated arrests for cocaine and cocaine-related deaths in Oahu decreased in 2011. All heroin indicators decreased in 2011; however, some decreased only slightly. Opioid-related deaths also decreased. Primary treatment admissions for marijuana increased, Medical Examiner (ME) decedent toxicology reports for marijuana decreased, and HPD estimates for marijuana-related arrests increased. Primary methamphetamine treatment admissions increased in 2011, but ME toxicology screens positive for methamphetamine decreased. Estimates of HPD arrests for methamphetamine-related offenses were slightly lower than in 2010. The pattern of substances identified among reports of drug items seized and analyzed in National Forensic Laboratory Information System (NFLIS) laboratories changed in 2011. Reports for methamphetamine and cocaine were lower in proportion to the total reports identified in drug items analyzed in NFLIS laboratories than in other years, while marijuana reports and “other” drug reports of items seized and analyzed increased. MDMA (3,4-methylenedioxymethamphetamine) did not appear among the top 15 reports of drug items analyzed in 2011. Despite the continued weakness in the general economy in Hawaii, the drug economy remained stable or was increasing slightly.

INTRODUCTION

This report presents current information on drug use in Honolulu and the State of Hawaii, based on the Honolulu Community Epidemiology Work Group (CEWG). The Honolulu CEWG has been operational for 23 years and was established at the suggestion of the National Institute on Drug Abuse as a response to the many reports of a “new” drug arriving on Hawaii’s shores, methamphetamine. Methamphetamine—“Batu,” “Shabu,” “crystal,” or “ice,” as it was known at the time—has had a profound influence on the health and social status of residents of the Hawaiian islands. Methamphetamine (methamphetamine hydrochloride [HCl]) in its purest and crystalline form has now impacted the entire Nation in one form or another. This report continues to track the indicators for that drug, as well as other drugs that are prevalent in Hawaii.

Area Description

Hawaii has a slowly increasing population of approximately 1.3 million residents and has approximately 6 million visitors per year. Growth in the State is mainly focused on the neighbor islands. The population on the main island of Oahu, the county with the largest population in the State, may

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be decreasing. Having experienced much of the seriousness of the recession for the past several years, the economy of Hawaii began to recover, although not fully, in 2011.

Unemployment in Hawaii in 2011 averaged about 6.2 percent, having peaked in late 2008 at nearly 10 percent. In spite of the fluctuations in the general economy in Hawaii, the drug economy remained stable or increased slightly.

Data Sources

The Honolulu CEWG was unable to hold a face-to-face meeting prior to this report; this was the third biannual meeting to be cancelled since the group began in 1989. Data were therefore collected directly from the member agencies for inclusion in this report. The Hawaii High Intensity Drug Trafficking Area (HIDTA) program office facilitated acquisition of data from the Drug Enforcement Administration (DEA) and the Honolulu Police Department (HPD)², but HPD data for the second half of 2011 were not available. Drug price data are also usually provided by the Hawaii HIDTA and HPD for 2011. During 2011, drug prices were not reported.

Specific data sources used in this report are listed below:

- **Treatment admissions and demographic data** were provided by the Hawaii State Department of Health, Alcohol and Drug Abuse Division (ADAD). Previous data from ADAD are updated for this yearly report when ADAD reviews its records. These data represent all State-supported treatment facilities (90 percent of all facilities). Approximately 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 of admissions was covered by State health insurance agencies or by private insurance. The rate of uninsured for the State remained at about 10 percent.
- **Drug-related death data** were provided by the Honolulu City and County Medical Examiner's (ME's) Office for 1991–2010. These data are based on toxicology screens performed by the ME's Office on decedents brought to them for examination. The types of circumstances that would lead to a body being examined by the ME include unattended deaths, deaths by suspicious cause, and drug-related deaths. While the ME data are consistent, they are not comprehensive and account for only about one-third of all deaths on Oahu. To allow a direct comparison between ME data and treatment data, the ME data were multiplied by a factor of 10 on report exhibits. In 2010, the ME's Office determined that, due to the technology in the Honolulu ME laboratories, it was difficult to detect heroin from a group of opioids found in the same screen. As a result, data for 2010 and possibly 2009 are tentative and not definitive.

²HPD data are presented for the first half of the year since full year data were not submitted in time for this report. Two methods were used to estimate the nature of the trends in the HPD data. The January through June data were doubled, assuming that the first half of the year's data would be the same for the last half of the year (July through December). The previous year's data were then compared with the 2011 data to determine if the 2 years were similar in their first 6 months of collection. If so, the estimates for HPD cases were adjusted in the direction of the trend from the first half to the second half of 2010.

- **Law enforcement case data** for 2011 were received from the HPD for Honolulu for the first half of the year. As noted in the footnote, a two-step estimate process to convert these semiannual data into an annualized data point was employed. 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 including data from neighbor island police departments; only HPD data are now reported.
- **Crime laboratory data** are from the National Forensic Laboratory Information System (NFLIS), administered by the DEA, which collects solid dosage drug analyses conducted by State and local forensic laboratories on drugs seized by law enforcement (through December 2011). Data presented are from Honolulu County. NFLIS methodology allows for the accounting of up to three drugs per item submitted for analysis. The data presented for 2009–2011 are a combined count including primary, secondary, and tertiary reports for each drug for. NFLIS data are subject to change. The longer the time after the calendar year for which data are extracted, the less likely there will be large changes in the number of drug reports. Therefore, data for 2011 are more likely to be subject to change than data for earlier years.
- **Uniform Crime Reports (UCR) data** were accessed from the State's Attorney General's Web site for 1975–2010.

DRUG ABUSE PATTERNS AND TRENDS

Cocaine/Crack

Powder cocaine and crack treatment admissions in Hawaii are shown for 2005–2011 on exhibit 1. There was an initial increase in admissions in 2005–2006, followed by a relatively consistent decrease over the following 4 years, ending in 2010 at 219 admissions. This suggests that cocaine use was declining in Honolulu from 2006 to 2010 (exhibit 1). The reasons for the decline are uncertain and could range from market restrictions, difficulties of treatment admission, shifts in patterns of demand, or simply choice of another drug by users. In 2011, powder cocaine/crack treatment admissions ranked fifth (with 2.9 percent of admissions) among primary drugs reported for treatment admissions, after methamphetamine, alcohol, marijuana, and other drugs. The number of admissions with cocaine as a secondary or tertiary drug of abuse was not reported by ADAD.

The Honolulu ME reported 22 deaths with a cocaine-positive toxicology screen in 2011, compared with 24 deaths with cocaine detected in a toxicology screen in 2010 (exhibit 1). From 2005 through 2011, the number of deaths in which decedent toxicology was positive for cocaine ranged from a low of 15 in 2005 to a high of 29 in 2007.

HPD cases for cocaine/crack were at a decade-long high in 2006, with 305 cases (a 111-percent increase from 2005) (exhibit 2). In 2010, the number of arrests related to cocaine dropped to 77, but the total increased slightly to 79 cases in 2011.

Heroin and Other Opiates

It has been more than two decades since the HPD has arrested an opioid user in possession of powder white heroin. Heroin in Honolulu is black tar heroin from Mexico. Data indicate that the presence of heroin in the community has declined rapidly in Honolulu since 2009, even though black tar heroin remained readily available in all other areas of the State. NFLIS data over the past 11 years show that heroin, regardless of form, has been found among reports of seized and analyzed drug items at a proportion of 2 percent or less of total drug reports.

There was a slight increase in the number of heroin primary treatment admissions from 2009 ($n=165$) to 2010 ($n=238$) (exhibit 3). However, in 2011, those numbers declined to 130, the lowest number in a decade. In 2010, heroin ranked sixth (at 1.2 percent of all admissions) among total treatment admissions.

The Honolulu ME reported that deaths in which heroin were detected in the toxicology screen numbered 29 in 2008, compared with 47 in 2010. For 2011, the number of deaths with toxicology screens showing the presence of an opiate was 42. The ongoing difficulty in determining the presence of heroin versus morphine and other opiates in toxicology screens continued, leaving the ME unable to accurately determine which cases were specifically heroin. Because of this, all opiate deaths (in which any opiate was detected in a toxicology screen), along with heroin deaths, are also shown in exhibit 3. Decedents with a positive toxicological result for other opiates were primarily composed of those with a toxicology screen in which hydrocodone, oxycodone, morphine, or methadone was detected; they numbered 66 decedents in 2010 and 54 in 2011. The exact medication (e.g., Oxy-Contin®) was not specified.

The HPD reported 27 heroin-related cases in 2010, an increase from 7 heroin cases in 2009. There were 24 heroin-related cases in 2011, compared with 53 heroin cases in 2008, 19 cases in 2007, 15 cases in 2006, and 31 cases in 2005. (exhibit 4). Despite the very high number of cases reported in 1998 ($n=87$) and 2008 ($n=53$), the multiyear trend in heroin cases has been a downward one from the 54 cases reported in 1995.

Marijuana

The June 2011 CEWG report for Hawaii noted that statewide marijuana treatment admissions reached their highest level since data collection began in 1991, with 2,408 primary marijuana admissions in 2010 (exhibit 5). The number of primary treatment admissions for marijuana increased again in 2011, with 2,497 admissions (23.1 percent of total admissions). This represented a continuation of yearly increases in primary marijuana admissions since 2005. The 2011 admissions were nearly 10 times the number of admissions in 1992 and represented a nearly 33-percent increase from 2005. Clients admitted for treatment in 2011 continued to be younger and referred by the courts and schools. While marijuana was 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 Oahu ME reported 12–21 deaths per year in which marijuana was found in toxicology screens (marijuana was often used with other drugs if there was a drug-related death). Those numbers increased to 25–45 between 2000 and 2005. In 2009, the number of decedents with a positive tetrahydrocannabinol (THC) toxicological screen was 49. In 2010, the ME

reported 54 decedents with positive toxicology screens for marijuana, the highest number since data collection began in 1991 (exhibit 5). In 2011, the numbers declined to 30.

The HPD continued to monitor, but not specifically report, all case data for marijuana. Instead, marijuana cases are combined with other drugs under the category “Detrimental Drugs,” an artifact of the UCR system. As mentioned in previous CEWG reports, possession cases remained steady at about 650 per year, although distribution cases continued to increase. Law enforcement sources speculated that much of the Big Island’s marijuana is brought to Oahu for sale. However, in addition to neighbor island marijuana, marijuana is imported from Mexico (low grade) and from Canada (BC Bud, high grade). Exhibit 6 shows that an estimated 290 cases of Detrimental Drugs were reported by the HPD in 2011, compared with 211 cases in 2010, 178 cases in 2009, 186 cases in 2008, 125 cases in 2007, 120 cases in 2006, and 116 cases reported in 2005.

Methamphetamine

While “speed” has been present in the islands for decades, it was generally of low potency and had great variability in its availability and quality. In 1985, there were early reports of a new drug called “*Shabu*” or “*Batu*”³. The island’s methamphetamine problem has existed for more than 25 years, and methamphetamine has remained the drug of choice with the 18–34 age group, based on treatment admissions data. The concerns of treatment providers and law enforcement officers have been well documented in these reports over the years. Hawaii’s methamphetamine has always been of extremely high purity⁴, which distinguished it from the “speed” of early decades. Anecdotal evidence emerged in the latter part of 2005 that suggested that even though the price of the drug was constant, the purity had declined from earlier levels. According to HIDTA, the purity of several samples submitted during late 2005 was in the mid-50s rather than in the high 90s. High purity is necessary for smoking the drug, Hawaii’s chosen route of administration.

Statewide, the spike in methamphetamine treatment admissions reported in 2009 was short-lived, and the previously reported 4-year decline continued. The 2009 admissions data ($n=3,693$, or 33.8 percent of all admissions) were preceded in 2008 by 2,726 admissions (32.1 percent of total treatment admissions) (exhibit 7). This represented a decline from 2005 ($n=3,353$), 2006 ($n=3,253$), and 2007 ($n=3,209$). The demand for treatment space for methamphetamine abusers increased by nearly 2,000 percent since 1991, a situation that continues to outstrip the treatment system’s capacity. Primary methamphetamine treatment admissions have fluctuated between 2008 and 2011 with large increases and decreases in admissions from 1 year to another (exhibit 7). This trend continued for the 2011 admissions data with a substantial increase from 2,764 admissions in 2010 to 4,138 admissions in 2011.

Police data for methamphetamine were even more varied than treatment data, and they were at a much lower level. HPD methamphetamine case data for Honolulu continued to vary considerably from year to year. The highest recorded number of cases in the past decade was in 2003 ($n=984$), the lowest number ($n=237$) was in 2009 (exhibit 8). In 2005, 962 cases were reported by the HPD,

³Crystal methamphetamine is known as *Shabu* in Japan and Korea and *Batu* in the Philippines.

⁴Cunningham, James K., Lon-Mu Liu, and Russell Callaghan (2009). *Impact of US and Canadian precursor regulation on methamphetamine purity in the United States*. *Addiction*, (104: 441-453).

which was the second highest number of cases since data collection began in 1991. There were 722 cases in 2006; this number declined to 567 cases in 2007. The number of cases continued to decline in 2008 and 2009, with 400 cases and 337 cases, respectively. There were 404 cases in 2010 and 395 cases in 2011 (exhibit 8).

Between 1994 and 2000, the Oahu ME reported toxicology screen positivity for crystal methamphetamine in 24–38 cases per year. In 2001, that number increased to 54, and methamphetamine-positive decedents increased again to 62 in 2003. They numbered 56 in 2004 and 88 in 2005. This represented 97.3 deaths per 1,000,000 population for the island of Oahu in 2005. The 2010 number of decedents with methamphetamine-positive toxicology reports was 76; this number declined to 47 in 2011, according to the ME (exhibit 7).

Crystal methamphetamine prices remained constant for street purchases and for wholesale size purchases in 2009 and 2010. The drug is sold in the islands as “clear” (a clear, white form) or “wash” (a brownish, less processed form). Ice prices were approximately \$100 for 0.25 grams, and wash was priced at approximately \$50 per 0.25 gram in 2008. Wash sold for \$425 for 3.5 grams, and clear sold for \$700 for the same quantity. As mentioned in previous reports, the methamphetamine sold in Hawaii is of extremely high potency and is most often smoked (more than 90 percent of methamphetamine is reportedly smoked).

Drug reports for methamphetamine among items seized and analyzed in NFLIS laboratories in 2011 ranked second among the total items analyzed (marijuana ranked first), at 38.1 percent of all samples analyzed in Hawaii. This was the first time since NFLIS data have been reported that methamphetamine has not ranked first among all items seized and identified. This supports the general declining trend for methamphetamine reports among drug items analyzed by NFLIS laboratories.

Other Drugs

MDMA

MDMA (3,4-methylenedioxymethamphetamine), or ecstasy, is present in Hawaii, although most indicators did not detect its presence. Individuals were not entering treatment with MDMA as their primary drug of use. Additionally, people were not being arrested for MDMA-related offenses by the HPD, and MDMA was not present in ME toxicology screen data. NFLIS data did not show MDMA as one of the top five drugs reported in items seized and identified in Honolulu until 2003. Between 2003 and 2010, MDMA reports among analyzed forensic laboratory drug items increased to the point where MDMA moved past heroin into fourth place among all items analyzed. However, in 2011, MDMA did not rank among the top 15 reported drugs in items analyzed by NFLIS laboratories.

Depressants

Barbiturates, sedatives, and sedatives/hypnotics are combined into the “depressants” 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 were minimal in terms of impact on the State system. The number of ME mentions for depressants in Honolulu has remained stable for several years, numbering five or less. The HPD has not reported depressant case data since 1991.

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.

TREATMENT ADMISSIONS SUMMARY: 1991–2011

As has been the case for the past 23 years of reports from Hawaii, Hawaiians⁵ and Caucasians remained the majority (64 percent of all admissions) among the 29 identified ethnic groups (plus the “other” and “unknown”/blank categories) accessing ADAD services for treatment. During 2011, 43.6 and 21.5 percent of the admissions to treatment services were for those self-identifying as Hawaiian or Caucasian, respectively. All other groups represented substantially lower proportions of admissions. Males accounted for 66.1 percent of all treatment admissions; clients younger than 18 (26.1 percent) and clients age 25–34 (24.2 percent) and 35–44 (17.8 percent) dominated admissions. One-third (33.8 percent) of all admissions were self-referrals. The criminal justice system and court referrals accounted for another one-third of admissions (33.6); the balance were a series of small referral sources accounting for approximately one-fifth (18.9 percent) of admissions. Less than 30 percent (27.2 percent) of all admissions were students.

Methamphetamine continued to be the leading primary substance of abuse for clients admitted to treatment, accounting for 38.2 percent of all admissions in 2011. Alcohol was the second most frequently reported primary substance for treatment admissions (29.7 percent), with marijuana (23.1 percent) the third primary substance self-reported upon admission to treatment. As in other jurisdictions, almost all admissions were polydrug treatment admissions, and most listed alcohol as a substance of abuse in addition to the primary drug at admission. While marijuana accounted for the majority of treatment admissions among clients younger than 18 (the most frequently admitted age group), the abuse of ice or crystal methamphetamine remained the major treatment category for all admissions.

Exhibit 9 shows the impact that methamphetamine and marijuana have on the demand for treatment services in the State. At the beginning of this 20-year dataset, as with most alcohol and drug treatment programs operated at the State level, the biggest contributor of clients for treatment came from those experiencing difficulties with alcohol (not shown on the exhibit). This situation changed in the mid-1990s, with methamphetamine taking the lead position in terms of frequency of reports of the drug most responsible for the admission in the western United States. It has not lost that lead position in Hawaii for the past 15 years. Marijuana also has a position of importance for substance abuse treatment services in the State, as it usually is the second most commonly mentioned drug responsible for the admission. The growth of these two sets of clients has eclipsed all others and has created a serious problem in terms of provision of adequate services to other drug users.

All other drugs represent small numbers on this exhibit. This is not reflective of the severity of the addiction to these other drugs or of the gravity of the impact of these drugs on the individuals and their families. Rather it is simply an issue of proportions. Relative to all drug treatment admissions, drugs other than marijuana and methamphetamine, including alcohol, do not impact the

⁵Hawaiians are defined as those who state on admission to treatment programs that they are of Hawaiian ancestry and may or may not be pure Hawaiian.

drug treatment system of the State. The reasons for so many marijuana admissions occurring are unknown, since the treatment most of the State's treatment facilities provide do not seem appropriate for adolescents or for drugs such as marijuana.

HPD DRUG CASE SUMMARY: 1991–2010

Exhibit 10 shows the numbers of HPD cases for selected drugs by drug and by year. While there are some parallel increases and decreases in the number of drug cases over time, for the most part the drugs appear to increase and decrease quite independently of one another. Exceptions are the concomitant increases in cocaine cases and methamphetamine cases from 1991 to 1994, the decrease in marijuana cases and cocaine cases between 1995 and 2002, and the inverse relationship demonstrated between the decline in methamphetamine cases in 2005 and the increase in cocaine cases during the same time period.

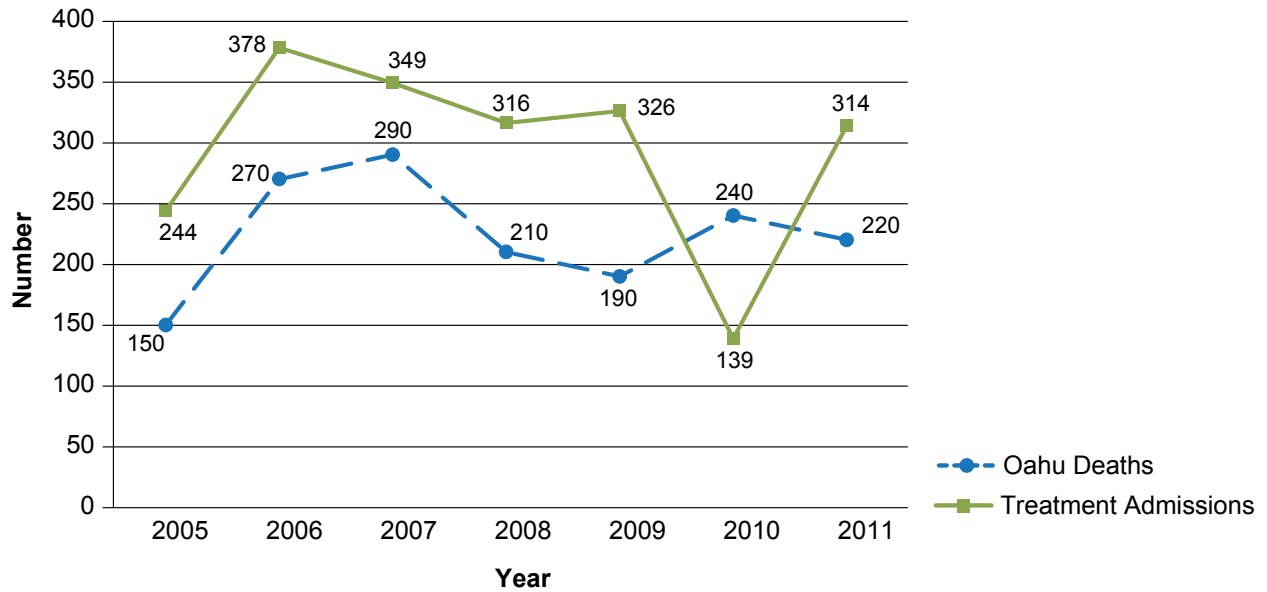
NFLIS DATA: 2005–2011

Exhibit 11 shows NFLIS data for Honolulu for 2005 through 2011. The data originate in the HPD forensic laboratory and relate to drugs seized and otherwise collected in the performance of the department's investigation and enforcement duties. Data for 2009–2011 represent the accounting of up to three drug reports per item submitted for analysis. The data presented for those 3 years are a combined count including primary, secondary, and tertiary reports for each drug item for selected drugs. Data presented for years prior to 2009 represent the primary drug only for each item analyzed; these data, therefore, are not comparable with 2009–2011 data.

Within the data presented in exhibit 11 are several findings that relate to the dominance of methamphetamine in Hawaii. First, the proportion of all samples collected that were identified as methamphetamine ranged between approximately 40 and 52 percent across the 6 years of data. However, a 4-percent increase in such samples was reported for 2010, after a notable decline in methamphetamine samples for 2008. The second most commonly occurring drug identified in drug reports in drug items was marijuana/cannabis, with constant proportions between 25 and 28 percent. Third on the list of drugs consistently appearing across the 6 years was cocaine. Cocaine identifications ranged between 14 and 18 percent. Heroin was usually the fourth drug in terms of proportion of all drug reports and items across the years and was consistently between 1 and 2 percent. These four drugs—methamphetamine, marijuana/ cannabis, cocaine, and heroin—represent a cumulative total of between 86.4 and 92.4 percent of drug reports/items identified in NFLIS laboratories. However, in 2004, MDMA reports exceeded those for heroin. All other drugs represented between 6 and 11 percent of the total reports from drug items tested. These comparisons across years are made with the cautionary statement that NFLIS methodology changed in 2011, and 2009–2011 data differ from prior years in that they reflect primary, secondary, and tertiary reports for drugs identified in analyzed items.

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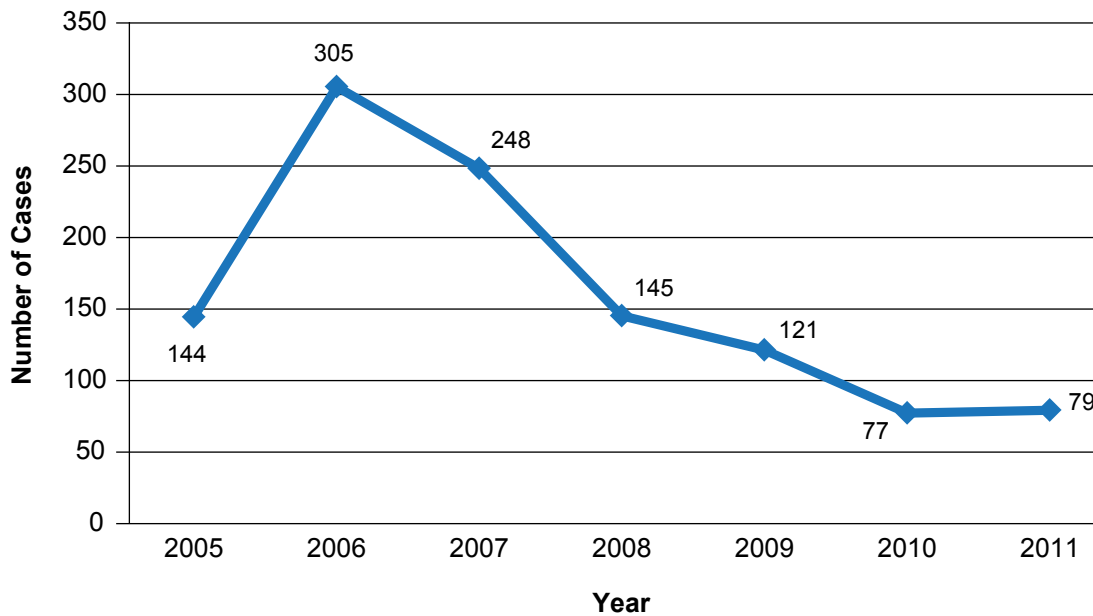
Exhibit 1. Number of Cocaine Deaths¹ in Oahu and Treatment Admissions in Hawaii: 2005–2011



¹Oahu deaths are multiplied by a factor of 10.

