

EPIDEMIOLOGIC TRENDS IN DRUG ABUSE

Proceedings of the Community
Epidemiology Work Group

Volume II

June 2013



NATIONAL INSTITUTE ON DRUG ABUSE



COMMUNITY EPIDEMIOLOGY WORK GROUP

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Division of Epidemiology, Services and Prevention Research
National Institute on Drug Abuse
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This publication, *Epidemiologic Trends in Drug Abuse, Volume II*, contains the individual reports presented and data prepared for the June 2013 meeting by representatives from 21 areas in the United States. This publication also includes reports presented by researchers from Canada, Latin America, and Mexico. Abstracts from local presenters in the St. Louis area, a guest researcher, and a representative of the Arrestee Drug Abuse Monitoring (ADAM) II program are also included.

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

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Foreword

This volume presents findings from the 74th semiannual meeting of the National Institute on Drug Abuse (NIDA) Community Epidemiology Work Group (CEWG) held in St. Louis, Missouri, on June 12–14, 2013. 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; the Youth Risk Behavior Survey (YRBS); 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* report is published in two volumes: the Highlights and Executive Summary Report (Volume I) and this volume, which includes the full CEWG area reports, international reports, and special presentation abstracts.

The majority of the June 2013 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 Canada, Iraq, Mexico, Peru, and the Inter-American Drug Abuse Control Commission, Office of American States (OAS). Other highlights of the meeting included presentations by DEA representative Wanda Iyoha, on trends in DEA trafficking reports, and an update from the Office of National Drug Control Policy on the ADAM II data system by M. Fe Caces, Ph.D. There were two presentations on adolescent drug use: “Adolescent Drug Use Across CEWG Areas: Highlights of Findings From the Youth Risk Behavior Survey,” by Moira O’Brien, M.Phil., Health Scientist Administrator with NIDA, and “Medicine or Drugs? Detroit Adolescents’ Misuse of Controlled Medications,” by Carol Boyd, Ph.D., M.S.N., Professor at the University of Michigan and a NIDA grantee. Local area perspectives on drug abuse were provided by Susan Depue, Ph.D., Research Assistant Professor with the Missouri Institute of Mental Health, who presented “Adolescent Substance Use in Missouri’s Eastern Region,” and Peggy Kinamore, Public Education Coordinator with the Missouri Poison Center, who presented, “Molly, Are These Your Bath Salts? Challenges in Monitoring New Drugs with Poison Control Center Data.”

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

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National Institute on Drug Abuse
National Institutes of Health
Department of Health and Human Services

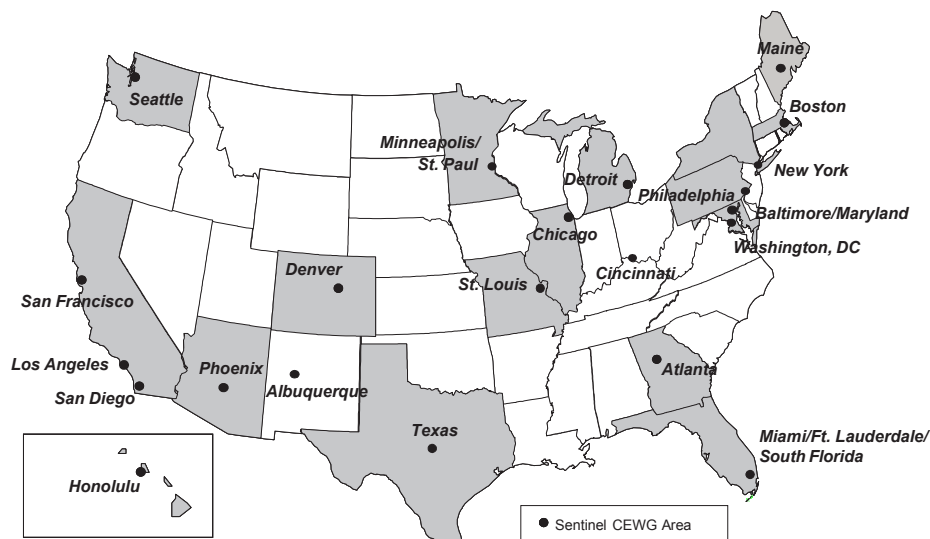
Introduction

The 74th semiannual meeting of the Community Epidemiology Work Group (CEWG) was held on June 12–14, 2013, in St. Louis, Missouri. During the meeting, researchers from 21 geographically dispersed areas in the United States reported on current trends and emerging issues in their areas. International representatives from Canada, Iraq, Mexico, Peru, and the Inter-American Drug Abuse Control Commission, Office of American States (OAS), reported on drug trends and issues in their respective countries.

The CEWG Network and Meetings: The CEWG is a unique epidemiology network that has functioned since 1976 to identify and assess current and emerging drug abuse patterns, trends, and issues, using multiple sources of information. The CEWG convenes semiannually; these meetings continue to be a major and distinguishing feature of the workgroup. CEWG representatives present information on drug abuse patterns and trends in their areas. In addition, time at each meeting is devoted to presentations by invited speakers. These sessions typically focus on presentations by researchers in the CEWG host city or with expertise on a particular topic, updates by Federal personnel on key data sets used by CEWG representatives, and drug abuse patterns and trends in other countries. The meetings provide a foundation for continuity in the monitoring and surveillance of current and emerging drug problems and related health and social consequences.

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.

The CEWG areas on which presentations were made at the June 2013 meeting are depicted in the map below, with one presentation including data on the Baltimore/Maryland/Washington, DC, area and one on Miami-Dade County and Broward County in South Florida.



Availability of data varies by area, so reporting varies by area. Examples of types of data reviewed by CEWG representatives to derive drug indicators include **admissions to substance abuse treatment programs** by primary substance of abuse or primary reason for treatment admission reported by clients at admission; **drug-involved emergency department (ED) reports of drugs** mentioned in ED records in the Drug Abuse Warning Network or reports from local and State sources; **seizure, average price, average purity, and related data** obtained from the Drug Enforcement Administration and from State and local law enforcement agencies; **drug-related deaths** reported by medical examiner or local coroner offices or State public health agencies; **arrestee urinalysis results** and other toxicology data; **surveys of drug use; and poison control center data**¹.

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**

Drug Abuse Patterns and Trends in Albuquerque and New Mexico: 2012

Brad Whorton, Ph.D.¹

ABSTRACT

There were four key findings for the Albuquerque area for the 2011–2012 reporting period: drug overdose deaths rates for Bernalillo County (Albuquerque) and New Mexico were very high and increased in 2011; there was a dramatic increase in methocarbamol poison control center cases in fiscal year (FY) 2011–2012 from the previous year; synthetic cannabinoids increased substantially in numbers of poison control center cases for FY 2011–2012 and in numbers of reports identified from drug items seized and analyzed by National Forensic Laboratory Information System (NFLIS) laboratories in 2012; and a large increase occurred in reported naloxone overdose reversals in Bernalillo County in 2011. Drug overdose deaths continued to increase at alarming rates throughout New Mexico. In 2010, New Mexico had the second highest drug overdose death rate in the Nation. The number of drug overdose deaths increased by 66.3 percent in Bernalillo County (the county that contains the city of Albuquerque) in 2011 over the previous year. Of the 521 drug overdose deaths statewide in 2011, nearly 40 percent occurred among Bernalillo County residents. In 2011, Bernalillo County's age-adjusted drug overdose death rate was 29.6 per 100,000 population. From 2010 to 2011, drug overdose death rates decreased for cocaine, heroin, benzodiazepines/depressants, antidepressants, and antipsychotics. During the same period, drug overdose death rates increased for those deaths which were unspecified, as well as those for prescription opioids. Overdose death rates were stable for methamphetamines/amphetamines. State-funded substance abuse treatment admissions were down by 26.6 percent statewide in 2012. Heroin treatment admissions declined by 56.1 percent; those for prescription opioids fell by 66.0 percent; and amphetamines admissions (including methamphetamines) decreased by 44.5 percent between 2011 and 2012. Harm reduction efforts increased in 2011. The number of Bernalillo County injection drug users who were enrolled into the Department of Health's Narcan® Program increased by 14.2 percent, and the number of reported overdose reversals increased by 525.0 percent. Almost one-half of these Narcan® reversals involved rescue breathing, but fewer than 20 percent were called into 911. In 2011–2012, there were almost 13,600 new prescriptions for Suboxone® filled in Bernalillo County—mostly for drug maintenance therapy. The rate of hospital inpatient discharges to Bernalillo County residents in which drug overdose was listed as the primary diagnosis decreased by nearly 11 percent in 2011 from the previous year, to a rate of 8.3 per 10,000 population. In 2012, 21.2 percent of drug reports among drug items seized and analyzed in Albuquerque were for heroin; 20.6 percent involved methamphetamine; 18.7 percent involved marijuana; and 16.3 percent involved cocaine. In 2011–2012, New Mexico poison control center cases involving Bernalillo County residents declined by 3.8 percent. Cases involving stimulants and street drugs increased by 14.0 percent; those for methocarbamol increased by 714.3

¹At the time of this report the author was affiliated with the New Mexico Department of Health.

percent; and those for THC (tetrahydrocannabinol) homologs increased by 292.3 percent over the previous year. During the same period, cases involving marijuana decreased by 57.1 percent, and those for carisoprodol declined by 35.0 percent. In recent years, sales of prescription opioids have increased, although during the last 2 years, the rate of increase has slowed. Total prescription opioid sales in Albuquerque increased by less than 1 percent from 2010 to 2011, compared with 5.8 percent for the State. Oxycodone had the largest sales volume in Albuquerque, although its sales level decreased by 3.2 percent in 2011. According to the Youth Risk and Resiliency Survey, drug use among youth in Bernalillo County (and New Mexico) remained high, although it has declined in recent years for all substances. Approximately 26.5 percent of high school students reported using marijuana during the past 30 days. One-tenth (10.2 percent) reported having used painkillers to “get high,” and 6.1 percent were reported as current users of inhalants. According to the National Survey of Drug Use and Health, 11.4 percent of those age 12 and older reported current marijuana use, and 5.8 percent reported current nonmedical use of prescription pain relievers.

INTRODUCTION

For the past two decades New Mexico has consistently had one of the highest drug overdose death rates in the Nation. In 2010, New Mexico had the second highest drug overdose death rate following West Virginia. This report focuses on the most recent data and trends available for the Albuquerque area (Bernalillo County). Based on data available as of June 2013, drug indicators were generally high with a mixed but generally decreasing trend.

Area Description

New Mexico is a large, low-density State with a diverse population of 2.1 million. New Mexico is the 5th largest U.S. State, the 6th least densely populated, and the 36th most populous. The demographics are as follows: 41.3 percent White (non-Hispanic), 46.4 percent Hispanic, 8.8 percent American Indian, 2.0 percent African-American, and 1.5 percent Asian or Pacific Islander. More than one-third of New Mexicans speak a language other than English at home, the second highest proportion in the Nation. In 2011, the city of Albuquerque had an estimated population of 553,000; it is by far the largest city in New Mexico. Albuquerque is the county seat of Bernalillo County. In 2011, the county had an estimated population of 673,000. The demographic breakdown of the county is as follows: 48.0 percent Hispanic, 42.4 percent White (non-Hispanic), 4.2 percent Native American, 2.9 percent African American, and 2.5 percent Asian or Pacific Islander. Approximately 19.9 percent of the Bernalillo County population was younger than 15; 41.4 percent were between the ages of 15 and 44; 26.0 percent were between the ages of 45 and 64; and 12.7 percent were age 65 or older.

New Mexico is also a relatively poor State. In 2010, the median household income was approximately \$43,820. For Bernalillo County, the median household income was \$47,481. In 2011, the State's child poverty rate was 31 percent. Roughly one-quarter of New Mexicans younger than 65 and not in prison or nursing facilities had no health insurance coverage for at least one-half of 2012.

Data Sources

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

- **Medical Investigator death data** were provided by the New Mexico Office of the Medical Investigator (OMI). The State-centralized OMI is authorized to investigate all deaths in New Mexico that are sudden, unexplained, suspicious, violent, or unattended, with the exception of those that occur on Federal or tribal jurisdictions. However, the OMI is often contracted to investigate some of those deaths as well. Classification for cause of death is determined by board-certified forensic pathologists and is not simply a determination of the presence or absence of a drug in a toxicological screen. The diagnosis of a drug poisoning death is dependent on results from a full medical investigation, including full autopsy; circumstances of death; scene and medical investigation; information from family; and blood concentration levels of one or more drugs, either with or without alcohol, as determined by the pathologist. Pathologists also classify manner of death based on information from the full investigation.
- **Total drug overdose death data** were provided by the Bureau of Vital Records and Health Statistics from the New Mexico Department of Health (NMDOH). Age-adjusted death rates are presented (age-adjusted to the 2000 U.S. standard population) and expressed per 100,000 standard population.
- **Treatment admissions data** were provided by the Behavioral Health Services Division, New Mexico Human Services Department. This dataset was submitted to the Treatment Episode Data Set (TEDS) system and includes all State-funded treatment admissions in New Mexico for 2012. During that year, there were 6,570 admissions. Treatment admissions data were available by age group, gender, and primary substance. Due to the very high number of “other and unknown” primary substance admissions (3,274), these were omitted when calculating percentages for each substance.
- **Suboxone® (buprenorphine) treatment data** were provided by the New Mexico Board of Pharmacy’s Prescription Monitoring Program (PMP) database.
- **Naloxone® Program data** on the number of individuals enrolled in the State’s Naloxone® Program were provided by the Harm Reduction Program, NMDOH. Data presented here are for Bernalillo County and for New Mexico for 2010–2012. These data were also used to determine the reported number of overdose reversals.
- **Crime laboratory data** for drug reports among drug items seized and analyzed in forensic laboratories were collected by the Albuquerque forensic laboratory and were sent to the National Forensic Laboratory Information System (NFLIS). 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. Data were reported for Albuquerque ($n=2,660$ reports in 2012) for 2011 and 2012.
- **Hospital discharge data** for Bernalillo County and New Mexico were provided by NMDOH for underlying cause of death for 2011, and these data were analyzed by gender and manner of death.

- **Poison control center data** for Bernalillo County were analyzed and are presented in this report. Poison control center cases were received from the New Mexico Poison Control and Information Center of the University of New Mexico for fiscal years (FYs) 2011–2012 and 2010–2011. They were analyzed by substance and substance category. Percentage of total cases and percentage increases between the 2 fiscal years are presented in this report.
- **Prescription sales data** were provided by the DEA through its Automation of Reports and Consolidated Order System (ARCOS). These data were provided for sales of Schedule II and III prescription opioids by three-digit ZIP Codes™. The three-digit 871 ZIP Code™ corresponds to the Albuquerque area and these data are presented in this report.
- **Youth drug use survey data** were from the 2011 Youth Risk Behavior Survey (YRBS), Centers for Disease Control and Prevention. These data were collected as part of the New Mexico Youth Risk and Resiliency Survey (YRRS). YRRS high school survey data are from school-based surveys of 9th through 12th graders attending public school in New Mexico. The middle school survey is of 6th through 8th graders attending public school in the State. The survey originated from the YRBS, but the New Mexico YRRS includes additional State-added questions. County-level data for Bernalillo County are presented in this report.
- **Drug use survey data** for individuals older than 12 were provided by the National Survey of Drug Use and Health (NSDUH), Substance Abuse and Mental Health Services Administration (SAMHSA). Sub-State data pertaining to Bernalillo County are presented in this report.
- **Human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS) data** (prevalence and incidence) were provided by the HIV Epidemiology Program, NMDOH. Only statewide data were provided and analyzed for this report.

DRUG ABUSE PATTERNS AND TRENDS

Cocaine/Crack

Cocaine/crack indicators were mixed and decreasing. In 2011, the Bernalillo County cocaine poisoning death rate was 3.5 deaths per 100,000 population, a decline from a rate of 4.5 in 2010 (exhibit 1). In 2000, the cocaine death rate was 7.4. In 2006, the cocaine death rate reached its highest point at 10.3, but it has declined every year since then. Exact determination, however, was made difficult by the large increase in unspecified deaths in 2010 and 2011 (where no specific substance was identified in the OMI files as contributing to the death). The overall drug overdose death rate increased from 26.7 in 2010 to 29.6 in 2011. Male cocaine/crack deaths constituted 76.2 percent of all cocaine/crack deaths in 2011.

According to statewide treatment admissions data, there were 102 admissions in which cocaine/crack was identified as the primary substance, which constituted 3.1 percent of all admissions. In slightly less than one-third of these admissions, the route of administration was identified as smoking. Nearly two-thirds (62.7 percent) of cocaine/crack admissions were male. Only 12.7 percent of all cocaine/crack admissions were clients younger than 26; 39.2 percent were age 26–34; and 48.0 percent were 35 and older.

NFLIS data show that in 2012, there were 433 drug reports among items seized and analyzed that involved cocaine/crack. This is sharply down from 559 in 2011. Cocaine/crack was present in 16.3 percent of drug reports among all substances seized in 2012.

In FY 2011–2012, there were 28 Bernalillo County poison control center cocaine/crack cases reported, this represented a 3.6-percent decrease from FY 2010–2011. In FY 2011–2012, cocaine cases constituted 10.7 percent of all Bernalillo County poison control center cases within the “Street Drugs and Stimulants” category.

The 2011 YRRS high school survey (for Bernalillo County) showed an apparent decrease in current cocaine use (4.4 percent) compared with 2009 (6.8 percent). During the same periods, lifetime cocaine use among high school students decreased from 14.5 to 11.1 percent. Among Bernalillo County middle school students, lifetime cocaine use decreased from 5.6 percent in 2009 to 2.5 percent in 2011. NSDUH data (for survey years 2008–2010) for Bernalillo County residents age 12 and older showed that 2.7 percent reported cocaine use during the past year, very similar to the State use rate of 2.2 percent.

Heroin

Heroin indicators were high but generally decreasing. Heroin remained one of the greatest drug threats in terms of drug abuse and was readily available in Albuquerque and statewide in New Mexico.

In 2011, the Bernalillo County heroin poisoning death rate was 5.4 deaths per 100,000 population, a decline from the previous year (the rate was 6.0 in 2010) (exhibit 1). In 2000, the heroin death rate was 10.7. Since then, the rate has been fairly stable, reaching its maximum in 2008 at 12.8, but has declined in subsequent years. Exact determination, however, was made difficult by the large increase in unspecified deaths in 2010 and 2011 (in which no specific substance was identified in the OMI files as contributing to the death). The overall drug overdose death rate increased from 26.7 in 2010 to 29.6 in 2011. Males constituted 86.5 percent of all heroin deaths in 2011.

According to statewide treatment admissions data, there were 162 admissions in which heroin was identified as the primary substance, which constituted 4.9 percent of all admissions. Nearly two-thirds (64.2 percent) of these admissions were male. More than one-third (35 percent) of all heroin admissions were clients younger than 26; 40.4 percent were age 26–34; and 24.8 percent were 35 and older.

Harm reduction data show that statewide more than 2 million syringes were exchanged by injection drug users (IDUs) in 2012. For Bernalillo County residents, the number of Naloxone® Program enrollees increased from 773 in 2011 to 883 in 2012. The number of drug overdose reversals in 2012 was 125. NFLIS data show that heroin was the top drug report among items seized and analyzed in both 2011 and 2012 in Albuquerque. In fact, heroin constituted 21.2 percent of all drug reports of items seized and analyzed in 2012.

In FY 2011–2012, there were 17 poison control center cases reported for heroin; this was a 22.7-percent decrease from the 22 cases reported in the previous fiscal year. In FY 2011–2012, heroin

cases constituted 6.5 percent of all Bernalillo County poison control center cases within the “Street Drugs and Stimulants” category.

The 2011 YRRS high school survey shows an apparent decrease in current heroin use (2.4 percent) compared with 2009 (4.9 percent) in Bernalillo County. During the same periods, lifetime heroin use among high school students decreased from 6.6 to 4.8 percent.

Prescription Opioids

Prescription opioid indicators were high with a mixed pattern. In 2011, the Bernalillo County prescription opioid poisoning death rate was 9.1 deaths per 100,000 population, an increase from the previous year (the 2010 rate was 8.2) (exhibit 1). In 2000, the prescription opioid death rate was 6.4; it increased to 15.9 in 2008. Between 2008 and 2010, the rate declined with the corresponding increase in unspecified deaths; as noted previously, however, there was an increase in 2011. Exact determination, however, was made difficult by the large increase in unspecified deaths in 2010 and 2011 (in which no specific substance was identified in the OMI files as contributing to the death). The overall drug overdose death rate increased from 26.7 in 2010 to 29.6 in 2011. Males constituted 71.9 percent of all prescription opioid deaths in 2011.

According to statewide treatment admissions data, there were 149 admissions in which prescription opioids were identified as the primary substance, which constituted 4.5 percent of all admissions. More than one-half (57.1 percent) of prescription opioid admissions were male. Treatment admissions by age group for prescription opioids as the primary substance in 2012 were as follows: 33.6 percent were clients younger than 26; 37.6 percent were age 26–34; and 28.9 percent were 35 and older.

Increases in deaths are a reflection of the wider availability of these drugs. DEA sales data show that sales of prescription opioids increased by more than 100 percent in the 871 three-digit ZIP Code™ area (Albuquerque) since 2001. The data show that oxycodone leads in drug sales in the Albuquerque area. Other top selling drugs are, in rank order, morphine, hydrocodone, and methadone. From 2010 to 2011, buprenorphine registered the largest percentage sales increase, at 25.8 percent. Between 2010 and 2011, sales also increased for hydromorphone (by 9.5 percent), hydrocodone (by 8.7 percent), and methadone (by 8.2 percent). Oxycodone sales in Albuquerque declined by 3.2 percent between 2010 and 2011, however, they continued to increase statewide.

NFLIS data for 2012 show the following drug reports among items seized and analyzed: 62 for oxycodone, 29 for buprenorphine, 15 for hydrocodone, and 10 for methadone. This represents a 31.3-percent decline for reports of these prescription opioids from the previous year.

Of the 6,970 poison control center cases from Bernalillo County in FY 2011–2012, the largest category of drugs involved analgesics, and one-third of these involved prescription opioids. Oxycodone cases constituted 27.7 percent of all prescription opioid cases, followed by buprenorphine (16.5 percent), tramadol (15.3 percent), and methadone (11.6 percent). The number of buprenorphine cases increased by 29.0 percent from FY 2010–2011 to FY 2011–2012, while tramadol cases increased by 32.1 percent during the same period.

According to 2011 YRRS data, 10.2 percent of Bernalillo County high school students reported having used prescription painkillers to “get high” during the past 30 days. This represents a decrease from 15.2 percent in 2009. A similar lifetime prevalence estimate was not available; however, 20.0 percent reported improper prescription drug use during their lifetime. Among middle school students, 4.4 percent reported having used painkillers to get high at some point in their lifetime, according to the 2011 YRRS survey. According to the NSDUH survey of those age 12 and older, 6.4 percent reported having used prescription painkillers to get high during the past year.

Benzodiazepines/Depressants

Benzodiazepine/depressant indicators were generally low and decreasing. In 2011, the Bernalillo County benzodiazepine poisoning death rate was 3.7 deaths per 100,000 population (exhibit 1). Many of these deaths were in combination with opioids. This represented a decline from the previous year (the 2010 rate was 6.3). While the death rate appears low, both alprazolam and diazepam appeared among the top 10 prescription drug deaths for both Bernalillo County and New Mexico (exhibit 2). Exact determination, however, was made difficult by the large increase in unspecified deaths in 2010 and 2011 (in which no specific substance was identified in the OMI files as contributing to the death). The overall drug overdose death rate increased from 26.7 in 2010 to 29.6 in 2011.

Treatment data show that sedative-hypnotics were identified as the primary substance in only 0.2 percent of all admissions. NFLIS data show a 70-percent decline in the number of benzodiazepine drug reports among items seized and analyzed from 2011 to 2012. In 2012, there were 13 reports for alprazolam, while there were 7 reports for diazepam. Poison control center data for Bernalillo County show that there were 466 antidepressant cases and 578 sedative-hypnotic cases in FY 2011–2012. Both categories experienced declines from the previous year; cases for sedative-hypnotics or antipsychotic drugs, for example, decreased by 7.8 percent between FY 2010–2011 and FY 2011–2012. Within the antidepressant and sedative-hypnotic categories, however, some individual drugs experienced sharp increases. One notable exception was cases for methocarbamol (a sedative-hypnotic), which increased by 714.3 percent between the 2 fiscal years.

Methamphetamine

Methamphetamine indicators were high, and the direction was mixed. In 2011, the Bernalillo County methamphetamine poisoning death rate was 1.2 deaths per 100,000 population, the same as the year before (exhibit 1). In 2000, the methamphetamine death rate was 0.7. It reached its peak in 2007 with a rate of 4.0 and has been lower since. Exact determination, however, was made difficult by the large increase in unspecified deaths in 2010 and 2011 (in which no specific substance was identified in the OMI files as contributing to the death). The overall drug overdose death rate increased from 26.7 in 2010 to 29.6 in 2011. Males constituted 85.7 percent of all methamphetamine deaths in 2011.

According to statewide treatment admissions data, there were 426 admissions in which amphetamines or methamphetamines were identified as the primary substance; these constituted 12.9 percent of all admissions. More than one-half (55.9 percent) of amphetamine or methamphetamine admissions were male. Twenty percent of all cocaine/crack admissions were clients younger than 26; 41.8 percent were age 26–34; and 38.3 percent were 35 and older.

NFLIS data show that in 2012, there were 547 drug reports of methamphetamine among items seized and analyzed, second only to heroin and an increase from 510 in 2011. Methamphetamine constituted 20.6 percent of all drug reports in 2012.

In FY 2011–2012, there were 25 Bernalillo County poison control center methamphetamine cases and 40 amphetamine cases. Methamphetamine cases increased by 25 percent from the previous year, and amphetamine cases increased by 29 percent. In FY 2011–2012, methamphetamine cases constituted 9.6 percent of all Bernalillo County poison control center cases within the “Street Drugs and Stimulants” category, while amphetamines totaled 15.3 percent.

The 2011 YRRS high school survey in Bernalillo County showed an apparent decrease in current methamphetamine use (3.3 percent, compared with 5.8 percent in 2009). During the same period, lifetime methamphetamine use among high school students decreased from 8.2 to 5.7 percent.

Marijuana

Marijuana indicators were high but decreasing. Marijuana is the most prevalent drug in New Mexico. According to statewide treatment admissions data, there were 351 admissions in which marijuana was identified as the primary substance, which constituted 10.6 percent of all admissions. More than three-quarters (76.1 percent) of marijuana admissions were male. Just over 11 percent of all marijuana admissions were for clients younger than 18; 42.4 percent were age 18–25; 24.4 percent were age 26–34; and 22.1 percent were 35 and older.

NFLIS data show that in 2012, there were 498 marijuana drug reports among items seized and analyzed, the same number as in 2011. Marijuana constituted 18.7 percent of all drug reports in 2012.