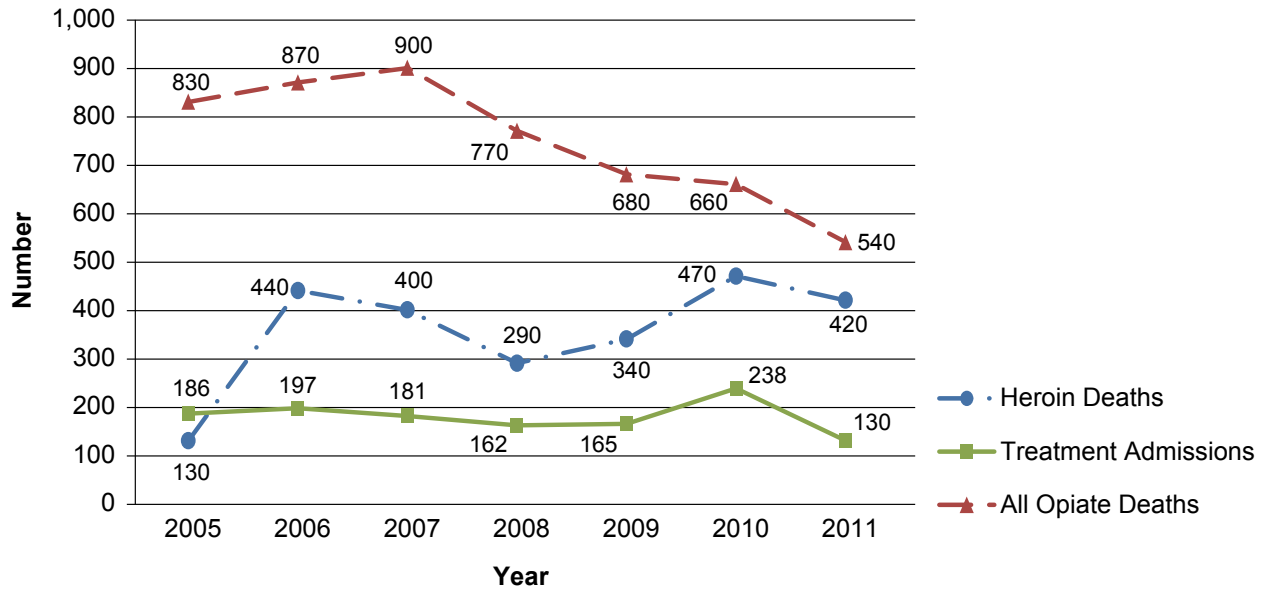
SOURCES: Honolulu City and County Medical Examiner’s Office and Hawaii State Department of Health, Alcohol and Drug Abuse Division

Exhibit 2. Number of Cocaine-Related Police Cases in Honolulu: 2005–2011



SOURCE: Honolulu Police Department

Exhibit 3. Number of Heroin/Opiate Deaths¹ in Oahu² and Treatment Admissions in Hawaii: 2005–2011

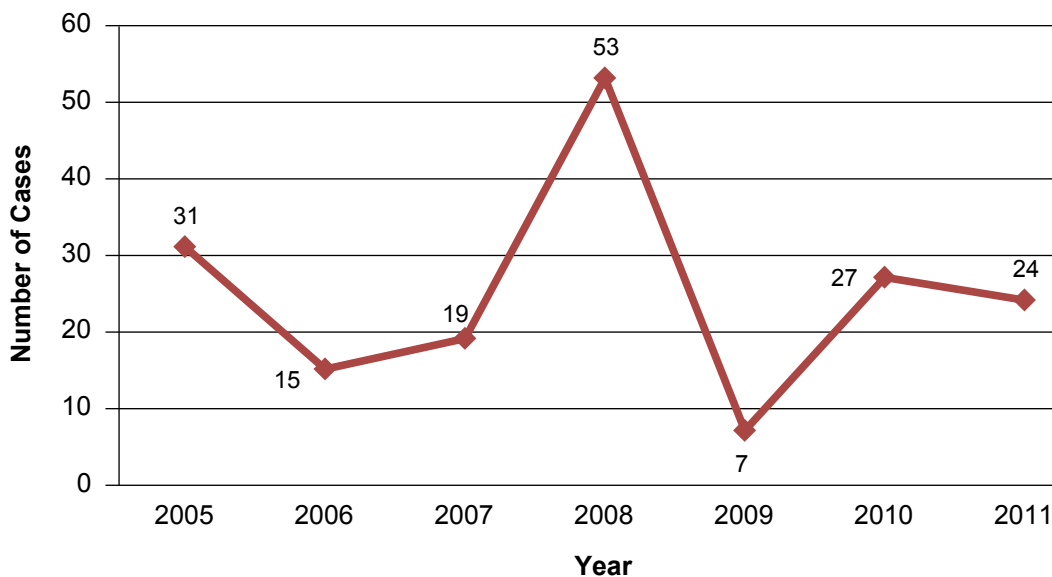


¹Due to the difficulty of in detecting heroin in a toxicology screen that includes other opiates/opioids with the technology available in the Honolulu Medical Examiner’s laboratories, deaths with a positive screen for all opiates, along with heroin, are shown as “All Opiate Deaths.”

²Oahu deaths are multiplied by a factor of 10.

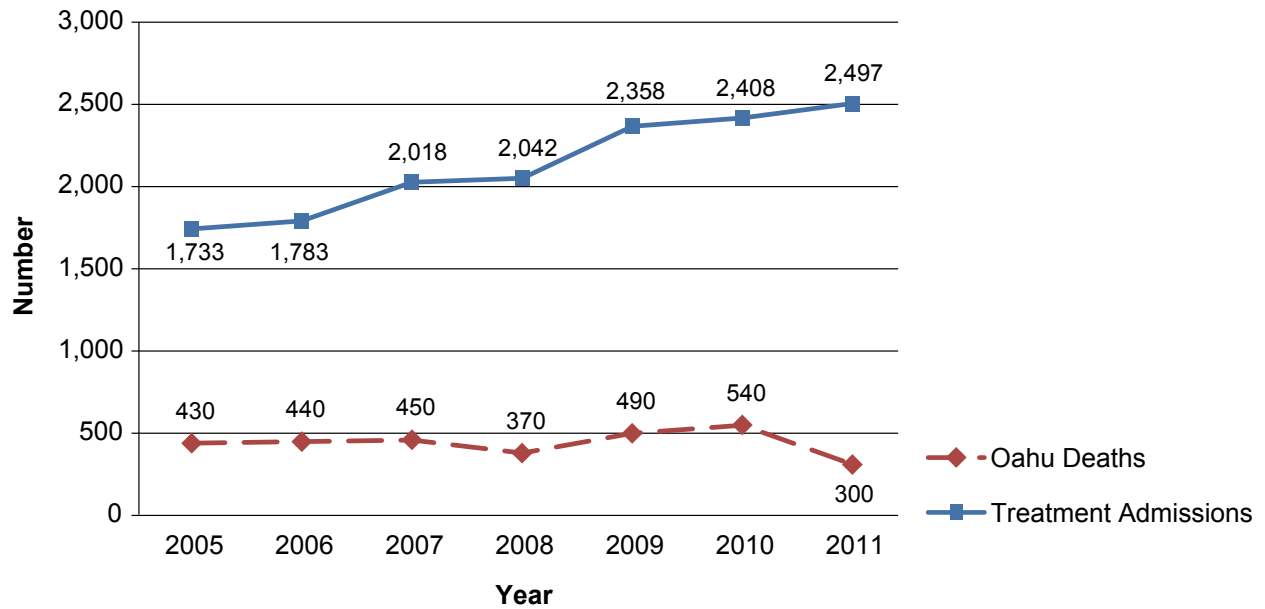
SOURCES: Honolulu City and County Medical Examiner’s Office and Hawaii State Department of Health, Alcohol and Drug Abuse Division

Exhibit 4. Number of Heroin-Related Police Cases in Honolulu: 2005–2011



SOURCE: Honolulu Police Department

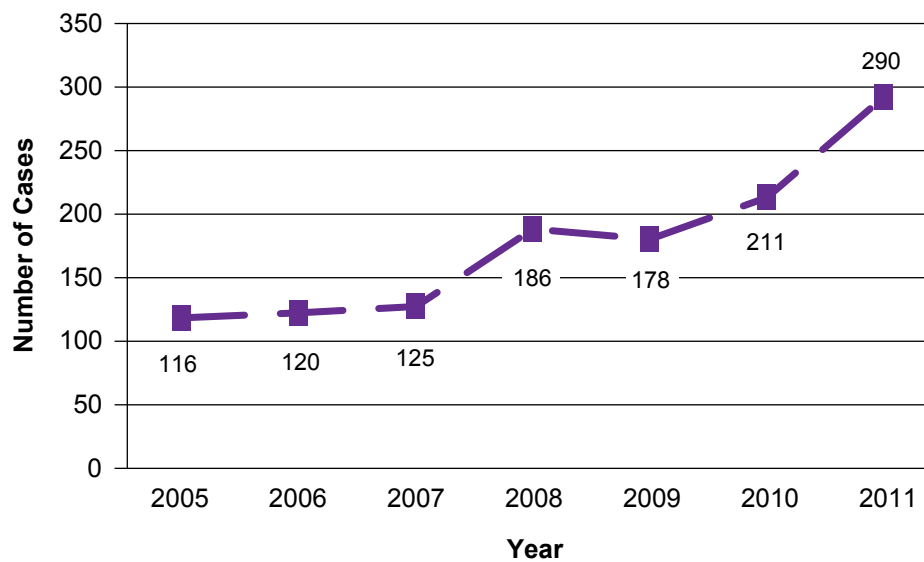
Exhibit 5. Number of Marijuana Deaths in Oahu¹ and Treatment Admissions in Hawaii: 2005–2011



¹Oahu deaths are multiplied by a factor of 10.

SOURCES: Honolulu City and County Medical Examiner’s Office and Hawaii State Department of Health, Alcohol and Drug Abuse Division

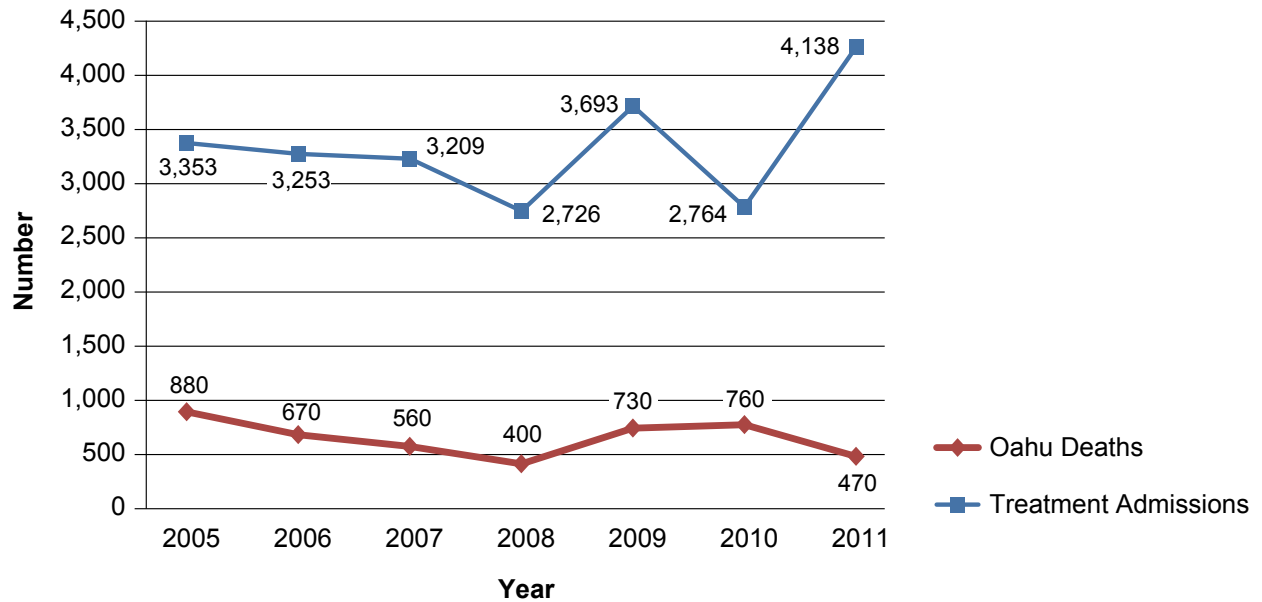
Exhibit 6. Number of Marijuana-Related/Detrimental Drugs¹ Police Cases in Honolulu: 2005–2011



¹Marijuana cases are combined with other drugs under the category “Detrimental Drugs.”

SOURCE: Honolulu Police Department

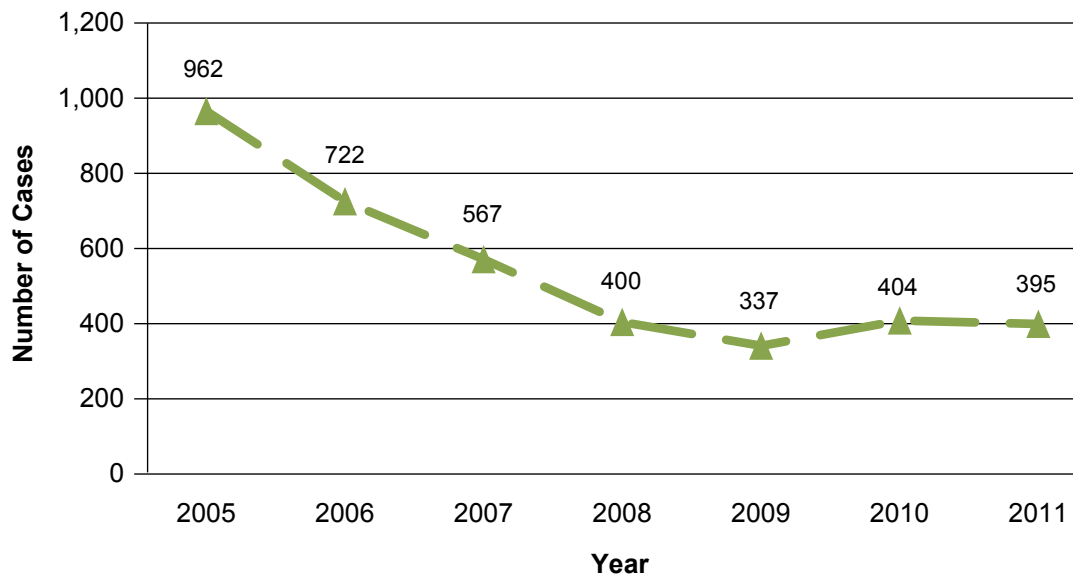
Exhibit 7. Number of Methamphetamine Deaths¹ in Oahu and Treatment Admissions in Hawaii: 2005–2011



¹Oahu deaths are multiplied by a factor of 10.

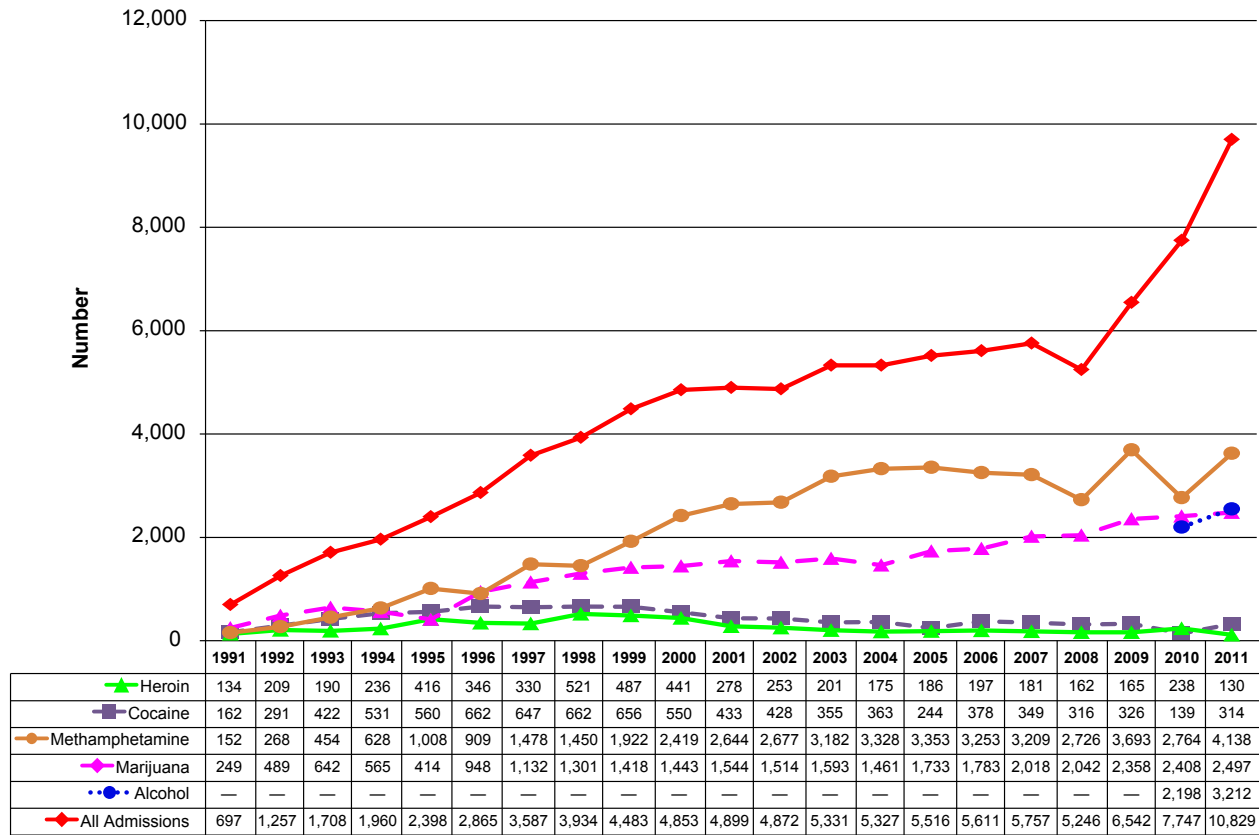
SOURCES: Honolulu City and County Medical Examiner's Office and Hawaii State Department of Health, Alcohol and Drug Abuse Division

Exhibit 8. Number of Methamphetamine-Related Police Cases in Honolulu: 2005–2011



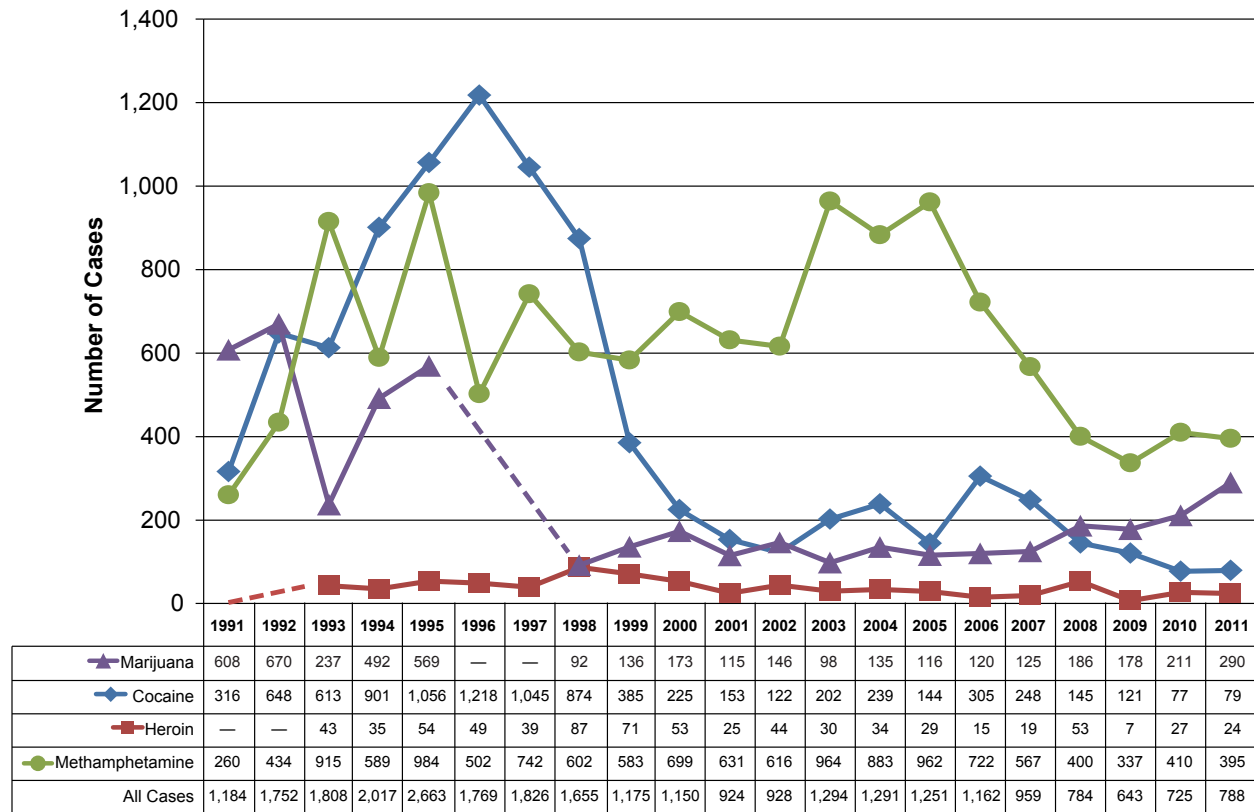
SOURCE: Honolulu Police Department

Exhibit 9. Numbers of Primary Treatment Admissions, for Selected Drugs, in Hawaii: 1991–2011



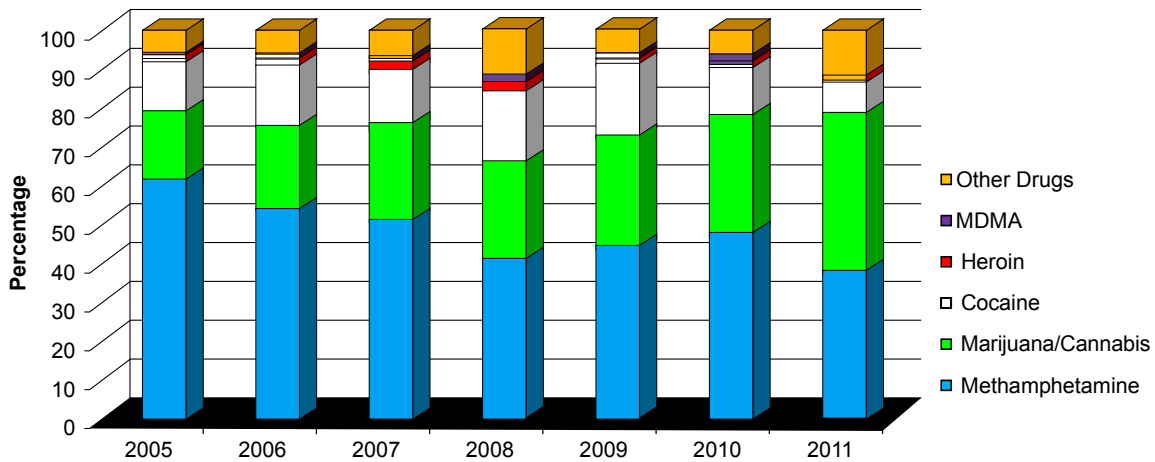
Note: Data for alcohol were only reported for 2010–2011.
 SOURCE: Alcohol and Drug Abuse Division

Exhibit 10. Numbers of Police Cases, by Drug and Year in Honolulu: 1991–2011



Note: Marijuana arrest data were not available for 1996–1997; heroin data were not available for 1991–1992.
 SOURCE: Honolulu Police Department

Exhibit 11: Percentage of Drug Reports¹, by Drug, Identified in Drug Items Analyzed in NFLIS Laboratories, Honolulu: 2005–2011²



¹NFLIS methodology for 2009–2011 allows for the accounting of up to three drug reports per item submitted for analysis. The data presented for those 3 years are a combined count including primary, secondary, and tertiary reports for each drug item for selected drugs. Data presented for years prior to 2009 represent the primary drug only for each item analyzed; these data, therefore, are not comparable with 2009–2011 data.
 SOURCE: NFLIS, DEA, data for 2009–2011 retrieved on May 8, 2012

Patterns and Trends in Drug Abuse in Los Angeles County, California: 2011

Mary-Lynn Brecht, Ph.D.¹

ABSTRACT

Marijuana as a primary drug of abuse accounted for one-fourth of Los Angeles County alcohol and drug treatment admissions in 2011, continuing a decade's upward trend. Marijuana/cannabis remained the highest ranking drug in terms of reports among drug items seized and analyzed by the National Forensic Laboratory Information System (NFLIS); 36.7 percent of all reports among analyzed drugs were identified as containing marijuana/cannabis. Heroin accounted for nearly one-fifth of primary treatment admissions in Los Angeles County in 2011, and methamphetamine accounted for approximately one-sixth (16 percent); these levels were similar to those in 2010. Other indicators were increasing for methamphetamine and mixed for heroin. Cocaine accounted for 8.5 percent of Los Angeles County treatment admissions in 2011; levels continued a downward trend of several years. Marijuana/cannabis, cocaine, and methamphetamine accounted for 82 percent of all drug reports among drug items from Los Angeles County seized and analyzed in NFLIS laboratories. Reports of narcotics (other than heroin/morphine) among analyzed drug items showed mixed trends, with similar proportions of treatment admissions as in the previous year (although they continued to be at relatively low levels). Hydrocodone was the most prevalent pharmaceutical, noncontrolled drug identified in reports among drug items seized and analyzed by NFLIS laboratories in Los Angeles County in 2011. Most retail drug prices have remained relatively stable since 2007, with the exception of a substantial decrease in methamphetamine prices in early 2012.

INTRODUCTION

Area Description

Los Angeles County is the most populous county in the Nation (with a 2010 census population of 9,818,605, which was a 3.1-percent increase from the 2000 census figure). Approximately 26 percent of California's residents live in Los Angeles County. Approximately one-half of all Los Angeles County residents are female (50.7 percent); one-quarter (25.4 percent) are younger than 18; and 10.6 percent are 65 or older. The racial and ethnic composition of Los Angeles County residents is diverse and in 2010 included the following non-Hispanic categories: 27.8 percent are White; 13.5 percent are Asian; 8.3 percent are Black/African-American; and 1.8 percent represent other races/ethnicities or are multiethnic. Hispanics constituted 47.7 percent of the 2010 population.

Los Angeles County encompasses approximately 4,752 square miles, including land and ocean/island areas. It is bordered by the Pacific Ocean, and Ventura, Kern, San Bernardino, and Orange

¹The author is affiliated with the University of California at Los Angeles.

Counties. Los Angeles County is a mix of heavily urbanized areas and lesser-populated desert and mountain inland areas in the northern and eastern portions of the county. There are 88 cities in Los Angeles County and 140 unincorporated areas.

According to the Drug Enforcement Administration (DEA), Los Angeles County is on the trafficking distribution route for illicit drugs, including heroin, cocaine, marijuana, and methamphetamine, primarily from Mexico. In addition, marijuana is cultivated in substantial quantities, and methamphetamine is produced within the State. Mexican drug trafficking organizations and criminal groups, aligned with the major drug cartels in western Mexico, are cited as a major concern of law enforcement groups in the Los Angeles area.

Data Sources

This report describes drug abuse-related indicators in Los Angeles County for 2011 (or most recent data available), as well as trends in selected indicators for several available years prior to and including 2011. Information was collected from the following sources:

- **Drug treatment data** were derived from the California Outcomes Monitoring System (CalOMS) and its predecessor, the California Alcohol and Drug Data System (CADDs). The statistics correspond to Los Angeles County alcohol and other drug treatment program admissions for January–December 2011. In January 2006, there was a change in the statewide substance abuse treatment program admission/discharge data system, from CADDs to CalOMS. Because of this system change, data collected prior to 2006 may not be exactly comparable to the more recent data. While trends for major substances appear to retain reasonable validity, the reader is nevertheless cautioned when interpreting these statistics. Treatment providers receiving public funding report all their admissions (whether public or private) to CalOMS. Because all programs providing narcotic replacement therapy must report admissions to CalOMS (whether or not the program receives public funding), admissions for heroin treatment may be disproportionately represented in the CalOMS system.
- **Drug analysis results** from local forensic laboratories were derived from the DEA's National Forensic Laboratory Information System (NFLIS). The statistics correspond to drug reports identified (primary, secondary, or tertiary) from drug items seized and analyzed by NFLIS laboratories in 2011 for Los Angeles County. Data for 2011 are provisional and may be subject to change.
- **Drug prices and trafficking data** were derived from U.S. Dept. of Justice sources. Prices were reported by the Los Angeles County Regional Criminal Information Clearinghouse (LA CLEAR). The prices included in this report reflect the best estimates of the analysts in the Research and Analysis Unit at LA CLEAR and reported in National Drug Intelligence Center (NDIC) publications. The price estimates are based primarily on field reports, interviews with law enforcement agencies throughout the Los Angeles High Intensity Drug Trafficking Area (HIDTA), and post-seizure analysis. Other data were from the Drug Market Analysis 2011 for the Los Angeles HIDTA report by NDIC.
- **Drugs detected in Los Angeles County coroner toxicology cases** were extracted from data provided by the Los Angeles County Coroner's office for 2007–2011. Percentages reflect fractions of the total number of cases in which toxicology tests were requested (i.e., not just drug-related

deaths). Each case may have more than one drug detected; therefore, percentages should not be summed.

- **Acquired immunodeficiency syndrome (AIDS) and human immunodeficiency virus (HIV) data** (through December 2011) were obtained from the Los Angeles County Department of Health Services, HIV Epidemiology Program, “2011 Annual Surveillance Report,” January 2012.
- **Demographic and geographic data** were accessed from the California Department of Finance, Demographic Research Unit, and the U.S. Census Bureau (*State and County Quick-Facts*), from the 2010 census figures.
- **Emergency department (ED) visits** for nonfatal cases with alcohol or drugs (AOD) as primary diagnosis were accessed from the California Department of Public Health, EpiCenter CA Injury Data Online (accessed May 29, 2012). Incidents include poisoning (“overdose”), mental disorder, and physical disease, where AOD was reported as principal diagnosis, but do not include indirect consequences, such as injuries due to drug or alcohol impairment. Rates are number of relevant incidents per 100,000 population.

DRUG ABUSE PATTERNS AND TRENDS

Cocaine/Crack

Of Los Angeles County treatment admissions in calendar year (CY) 2011, 8.5 percent ($n=3,906$) reported crack or powder cocaine as the primary drug of abuse; this represents a continuing decrease from previous years (such admissions constituted 9.7 percent of total admissions in 2010 and 12.6 percent in 2009) (exhibit 1). As a percentage share of the total admissions, cocaine admissions in 2011 were the lowest in the 10-year period shown in exhibit 1 (during which cocaine declined from a high of 19.3 percent of admissions in 2002).

A majority (59.7 percent) of primary cocaine admissions in 2011 were male, lower than in previous years (males constituted 62.5 percent of cocaine treatment admissions in 2009 and 63.4 in 2010) (exhibit 2 for 2011 distributions; earlier demographic data not shown in exhibits). Non-Hispanic Blacks continued to represent a majority of cocaine admissions (at 63.0 percent of the total in 2011), followed by Hispanics (at 20.2 percent), and non-Hispanic Whites (at 12.3 percent). Other racial/ethnic groups combined constituted 4.5 percent of cocaine admissions in 2011. Cocaine admissions were predominantly age 35 and older (with this age group constituting 78.5 percent of cocaine admissions). Primary cocaine admissions were more likely than admissions for other drugs to report being homeless at admission (at 29.1 percent). More than one-half (57.6 percent) had earned a high school diploma/GED or reported post-high school educational levels. At the time of admission, 7.0 percent were employed full- or part-time; this proportion was lower than in 2010 or 2009 (when it was 7.3 and 9.9 percent, respectively).

Primary cocaine treatment admissions were more likely than treatment admissions for any other major illicit substances to report a secondary substance (60.5 percent). The most common secondary substance reported was alcohol (for 32.0 percent of cocaine admissions), followed by marijuana (for 20.0 percent). Smoking was the predominant reported route of administration (for 86.1 percent); another 11.4 percent of cocaine admissions reported inhalation. Only 2.4 percent of cocaine

admissions reported intravenous drug use of any drug in the year prior to admission (exhibit 2). Almost one-half (46.8 percent) of the primary cocaine admissions had not been previously admitted to treatment in the California public treatment system (exhibit 2).

Data from NFLIS for 2011 showed that of the 40,337 drug reports among items seized and analyzed by participating laboratories within Los Angeles County, 23.1 percent were found to contain cocaine/crack (exhibit 3). Cocaine/crack retained its ranking as the second most likely illicit drug to be found among drug reports from drug items analyzed by NFLIS laboratories for the county, with a percentage lower than marijuana and only slightly higher than methamphetamine. While percentages differed from other locations, rankings for these drugs in Los Angeles County were similar to rankings for the United States as a whole.

Cocaine was detected in 12.1 percent of Los Angeles County coroner toxicology cases in 2011, a decrease in proportion from 2010 and 2009 (13.7 and 19.3 percent, respectively) (data not shown in exhibits). This was a lower percentage of cases than for narcotic analgesics, heroin/morphine, or methamphetamine. Cocaine percentages were similar to those for antidepressants and greater than the percentages for benzodiazepines.

In 2010 (the most recent year available), the ED visit rate for cocaine as a primary diagnosis among nonfatal ED visits in Los Angeles County was 6.2 per 100,000 population (exhibit 4). This represented a continuing downward trend from a rate of 8.2 in 2006.

Wholesale prices for powder cocaine were at levels of \$19,000–\$22,000 per kilogram by the first quarter of 2012, representing little change from the fourth quarter of 2009 through 2010. Prices continued to be lower than 2008 levels (\$22,000–\$26,000). However, retail prices remained stable, at approximately \$80 per gram.

Heroin

In 2011, 9,417 Los Angeles County treatment admissions reported heroin as the primary drug. These heroin admissions represented 20.6 percent of Los Angeles County admissions (exhibit 1). This percentage was similar to 2010 levels (at 20.4 percent) but higher than 2009 levels (at 18.8 percent), offsetting a downward trend from 2001 to 2008.

In 2011, heroin admissions were predominantly male (71.6 percent) and were most likely to be non-Hispanic White (53.0 percent). Hispanics accounted for 35.6 percent of heroin admissions, and non-Hispanic Blacks accounted for 7.4 percent (exhibit 2). This distribution was similar to 2009 and 2010. Heroin clients remained predominantly age 35 and older (constituting 59.1 percent of heroin admissions); this proportion represented a continuing decreasing trend for this age group (74.5, 69.2, 64.9, and 62.8 percent for 2007–2010, respectively). Commensurately, an increase was observed in the 18–25 age group (19.9 percent in 2011, up from 17.9 percent in 2010, 13.2 percent in 2009, and 9.0 percent in 2008). Approximately 16 percent of primary heroin admissions were homeless at time of admission. Employment rates (including full- or part-time) for heroin admissions were 12.1 percent in 2011, indicating a downward trend when compared with 18.0 percent in 2008, 13.4 percent in 2009, and 11.4 in 2010. High school graduation/GED or higher education levels were reported by 57.9 percent of 2011 heroin clients.

Almost two-thirds (62.0 percent) of heroin clients reported no secondary substance of abuse. Cocaine/crack remained the most commonly reported secondary substance problem (at 9.5 percent), followed by alcohol (at 7.1 percent). Injection use was reported as the primary route of administration by 81.1 percent of heroin admissions in 2011; smoking was reported by 14.0 percent; inhalation (snorting) was reported by 3.2 percent. Approximately one-fourth (25.4 percent) indicated that they had not previously participated in drug treatment (exhibit 2).

Of 40,337 NFLIS drug reports for Los Angeles County in 2011, 4.8 percent ($n=1,933$) were found to contain heroin (exhibit 3). Heroin ranked fourth for both Los Angeles County and the Nation as a whole among drug reports for drug items seized and analyzed by NFLIS laboratories in 2011.

Heroin/morphine was detected in 15.7 percent of Los Angeles County coroner toxicology cases in 2011; this proportion was a decrease from 19.8 percent in 2009 and 16.2 in 2010. The ED visit rate for the category of opioids as a principal diagnosis (not distinguished in the data source by subcategory, e.g. heroin or other opioids) among 2010 nonfatal ED visits was 14.7 per 100,000; this rate was stable from 2009 but above the 2006–2008 levels of 11.0–12.5 (exhibit 4).

According to LA CLEAR, as reported through the NDIC, the wholesale price per kilogram of the most prevalent type of heroin in Los Angeles, Mexican black tar, ranged from \$20,000 to \$22,000 in the first quarter of 2012; this represented a slight reduction from 2008–2010 prices. Retail prices were stable, at approximately \$80 per gram.

Other Opioids/Narcotics

Other opioids/synthetics continued to constitute a small percentage ($n=1,454$, or 3.2 percent) of Los Angeles County treatment admissions in 2011. Although representing a relatively small share of admissions when compared with other major substances of abuse, other opioids/synthetics have shown a continuing upward trend since 2005 (exhibit 1).

In 2011, hydrocodone was identified as the most prevalent drug among pharmaceuticals, prescription drugs, or noncontrolled medications (in contrast to illicit substances) to be identified by NFLIS laboratories in drug reports for analyzed drug items. It constituted 1.2 percent ($n=470$) of NFLIS reports, ranking sixth among all drug reports for Los Angeles County (exhibit 3). Oxycodone was identified in 0.5 percent ($n=193$) of the total Los Angeles County NFLIS drug reports in 2011, and codeine was identified in 0.4 percent ($n=175$) of reports among items analyzed. These two drugs ranked 9th and 10th, respectively, among Los Angeles County NFLIS drug reports. Small percentages of items (less than 0.1 percent each) were identified as containing methadone, hydromorphone, buprenorphine, and oxymorphone.

Narcotic analgesics were detected in 27.8 percent of Los Angeles County coroner toxicology cases in 2011; this was a slight decrease from 2009–2010 levels (32.3 and 29.5 percent, respectively). They accounted for a larger proportion of toxicology cases than other specific types of drugs, including cocaine, heroin/morphine, methamphetamine, antidepressants, THC (tetrahydrocannabinol, an active ingredient in marijuana), or benzodiazepines.

Benzodiazepines, Barbiturates, and Sedative/Hypnotics

In 2011, treatment admissions associated with primary barbiturate, benzodiazepine, or other sedative/hypnotic abuse continued to account for less than 1.0 percent of all admissions in Los Angeles County (0.5 percent, data not shown in exhibits).

The most frequently identified benzodiazepine in drug reports from items analyzed in NFLIS laboratories in Los Angeles County was alprazolam ($n=303$, or 0.8 percent) (exhibit 3). In 2011, benzodiazepines and/or barbiturates were detected in 12.1 percent of Los Angeles County coroner toxicology cases; this was a decrease from 16.1 percent of in 2009. The sedatives category accounted for a rate of 20.4 per 100,000 among ED visits in 2010; this rate continued an increasing trend from the 15.9 rate in 2006. Sedatives had a higher rate than amphetamines, cocaine, opioids, or marijuana/cannabis.

Methamphetamine/Other Amphetamines

Methamphetamine accounted for 16.3 percent ($n=7,451$) of admissions to Los Angeles County substance abuse treatment programs in 2011. This continued a multiyear decrease from the 26.1 percent high in 2005 (exhibit 1). Other amphetamines were reported as the primary substance in 0.2 percent of the total treatment admissions.

Compared with admissions for other major illicit drugs, primary methamphetamine admissions had the largest proportion of females (at 48.9 percent) (exhibit 2); this percentage was an increase over 41.2, 45.2, and 46.4 percent in 2008, 2009, and 2010, respectively (data not shown in exhibits). Methamphetamine admissions were most likely to be Hispanic (57.7 percent), followed by non-Hispanic Whites (30.5 percent). There was broad age diversity across methamphetamine admissions: age 18–25 constituted 22.0 percent; age 26–34 constituted 36.1 percent; and clients 35 or older represented 37.0 percent. More than one-half (52.6 percent) of methamphetamine admissions reported education levels of high school graduate/GED or higher, and more than one-fourth (27.0 percent) were homeless at admission. Employment rates (part- or full-time) were at 11.2 percent in 2011.

While 42.2 percent of methamphetamine admissions reported no secondary substance problem, 24.2 percent reported marijuana and 22.8 percent reported alcohol as a secondary substance problem (exhibit 2). Smoking continued as the most frequently mentioned route of administration reported by primary methamphetamine admissions (78.6 percent). Proportions of injectors and inhalers declined between 1999 and 2011, from 15.2 and 29.9 percent, respectively, in 1999, to 7.5 and 11.2 percent, respectively, in 2011. Past-year injection drug use (of any drug) was reported by 12.0 percent of primary methamphetamine admissions. Almost 45 percent were entering treatment for the first time (exhibit 2).

According to NFLIS data, based on 40,337 drug reports from drug items analyzed in NFLIS laboratories in Los Angeles County in 2011, 22.2 percent ($n=8,973$) were found to contain methamphetamine (exhibit 3). Methamphetamine accounted for the third largest proportion of reports positively identified by NFLIS laboratories in 2011 in both Los Angeles County and the United States as a whole; however, Los Angeles County had a substantially higher percentage than the Nation.

Methamphetamine was detected in 15.4 percent of Los Angeles County coroner toxicology cases in 2011; this was a slight increase over 14.0 percent in 2010. Among nonfatal ED visits in 2010, the category of amphetamines (including, but not distinguishing, methamphetamine) was primary diagnosis with a rate of 15.0 per 100,000 population; this represented a substantial increase over the 2009 rate of 10.3.

The wholesale price of methamphetamine in the first quarter of 2011 ranged from \$8,500 to \$11,000 per pound. This was lower than previous periods: \$9,000–\$13,000 per pound in the third quarter of 2010, \$13,800–\$14,000 per pound in 2009, and \$17,500–\$19,500 per pound in 2008 (data not shown in exhibits). While street prices remained stable at approximately \$240 for one-eighth ounce in 2008–2010, they decreased in 2011 to \$180–\$200. According to NDIC reports, methamphetamine availability has continued to increase after decreases in 2007–2008 coinciding with major control efforts on both sides of the California–Mexico border and strict precursor chemical regulations. Since these controls, Mexican production has adapted, resulting in an increased supply to the Los Angeles area. The NDIC National Drug Threat Survey in 2011 indicated that 34 of 50 State and local law enforcement agency respondents in the Los Angeles area reported methamphetamine as the greatest drug threat in their jurisdictions. There was a more than 50-percent increase in methamphetamine (“ice”) seizures in 2010 from 2009.

Marijuana

Marijuana’s percentage share of all treatment admissions has steadily increased from 2002 to 2011 in Los Angeles County, from 11.8 to 24.8 percent ($n=11,356$, in 2011), respectively (exhibit 1). Approximately two-thirds of the primary marijuana admissions were male (66.6 percent) (exhibit 2). Marijuana admissions had the largest proportion of clients younger than 18 (58.0 percent, compared with 0.6 percent for heroin and 4.9 percent for methamphetamine). Consistent with the generally younger age for marijuana admissions than for those for other primary drugs, marijuana admissions had the lowest percentage of high school or higher education (23.7 percent). Marijuana admissions also had relatively low rates of employment (4.6 percent full- or part-time). Approximately 5.6 percent of marijuana admissions were homeless. A majority of marijuana admissions were Hispanics (at 56.8 percent), followed by non-Hispanic Blacks (at 29.0 percent). Of the major illicit substances, the smallest percentage of non-Hispanic Whites (9.8 percent) was reported for marijuana.

While 51.4 percent of primary marijuana admissions reported no secondary drug problem, alcohol was identified as a secondary drug problem for 35.1 percent, methamphetamine was a secondary problem for 5.5 percent, and cocaine/crack was a secondary problem for 3.3 percent. Smoking was the predominant route of administration reported by marijuana treatment admissions (97.5 percent). Few (0.9 percent) marijuana clients reported any past-year injection drug use (exhibit 2). More than three-fourths (77.2 percent) were entering treatment for the first time (exhibit 2).

According to NFLIS data from 40,337 drug reports for Los Angeles County in 2011, 36.7 percent ($n=14,806$) were found to contain marijuana/cannabis (exhibit 3). Marijuana/cannabis was the most frequently identified substance among drug items seized and analyzed by NFLIS laboratories in Los Angeles County, as it was for the Nation.

THC was detected in 14.8 percent of Los Angeles County coroner toxicology cases in 2011; this was an increase from 12.4 percent in 2010, but it was still lower than 2009 and 2008 levels (19.3 and 19.7 percent, respectively) (data not shown in exhibits). Marijuana/cannabis was reported as a primary diagnosis in nonfatal ED visits with a rate of 8.3 per 100,000 population; this represented a continuing increase from the 2006 levels of 3.2 (exhibit 4).

The price of Mexican low-grade marijuana decreased, with wholesale prices in the first quarter of 2012 ranging from \$100 to \$500 per pound, while retail prices remained stable at \$5–\$10 per gram. Prices of high-grade domestic marijuana also decreased to \$1,500–\$3,200 per pound, and retail prices remained stable at \$60–\$80 for one-eighth ounce.

Other Drugs

MDMA

Very few admissions to treatment for substance abuse in Los Angeles County in 2011 reported “club drugs,” including MDMA (3,4-methylenedioxymethamphetamine) or ecstasy, GHB (gamma hydroxybutyrate), ketamine, or Rohypnol®, as the primary drug of abuse (0.5 percent, data not shown in exhibits).

According to NFLIS, 1.8 percent ($n=743$) of drug reports from drug items analyzed in Los Angeles County were identified as containing MDMA (exhibit 3). MDMA was more likely to be found in Los Angeles County NFLIS reports (ranking 5th) than in the Nation as a whole (where it ranked 11th). Small percentages (less than or equal to 0.1 percent) of reports from items analyzed in NFLIS laboratories contained other club drugs, including GHB, ketamine, BZP (1-benzylpiperazine), or TFMPP (1-3-(trifluoromethylphenyl)piperazine).

At the wholesale level in 2011, MDMA prices were approximately \$2,500–\$3,000 per “boat” (1,000 pills); this was similar to 2007–2010 prices. At the retail level, ecstasy sold for \$10–\$12 per tablet, which was also consistent with 2007–2010 prices.

PCP and Hallucinogens

PCP (phencyclidine) and other hallucinogens accounted for 0.6 percent of the reported primary drugs among Los Angeles treatment admissions in 2011 (data not shown in exhibits); this proportion was similar to 2010 levels. According to NFLIS data, 0.8 percent ($n=334$) of the 40,337 drug reports for Los Angeles County in 2011 contained PCP (exhibit 3). In 2011, PCP ranked seventh among all drugs identified by NFLIS in Los Angeles.

Wholesale prices for a gallon of PCP in early 2012 ranged from \$12,000 to \$17,000; this was similar to 2010 prices. Retail prices have remained stable, with 2007 to early 2012 levels at \$300–\$350 an ounce or \$10–\$20 for a “sherm” cigarette dipped in liquid PCP.

Other Stimulants, Antidepressants, Substituted Cathinones, and Cannabimimetics

Other stimulants (including prescription stimulants, such as methylphenidate) accounted for 1.7 percent of 2011 treatment admissions (an increase from 1.0 percent in 2010 and 0.2 percent in 2009, data not shown in exhibits). Antidepressants were detected in 13.1 percent of Los Angeles County coroner toxicology cases in 2011.

Reports of synthetic (substituted) cathinones have increased among NFLIS drug reports for Los Angeles County, but numbers remained small (totaling 12). NFLIS data indicated 11 reports of synthetic cannabinoids (cannabimimetics) among drug items seized and analyzed.

INFECTIOUS DISEASES RELATED TO DRUG ABUSE

The cumulative total of AIDS diagnoses reported in Los Angeles County through December 31, 2011, reached 59,250. This number represented approximately 36 percent of the cumulative diagnoses in California and 5 percent of those in the United States (data not shown in exhibits). As of 2011, approximately 43,936 Los Angeles County residents were living with HIV infection, and 26,083 were living with AIDS. Of the cumulative HIV/AIDS diagnoses reported in Los Angeles County, 41 percent were non-Hispanic Whites, 34 percent were Hispanics, and 21 percent were non-Hispanic Blacks (data not shown in exhibits). In terms of age, 28 percent were younger than 30, 39 percent were age 30–39, and 32 percent were 40 or older when diagnosed with HIV/AIDS. Most (90 percent) were male. Approximately 7 percent of cumulative adult/adolescent HIV/AIDS diagnoses reported by the end of 2011 involved injection drug use as the primary vector of exposure, and another 7 percent involved men who have sex with men (MSM) and injection drug use. Specifically for adult/adolescent females, exposure through injection drug use has been 27 percent, while for males injection drug use exposure has totaled 13 percent (combined across categories of injection drug use alone or MSM/injection drug use).

The number of AIDS diagnoses in Los Angeles County gradually declined from 2002 to 2007, but then increased slightly in 2008–2009 (exhibit 5). Because of reporting delays, figures for 2011 were a substantial underestimate of what completed reporting is likely to show; 2010 figures also remain an underestimate. There appeared to be a slight declining trend in injection drug use as an exposure vector for males, at 8 percent (2 percent injection drug user [IDU] and 6 percent MSM/IDU) in 2011.

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Exhibit 1. Frequency and Percentage of Annual Treatment Admissions, by Primary Drug of Abuse, in Los Angeles County: 2002–2011

Primary Drug	2002 Freq. (%)	2003 Freq. (%)	2004 Freq. (%)	2005 Freq. (%)	2006 Freq. (%)	2007 Freq. (%)	2008 Freq. (%)	2009 Freq. (%)	2010 Freq. (%)	2011 Freq. (%)
Cocaine	9,009 (19.3)	10,057 (18.8)	9,261 (18.0)	8,418 (17.1)	9,421 (17.2)	8,354 (16.2)	8,662 (15.6)	6,690 (12.6)	4,717 (9.7)	3,906 (8.5)
Heroin	14,863 (31.9)	13,595 (25.4)	12,283 (23.9)	9,997 (20.3)	10,969 (20.0)	10,150 (19.6)	10,250 (18.5)	9,978 (18.8)	9,940 (20.4)	9,417 (20.6)
Marijuana	5,502 (11.8)	7,121 (13.3)	7,130 (13.9)	7,681 (15.6)	9,121 (16.6)	9,469 (18.3)	11,031 (19.9)	12,222 (23.0)	11,696 (24.0)	11,356 (24.8)
Metham- phetamine	7,145 (15.3)	10,056 (18.8)	11,235 (21.8)	12,875 (26.1)	13,414 (24.5)	11,853 (22.9)	10,564 (19.0)	9,399 (17.7)	7,994 (16.4)	7,451 (16.3)
PCP	415 (0.9)	576 (1.1)	365 (0.7)	278 (0.6)	279 (0.5)	281 (0.5)	289 (0.5)	314 (0.6)	270 (0.6)	266 (0.6)
Other Opiates/ Synthetics	839 (1.8)	1,227 (2.3)	956 (1.9)	510 (1.0)	1,013 (1.8)	1,161 (2.2)	1,253 (2.3)	1,315 (2.5)	1,373 (2.8)	1,454 (3.2)
Other (Includes Alcohol)	8,856 (19.0)	10,871 (20.3)	10,200 (19.8)	9,516 (19.3)	10,362 (18.9)	10,161 (19.7)	13,481 (24.3)	13,118 (24.7)	12,772 (26.2)	11,886 (26.0)
Total Admissions	46,629 (100.0)	53,503 (100.0)	51,430 (100.0)	49,275 (100.0)	54,784 (100.0)	51,662 (100.0)	55,530 (100.0)	53,036 (100.0)	48,762 (100.0)	45,736 (100.0)

SOURCE: Los Angeles County Alcohol and Drug Program Administration, California Outcomes Monitoring System (CalOMS)

Exhibit 2. Demographic Characteristics of Primary Treatment Admissions for Selected Illicit Drugs of Abuse, as a Percentage, in Los Angeles County: CY 2011¹

Demographic	Cocaine/ Crack	Heroin	Marijuana	Metham- phetamine	All Admissions ²
Gender³					
Male	59.7	71.6	66.6	51.0	68.7
Female	40.2	28.4	33.4	48.9	31.3
Race/Ethnicity					
White non-Hispanic	12.3	53.0	9.8	30.5	28.7
Black non-Hispanic	63.0	7.4	29.0	5.1	21.7
Hispanic	20.2	35.6	56.8	57.7	43.7
American Indian	0.6	0.7	0.6	1.1	0.9
Asian/Pacific Islander	1.8	0.8	1.3	2.9	1.8
Other	2.1	2.5	2.5	2.7	3.2
Age at Admission					
17 and younger	1.5	0.6	58.0	4.9	21.4
18–25	6.0	19.9	20.4	22.0	16.7
26–34	14.2	20.5	10.0	36.1	18.4
35 and older	78.3	59.1	11.5	37.0	43.5
Route of Administration					
Oral	1.1	1.2	2.3	1.9	29.7
Smoking	86.1	14.0	97.5	78.6	48.0
Inhalation	11.4	3.2	0.2	11.2	3.8
Injection	0.5	81.1	0.0	7.5	18.0
Unknown/other	1.0	0.6	0.1	0.9	0.5
Secondary Substance⁴					
None	39.5	62.3	51.4	42.4	50.9
Alcohol	32.0	7.1	35.1	22.8	17.3
Cocaine/crack	—	9.5	3.3	4.7	5.6
Heroin	1.9	—	0.4	2.5	1.2
Marijuana	20.0	5.0	—	24.2	12.1
Methamphetamine	3.9	6.9	5.5	—	4.9
Past-Year Injection Drug Use	2.4	81.1	0.9	12.0	20.0
Homeless	29.1	15.8	5.6	27.0	15.5
Employed Full- or Part-Time	7.0	12.1	4.6	11.2	8.7
Graduated from High School	57.6	57.9	23.7	52.6	47.3
First Treatment Episode	46.8	25.4	77.2	44.6	54.3
Total Admissions (N)	(3,906)	(9,417)	(11,356)	(7,451)	(45,736)

¹Data are for January–December 2011.