In FY 2011–2012, there were only 15 Bernalillo County poison control center marijuana cases reported; this represented a 57.1-percent decrease from 35 cases in the previous fiscal year. The 2011 YRRS high school survey showed an apparent decrease in current marijuana use (26.5 percent) compared with 2009 (32.1 percent). During the same years, lifetime marijuana use among Bernalillo County high school students remained virtually the same (registering a nonstatistically significant decrease from 52.3 to 51.7 percent). Current marijuana use among middle school students also showed a decline. In 2009, 11.0 percent of students reported having used marijuana during the past 30 days, compared with 8.7 percent in 2011. NSDUH data show that 12.7 percent of county residents age 12 and older reported having used marijuana during the past year.

Other Drugs

Deaths from antipsychotics and antidepressants have remained low and stable. In 2011, the death rate for antipsychotics was 0.7 per 100,000 population, and the rate for antidepressants was 1.6 per 100,000 population (exhibit 1). Exact determination, however, was made difficult by the large increase in unspecified deaths in 2010 and 2011 (in which no specific substance was identified in the OMI files as contributing to the death). The overall drug overdose death rate increased from 26.7 in 2010 to 29.6 in 2011.

Poison control center data show that there were 446 cases involving antidepressants in FY 2011–2012. Between FY 2010–2011 and FY 2011–2012, the number of antidepressant poison control center cases decreased by 6.5 percent. However, cases for the antidepressant trazodone increased by 67.6 percent during that time period.

Indicators for synthetic cannabinoids increased substantially in Albuquerque and New Mexico in 2012. NFLIS data for Albuquerque show that the number of drug reports for these substances among drug items seized and analyzed increased from just 5 in 2011 to 94 in 2012. Reports included 71 for AM-2201, 12 for XLR-11, and 6 for AM-694. Five other synthetic cannabinoids registered one report each in 2012. Data from poison control also showed a substantial increase in synthetic cannabinoid cases. Specifically, the number of cases involving tetrahydrocannabinol homologs increased by 292.3 percent between FY 2010–2011 and FY 2011–2012.

Deaths and poison control center cases involving MDMA (3,4-methylenedioxymeth-amphetamine, or ecstasy), GHB (gamma hydroxybutyrate), and PCP (phencyclidine) were virtually nonexistent in Bernalillo County or in the State. According to the 2011 YRRS, 4.8 percent of Bernalillo County public high school students reported having used ecstasy (MDMA), down from 11.4 percent in 2009.

INFECTIOUS DISEASE RELATED TO DRUG ABUSE

HIV/AIDS

As of December 2011, there were 3,468 known living HIV and AIDS cases in New Mexico. Exposure categories for all New Mexico cases of HIV and AIDS combined were as follows: men who have sex with men (MSM) (57 percent), IDU (9 percent), MSM and IDU (4 percent), heterosexual contact (8 percent), and no identified risk (22 percent). The overwhelming majority (84 percent) of HIV/AIDS cases were male; 50 percent were Hispanic; 25 percent were White non-Hispanic; and 15 percent were Native American. Prevalence breakdown by age group was as follows: age 13–24 (16 percent), age 25–34 (32 percent), age 35–44 (28 percent), age 45–54 (15 percent), and 55 and older (9 percent). In 2011, there were 147 new cases, and the incidence rate was 8.0 per 100,000 population.

It is estimated that roughly 25,000 IDUs are living in New Mexico. According to a synthetic methodology based on national adult lifetime drug injection prevalence from the NSDUH, the prevalence is 1.6 percent.

Hepatitis B and C

In 2011, there were 69 hepatitis C deaths statewide and 25 in Bernalillo County. The age-adjusted death rate for the State was 2.8 deaths per 100,000 population, and the Bernalillo County death rate was 3.2. Both localities experienced a rate decrease from the previous year. Bernalillo County's rate decreased by 20 percent from 2010 to 2011, and the State's rate decreased by 26 percent during the same period.

In 2011, there were only three deaths in the State in which hepatitis B was listed as the underlying cause of death, and two of these were in Bernalillo County. Counts have remained consistently low for the past several years.

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Exhibit 1: Drug Overdose Death Rates¹ in Bernalillo County (Albuquerque Area): 2000–2011

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Total Drug Overdose	20.7	20.6	23.8	24.9	19.6	26.2	26.7	27.4	34.0	25.8	26.7	29.6
Cocaine	7.4	7.7	7.3	9.2	5.8	9.3	10.3	9.2	8.5	6.7	4.5	3.5
Heroin	10.7	7.8	11.2	8.5	6.6	11.3	9.9	10.6	12.8	9.1	6.0	5.4
Methamphetamine	0.7	0.5	0.5	0.3	1.1	2.2	3.2	4.0	2.0	3.0	1.2	1.2
Rx Opioid	6.4	6.8	8.3	9.5	7.8	9.2	12.7	14.3	15.9	14.7	8.2	9.1
Benzodiazepine/ Depressant	3.3	4.0	2.6	2.7	2.4	5.9	7.4	8.0	7.8	12.0	6.3	3.7
Antidepressant	3.9	3.0	1.3	2.9	2.3	3.0	4.7	5.8	4.5	7.9	3.9	1.6
Antipsychotic	0.3	0.4	0.2	0.3	0.2	0.4	1.8	1.1	1.5	1.2	1.5	0.7
Unspecified	0.0	1.2	1.5	1.3	3.7	1.3	1.2	1.8	1.5	1.6	8.2	10.9

¹Rates are per 100,000 population. Death rates for specific drugs and drug categories are not mutually exclusive.

SOURCES: Total rates are from Bureau of Vital Records and Health Statistics, New Mexico Department of Health; all others are from the New Mexico Office of the Medical Investigator; population estimates for rate calculation are from the Bureau of Business and Economic Research, University of New Mexico

Exhibit 2: Number of Deaths for Prescription Drug Overdose Deaths and Death Rates¹, for Specific Substances, in Bernalillo County (Albuquerque Area): 2011

Prescription Drug	Number of Deaths	Death Rate
Methadone	15	2.3
Oxycodone	15	2.0
Alprazolam	9	1.4
Hydrocodone	6	0.9
Diazepam	6	0.9
Morphine	4	0.6
Fentanyl	4	0.5

¹Rates are per 100,000 population.

SOURCE: Bureau of Vital Records and Health Statistics, New Mexico Department of Health

Patterns and Trends of Drug Use in Atlanta: 2012

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ABSTRACT

The two key findings in the Atlanta area during 2012 were the decrease in cocaine indicators and an increase in methamphetamine indicators. According to the available indicators, cocaine use in Atlanta continued to decline. Cocaine primary public drug treatment admissions decreased from 12.8 percent in 2010, to 10.8 percent in 2011, and to 10.5 percent in 2012. However, compared with the previous 10 years, a greater proportion of 25–34-year-olds sought public substance abuse treatment for cocaine in Atlanta. Both the State Medical Examiner (ME)'s Office and the Georgia Poison Control Center reported decreases in the count of cocaine-related incidents, specifically the number of deaths and poisonings. Cocaine reports from drug items seized and analyzed by National Forensic Laboratory Information System (NFLIS) laboratories decreased, from 34 percent in 2011 to 22 percent in 2012. However, cocaine continued to constitute the highest percentage of overall drug reports from analyzed items. Alcohol (defined as alcohol only and alcohol in combination with other drugs) 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 and marijuana users. While ranking first among drug-related crisis line calls in Atlanta in 2012, the number of calls related to alcohol increased from 20,404 in 2011 to 21,410 in 2012. The number of clients seeking public treatment for marijuana as a primary drug of choice slightly decreased, from 17 percent in 2011 to 16.3 percent in 2012, but marijuana was the most commonly used illicit drug in Atlanta. Methamphetamine-related public treatment admissions continued to increase year over year (from 5.2 percent in 2010, to 5.7 percent in 2011, and to 6.4 percent in 2012). In 2012, the proportion of individuals seeking public treatment for methamphetamine abuse in Atlanta was at the highest level since 2006. The State ME's Office reported a slight decrease in deaths with methamphetamine present in fiscal year (FY) 2012 compared with FY 2011. NFLIS data also indicated an increase in methamphetamine reports among seized and analyzed drug items (from n=2,660 reports in 2011 to n=3,399 in 2012). Heroin abuse indicators continued to be stable, with heroin representing only 4.3 percent of primary treatment admissions. Ethnographic reports from local heroin users reported an increase in the availability of Mexican heroin in Atlanta. Users indicated minimal difference between the purity levels of South American and Mexican heroin available at the retail level. Results from the 2011 Heroin Domestic Monitor Program (HDMP) report on heroin use in Atlanta documented an increase in purity in Mexican heroin. Drug reports for heroin among drug items analyzed in NFLIS laboratories increased from 328 in 2011 to 512 in 2012. In 2012, multiple drug indicators (treatment admissions data, NFLIS reports, and State ME data) suggested that oxycodone was the most reported prescription drug used in the Atlanta area. Treatment

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admissions data demonstrated that oxycodone use has stabilized over the last 2 years (2.8 percent in 2011 and 3.0 percent in 2012) after increasing consistently from 2007 through 2011. State ME data also showed a slight decrease in oxycodone postmortem result entries. NFLIS data indicated a small decrease in oxycodone reports among analyzed drug items from 2011 to 2012 (n=930 versus n=863). Alprazolam, the most commonly reported benzodiazepine, displayed similar trends, with stable treatment admissions and a slight increase in drug reports among items analyzed by NFLIS laboratories from 2011 to 2012. The State ME's Office also reported a slight increase in deaths with alprazolam present. State ME data indicated an increase in the number of deaths associated with hydrocodone, while NFLIS data showed an increase in drug reports among items analyzed from 2011 to 2012 (n=564 versus n=641). MDMA (3,4-methylenedioxymethamphetamine) trends continued to be stable and accounted for a less than 0.1 percent of treatment admissions. State ME and NFLIS data also indicated a continued decrease in MDMA.

INTRODUCTION

Area Description

The metropolitan Atlanta area is located in the northwest corner of Georgia and includes 28 of the State's 159 counties. The metropolitan area includes more than 6,100 square miles, or 10.5 percent of Georgia's total size. According to 2012 estimates by the U.S. Census Bureau, Georgia currently ranks as the eighth most populous State with more than 9.9 million residents, recently passing Michigan in the number of residents. The population of the Atlanta Metropolitan Statistical Area (MSA), while steadily increasing from 2000 to 2010, has plateaued since 2011. With an estimated 5 million residents, the metropolitan Atlanta area includes nearly 53 percent of the State's population. The Atlanta metropolitan area ranks ninth among the Nation's major population centers. The city of Atlanta, with an estimated population in 2011 of 432,427, represents 7.9 percent of the Atlanta MSA and 4.4 percent of the State's population. The total population living in the city of Atlanta has decreased by 2 percent in the last 5 years. The city is divided into two counties, Fulton County and DeKalb County, which include 18.9 and 13.0 percent of the metropolitan population, respectively.

There are demographic differences between the city of Atlanta and the larger metropolitan area, which more closely reflects the State as a whole. Based on the 2010 U.S. Census, African-Americans are the largest ethnic group within the city (54.0 percent), followed by Whites (38.4 percent), Hispanics (5.2 percent), and Asians (3.1 percent). When examining the overall metropolitan Atlanta area, those numbers reverse. Whites account for the majority (50.7 percent), followed by African-Americans (32.1 percent), Hispanics (10.4 percent), and Asians (4.8 percent). The estimated percentage of persons living below the Federal poverty level was higher in the city of Atlanta (26.1 percent) than in the Atlanta MSA (14.8 percent) and the State (17.9 percent) in 2010. The housing vacancy rate outside the city (12.3 percent) was much lower than in the city (17.6 percent).

Available unemployment data indicate a downward trend for the city of Atlanta, the Atlanta MSA, and the State of Georgia. In March 2013, the unemployment rate for the city of Atlanta was 9.9 percent, versus 12.7 percent at the end of 2010. The Atlanta MSA's unemployment rate was 7.9 percent, compared with an annualized rate of 10.1 percent in 2010. In March 2013, the rate of unemployment for Georgia was 8.4 percent, down from 10.2 percent at the end of 2010.

In 2012, the Georgia Bureau of Investigation (GBI)'s statewide drug enforcement efforts were led by six regional drug offices (Savannah, Milledgeville, Thomson, Atlanta, Sylvester, and Canton) and 11 multijurisdictional task force programs. In 2012, there were 43 existing drug courts in Georgia (of these, 31 were for adult felony drug offenses and 12 were for juvenile drug offenses).

Additional factors that influence substance use in the State:

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

Data Sources

Information for this report was gathered from the following 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 2012.
- **Crisis and access line call data** were from the Georgia Department of Human Resources 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 from June 2006 through December 2012, were classified by drug type.
- **Drug purity and price data** (for heroin) came from the Drug Enforcement Administrations (DEA's) 2011 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 Forensic Laboratory from 2011 to 2012.

NFLIS methodology allows for the accounting of up to three drugs for each item submitted for analysis. The data presented are a combined count including primary, secondary, and tertiary reports for each drug. Data for 2012 are preliminary and subject to change.

- **State drug-related mortality data** were obtained from the Georgia Medical Examiner's (ME)'s Office. Data represent the number of postmortem specimens that tested positive for a particular drug and were collected from fiscal years (FYs) 2007 through 2012.
- **Acquired immunodeficiency syndrome (AIDS) 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 human immunodeficiency virus (HIV) and AIDS cases in Georgia in 2008 and 2010.
- **Poison exposure call data** were extracted using general terms from the Georgia Poison Control Center and represent the count of drug exposure calls by drug from 2006 to 2012.
- **Arrestee Drug Abuse Monitoring (ADAM) II data** are self-reported use and receipt of treatment from male arrestees from two sites for years 2007 through 2012. Additionally, the proportion of male arrestees testing positive for multiple drugs from the same two sites are included. The sites were the Atlanta Detention Center and the Fulton County Jail.

DRUG ABUSE PATTERNS AND TRENDS

Cocaine/Crack

In 2012, 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 2012 for cocaine or crack ($n=928$) decreased by 57 admissions from the previous year, reflecting a steady decrease since 2000. In 2012, cocaine-related admissions constituted 10.5 percent of the total number of primary admissions (including treatment admissions for alcohol only and alcohol in combination with other drugs), representing a 0.3-percent decrease from 2011 and a 2.3-percent decrease from 2010 (exhibit 1). The ratio of males to females in treatment for cocaine decreased in 2012 to 1.19:1. While treatment data from the last 3 years revealed similar proportions by gender, 2012 data indicated an increasing proportion of females among those individuals seeking admission to public treatment centers for cocaine. Admissions to public treatment facilities in the Atlanta MSA tend to be predominately African-American, with members of this racial group constituting 74.2 percent of cocaine treatment admissions. This proportion of African-American users is consistent regardless of whether the primary drug of choice upon admission is crack cocaine (75.0 percent) or cocaine hydrochloride (73.4 percent). Clients older than 35 accounted for the highest number of cocaine admissions across all age groups (70.0 percent) in 2012. This proportion represents a 5-percent decrease from 2011. The majority of crack cocaine primary admissions reported that they smoked the drug, while powder cocaine admissions were most likely to snort (54.6 percent) and smoke (34.7 percent) the drug. Among the 44.3 percent of clients seeking treatment who reported secondary drugs of choice, the percentage of clients who indicated that they used crack or powder cocaine increased from 24.1 percent in 2011 to 31.2 percent in 2012.

Georgia Crisis Line calls for cocaine in 2012 were stable from the previous year (exhibit 2). NFLIS reported that cocaine accounted for 21.8 percent ($n=3,796$) of reports among drug items seized and analyzed in the Atlanta MSA in 2012 (exhibit 3). The number of reports in 2012 was slightly less than in 2011 ($n=3,913$), continuing a downward trend.

After representing a fairly stable number of all of Georgia's postmortem specimens tested by the Georgia State ME's Office between FYs 2008 and 2010, the number of specimens containing cocaine in FY 2012 represented a decrease (exhibit 4). The percentage of Atlanta male arrestees in 2012 who were found to have cocaine in their system at the time of their jail admission was at a 5-year low (30.2 percent in 2012, compared with 39.8 percent in 2008). In 2011, the proportion was 31.7 percent.

In contrast to other drug indicators that indicated decreasing or stable use of cocaine, exposure calls to the Georgia Poison Center for cocaine increased from 2011 ($n=104$) to 2012 ($n=137$) (exhibit 5).

Alcohol (Alcohol Only and Alcohol in Combination With Other Drugs)

In 2012, 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, and it constituted approximately 50 percent of treatment admissions (exhibit 1). Since 2007, the percentage of alcohol in combination treatment admissions has stayed relatively stable near 25 percent. Of the 25.9 percent of clients seeking treatment for alcohol in combination, the most frequently reported drugs used with alcohol were marijuana (34.9 percent) and crack cocaine (32.6 percent). Among the 45.3 percent of clients seeking drug treatment who reported a secondary drug of choice, 26 percent listed alcohol as their second drug of choice. Alcohol-related admissions continued to be most commonly male (66.2 percent) and clients 35 and older (64.5 percent). The proportion of alcohol-related treatment admissions for clients 35 and older in 2012 was at the highest level in the past 10 years and represents an 8-percent increase from 2010. The proportion of African-Americans seeking treatment for alcohol in combination with other drugs has stayed consistent at 51 percent.

While treatment admission percentages for alcohol in combination with other drugs remained stable over the past few years, the percentage of alcohol only treatment admissions steadily increased from 18.5 percent in 2007 to 24.9 percent in 2012. Clients seeking treatment for alcohol only drug usage were predominantly male (65.7 percent) and age 35 and older (77.9 percent). Unlike alcohol in combination clients, Whites constituted a higher proportion of treatment admissions, at 58.9 percent.

Data related to the Georgia Crisis and Access Line were mixed. In 2012, calls regarding alcohol increased from the previous year ($n=20,404$ in 2011, compared with $n=21,410$ in 2012) (exhibit 2). However, the overall proportion of alcohol-related calls dropped by 1 percentage point, from 54.4 percent in 2011 to 53.4 percent in 2012.

Heroin

Heroin use in metropolitan Atlanta remained low compared with other cities throughout the United States. In 2012, treatment admissions for individuals who reported heroin as their primary drug of choice accounted for 4.3 percent of public treatment program admissions (including alcohol only and alcohol in combination) in the 28-county MSA. Although low compared with other types of drugs

used among treatment admissions, primary heroin-related treatment admissions in 2012 increased by 1 percentage point from the previous year (4.3 percent in 2012, compared with 3.3 percent in 2011) (exhibit 1). Treatment admission percentages for males were higher (63.1 percent) than for females (36.9 percent). Among the 46 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.

In 2012, Whites constituted 64.7 percent of heroin treatment admissions in metropolitan Atlanta, compared with 65.0 percent in the previous year. African-Americans made up the next highest proportion, at 33.5 percent. Approximately 40 percent of the treatment admissions (41.6 percent) were for clients age 35 and older, up from 38.8 percent in 2011 but down from 48.4 percent in 2010. Clients age 18–25 represented 27.1 percent of admissions for heroin in 2012, a 2-percentage-point decrease from the previous year (29.1 percent in 2011). In 2012, treatment admissions for heroin among users age 26–34 were stable compared with 2011 (31.3 and 31.7 percent, respectively). 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 cocaine (20.7 percent) and alcohol (13.3 percent).

According to the HDMP, only 16 heroin samples were purchased in Atlanta in 2011, compared with 32 purchased in 2010. Of those 16 samples in 2011, 13 were South American (SA) heroin, 2 were Mexican (MEX) heroin, and 1 was Southwest Asian (SWA) heroin. The SA heroin was found to be less pure in 2011 than in 2010 (25.5 percent compared with 29.1 percent) and it was priced at \$1.04 per milligram pure, slightly higher than in the previous year (\$1.01). Purity levels of MEX heroin more than doubled in 2012 (22.2 percent) compared with the previous year (10.1 percent). The price per milligram pure of MEX heroin nearly doubled in 2012 (\$1.73) compared with 2011 (\$0.99).

Approximately 2.9 percent ($n=512$ reports) of the total drug reports among items seized and analyzed by NFLIS laboratories were identified as heroin in 2012 (exhibit 3). Although the number of drug reports in 2012 reflected an increase from 2011 ($n=328$), the numbers represented the same proportion of the total.

Self-reported use of heroin along with receipt of treatment among male arrestees declined steadily, from 84.4 percent in 2009 to 50.4 percent in 2012. Heroin-related exposure calls to the Georgia Poison Center have remained at relatively low levels; however, the numbers of calls doubled in the last 3 years (from $n=29$ in 2010, to $n=43$ in 2011, and to $n=60$ in 2012) (exhibit 5).

Other Opiates/Narcotics

The Georgia Department of Human Resources began to report primary treatment admissions for prescription opiates/narcotics in 2007. Georgia political, medical, pharmaceutical, and public health officials came together to pass a law in 2011 to create a new Prescription Drug Monitoring Program that was to become operational by January 2013. However, funding bills from the Georgia House and Senate died without a vote in April 2013, and this program is at risk of not being implemented. Effective July 1, 2013, a bill related to prescription opiates will go into effect. The “Georgia Pain Management Clinic Act” will require the licensure of pain management clinics and establish criteria on which this license would be issued and renewed. A bill that would prohibit doctors, nurses, and physician’s assistants from prescribing long-acting opioid painkillers in emergency rooms and outlaw the refilling of prescriptions for painkillers that have been lost, stolen, or destroyed is pending in the Georgia Senate.

Oxycodone accounted for 3.0 percent of primary treatment admissions in 2012 (including alcohol-related treatment admissions), representing nearly a 1-percent increase since 2007 (when oxycodone admissions constituted 2 percent of total admissions). Among the 45.3 percent of treatment admissions who reported a secondary drug of choice, 3.1 percent indicated oxycodone as a secondary drug of choice. Forty-seven percent of treatment admissions for oxycodone were age 26–34, an 8-percent increase from the previous year. The second largest age group was 18–25-year-olds (21.1 percent). Only 1.9 percent of oxycodone treatment admissions were younger than 18. The percentage of female admissions (52.5 percent) was larger than the proportion of males (47.5 percent), indicating a reversal in trends from the previous 8 years.

During 2012, drug reports identified by NFLIS laboratories as containing oxycodone and hydrocodone among items seized and analyzed were mixed compared with results from the previous year. A total of 863 reports were identified as containing oxycodone in 2012, which represents a decrease from 930 reports in 2011. Drug reports seized and identified as containing hydrocodone totaled 641 reports in 2012, compared with 564 reports in 2011. The number of deaths in the State of Georgia in which oxycodone was found was 350 in FY 2011. This number then decreased to 340 in FY 2012 (exhibit 4). There were 332 deaths with hydrocodone detected in FY 2012, which is an increase from 304 in FY 2011. Calls to the Georgia Crisis Line indicated an increase in calls regarding opioids/narcotics in 2012 compared with 2011 ($n=4,389$ in 2012 compared with $n=3,599$ in 2011) (exhibit 2). Opiate/narcotic-related calls to the Georgia Poison Control Center also indicated an increase, with 35 calls in 2012, compared with 11 calls in 2011 (exhibit 5). These results from the last 2 years are lower than the 103 calls related to opiate/narcotic use reported in 2010. The proportion of male arrestees testing positive for opiates (possibly including heroin) was 2.4 percent in 2009, 5.1 percent in 2010, 6.2 percent in 2011, and 5.4 percent in 2012. These results indicate a stabilizing of prescription opiate use for the past 3 years, following a sharp increase in the late 2000s.

Benzodiazepines/Depressants

Benzodiazepine indicators in the 28-county MSA were mixed. The most commonly reported benzodiazepine was alprazolam. Primary treatment admissions for alprazolam, while relatively low, have been increasing gradually since the Georgia Department of Human Resources began to provide treatment data on benzodiazepines as a primary reason for seeking treatment. The proportion of treatment admissions with alprazolam as their primary drug doubled from 2007 (0.8 percent) to 2010 (1.5 percent) and then stabilized at 1.3 percent in 2012 (including alcohol-related treatment admissions). While this proportion was small compared with other drugs of abuse, it was part of an overall stabilization trend among prescription benzodiazepines. Additionally, alprazolam constituted 4.3 percent of all secondary drugs of choice among 2012 treatment admissions. Other benzodiazepines, including clonazepam and diazepam, made up less than 1 percent of all primary treatment admissions. Calls to the Georgia Crisis Line for benzodiazepines rose from 1.3 percent in 2007 to 4.9 percent in the 2012 (exhibit 2). Exposure calls to the Georgia Poison Center regarding benzodiazepines continued to constitute the highest proportion of drug-related exposure calls in 2012, representing 55.1 percent of the total calls. The number of benzodiazepine-related calls more than doubled in 2012 ($n=2,322$) from the previous year ($n=929$) (exhibit 5).

Based on data provided by the State ME Office, postmortem result entries for alprazolam totaled 439 in FY 2010, 518 in FY 2011, and 528 in FY 2012 (exhibit 4). According to NFLIS data, drug reports for alprazolam among items seized and analyzed increased from 682 in 2011 to 840 in 2012.

Stimulants

Public treatment admissions for methamphetamine were at the highest level since 2006. The proportion ranged between 5 and 6 percent from 2009 to 2011, but methamphetamine-related treatment admissions constituted 6.4 percent in 2012 (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 proportion of female treatment admissions in metropolitan Atlanta who reported methamphetamine as their primary drug increased in 2012 (to 61.6 percent) compared with the previous year (56.7 percent). Clients continued to be predominantly White (94.1 percent). The age distribution of people seeking treatment for methamphetamine continued to be fairly evenly split across age groups, with approximately 41 percent of clients age 26–34 and a slightly lower percentage of clients age 35 and older (36.5 percent). Metropolitan Atlanta treatment admissions were most likely to smoke methamphetamine (55.3 percent). The percentage of methamphetamine injectors seeking treatment was at a 3-year high (from 20.1 percent in 2010 to 23.8 percent in 2012).

Methamphetamine reports among drug items seized and analyzed by NFLIS increased from 2,660 in 2011 to 3,399 in 2012 (exhibit 3). Self-reported drug use along with receipt of treatment for methamphetamine among male arrestees has increased to the highest level of any drug-related category. Nearly 8 out of 10 male arrestees reported having received some methamphetamine-related treatment over their lifetime (80.1 percent in 2012). Calls to the Georgia Crisis Line in 2012 for amphetamines represented 14.4 percent of the total calls, and the numbers of calls increased in the first and second halves of 2012 compared with those periods in 2011 (exhibit 2). Methamphetamine-related exposure calls to the Poison Control Center nearly doubled in 2012 ($n=102$) compared with the previous year ($n=63$) (exhibit 5).

Marijuana/Cannabis

Approximately 16 percent of public treatment admissions in 2012 in metropolitan Atlanta (including alcohol-related treatment admissions) were for clients who considered marijuana their primary drug of choice (exhibit 1). This proportion was only slightly less than in 2011 (17.3 percent). Additionally, marijuana was reported by 28.2 percent of treatment admissions as the secondary drug of choice among the 45.3 percent of treatment admissions who reported a secondary drug. The proportion of male admissions was higher than females but stable from previous years, at 66.7 percent. The proportion of African-Americans who identified marijuana as their primary drug of choice in 2012 increased over the previous year (62.7 vs. 58.6 percent). Whites accounted for 29.1 percent of treatment admissions for marijuana. The proportion of younger users declined over the past 3 years, with 54.2 percent of clients being younger than 26 in 2012, compared with 63.0 percent in 2009. Alcohol continued to be the most popular secondary drug of choice for marijuana users, with one-third of clients reporting it as their secondary drug of choice.