²Total also includes alcohol and other drugs.

³0.04 percent reported “other” gender and were not included in this table; percentages may not total exactly 100 percent.

⁴Other secondary drugs are not listed in this table; percentages may not add to 100.

SOURCE: Los Angeles County Alcohol and Drug Program Administration, California Outcomes Monitoring System (CalOMS)

Exhibit 3. Most Common Drug Reports Among Drug Items Analyzed by NFLIS, by Number and Percentage of Total Reports, in Los Angeles County, and Rankings for Los Angeles County and the United States: CY 2011¹

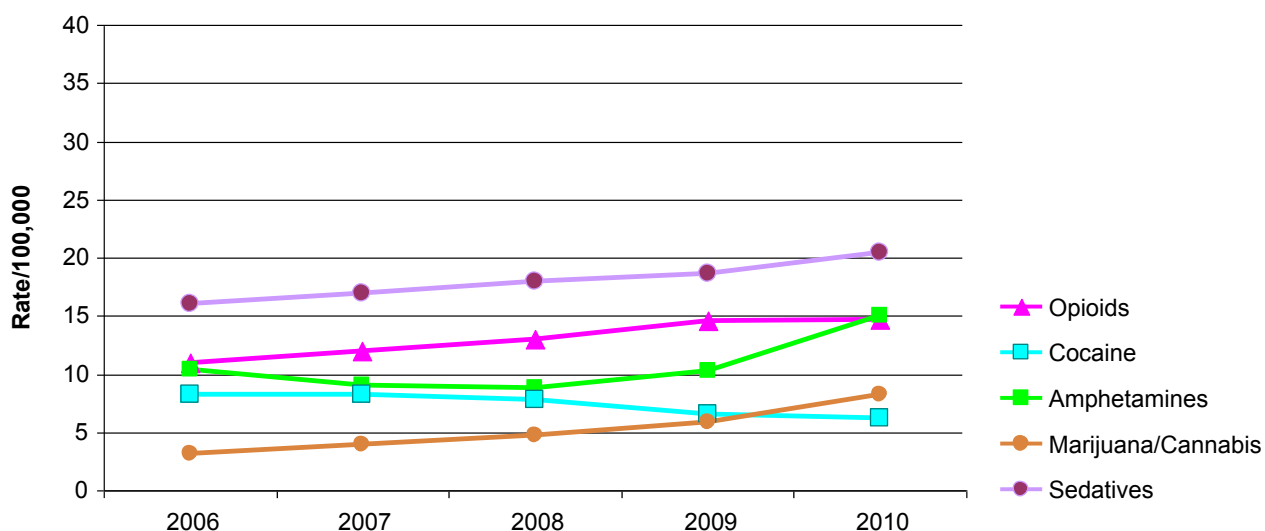
Drug (LA Ranking)	Number	Percent	LA Rank	U.S. Rank ²
Marijuana/Cannabis	14,806	36.7	1	1
Cocaine	9,330	23.1	2	2
Methamphetamine	8,973	22.2	3	3
Heroin	1,933	4.8	4	4
MDMA (3,4-methylenedioxy-methamphetamine)	743	1.8	5	11
Hydrocodone	470	1.2	6	6
PCP (phencyclidine)	334	0.8	7	21
Alprazolam	303	0.8	8	7
Oxycodone	193	0.5	9	5
Codeine	175	0.4	10	23
Other	3,077	7.6	—	—
Total	40,337	100.0	—	—

¹Data are for January–December 2011.

²Ranks exclude “negative results” and “unknown.”

SOURCE: NFLIS, DEA, May 8, 2012

Exhibit 4. Rates of Primary Diagnosis Among Nonfatal Emergency Department Visits for Selected Major Drug Categories in Los Angeles County: 2006–2010¹



¹Incidents include poisoning (“overdose”), mental disorder, and physical disease, where AOD is reported as the principal diagnosis, but they do not include indirect consequences such as injuries due to drug or alcohol impairment. Rates are number of relevant incidents per 100,000 population.

SOURCE: CA Dept. of Public Health, EpiCenter CA Injury Data Online, accessed 5/29/12

Exhibit 5. Frequency and Percentage of AIDS Diagnoses, by Gender, Exposure Category, and Year of Diagnosis, in Los Angeles County: 2002–2011

Exposure Category	2002 Freq. (%)	2003 Freq. (%)	2004 Freq. (%)	2005 Freq. (%)	2006 Freq. (%)	2007 Freq. (%)	2008 Freq. (%)	2009 Freq. (%)¹	2010 Freq. (%)¹	2011 Freq. (%)¹
Males										
Male-to-Male Sexual Contact (MSM)	1,317 (80)	1,289 (82)	1,104 (82)	1,062 (83)	1,019 (84)	896 (83)	1,035 (87)	1,051 (76)	893 (88)	565 (89)
Injection Drug Use	98 (6)	79 (5)	81 (6)	70 (5)	52 (4)	40 (4)	38 (3)	47 (4)	28 (3)	16 (2)
MSM/Injection Drug User (IDU) Contact	137 (8)	120 (8)	107 (8)	99 (8)	97 (8)	102 (9)	86 (7)	75 (6)	59 (6)	38 (6)
Heterosexual Contact ²	78 (54)	75 (5)	53 (4)	44 (3)	38 (3)	36 (3)	27 (2)	34 (3)	23 (2)	14 (2)
Other/Undetermined	8 (1)	4 (-)	3 (-)	3 (-)	6 (-)	4 (-)	2 (-)	7 (1)	1 (-)	1 (-)
Male Subtotal	1,638	1,567	1,348	1,278	1,212	1,077	1,189	1,214	1,102	634
Females										
Injection Drug Use	73 (31)	47 (22)	52 (28)	50 (27)	42 (23)	29 (19)	39 (22)	32 (22)	36 (26)	14 (18)
Heterosexual Contact ²	153 (65)	166 (77)	130 (70)	130 (71)	132 (74)	124 (79)	133 (76)	127 (76)	97 (70)	63 (79)
Other/Undetermined	8 (3)	3 (1)	4 (2)	4 (2)	5 (3)	3 (2)	3 (2)	7 (4)	3 (2)	1 (1)
Female Subtotal	234	216	186	184	179	156	175	166	138	79
Total	1,872	1,783	1,534	1,452	1,391	1,233	1,364	1,381	1,149	713

¹Data are provisional due to reporting delay. Cases include those reported by December 31, 2011.

²Heterosexual contact indicates contact with a person who is HIV-infected or at increased risk for HIV.

SOURCE: HIV Epidemiology Program, Los Angeles County Department of Health Services

Patterns and Trends of Drug Abuse in Maine: 2011 and Early 2012

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ABSTRACT

This report updates most drug abuse indicators in Maine through calendar year 2011 and early 2012. Heroin levels remained low. Heroin arrests in early 2012 decreased sharply to 4 percent; however, deaths, law enforcement seizures, and treatment admissions were stable at low levels. Heroin was detected in 12 percent of 2011 drug impaired driver urinalyses; this represented an increase of 3 percent. Primary heroin treatment admissions showed some similarity to primary opiate/opioid admissions in age and in the range of drugs reported as secondary problems, particularly including other opiates. Cocaine/crack abuse indicators varied in direction. Deaths have declined overall from 19 percent in 2006–2007 to 7 percent in the first half of 2011 (one-half of the latter involved opioid cointoxicants). There was a sharp drop in arrests, from 29 percent in 2011 to 13 percent in early 2012. Law enforcement cocaine seizure samples that were adulterated with levamisole dropped substantially, from 47 percent in 2011 to 12 percent in early 2012. Numbers of primary treatment admissions for cocaine/crack remained low, with relatively more for crack cocaine. There was an increase in clients age 18–25. Smoking as a primary route of administration increased to 51 percent. Marijuana arrests continued to decline, while the percentage of drug impaired drivers with cannabinoid positive urine increased. Primary marijuana treatment admissions remained at a 9-percent plateau for the third year; approximately one-third were age 18–25 and another one-third were younger than 18. Pharmaceutical opiate/opioid misuse and abuse remained very high in 2011 and early 2012 indicators, contributing to 42 percent of early 2012 arrests and 27 percent of forensic laboratory samples. Primary treatment admissions for opiates/opioids, at 35 percent of all 2011 admissions, continued to outpace those for heroin. Pharmacy robberies demanding opioids have risen from 2 in 2008, to 24 in 2011, to a projected 43 for 2012, based on the first 5 months of the year. Narcotics were detected in 59 percent of the urine tests of drug impaired drivers in 2011; 43 percent had a combination of opiates and benzodiazepines. Methamphetamine indicators were at low levels, but all indicators showed an increase, particularly in confirmed one-pot clandestine laboratories during early 2012. Synthetic (substituted) cathinones have been an increasing problem reported by law enforcement, these were predominantly identified as MDPV (3,4-methylenedioxypropylone), although several other cathinones have been detected in law enforcement seizures.

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INTRODUCTION

Area Description

According to the 2010 U.S. Census, Maine has 1.3 million inhabitants; this represents a 4-percent increase over the previous decade. It has the highest percent of rural land area of any State, with more than 60 percent. Maine averages 43 persons per square mile and ranks 40th among States in population density. The majority of its population lives in rural communities. Most (95 percent) of its citizens are White. The population is the oldest of all States, with a median age of 42.7. More than 10 percent fall below the Federal poverty line. The majority of Maine's borders are shared with Canada, contributing to an important pattern of cross-border drug trafficking. Maine's long coast and many harbors have also contributed to drug distribution, as has the north-south I-95 corridor, which connects Maine to more southerly urban centers.

Since the late 1990s, Maine has experienced a substantial increase in drug abuse, including accidental drug-induced deaths, which peaked in the early 2000s and again in 2009. Pharmaceuticals have fueled the increase both times; these were largely opioids in mixed drug combinations, including benzodiazepines, antidepressants, muscle relaxants, and alcohol.

Data Sources

The data sources used in this report are listed below:

- **Treatment admissions data** were provided by the Maine State Office of Substance Abuse and include all admissions to programs receiving State funding. This report includes 2011 treatment admissions and makes comparisons with prior calendar years. Totals include alcohol admissions (exhibit 1).
- **Mortality data** were generated by analysis of State of Maine Office of Chief Medical Examiner case files for all drug-induced cases through June 2011. That office investigates all drug-related cases statewide (exhibit 2).
- **Arrest data** were provided by the Maine State Drug Enforcement Agency (MDEA), which directs eight multijurisdictional task forces covering the entire State, generating approximately 60 percent of all Uniform Crime Report (UCR) drug arrests statewide. Data totals include only arrests for possession or trafficking, extending through the first quarter of 2012 (exhibit 3).
- **Forensic laboratory data on drug seizures** were provided by the Maine State Health and Environmental Testing Laboratory, which tests all samples of drugs seized by the MDEA, as well as by other police and sheriff departments². Data were provided through calendar year (CY) 2011 and for the first 5 months of 2012 (exhibit 4).

²Numbers and proportions of items seized and analyzed in Maine by forensic laboratories will differ in this report from those shown in Volume I, where numbers and percentages shown in charts and tables of drug reports in items seized and identified are provided by the National Forensic Laboratory Information System.

- **Forensic laboratory data on urinalyses of drug impaired drivers** were provided by the Maine State Health and Environmental Testing Laboratory, which tests all urine samples of drivers suspected of driving under the influence of drugs. Data were provided for 2011.
- **Epidemiological data** were provided by the Maine State Center for Disease Control on acquired immunodeficiency syndrome (AIDS) and human immunodeficiency virus (HIV) data available through 2011. Viral hepatitis B and C surveillance data were available through 2011.
- **Pharmacy robbery data** were provided by the Maine Department of Public Safety public information service for the period 2008 through June 2012 (exhibit 5).

DRUG ABUSE PATTERNS AND TRENDS

Cocaine/Crack

Cocaine/crack abuse indicators have been mixed. Although arrests and seizures have continued a downward trend during the past 5 years, deaths, drug impaired drivers, and primary treatment admissions increased slightly in 2011. The increase appeared to be largely due to crack cocaine in arrests and admissions indicators.

Proportions of primary treatment admissions for cocaine declined from 6 percent in the years 2006–2008 to 3 percent in 2010 (1 percent were crack cocaine and 2 percent were powder cocaine admissions). From 2010 to 2011, the proportion and number stayed level. During 2011, the proportion of primary admissions citing a smoking route of administration increased from 28 to 51 percent, while inhalation and injection declined. The proportion age 35 and older also decreased, from 47 to 43 percent, and clients age 18–25 increased by the same proportion; they increased from 15 to 20 percent.

Cocaine-induced deaths rose from a low of 4 percent of all drug-related deaths in 2002 to peak at approximately 19 percent in 2006 and 2007. These deaths then decreased to 5 percent in 2009. In 2010, there was a slight increase to 6 percent, and again to 7 percent in the first half of 2011. Most recent deaths had cointoxicants. These cointoxicants were most frequently diverted prescription opioids. The same pattern of cocaine-narcotic combinations was seen in the cointoxicant pattern in drug impaired driver toxicology. Overall, the percentage of drug impaired drivers with cocaine-positive urinalyses increased, from approximately 7 percent in 2009 to 8 percent in 2010, and then to 9 percent in 2011.

Cocaine/crack arrests have constituted a declining proportion of MDEA arrests. In 2006, there were 235 arrests for cocaine (representing 45 percent of total arrests); 36 percent were for crack cocaine. The number of cocaine arrests dropped steadily to 172 (28 percent of total arrests) in 2011. Numbers of cocaine arrests during the first quarter of 2012 suggested continued declines overall to a projected 72 arrests for 2012, with 72 percent of these for crack/cocaine. Cocaine/crack trafficking is linked to New York supplies, brought in by bus, frequently along with prescription opioids. Local dealers were selling prescription opiates along with the cocaine.

The percentage of drug items seized by law enforcement testing positive for cocaine continued to decline, from approximately 43 percent of all items seized and identified in 2009 to 29 percent in 2011; 27 percent were projected for 2012. Levamisole was found in 47 percent of 2011 analyzed

samples, compared with 32 percent of such items in 2010. However, in the first 5 months of 2012, only 12 percent of analyzed items contained levamisole. Despite persistent declines, cocaine/crack continued to represent the largest single category of drug samples seized and identified in Maine's drug testing laboratory.

Heroin

Most heroin indicators have been declining or stable during the past 5 years. However, there was an increase in heroin/morphine-positive urinalyses among drug impaired drivers, from 8 percent in 2009 to 12 percent in 2011; approximately one-quarter of these were confirmed heroin. The majority of those with heroin/morphine also had one or more other drugs present, including benzodiazepines (55 percent), opioids (50 percent), and cocaine (13 percent).

The number of primary heroin admissions has been relatively stable over the past 5 years; heroin primary admissions constituted 8 percent of all admissions in 2011. Males constituted 55 percent of heroin admissions in 2011, and 21 percent of these clients were age 35 and older. From 2003 to 2008, there was a decline in the proportion of admissions among clients age 18–25, from a peak of approximately 50 percent of all heroin treatment admissions in 2003 to 29 percent in 2011. There was a compensatory increase in clients age 26–34, from approximately 30 percent in 2003 to 50 percent in 2011. Among primary heroin admissions, 53 percent named other opiates as a secondary problem.

Heroin/morphine deaths continued a multiyear decline, from approximately 24 percent in 2005 to 4 percent in 2010 and an estimated 5 percent in 2011. It is important to note that, beginning in 2008, some heroin/morphine deaths were found to involve pharmaceutical morphine rather than heroin. These have been removed from the heroin/morphine death totals if identified. There are some deaths in which the drug form cannot be discerned. All confirmed heroin deaths in early 2011 were polydrug induced, and some included benzodiazepines.

Heroin arrests by the MDEA were stable, at 40–45 per year (approximately 5 to 8 percent of total arrests), from 2007 to 2010. However, in 2011, there were 58 heroin arrests, representing a substantial increase; the projection based on the first quarter of 2012 suggests a decline. Drug samples seized by law enforcement and identified as heroin fluctuated from approximately 9 percent of all drug items identified in 2008, to 15 percent in 2009, and to 10 percent in 2011. The projection for 2012, based on data for the first 5 months of 2011, was 8 percent.

Maine's heroin supplies are South American. In the 65 heroin samples identified in Maine's 2011 law enforcement seizures, 46 percent contained adulterants. Of those, 83 percent included caffeine, 33 percent contained diltiazem, 7 percent contained levamisole, and 43 percent included procaine, benzocaine, or lidocaine.

Pharmaceutical Opiates/Opioids

Pharmaceutical opiate/opioid misuse in Maine remained relatively high in 2011 and early 2012 indicators, with most increasing. These drugs were responsible for approximately 69 percent of January–June 2011 drug-induced deaths, 35 percent of 2011 primary treatment admissions (including alcohol), 28 percent of 2011 law enforcement seizures, 39 percent of 2011 MDEA arrests, and 59 percent of drug impaired driver urinalyses.

Proportions of treatment admissions for opiates/opioids other than heroin/morphine were only 6 percent in 2000; they steadily increased to 18 percent in 2005 and 35 percent in 2011. According to 2011 data, the most common route of administration was inhalation (43 percent); 24 percent were injecting the drugs. Primary oxycodone treatment admissions constituted the majority of the non-heroin opiate/opioid admissions.

Sixty percent of Maine's 2010 drug-induced deaths involved at least one pharmaceutical opioid, either alone or in combination with other drugs. Methadone and oxycodone were the most frequently implicated opioids. Methadone-induced deaths peaked at approximately 46 percent of all drug-induced deaths in 2004, then gradually decreased to a low of 26 percent in 2009. In 2010 and in the first half of 2011, these deaths constituted 30 percent of the total. The percentage of oxycodone deaths has fluctuated, increasing from approximately 16 percent in 2008, to 28 percent in 2009, to 29 percent in 2010, and then to 22 percent in the first half of 2011. Fentanyl drug-induced deaths increased in frequency; fentanyl caused 10 percent of early 2011 deaths.

Arrests for pharmaceutical narcotics rose from 22 percent of all drug arrests in 2007 to 39 percent in 2011; during the first 3 months of 2012, the percentage increased to 42 percent. Among drug items seized by law enforcement and identified as narcotics by the State testing laboratory, opiate analgesics constituted 13 percent in 2009; these rose to 28 percent in 2011 and represented 27 percent in the first 5 months of 2012. In 2011, 55 percent of these items were identified as oxycodone, 15 percent were identified as buprenorphine, and 13 percent were identified as hydrocodone. Among drug impaired drivers tested in 2011, 59 percent had urinalysis-positive tests for at least one opioid. In 26 percent of the cases, oxycodone was detected; methadone was detected in 20 percent. Frequently more than one opiate was present, very often in combination with benzodiazepines. Pharmacy robberies demanding opioids rose from 2 in 2008 to 24 in 2011 and were projected to reach 43 for 2012, based on data for the first 5 months.

Buprenorphine has emerged as a key drug in opioid indicators. Buprenorphine was involved in five deaths during 2010 and two in the first half of 2011. The drug ranked sixth among all substances confirmed in drug items seized by law enforcement and analyzed in 2011. Buprenorphine was found in 11 percent of drug impaired driver urinalyses in 2011.

Benzodiazepines

Benzodiazepines continued to play a substantial role in Maine drug abuse indicators, with mixed levels and trends across indicators. The proportion of deaths involving benzodiazepines rose steadily from 2005 to 2010 (from 20 to 34 percent), but the projected proportion for 2011 was lower than the previous 2 years, at 24 percent. Approximately 45 percent of drug impaired drivers had urinalysis-positive tests for one or more benzodiazepine, and 43 percent tested positive for a combination of narcotics and benzodiazepines. Arrests by the MDEA for benzodiazepine possession or trafficking totaled 3 percent in 2011 and 1 percent for the first quarter of 2012.

Numbers of primary benzodiazepine admissions increased from 74 in 2010 to 121 in 2011; they constituted 1 percent of all admissions. Benzodiazepines were often mentioned as secondary problems in treatment admissions. For example, 4 percent of heroin admissions mentioned benzodiazepines as a secondary problem, and 5 percent of other opiate admissions cited a secondary problem with benzodiazepines.

Methamphetamine

Methamphetamine indicators were at low levels, but they were increasing in 2011 and early 2012. Methamphetamine was not present in any deaths during the first half of 2011. In 2011, 23 (4 percent) of MDEA drug arrests were for methamphetamine, increasing to 64 (12 percent) in the first quarter of 2012. The majority of the arrests were near the Canadian border in small towns. In 2011, only 12 seizure samples analyzed in the Maine forensic testing laboratory were positive for methamphetamine; there were 13 during the first 5 months of 2012. There were 7 confirmed clandestine laboratories statewide in 2010; there were 6 in 2011; and there were 10 in the first 6 months of 2012. During the first 5 months of 2012, 10 of 13 methamphetamine seizure items were in tablet form, and in 2011 that proportion was 8 of 12. About one-half of the tablets tested in 2011 and early 2012 included caffeine, but no other substances. Among drug impaired drivers in 2011, 3 percent tested urinalysis-positive for methamphetamine.

The numbers were very small in this reporting period, but a slight increase, from 41 to 44 admissions, was observed in primary methamphetamine treatment admissions from the previous reporting periods. In 2011, methamphetamine accounted for 0.4 percent of primary treatment admissions.

Marijuana

Marijuana indicators in Maine have been affected by the new State medical marijuana law licensing distributors. Levels and trends were mixed, with a substantial drop in the percentage of marijuana drug arrests, from 23 percent in 2010, to 11 percent in 2011, and 13 percent in the first quarter of 2012. Drug impaired drivers with a urinalysis positive for marijuana, however, increased from 21 to 36 percent from 2010 to 2011; tests revealed that marijuana was often combined with other substances. The percentage of drug items from law enforcement seizures identified as containing marijuana remained stable, at 10 percent in 2010 and 2011 and 11 percent in the first 5 months of 2012.

Proportions of primary treatment admissions for marijuana also stabilized after a multiyear decrease, at 9 percent in the 3-year period from 2009 to 2011 (primary treatment admissions for marijuana constituted 14 percent of the total in 2002). The age and gender distribution of primary treatment admissions for marijuana has remained fairly stable. In 2010 data, approximately 72 percent of marijuana treatment admissions were male; in 2011, males constituted 71 percent. In 2011, 31 percent of marijuana admissions were younger than 18; 32 percent were age 18–25; 19 percent were age 26–34; and 18 percent were 35 and older.

MDMA

Indicators for MDMA (3,4-methylenedioxymethamphetamine) were very small in number. There were only three MDMA primary treatment admissions during 2011. There were no deaths due to either MDMA or MDA (3,4-methylenedioxyamphetamine) during the first 6 months of 2011. During 2011, there were 14 arrests for MDMA by the MDEA (constituting 2 percent of all arrests, a percentage that continued through the first quarter of 2012). Among drug impaired drivers, only 1 percent tested urinalysis-positive for MDMA.

The number of law enforcement drug seizures tested in the Maine State laboratory and identified as containing MDMA increased every year from 2007 to 2010, although numbers were low. In 2011, there was a decrease to 19 items (3 percent of the total); the proportion decreased to 1

percent during the first 5 months of 2012. Among the 19 MDMA items seized and analyzed in the Maine forensic testing laboratory in 2011, 10 contained MDMA only, 7 contained caffeine, and 2 contained TFMPP (1-3-(trifluoromethylphenyl)piperazine) and BZP (1-benzylpiperazine). During the first 5 months of 2012, only four items were identified as containing MDMA. Two of these analyzed items contained MDMA alone, and two had a combination of MDMA and the substituted cathinone MDPV (3,4-methylenedioxypropylvalerone).

Synthetic (Substituted) Cathinones

Synthetic (substituted) cathinones were first reported by Maine law enforcement, particularly in several mid-State and coastal areas, in 2011. That year, 17 items seized by law enforcement and analyzed were identified as containing synthetic (substituted) cathinones (3 percent of the total). These items included the following, some in combination: 10 items with MDPV; 5 items with FMC (4-fluoromethylcathinone); 2 items with methylone (3,4-methylenedioxy-N-methylcathinone); and 1 item with NRG-1 (naphthylpyrovalerone). One item combined MDPV and NRG-1; three others included the adulterant niacinamide; and two contained the adulterant caffeine. Among urinalysis tests positive of drug impaired drivers statewide, 6 percent of 330 drug impaired drivers tested positive for MDPV. The MDEA reported one arrest for synthetic (substituted) cathinones at the end of 2011.

In early 2012, analysis of the law enforcement seizure items tested in the first 5 months indicated an increase in synthetic (substituted) cathinones in analyzed items (60 of 595 samples, or 10 percent, contained synthetic [substituted] cathinones). This was likely due to increased law enforcement efforts after the passage of the Maine law making eight specific compounds illegal. These items included the following: 47 items with MDPV (2 combined with MDMA, 1 with morphine, 1 with 2-pyrrolidinovacrophnone, and 1 combined with naphthylpyrovalerone [naphyrone] and JWH-203 [a cannabimimetic]; 4 items with methylone, combined in 1 sample with MDMC (3,4-methylenedioxymethcaninone); 4 items with pentedrone (2-(methylamino)-1-phenylpenta-1-one or alpha-methylamino-valerophenone); 3 items with alpha-Pyrrolidinopentiophenone, alpha-PVP; 1 item with mephedrone (4-methylethcathinone, or 4-MEC); and 1 item with pentylone (beta-Keto-Methylbenzodioxolypentanamine).