Georgia Crisis Line calls addressing marijuana increased slightly in 2012 (to 15.5 percent), compared with 2011 (14.0 percent), and the number of calls increased between the 2 years as well (exhibit 2). The proportion of calls to the Poison Control Center regarding marijuana remained at approximately 2.0 percent, and the total number of calls rose from 2010 ($n=38$), to 2011 ($n=49$), and to 2012 ($n=89$) (exhibit 5).

In 2012, 2.5 percent ($n=443$) of all drug reports among items seized and analyzed by NFLIS laboratories were identified as containing marijuana/cannabis (exhibit 3). These findings are consistent with previous years. However, these results are skewed due to changes in statewide drug seizure testing for marijuana and therefore do not accurately reflect the prevalence of the drug's use.

The proportion of male arrestees testing positive for marijuana was slightly higher in 2012 than in the previous 2 years: 42.2 percent in 2010; 44.2 percent in 2011; and 47.3 percent in 2012. The proportions of self-reported use along with receipt of treatment were as follows: 20.6 percent in 2010, 27.7 percent in 2011, and 20.3 percent in 2012.

“Club Drugs”

MDMA or Ecstasy

Only 0.2 percent ($n=38$ reports) of drug reports among items seized and analyzed by NFLIS laboratories were identified as containing MDMA (3,4-methylenedioxymethamphetamine) in 2012, which demonstrates a decrease since 2011 ($n=99$ reports). In contrast, there were 23 calls to the Georgia Poison Center regarding MDMA in 2012, compared with 1 call in the previous year.

GHB

There were no clients who reported GHB (gamma hydroxybutyrate) among primary treatment admissions, nor were there any reports of seizures for this drug by NFLIS laboratories in 2012. GHB was reported by five treatment admissions as a secondary substance.

BZP and TFMPP

The number of drug reports for BZP (1-benzylpiperazine) among items seized and identified by NFLIS laboratories in 2012 ($n=9$) was less than one-half of the number reported in 2011 ($n=25$). Drug reports identified as containing TFMPP (1-(3-trifluoromethylphenyl)piperazine) stabilized in 2012 ($n=241$), following a 2-year increase from 2010 to 2011. Similar to 2011, TFMPP ranked 11th among all drug reports of items seized and analyzed by NFLIS laboratories in 2012. Local ethnographic reports indicate that TFMPP is often combined with BZP and marketed as ecstasy.

Hallucinogens

In 2012, there were only 2 reports of PCP (phencyclidine) and 5 reports of LSD (lysergic acid diethylamide) among primary treatment admissions for the 28-county MSA. There were 20 LSD reports among items seized and analyzed by NFLIS laboratories in 2012, consistent with results from the previous year ($n=15$).

Synthetic Drugs (Cathinones and Cannabimimetics)

Other drug trend changes included increasing use of synthetic cathinones and cannabimimetics, as reported by the Georgia Poison Control Center. The number of cathinone-related exposure calls rose from 3 calls in 2010 to 54 calls in 2011 (exhibit 5). In 2012, the number of cathinone-related calls decreased slightly to 39. Exposure calls regarding cannabimimetics, while increasing sharply from 3 calls 2010 to 154 calls in 2011, stabilized at 149 in 2012 (exhibit 5). While calls to the Georgia

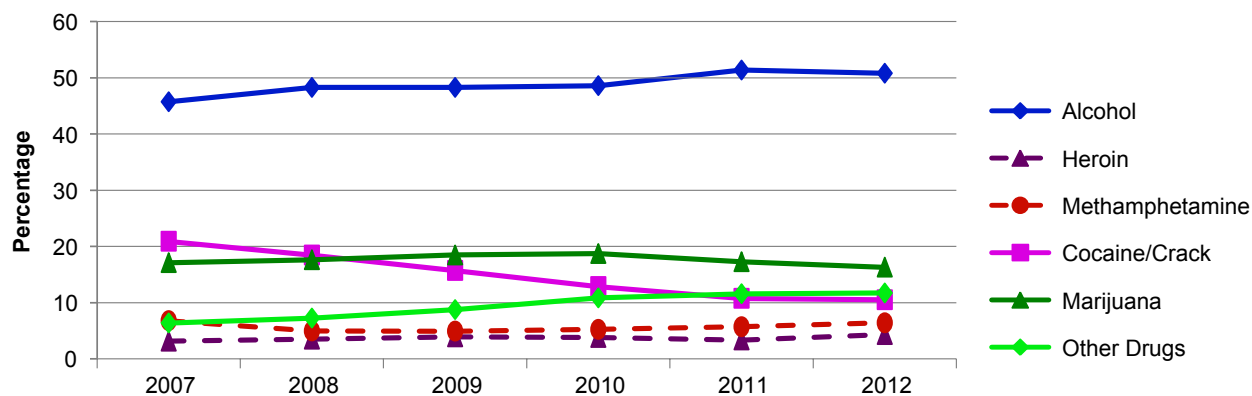
Poison Center for synthetic drugs have stabilized, they still represent a small proportion of the total exposure calls. Approximately 7.5 out of 10 cathinone and cannabimimetic poison exposure cases were among males. These drugs were most predominantly used by 18–24-year-olds. Both synthetic cathinones 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 percent of people living HIV were female injection drug users (IDUs), and another 2.4 percent were male IDUs, which was unchanged from 2009. Additionally, 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 proportions of MSM/IDUs living with HIV/AIDS also remained stable from 2009 (2.1 percent/3.2 percent) to 2010 (2.4 percent/4.8 percent).

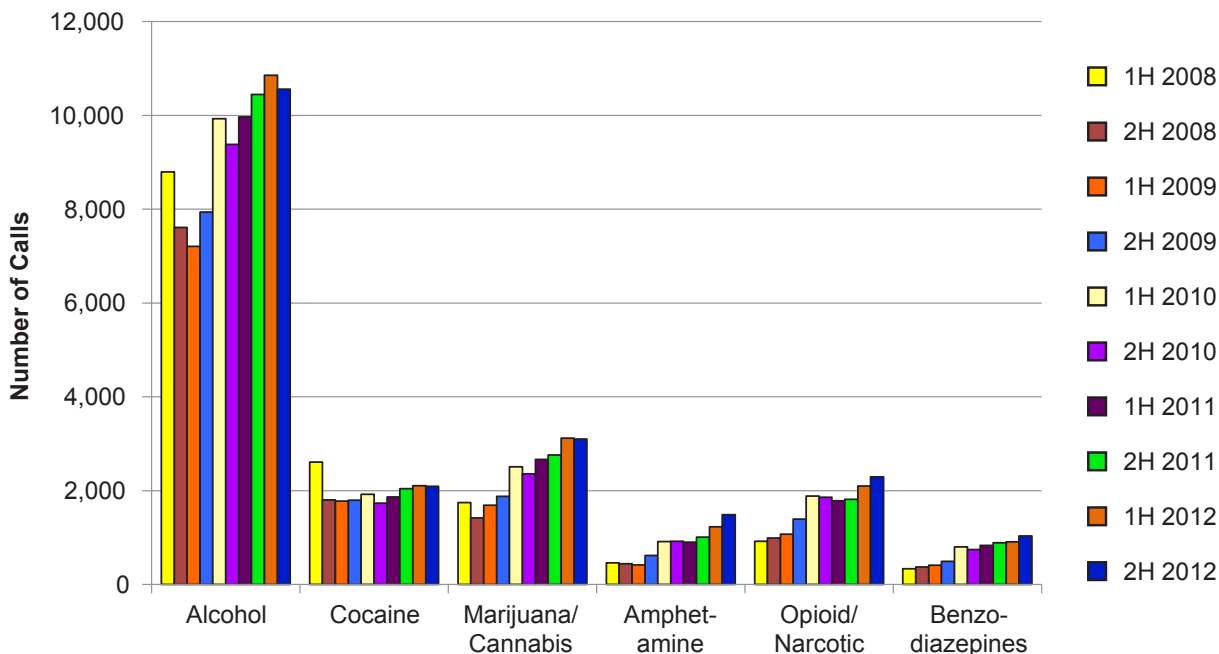
For inquiries regarding this report, contact Brian J. Dew, Ph.D., Associate Professor and Chair, Department of Counseling and Psychological Services, Georgia State University, P.O. Box 3980, Atlanta, GA 30302, Phone: 404-413-8168, Fax: 404-413-8013, E-mail: bdew@gsu.edu.

Exhibit 1. Percentage of Primary Public Substance Abuse Treatment Admissions¹ in Metropolitan Atlanta: 2007–2012



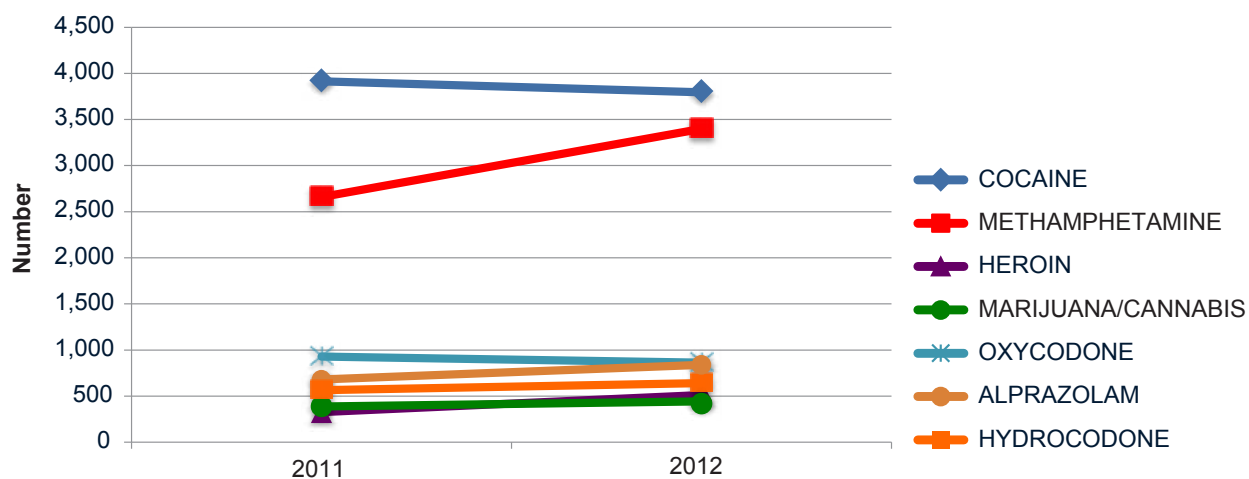
¹Treatment data denominator includes alcohol only.
SOURCE: Georgia Department of Human Resource

Exhibit 2. Number of Calls, by Drug and Half-Year, to the Georgia Crisis and Access Line, in Georgia: First Half (1H) 2008–Second Half (2H) 2012



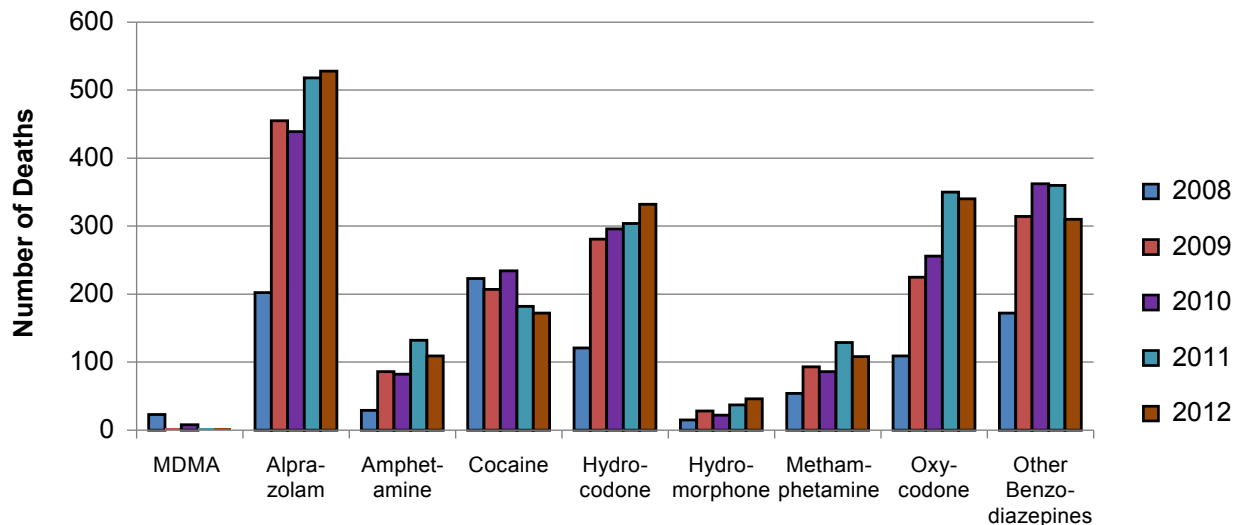
SOURCE: Georgia Crisis Line

Exhibit 3. Number of Analyzed Reports from NFLIS Laboratories, by Drug, in the Atlanta Area: 2011–2012¹



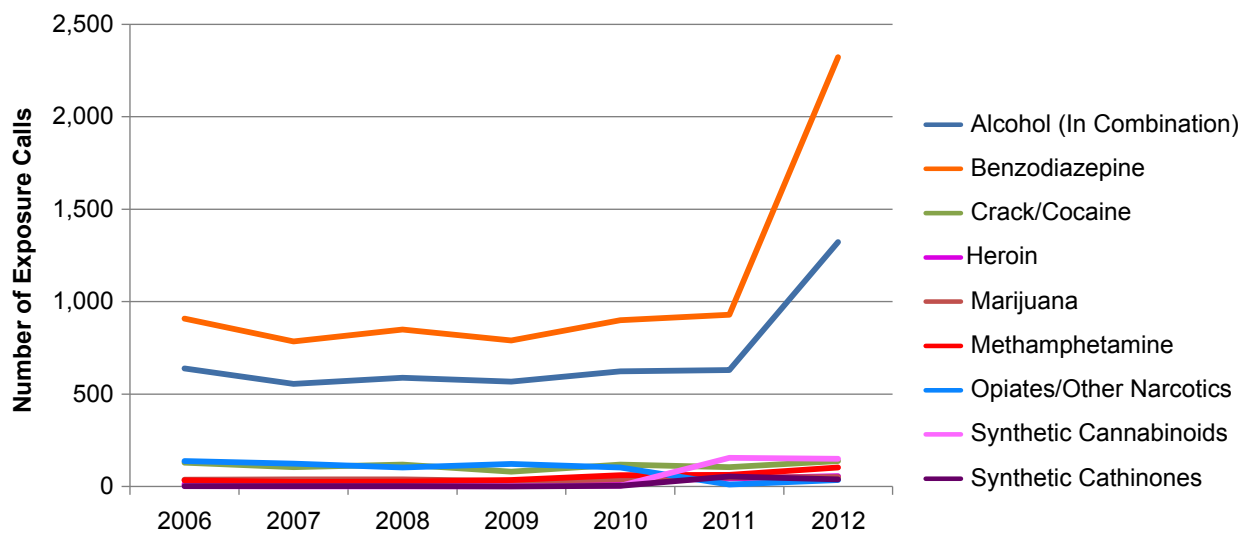
¹2011 Data may be incomplete; Data prior to 2011 are not provided due to a change in the unit of analysis.
SOURCE: NFLIS, DEA

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



¹FYs are from July 1 through June 30 for each year.
SOURCE: Georgia State Medical Examiner's Office

Exhibit 5. Number of Exposure Calls, by Drug, to the Georgia Poison Center in Georgia: 2006–2012



SOURCE: Georgia Poison Center

Patterns and Trends of Drug Abuse in the Baltimore/Maryland/Washington, DC, Metropolitan Area—Epidemiology and Trends: 2002–2012

Eleanor 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 2012. However, trends in the indicators monitored for these drugs were mixed. The most distinct changes in this region were for heroin and newer synthetic drugs. The two key findings in the Baltimore/Maryland/Washington, DC, area were the upward trending of heroin indicators and the increase across the region in indicators for cannabimimetics and substituted cathinones. Heroin indicators in Maryland were showing increases. Law enforcement reports involving cannabimimetics processed by the National Forensic Laboratory Information System (NFLIS) for Maryland and Washington, DC, and synthetic marijuana seizures by the Washington/Baltimore High Intensity Drug Trafficking Area (HIDTA) increased sharply. Law enforcement reports involving substituted cathinones processed by NFLIS for Maryland and Washington, DC, also increased sharply. In Washington, DC, in 2012, cocaine/crack, marijuana, and heroin continued to be the primary illicit drug problems. Cocaine remained one of the most serious drugs of abuse, as evidenced by the fact that more adult arrestees tested positive for cocaine than for any other drug, and more NFLIS reports were positive for cocaine than for any other drug in 2009 and 2010. In 2011 and 2012 data, however, more reports were positive for marijuana than for cocaine. The percentage of adult arrestees testing positive for cocaine continued to decrease in 2012. In comparison, the percentage testing positive for opiates and PCP (phenylcyclidine) remained about the same. In 2012, 14 percent of adult arrestees tested positive for cocaine, and approximately 7–11 percent tested positive for opiates and/or PCP. In 2012, approximately 27 percent of reports were positive for marijuana, followed by 16 percent for cocaine and 7 percent for heroin, as reported by NFLIS. Several new drugs were starting to appear among NFLIS reports. “Possible levamisole” ranked third each year from 2009 to 2012, outranking heroin each year. Cannabimimetics and substituted cathinones first began to appear in 2010, and the number of reports involving these substances increased sharply from 1 in 2010 to 33 in 2012 for cannabimimetics and from 13 to 114 for substituted cathinones. During 2012, juvenile arrestees were more likely to test positive for marijuana (41 percent) than for any other drug. The percentage testing positive for marijuana in 2012 was lower than for any other year since 1993. The percentage of youth testing positive for cocaine decreased to less than 1.0 percent (from 1.0 percent in 2011 to 0.2 percent in 2012). The percentage of adult offenders in Washington, DC, testing positive for amphetamines remained

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considerably lower than for other drugs (approximately 1 percent) in 2012. In Maryland, there were 55,499 primary enrollments to certified publicly funded treatment programs in 2012. This was an increase statewide and in Baltimore City compared with enrollments in 2011. Enrollments most frequently involved alcohol, heroin, marijuana, crack/other cocaine, and other opiates. Treatment enrollments involving primary mentions of marijuana, heroin, other opiates, PCP, and benzodiazepines appeared to increase from 2011 to 2012, while those involving cocaine decreased. In Baltimore City, enrollments involving heroin, other opiates, PCP, and benzodiazepines increased. Baltimore City accounted for more than one-half (53 percent) of statewide heroin enrollments and for approximately one-third (37 percent) of cocaine enrollments, but the city constituted only 12 percent of the other opiate enrollments. Total intoxication deaths in Maryland increased by 15 percent from 663 deaths in 2011 to 761 in 2012. In 2012, heroin intoxication deaths increased in Maryland, and prescription opioid deaths decreased. The number of cocaine and benzodiazepine intoxications deaths, however, remained about the same in 2011 and 2012. Baltimore City accounted for 28 percent of all intoxication deaths in Maryland, and these deaths increased by 29 percent from 165 in 2011 to 213 in 2012. Heroin intoxication deaths increased by 66 percent in Baltimore City; Baltimore City accounted for one in three heroin intoxication deaths in the State. Cocaine and marijuana accounted for approximately 69 percent of the positive reports from NFLIS in 2012 in Maryland and Baltimore City. Drug reports among analyzed items positive for marijuana increased from 2009 to 2012 in Maryland, while those positive for cocaine decreased. Reports among analyzed drug items identified as positive for heroin appeared to be reversing trend and increased in 2012. Approximately three-quarters of these heroin reports (74 percent) were from Baltimore City. Several new drugs were starting to appear in Maryland and Baltimore City. Substituted cathinones first appeared in reports among drug items analyzed by NFLIS laboratories in Maryland in 2010 and in Baltimore City in 2011, and cannabimimetics first appeared among NFLIS reports in Maryland in 2010. Both have increased sharply—reports involving cannabimimetics increased from 43 in Maryland in 2010 to 897 in 2012, and reports for substituted cathinones rose from 9 in 2010 to 444 in 2012. Seizures across the region by Washington/Baltimore HIDTA initiatives increased from 2011 to 2012 for marijuana (from 5,268 to 8,108 kilograms), heroin (from 67 to 86 kilograms), and cocaine/crack (from 261 to 305 kilograms). Seizures of cannabimimetics by HIDTA initiatives nearly quadrupled from 165 to 628 kilograms during this time. In addition, 10,775 dosage units were seized in 2012. The majority of seizures in 2012 were in the Baltimore metropolitan region, which accounted for more than 70 percent of the kilograms of cannabimimetics seized.

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 632,323 people residing in 8 wards; 18.2 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 to 9.5 percent, and Asians increased to 3.7 percent). Approximately 83 percent of the population in Washington, DC, is age 18 and older, which is higher than the Nation's population. Approximately 17 percent of residents are younger than 18, and 11.4 percent are 65 and older. More than one-half (50.5 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 5,884,563 people residing in 24 jurisdictions. The State has slightly more females than males, and the majority of the State's population is White (61.1 percent). Approximately 30 percent of Maryland's population is African-American; 8.4 percent are Hispanic or Latino; and 5.8 percent are Asian. Maryland's total population increased by 11 percent from 1990 to 2000 and increased again in the 2012 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 (76.9 percent) of the State's population are age 18 and older, comparable to the national average of 76.3 percent. Approximately 12.5 percent of Maryland's population is 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 (36.1 percent) have a bachelor's degree or higher—an education level higher than that of the Nation's general population. Nearly 10 percent (9 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 621,342 residents; the majority are African-American (63.7 percent). The percentage living below the Federal poverty level (22.4 percent) is higher than in the State, while the percentage in the labor force (61.5 percent) and the mean household income are lower (\$40,100 in Baltimore City versus \$72,419 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 2012. 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 across the region, but several (primary treatment enrollments, National Forensic Laboratory Information System [NFLIS] reports, and intoxication deaths) in Maryland showed possible trend changes and were starting to increase. Cannabimimetics and substituted cathinones indicators (NFLIS reports and High Intensity Drug Trafficking Area [HIDTA] data) have increased sharply across the region. PCP (phencyclidine) indicators were increasing in Washington, DC. The total number of enrollments to publicly funded alcohol and drug treatment programs in Maryland increased, as did those related to other opioids and marijuana. The retail distribution of buprenorphine continued to increase in Baltimore City and Washington, DC. However, the retail distribution of oxycodone in Baltimore City and Washington remained relatively stable, with a slight decrease. Total intoxication/overdose deaths in Washington, DC, increased in 2011, but the numbers involving heroin or cocaine remained about the same. A

special assessment of half-year data on intoxication deaths in Maryland indicated that heroin and morphine intoxication deaths increased from the first half of 2011 to the first half of 2012. Methadone and oxycodone intoxication deaths, in comparison, decreased during this time.

Washington, DC/Baltimore HIDTA Region Overview. The primary drugs identified across the region by the Washington/Baltimore HIDTA (W/B HIDTA) in 2012 were heroin, crack, and pharmaceuticals. The 2012 Annual Report states that heroin supplanted crack cocaine in 2012 as the single most serious drug threat facing the region according to law enforcement representatives and treatment providers (p.8). Further, the annual report states that heroin was found in increasing quantities and was not concentrated in Baltimore City and the surrounding areas (p.8). All law enforcement representatives and treatment providers surveyed cited heroin as a drug that caused extreme or significant harm in their communities, and more than three-quarters cited crack cocaine this way.

Washington, DC: The primary indicators assessed in this report for Washington, DC, are arrestee urinalysis results, overdose deaths, and law enforcement seizures. Arrestee urinalysis results from the Pretrial Services Agency for the District of Columbia indicate that adult arrestees were most likely to test positive for cocaine, and juvenile arrestees were most likely to test positive for marijuana, but the percentages testing positive continued to decrease in 2012. In fact, the percentage of adult arrestees testing positive for cocaine reached the lowest point since 1985. Drug overdose deaths most frequently involved cocaine, alcohol, or heroin in 2011, but the number involving cocaine or heroin remained about the same. The most frequently identified substances in NFLIS reports for drug items seized and analyzed in forensic laboratories in 2012 were marijuana, cocaine, and “possible levamisole.” From 2009 to 2012, reports involving marijuana increased, while reports involving cocaine decreased and reports involving heroin stayed about the same. Reports involving PCP and “possible levamisole” were more likely in Washington, DC, than in other parts of the region and were increasing. Reports involving the synthetic cathinones and cannabimimetics continued to increase.

Maryland: The primary indicators assessed in this report for Maryland 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 2012. Increases in enrollments occurred for primary mentions of other opiates/opioids (other than heroin), marijuana, and heroin, while crack cocaine decreased. The most frequently identified reports in drug items seized and analyzed in NFLIS laboratories in 2012 were marijuana, cocaine, and heroin. From 2009 to 2012, reports involving cocaine decreased steadily, but reports involving heroin seemed to be reversing trend and increasing. Reports involving the synthetic cathinones and cannabimimetics increased sharply from 2010 to 2012.

Baltimore City: The primary indicators assessed in this report for Baltimore City are enrollments in publicly funded treatment programs, intoxication deaths, and law enforcement seizures. Baltimore City enrollments in publicly funded treatment programs in 2012 were more likely to involve heroin as the primary drug mentioned than any other drug, and the total number of such enrollments increased after decreasing for several years. Primary mentions of marijuana and other opiates/opioids (other than heroin) continued to increase. Baltimore City accounted for more than one-half (56 percent) of primary heroin enrollments and approximately one-third (37 percent) of primary cocaine/crack enrollments. The most frequently identified drugs in NFLIS reports from drug items seized and analyzed in 2012 were marijuana, cocaine, and heroin. From 2009 to 2012, reports for marijuana increased, while reports for cocaine decreased. Reports for heroin were stable in 2012 after decreasing in 2010 and 2011.

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 2009–2012 (exhibits 1a, 1b, and 1c). 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.
- **Drug-related death data** for Washington, DC, were obtained from the 2005 through 2011 Annual Reports prepared by the District's Office of the Chief Medical Examiner (OCME). Drug-related death data for Maryland were obtained from the *Drug and Alcohol Intoxication Deaths in Maryland, 2007–2012* report released by the State Department of Health and Mental Hygiene in July 2013. Exhibits 2a and 2b show the number of drug overdose and drug-positive deaths by drug in Washington, DC, and exhibits 2c, 2d, and 2e show drug intoxication death data in Baltimore and 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 urinalyses. Additional arrestee urinalysis data were provided by the Pretrial Services Agency for the District of Columbia for adult arrestees (which include all willing adult arrestees [$n=16,291$ in 2012] and juvenile arrestees [$n=1,632$ in 2012]) for 1984 through 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) (exhibits 5a and 5b). It is important to note that the Maryland ADAA 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 published 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. Treatment data for Washington, DC, were obtained from the Treatment Episode Dataset (TEDS) maintained by SAMHSA online reports.
- **Drug trafficking trends** were obtained from the W/B HIDTA Threat Assessment report for program year 2012, along with the 2008 to 2012 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, 7c, 8a, and 8b).

DRUG ABUSE PATTERNS AND TRENDS

Cocaine/Crack

More than three-quarters of the law enforcement and treatment providers surveyed for the 2012 Threat Assessment categorized crack cocaine as a severely harmful drug, making it the second most harmful drug, behind heroin. Cocaine, particularly in the form of crack, accounted for more adult arrestee urinalysis positive drug tests in the District than any other drug, as well as more deaths than any other illicit drug. The number of cocaine overdose deaths decreased in 2010 and stayed about the same in 2011. 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 2012 showed that 16.1 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 17.4 percent of the drug reports identified among drug items analyzed in Maryland and 25.8 percent of the drug items analyzed in Baltimore City tested positive for cocaine (exhibits 1a and 1b). Cocaine was the second most frequently detected drug after marijuana in all three areas. The percentage of reports from analyzed drug items testing positive for cocaine decreased from 2011 to 2012 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 2010–2012. The total amount seized (302 kilograms) in 2012 was still considerably lower than the seizures in 2007 and 2008 (W/B HIDTA 2012 Annual Report).

Cocaine overdose deaths in the District totaled 48 in 2011, higher than deaths caused by any other drug (exhibit 2a). This number has fluctuated in recent years. The number of cocaine-positive deaths ($n=95$) was surpassed by alcohol-positive deaths ($n=241$) and morphine-positive deaths ($n=113$) in the District in 2011 (exhibit 2b). More than one-half (59 percent) of all traffic-related deaths analyzed by the OCME tested positive for at least one drug. Approximately 4.5 percent of these cases were positive for cocaine. In Maryland, the total number of intoxication deaths fluctuated in recent years, increasing by approximately 15 percent in 2012 (exhibit 2c). The number of cocaine-related intoxication deaths statewide decreased slightly from 147 in 2011 to 142 in 2012 (exhibit 2d), but they increased in Baltimore from 47 in 2011 to 53 in 2012 (exhibit 2e). Baltimore accounted for 28 percent of all intoxication deaths and 37 percent of cocaine-related intoxication deaths in Maryland in 2012.

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 2012 (from 28.7 percent in 2009, to 24.0 percent in 2010, to 21.5 percent in 2011, and to 16.1 percent in 2012) to the lowest point since testing began in 1984. The percentage of juveniles, remained low and steady from 2009 through 2011 at approximately 1 percent. In 2012, this proportion decreased to a mere 0.2 percent.

For Maryland, primary crack admissions to certified publicly funded Maryland alcohol and drug abuse treatment programs decreased steadily from 2007 to 2012. Primary crack mentions at enrollment also decreased in Baltimore City from 2008 to 2012. 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. In 2012, however, there was a slight decrease in Baltimore City. Baltimore City residents accounted for more than one-third of the crack and other cocaine enrollments in the State in 2012 (exhibits 5a and 5b).

Heroin

In 2012, heroin replaced crack cocaine as the drug identified by law enforcement and treatment providers as the most prevalent drug threat in the W/B HIDTA area (2012 Annual Report for the W/B HIDTA). 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 2012, there was an increase from a low of 67 kilograms in 2011 to a high of 90 kilograms in 2012 (W/B HIDTA 2012 Annual Report). The value of heroin seized in 2012 increased by nearly 0.8 million dollars from 2011 in the Washington/Baltimore HIDTA area, and the wholesale value of heroin accounted for approximately 12.6 percent of all the drugs seized (W/B HIDTA 2012 Annual Reports).

Preliminary data for 2012 showed that 6.6 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 13.3 percent of the drug reports identified among drug items analyzed in Maryland and 21.8 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 it was the fifth most frequently found drug in Washington, DC. The proportion of reports among analyzed drug items testing positive for heroin slightly increased from 2011 to 2012 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), then decreased by 34 percent in 2010 to 29 deaths, and continued to decrease to 28 deaths in 2011. As in prior years, heroin/morphine was the third most likely drug to cause an overdose death (exhibit 2a). Heroin/morphine was the second most frequently found drug in all drug-positive cases in Washington, DC, in 2011 (found in 113 cases) (exhibit 2b). The number of cases in which morphine was detected increased by 23 percent from 87 in 2010. In Maryland, heroin-related intoxication deaths increased by 54 percent, from 245 in 2011 to 378 in 2012 (exhibit 2d). The number of heroin-related intoxication deaths increased among all demographic groups and in all regions of the State. Baltimore City experienced an even larger increase (by 66 percent), from 76 deaths in 2011 to 126 deaths in 2012 (exhibit 2e). In 2012, approximately 33 percent of the heroin-related intoxication deaths in the State occurred in Baltimore City.

Reports from the Pretrial Services Agency indicated that the percentage of adult arrestees in Washington, DC, testing positive for opiates remained about the same for 2001 through 2009. In 2010, 8.3 percent of adult arrestees tested positive for opiates (including heroin); the percentage testing

positive continued to decrease in 2011 (to 7.9 percent) and in 2012 (to 7.0 percent) (exhibits 3a and 3b). Juvenile arrestees were not tested for opiates during this time period.

Second to alcohol, heroin was the most frequently used illicit drug among publicly funded Maryland treatment admissions (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. In 2012, the number of enrollments for heroin in Maryland ($n=14,185$) increased. These enrollments were highest in Baltimore City in 2012, where they also increased to 7,455 enrollments (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 more than 50 percent of the enrollments in the State.

Other Opioids

The number of prescription opioid-related intoxication deaths in Maryland statewide has been higher than the number of cocaine-related intoxication deaths since 2007. However, the number of prescription opioid-related intoxication deaths in Maryland decreased by 13 percent from 335 in 2011 to 293 in 2012 (exhibit 2d). These deaths declined among individuals age 45–54 and for those younger than 25, but they increased among individuals age 55 and older. In Baltimore, prescription opioid-related intoxication deaths decreased from 80 in 2011 to 67 in 2012, but Baltimore still accounts for a higher percentage of these deaths (23 percent) in Maryland than any other jurisdiction (exhibit 2e). The number of methadone-related intoxication deaths decreased statewide for a second year, from 168 in 2011 to 160 in 2012. Methadone-related intoxication deaths in Baltimore decreased from 63 in 2011 to 47 in 2012 after increasing steadily from 2008 to 2011. However, methadone continued to account for the majority of prescription opioid deaths statewide and in Baltimore. In Maryland, oxycodone-related intoxication deaths peaked at 115 in 2011 and then decreased to 95 in 2012. The number of oxycodone-related intoxication deaths in Baltimore City also peaked in 2011 ($n=15$) and remained about the same in 2012 ($n=14$). Buprenorphine-related deaths, however, cannot be estimated in Maryland because the OCME does not routinely test for it. The number of drug overdose deaths in Washington, DC, involving methadone fluctuated between 10 and 14 from 2007 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 $n=20$), but they were still lower than in 2006 (when there were $n=23$ deaths) (exhibit 2b). In 2010, oxycodone-positive deaths dropped to 13, but they then reached a peak at 33 oxycodone-positive deaths in 2011. Oxycodone-related overdose deaths ranged from none in 2007 and 2008 to eight in 2009. There were three deaths in 2010 and eight in 2011.

Oxycodone, methadone, and buprenorphine combined accounted for approximately 3.5 percent of the drug reports among drug items seized and analyzed by NFLIS laboratories in 2012 in Baltimore City and for 1.5 percent in Washington, DC. The number of oxycodone reports increased in Washington, DC, from 2011 to 2012, while the number of buprenorphine reports slightly decreased. The number of methadone reports stayed about the same. The oxycodone and buprenorphine reports in Baltimore City also slightly increased in 2012. Baltimore City accounted for 35 percent of the buprenorphine reports in Maryland in 2012.

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 2011 (exhibits 6a and 6b). In 2012, the retail distribution of buprenorphine in both Washington, DC, and Baltimore City and County continued to steadily increase. However, in both of these areas, the distribution of oxycodone decreased very slightly. All of these drugs were distributed in higher quantities in Baltimore City and County than in Washington, DC. Oxycodone was distributed in significantly higher quantities than buprenorphine in both cities. 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. In 2012, the distribution decreased slightly to 83,436 grams. The distribution of oxycodone 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. In 2012, the distribution decreased to 451,522 grams. Buprenorphine distribution, in contrast, increased from 224 grams in 2005 to 3,437 grams in Washington, DC, in 2012, and from 2,623 grams in 2005 to 29,340 grams in 2012 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. Enrollments continued to increase in 2011 ($n=6,395$) and in 2012 ($n=6,785$) (exhibit 5a). These enrollments nearly doubled in Baltimore City from 2006 to 2010 and continued to increase in 2011 and in 2012 ($n=840$) (exhibit 5b). Approximately 1 in 12 enrollments involving other opiates/opioids in the State were Baltimore City residents.

Marijuana

Marijuana was widely available in the District and in Maryland, but local production (indoor and outdoor) has historically been limited. Marijuana was the most frequent drug seized by W/B HIDTA initiatives. According to the W/B HIDTA 2012 Annual Report, seizures of marijuana greatly increased in 2012. Compared with the total of 4,144 kilograms of marijuana seized in 2011, there was an increase in marijuana seized in 2012 as a result of the investigations by the W/B HIDTA initiatives. In total, 8,158 kilograms were seized, almost double the quantity seized in 2011. In comparison, the number of marijuana plants seized decreased from 1,156 in 2011 to 679 in 2012.

NFLIS data for 2012 showed that marijuana was the most frequently identified drug report among drug items seized and analyzed in Washington, DC, Baltimore, and the general Maryland region. Approximately 27.3 percent of the drug reports identified among drug items analyzed by NFLIS laboratories in Washington, DC, tested positive for marijuana/cannabis, while 43.6 percent of the reports identified among drug items analyzed in Baltimore tested positive for marijuana/cannabis (exhibits 1a and 1b). This represented an increase in both areas from 2011. In Maryland, slightly more than one-half of reports from drug items analyzed (51.2 percent) were positive for marijuana.

No marijuana-related deaths were reported by the District's or Maryland's OCME in recent years, but marijuana was the second most frequently found illicit drug in Washington, DC, traffic-related deaths testing positive for illicit drugs in 2011 (after alcohol). Marijuana was found in 11.3 percent of these cases. There were 70 marijuana metabolite-positive deaths in Washington, DC, in 2011.

The 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 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. In 2011 and 2012, this proportion once again decreased slightly (exhibits 4a and 4b). Approximately 47 percent of juvenile arrestees tested positive for marijuana in 2012.

Primary marijuana enrollments to certified publicly funded Maryland treatment programs increased from 2006 ($n=8,109$) to 2012 ($n=11,246$) (exhibit 5a). Marijuana enrollments also increased in Baltimore City from 2007 to 2012 (from $n=1,519$ to $n=2,471$ enrollments) (exhibit 5b).

Methamphetamine and MDMA

Methamphetamine and MDMA (3,4-methylenedioxymethamphetamine) accounted for 1 percent of the primary drug mentions at enrollment to treatment in certified publicly funded Maryland drug treatment programs in 2012.

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 since 2011 they decreased from 9 to 5 kilograms (W/B HIDTA 2012 Annual Report).

NFLIS data for 2012 showed that slightly more reports among analyzed drug items tested positive for methamphetamine (0.96 percent) than for MDMA/MDA (3,4-methylenedioxyamphetamine) (0.27 percent) in Washington, DC. 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. This number decreased to less than 0.5 percent in 2012.

Participants enrolled in the certified publicly funded Maryland treatment programs for methamphetamine and MDMA are relatively low in comparison with other, more prevalent drugs. In 2012, Maryland enrollments for methamphetamine totaled 34; there were 21 for MDMA. More than one-quarter of the methamphetamine enrollments (nine enrollments) and 43 percent of the MDMA enrollments came from the Baltimore City area.

The Pretrial Services Agency for Washington, DC, began to test for amphetamines in August 2006. The proportion of adult arrestees testing urinalysis positive for amphetamines decreased from 3.7 percent in 2007 to 1.1 percent in 2009, and it has remained about the same since (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 in 2012, 0.6 percent were positive (exhibits 3b and 4b).

PCP

NFLIS data showed that the proportion of reports in Washington, DC, testing positive for PCP (phencyclidine) among drug items analyzed in NFLIS laboratories increased from 3.6 percent in 2009 to 4.8 percent in 2011. A similar percentage tested positive in 2012 (5.4 percent). However, very few PCP reports were identified among analyzed drug items in Baltimore City or in Maryland in any of these years (0.6 percent or less).

Forty-two PCP-positive deaths occurred in Washington, DC, in 2011, an increase from 30 deaths in 2010 (exhibit 2b). The number of overdose deaths involving PCP increased from 6 overdose deaths in Washington, DC, in 2008 to 13 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 at approximately 9–11 percent. In 2011, 10.5 percent of adults tested urinalysis positive for PCP, and in 2012, 10.0 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 2–3 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 in 2012 decreased slightly to 1.0 percent.

Primary treatment enrollments involving PCP in Maryland—although much lower than those for other drugs—more than doubled between 2006 ($n=247$) and 2012 ($n=587$) (exhibit 5a). Enrollments involving PCP in Baltimore City remained low—from 3 to 12 each year.

Emerging Drugs of Abuse

“Possible Levamisole”

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 identified among drug items analyzed by NFLIS laboratories in Washington, DC, each year, outranking heroin, from 2009 to 2012. The DC OCME 2011 annual report included a list of all drugs found in postmortem cases. Levamisole was found in 15 deaths overall and in 13 drug overdose deaths.

Synthetic Marijuana (Cannabimimetics)

Several new drugs were beginning to appear across the region. Synthetic marijuana (cannabimimetics) first appeared in Washington, DC, and Maryland in 2010. Since then, the number of NFLIS reports positive for synthetic marijuana metabolites increased sharply from 2010 to 2012 from 1 to 33 in Washington, DC, and from 43 to 897 in Maryland (exhibit 1c). The number of types of synthetic marijuana (cannabimimetics) identified in Maryland drug reports among items analyzed in NFLIS laboratories increased from none in 2009, to 10 in 2011, and to 14 in 2012. In addition, seizures of “K2/Spice” in Maryland by HIDTA initiatives increased from 165 kilograms in 2011 to 634 kilograms in 2012.

“Bath Salts” (Substituted Cathinones)

Similar to synthetic marijuana, “bath salts” (substituted cathinones) also first appeared in Washington, DC, and Maryland in 2010. In Washington, DC, reports positive for bath salts increased from 13 in 2010 to 114 in 2012. In Maryland, there was also an increase in positive reports for “bath salts” among drug items analyzed in NFLIS laboratories, from 9 in 2010 to 444 in 2012 (approximately 0.6 percent of total reports in 2012).

INFECTIOUS DISEASES RELATED TO DRUG ABUSE

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. As shown in exhibit 7a, IDUs accounted for 5 percent of new HIV diagnoses in the District in 2010. New cases among men who have sex with men (MSM)/IDUs fluctuated during this time, but they decreased overall from 33 in 2006 to 15 in 2010 (representing 1.8 percent). Nearly three-quarters of all new HIV diagnoses were male, and more than three-quarters were African-American each year from 2008 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. IDUs and MSM/IDUs accounted for a higher percentage of these deaths each year from 2006 to 2010 than any other transmission cohort. However, the proportion decreased from 45 percent in 2008 to 31 percent in 2010 (exhibit 7b). 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 non-injection 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 non-injection 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 non-injection 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, newly reported HIV cases decreased by more than one-third from 2007 to 2010 and newly diagnosed AIDS cases decreased by 17 percent (from $n=2,299$ in 2007 to $n=1,430$ in 2010 for HIV and from $n=1,097$ to $n=909$ for AIDS). The percentage of HIV cases related to injection drug use in Maryland also decreased steadily from 1996 (51 percent) to 2010 (16 percent), but the percentage of MSM/IDU-related HIV cases fluctuated slightly (exhibit 8a). In Baltimore City in 2010, IDUs represented 24.5 percent of new HIV cases (exhibit 8b). The *Fourth Quarter 2011 Maryland HIV/AIDS Epidemiological Profile* shows that there were 1,430 HIV diagnoses and 909 reported

AIDS diagnoses among adults and adolescents in 2010. More than one in four of the HIV diagnoses in 2010 were from Baltimore City (28 percent), and approximately one-quarter (23 percent) were from Prince George's County. The only other jurisdictions accounting for more than 5 percent of the cases were Baltimore County (20 percent) and Montgomery County (10 percent). Similarly, one-third of the new AIDS diagnoses were from Baltimore City, approximately 12 percent were from Baltimore County, and approximately 21 percent were from Prince George's County. Nearly one-half of those living with HIV without AIDS (45 percent) and approximately 43 percent of those living with HIV and AIDS were from Baltimore City. In 2010, the majority of new HIV diagnoses in Maryland were male and African-American. As in Washington, DC, the age breakdown was spread across three age groups. Nearly three-quarters were age 20–49. The majority of new AIDS diagnoses were also male and African-American, but they were slightly older (78 percent were age 30–59).

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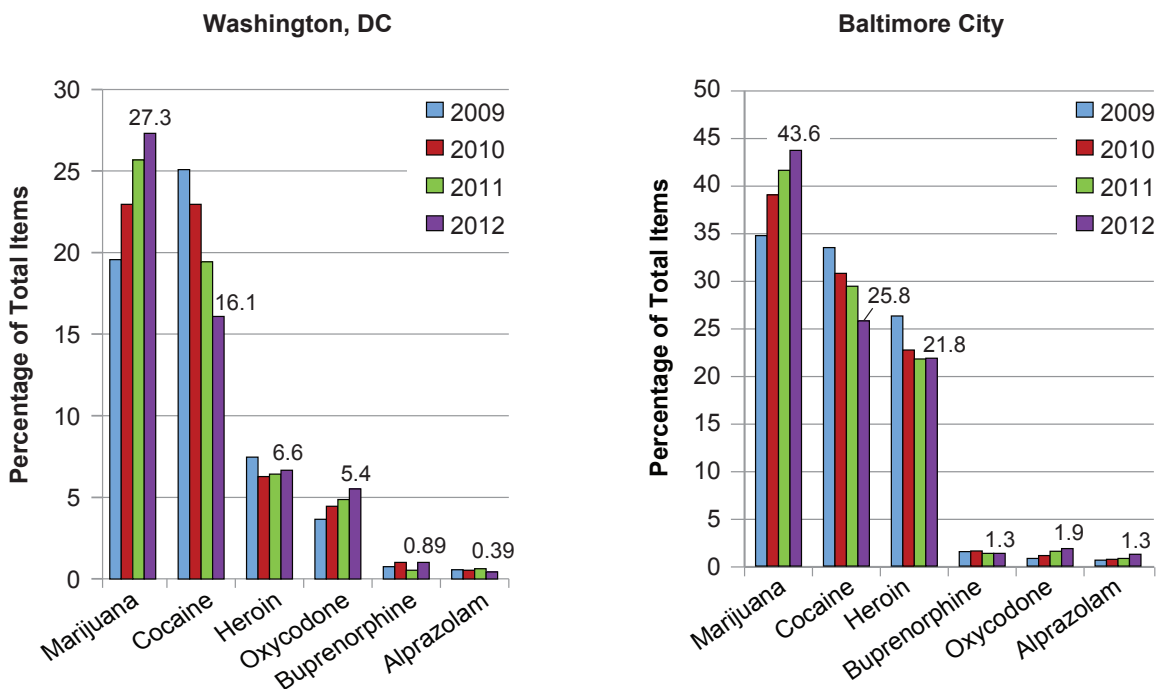
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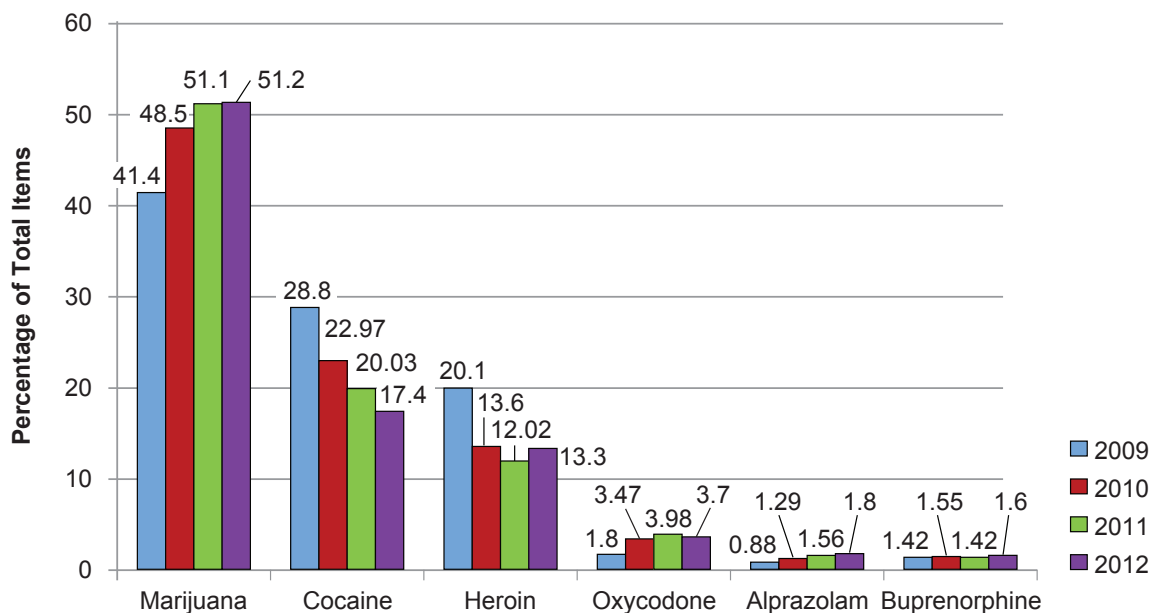
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Exhibit 1a. Percentage of Drug-Positive Reports Identified in NFLIS Analyses¹, for Selected Drugs, in Washington, DC, and Baltimore City: 2009–2012



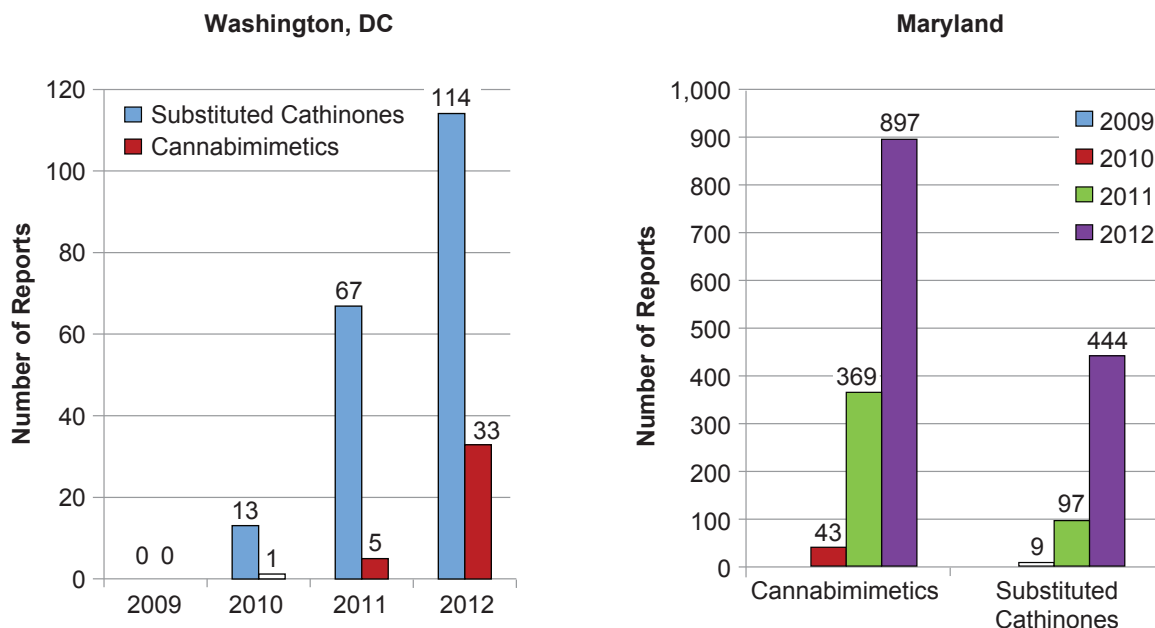
¹Total reports in Washington, DC: 2009, N=7,618; 2010, N=7,677; 2011, N=6,472; 2012, N=4,383. Total reports in Baltimore, MD: 2009, N=39,278; 2010, N=35,050; 2011, N= 31,326; 2012, N= 32,444. SOURCE: NFLIS, DEA, special data runs May 2012, and May 2013

Exhibit 1b. Percentage of Drug-Positive Reports Identified in NFLIS Analyses¹ for Selected Drugs, in Maryland: 2009–2012



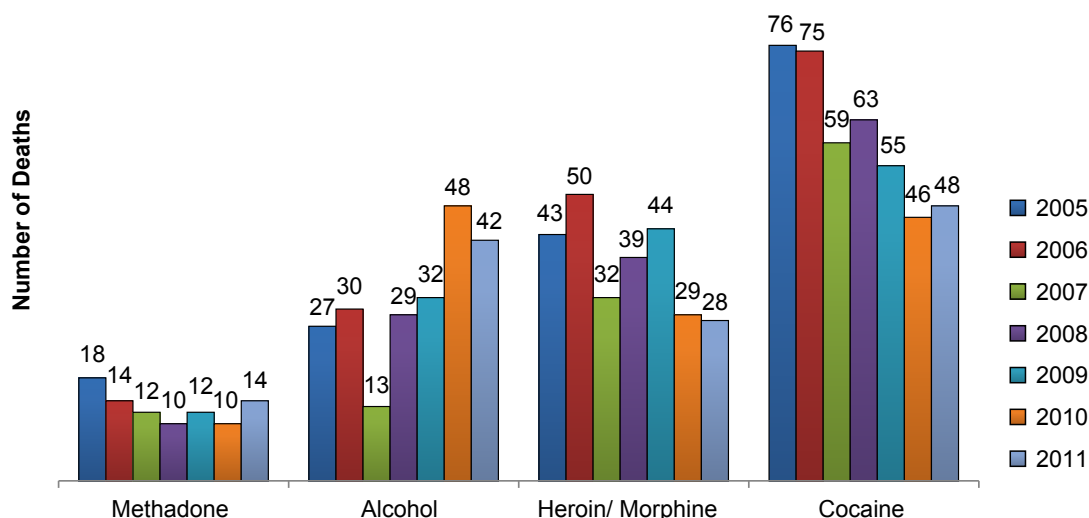
¹Total reports: 2009, N=58,981; 2010, N=71,579; 2011, N =77,082; 2012, N=76,483. SOURCE: NFLIS, DEA, special data runs May 2012 and May 2013

Exhibit 1c. Number of Drug-Positive Reports Identified in NFLIS Analyses¹ for Cannabimimetics and Substituted Cathinones, in Washington, DC, and Maryland: 2009–2012