Retrospective analysis of the 2010 law enforcement seizure test results indicated that only two samples with synthetic (substituted) cathinones were identified in analyzed items that year; both samples were tablets that contained mephedrone. One sample of plant material tested as having cathinone, and may have been khat.

The medical examiner tests for these substances, when they are suspected. During 2011, and the first 6 months of 2012, there were 17 cases tested. Of these, three tested positive for MDPV. In one case of the three, MDPV was listed as a cause of death. One case in 2012 tested positive for alpha-PVP and was still under investigation at the time of writing this report.

Piperazines

Piperazines have appeared in items seized by Maine's law enforcement and analyzed in the last 3 years, but numbers were declining. During 2010, 15 items seized by law enforcement were identified in the Maine State laboratory as containing BZP; all of these were in tablet form. This total has been updated since the 2010 report. Six of these were combined with MDMA, and 13 were

combined with TFMPP alone or with TFMPP and caffeine. One combined BZP, TFMPP, MDMA, and methamphetamine.

During 2011, there were 10 items tested in the Maine forensic laboratory that contained BZP; 8 combined BZP with TFMPP alone, and 2 were combined with TFMPP and MDMA. During the first 5 months of 2012, by contrast, there were no analyzed samples that were identified as containing either BZP or TFMPP.

Tryptamines

In 2010, four items tested in the Maine forensic laboratory contained DMT (dimethyltryptamine), associated with a small DMT laboratory that was discovered by law enforcement. There were no seizures containing DMT in either 2011, or in the first 5 months of 2012, but the MDEA confirmed two clandestine DMT laboratories, one in 2010, and one in 2011.

INFECTIOUS DISEASES RELATED TO DRUG ABUSE

HIV/AIDS, Hepatitis B, and Hepatitis C

HIV/AIDS data revealed 56 new HIV diagnoses in 2009, 59 new diagnoses in 2010, and 54 new diagnoses during 2011. Recent HIV mode of transmission data showed that most new cases were due to men having sex with men (MSM)—approximately 54 percent in 2011, down slightly from 59 percent in 2010. In 2011, 2 percent of these cases were due to an injection drug use source, but none were combined injection drug use and MSM. Approximately 20 percent of new diagnoses were female in 2011; ethnicity was not reported. The rate of new HIV diagnoses per 100,000 in Maine was 4.1 in 2011, compared with 19.7 for the United States in 2010. The number of reported acute hepatitis B cases has declined; 15 cases were reported in 2009, 13 were reported in 2010, and there were 8 reported cases in 2011. The number of acute hepatitis C cases increased from 2 cases in 2009 and 2010 to 12 cases in 2011. The number of chronic hepatitis C cases increased slightly, from 1,142 in 2010 to 1,184 in 2011.

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Exhibit 1. Frequency and Percentage of Annual Treatment Admissions by Primary Drug for the State of Maine: 2005–2011

Primary Drug	2005 Freq. (%)	2006 Freq. (%)	2007 Freq. (%)	2008 Freq. (%)	2009 Freq. (%)	2010 Freq. (%)	2011 Freq. (%)
Cocaine	681 (5.9)	764 (7.0)	902 (7.3)	768 (6.0)	575 (4.0)	454 (3.3)	456 (3.6)
Heroin/Morphine	1,096 (9.5)	1,007 (9.2)	991 (8.0)	1,092 (8.5)	1,250 (8.6)	928 (6.8)	1058 (8.5)
Other Opiates and Opioids	2,025 (17.5)	2,282 (20.9)	3,142 (25.3)	3,951 (30.7)	4,185 (28.9)	4,372 (32.2)	4,409 (35.2)
Marijuana	1,370 (11.9)	1,169 (10.7)	1,349 (10.9)	1,304 (10.1)	1,303 (9.0)	1,275 (9.4)	1,179 (9.4)
Methamphetamine	51 (.4)	49 (0.4)	34 (0.3)	31 (0.2)	33 (0.2)	41 (0.3)	44 (0.4)
Alcohol	6,201 (53.7)	5,519 (50.6)	5,800 (46.8)	5,531 (43.0)	6,481 (44.7)	5,904 (43.5)	4,726 (37.8)
Other	134 (1.2)	122 (1.1)	602 (4.9)	172 (1.3)	671 (4.6)	602 (4.4)	637 (5.1)
Total Admissions With Alcohol	11,558	10,912	12,395	12,849	14,498	13,576	12,510

SOURCE: Maine Office of Substance Abuse Treatment Data System

Exhibit 2. Frequency and Percentage of Key Drugs and/or Categories Mentioned on the Death Certificate as a Cause of Death for the State of Maine: 2005–June 2011¹

Key Drug	2005 Freq. (%)	2006 Freq. (%)	2007 Freq. (%)	2008 Freq. (%)	2009 Freq. (%)	2010 Freq. (%)	2011 est.² Freq. (%)
Cocaine	22 (12.5)	32 (19.2)	30 (19.5)	12 (7.3)	9 (5.0)	10 (6.0)	12 (6.9)
Heroin/Morphine ³	43 (24.4)	32 (19.2)	25 (16.2)	18 (11.0)	13 (7.3)	7 (4.2)	8 (4.6)
Pharmaceutical Morphine				2 (1.2)	18 (10.1)	16 (9.6)	4 (2.3)
Oxycodone	17 (9.7)	24 (14.4)	38 (24.7)	27 (16.5)	50 (27.9)	48 (28.7)	38 (21.8)
Methadone	71 (40.3)	68 (40.7)	59 (38.3)	56 (34.1)	47 (26.3)	50 (29.9)	52 (29.9)
Benzodiazepines	35 (19.9)	36 (21.6)	36 (23.4)	39 (23.8)	56 (31.3)	57 (34.1)	42 (24.1)
Antidepressants	19 (10.8)	19 (11.4)	27 (17.5)	44 (26.8)	61 (34.1)	58 (34.7)	34 (19.5)
Illicit Drugs	61 (34.7)	59 (35.3)	49 (31.8)	30 (18.3)	22 (12.3)	17 (10.2)	26 (14.9)
Pharmaceuticals	139 (79.0)	134 (80.2)	136 (88.3)	155 (94.5)	164 (91.6)	160 (95.8)	164 (94.3)
Total Drug Deaths	176 (100.0)	167 (100.0)	154 (100.0)	164 (100.0)	179 (100.0)	167 (100.0)	Projected 174 (100.0)

¹Note that drug categories are not mutually exclusive and do not add to 100 percent. Drugs may be implicated as a cause of death either alone or in combination with other drugs or alcohol. All drug categories are not included.

²The totals for 2011 were estimated by multiplying the January–June total by two.

³Beginning in 2008, pharmaceutical morphine is reported separately, if known, and subtracted from the heroin/morphine total. However, in some deaths it is not possible to differentiate pharmaceutical morphine from heroin.

SOURCE: Maine Office of Chief Medical Examiner

Exhibit 3. Frequency and Percentage of Key Drug Arrest Categories in Maine: 2006–March 2012¹

Key Drug	2006 Freq. (%)	2007 Freq. (%)	2008 Freq. (%)	2009 Freq. (%)	2010 Freq. (%)	2011 Freq. (%)	2012 est ² Freq. (%)
Cocaine/Crack	235 (45.1)	252 (46.5)	230 (36.3)	203 (26.2)	189 (22.0)	172 (28.4)	72 (13.2)
Heroin	18 (3.5)	43 (7.9)	40 (6.3)	45 (5.8)	40 (4.7)	58 (9.6)	24 (4.4)
Methamphetamine	30 (5.8)	17 (3.1)	8 (1.3)	25 (3.2)	30 (3.5)	23 (3.8)	64 (11.7)
Marijuana	103 (19.8)	94 (17.3)	108 (17.1)	160 (20.6)	197 (22.9)	69 (11.4)	72 (13.2)
Pharmaceutical Narcotics	123 (23.6)	118 (21.8)	218 (34.4)	308 (39.7)	331 (38.5)	236 (39.0)	228 (41.9)
Benzodiazepines	3 (0.4)	14 (2.6)	9 (1.4)	17 (2.2)	16 (1.9)	17 (2.8)	4 (0.7)
Total Arrests	521 (100.0)	542 (100.0)	633 (100.0)	776 (100.0)	859 (100.0)	605 (100.0)	Projected 54 (100.0)

¹Categories do not sum to 100 percent because all categories are not included in the table.

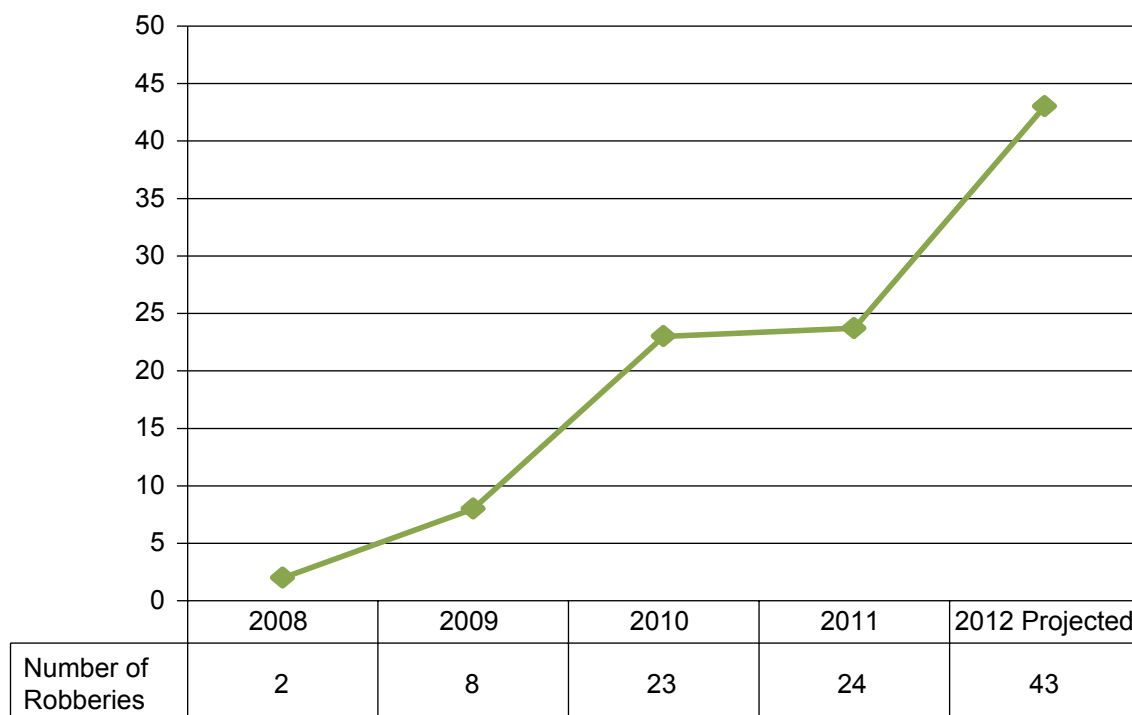
²Estimated 2012 totals were obtained by multiplying the first 3-month totals by four.

SOURCE: Maine Drug Enforcement Agency

Exhibit 4. Percentage of Items Seized by Law Enforcement in Key Drug Categories Identified by the Maine State Health and Environmental Laboratory: 2006–May 2012

Key Drug Category	2006 Percent	2007 Percent	2008 Percent	2009 Percent	2010 Percent	2011 Percent	January–May 2012 Percent
Cocaine	43.3	50.1	44.1	43.4	41.1	29.0	26.8
Opiate Analgesic	18.3	14.8	12.2	13.3	17.7	27.9	27.2
Heroin	10.2	7.2	8.5	14.7	8.3	9.9	7.7
Marijuana	11.3	11.1	7.6	7.1	9.5	10.4	10.7
Benzodiazepine	4.9	3.0	3.7	1.6	2.7	3.5	2.9

SOURCE: Maine State Health and Environmental Testing Laboratory

Exhibit 5. Number of Pharmacy Robberies in Maine: 2008–2012 (Projected)¹

¹The projected total is extrapolated from the January through May total ($n=18$).
 SOURCE: Maine Department of Public Safety

Drug Abuse Trends in Miami-Dade and Broward Counties, South Florida: June 2012

James N. Hall¹

ABSTRACT

Indicators of cocaine problems in South Florida continued to represent high levels, even as they have been declining in recent years. The numbers of cocaine occurrences among deceased persons have declined since 2007 across the State of Florida and in Broward County. The number of cocaine fatalities rose in Miami-Dade County during the second half of 2010, primarily due to the increase of polysubstance abuse with prescription opioids and benzodiazepines, and then stabilized in the first half of 2011. Treatment admissions for cocaine had declined sharply across the State since 2007 but stabilized from 2010 to 2011 in the southeastern Florida counties. Heroin consequences remained at low levels across Florida; deaths increased in Florida in the first half of 2011 but declined during that time period in the southeastern counties. Primary treatment admissions for heroin were stable across Florida and in Miami-Dade and Broward Counties from 2010 to 2011. Heroin purity in the greater Miami area was among the lowest for major metropolitan areas across the country. Many heroin consequences also involved the nonmedical use of prescription opioids. The nonmedical use of prescription opioids continued to be Florida's most deadly and addictive drug problem. However, consequences have generally stabilized at high levels. For the first time in history, prescription opioids became the leading category for primary addiction treatment admissions in the State of Florida, ranking above all other drugs during 2011. Numerous new laws and regulations to control prescription diversion took effect in the second half of 2011. Broward County continued to report high rates of prescription opioid consequences, including more users reporting injecting than oral administration as their primary method of use. The majority of prescription opioid addiction treatment clients were young adults between the ages of 18 and 34. Benzodiazepine abuse in general, and specifically alprazolam (Xanax®), continued at high levels in South Florida, particularly when used in combination with other substances. Benzodiazepine deaths were reported in high numbers; the numbers were slightly fewer than those for opioids and most often in combination with them. Benzodiazepine deaths decreased in the first half of 2011 statewide and in Broward County and stabilized in Miami-Dade County. Indicators of methamphetamine abuse remained at relatively low levels. Numerous anecdotal reports from private treatment counselors suggested a resurgence in methamphetamine abuse in the first half of 2012, which is too recent to be identified in the data presented in this report. Consequences of marijuana use and addiction continued at high levels, particularly among adolescents and young adults. Marijuana declined from the leading substance for primary treatment admissions statewide in 2010 to ranking third in 2011. Yet, marijuana continued as the number one

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primary substance for addiction treatment in both southeastern Florida counties, where the number of admissions increased by 15 percent from 2010 to 2011. Cannabimimetics (synthetic cannabinoids) were widely reported. Measures of MDMA (3,4-methylenedioxymethamphetamine) abuse have stabilized in the South Florida area at relatively low numbers in recent years, while reports of other hallucinogenic amphetamines have increased. Ecstasy pills were often adulterated and contained other drugs, including numerous emerging psychoactive substances now identified in poison information exposure calls and crime laboratory reports. Muscle relaxants continued to be abused at moderate levels in combination with opioids, benzodiazepines, and MDMA.

INTRODUCTION

This report reviews data from 2010 and 2011 for drug-related deaths, addiction treatment admissions, poison information center exposure calls, and crime laboratory analysis. Information is presented by primary substance of abuse, with topics including cocaine, heroin, nonmedical use of prescription opioids, benzodiazepines, methamphetamine/amphetamines, marijuana, emerging psychoactive substances, MDMA (3,4-methylenedioxymethamphetamine) or ecstasy, GHB (gamma hydroxybutyrate), 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.

Area Description

The population of the State of Florida was 18,801,310, according to the 2010 U.S. Census, of whom 22.5 percent are Latino/Hispanics. White persons of all ethnicities constitute 75 percent of the population, including 58.9 percent who are White non-Hispanic; 16 percent are Black; and 2.4 percent are Asian. Foreign born persons account for 19.2 percent of the State's population.

Located in the extreme southern portion of the Florida peninsula, Miami-Dade County has the State's largest population, with 2,253,362 residents, according to the 2010 U.S. Census. Latinos/Hispanics account for 65 percent of the population; White persons of all ethnicities constitute 73.8 percent of the population, including 15.4 percent who are White non-Hispanic; 18.9 percent are Black; and 1.5 percent are Asian. Miami is the county's largest city, with 399,457 residents. Foreign born persons account for 51.1 percent of the County's population. More than 100,000 immigrants arrive in Florida each year; one-half establish residency in Miami-Dade County.

Broward County, situated due north of Miami-Dade, is composed of Ft. Lauderdale, 28 other municipalities, and an unincorporated area. The county covers 1,197 square miles, including 25 miles of coastline. According to the 2010 U.S. Census, the Broward County population was 1,748,066. The population is 63.1 percent White, including 43.5 percent who are White non-Hispanic; 26.7 percent are Black; and 3.2 percent are Asian. Latino/Hispanics constitute 25.1 percent of the population. Foreign born persons account for 30.9 percent of the County's population. Broward County is the second most populated county in Florida and accounts for 9.3 percent of Florida's population.

Palm Beach County (population 1,320,134) is located due north of Broward County and is the third most populated county in the State. The county population is 73.5 percent White, including 60.1 percent who are White non-Hispanic; 17.3 percent are Black; and 2.4 are percent Asian. Latino/

Hispanics constitute 19 percent of the population. Twenty-two percent of the county's population is foreign born. Together, the 5.3 million people of these three counties— Miami-Dade, Broward, and Palm Beach—constitute 28 percent of the State's 18.8 million population. Since 2003, these three counties have constituted the federally designated Metropolitan Statistical Area (MSA) for South Florida, making it the sixth largest MSA in the Nation. Previously, the MSA included only Miami-Dade County. This means that the three counties are included in more national data sets tracking health-related conditions and criminal justice information.

South Florida is a hub of international transportation and the gateway to commerce between the Americas, accounting for sizable proportions of the Nation's trade. 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. The area's 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.

Data Sources

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

- **Drug-related mortality data** came from the Florida Department of Law Enforcement (FDLE) Medical Examiners Commission's *2011 Interim Report of Drugs Identified in Deceased Persons between January and June 2011*. The report provides information on the total number of various drugs detected in 4,329 decedents in the first half of 2011, mostly for whom an autopsy was performed, but not all of the 90,510 deaths that occurred in Florida during the first 6 months of 2011. The numbers of drugs detected are referred to as "occurrences" and should not be confused with the actual number of drug-related deaths. Medical Examiners (MEs) reported the number of drug-related deaths (whether the drug was the cause of death or was merely found to be present) through toxicology reports submitted to the Medical Examiners Commission. In order for a death to be considered "drug-related" there needs to be at least one drug identified in the decedent, which is a drug occurrence. The vast majority of these deaths (or cases) had more than one drug occurrence. The State's MEs were asked to distinguish between the drugs being a "cause" of death or merely "present" in the body at the time of death. A drug is only indicated as the cause of death when, after examining all evidence and the autopsy and toxicology results, the ME determines the drug played a causal role in the death. It is not uncommon for a decedent to have multiple drugs listed as a cause of death. When a ME determines a drug is merely present or detected in the decedent, the drug may not have played a causal role in the death. It is not uncommon for a decedent to have multiple drugs listed as present. Therefore, the number of drug occurrences exceeds the number of decedents because of multiple drugs including alcohol identified in the same person. While this report provides the most current count of deaths in which substances have been detected, it is very likely that the numbers will increase for the first half of the year when the 12-month annual report is released (due to cases finalized after the reporting deadline). The report for all of 2011 is scheduled to be released by August 2012.
- **Drug treatment data** on primary admission to all publicly funded addiction treatment programs in the State of Florida from 1998 to 2011 are from the Treatment Episode Data Set, the Substance Abuse and Mental Health Services Administration's Center for Behavioral Health Statistics

and Quality, as provided by the Florida Department of Children and Families as of April 5, 2012. Drug treatment data on primary admissions to all publicly funded addiction treatment programs in Miami-Dade and Broward Counties during calendar year 2011 were provided by the Florida Department of Children and Families, as of May 25, 2012.

- **Crime laboratory drug analyses reports** were queried from the Drug Enforcement Administration's (DEA's) National Forensic Laboratory Information System (NFLIS) Data Query System on May 8, 2012 for Miami-Dade, Broward, and Palm Beach Counties for January–December 2011. A recent change in NFLIS methodology allows for the accounting of up to three drugs per item submitted for analysis. The numbers of NFLIS reports now include primary, secondary, and tertiary substances for crime laboratory items analyzed and provide a more complete surveillance than when only the primary substance detected was reported. Because of this change, it is not appropriate to compare the 2011 NFLIS data to those in previous South Florida CEWG Reports. Data for 2011 are provisional and subject to change. It should also be noted that the NFLIS data combine some, but not all, pharmaceutical items into the category of “controlled substance.” This factor means that the numbers provided for reports of specific medications or categories (e.g., prescription opioids or benzodiazepines) may be fewer than submitted to local crime laboratories.
- **Heroin price and purity information** came from the DEA's Heroin Domestic Monitor Program (HDMP) for 2010, published July 8, 2011.
- **Reports on poison exposure calls for emerging psychoactive substances** are from the Florida Poison Information Center–Miami for the State of Florida for January to December 2011 and January to April 2012.
- **Data on drug-related arrests among juveniles** are from the Florida Department of Juvenile Justice for the fiscal year (FY) July 2010 to June 2011.
- **Data on injection drug use** among acquired immune deficiency syndrome (AIDS) cases came from Miami-Dade and Broward Counties Departments of Health, as of December 31, 2011.

Other information on drug use patterns was derived from ethnographic research and callers to local drug information hotlines, as well as the United Way of Broward County's Commission on Substance Abuse's Emerging Issues Task Force.

DRUG ABUSE PATTERNS AND TRENDS

Cocaine/Crack

Indicators of cocaine problems in South Florida continued to represent high levels, despite a decline in recent years. The numbers of cocaine occurrences among deceased persons have declined since 2007 across the State of Florida and in Broward County. In Miami-Dade County, there was a sharp decline in cocaine deaths from 2007 to 2009, but the number of fatalities increased in the second half of 2010, primarily due to the increase of cocaine deaths in which prescription opioids and benzodiazepines were also detected. The number of cocaine deaths then stabilized in the first half of 2011 in Miami-Dade County, while continuing to decline in Broward County and across the State. Treatment admissions for cocaine have declined sharply across the State since 2007 but

stabilized from 2010 to 2011 in the South Florida counties. The majority of cocaine deaths and addiction treatment admissions were among those older than 35. Many indicators reflected cocaine use in combination with other drugs.

Throughout Florida, the number of cocaine-related deaths decreased by 7 percent in the first half of 2011 ($n=679$), compared with the last half of 2010 ($n=730$). These proportions continued the yearly decline since 2007, reversing what had been an upward trend from 2000 to 2007 (exhibit 1). However, the most recent decline was based on what is likely an incomplete count for the first half of 2011, which is expected to increase with the release of the 2011 annual report due in August 2012. A cocaine-related death is defined as a death in which cocaine is detected in the decedent and may or may not be considered the cause of death. In 2010, there were 1,402 cocaine-related deaths in Florida, compared with 1,462 in 2009 and 1,791 in 2008. The 2007 total of 2,179 reports was the highest number since the drug has been tracked, beginning in the late 1980s. The number of cocaine deaths increased by 97 percent from 2001 to 2007; the key factor for that rise appears to be a corresponding 105-percent increase of deaths with cocaine in combination with other drugs, particularly prescription medications. Among the 679 cocaine-related deaths in Florida during the first half of 2011, 91 percent of the cases involved cocaine in combination with at least 1 other drug.

In Florida, a drug is considered to be a cause of death if it is detected in an amount considered a lethal dose by the local ME. Among the cocaine-related deaths statewide in the first half of 2011, the drug was considered to be a cause of deaths in 294 (or 43 percent) of the cases. Among the decedents accounting for the 679 cocaine-related deaths in the first half of 2011, 1 percent were younger than 18; 9 percent were age 18–25; 22 percent were age 26–34; 42 percent were age 35–50; and 26 percent were older than 50.

There were 88 deaths related to cocaine use in Miami-Dade County during the first half of 2011, for an annualized number of 176 occurrences, compared with 198 in 2010 (exhibit 1). Cocaine was detected at a lethal level in 31 percent of the cases in the first half of 2011. Cocaine was found in combination with another drug in 69 percent of the cases. Two of the cocaine-related decedents in the first half of 2011 were younger than 18; 9 percent were age 18–25; 15 percent were age 26–34; 33 percent were age 35–50; and 41 percent were older than 50.

Cocaine-related deaths increased in Miami-Dade County from 2009 to 2010. The key factor appears to be the more than 100-percent increase during this time in polysubstance abuse, with both prescription opioids and benzodiazepines detected among cocaine decedents. Prescription drugs accounted for 61 percent of other substances detected among cocaine decedents in 2010. Miami-Dade County had the highest number of cocaine-related deaths in the first half of 2011 among the State's 24 ME districts.

There were 54 deaths related to cocaine abuse in Broward County in the first half of 2011, for an annualized number of 108 occurrences, compared with 127 in 2010 (exhibit 1). Cocaine was detected at a lethal level in 65 percent of the Broward County cases in the first half of 2011. Cocaine was found in combination with another drug in all cases. None of the 2010 cocaine-related fatalities were younger than 18; 1 of the decedents was age 18–25; 13 percent were age 26–34; 57 percent were age 35–50; and 28 percent were older than 50. Broward County's number of cocaine-related deaths ranked fifth among the 24 ME districts in the State in the first half of 2011.

The Orlando ME district reported the second highest number of cocaine-related deaths in the State during the first half of 2011, with 71 cases; the St. Petersburg ME district followed with 70 reports; the Jacksonville region reported 61 cases; Broward County reported 54 cases; and the Tampa ME district reported 47 cases. Palm Beach County ranked seventh, with 38 cocaine-related deaths.