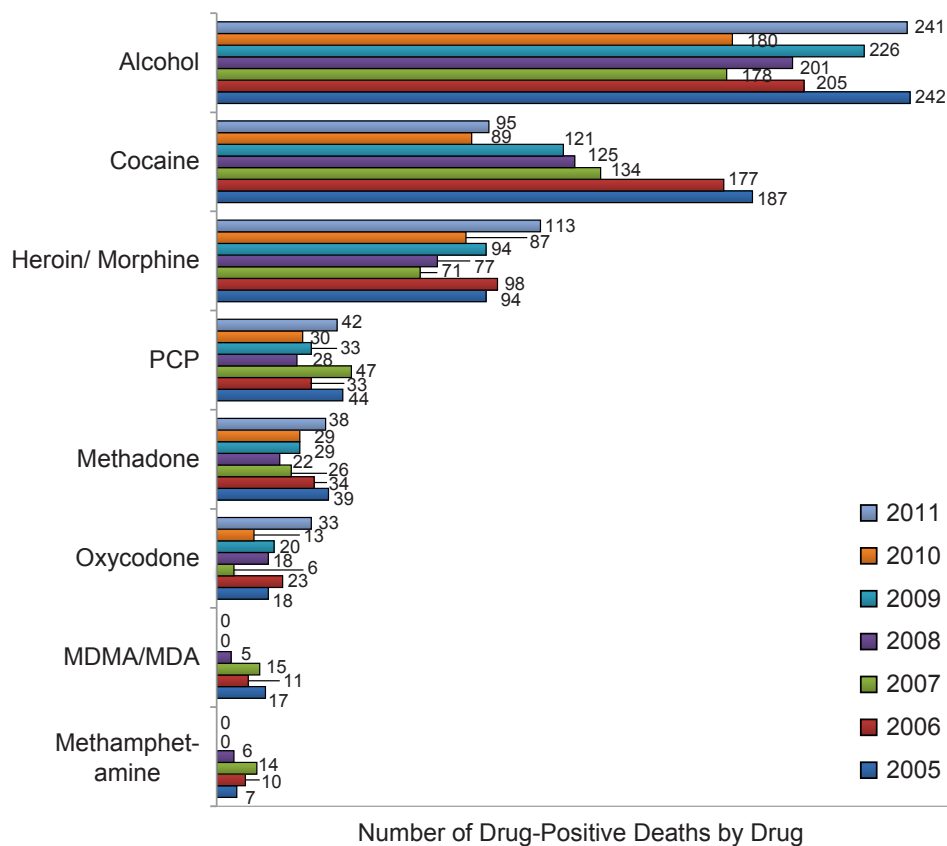
¹Total reports in Washington, DC: 2009, N=7,618; 2010, N=7,677; 2011, N=6,472; 2012, N=4,383. Total reports in Maryland: 2009, N=58,981; 2010, N=71,579; 2011, N=77,082; 2012, N=76,483. SOURCE: NFLIS, DEA, special data runs May 2012, May 2013

Exhibit 2a. Number of Drug Overdose Deaths, by Drug¹, in Washington, DC: 2005–2011



¹Total deaths: 2005, N=119 deaths; 2006, N=111; 2007, N=93; 2008, N=105; 2009, N=103; 2010, N=79; 2011, N=111. 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, 2010, and 2011

Exhibit 2b. Number of Drug-Positive Deaths, by Drug¹, in Washington, DC: 2005–2011²

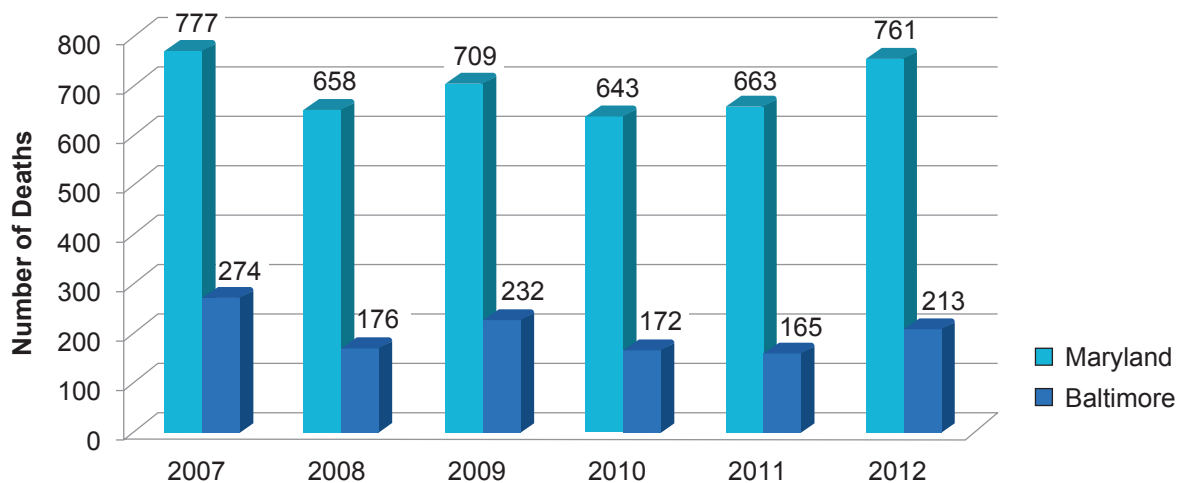


¹Total positive cases: 2005, N=631; 2006, N=503; 2007, N=447; 2008, N=500; 2009, N=821; 2010, N=545; 2011, N=509. Some decedents tested positive for multiple drugs.

²Positive cases for MDMA/MDA and methamphetamine were not included in the 2009, 2010, or 2011 Annual Reports.

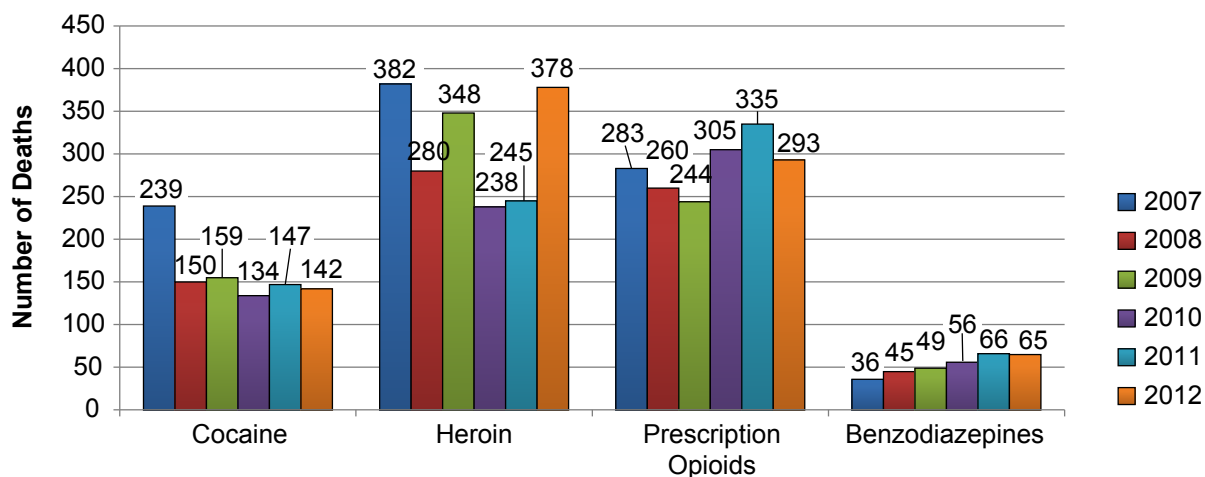
SOURCE: Office of the Chief Medical Examiner, Washington, DC, Annual Reports 2005, 2006, 2007, 2008, 2009, 2010, and 2011

Exhibit 2c. Number of Drug Intoxication Deaths, in Maryland and Baltimore City, by Year: 2007–2012



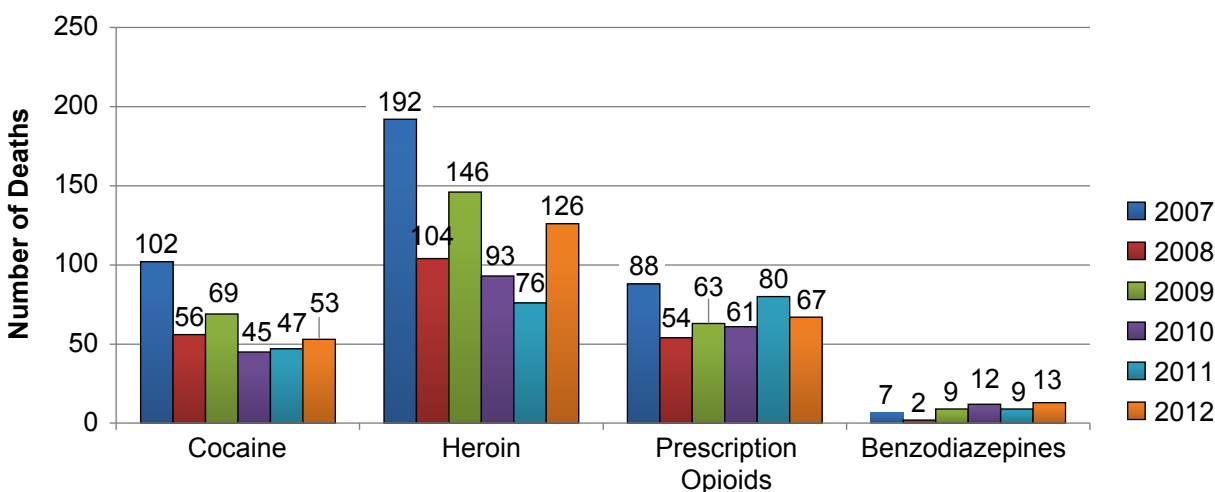
SOURCE: Maryland Department of Health and Mental hygiene, Office of the Chief Medical Examiner, Maryland, 2012, *Drug and Alcohol Deaths in Maryland, 2007–2012*. p. 7 and 52

Exhibit 2d. Number of Drug Intoxication Deaths for Selected Drugs, in Maryland: 2007–2012



SOURCE: Maryland Department of Health and Mental hygiene, Office of the Chief Medical Examiner, Maryland, 2012, *Drug and Alcohol Deaths in Maryland, 2007–2012*, p. 11

Exhibit 2e. Number of Drug Intoxication Deaths for Selected Drugs, in Baltimore City: 2007–2012



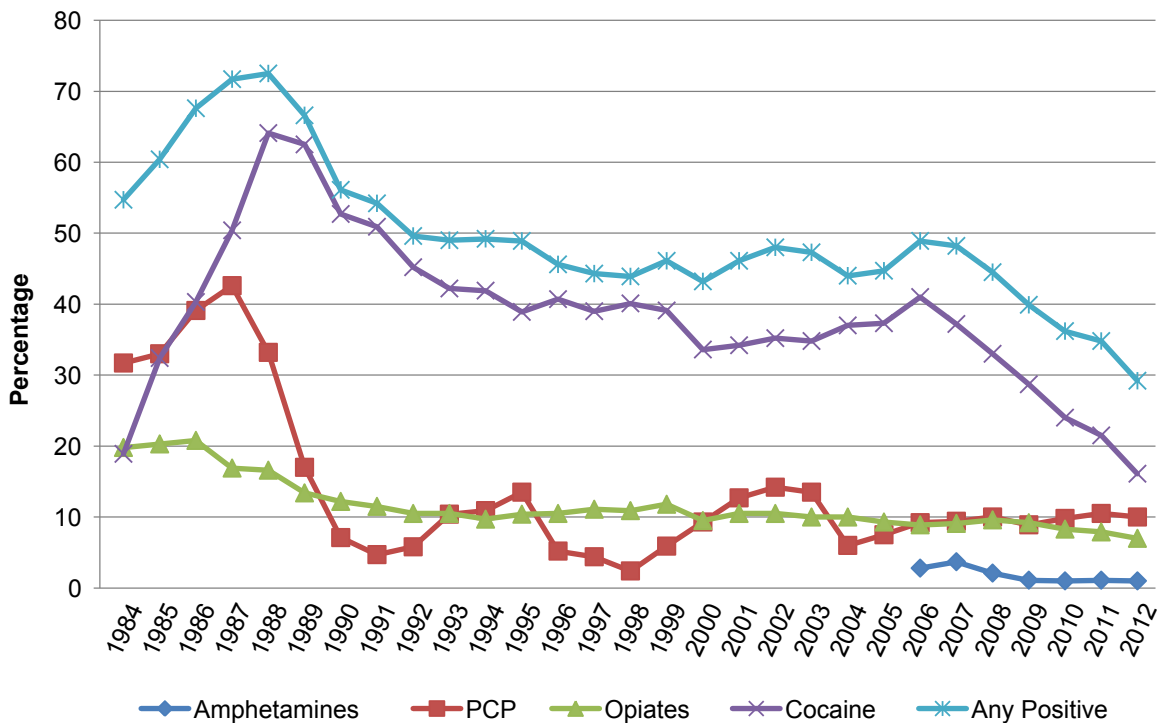
SOURCE: Maryland Department of Health and Mental hygiene, Office of the Chief Medical Examiner, Maryland, 2012, *Drug and Alcohol Deaths in Maryland, 2007–2012*. p. 54, 55, 61, and 62

Exhibit 3a. Percentage of Adult Arrestees Testing Positive for Selected Drugs, in Washington, DC: 2000–2012

Drug	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Total 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	16,291
Cocaine	33.6	34.2	35.2	34.8	36.6	37.3	41.0	37.2	33.0	28.7	24	21.5	16.1
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	10.0
Opiates	9.5	10.5	10.5	10.0	9.8	9.3	8.9	9.1	10.0	9.2	8.3	7.9	7.0
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	29.2

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



¹2006 percentage for amphetamines covers August–December only. Amphetamines are for 2006–2012 only.

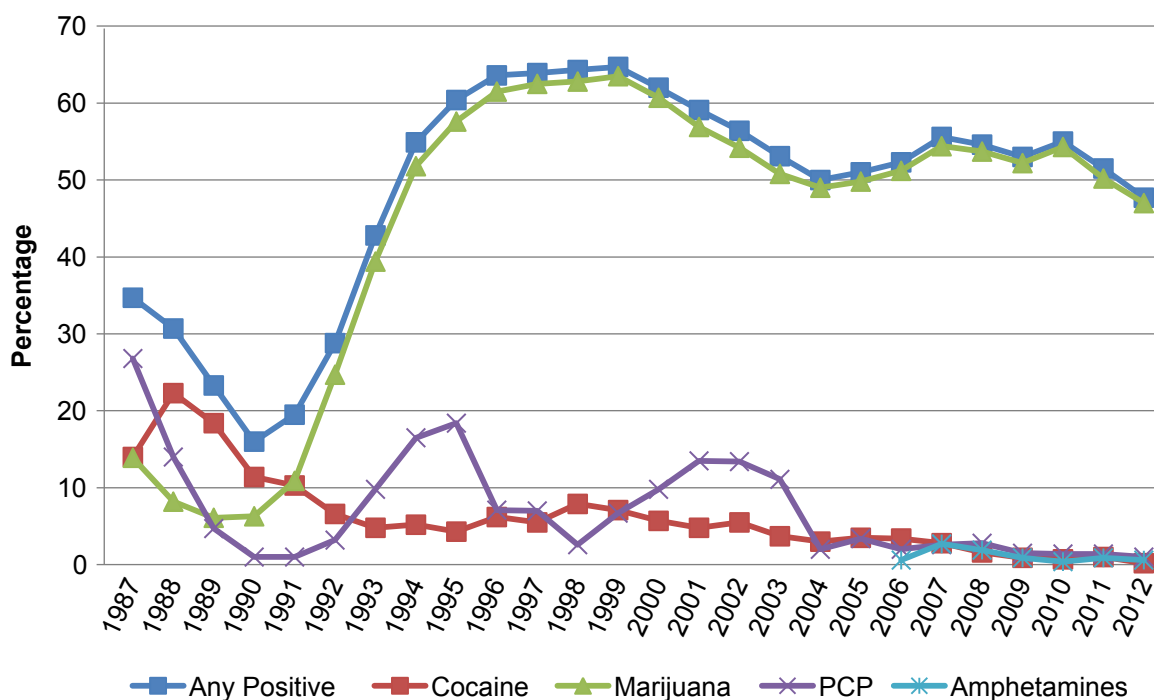
SOURCE: Adapted by the Center for Substance Abuse Research (CESAR) from data from the District of Columbia Pretrial Services Agency

Exhibit 4a. Percentage of Juvenile Arrestees Testing Positive for Selected Drugs in, Washington, DC: 2000–2012

Drug	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Total 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	1,632
Marijuana	60.7	56.9	54.2	50.8	49	49.8	51.2	54.4	53.7	52.2	54.3	50.2	47
Cocaine	5.7	4.8	5.5	3.7	3.3	3.5	3.4	2.8	1.6	0.9	0.7	1	0.2
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	1.0
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	47.7

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

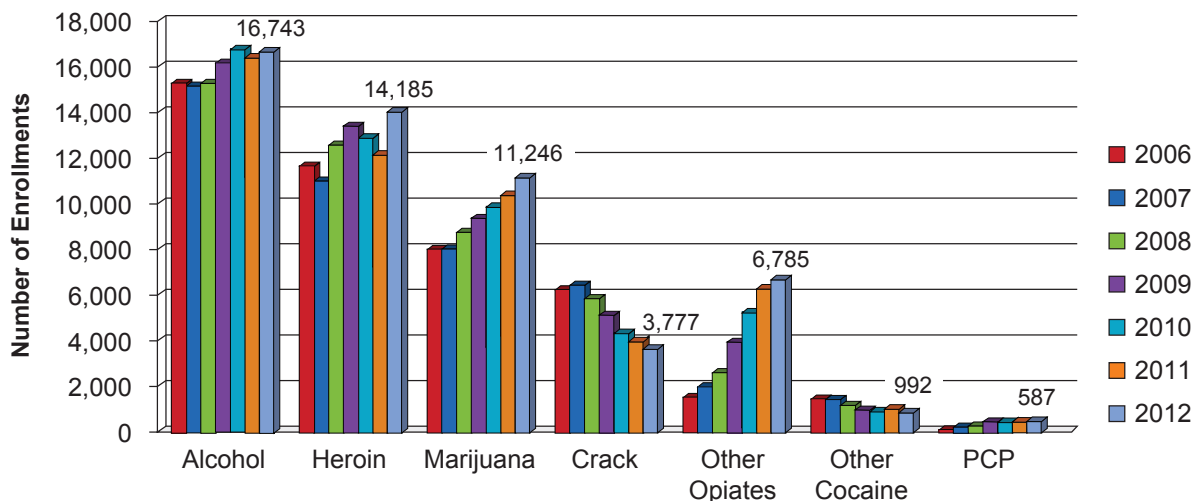


¹Any positive includes opiates from 1987 through mid-1994 (<1 percent).

²Amphetamines testing started in August 2006.

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

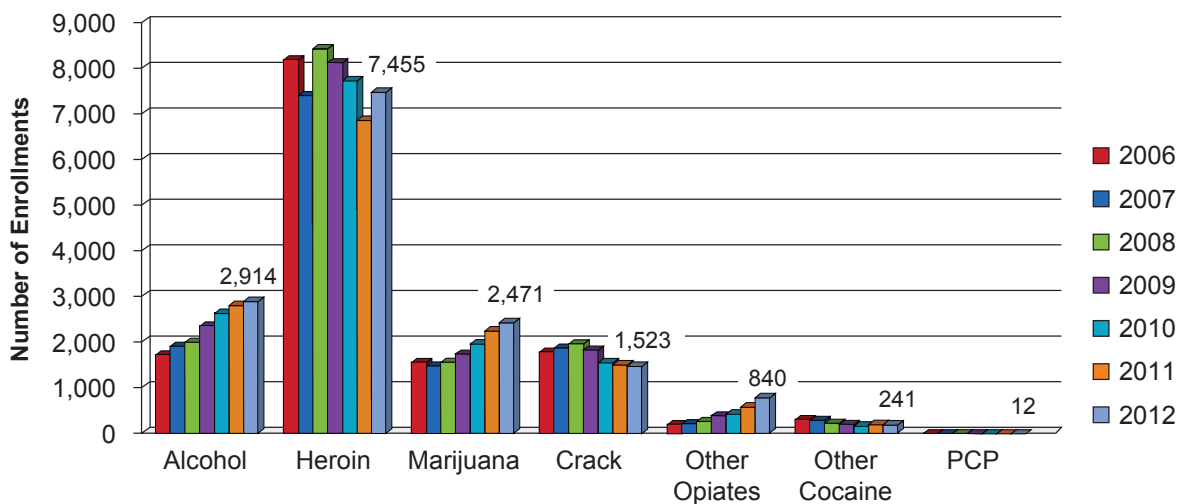
Exhibit 5a. Number of Primary Enrollments¹ to Certified Publicly Funded Alcohol and Drug Treatment Programs, in Maryland: 2006–2012



¹Total enrollments: 2006, N=45,554; 2007, N=45,657; 2008, N=47,848; 2009, N=50,774; 2010, N=52,027; 2011, N=52,466; 2012, N=55,499.

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

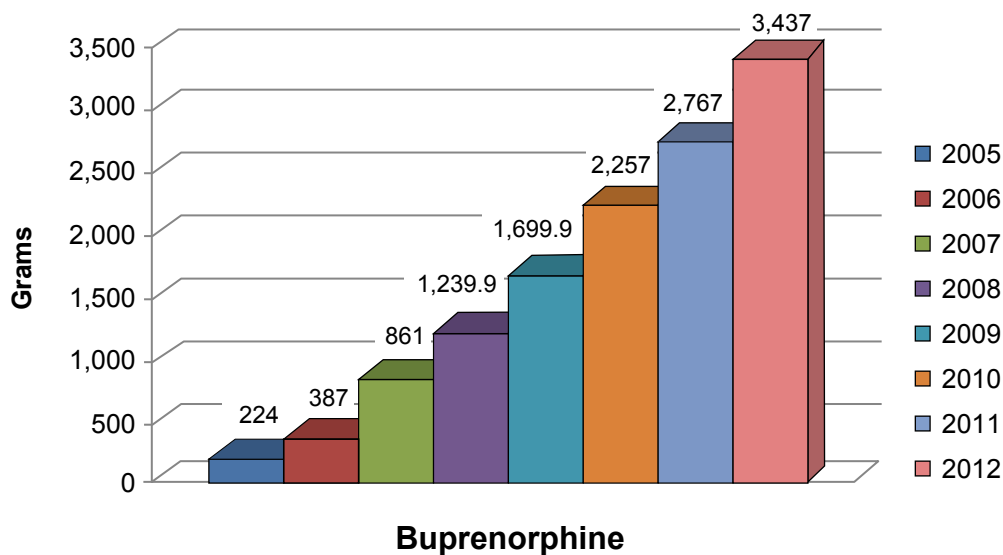
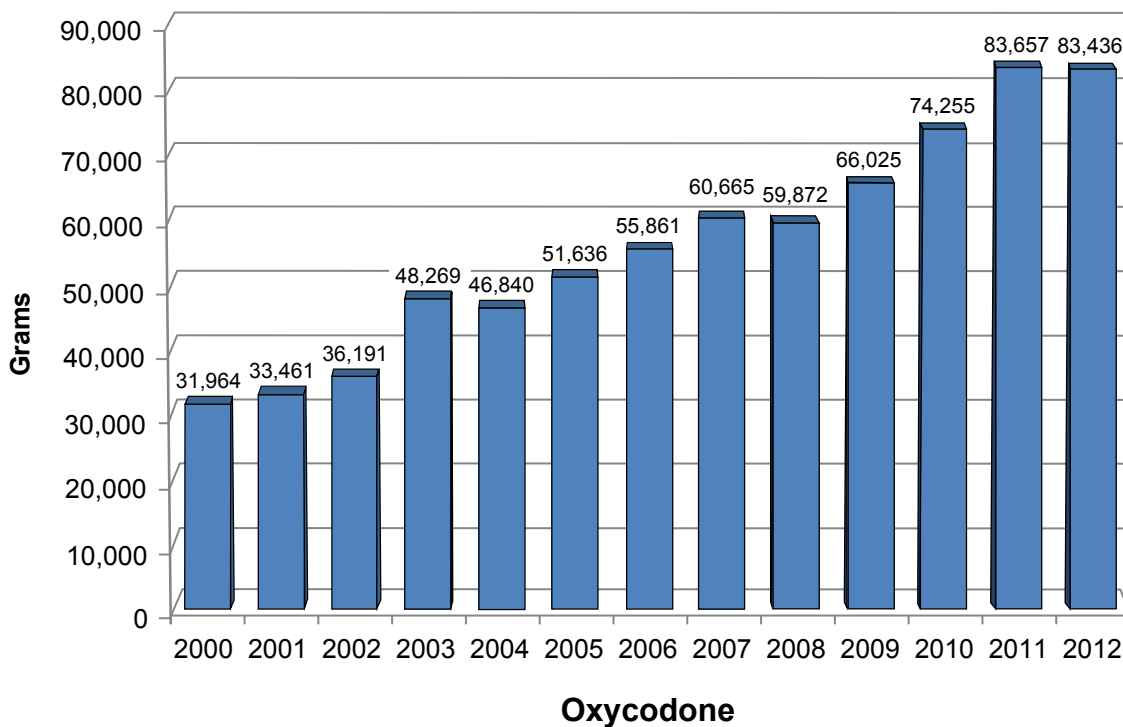
Exhibit 5b. Number of Primary Enrollments¹ to Certified Publicly Funded Alcohol and Drug Treatment Programs, in Baltimore City: 2006–2012



¹Total enrollments: 2006, N=14,018; 2007, N=13,467; 2008, N=14,756; 2009, N=14,957; 2010, N=14,857; 2011, N=14,643; 2012, N=15,749.