There were 2,812 primary treatment admissions for cocaine smoking (crack), and an additional 1,599 for powder cocaine across Florida during 2011. These cases accounted for a total of 4,411 (or 7.9 percent) of the 56,027 publicly funded primary treatment admissions (including 16,174 for alcohol) statewide in 2011. These totals represent an 18-percent decline in the number of cocaine primary admissions compared with 2010, when cocaine accounted for 11.2 percent of all admissions. From 2007 to 2008, the percentage of primary cocaine admissions in Florida declined from 22.3 to 7.9 percent (exhibit 2). Males accounted for 56 percent of the 2011 clients, and 58 percent ($n=2,554$) were older than 35; fewer than 2 percent were age 17 or younger.

There were 615 primary treatment admissions for cocaine smoking (crack), and an additional 437 for powder cocaine in Miami-Dade County during 2011 (exhibit 3). These cases accounted for a total of 1,052 (or 19.7 percent) of the 5,422 publicly funded primary treatment admissions (including 1,406 for alcohol) in Miami-Dade County during 2011, as reported by the Florida Department of Children and Families. These totals were stable with 918 cocaine primary admissions in 2010, when cocaine accounted for 20 percent of all admissions. Males accounted for 64 percent of the 2011 clients, and 61 percent ($n=643$) were age 35 or older; six were 17 or younger.

In Broward County, there were 432 primary admissions for cocaine smoking (crack), and an additional 123 for powder cocaine, accounting for a total of 555 (or 9.5 percent) of the 5,998 publicly funded primary treatment admissions where a primary drug was cited (including 1,302 for alcohol) in 2011 (exhibit 4). These totals were stable with the 481 cocaine primary admissions in 2010, when cocaine also accounted for 9.5 percent of all admissions. Males accounted for 60 percent of the 2011 clients, and 74 percent ($n=409$) of the 2011 cocaine clients were age 35 or older; eight were 17 or younger.

Cocaine continued to be the most commonly identified substance among reports from drug items analyzed by local crime laboratories. It accounted for 12,599 NFLIS reports, or 49 percent of the 25,697 total primary, secondary, and tertiary crime laboratory reports among drug items analyzed in Miami-Dade, Broward, and Palm Beach Counties combined in 2011 (exhibit 5). There were also 286 reports for phenylimidothiazole isomer (possibly levamisole) found along with cocaine.

Heroin

Heroin consequences remained at low levels across Florida. Deaths increased in the State of Florida in the first half of 2011 but declined in the southeastern counties. South American heroin has been entering the South Florida area over the past two decades. However, reports and seizures of Mexican heroin in South Florida have been noted since 2008. Primary treatment admissions for heroin were stable across Florida and in Miami-Dade and Broward Counties from 2010 to 2011. Heroin purity in South Florida was among the lowest for major metropolitan area across the country, with the highest price per milligram pure. Many heroin consequences also involved the nonmedical use of prescription opioids.

Throughout the State, the number of heroin-related deaths increased by 18 percent during the first half of 2011, compared with the previous 6 months. There were 20 heroin-related deaths across Florida during the first half of 2011, compared with 17 in the second half of 2010. What is likely an incomplete count for the first half of 2011 is expected to increase with the release of the 2011 annual report expected in August 2012. Heroin continued to be the most lethal drug, with 95 percent ($n=19$) of heroin-related deaths in the first half of 2011 caused by the drug. Polysubstance abuse was noted in all of the 2011 heroin-related deaths statewide. Deaths caused by heroin declined in Florida from 2001 to 2006, then increased from 2006 to 2008, before declining again in 2009 and 2010. Substantial increases in abuse and consequences of narcotic analgesic use have occurred as heroin problems were waning. Most heroin addiction treatment admissions in the State of Florida continued to be among White males, age 26–34; the majority in South Florida were older than 35.

Among the 58 heroin-related deaths in Florida during 2010, 54 of the decedents had 1 or more other drugs present at the time of death, including 60 prescription opioid and 39 benzodiazepine occurrences.

There were 5 heroin deaths in Miami-Dade County during the first half of 2011, for an annualized rate of 10 occurrences, compared with 26 in 2010. Lethal heroin deaths peaked in Miami-Dade County in 2000 with 61 fatalities. In the first half of 2011, heroin was found at a lethal dose level in four of the five deaths in which the drug was detected in the county. Other drugs were found in combination with heroin in all of the cases. None of the heroin-related fatalities were younger than 35, while four of the heroin-related decedents (80 percent) were age 35–50; one (20 percent) was older than 50.

There was 1 heroin death in Broward County during the first half of 2011, compared with 5 in 2010, 8 in 2009, and 17 in 2008. Lethal heroin deaths peaked in Broward County in 2001 with 51 fatalities. In the first half of 2011, the one heroin death was considered to be caused by the drug and was found in combination with at least one other drug. The one heroin decedent was age 35–50.

There were 1,304 primary treatment admissions for heroin across Florida during 2011 (exhibit 2). These treatment admissions accounted for 2.3 percent of the 56,027 publicly funded primary treatment admissions (including alcohol) statewide in 2011. The total represents a 23-percent increase in the number of heroin primary admissions, compared with 2010 but was stable with the 2.2 percent of the 48,297 admissions for all substances that year. Males accounted for 67 percent of the 2011 clients. Fewer than 1 percent were younger than 18; 20 percent were age 18–25; 41 percent were age 26–35; and 38 percent were older than 35.

There were 227 primary heroin treatment admissions in Miami-Dade County during 2011 (exhibit 3). These cases accounted for 4.2 percent of the 5,422 publicly funded treatment admissions (including 1,406 for alcohol), as reported by the Florida Department of Children and Families. This total is stable with the proportion of primary heroin admissions in 2010 ($n=183$), when the drug accounted for 4.0 percent of all admissions. Males accounted for 77 percent of the 2011 clients; only 1 was 17 or younger; 15 percent were age 18–25; 30 percent were age 26–34; and 54 percent ($n=123$) were age 35 or older.

In Broward County, there were 169 primary admissions for heroin (or 2.9 percent) of the 5,998 publicly funded treatment admissions (including 1,302 for alcohol) in 2011 (exhibit 4). This total is stable with the number and proportion of primary heroin admissions in 2010 ($n=156$), when the drug

accounted for 3.1 percent of all admissions. Males accounted for 79 percent of the 2011 clients; none were younger than 18; 20 percent were age 18–25; 31 percent were age 26–34; and 49 percent were age 35 or older.

Heroin accounted for 618 crime laboratory reports, or 2.4 percent of the 25,697 total primary, secondary, and tertiary NFLIS reports among drug items analyzed for Miami-Dade, Broward, and Palm Beach Counties combined in 2011 (exhibit 5). Heroin ranked fifth among all reports from drug items seized and analyzed in the three counties.

The Miami Field Division of the DEA purchased 24 qualified HDMP samples in 2010. All 24 exhibits were classified as South American (SA) heroin and averaged 10.2 percent pure, compared with a national average of 25.9 percent pure for that type of heroin. According to the HDMP, the price of SA heroin averaged \$6.05 per milligram pure in South Florida, compared with the national average of \$1.75 per milligram pure. Compared with 2009 HDMP data, the average purity for SA heroin in South Florida decreased by 10.4 percentage points, while the average price per milligram pure increased sharply by \$4.42, the highest increase per milligram pure of all 2010 qualified exhibits purchased nationwide.

Nonmedical Use of Prescription Opioids

The nonmedical use of prescription opioids continued as Florida's most deadly and addictive drug problem. However, consequences have generally stabilized at high levels. Numerous new laws and regulations took effect in the second half of 2011. The impact of these new strategies is not reflected in data presented in this report that precede the enactment of these controls. Broward County continued to report high rates of prescription opioid consequences, including more users reporting injecting than oral administration as their primary method of use.

During the first half of 2011, 2,609 individuals died in Florida with 1 or more prescription drugs in their system, of which 45 percent ($n=1,175$) had at least 1 prescription medication that was considered a cause of death. In total, there were 6,287 prescription drugs detected (including 3,063 opioids), and 2,388 (or 38 percent of the total medication occurrences) were considered at a lethal dose and a cause of death, including 48 percent ($n=1,462$) of the opioids. The number of drug occurrences exceeded the number of deaths because many decedents had more than one substance detected, including another prescription medication, illicit drug, or alcohol.

From the second half of 2010 to the first 6 months of 2011, statewide reports in Florida related to the category of prescription opioids detected among deceased persons decreased by 5 percent, from 3,226 to 3,063. This followed a 10-percent increase from 2009 ($n=6,006$) to 2010 ($n=6,608$) and another 10-percent increase from 2008 ($n=5,457$) to 2009 ($n=6,006$). Reports of hydrocodone (Vicodin® and Lortab®), oxycodone (OxyContin®, Roxicodone®, and Percocet®), and methadone (Dolophine®) identified among decedents have been tracked in Florida since 2000. Beginning in 2003, morphine (MS Contin® and Roxanol®), propoxyphene (Darvon®), fentanyl (Fentora®), hydromorphone (Dilaudid® and Palladone®), meperidine (Demerol HCl®), tramadol (Ultram®), buprenorphine (Buprenex® and Suboxone®), oxymorphone (Opana® and Numophan®), and other opioids were included in the Florida ME Commission's surveillance monitoring program. Propoxyphene is no longer included as of the first half of 2011. Occurrences of 4 prescription opioids detected among deceased persons during the first half of 2011 totaled 153 in Broward County, 104 in Miami-Dade County, and 112 in Palm Beach County.

Across Florida, the 100 codeine reports detected among deceased persons in the first half of 2011 represented a 35-percent increase from the 74 reports in the previous 6 months. The 180 ME reports for tramadol in the first half of 2011 represented an 18-percent increase from the previous semiannual period, while the number of occurrences for morphine were up 7 percent, with a total of 345 occurrences in the first 6 months of 2011.

The most lethal prescription opioids statewide in the first half of 2011 were methadone, which was considered a cause of death for 72 percent of the decedents in which it was detected; oxycodone, which was a cause of death for 57 percent of the deaths related to it; and fentanyl, which was a cause of death for 57 percent of its occurrences. Most of the statewide ME prescription opioid cases were polydrug episodes, including 96 percent of the oxycodone reports, 95 percent of the methadone cases, 93 percent of the hydrocodone reports, and 89 percent of morphine cases.

Miami-Dade County recorded 47 oxycodone occurrences among deceased persons in the first half of 2011, along with 32 for morphine, 13 for hydrocodone, and 12 for methadone. These 104 opioid occurrences during the first 6 months of 2011 are compared with 203 combined reports in 2010 for the same 4 narcotic analgesics. Among reports for these four opioids in the first half of 2011, 36 percent were considered lethal doses, and 90 percent were found in combination with at least one other substance. Most of the deaths occurred among those age 35 and older; 40 percent of Miami-Dade County oxycodone deaths in the first half of 2011 were age 35–50, and 34 percent were older than 50.

Broward County recorded 82 oxycodone occurrences among deceased persons in the first half of 2011, along with 31 for morphine, 24 for methadone, and 16 for hydrocodone. These 153 combined opioid occurrences during the first 6 months of 2011 are compared with 380 reports in 2010 for the same 4 narcotic analgesics. Among reports for these four opioids in the first half of 2011, 66 percent were considered lethal doses, and 100 percent were found in combination with at least one other substance. Most of the deaths occurred among those age 35 and older; 49 percent of Broward County oxycodone deaths in the first half of 2011 were age 35–50, and 32 percent were older than 50.

Palm Beach County recorded 56 oxycodone occurrences among deceased persons in the first half of 2011, along with 28 for methadone, 15 for morphine, and 13 for hydrocodone. These 112 combined opioid occurrences during the first 6 months of 2011 are compared with 291 reports in 2010 for the same 4 narcotic analgesics. Among reports for these four opioids in the first half of 2011, 67 percent were considered lethal doses, and 100 percent were found in combination with at least one other substance. Most of the deaths occurred among those older than 35; 34 percent of Palm Beach County oxycodone deaths in the first half of 2011 were age 35–50, and 30 percent were older than 50.

There were 16,386 primary treatment admissions for opiates other than heroin (i.e., prescription opioids) across Florida during 2011 (exhibit 2). These cases accounted for 29.2 percent of the 56,027 publicly funded primary treatment admissions (including alcohol) statewide in 2011, ranking highest of all substances, with 212 more admissions than alcohol. The total represents a 42-percent increase in the number of primary prescription opioid admissions when compared with 2010, when the drug accounted for 23.9 percent of the 48,297 admissions for all substances. The percent of primary prescription opioid treatment admissions has risen steadily since 1998, when they accounted for 2 percent of all admissions, to 2011, when they reached 29 percent (exhibit 6). Males accounted

for 49 percent of the 2011 clients. Two percent of treatment clients were younger than 18; 7 percent were age 18–20; 26 percent were age 21–25; 27 percent were age 26–30; 15 percent were age 31–35; 8 percent were age 36–40; 10 percent were age 41–50; and 5 percent were older than 50. As the number of primary prescription opioid admissions has escalated since 1998, the proportion of clients younger than 30 has also increased, from 22 percent in 1998 to 62 percent in 2011 (exhibit 7). Whites accounted for 95 percent of the primary opioid clients; 2 percent were Black; and 3 percent were other or unknown race. Hispanic/Latinos accounted for 6 percent of these clients.

There were 302 primary treatment admissions for “opiates other than heroin” (prescription opioids) in Miami-Dade County during 2011 (exhibit 3). These cases accounted for a total of or 5.6 percent) of the 5,422 publicly funded treatment admissions (including 1,406 for alcohol). This total is stable with the proportion of primary prescription opioid admissions in 2010 ($n=246$), when the drug accounted for 5.4 percent of all admissions. Males accounted for 61 percent of the 2011 opioid clients. Information on the ages of these clients was reported for only 170 of them, among whom 3 percent were younger than age 18; 24 percent were age 18–25; 38 percent were age 26–34; and 35 percent ($n=123$) were age 35 or older. Among the 56 percent of the other prescription opioid clients ($n=170$) for whom the primary route of administration was recorded, 18 percent ($n=31$) reported injecting prescription opioids; sniffing was reported by 9 percent; and 69 percent reported oral administration as their primary method of use.

There were 1,459 primary treatment admissions for “opiates other than heroin” (prescription opioids) in Broward County during 2011 (exhibit 4). These cases accounted for 24 percent of the 5,998 publicly funded treatment admissions (including 1,406 for alcohol). This total represents a modest increase in the proportion of primary prescription opioid admissions in 2010 ($n=1,118$), when the drug accounted for 22 percent of all admissions. Males accounted for 51 percent of the 2011 opioid clients. Information on the ages of these clients was only reported for 884 of them, among whom 3 were younger than age 18; 34 percent were age 18–25; 36 percent were age 26–34; and 30 percent ($n=123$) were age 35 or older. Among the 61 percent of the other prescription opioid clients ($n=884$) for whom the primary route of administration was recorded, 39 percent ($n=341$) reported injecting prescription opioids; sniffing was reported by 25 percent; and 25 percent reported oral administration as their primary method of use.

During 2010, hospitals reported 65 cases of neonatal abstinence syndrome in Broward County and 21 in Miami-Dade County. While these cases could be for maternal use of any addictive drug except alcohol, most are considered to be related to the mothers’ nonmedical use of prescription opioids. Statewide, the number of cases increased by 433 percent from 2005 to 2010, rising from 254 to 1,355.

The sales of oxycodone to Florida dispensing practitioners declined by 44,478,936 pills, or 97 percent, from 2010 to 2011. The highest volumes of direct sales by practitioners were generated by the numerous “pill mills” or “rogue pain clinics,” in contrast with legitimate pain management physicians. Multiple strategies have been incorporated to reduce the illicit diversion of oxycodone and other medications, including law enforcement crack downs and arrests, the establishment of the Prescription Drug Monitoring Program in the fall of 2011, and new laws and regulations effective July 1, 2011 (including banning the direct sale of narcotic medications by physicians). Sales of oxycodone to pharmacies and hospitals also declined by 80,259,078 pills from 2010 to 2011, contributing to an overall 20-percent reduction in oxycodone sales from all sources in Florida.

Prescription opioids accounted for 1,525 crime laboratories reports, or 5.9 percent of the 25,697 total primary, secondary, and tertiary NFLIS reports from drug items analyzed in Miami-Dade, Broward, and Palm Beach Counties combined in 2011 (exhibit 5). This category of drugs ranked third among all reports from items analyzed in the three counties. Oxycodone accounted for 1,202 (or 79 percent) of the opioid reports and by itself also ranked third among all reports. Additionally, there were 115 hydrocodone reports, 66 for methadone, 47 for buprenorphine, 30 for morphine, 25 for codeine, 24 for hydromorphone, 7 for tramadol, and 9 for other opioids (exhibit 8). There were also 981 “unspecified controlled substance” crime laboratory reports in 2011 which may have included additional prescription opioids.

Nonmedical Use of Prescription Benzodiazepines

Benzodiazepines in general, and specifically alprazolam (Xanax®), continued as a substantial problem in South Florida, particularly when used nonmedically in combination with other pharmaceuticals, alcohol, and illicit drugs. There were 2,774 reports of a benzodiazepine present in 1,525 deceased persons across Florida in the first half of 2011, representing an 11-percent decrease in the total number of benzodiazepine occurrences and a 24-percent decrease from the 2,006 decedents in the previous 6 months. Of the benzodiazepine occurrences in the first half of 2011, a benzodiazepine was identified as causing 545 deaths, with a total of 811 lethal benzodiazepine occurrences. Among the benzodiazepine ME reports statewide, 950 were attributed to alprazolam, and 405 were attributed to diazepam (Valium®); 48 percent of the alprazolam occurrences and 31 percent of the diazepam occurrences were considered to be a cause of death.

In Miami-Dade County, there were 63 reports of alprazolam detected in deceased persons during the first half of 2011, of which 41 percent were considered lethal. At least one other drug was involved in 84 percent of the reports. There were also 17 reports of diazepam detected in deceased persons in Miami-Dade County; 18 percent were considered to be the cause of death, and 100 percent of these deaths involved at least 1 other drug. These 80 ME occurrences for the 2 benzodiazepines in the first 6 months of 2011 are compared with 169 such reports for alprazolam and diazepam in 2010 and 124 in 2009. One of the benzodiazepine mentions in the first half of 2011 involved a person younger than 18; 8 percent of the decedents were age 18–25; 11 percent were age 26–34; 39 percent were age 35–50; and 41 percent were older than 50.

In Broward County, there were 105 reports of alprazolam detected in deceased persons during the first half of 2011, of which 64 percent were considered a cause of death. At least one other drug was involved in 100 percent of the reports. There were also 33 reports of diazepam detected in deceased persons in Broward County; 54 percent were considered to be the cause of death, and 100 percent of these deaths involved at least one other drug. These 138 medical examiner occurrences for the two benzodiazepines in the first 6 months of 2011 are compared with 315 such reports for alprazolam and diazepam in 2010 and 376 in 2009. None of the benzodiazepine mentions in the first half of 2011 involved a person younger than 18; 5 percent of the decedents were age 18–25; 12 percent were age 26–34; 44 percent were age 35–50; and 39 percent were older than 50.

In Palm Beach County, there were 52 reports of alprazolam detected in deceased persons during the first half of 2011, of which 62 percent were considered lethal. At least one other drug was involved in 100 percent of the reports. There were also 19 reports of diazepam detected in deceased persons in Palm Beach County; 37 percent were considered to be the cause of death, and 95 percent of

these deaths involved at least one other drug. These 71 medical examiner occurrences for the two benzodiazepines in the first 6 months of 2011 are compared with 186 such reports for alprazolam and diazepam in 2010 and 299 in 2009. None of the benzodiazepine mentions in the first half of 2011 involved a person younger than 18; 18 percent of the decedents were age 18–25; 20 percent were age 26–34; 32 percent were age 35–50; and 30 percent were older than 50.

There were 1,081 primary treatment admissions for tranquilizers across Florida during 2011. These cases accounted for 1.9 percent of the 56,027 publicly funded primary treatment admissions (including alcohol) statewide in 2011. The total represents a 33-percent increase in the number of tranquilizer primary admissions, compared with 2010, when they accounted for 1.7 percent of the 48,297 admissions for all substances that year. Males accounted for 44 percent of the 2011 clients. Eight percent were younger than 18; 25 percent were age 18–25; 36 percent were age 26–35; and 30 percent were older than 35.

There were 79 admissions for benzodiazepines reported as primary treatment admissions in Miami-Dade County during 2011, or 1.5 percent of the 5,422 total treatment admissions in the county (exhibit 3). This total is stable with the proportion of such admissions in 2010, when 71 cases also represented 1.5 percent of the total. Females accounted for 51 percent of the benzodiazepine clients.

In Broward County, there were 140 primary admissions for benzodiazepines during 2011, or 2.3 percent of 5,998 primary admissions (exhibit 4). This total is a modest increase in the proportion of such admissions in 2010, when 101 cases represented 1.9 percent of the total. Males accounted for 51 percent of the benzodiazepine clients.

Prescription benzodiazepines accounted for 1,123 crime laboratory reports, or 4.4 percent of the 25,697 total primary, secondary, and tertiary NFLIS reports among drug items analyzed in Miami-Dade, Broward, and Palm Beach Counties combined in 2011 (exhibit 5). This category of drugs ranked fourth among all reports from drug items seized and analyzed in the three counties. Alprazolam accounted for 981 (or 87 percent) of the benzodiazepine reports and by itself also ranked fourth among all substances. Additionally, there were 72 clonazepam reports, 42 diazepam reports, 22 lorazepam reports, and 6 reports for other benzodiazepines (exhibit 9). There were also 981 “unspecified controlled substance” crime laboratory reports in 2011, which may have included additional prescription benzodiazepines.

Methamphetamine/Amphetamines

Indicators of methamphetamine abuse remained at relatively low levels. While methamphetamine was cited as the primary drug for addiction treatment among less than 1 percent of addiction treatment clients in South Florida during 2011, all of the methamphetamine clients were older than 25. However, among the few amphetamine clients, most were younger than 26. Numerous anecdotal reports from private treatment counselors suggested a resurgence in methamphetamine abuse among men who have sex with men (MSMs) in the first half of 2012; this possible trend is too recent to be identified in the data presented in this report. It was suspected that the methamphetamine being used was produced in Mexico.

Domestic clandestine laboratory production in Florida mostly appears to be the 2-liter soda bottle “shake and bake” method. This method yields a relatively small amount of methamphetamine for personal use by the “cook” and for sharing with those who may have helped supply the precursor, pseudoephedrine.

Methamphetamine was detected among 57 deceased persons during the first half of 2011 statewide in Florida, compared with 69 in the previous 6 months. There were 132 methamphetamine ME occurrences in all of 2010; there were 81 in 2009; and there were 114 in 2008. Methamphetamine was considered a cause of death in 19 (33 percent) of the 57 cases during the first half of 2011. There were also 96 reports of amphetamine detected among decedents across Florida in the first 6 months of 2011, 1 less than in the previous semiannual period. Amphetamine was considered the cause of death in 14 percent of the 96 cases in the first half of 2011.

There were 957 primary treatment admissions for the category of amphetamines, which included methamphetamines, across Florida during 2011. These cases accounted for 1.7 percent of the 56,027 publicly funded primary treatment admissions (including alcohol) statewide in 2011. The total represents a 6-percent increase in the number of amphetamine-type primary admissions, compared with 2010, when the drug accounted for 1.9 percent of the 48,297 admissions for all substances that year. Males accounted for 45 percent of the 2011 clients. Five percent were younger than 18; 25 percent were age 18–25; 42 percent were age 26–35; and 27 percent were older than 35.

There were 17 primary treatment admissions for methamphetamines in Miami-Dade County during 2011 (exhibit 3). These cases accounted for 0.3 percent of the 5,422 publicly funded primary treatment admissions where a primary drug was cited (including 1,406 for alcohol). This total represents a 22-percent decrease in the number of primary methamphetamine admissions, compared with 2010, when the drug accounted for 0.5 percent ($n=22$) of all admissions. All of the 2011 methamphetamine clients were male; none of the clients were younger than 26; 41 percent ($n=7$) were age 26–34; and 59 percent ($n=10$) were age 35 or older. There were also five primary admissions for other amphetamines, three of whom were younger than 18.

In Broward County, there were 12 primary admissions for methamphetamines, accounting for 0.2 percent of the 5,998 publicly funded primary treatment admissions where a primary drug was cited (including 1,302 for alcohol) in 2011 (exhibit 4). This total represents a 65-percent decrease from the 34 primary methamphetamine admissions in 2010, when the drug accounted for 0.7 percent of all admissions. Males accounted for 79 percent of the 2011 clients; none of the clients were younger than 26; 33 percent ($n=4$) were age 26–34; and 67 percent ($n=8$) were age 35 or older. There were also eight primary admissions for other amphetamines, three of whom were younger than 18; two were age 18–25; and three were age 35 or older.

Methamphetamine accounted for 161 crime laboratory reports, or 2.4 percent of the 25,697 total primary, secondary, and tertiary NFLIS reports among drug items analyzed in Miami-Dade, Broward, and Palm Beach Counties combined in 2011 (exhibit 5). Methamphetamine ranked 10th among all reports from drug items seized and analyzed in these three South Florida counties. There were also 44 amphetamine crime laboratory reports.

Marijuana/Cannabis and Cannabimimetics (Synthetic Cannabinoids)

Consequences of marijuana use and addiction continued at high levels, particularly among adolescents and young adults. Marijuana was cited as the number one primary substance for addiction treatment in both South Florida counties, where the proportion of admissions increased by 15 percent from 2010 to 2011. A majority of marijuana clients were younger than 18; 82 percent were younger than age 25 in the State of Florida, as well as in Miami-Dade and Broward Counties. Cannabinoids were detected in 427 deaths statewide in Florida during the first half of 2011; this was a 5-percent increase from the 406 occurrences in the previous 6 months.

The availability of unregulated cannabimimetics increased through retail sales throughout 2010 and the first half of 2011. They were used primarily by those who were subject to frequent drug tests that did not identify these products. However, drug tests are now available for their detection, and five cannabimimetics that were federally scheduled in June 2012 were also made illegal by the 2011 Florida Legislature. There were 516 human exposure calls statewide in 2011 to Florida Poison Information Centers for various cannabimimetics (synthetic cannabinoids such as “K2” or “Spice”). Exposure calls involved cases usually from a hospital emergency department where someone was experiencing adverse consequences after smoking or ingesting a substance. The 2011 total represents an 87-percent increase from the number of such calls in 2010. In the first 4 months of 2012, there were 269 synthetic cannabimimetic human exposure calls in Florida.