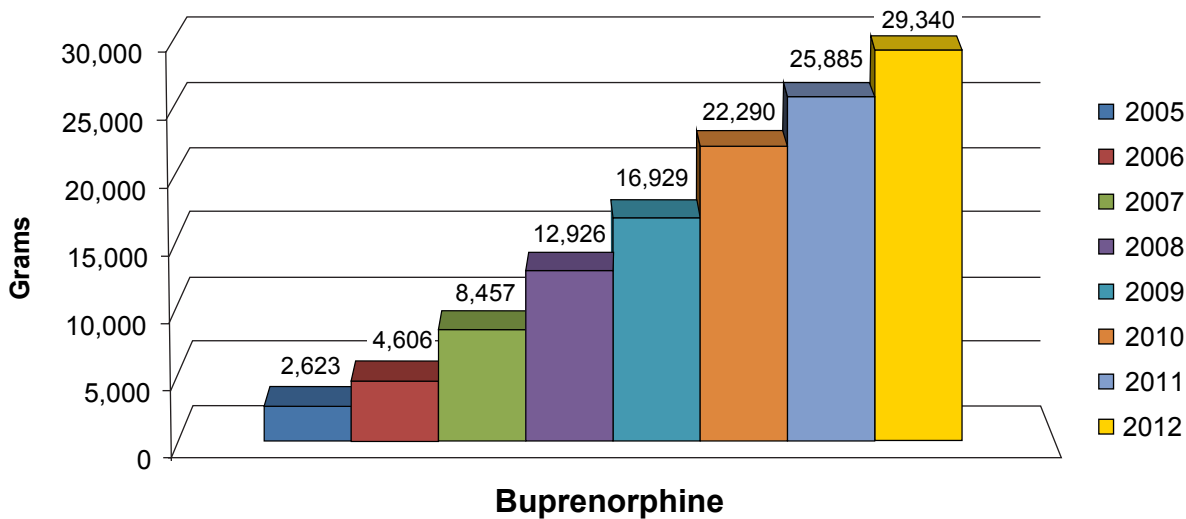
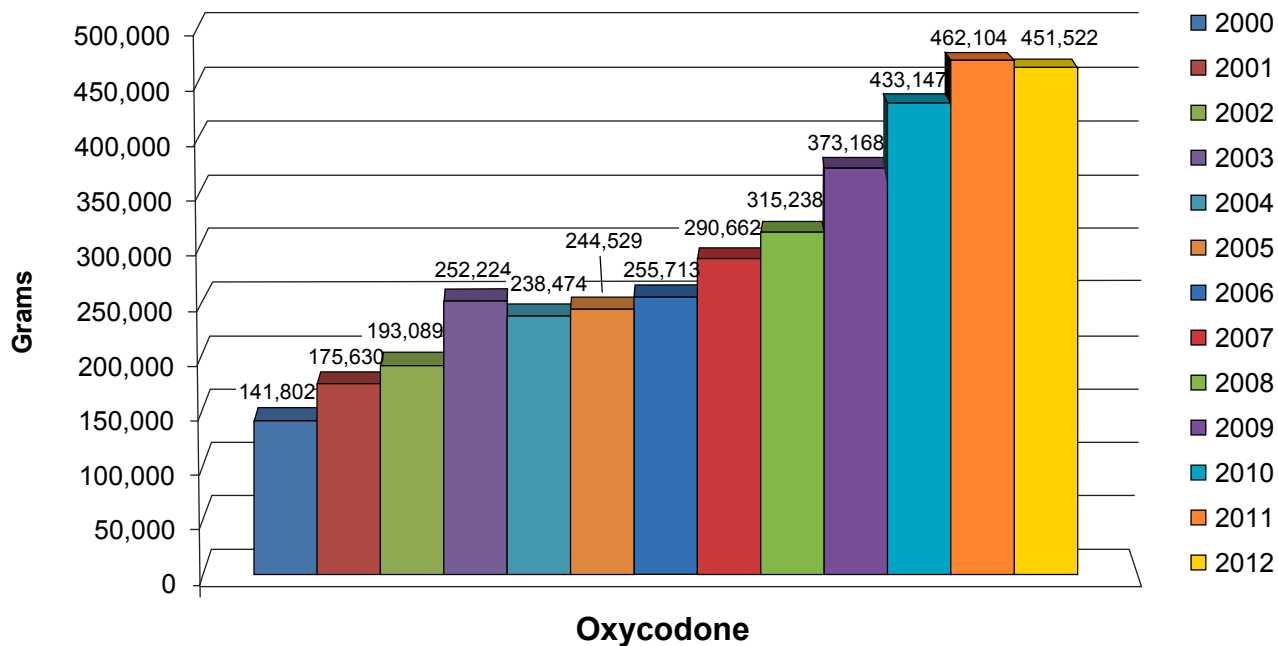
SOURCE: Adapted by the Center for Substance Abuse Research (CESAR) from data provided by the Alcohol and Drug Abuse Administration, Department of Health and Mental Hygiene, SMART System

Exhibit 6a. Retail Distribution of Oxycodone and Buprenorphine, by Year and Drug¹, in Grams, in Washington, DC: 2000–2012



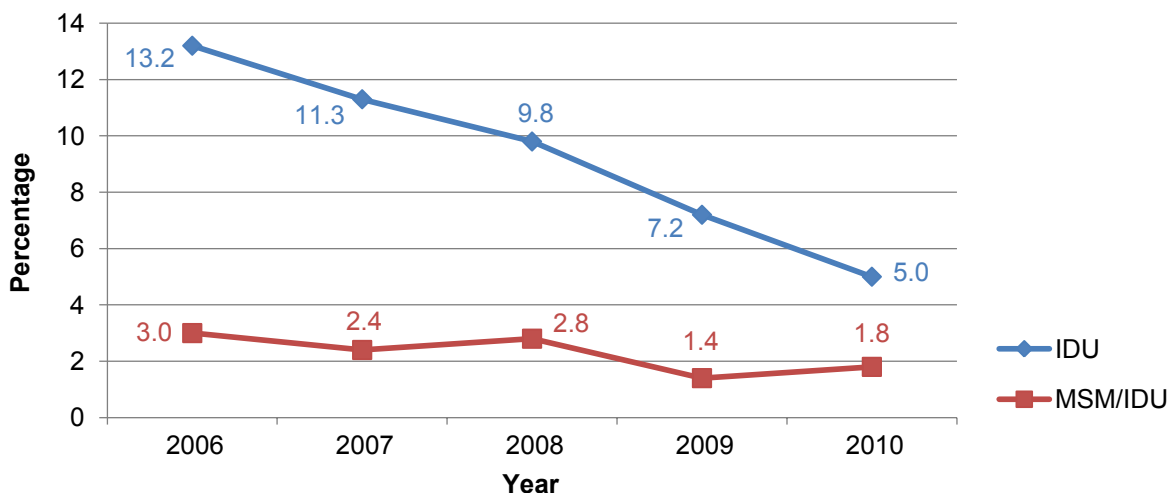
¹Buprenorphine first became available for treating heroin addiction in May 2003.
SOURCE: ARCOS, DEA, Retail Drug Summaries and special data runs

Exhibit 6b. Retail Distribution of Oxycodone and Buprenorphine, by Year and Drug¹, in Baltimore City and County: 2000–2012



¹Buprenorphine first became available for treating heroin addiction in May 2003. Baltimore includes Zip Code™ 212.
SOURCE: ARCOS, DEA, Retail Drug Summaries and special data runs

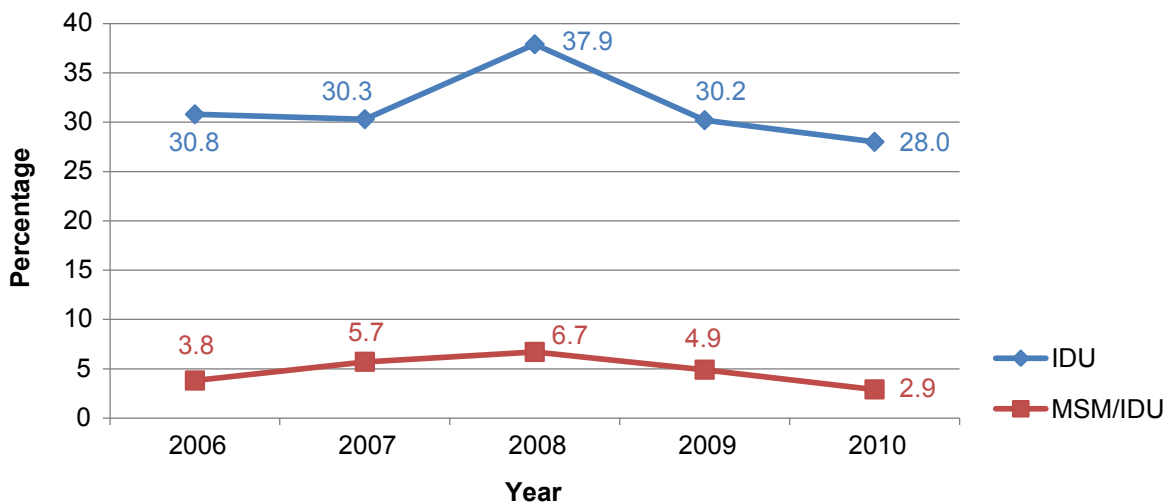
Exhibit 7a. Newly Diagnosed IDU- and MSM/IDU-Related HIV Cases¹, as a Percentage of All New HIV Diagnoses, by Year of Diagnosis, in Washington, DC: 2006–2010



¹IDU=injection drug user; MSM=men who have sex with men.

SOURCE: District of Columbia HIV/AIDS, Hepatitis, STD, and TB Annual Reports 2010 and 2011, Washington, DC, Department of Health

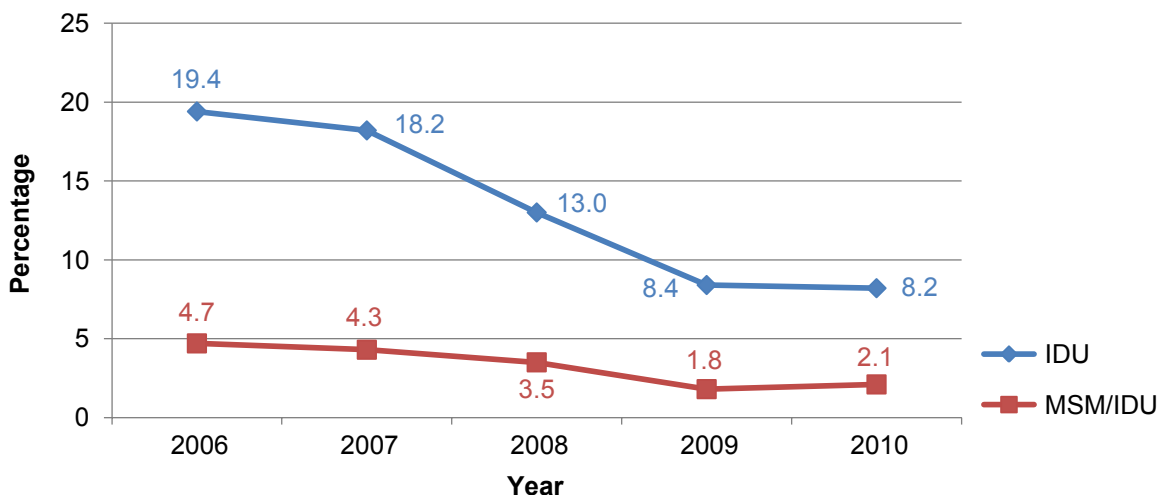
Exhibit 7b. HIV Deaths among Adults and Adolescents with IDU- and MSM/IDU as Mode of Transmission¹, as a Percentage of All HIV Deaths, by Year of Death, in Washington, DC: 2006–2010



¹IDU=injection drug user; MSM=men who have sex with men.

SOURCE: District of Columbia HIV/AIDS, Hepatitis, STD, and TB Annual Reports 2010 and 2011, Washington, DC, Department of Health

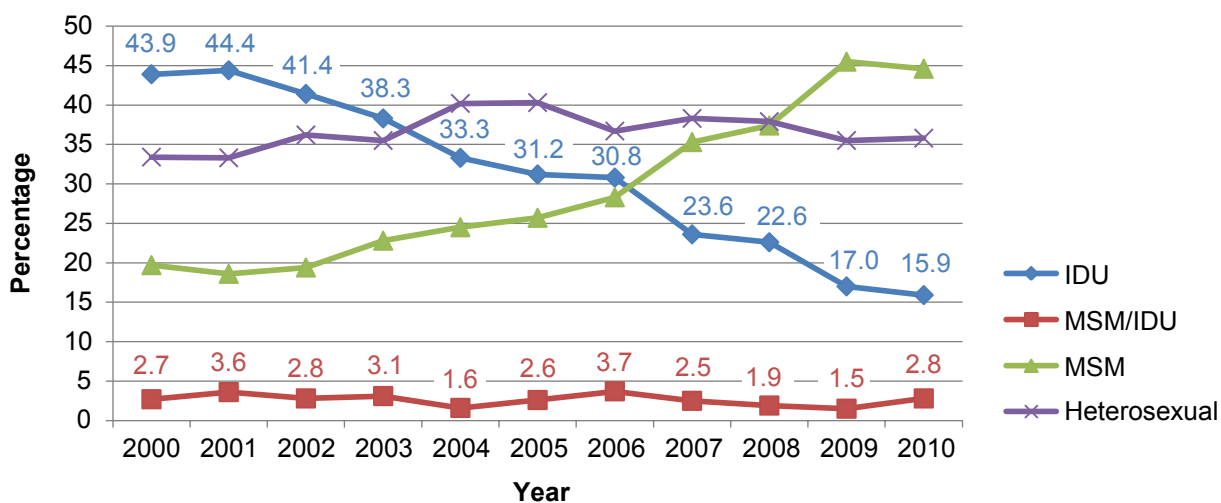
Exhibit 7c. Newly Diagnosed IDU- and MSM/IDU-Related AIDS Cases¹, as a Percentage of All New AIDS Diagnoses, by Year of Diagnosis, in Washington, DC: 2005–2010



¹IDU=injection drug user; MSM=men who have sex with men.

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

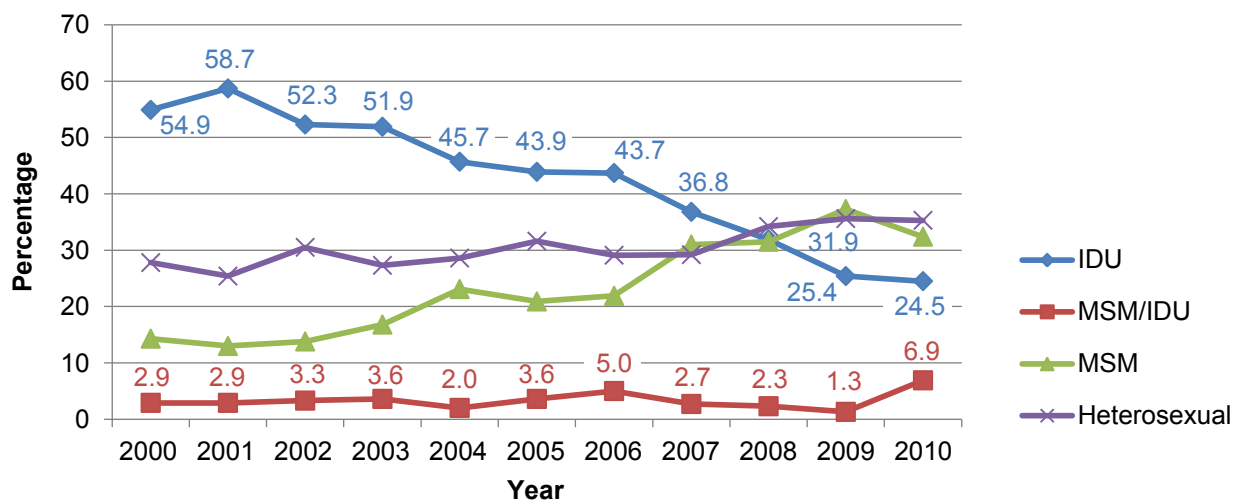
Exhibit 8a. Newly Diagnosed Adult/Adolescent HIV Cases With or Without an AIDS Diagnosis and With Reported Exposure Category, as a Percentage of New HIV Diagnoses, by Year of HIV Diagnosis, in Maryland: 2000–2010



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

SOURCE: Maryland HIV/AIDS Epidemiological Profile Fourth Quarter 2011, Center for HIV Surveillance, Epidemiology and Evaluation Infectious Disease Bureau, Maryland Department of Health and Mental Hygiene

Exhibit 8b. Newly Diagnosed Adult/Adolescent 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 Baltimore City: 2000–2010



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

SOURCE: Baltimore City HIV/AIDS Epidemiological Profile Fourth Quarter 2011, Center for HIV Surveillance, Epidemiology and Evaluation Infectious Disease Bureau, Maryland Department of Health and Mental Hygiene

Greater Boston Patterns and Trends in Drug Abuse: 2012

Daniel P. Dooley¹

ABSTRACT

Boston's cocaine indicators were decreasing in 2012 but remained at high levels of abuse. As a proportion of unique client primary drug treatment admissions, cocaine (including crack) decreased steadily from 13 percent in 2005 to 7 percent in 2012. Additionally, 29 percent of all unique treatment clients identified cocaine (including crack) as a primary, secondary, or tertiary drug in 2012, compared with 32 percent in 2010 and 40 percent in 2006. The proportion of Class B drug arrests (mainly cocaine) decreased from 49 percent in 2011 to 43 percent in 2012, and the proportion of cocaine reports among drug items seized and analyzed by National Forensic Laboratory Information System (NFLIS) laboratories decreased from 24 percent of the total in 2010, to 22 percent in 2011, and to 19 percent in 2012. The key finding for the Boston area for 2012 was the high and increasing levels of heroin abuse. Heroin abuse indicators for 2012 were increasing at already high levels. The proportion of unique client primary heroin treatment admissions increased from 37 percent in 2010, to 40 percent in 2011, to 42 percent in 2012. The proportion of Class A drug arrests (mainly heroin) increased from 22 percent in 2009 and 2010, to 25 percent in 2011, to 28 percent in 2012. From 2010 to 2012, the proportion of heroin drug reports among drug items analyzed by NFLIS laboratories increased from 13 to 18 percent. Indicators for other opioids were mixed at moderate levels. In 2012, 12 percent of all unique treatment clients identified other opioids as primary, secondary, or tertiary drugs, slightly less than the 14 percent in 2010 and 2011. The proportion of NFLIS drug reports identified as oxycodone among analyzed drug items increased from 8 percent in 2010 to 10 percent in 2011, but they decreased to 8 percent in 2012. Benzodiazepine abuse indicators were mixed (some were increasing and some were stable) at moderate levels in 2012. The proportion of unique treatment clients citing benzodiazepines as either primary, secondary, or tertiary drugs of abuse increased, from 9 to 14 percent from 2007 to 2012. Together, clonazepam, alprazolam, diazepam, and lorazepam accounted for 4 percent of all reports among drug items analyzed by NFLIS laboratories in the Boston area in 2012. Marijuana indicators were mixed at moderate levels in 2012. The proportion of unique clients citing marijuana as a primary, secondary, or tertiary drug decreased steadily from 23 percent in 2009 to 18 percent in 2012. From 2010 to 2011, the proportion of Class D drug arrests (mainly marijuana) decreased from 21 to 18 percent and remained at 18 percent in 2012. The proportion of marijuana/cannabis drug reports among items seized and analyzed in NFLIS laboratories increased from 23 percent in 2011 to 27 percent in 2012. Methamphetamine and MDMA (3,4-methylenedioxymethamphetamine) indicators remained relatively low overall in Boston (below 1 percent for all available data sources) in 2012.

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

INTRODUCTION

Area Description

According to the 2010 U.S. Census, the city of Boston has a population of 617,594. The larger seven-county Boston Metropolitan Statistical Area (MSA) has a population of 4,552,402. The 2010 racial composition for the city of Boston includes 47 percent White non-Hispanic, 22 percent Black non-Hispanic, 17 percent Hispanic/Latino, and 9 percent Asian. The racial composition for the Boston MSA includes 75 percent White non-Hispanic, 7 percent Black non-Hispanic, 9 percent Hispanic/Latino, and 6 percent Asian. The age distribution for the city of Boston consists of 36 percent age 0–24, 36 percent age 25–44, and 28 percent age 45 and older. The age distribution for the Boston MSA consists of 32 percent age 0–24, 27 percent age 25–44, and 41 percent age 45 and older.

Several environmental characteristics influence drug trends in Boston and throughout Massachusetts:

- Contiguity with five neighboring States (Rhode Island, Connecticut, New York, Vermont, and New Hampshire), linked by a network of State and interstate highways
- Proximity to Interstate 95, which connects Boston to all major cities on the east coast, particularly New York City
- A public transportation system that provides easy access to communities in eastern Massachusetts
- A large population of college students in both the greater Boston area and western Massachusetts
- Logan International Airport and several regional airports within a 1-hour drive of Boston
- A high number of homeless individuals seeking shelter

Data Sources

This report presents data from a number of different sources with varied Boston area geographical parameters (i.e., city of Boston and 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 typically 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 we improve our collective knowledge of drug abuse epidemiology.

Data sources used in this report include the following:

- **Drug abuse mortality data** for city of Boston residents for 2001–2010 were provided by the Massachusetts Department of Public Health (MDPH), Registry of Vital Records and Statistics. Age-adjusted rates were calculated using population estimates derived from interpolation of 2000 and 2010 U.S. Census data and the 2000 U.S. standard population distribution of residents age 12 and older (exhibit 1).
- **Drug-related hospital emergency department (ED) visit data** for city of Boston residents for fiscal years (FYs) (October–September) 2002–2011 were provided by the Massachusetts Center for Health Information and Analysis (formerly Division of Health Care Finance and Policy). Age-adjusted rates of unique patient drug-related visits were calculated using population estimates derived from interpolation of 2000 and 2010 U.S. Census data and the 2000 U.S. standard population distribution of residents age 12 and older (exhibit 2).
- **State-funded substance abuse treatment admissions data** for city of Boston resident clients with some comparison to admissions of clients from the rest of Massachusetts for 2003–2012 were provided by the MDPH, Bureau of Substance Abuse Services. Treatment data refer to both the total number and percentage distributions of treatment admissions of clients who may or may not have been admitted more than once within a calendar year and to unique client admissions as specified (exhibits 3a, 4a–4d). Age-adjusted rates of unique client admissions were calculated using population estimates derived from interpolation of 2000 and 2010 U.S. Census data and the 2000 U.S. standard population distribution of residents age 12 and older (exhibit 3b).
- **Drug arrest data** for the city of Boston for 2009–2012 were provided by the Boston Police Department, Drug Control Unit and Office of Research and Evaluation. For arrest data only, Black and White racial designations include those who identify themselves as Hispanic. Also, due to a 2009 change in Massachusetts' marijuana possession law, drug class trending considerations are confined to observed changes from 2009 to 2012 (exhibit 5).
- **Analysis of drug reports among drug items seized and analyzed** for the seven-county Boston MSA including the Massachusetts counties of Essex, Middlesex, Norfolk, Plymouth, Suffolk, as well as Rockingham and Strafford, New Hampshire, for 2009–2012 was provided by the National Forensic Laboratory Information System (NFLIS) Data Query System, Drug Enforcement Administration (DEA) (exhibit 6).
- **Drug price, purity, and availability information** covering the second half of 2012 for New England were provided by the DEA, New England Field Division Intelligence Group, May 2013 (exhibit 7). Heroin price and purity data for 2011 were provided by the Heroin Domestic Monitoring Program (HDMP).
- **Drug use survey data** were obtained from the Youth Risk Behavior Survey (YRBS) of the Youth Risk Behavior Surveillance System (YRBSS) for 2011 for students in Boston public high schools.

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 2012 were decreasing but remain at high levels of use and abuse.

Mortality data for 2012 and 2011 were not yet available at the time of this report. In 2010, there were 23 cocaine overdose deaths. From 2006 to 2010, the cocaine overdose age-adjusted mortality rate decreased by 58 percent (from 11.0 to 4.6 deaths per 100,000 residents) (exhibit 1).

Hospital ED data for 2012 are not yet available. In 2011, there were 1,499 unique patient cocaine-related ED visits among Boston residents. The annual age-adjusted rate of unique patient cocaine visits decreased steadily from 368.3 per 100,000 residents in 2006 to 306.9 in 2011 (exhibit 2). Similarly, the rate of cocaine overdose ED visits decreased by 23 percent from 32.3 in 2007 to 24.8 in 2011 (exhibit 2). In 2011, the rate of cocaine overdose visits for Black residents (55.8) was nearly four times that for White residents (15.0) and more than twice the rate for Latinos (23.3).

In 2012, 681 treatment admissions (5 percent of all admissions) reported cocaine/crack as the primary drug (exhibit 3a), and there were an additional 3,008 admissions (20 percent of all admissions) with cocaine/crack reported as a secondary or tertiary drug. Of the cocaine/crack primary admissions, 58 percent identified crack and 42 percent identified powder cocaine as the primary drug in 2012.

The proportion of admissions reporting cocaine/crack as the primary drug has steadily decreased from 10 percent in 2005 to 5 percent in 2012 (exhibit 3a). This percentage decrease was driven by a 61-percent decrease in the number of crack primary admissions and a 52-percent decrease in the number of powder cocaine admissions. The age-adjusted rate of unique clients reporting cocaine/crack as a primary, secondary, or tertiary drug decreased 37 percent from 2006 to 2012 (from 743.3 to 467.7 per 100,000 residents) (exhibit 3b).

Twenty-six percent of the 681 cocaine/crack primary drug admissions reported no other secondary drug in 2011. Of the 507 cocaine/crack primary drug admissions reporting a different secondary drug, 41 percent reported alcohol, 22 percent reported heroin, and 17 percent reported marijuana as the secondary drug.

The gender distribution of cocaine/crack primary drug treatment admissions in 2012 (55 percent male, 45 percent female) reflected a slight increase in the proportion of females (up from 39 percent in 2010) and a decrease in the proportion of males (down from 60 percent in 2010) (exhibit 4a). In 2012, 6 percent of cocaine/crack treatment admissions were younger than 26, 25 percent were age 26–34, and 69 percent were 35 and older. From 2007 to 2012, the proportion of cocaine admissions age 18–25 decreased from 12 to 6 percent (exhibit 4a). The 2012 racial/ethnic group distribution for cocaine/crack admissions (48 percent Black, 33 percent White, 15 percent Latino) revealed a shift toward higher Latino proportions (up from 12 percent in 2003) and higher White proportions (up from 24 percent in 2003), while the Black proportion remained at a lower level (down from 60 percent in 2003) (exhibit 4a).

There were 1,209 Class B (mainly cocaine and crack) drug arrests in 2012. Although Class B arrests accounted for the largest proportion of drug arrests (43 percent) in the city of Boston in 2012, the proportion decreased from 49 percent in 2011 (exhibit 5). In 2012, 85 percent of Class B arrestees were male, and 15 percent were female. The gender distribution skewed overwhelmingly male from 2002 to 2012, with the percentage of females ranging from 11 to 15 percent during the time period. The age distribution of Class B arrestees in 2012 was 28 percent younger than 25, 43 percent age 25–39, and 39 percent age 40 or older. The proportion of Class B arrestees age 40 and older in 2012 represented a substantial increase from the previous 6-year average of 31 percent between 2006 and 2011. Previously, from 2002 to 2005, the proportion remained near 25 percent annually. The racial/ethnic distribution of Class B arrestees was 43 percent White (including Hispanic), 57 percent Black (including Hispanic), and 21 percent Hispanic in 2012. From 2004 to 2012, the proportion of Black (including Hispanic) arrestees decreased from 68 to 57 percent, while the proportion of White (including Hispanic) arrestees increased from 31 to 43 percent (arrestee demographic data not shown).

Cocaine ranked second in drug reports among items seized and analyzed by NFLIS laboratories in 2012; reports of cocaine/crack samples totaled 3,615. The proportion of cocaine/crack reports among all drug reports decreased from 25 percent in 2009 to 19 percent in 2012 data (exhibit 6).

The DEA reported that retail “street-level” cocaine cost between \$18 and \$130 per gram in the second half of 2012 (exhibit 7), compared with a range of \$50–\$100 per gram in 2010. 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. Although the 2010 mortality and 2011 ED data are mixed, the 2012 heroin indicators were mostly increasing at very high levels.

In 2010, there were 45 heroin/opioid overdose deaths. From 2006 to 2010, the heroin/opioid overdose age-adjusted mortality rate decreased by 53 percent (from 19.4 to 9.1 deaths per 100,000 residents) (exhibit 1).

Hospital ED data for 2012 were not yet available at the time of this report. In 2011, there were 1,993 unique patient heroin/opioid-related ED visits among Boston residents. The annual age-adjusted rate of unique patient heroin/opioid visits decreased from 402.3 per 100,000 residents in 2009 to 374.9 in 2011 (exhibit 2). The rate of heroin overdose ED visits decreased by 30 percent from 48.9 in 2009 to 34.1 in 2010; the rate then increased by 30 percent to 44.3 in 2011 (exhibit 2). In 2011, the rate of heroin overdose visits for White residents (57.9) was 39 percent higher than the rate for Black residents (35.5) and 36 percent higher than the rate for Latino residents (37.2).

In 2012, 8,227 treatment admissions (54 percent of all admissions) reported heroin as the primary drug, and there were an additional 537 admissions (4 percent of all admissions) with heroin reported as either a secondary or tertiary drug (exhibit 3a). The proportion of admissions with heroin reported as the primary drug reached the highest level in 10 years of reported data in 2012 (exhibit 3a).

The age-adjusted rate of unique clients reporting heroin as a primary, secondary, or tertiary drug remained relatively stable from 2010 to 2012, at a lower level than seen from 2003 to 2009 (exhibit 3b).

Forty-eight percent of the 8,227 heroin primary drug admissions in 2012 reported no secondary drug. Of the 4,307 heroin primary drug admissions reporting a secondary drug, 35 percent reported cocaine, 26 percent reported alcohol, 23 percent reported benzodiazepines, and 11 percent reported another opioid as the secondary drug.

Exhibit 4b shows demographic characteristics of heroin primary treatment admissions in Boston. In each year from 2003 to 2012, nearly three-fourths of heroin admissions were male clients, and a little more than one-fourth were female clients. In recent years, the age distribution of heroin admissions has become slightly older, with the proportion of admissions age 18–25 down from 24 percent in 2009 to 17 percent in 2012. The racial distribution for heroin admissions shifted over 10 years, with an increasing proportion of White client admissions (up from 53 percent in 2003 to 63 percent in 2012) and a decreasing proportion of Black client admissions (down from 20 percent in 2003 to 11 percent in 2012), but proportions were fairly stable from 2007 to 2012 (exhibit 4b). The percentage of heroin primary admissions reporting injecting as the preferred route of administration increased steadily from 75 percent in 2003 to 86 percent in 2010, 2011, and 2012. Only 56 percent of Black heroin primary drug client admissions reported injection drug use as the preferred route, compared with 92 percent of Asian, 85 percent of Latino, and 91 percent of White client admissions in 2012.

There were 803 Class A (mainly heroin and other opiates) drug arrests in 2012. The proportion of Class A arrests increased from 22 percent in 2009 to 28 percent in 2012. The gender distribution of Class A arrestees remained fairly stable from 2001 to 2012, with males accounting for more than four-fifths each year. The racial/ethnic distribution of Class A arrestees was 70 percent White (including Hispanic), 29 percent Black (including Hispanic), and 42 percent Hispanic in 2012. The proportion of White (including Hispanic) Class A arrestees increased from 63 percent in 2010 to 70 percent in 2012 (arrestee demographic data not shown).

In 2012, there were 3,389 heroin reports among drug items seized and analyzed by NFLIS laboratories, ranking third among seized drug samples. The proportion of heroin reports among all drug reports increased from 13 percent in 2010 to 18 percent in 2012 data (exhibit 6).

Data from the 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 reports that heroin remains readily available from source countries, including Colombia, the Dominican Republic, and Guatemala. Documented supplying 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 decreased from 50 percent in 2002 to 29 percent in 2005 and ranged between 15 and 18 percent from 2006 to 2011. The street-level price of a pure milligram of heroin increased by 62 percent from 2009 to 2010 then decreased by 40 percent from 2010 to 2011. From 2005 to 2006, the price nearly doubled (from \$0.88 to \$1.63, respectively), and heroin remained in a higher price range (from \$1.34 to \$2.22 from 2006 to 2011). The most recent DEA data indicated that in New England, street-level (retail) heroin typically cost \$50–\$200 per gram (exhibit 7).

According to the 2011 YRBS, 2 percent of Boston public high school students reported having used heroin during their lifetime.

Narcotic Analgesics

Narcotic analgesic (other nonheroin opioids) abuse indicators were mixed (stable and decreasing) at moderate levels. Mortality data for narcotic analgesics were presented with heroin within the heroin section.

Hospital ED data for 2012 were not yet available at the time of this report. From 2010 to 2011, the annual age-adjusted rate of unique patient opioid overdose ED visits was stable at the highest level in 10 years of reported data (37 visits per 100,000 residents) (exhibit 2). In 2011, the rate of opioid overdose visits for White residents (101.0) was 27 percent higher than the rate for Black residents (73.8), 41 percent higher than the rate for Latino residents (59.8), and 92 percent higher than the rate for Asian residents (8.2).

In 2012, 518 treatment admissions (3 percent of all admissions) reported other opioids as primary drugs (exhibit 3a), and 1,295 admissions (9 percent of all admissions) reported other opioids as primary, secondary, or tertiary drugs. The proportion of other opioid primary drug admissions peaked at 5 percent in 2010 and decreased to 3 percent by 2012 (exhibit 3a). Similarly, the age-adjusted rate of unique clients reporting other opioids as a primary, secondary, or tertiary drug peaked at 220.8 in 2010 and then decreased by 22 percent to 173.2 per 100,000 residents in 2012 (exhibit 3b).

Thirty-three percent of the 518 other opioid primary drug admissions reported no secondary drug. Of the 346 other opioid primary drug admissions citing a secondary drug, 27 percent reported alcohol, 22 percent reported heroin, 16 percent reported benzodiazepines, 14 percent reported marijuana, 10 percent reported cocaine, and 8 percent reported another opioid as the secondary drug.

Exhibit 4c shows demographic characteristics of other opioid primary treatment admissions in Boston. About two-thirds of admissions were male, and about one-third were female between 2003 and 2012. The proportion of younger client admissions (age 18–25) decreased sharply from 45 percent in 2003 to 20 percent in 2012. The proportion of client admissions age 26–34 increased from 25 percent in 2006 to 40 percent in 2012. The proportion of older client (age 35 and older) admissions ranged from 37 to 42 percent between 2005 and 2012. The proportion of White client admissions decreased steadily, from 94 percent in 2003 to 78 percent in 2012. Over the same time period, the proportion of Black and Latino client admissions increased from 3 to 8 percent and from 1 to 8 percent, respectively.

In 2012, there were 1,458 oxycodone drug reports identified among drug items seized and analyzed by NFLIS laboratories (8 percent of total drug reports), making oxycodone the fourth most reported drug. The proportion of oxycodone reports increased from 6 percent in 2009 to 10 percent in 2011 before decreasing to 8 percent in 2012 (exhibit 6). Other opioids among the top 20 NFLIS drug reports in 2012 included buprenorphine ($n=601$, ranking 5th), naloxone ($n=484$, ranking 6th), hydrocodone ($n=91$, ranking 13th), methadone ($n=88$, ranking 14th), and morphine ($n=68$, ranking 18th). Exhibit 6 lists the top 20 drug reports among seized and analyzed items.

The DEA reported that availability of narcotic analgesics was high throughout New England. An 80-milligram OxyContin® tablet typically cost between \$30 and \$120 (exhibit 7). The price of an

80-milligram generic oxycodone tablet was \$10–\$50, and a 30-milligram Percocet® tablet was \$14–\$30.

Benzodiazepines

Benzodiazepine abuse indicators were increasing or stable at moderate levels. The age-adjusted rate of unique patient ED visits citing abuse/dependence/overdose of benzodiazepines, barbiturates, other tranquilizers, and sedatives increased by 40 percent, from 77.5 per 100,000 residents in 2007 to 108.4 in 2011. In 2011, there were 230 unique patient benzodiazepine overdose ED visits among Boston residents. The average annual age-adjusted rate of unique patient benzodiazepine overdose visits was stable at 41.4 per 100,000 residents in 2003 and 43.4 in 2011 (exhibit 2).

In 2012, 210 treatment admissions cited benzodiazepines as primary drug, accounting for 1 percent of all treatment admissions. Although the proportion of benzodiazepines cited as primary drug among treatment admissions remained low, at 1 percent from 2009 to 2012 (exhibit 3a), the proportion of admissions citing benzodiazepines as either primary, secondary, or tertiary drugs increased from 6 percent in 2005 to 12 percent by 2012. Similarly, the age-adjusted rate of unique clients reporting benzodiazepines as a primary, secondary, or tertiary drug increased steadily, from 119.3 per 100,000 residents in 2004 to 196.0 in 2012 (exhibit 3b).

In 2012, there were 425 reports of clonazepam (2.2 percent of total reports) and 254 reports of alprazolam (1.5 percent of total reports) among items seized and analyzed by NFLIS laboratories, ranking clonazepam the seventh most reported drug and alprazolam the ninth most reported drug among laboratory samples. Other benzodiazepines among the top 25 NFLIS drug reports in 2012 included lorazepam ($n=75$, ranking 16th) (exhibit 6) and diazepam ($n=55$, ranking 22nd). Arrest data were unavailable for benzodiazepines.

Methamphetamine/Amphetamines

Methamphetamine abuse indicators remained low overall in Boston. From 2003 to 2012, less than 1 percent of all treatment admissions identified methamphetamine as a primary, secondary, or tertiary drug. Methamphetamine ranked 20th among all NFLIS drug reports from items seized and analyzed in 2012 (exhibit 6). Methamphetamine drug reports totaled 62 in both 2011 and 2012. The DEA reported that the cost of methamphetamine was \$90–\$200 per gram in the second half of 2012. According to the 2011 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/abuse. In 2011, there were 861 unique patient marijuana-related ED visits among Boston residents. The average annual age-adjusted rate of unique patient marijuana visits increased by 116 percent from 67.6 per 100,000 residents in 2005 to 145.8 in 2011 (exhibit 2).

In 2012, 526 treatment admissions (4 percent of all admissions) reported marijuana as the primary drug (exhibit 3a), and 1,810 admissions (12 percent of the total) reported marijuana as either a primary, secondary, or tertiary drug. The proportion of all treatment client admissions that reported

marijuana as their primary drug remained relatively stable from 2003 to 2012, accounting for 3–5 percent of total admissions each year. The age-adjusted rate of unique clients reporting marijuana as a primary, secondary, or tertiary drug decreased by 24 percent, from 356.4 clients per 100,000 residents in 2005 to 272.0 in 2012 (exhibit 3b).

Thirty-eight percent of the 526 total marijuana primary drug treatment admissions reported no secondary drug in 2012. Of the 325 marijuana primary drug admissions citing a secondary drug in 2012, 75 percent reported alcohol, 14 percent reported cocaine/crack, 4 percent reported heroin, and 4 percent reported other opioids as their secondary drug.

Exhibit 4d shows demographic characteristics of marijuana primary treatment admissions in Boston. Over the 10-year period, the gender distribution remained relatively constant, with the average annual proportion of male and female admissions at 76 percent male and 24 percent female. Between 2009 and 2012, the proportion of admissions age 18 and younger increased from 4 to 13 percent. The proportion of admissions of clients age 18–25 decreased from 50 percent in 2007 to 39 percent in 2012. The proportion of admissions for residents age 26 and older remained relatively constant over this time period. Black client admissions, having accounted for a little more than one-half of all marijuana primary drug admissions between 2003 and 2010, decreased from 54 percent in 2010 to 47 percent in 2012 (exhibit 4d).

There were 513 Class D (mainly marijuana) drug arrests in 2012. The proportion of Class D arrests among all drug arrests decreased from 21 percent in 2009 and 2010 to 18 percent in 2011 and 2012. The proportion of female Class D arrestees increased sharply to 21 percent in 2012 after being fairly stable at an average proportion of 7 percent between 2001 and 2010. In 2012, the proportion of White (including Hispanic) Class D arrestees was 32 percent, and the proportion for Black (including Hispanic) Class D arrestees was 66 percent. The proportion of Hispanic Class D arrestees nearly doubled from 20 to 38 percent between 2009 and 2012.

In 2011 and 2012, marijuana ranked first among NFLIS drug laboratory reports among items seized and analyzed. In 2012, there were 5,171 reports for marijuana. The proportion of marijuana reports among all drug reports increased from 21 percent in 2009 to 27 percent in 2012 (exhibit 6).

The DEA reported that marijuana remained readily available throughout the New England States and sold for \$80–\$350 per ounce (exhibit 7).

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)

Indicators for MDMA (or ecstasy) were possibly decreasing in 2012 at already low levels of abuse. There were only 38 MDMA drug laboratory reports among items seized and analyzed by NFLIS in 2012, compared with 88 reports in 2011 and 216 reports in 2010.

The DEA reported that the availability of MDMA was “low but stable” in the second half of 2012, and the drug cost between \$10 and \$30 per tablet retail (exhibit 7). MDMA is primarily distributed and abused by teenagers and young adults at nightclubs, raves, and private parties.

According to the 2011 YRBS, approximately 3 percent of Boston public high school students reported having used MDMA during their lifetime.

Ketamine

Among drug items seized and analyzed by NFLIS laboratories, there were 17 ketamine drug reports in 2012, compared with 25 reports in 2011, 34 reports in 2010, and 21 reports in 2009. The DEA reported that a vial of ketamine cost \$75–\$100 per dosage unit in Springfield, Massachusetts (exhibit 7).

PCP (Phencyclidine)

PCP is back on the watch list. There were 40 PCP drug reports among items seized and analyzed by NFLIS laboratories in 2012, up from 16 reports in 2011, 10 reports in 2010, and 15 reports in 2009. The DEA reported that PCP cost between \$10 and \$20 per tea leaf bag (1–2 grams) (exhibit 7).

BZP (1-Benzylpiperazine)

The number of BZP drug reports among items seized and analyzed by NFLIS laboratories decreased substantially from 115 in 2011 to 17 in 2012.

LSD (Lysergic Acid Diethylamide)

There were only 5 LSD drug reports among items seized and analyzed by NFLIS laboratories in 2012, compared with 23 reports in 2011, 3 reports in 2010, and 14 reports in 2009.

Psilocybin/Psilocin

There were 83 psilocybin/psilocin (mushrooms) drug reports among items seized and analyzed by NFLIS laboratories in 2012, compared with 73 reports in 2011, 68 reports in 2010, and 79 reports in 2009.

Synthetic Cannabinoids

These cannabinoids were among the 19,310 drug reports among items seized and analyzed by NFLIS laboratories in 2012:

- 54 reports of AM-2201 (1-(5-Fluoropentyl)-3-(1-Naphthoyl)Indole);
- 32 reports of XLR-11 (1-(5-Fluoropentyl)-1H-3-YL)(2,2,3,3-Etramethylcyclopropyl) Methanone);
- 22 reports of UR-144 ((1-Pentylindol-3-YL)-(2,2,3,3-Tetramethylcyclopropyl)Methanone);
- 8 reports of JWH-018 (1-Pentyl-3-(1-Naphthoyl)Indole)
- 7 reports of JWH-122 (1-Pentyl-3-(4-Methyl-1-Naphthoyl)Indole);
- 6 reports of JWH-210 (1-Pentyl-3-(4-Ethyl-1-Naphthoyl)Indole);

- 5 reports of AM-694 (1-(5-Fluoropentyl)-3-(2-Iodobenzoyl)Indole);
- 4 reports of RCS-4 (1-Pentyl-3-(4-Methoxybenzoyl)Indole);
- 2 reports of JWH-019 (1-Hexyl-3-(1-Naphthoyl)Indole);
- 1 report of AKB48 (N-(1-Adamantyl)-1-Pentyl-1H-Indazole-3-Carboxamide);
- 1 report of AM-2233 (1-[(N-Methyl-2-Piperidiny)Methyl]-3-(2-Iodobenzoyl)Indole);
- 1 report of JWH-081 ([1-Pentyl-3-[1-(4-Methoxy) Naphthoyl]Indole);
- 1 report of MAM-2201 (1-(5-Fluoropentyl)-3-(4-Methyl-1-Naphthoyl)Indole); and
- 1 report of URB597 (3-(Aminocarbonyl)[1,1-Biphenyl]-3-YL)-Cyclohexylcarbamate).

Others (Miscellaneous)

Of 19,310 drug reports in 2012, there were multiple reports of Phenylimidothiazole Isomer Undetermined (possible levamisole) (86 reports in 2012, compared with 181 in 2011); N-Methyl-3,4-Methylenedioxycathinone (methyone) (66 reports in 2012, compared with 7 in 2011); Methylenedioxypropylvalerone (MDPV) (8 reports in 2012, compared with 11 in 2011); and 5-Methoxy-N,N-diisopropyltryptamine (5-MeO-DIPT) (3 reports in 2012, compared with 16 in 2011).

INFECTIOUS DISEASES RELATED TO DRUG ABUSE

The HIV/AIDS prevalence rate for Boston residents originally diagnosed in Massachusetts was 857.7 per 100,000 residents on December 31, 2011. There were 5,297 people living in Boston with HIV/AIDS who were originally diagnosed in Massachusetts. The primary exposure mode for these included 14 percent who had been injection drug users (IDUs) and an additional 3 percent who had both men who have sex with men and IDU exposures; 21 percent had an unknown/undetermined exposure mode. Of 2,290 Boston residents diagnosed in Massachusetts with HIV from 2001 to 2010, 218 (9.5 percent) were identified as having injection drug use as exposure mode.

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Exhibit 1. Rate and Number of Resident Drug-Related Mortality¹ in Boston: 2001–2010

Drug	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
	Rate (n)	Rate (n)	Rate (n)	Rate (n)	Rate (n)	Rate (n)	Rate (n)	Rate (n)	Rate (n)	Rate (n)
All Drug-Related	22.6 (107)	21.7 (98)	27.8 (128)	21.6 (100)	21.0 (97)	34.9 (159)	34.1 (155)	23.4 (110)	28.8 (135)	22.3 (106)
Heroin/Opioids Overdose	14.4 (71)	12.3 (59)	16.0 (75)	12.0 (57)	10.8 (50)	19.4 (90)	18.9 (85)	11.7 (57)	14.6 (72)	9.1 (45)
Cocaine Overdose	8.1 (39)	6.1 (28)	11.2 (52)	7.6 (35)	5.6 (26)	11.0 (51)	9.9 (46)	6.7 (32)	6.3 (28)	4.6 (23)

¹Age-adjusted rate per 100,000 residents age 12 and older. Rate denominators based on estimates derived from 2000 and 2010 U.S. Census data for the city of Boston.

SOURCE: Massachusetts Department of Public Health Registry of Vital Records; Data Analysis: Boston Public Health Commission Research Office

Exhibit 2. Rates of Resident Unique Patient Drug-Related Hospital ED Visits¹ in Boston: 2002–2011

Drug-Related	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate
All Drugs	898.0	982.4	978.0	968.7	976.2	951.5	951.7	983.0	975.7	965.0
Heroin/Opioids	384.5	414.9	394.6	384.3	368.4	364.6	373.6	402.3	380.8	374.9
Cocaine	295.8	308.0	294.9	333.8	368.3	361.1	356.9	337.8	316.2	306.9
Marijuana	69.5	74.2	79.3	67.6	77.6	70.8	88.7	128.1	141.6	145.8
Benzodiazepines/ Barbiturates/Sedatives/ Other Tranquilizers	70.2	83.4	82.6	84.4	80.7	77.5	93.0	89.2	103.4	108.4
Antidepressants	27.3	27.2	27.9	26.5	22.7	22.5	25.8	27.2	32.8	24.8
Amphetamine	5.9	10.7	11.5	13.3	13.6	9.7	11.7	13.0	19.1	18.2
Hallucinogens	5.3	4.5	4.5	4.0	5.2	3.1	3.4	5.2	4.8	5.7
Drug Overdose										
Heroin Overdose	46.5	59.6	57.9	54.6	51.8	47.6	53.9	48.9	34.1	44.3
Nonheroin Opioid Overdose	27.1	31.6	30.3	29.5	28.5	30.9	29.7	35.4	37.2	37.0
Cocaine Overdose	15.2	20.2	22.5	23.8	27.2	32.3	30.7	24.1	25.9	24.8
Benzodiazepine Overdose	32.5	41.4	41.7	41.2	40.2	39.5	48.9	39.2	45.3	43.4
Barbiturate Overdose	8.7	7.3	8.6	7.1	10.7	7.4	10.7	8.6	7.7	12.1
Other Tranquilizer Overdose	10.7	14.6	16.1	17.7	15.8	15.7	20.2	18.3	17.2	20.5
Amphetamine Overdose	2.5	4.1	4.7	5.9	6.4	3.6	3.9	4.6	5.1	6.0
Total Unique Patients N	4,487	4,929	4,918	4,847	4,919	4,784	4,848	5,052	5,025	5,042

¹Age-adjusted rate per 100,000 residents age 12 and older (defined by unique patient identifications among all drug-related visits within a given fiscal year, October–September). Drug-related drug categories include codes for dependence, abuse, and poisoning.

Rate denominators based on estimates derived from 2000 and 2010 U.S. Census data for the city of Boston.

SOURCE: Massachusetts Center for Health Information and Analysis; Data Analysis: Boston Public Health Commission Research Office

Exhibit 3a. Percentage of Admissions to State-Funded Substance Abuse Treatment Programs, by Primary Drug, in Boston and for Other Massachusetts Residents¹: 2003–2012

BOSTON										
Drug	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Heroin	45.5%	48.8%	46.2%	46.1%	48.9%	49.7%	49.9%	49.3%	51.8%	54.2%
Alcohol	36.9%	35.2%	35.3%	36.3%	34.7%	33.1%	32.6%	34.6%	33.0%	32.5%
Cocaine/Crack	8.8%	7.9%	9.6%	8.9%	8.4%	8.3%	7.2%	5.4%	5.5%	4.5%
Other Opioids	2.9%	2.8%	3.2%	2.9%	2.7%	3.6%	4.2%	4.6%	4.3%	3.4%
Marijuana	4.9%	4.0%	4.1%	4.3%	4.0%	3.8%	4.7%	4.4%	3.8%	3.5%
Benzodiazepines	0.4%	0.5%	0.5%	0.6%	0.6%	0.8%	1.0%	1.1%	1.2%	1.4%
Other ²	0.7%	0.8%	1.1%	0.9%	0.8%	0.8%	0.4%	0.5%	0.5%	0.6%
Total Admissions N	17,003	16,387	16,773	16,684	17,035	16,784	17,025	16,799	15,604	15,182
OTHER MASSACHUSETTS										
Drug	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Heroin	36.3%	36.7%	36.5%	35.2%	34.7%	36.1%	38.2%	37.1%	39.7%	45.2%
Alcohol	43.9%	43.0%	42.3%	42.0%	42.0%	41.3%	40.3%	39.4%	37.2%	34.4%
Cocaine/Crack	6.6%	7.2%	7.5%	8.3%	7.9%	6.7%	5.4%	4.6%	4.3%	3.8%
Other Opioids	5.2%	6.0%	6.4%	6.9%	7.4%	7.9%	8.9%	11.6%	12.1%	10.1%
Marijuana	6.6%	5.7%	5.9%	6.1%	6.4%	6.4%	5.7%	5.6%	4.8%	4.7%
Benzodiazepines	0.6%	0.7%	0.8%	0.9%	0.9%	0.9%	1.1%	1.3%	1.5%	1.2%
Other ²	0.9%	0.7%	0.7%	0.7%	0.7%	0.9%	0.5%	0.5%	0.5%	0.7%
Total Admissions N	83,985	83,325	83,317	82,236	87,174	83,848	86,470	86,016	84,480	84,460

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

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

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

Exhibit 3b. Rates¹ of Unique Client Combined Primary, Secondary, and Tertiary Drug Treatment Admissions in Boston: 2003–2012

Drug	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate
Alcohol Only	431.7	402.4	429.8	419.0	435.5	418.0	418.6	445.7	429.5	440.0
Heroin	735.3	717.1	734.9	704.5	711.2	705.0	700.5	671.2	656.3	664.5
Other Opioids	145.4	143.6	155.4	164.3	168.3	197.7	217.0	220.8	208.9	173.2
Cocaine/Crack	676.9	646.3	721.9	743.3	705.9	706.1	640.7	598.4	521.7	467.7
Marijuana	412.2	349.6	356.4	348.9	335.0	330.6	377.2	357.4	290.9	272.0
Benzodiazepines	137.8	119.3	120.3	142.6	149.5	155.1	167.7	183.4	191.7	196.0
Other Prescription Drugs (Excludes Opioids and Benzodiazepines)	16.2	12.8	14.1	12.4	12.5	11.7	9.6	9.2	6.3	6.2

¹Age-adjusted rate per 100,000 Boston residents age 12 and older (defined by unique client identifications among all primary drug admissions within a given calendar year). Rate denominators based on estimates derived from 2000 and 2010 U.S. Census data for the city of Boston.

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

Exhibit 4a. Demographic Characteristics of Resident Client Admissions in State-Funded Substance Abuse Treatment Programs With a Primary Problem With Cocaine/Crack, by Percentage, in Boston: 2003–2012

Characteristic	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Gender	%	%	%	%	%	%	%	%	%	%
Male	54	59	65	63	60	59	59	60	52	55
Female	45	41	35	37	40	41	40	39	47	45
Transgender	***	***	***	***	***	***	1	1	***	***
Race/Ethnicity	%	%	%	%	%	%	%	%	%	%
White	24	25	26	29	32	35	34	34	31	33
Black	60	56	56	54	48	45	46	43	47	48
Latino	12	16	16	15	16	15	14	17	18	15
Asian	1	***	***	***	< 1	***	1	***	***	***
Other	3	3	3	3	3	5	5	5	4	3
Age	%	%	%	%	%	%	%	%	%	%
18 or Younger	< 1	***	***	< 1	***	***	***	***	1	***
18 to 25	8	8	10	10	12	9	9	9	8	6
26 to 34	30	27	22	22	22	21	23	23	21	25
35 or Older	62	66	68	68	66	70	69	67	69	69
Total Primary Admissions N	1,487	1,290	1,602	1,492	1,435	1,391	1,224	914	860	681

Note: The symbol "****" represents fewer than six admissions.

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

Exhibit 4b. Demographic Characteristics of Resident Client Admissions in State-Funded Substance Abuse Treatment Programs With a Primary Problem With Heroin, by Percentage, in Boston: 2003–2012

Characteristic	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Gender	%	%	%	%	%	%	%	%	%	%
Male	72	73	74	75	73	72	72	73	74	73
Female	28	27	26	25	27	28	28	27	26	27
Transgender	***	***	***	< 1	***	< 1	< 1	< 1	***	< 1
Race/Ethnicity	%	%	%	%	%	%	%	%	%	%
White	53	58	58	60	63	64	65	65	65	63
Black	20	16	16	15	13	13	13	11	12	11
Latino	24	23	22	21	21	19	18	18	19	22
Asian	1	1	1	1	1	1	1	1	1	1
Other	2	2	2	3	2	2	3	3	3	3
Age	%	%	%	%	%	%	%	%	%	%
18 or Younger	< 1	< 1	< 1	< 1	< 1	< 1	***	***	***	***
18 to 25	19	22	24	23	24	24	24	22	19	17
26 to 34	30	32	30	32	33	32	33	36	36	37
35 or Older	51	46	46	44	42	44	44	42	45	45
Total Primary Admissions N	7,737	7,999	7,749	7,692	8,323	8,338	8,500	8,288	8,084	8,227

Note: The symbol "****" represents fewer than six admissions.