There were 13,088 primary treatment admissions for marijuana across Florida during 2011 (exhibit 2). These cases accounted for 23.4 percent of the 56,027 publicly funded primary treatment admissions (including alcohol) statewide in 2011, ranking third behind prescription opioids and alcohol. The total represents a 9-percent decline in the number of marijuana primary admissions, compared with 2010, when the drug accounted for 29.9 percent of the 48,297 admissions for all substances that year. Males accounted for 73 percent of the 2011 marijuana clients. Sixty-one percent were younger than 18; 21 percent were age 18–25; 12 percent were age 26–35; and 6 percent were older than 35.

There were 2,008 primary treatment admissions for marijuana in Miami-Dade County during 2011 (exhibit 3). These cases accounted for 37 percent of the 5,422 publicly-funded primary treatment admissions (including 1,406 for alcohol), higher than for any other substance. This total represents a 15-percent increase in the number of primary methamphetamine admissions, compared with 2010, when the drug accounted for 38 percent ($n=1,741$) of all admissions. Among the 2011 marijuana clients, 73 percent were male; 63 percent were younger than 18; 19 percent were age 18–25; 11 percent were age 26–34; and 7 percent were age 35 or older.

In Broward County, there were 1,949 primary admissions for marijuana, constituting 32 percent of the 5,998 publicly funded primary treatment admissions (including 1,302 for alcohol). This proportion of the total was higher than for any other substance (exhibit 4). This total represents a 15-percent increase from the 1,689 primary marijuana admissions in 2010, when the drug accounted for 33 percent of all admissions. Males accounted for 82 percent of the 2011 clients; 55 percent were younger than 18; 27 percent were age 18–25; 11 percent were age 26–34; and 7 percent were age 35 or older.

Miami-Dade County recorded 1,137 juvenile criminal charges for a marijuana offense, or 74 percent of the 1,538 total alcohol and drug charges for those younger than 18 in FY 2010–2011. In Broward County, during the same 12-month period (July 2010 to June 2011), there were 1,112 juvenile criminal charges for a marijuana offense, representing 72 percent of the 1,542 total alcohol and drug charges for those younger than 18.

Marijuana/cannabis accounted for 5,436 crime laboratory reports, or 21.2 percent of the 25,697 total primary, secondary, and tertiary NFLIS reports among drug items analyzed in Miami-Dade, Broward, and Palm Beach Counties combined in 2011 (exhibit 5). Marijuana ranked second among all reports from drug items seized and analyzed in the three counties. There were also 18 crime laboratory reports for the synthetic cannabinoid, JWH-018 (1-pentyl-3-[1-naphthoyl]indole), and 1 for synthetic tetrahydrocannabinol.

Marijuana continued to be described as widely available throughout Florida, with local commercial, sinsemilla, and hydroponic grades available. The ounce price for commercial grade marijuana continued to be \$100–\$150. Sinsemilla sold for \$400–\$500 per ounce. Depending on its potency, marijuana sold for \$5–\$20 per gram.

MDMA/Ecstasy and Emerging Psychoactive Substances

Measures of MDMA abuse have stabilized in the South Florida area at relatively low numbers in recent years, while reports of other hallucinogenic amphetamines have increased. Ecstasy pills generally contained 75–125 milligrams of MDMA. Ecstasy pills are often adulterated and contain other drugs, including 5-MeO-DIPT (5-methoxy-N,N-diisopropyltryptamine, or Foxy methoxy), BZP (1-benzylpiperazine), and TFMPP (1-3-(trifluoromethylphenyl)piperazine). These were found both with and without MDMA in ecstasy pills.

There were 15 MDMA-related deaths statewide in Florida in the first half of 2011, with the drug being cited as the cause of death in 5 of these cases. There were also six reports of MDA (3,4-methylenedioxyamphetamine)-related deaths statewide in Florida during the semiannual period. During the previous 6 months, there were 40 MDMA-related deaths, and 23 MDA-related deaths. There was also one confirmed death involving 5-MeO-DIPT in Florida during 2011.

Statewide in Florida, there were 184 poison information exposure calls for hallucinogenic amphetamines in 2011 and 64 in the first 4 months of 2012. The 2012 calls included 13 specifically for methylene and multiple references to the phenethylamines 2C-E, 2C-I, 2C-P, and “Molly.” Additionally, there were 150 exposure calls for the category of “bath salts” (substituted cathinones) in 2011, including 4 for MDPV (3,4-methylenedioxypropylvalerone). In the first 4 months of 2012, there 28 exposure calls for substituted cathinones including one specifically for mephedrone (4-methylmethcathinone). During 2011, there were nine exposure calls for the category of “other hallucinogens,” including eight for DMT (dimethyltryptamine) and one for 5-MeO-DIPT. In the first 4 months of 2012, there were two exposure calls for the “other hallucinogens” category (exhibit 10).

There were four primary treatment admissions for MDMA in Miami-Dade County in 2011 and seven in Broward County (exhibits 3 and 4). In 2010, there were six primary treatment admissions for MDMA in Miami-Dade County and five in Broward County.

MDMA accounted for 299 crime laboratory reports, or 1.2 percent of the 25,697 total primary, secondary, and tertiary NFLIS reports among drug items analyzed in Miami-Dade, Broward, and Palm Beach Counties combined in 2011(exhibit 5). MDMA ranked eighth among all reports analyzed in the three counties. There were also 443 other hallucinogenic amphetamine crime laboratory cases, including 133 for 5-MeO-DIPT, 130 for BZP, and 83 for TFMPP.

GHB

Abuse of the anesthetic GHB has declined significantly in recent years in the South Florida area. There are several compounds that are converted by the body to GHB, including GBL (gamma butyrolactone) and 1,4-BD (1,4-butanediol). Over the past few years, GHB abuse has involved 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. However, there were increasing anecdotal reports of 1,4-BD being used in drug-facilitated sexual assaults among MSMs in 2011.

There were three GHB-related deaths statewide during the first half of 2011, and the drug was considered the cause of death in one of those cases. There were eight GHB-related deaths statewide in 2010, six in 2009, three in 2008, five in 2007, four in 2006, and nine deaths in 2005. Statewide in Florida, GHB-related deaths increased from 23 in 2000 to 28 in 2001; they then declined to 19 in 2002 before declining to 11 in 2003 and 2004.

There were 9 crime laboratory reports for 1,4-BD and none for GHB among the 25,697 total primary, secondary, and tertiary NFLIS reports from drug items analyzed in Miami-Dade, Broward, and Palm Beach Counties combined in 2011.

Nonmedical Use of Prescription Muscle Relaxants

Muscle relaxants may be abused in combination with MDMA and other drugs. There were 232 reports of carisoprodol or meprobamate among deceased persons in Florida during the first half of 2011, of which 76 (or 33 percent) were considered to be caused by the drug. There were 273 carisoprodol/meprobamate occurrences the previous 6 months; there were 513 such occurrences in 2010, 455 in 2009, and 415 in 2008.

There were three primary treatment admissions for carisoprodol in Broward County in 2011 and none in Miami-Dade County. There were 42 crime laboratory reports for carisoprodol among the 25,697 total primary, secondary, and tertiary reports from drug items analyzed by NFLIS laboratories for Miami-Dade, Broward, and Palm Beach Counties combined in 2011.

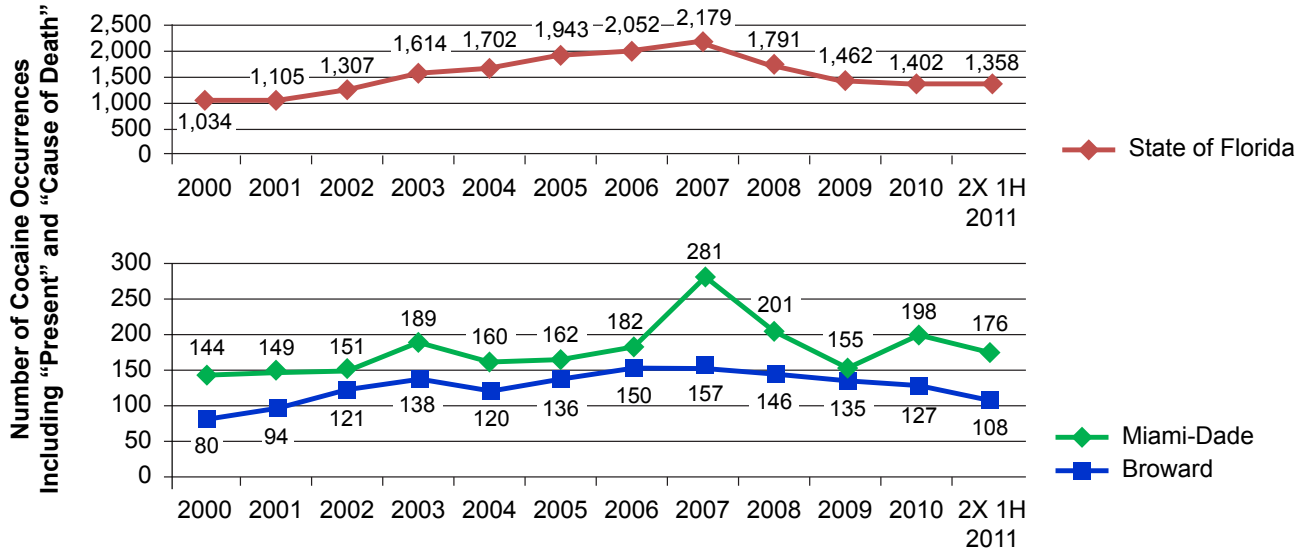
INFECTIOUS DISEASES RELATED TO DRUG USE

As of December 31, 2011, 33,111 adult/adolescent cumulative cases of AIDS had been reported in Miami/Dade County. Among those cases, 15.5 percent were identified as injection drug users (IDUs), and an additional 3.9 percent reported the dual risk of MSM/IDU. Approximately 11 percent of the total cases had not been classified by a known risk category.

As of December 31, 2011, 19,842 adult/adolescent cumulative cases of AIDS had been reported in Broward County. Among those cases, 11.5 percent were identified as IDUs, and an additional 3.8 percent reported the dual risk of MSM/IDU. Approximately 15 percent of the total cases had not been classified by a known risk category. Because of the cases not reported by a risk category, the rates of IDU cases are most likely higher for both counties.

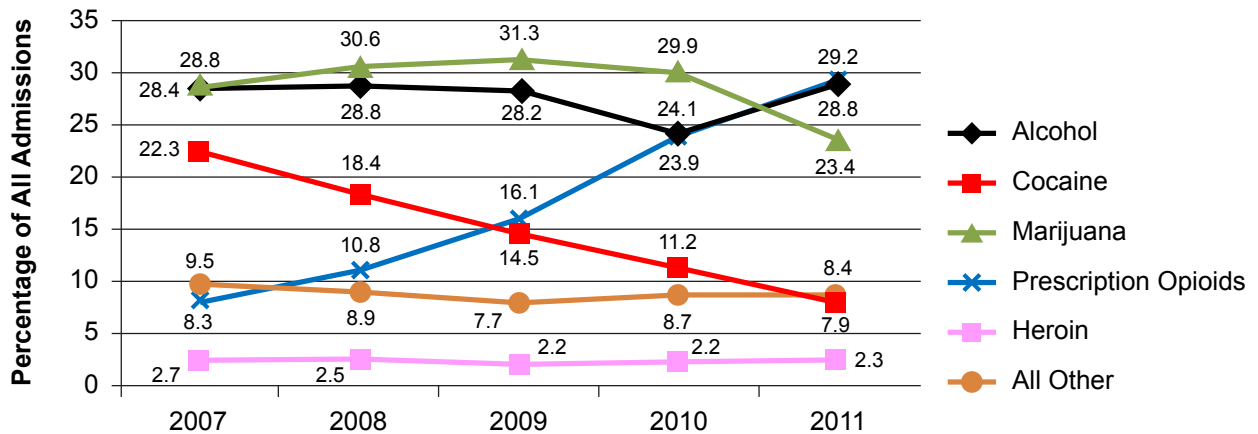
For inquiries regarding this report, contact James N. Hall, Epidemiologist, Center for Applied Research on Substance Use and Health Disparities, Nova Southeastern University, 13584 S.W. 114 Terrace, Miami, FL 33186, Phone: 786-547-7149, Fax: 786-242-8759, E-mail: upfrontin@aol.com.

Exhibit 1. Number of Cocaine Reports Detected Among Decedents in Miami-Dade and Broward Counties and the State of Florida: 2000–2011



SOURCE: Florida Medical Examiners Commission Interim Report January–June 2011

Exhibit 2. Percentage of Primary Addiction Treatment Admissions, by Substance, State of Florida: 2007–2011



SOURCE: TEDS, CBHSQ, SAMHSA, as provided by the Florida Department of Children and Families, as of April 5, 2012

Exhibit 3. Number of Primary Treatment Admissions, by Substance, in Miami-Dade County, Florida: 2009–2011

Primary Treatment Substance	2009 (n)	2010 (n)	2011 (n)
Alcohol	1,289	1,242	1,406
Crack Cocaine	867	549	615
Powder Cocaine	690	369	437
Heroin	150	183	227
Prescription Opioids	113	246	302
Marijuana	2,118	1,741	2,008
Methamphetamine	55	22	17
Amphetamine	2	5	5
MDMA	3	6	4
PCP	29	0	1
Benzodiazepine	1	71	79
All Other Drugs	108	30	230
Substance Unknown	117	84	91
Total Admissions (N)	5,542	4,548	5,338

SOURCE: Florida Department of Children and Families Data, Submitted May 25, 2012

Exhibit 4. Number of Primary Treatment Admissions, by Substance, in Broward County, Florida: 2009–2011

Primary Treatment Substance	2009 (n)	2010 (n)	2011 (n)
Alcohol	1,254	1,142	1,302
Crack Cocaine	610	424	432
Powder Cocaine	159	57	123
Heroin	105	156	169
Prescription Opioids	336	1,118	1,459
Marijuana	2,030	1,689	1,949
Methamphetamine	20	34	12
Amphetamine	6	2	8
MDMA	0	5	7
PCP	0	0	0
Benzodiazepine	47	101	140
All Other Drugs	689	37	219
Substance Unknown	422	304	178
Total Admissions (N)	5,678	5,069	5,851

SOURCE: Florida Department of Children and Families Data, Submitted May 25, 2012

Exhibit 5. Top 10 Most Frequently Identified Crime Laboratory Drugs of Total Analyzed Drug Reports, by Number and Percentage, Miami-Dade, Broward, and Palm Beach Counties: 2011¹

Drug	Number	Percent
Cocaine	12,599	49.0
Cannabis/THC	5,436	21.2
Prescription Opioids (includes 1,202 Oxycodone)	1,525	5.9
Prescription Benzodiazepines (includes 981 Alprazolam)	1,123	4.4
Heroin	618	2.4
Hallucinogen (includes 10 LSD)	491	1.9
Caffeine	306	1.2
MDMA (3,4-Methylenedioxyamphetamine)	299	1.2
Phenylimidothiazole Isomer Undetermined (possible Levamisole)	286	1.1
Methamphetamine	161	0.6
Other ²	2,853	11.1
Total	25,697	100.0

¹Data are for January–December 2011 and include primary, secondary, and tertiary reports.

²All other analyzed reports.

NOTES:

1. Data are for the Miami/Fort Lauderdale/Pompano Beach MSA and include Miami-Dade, Broward, and Palm Beach Counties.

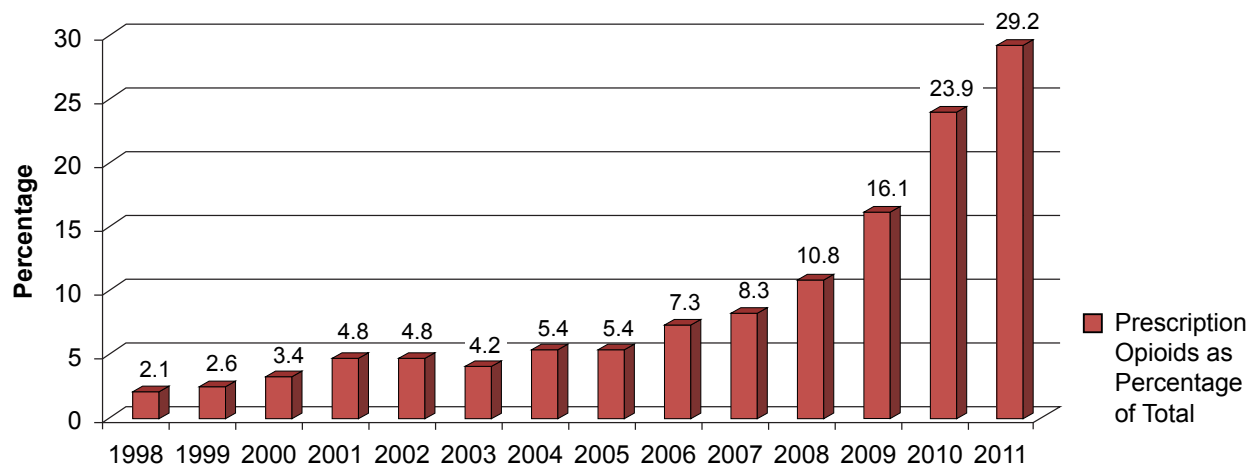
2. “Controlled Substance” represents 981 reports and are included under “Other.”

3. “Emerging Psychoactive Substances” represents 463 reports, including 133 5-MeO-DIPT, 130 BZP, and 20 Synthetic Cannabinoids, and are included under “Other.”

4. “Negative Results–Tested for Specific Drugs” represents 418 reports and are included under “Other.”

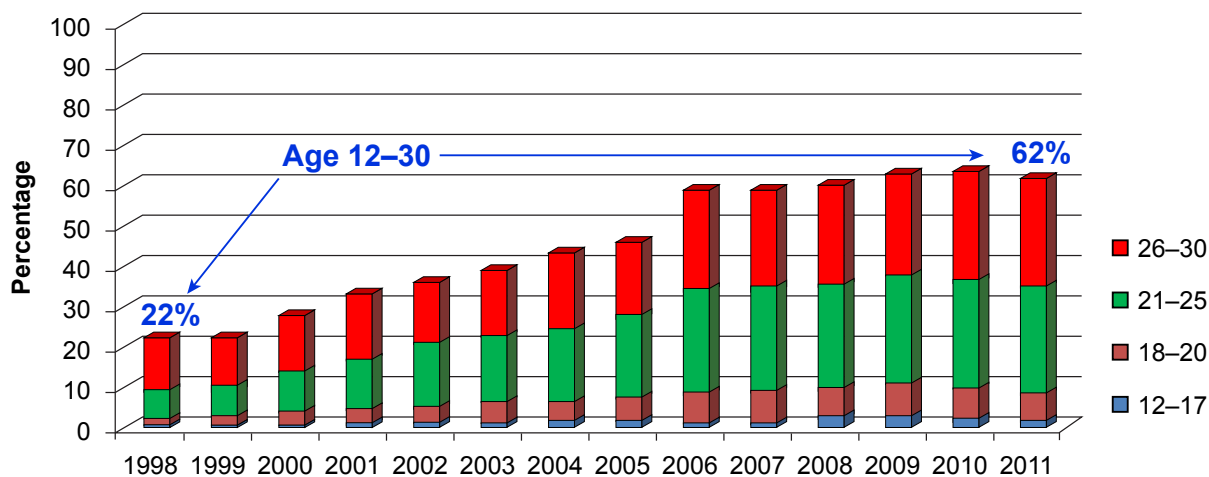
SOURCE: NFLIS, DEA, May 8, 2012

Exhibit 6. Percentage of Primary Addiction Treatment Admissions for Prescription Opioids Among All Substances (Including Alcohol), in Florida: 1998–2011



SOURCE: TEDS, CBHSQ, SAMHSA, April 5, 2012

Exhibit 7. Percentage of Primary Prescription Opioid Addiction Treatment Admissions Among Clients Age 12–30, in Florida: 1998–2011



SOURCE: TEDS, CBHSQ, SAMHSA, April 5, 2012

Exhibit 8. Number of Crime Laboratory Prescription Opioid Reports, South Florida¹: 2011

Prescription Opioids	Number of Reports
Oxycodone	1,202
Hydrocodone	115
Methadone	66
Buprenorphine	47
Morphine	30
Codeine	25
Hydromorphone	24
Tramadol	7
Oxymorphone	3
Propoxyphene	3
Bezymorphine	1
Dihydrocodeine	1
Fentanyl	1
Total Opioids	1,525

¹Miami-Dade, Broward, and Palm Beach Counties.
SOURCE: NFLIS, DEA, May 8, 2012

Exhibit 9. Number of Crime Laboratory Prescription Benzodiazepine Reports, South Florida¹: 2011

Prescription Benzodiazepines	Number of Reports
Alprazolam	981
Clonazepam	72
Diazepam	42
Lorazepam	22
Temazepam	4
Bromazepam	1
Flurazepam	1
Total Benzodiazepines	1,123

¹Miami-Dade, Broward, and Palm Beach Counties.
SOURCE: NFLIS, DEA, May 8, 2012

Exhibit 10. Number of Emerging Psychoactive Substance Drug Poison Control Exposure Calls in Florida: January–December 2011 and January–April 2012

Synthetic Drug Category	# of Poison Exposure Calls January–December 2011	# of Poison Exposure Calls January–April 2012
Synthetic Cannabinoids	516	269
Hallucinogenic Amphetamines	184	64
MDPV & Mephedrone (“Bath Salts”)	152	28
Other Hallucinogens DMT and 5-MeO-DIPT	6	2

SOURCE: Florida Poison Information Center–Miami (1-800-222-1222)

Exhibit 11. Number of Crime Laboratory Reports for Synthetic Cannabinoids, Piperazines, Tryptamines, Phenethylamines, and Cathinones in South Florida¹: 2011

Drugs	Number of Reports
Synthetic Cannabinoids, including 18 for JWH-018	20
BZP (N-Benzylpiperazine)	130
5-MeO-DIPT	133
TFMPP (1-[3-Trifluoromethylphenyl]-Piperazine)	83
MDPV (Methylenedioxypropylvalerone)	32
Methylone (N-Methyl-3,4-Methylenedioxycathinone)	27
Mephedrone (4-Methylmethcathinone [4-MMC])	12
MDA (3,4-Methylenedioxyamphetamine)	1
Other	25
Total	463

¹Miami-Dade, Broward, and Palm Beach Counties.
SOURCE: NFLIS, DEA, May 8, 2012

Drug Abuse Trends in Minneapolis/ St. Paul, Minnesota: June 2012

Carol L. Falkowski¹

ABSTRACT

The escalating abuse of heroin and prescription opiates continued to dominate the drug abuse situation in the Minneapolis/St. Paul (“Twin Cities”) metropolitan area. Combined figures from Hennepin County and Ramsey County showed that opiate-related deaths rose from 92 in 2010 to 120 in 2011 (a 30.4-percent increase). One in five admissions to addiction treatment programs in the Twin Cities (20.2 percent) in 2011 were for heroin or other opiates; this was second only to treatment admissions for alcohol (compared with 8.7 percent of admissions in 2005). Opiates were detected in 7.7 percent of adult males arrested in Hennepin County in 2011, which was an increase from 4.7 percent in 2007. Statewide, heroin arrests rose by 81.5 percent from 2010 to 2011, after increasing by 53.7 percent from 2009 to 2010. Three American Indian Tribal Councils declared public health emergencies in 2011 due to the abuse of prescription opiates and illegal drugs on their reservations. Cocaine-related treatment admissions continued to decline, and methamphetamine-related treatment admissions remained stable. Adverse reactions related to the abuse of synthetic THC (tetrahydrocannabinol) (cannabimimetics) and “bath salts” (substituted cathinones) resulted in growing numbers of reports to the Hennepin Regional Poison Center. From 2010 to 2011, reported exposures to THC homologs (cannabimimetics) increased from 28 to 149, and substituted cathinone exposures increased from 5 to 144. Since July 2011, these substances have been illegal to possess or sell in Minnesota, although they remain available from online retailers.

INTRODUCTION

This report analyzes current and emerging substance abuse trends in the metropolitan area of Minneapolis/St. Paul, Minnesota (the Twin Cities), utilizing the most recent data obtained from multiple sources. It is produced twice annually for participation in the Community Epidemiology Work Group of the National Institute on Drug Abuse, an epidemiological surveillance network of selected researchers from 20 U.S. metropolitan areas.

Area Description

The Minneapolis/St. Paul 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, unless otherwise noted. According to the 2010 Census, the population of each county is as follows: Anoka, 330,844; Dakota, 398,552; Hennepin, 1,152,425; Ramsey, 508,640; and Washington, 238,136, for a total of 2,588,907. This equals roughly one-half of Minnesota’s 5.3 million State population.

¹At the time of this report, the author was the Drug Abuse Strategy Officer for the Minnesota Department of Human Services.

Regarding race/ethnicity in the five-county metropolitan area, 80.1 percent of the population are White. African-Americans constitute the largest minority group (9.1 percent), with Asians accounting for 6.1 percent, American Indians representing 0.7 percent, and Hispanics of all races constituting 6.0 percent.

In response to civil unrest and government collapse in Somalia, many Somalis sought refuge in Minnesota. The Twin Cities now has a large population of immigrants from Somalia, ranging from 30,000 to 60,000 people. Since 1975, many Hmong refugees from Laos have also made their way to the Twin Cities. The Hmong population in Minnesota is now estimated at 60,000 to 70,000, making it one of the largest Hmong communities in the country.

Outside of the Twin Cities metropolitan area, the State is less densely populated and more rural in character. Minnesota shares a northern, 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. In 2011, North Dakota's population was 683,932, and South Dakota's population was 824,083.

Illicit drugs are sold and distributed within Minnesota by Mexican drug trafficking organizations, street gangs, independent entrepreneurs, and other criminal organizations. Drugs are typically shipped or transported into the Twin Cities area for further distribution throughout the State. Interstate Highway 35 runs north-south throughout Minnesota and south to the United States-Mexican border.

Data Sources

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

- **Addiction treatment data** are from the Drug and Alcohol Abuse Normative Evaluation System (DAANES) of the Performance Measurement and Quality Improvement Division, Minnesota Department of Human Services (through December 2011).
- **Mortality data** on drug-related deaths were provided by the Ramsey County Medical Examiner and the Hennepin County Medical Examiner (through December 2011). Hennepin County cases include accidental deaths in which drug toxicity or mixed drug toxicity was the 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 accidental deaths in which drug toxicity or mixed drug toxicity was the cause of death.
- **Data on human exposures to various substances** are reported to the Hennepin Regional Poison Center (through April 2012).
- **Data on thefts or loss of controlled substances from hospital-affiliated pharmacies** are reported to the U.S. Drug Enforcement Administration (DEA) on Form DEA-106 and were obtained and compiled by Minnesota Department of Health (2006–November 2011).
- **Crime laboratory data** are from the National Forensic Laboratory Information System (NFLIS), administered by the DEA, which collects solid dosage drug analyses conducted by State and local forensic laboratories on drugs seized by law enforcement (through December 2011). Data

presented are from the seven-county metropolitan area including the counties of Anoka, Dakota, Hennepin, Ramsey, Washington, Scott, and Carver. The 2011 data are incomplete and do not include St. Paul Police Department laboratory submissions for November and December 2011. NFLIS methodology allows for the accounting of up to three drugs per item submitted for analysis. The data presented are a combined count including primary, secondary, and tertiary reports for each drug for 2009–2011.

- **Drug seizure and arrest data** are from the multijurisdictional narcotics task forces that operate throughout the State, compiled by the Office of Justice Programs, Minnesota Department of Public Safety, 2012. As of January 2012, there are 23 multijurisdictional law enforcement drug and violent crime task forces operating throughout Minnesota, staffed by more than 200 investigators from more than 120 agencies.
- **Data on drug use among arrestees** in Hennepin County are from the Arrestee Drug Abuse Monitoring (ADAM) II program, administered by the White House Office of National Drug Control Policy. These data are based on the urinalysis of a sample of 899 adult males arrested in 2011.
- **Data on human immunodeficiency virus (HIV) infection and hepatitis C virus (HCV)** are from the Minnesota Department of Health (through December 2011).
- **Additional information** is from interviews with addiction treatment providers, narcotics agents, and school-based drug specialists (ongoing).

DRUG ABUSE PATTERNS AND TRENDS

Cocaine

The number of clients receiving treatment for cocaine addiction has decreased in recent years, with a 65.8-percent decline from 2005 to 2011 (exhibit 1). Cocaine was the primary substance problem for 5.2 percent of total treatment admissions in 2011, compared with 14.4 percent in 2005 (exhibits 2 and 3).

Most cocaine-related treatment admissions in 2011 (75.2 percent) were for crack cocaine (exhibit 4). Of all cocaine-related admissions in 2011, 50.1 percent were African-American, and 35.9 percent were White. Females accounted for 37.0 percent, and almost three-quarters (73.2 percent) were age 35 and older.

Cocaine-related deaths appeared to be declining as well. In Hennepin County, there were 28 cocaine-related deaths in 2011 (exhibit 5), compared with 59 in 2007. Of these 28 decedents in 2011, 17 had cocaine toxicity as the cause of death. Eight were African-American; nine were White; two were female; and the average age was 48.8 years. An additional 11 deaths involved recent cocaine use as a significant contributing condition. In Ramsey County, there were six cocaine-related deaths in 2011. All were male; three were African-American; and two were White. The average age was 37.5 years.

Cocaine was present in 20.9 percent of the drug reports from items seized and analyzed by NFLIS laboratories in 2011 (exhibit 6). Gangs remain involved in the street-level, retail distribution of crack

cocaine. A rock of crack ranged in price from \$15 to \$20; a gram of cocaine powder cost \$80–\$120; and an ounce ranged from \$1,000 to \$1,400.

In both 2011 and 2010, 20.6 percent of the adult males arrested in Hennepin County tested positive for cocaine, compared with 27.5 percent in 2007 (exhibit 7).

Heroin and Other Opiates

All quantitative indicators related to heroin and other opiates increased and remained at heightened levels in the Twin Cities. This is the continuation of an upward trend that began in 2000.

Clients admitted to treatment for addiction to heroin or other opiates accounted for 20.2 percent of all treatment admissions in the Twin Cities in 2011, second only to alcohol admissions. There were 4,210 treatment admissions for heroin or other opiates combined in 2011; this was more than double the 2,032 admissions in 2006 (exhibit 8).

Heroin accounted for 10.7 percent of total treatment admissions in 2011, compared with 7.8 percent in 2010, and 3.3 percent in 2000. Of these 2,223 heroin admissions in 2011, 41.6 percent were age 18–25. Anecdotally, many of the young males entering treatment reported initially using prescription opiates and eventually progressing to heroin addiction. Very few (0.8 percent) were younger than 18. Whites accounted for 67.5 percent; African-Americans represented 20.9 percent; and American Indians accounted for 5.4 percent. Injection was the most common route of administration (64.7 percent). Thirty-two percent were female.

“Other opiates” are mainly prescription narcotic analgesics, also known as painkillers, although this category encompasses all opiates other than heroin (including opium). Other opiates were the primary substance problem reported by a record high 1,987 clients admitted to treatment in 2011, representing 9.5 percent of the total. This compares with 8.4 percent in 2010, 3.4 percent in 2005, and 1.4 percent in 2000. Of these 1,987 admissions for other opiates, almost one-half were female (46.6 percent). More than one-quarter (27.3 percent) were age 18–25, and 2.5 percent were younger than 18. Whites accounted for 81.9 percent, followed by American Indians (7.8 percent) and African-Americans (4.2 percent). Oral was the most common route of administration (65.8 percent), followed by snorting (15.3 percent) and injection (12.1 percent).

Opiate-related deaths increased in both Hennepin and Ramsey Counties. In these two counties, combined opiate-related deaths rose from 92 in 2010 to 120 in 2011, a 30.4-percent increase. Anoka County reported 5 overdose deaths in 2010 and 13 in 2011.

Of the 84 opiate-related decedents in Hennepin County in 2011, 71.4 percent were male; 66.7 percent were White; 20.2 percent were African-American; 9.5 percent were American Indian; and 3.0 percent were Hispanic. The ages of decedents ranged from 19 to 71, with an average of 43.4 years. Of the 36 opiate-related decedents in Ramsey County in 2011, 66.7 percent were male; 75.0 percent were White; and 19.4 percent were African-American. The ages ranged from 20 to 69, with an average of 40.7 years.

All levels of law enforcement throughout the State reported an increase in activity surrounding both heroin and prescription opiate drugs. Minnesota multijurisdictional law enforcement drug task forces

seized 78.1 percent more heroin and 173.9 percent more oxycodone in 2011 than in 2010. From 2010 to 2011, heroin arrests by these task forces rose from 108 to 206, a 90.7-percent increase (exhibit 9). From 2009 to 2010, heroin arrests rose 53.7 percent. Heroin was present in 6.1 percent of the drug reports in drug items analyzed by NFLIS in 2011, compared with 3.8 percent in 2009 (exhibit 6). Oxycodone was present in 2.7 percent of the drug reports in 2011.

In 2011, 7.7 percent of adult male arrestees in Hennepin County tested positive for opiates. This compares with 4.7 percent in 2007 (exhibit 7). The number of heroin exposures reported to the Hennepin Regional Poison Center grew from 52 in 2010 to 78 in 2011, a 50-percent increase (exhibit 10).

Mexico continued to be the primary source of heroin in the Twin Cities and Minnesota. This included both black tar heroin and the brownish-colored heroin powder. Mexican heroin typically cost \$20 per dosage unit and \$100–\$200 per gram. An “eight-ball” (1/8 of an ounce) cost roughly \$400. According to 2009 data from the DEA’s Heroin Domestic Monitoring Program, the purity of Mexican heroin in Minneapolis was among the highest found in the country (53 percent pure), and it sold at the lowest cost (\$0.25 per milligram pure).

In an attempt to assess the magnitude of the diversion of controlled substances by health care professionals, the Minnesota Department of Health obtained data from the DEA on incidents of employee pilferage or loss reported by hospital-affiliated pharmacies, excluding stand-alone and retail pharmacies. From 2005 to 2011 (through November) there were 250 thefts or loss of controlled substances reported to the DEA (exhibit 11). Roughly one-half (54 percent) were from the seven-county Twin Cities metropolitan area. The number of reports increased from 16 in 2006 to 52 in 2010, a 325-percent increase. The controlled substances most frequently involved were hydrocodone (18 percent), oxycodone (17 percent), hydromorphone (14 percent), morphine sulfate (13 percent), and fentanyl (8 percent).

Three American Indian Tribal Councils in Minnesota declared public health emergencies in 2011 in response to prescription opiate and illegal drug abuse on their reservations: Red Lake, White Earth, and Leech Lake. Opium smoking continued within the Twin Cities’ Hmong community. The opium is typically shipped from Asia to the Twin Cities concealed in various packages, some of which are intercepted by U.S. Customs and Border Protection.

Methamphetamine and Other Stimulants

Methamphetamine

The manufacture and abuse of methamphetamine in Minnesota peaked in 2005. From 2010 to 2011, methamphetamine-related treatment admissions were stable, accounting for 6.4 percent of total admissions each year (exhibits 2 and 3). The actual number of methamphetamine admissions increased slightly from 1,259 to 1,326 between 2010 and 2011, a 5.3-percent increase (exhibit 12).

Of the methamphetamine-related treatment admissions in 2011, 37 percent were female; 82.2 percent were White; 6.2 percent were Asian; and 4.2 percent were Hispanic (exhibit 4). Smoking was the most common route of administration (72.0 percent). Only 1.1 percent of the methamphetamine clients in treatment were younger than 18, and 24.1 percent were between the ages of 18 and 25.

In Ramsey and Hennepin Counties combined, there were 10 methamphetamine-related deaths in 2011, compared with 13 in both 2009 and 2010 (exhibit 5). Of the decedents in 2011, one-half were White; one was female; and the average age was 41.3 years. Ages ranged from 23 to 61, and one-half were in their thirties.

Methamphetamine was present in 19 percent of drug reports from items seized and analyzed by NFLIS laboratories in 2011, compared with 20 percent in 2010 (exhibit 6). Methamphetamine cost \$20 per dosage unit and ranged in price from \$80 to \$150 per gram and \$19,000 to \$20,000 per pound. In 2011, 2.8 percent of adult males arrested in Hennepin County tested positive for methamphetamine, compared with 2.4 percent in 2010.

Other Stimulants

Khat (pronounced “cot”) is a plant that is indigenous to East Africa and the Arabian Peninsula. Users chew the leaves, smoke it, or brew it in tea for its stimulant effects. It is used within the Somali community in the Twin Cities. The 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 approximately 48 hours. In February 2011, an 83-year-old man was arrested for having 4 pounds of khat that he was selling out of the trunk of his car in South Minneapolis.

Methylphenidate (Ritalin®), a widely prescribed prescription drug used in the treatment of attention deficit hyperactive disorder, is also abused nonmedically to increase alertness and suppress appetite by some adolescents and young adults. Crushed and snorted, or ingested orally, each pill sells for up to \$5 or is simply shared with others at no cost. It is sometimes known as a “hyper pill” or “the study drug.”

MDMA (3,4-methylenedioxymethamphetamine), also known as ecstasy, “X,” or “e,” sold for \$20 per pill. MDMA was present in 0.9 percent of drug reports among items seized and analyzed by NFLIS laboratories in 2011 (exhibit 6), compared with 4.6 percent in 2009. There were 24 exposures involving MDMA reported to Hennepin Regional Poison Center in 2011 and 8 through April 2012 (exhibit 10).

Marijuana

In 2011, there were 3,464 admissions to addiction treatment programs for marijuana (exhibit 13), representing 16.6 percent of total treatment admissions. Of these, 32.4 percent were younger than 18; 36.9 percent were age 18–25; and only 12.8 percent were 35 and older (exhibit 4). More than one-half (56.6 percent) were White; 27.1 percent were African-American; 6.3 percent were Hispanic; and 3.1 percent were American Indian. Females accounted for 21.6 percent; this was the lowest percentage of females in any drug category.

Marijuana/cannabis was present in 19.4 percent of drug reports from items analyzed by NFLIS laboratories in 2011 (exhibit 6). Marijuana sold for \$5 per joint. Marijuana joints dipped in formaldehyde, which is often mixed with PCP (phencyclidine), are known as “wet sticks,” “water,” or “wet daddies.” Joints containing crack are known as “primos.” Pounds of “BC Bud” ranged from \$2,400 to \$2,800, compared with pounds of Mexican marijuana that ranged from \$550 to \$1,000. One-half (50.8 percent) of adult male arrestees in Hennepin County tested positive for marijuana in 2011, compared with 42.7 percent in 2007 (exhibit 7).

Synthetic THC (cannabimimetics), such as “K2,” and “Spice,” are dried-out, herbal mixtures that have been sprayed with synthetically-produced THC, the active ingredient in plant marijuana. They are sold as incense with a warning not to use for human consumption. When smoked, these products produce effects similar to those of plant marijuana. They are sold online and in “head-shops” under many other names, such as “Smoke XXXX,” “Stairway to Heaven,” or “California Dreams.” The Hennepin Regional Poison Center reported 28 cannabimimetic exposures in 2010, 149 exposures in 2011, and 54 exposures in 2012 through April (exhibit 10).

Hallucinogens and Other Synthetics

Salvia divinorum (a plant) and salvinorin A produce short-acting hallucinogenic effects when chewed, smoked, or brewed in tea. These are most often used by adolescents and young adults. Effective August 1, 2010, the sale or possession of these in Minnesota became a gross misdemeanor. The Hennepin Regional Poison Center reported six Salvia exposures in 2009, three in 2010, and one in 2011.

LSD (lysergic acid diethylamide) or “acid”, a strong, synthetically produced hallucinogen, typically sold as saturated, tiny pieces of paper, known as “blotter acid,” for \$5 to \$10 per dosage unit. The Hennepin Regional Poison Center reported 15 LSD exposures in 2011 and 5 in 2012 through April (exhibit 10).

Substituted cathinones that are sold online and in “head shops,” as “bath salts,” or “plant food,” are consumed to produce effects similar to those of illegal drugs, such as cocaine or MDMA. Because the actual ingredients are unknown, the effects are unpredictable and can include agitation, paranoid delusions, and extreme psychosis.

In 2011, there were marked increases in the abuse of substituted cathinones. The Hennepin Regional Poison Center reported 5 bath salt exposures in 2011 and 144 in 2012 through April. There were also 27 cases in 2012 through April. Sold under names such as “Vanilla Sky,” “Bliss,” and “Ivory Wave,” some contain mephedrone. Mephedrone by itself is also known as “Meow Meow,” “M-CAT,” “Bubbles,” or “Mad Cow.” Substituted cathinones may contain mephedrone or many other chemicals alone or in combination, such as MDPV (3,4-methylenedioxypropylvalerone), methylone (3,4-methylenedioxymethcathinone or MDMC), naphyrone (naphthylpyrovalerone or NRG-1), 4-Fluoromethcathinone or 3-FMC0, methedrone (4-methoxymethcathinone or bk-PMMA or PMMC), or butylone (beta-keto-N-methylbenzodioxolylpropylamine or bk-MBDB).

Chemical mixtures that are sold online as “research drugs” that are “not intended for human consumption,” were intentionally consumed by a group of young people at a party in suburban Blaine, Minnesota, in March 2011. The chemical compound known as 2C-E (2,5-dimethoxy-4-ethylphenylethylamine) was snorted by 11 young people who were seeking effects similar to the stimulant drug MDMA or “ecstasy.” All experienced profound hallucinations, became distressed, and were eventually hospitalized. One 19-year-old male was pronounced dead at the hospital. The person who provided the substance was recently convicted of third degree murder and sentenced to 10 years in prison. Exposures to the 2C-E phenethylamine and related analogs reported to the Hennepin Regional Poison Center numbered 5 in 2009, 10 in 2010, 23 in 2011, and 6 in 2012 through April.

The possession and sale of synthetic (substituted) cathinones, 2C-E phenethylamine analogs, and THC homologs (cannabimimetics) have been illegal under Minnesota law since July 1, 2011. Several large shipments of chemicals believed to be used in making “bath salts” (substituted cathinones) were intercepted by the U.S. Postal Inspection Service in spring 2012.

Alcohol

Alcohol remained the most widely abused substance in Minnesota and the Twin Cities. Roughly one-half of the total admissions to addiction treatment programs (49.2 percent) reported alcohol as the primary substance problem in 2011 (exhibit 2). Of these 10,240 clients, 67.4 percent were male (exhibit 4). More than one-half (58.3 percent) were 35 and older; 1.6 percent were younger than 18; 74.4 percent were White; 14.2 percent were African-American; and 3.9 percent were of Hispanic origin.

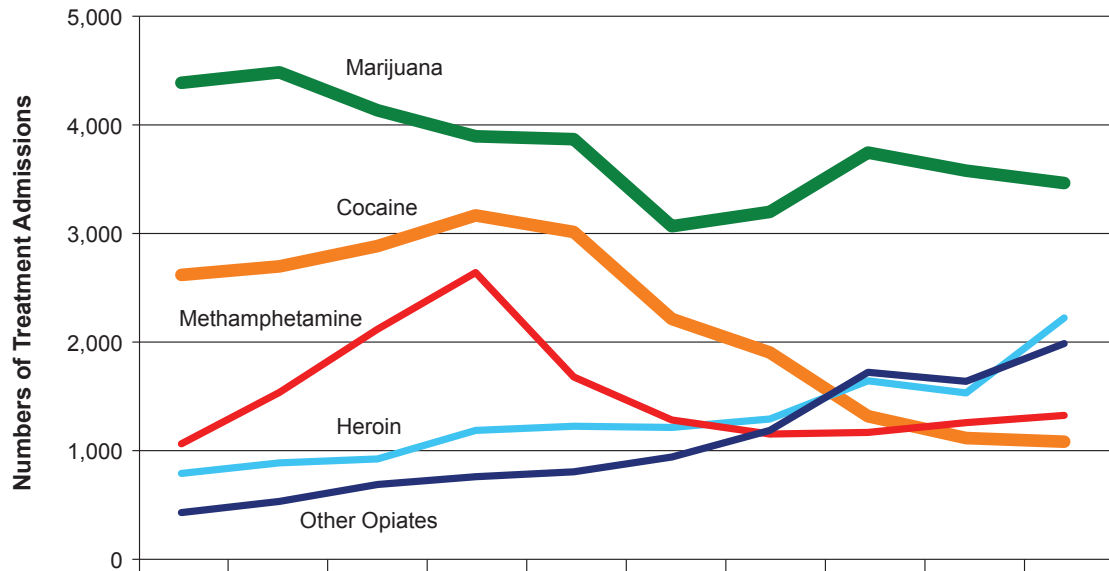
INFECTIOUS DISEASES RELATED TO DRUG ABUSE

As of December 31, 2011, 7,136 persons residing in Minnesota were known to be living with HIV/AIDS (acquired immunodeficiency syndrome), an increase of 4.7 percent from 2010. Of these, roughly 85 percent resided in the seven-county Twin Cities metropolitan area. In regard to new HIV infection cases in 2011, male-to-male sex (MSM) accounted for 72 percent of cases among males; injection drug use accounted for no new cases; and MSM and injection drug use accounted for 3 percent (exhibit 14). Among females, heterosexual contact accounted for 85 percent of new HIV infection cases, and injection drug use accounted for 1 percent.

Hepatitis C, the contagious liver disease that results from infection with HCV, can range from a mild illness lasting a few weeks to a serious, lifelong illness. Most people contract HCV by sharing needles or other equipment used to inject drugs. It is transmitted when blood from a person infected with HCV enters the body of someone who is not infected. As of December 31, 2011, there were 37,303 people living in Minnesota with past or present HCV infection. The median age was 55 years. The population-based rate in Minnesota is highest for American Indians, with 2,673 cases per 100,000 population, followed by 2,039 per 100,000 population for African-Americans, 403 for Hispanic-origin persons, 340 for Asian/Pacific Islanders, and 234 per 100,000 population for Whites. Two-thirds (66 percent) resided in the Minneapolis/St. Paul metropolitan area.

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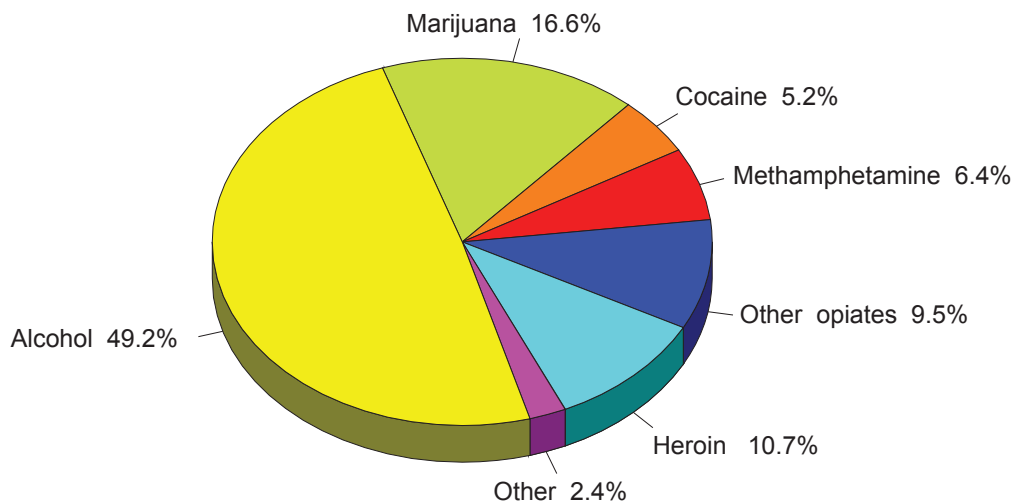
Exhibit 1. Number of Nonalcohol Admissions to Area Addiction Treatment Programs, by Primary Substance Problem, Minneapolis, St. Paul: 2002–2011



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Other Opiates	431	534	689	761	806	942	1,187	1,722	1,639	1,987
Methamphetamine	1,063	1,537	2,119	2,641	1,679	1,283	1,154	1,169	1,259	1,326
Marijuana	4,387	4,483	4,134	3,895	3,868	3,067	3,199	3,744	3,578	3,464
Heroin	792	888	924	1,187	1,226	1,215	1,292	1,644	1,532	2,223
Cocaine	2,619	2,697	2,884	3,166	3,014	2,213	1,905	1,317	1,116	1,083

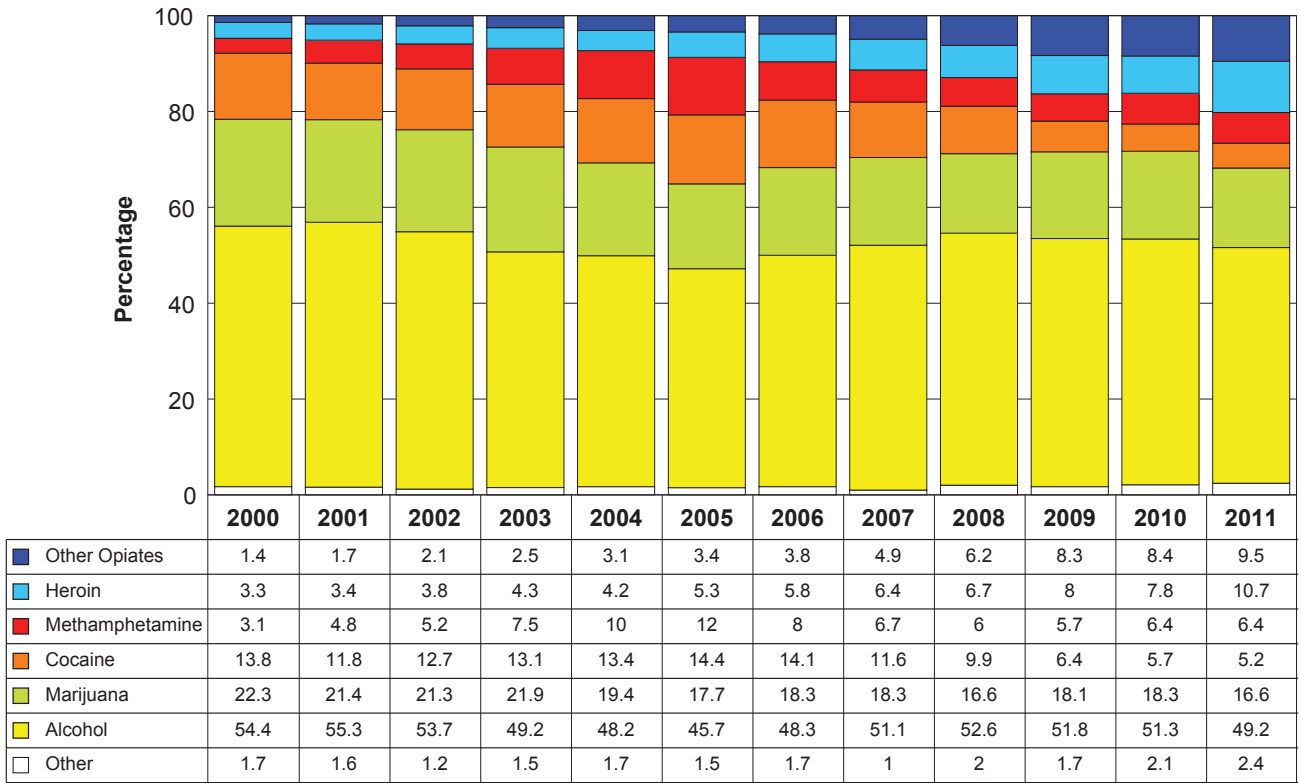
SOURCE: Minnesota Department of Human Services, Drug and Alcohol Abuse Normative Evaluation System (DAANES), May 2012

Exhibit 2. Percentage of Admissions to Area Addiction Treatment Programs, by Primary Substance Problem, Minneapolis/St. Paul: 2011



SOURCE: Minnesota Department of Human Services, Drug and Alcohol Abuse Normative Evaluation System (DAANES), May 2012

Exhibit 3. Percentage of Admissions to Area Addiction Treatment Programs, by Primary Substance, Minneapolis/St. Paul: 2000–2011



SOURCE: Minnesota Department of Human Services, Drug and Alcohol Abuse Normative Evaluation System (DAANES), May 2012