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

Exhibit 4c. Demographic Characteristics of Resident Client Admissions in State-Funded Substance Abuse Treatment Programs With a Primary Problem With Other Opioids, by Percentage, in Boston: 2003–2012

Characteristic	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Gender	%	%	%	%	%	%	%	%	%	%
Male	68	67	64	68	62	67	62	67	64	64
Female	32	33	36	32	37	33	38	33	36	36
Transgender	***	***	***	***	***	***	***	***	***	***
Race/Ethnicity	%	%	%	%	%	%	%	%	%	%
White	94	92	90	89	86	84	86	86	82	78
Black	3	4	5	6	7	6	4	6	7	8
Latino	1	3	3	2	5	7	5	4	6	8
Asian	***	***	***	***	***	***	1	***	***	***
Other	2	1	2	1	2	2	4	4	5	4
Age	%	%	%	%	%	%	%	%	%	%
18 or Younger	3	3	3	***	***	2	***	***	***	***
18 to 25	45	35	33	36	31	28	26	27	25	20
26 to 34	25	28	24	25	28	29	31	35	33	40
35 or Older	26	34	40	37	41	42	42	37	42	40
Total Primary Admissions N	492	460	534	476	454	600	708	777	666	518

Note: The symbol "****" represents fewer than six admissions.

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

Exhibit 4d. Demographic Characteristics of Resident Client Admissions in State-Funded Substance Abuse Treatment Programs With a Primary Problem With Marijuana, by Percentage, in Boston: 2003–2012

Characteristic	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Gender	%	%	%	%	%	%	%	%	%	%
Male	76	69	79	77	74	77	81	77	71	76
Female	24	31	21	23	26	23	19	23	28	24
Transgender	***	***	***	***	***	***	***	***	***	***
Race/Ethnicity	%	%	%	%	%	%	%	%	%	%
White	22	22	20	23	17	20	18	19	22	19
Black	53	54	55	52	56	52	55	54	46	47
Latino	21	20	21	22	22	23	22	23	23	26
Asian	1	1	***	***	***	1	***	***	***	1
Other	3	4	3	3	3	5	5	4	8	7
Age	%	%	%	%	%	%	%	%	%	%
18 or Younger	17	5	14	6	4	7	4	8	14	13
18 to 25	47	46	43	47	50	48	43	45	40	39
26 to 34	22	26	22	25	27	24	30	26	23	26
35 or Older	15	23	21	22	19	21	22	20	24	22
Total Primary Admissions N	831	658	694	717	689	641	805	744	597	526

Note: The symbol "****" represents fewer than six admissions.

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

Exhibit 5. Number and Percentage of Police Department Arrests, by Drug Class¹, in Boston: 2009–2012

Drug Class	2009	2010	2011	2012
	% (n)	% (n)	% (n)	% (n)
A (Mostly Heroin)	22.4 (716)	21.7 (623)	24.6 (592)	28.3 (803)
B (Mostly Cocaine)	49.4 (1,575)	47.9 (1,376)	49.0 (1,178)	42.6 (1,209)
D (Mostly Marijuana)	21.2 (677)	21.3 (613)	17.9 (431)	18.1 (513)
Other	7.0 (222)	9.1 (263)	8.5 (204)	11.1 (316)
Total Drug Arrests N	3,190	2,875	2,405	2,841

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 6. Top 20 Drug Reports From Boston Area Drug Items Seized and Analyzed by NFLIS Laboratories, by Substance¹ and Percentage: 2009–2012

Drug	2009	2010	2011	2012
	%	%	%	%
Marijuana/Cannabis	20.7	23.2	23.1	26.8
Cocaine	25.4	24.2	21.7	18.7
Heroin	14.5	13.1	15.3	17.6
Oxycodone	6.3	8.3	9.5	7.6
Buprenorphine	2.5	3.2	3.5	3.1
Naloxone	0.6	1.2	1.7	2.5
Clonazepam	2.6	2.7	2.7	2.2
Acetaminophen	1.2	1.3	1.3	1.5
Alprazolam	1.5	1.9	1.6	1.3
Amphetamine	0.7	1.2	1.0	1.3
Gabapentin	0.6	1.0	1.1	0.9
Clonidine	0.6	0.7	0.8	0.6
Hydrocodone	0.9	0.9	0.6	0.5
Methadone	0.6	0.6	0.5	0.5
Phenylimidothiazole Isomer	2.8	0.8	0.8	0.4
Undetermined				
Lorazepam	0.4	0.4	0.5	0.4
Quetiapine	0.5	0.6	0.5	0.4
Morphine	0.3	0.3	0.4	0.4
Methylone (N-Methyl-3,4-Methylenedioxycathinone)	—	—	—	0.3
Methamphetamine	0.3	0.4	0.3	0.3
Total Number of Reports	23,547	27,409	21,920	19,310

¹Percentages based on total number of drug reports.

SOURCE: NFLIS, DEA

Exhibit 7. Retail (Street-Level) Drug Price, Purity, and Availability in New England: July 2012–December 2012

Drug	Price	Availability
Heroin	\$50–\$200 per gram \$70–\$85 per bundle \$5–\$50 per bag	Readily Available
Cocaine (Powder)	\$18–\$130 per gram	Available
Crack	\$10–\$100 per rock	Available
Marijuana	\$80–\$350 per ounce	Readily Available
Methamphetamine	\$90–\$200 per gram	Low
MDMA (Ecstasy)	\$10–\$30 per tablet	Low
OxyContin®	\$30–\$120 per 80 milligrams	Readily Available
Percocet®	\$14–\$30 per 30 milligrams	Readily Available
PCP	\$10–\$20 per tea leaf bag (1–2 grams)	Low
Ketamine	\$75–\$100 per dosage unit	Available
GHB (Gamma Hydroxybutyrate)	\$150 per ounce	Available
Psilocybin (Mushrooms)	\$1,000 per pound	Low

SOURCE: New England Field Division, DEA

Patterns and Trends of Drug Abuse in Chicago: 2012

Lawrence J. Ouellet, Ph.D.¹

ABSTRACT

Epidemiological indicators suggested that heroin, cocaine, and marijuana continued to be the most commonly used illicit substances in Chicago during this reporting period. These drugs accounted for 90 percent of the reports from drug items seized by law enforcement and analyzed in National Forensic Laboratory Information System (NFLIS) laboratories in 2012. 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. Heroin ranked first in reasons for entering publicly funded drug treatment among Chicago residents in fiscal year (FY) 2012, second in the number of seizures by police in 2012, and essentially was tied for first with alcohol in the rate of Drug Abuse Warning Network (DAWN) emergency department (ED) heroin-involved visits in 2011. Heroin purity increased from 2006 to 2009, then declined in 2011 and 2012, although it remained within the typical range for the past decade. Cocaine indicators suggested a continuing decline. Heroin purity at the street level and the price per milligram pure in 2011 were within the typical range for the past decade, at 13.6 percent and \$0.58, respectively. The Illinois Poison Center reported an increase in calls during the summer of 2012 regarding potent heroin that required high levels of naloxone to reverse when overdoses occurred. New heroin users typically are young, White suburban residents. The increase in heroin indicators, including deaths from overdose, in the suburban counties around Chicago (specifically, DuPage, Will, and McHenry Counties) is the most important finding for the Chicago area for this reporting period. Cocaine fell to third in the number of drug reports among items seized and analyzed NFLIS, behind marijuana and heroin. Cocaine also fell to third among reasons for entering publicly funded treatment programs in FY 2009 and then fell to fourth in FY 2012. ED rates for cocaine in the DAWN database declined significantly between 2004 and 2011 and from 2009 to 2011. Among detainees at the Cook County Jail who participated in the Arrestee Drug Abuse Monitoring Program (ADAM) II urinalyses and self-reports indicated declines in cocaine use. Hydrocodone (compared with oxycodone) continued to be the most available prescription opioid to nonprescribed users. While these drugs were reported far less often than heroin in the DAWN ED database, weighted rates significantly increased between 2004 and 2011 for hydrocodone (106 percent) and oxycodone (81 percent). In the 2011 Youth Risk Behavior Survey (YRBS), these drugs were the third most mentioned by 9th–12th grade students, after marijuana and inhalants. Methamphetamine indicators suggested little use in Chicago; the drug was most often found in downstate and western Illinois. Marijuana use (ever) among 9th–12th grade students in Chicago remained approximately level. The Drug Enforcement Administration and Chicago Police Department reported increases in supply sources for marijuana, including local grow houses. MDMA (3,4-methylenedioxymethamphetamine)

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indicators suggested low but increasing use, including among 9th–12th grade students. ED rates for MDMA-involved visits were significantly higher in 2011 compared with 2010 (an increase of 71 percent) and 2004 (an increase of 221 percent). Ethnographic reports suggested that MDMA (or drugs sold as MDMA) was popular among young, low-income African-Americans and was readily available. The 2011 YRBS indicated a continuing increase in inhalant use by students. NFLIS data showed sizeable increases in reports from seized and analyzed drug items identified as piperazines (primarily BZP [1-benzylpiperazine]), substituted cathinones (e.g., “bath salts”), and cannabimimetics (synthetic marijuana) and a decrease in tryptamines. PCP (phencyclidine) indicators showed low levels of use, although reports for PCP among analyzed drug items remained above the national average. Some indicators suggested continuing increases in benzodiazepine use.

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 21 U.S. areas monitor trends in drug abuse using the most recent data from multiple sources.

Area Description

Because of its geographic location and multifaceted transportation infrastructure, Chicago is a major hub for the distribution of illegal drugs throughout the Midwest. Located in northeastern Illinois, Chicago stretches for 25 miles along the shoreline of the southern tip of Lake Michigan. The 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 8.8 percent in December 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) 2002–2012 (July 1–June 30) were provided by the Illinois Division of Alcoholism and Substance Abuse (DASA).

Declines in drug treatment episodes should be understood within the context of reductions in the availability of treatment. Treatment episodes declined by 49 percent from 67,778 in FY 2007 to 34,807 in FY 2010 and then increased by 9 percent in FY 2012 to 37,986.

- **Emergency department (ED) data** were derived for calendar year 2011 from the Drug Abuse Warning Network (DAWN). It should be noted that significance tests for changes in DAWN data did not compare the most recent (2011) data with all previous years. Instead, the 2011 data were compared only with 2004, 2009, and 2011 data.
- **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) 2009–2012. Data for 2012 are preliminary and are subject to change. Drug seizure data also came from the DEA's Chicago Field Division, which is composed of the States of Indiana, Minnesota, North Dakota, Wisconsin, and the Northern and Central Federal Judicial Districts of Illinois.
- **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 five 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. Data were collected between April 1 and July 15 and then statistically annualized to represent the entire year. During that period, 1,938 interviews were conducted and 1,736 urine specimens were collected from a probability-based sample of adult male booked arrestees within 48 hours of their arrest. When weighted, the samples represented 14,155 persons arrested and booked in the 5 ADAM counties during the data collection period. Since 2007, in these 5 sites alone, almost 15,000 interviews have been conducted and almost 13,000 urine specimens have been tested, representing more than 100,000 arrests.
- **Drug-related mortality data** on deaths were obtained from the Will County Coroner's Office, the *Northwest Herald*, the AIDS Foundation of Chicago, and American Civil Liberties Union.
- **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 HDMP 2011 data from the DEA. Ethnographic data on drug availability, prices, and purity are from observations conducted by the Community Outreach Intervention Projects (COIP), School of Public Health, 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.

- **Drug use estimates** were derived from the NIDA-funded “Sexual Acquisition and Transmission of HIV—Cooperative Agreement Program” (SATHCAP) 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.

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.

ED mentions for cocaine in the DAWN database (weighted rates per 100,000 population) declined for the fifth consecutive year between 2006 and 2011. The rate in 2011 (233) was significantly lower ($p<.05$) by 5 percent compared with 2009 (248) and by 29 percent compared with 2004 (336).

The number of treatment episodes for primary cocaine use in Chicago continued to decline from the FY 2006 peak of 17,764, to 7,272 in FY 2010, and to 5,665 in FY 2012 (exhibit 1). While budget cuts contributed to a 44-percent reduction in all treatment episodes between FY 2007 and FY 2012, cocaine episodes experienced the greatest decline during this period (by 66 percent). The majority of cocaine clients (82 percent) reported treatment for crack cocaine use, which was a lower proportion than in FY 2011 (89 percent). Cocaine was the most commonly mentioned secondary drug among clients treated for primary alcohol and heroin problems. In FY 2012, African-Americans remained the largest group treated for cocaine abuse (at 80 percent); more males sought services for cocaine addiction (61 percent) than females (exhibit 1).

Among the 430 male arrestees sampled in 2012 by ADAM II at the Cook County Jail, 395 (94 percent) consented to interviews, and 374 of them (95 percent) provided a urine sample for drug testing. Most of the arrestees (86 percent) tested positive for at least one illicit drug. More than one-fifth (22 percent) were positive for multiple drugs, a significantly lower level ($p \leq .01$) than found in the 6 years in which ADAM was conducted (between 2000 and 2008). Nineteen percent were urinalysis-positive for cocaine. This proportion marked the fourth consecutive year of decline and was significantly lower ($p < .01$) than in 2007 (41 percent), 2008 (44 percent), and 2009 (33 percent, $p \leq .05$). Self-reported crack use in the 30 days before arrest declined for the fourth consecutive year and was significantly lower ($p \leq .01$) in 2012 (at 9 percent) compared with 2007 and 2008 (at 23 percent in both years). Chicago arrestees were the least likely (at 2 percent) to report using powdered cocaine in the 30 days before arrest.

For the first time since at least 2000, cocaine reports among drug items seized and analyzed by NFLIS laboratories fell to third among all drug reports in 2012, following marijuana/cannabis and heroin and constituting 16 percent of total drug reports. This represented a decline from 22 percent in 2009 and 20 percent in 2010 (exhibit 2).

The amount of cocaine seized by the DEA's Chicago Field Division in FY 2012 declined for the eighth consecutive year to the lowest level in more than 20 years. The 255 kilograms of cocaine seized in FY 2012 represented a 94-percent reduction compared with FY 2007—the peak year since FY 2000—and an 86-percent reduction since 2007, the first year that cocaine shortages were reported.

The DEA reported an 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, and to \$24,000–\$45,000 in FY 2012. Ethnographic sources noted kilogram prices as high as \$35,000–\$40,000 in 2012. Prices for an ounce of powdered cocaine reported by the DEA in FY 2012 ranged from \$600 to \$1,700, and ethnographic sources reported a range of \$600–\$1,000 for 1 ounce in early 2013. Prices for 1 ounce of crack cocaine during the same periods ranged from \$750 to \$1,700, according to the DEA and ethnographic sources. Crack typically sold for \$5–\$20 per bag; this price has been stable for many years. Ethnographic reports indicated that while crack cocaine remained readily available in street markets, there continued to be reports of areas with only moderate availability. The availability of powdered cocaine was moderate to low.

When participants in the 2012 ADAM II study were asked about their most recent purchase of crack cocaine, 60 percent said they used an outdoor drug market, which was close to the levels reported in 2007, 2008, and 2009.

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 (although the decline was not statistically significant). Lifetime use for these students was 4.2 percent (CI=2.4–7.3) in 2005, compared with 6.7 percent (CI=4.3–10.1) in 2009. Although this 2009 level represented the highest level since the first YRBS survey in 1991, the difference was not statistically significant. The level was 5.9 percent (CI=4.7–9.4) in 2011 (again, not a statistically significant difference) (exhibit 3).

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 easily accessed outdoor markets. Tar heroin is available, although mostly in neighborhoods where residents are predominately of Mexican descent.

During FY 2012, heroin use was the most frequently reported reason for seeking addiction treatment in Chicago, representing 40 percent of admissions (exhibit 1). Among these treatment episodes, the most common secondary substances reported were cocaine (29 percent, down from 43 percent in 2010) and alcohol (11 percent). The number of primary heroin treatment episodes in Chicago increased to 15,360 in FY 2012, up from 13,312 in FY 2011. The increase may be due mostly to the partial restoration of funds cut in recent years. 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 approximately 27,000 in both FYs 2006 and 2007 and to 15,360 in FY 2012, largely due to declines in the availability of publicly funded treatment slots. The proportion reporting inhalation (“snorting”) as the primary route of administration declined from 81 percent in FY 2009 to 72 percent in FY 2012. 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 21 percent in FY 2012 (exhibit 1). 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 66 percent in FY 2012. 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 for heroin in Chicago were more likely to be African-American (74 percent), clients from the remainder of Illinois were more likely to be White (73 percent).

Heroin ED rates from 2004 and 2009 to 2011 were stable, but they led all substances in 2011, including alcohol, for the first time since 2004. Heroin ED rates increased significantly by 22 percent from 2010 to 2011. The rate for 18–20-year-olds declined between 2004 and 2007 to a low of 121 per 100,000, but rose to 168 per 100,000 in 2011. The same pattern was found for persons age 21–25, with rates increasing from 187 per 100,000 in 2007 to 305 per 100,000 in 2011. ED rates for heroin were twice as high for males (363 per 100,000) as for females (159).

ADAM II data indicated that 15.1 percent of male arrestees at the Cook County Jail tested urinalysis-positive for opiates in 2012; this represented a decrease from 2011 (18.6 percent) and 2009 (17.6 percent) and was significantly lower ($p < .05$) than in 2008 (28.6 percent). This was the highest level among the five ADAM II sites nationally. The average age of males testing positive for opiates in 2010–2012 was 38.7, higher than the average age for 2000–2003 (37.4 years). Whites were more likely to test positive for opiates than were African-Americans and Hispanics. Among Chicago arrestees who used heroin, 37 percent said they injected the drug (fewer than in the other four cities in the ADAM II study), up from 21 percent in 2010 and a significant increase ($p < .05$) compared with 4 of the 5 years ADAM was conducted between 2000 and 2007. When Chicago participants in the 2012 ADAM II study were asked about their most recent purchase of heroin, 92 percent said

they used an outdoor drug market. This proportion was significantly greater ($p \leq .01$) than in 2007 (55 percent), 2008 (54 percent), 2009 (38 percent), and 2011 (51 percent).

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 4). 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 22.4 percent pure in 2007, to 23.8 percent pure in 2008, and to 26.6 percent pure in 2009, and it then declined to 13.8 percent pure in 2011 and 13.6 percent pure in 2012. This change was accompanied by a decline in the average price to \$0.37 per milligram pure in 2008 and 2009. In 2012, the price per milligram pure was \$0.58.

According to NFLIS, heroin was the second most often identified drug report among items seized and analyzed in the Chicago MSA in 2012, accounting for 17.9 percent of all reports among items analyzed (exhibit 2).

The amount of heroin seized by the DEA's Chicago Field Division since 2006 has increased in every year except 2010. The 180 kilograms of heroin seized in FY 2012 represented a more than fourfold increase since 2006, which was the low point between 2000 and 2012.

The YRBS reported lifetime use of heroin among Chicago public high school students at 2.0 percent (CI=0.9–4.4) in 2005, compared with 4.7 percent (CI=3.0–7.2) in 2009 and 3.9 percent (CI=2.9–5.2) in 2011 (exhibit 3). The increase from 2005 to 2011 was statistically significant. 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. The DEA reported kilogram price ranges in FY 2012 of \$55,000–\$70,000 for South American heroin, \$55,000–\$100,000 for Mexican brown, and \$45,000–\$48,000 for Mexican black tar heroin. Ethnographic reports in 2012 regarding kilogram prices for these three types of heroin were approximately \$100,000, \$80,000, and \$60,000, respectively. For heroin whose source was unknown, kilogram prices ranged from \$51,000 to \$60,000, according to the DEA. Prices for an ounce of heroin ranged from \$2,100–\$3,200 for South American, to \$1,000–\$1,600 for Mexican brown powder, and to \$1,900–\$2,700 for Mexican black tar heroin, according to the DEA. Ethnographic sources reported a range of \$600–\$1,000 for 1 ounce of heroin (type not cited) in early 2013. Gram prices for heroin reported by the DEA ranged from \$60 to \$250, while ethnographic reports found a typical range of \$80–\$100. “Jabs” of heroin typically featured 12–13 “dime” bags for \$100. Ethnographic reports indicated that heroin was readily available in street markets. Ethnographic reports of ounce prices in the second half of 2012 for white and brown heroin averaged \$1,000–\$1,500 per ounce. DEA reports indicated gram prices for brown and tar heroin typically ranged from \$70 to \$110, while ethnographic reports in 2012 indicated that price ranges were \$80–\$150 for white heroin, \$80–\$120 for brown heroin, and \$50–\$150 for black tar heroin.

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, 2012). As

another indicator of increasing heroin use in Chicago's suburbs, the number of heroin purchases 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 30 in 2011, and to 46 in 2012 (in addition, 7 other deaths were thought to involve heroin); 45 percent of the decedents were age 25 or younger. 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

While narcotic analgesics were reported far less often than heroin in the DAWN ED database, weighted rates significantly increased between 2004 and 2011 for hydrocodone (by 106 percent) and for oxycodone (by 86 percent), but not for methadone. The age groups with the highest rates of narcotic analgesic use were 25–29-year-olds (104 per 100,000), 45–54-year-olds (99), and 34–44-year-olds (91).

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 continued decrease to 197 episodes in FY 2011 may reflect budget reductions rather than diminished demand. Likewise, the increase to 248 treatment episodes in FY 2012 may reflect on a partial restoration of funds to increase treatment availability. Treatment episodes in FY 2012 for other opiates/opioids compared with other substances had a high proportion of females (at 49 percent) and White clients (at 52 percent). Clients older than 34 constituted the largest age group, but this proportion was substantially lower in FY 2012 (50 percent) than in FY 2007 (76 percent). Oral ingestion was reported as the most frequent route of administration (with 84 percent reporting that route of administration), and marijuana was reported to be the most common secondary drug. In other areas of the State, females (at 52 percent) and Whites (at 91 percent) constituted the majority of treatment episodes; the largest age group was 26–34-year-olds (41 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 2012, 5 were opiates/opioids other than heroin: hydrocodone ($n=663$), buprenorphine ($n=134$), oxycodone ($n=114$), methadone ($n=90$), and codeine ($n=143$). A Vicodin® tablet with 7.5 milligrams of hydrocodone generally cost \$4–\$6 on the street.

Benzodiazepines/Barbiturates

In Chicago, depressants such as benzodiazepines and barbiturates are commonly taken with narcotics to enhance the effect of opiates, frequently heroin, or to help alleviate symptoms of drug withdrawal. 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 2012, DASA reported 38 treatment episodes for benzodiazepines and 11 episodes for other prescription depressants in Chicago. Males (53 percent) and Whites (87 percent) constituted the

majority of treatment episodes for benzodiazepines. NFLIS data indicated alprazolam (Xanax®) was the sixth 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. Alprazolam typically sold for \$2–\$3 for 1-milligram tablets and for \$3–\$5 for 2-milligram bars.

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 60 in FY 2011. In FY 2012, methamphetamine treatment episodes increased to 123 (exhibit 1). Recent changes, however, may to some extent reflect budget reductions and then a partial restoration of funds. 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 to 10 percent in FY 2011. In FY 2012, the proportion of African-Americans increased to 26 percent. Males (representing 80 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. The proportion who reported that smoking was the primary route of administration decreased from 65 percent in FY 2011 to 40 percent in FY 2012, while injection increased from 20 to 30 percent during that period. 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 and 1,949 in FY 2012. These figures likely were first affected by budget cuts and then by a recent budget increase. Alcohol was the predominant secondary drug used with methamphetamine in Chicago (22 percent), followed by marijuana (7 percent). Elsewhere in the State, the predominant secondary drug was marijuana (33 percent), followed by alcohol (18 percent).

Primary methamphetamine treatment episodes outnumbered those for amphetamine in Chicago and in the rest of the State. In FY 2012, there were 51 amphetamine episodes reported in Chicago. Amphetamine treatment episodes in the rest of the State numbered 335 in FY 2007, 127 in FY 2009, 145 in FY 2011, and 280 in FY 2012. Treatment for amphetamine use in Chicago more often involved males (75 percent) than females; African-Americans and Whites represented nearly all episodes and in equal proportions. Elsewhere in the State, females constituted 57 percent of treatment episodes, and 95 percent were White. Alcohol was the predominant secondary drug used with amphetamine in Chicago (17 percent), while elsewhere in the State marijuana was the predominant secondary drug (33 percent).

ADAM II data indicated that in 2011, only 0.8 percent of male arrestees at the Cook County Jail tested urinalysis-positive for methamphetamine.

ED weighted rates for methamphetamine mentions have been low since 2004, ranging from 1.7 to 3.1 per 100,000 population. The rate for 2011 (3.0 per 100,000) was not significantly higher ($p < .05$) than the levels reported in 2004, 2009, and 2010.

According to NFLIS, 0.3 percent of drug reports among items seized and analyzed in Chicago in 2012 were identified as methamphetamine (exhibit 2). Most of the methamphetamine seized by the

DEA's Chicago Field Division is produced in large laboratories based in Mexico and is bound for States other than Illinois.

According to the YRBS, lifetime use of methamphetamine among Chicago public high school students increased significantly from 1.5 percent in 2005 to 3.4 percent in 2011 (exhibit 3). 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 and more recently among some Asian ethnic groups. In the 2010 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, staff for the first time learned of a methamphetamine laboratory in an African-American neighborhood.

The DEA's Chicago Field Division reported methamphetamine prices in FY 2012 ranging from \$10,000 to \$28,000 for a pound of "ice," which typically is smoked, and \$7,000–\$7,500 for a pound of powder, which typically is snorted. Ounce prices for these types of methamphetamine were \$1,000–\$2,400 and \$500–\$1,300, respectively, while gram prices were \$80–\$150 for ice and \$50–\$125 for powder.

Marijuana

Marijuana continued to be the most widely available and used illicit drug in Chicago and in Illinois. Marijuana users represented 17 percent (6,625) of all treatment episodes in Chicago in FY 2012 (exhibit 1). The proportion of marijuana treatment episodes was similar to those for FYs 2007, 2009, and 2011. 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). There were higher proportions of primary marijuana treatment episodes for males (80 percent) than for females and for African-Americans (72 percent) than for other ethnicities.

Among arrestees in the ADAM II study, 58 percent tested urinalysis-positive for marijuana; this was the second highest proportion among the five sites. Males age 25 and younger were more likely to test positive for marijuana than were older male arrestees. When participants in the 2011 ADAM II survey were asked about their most recent purchase of marijuana, 62 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, 2009, and 2011 proportions (66, 63, and 69 percent, respectively).

The ED weighted rate for marijuana in 2011 (161 per 100,000) was the highest since 2004, but it did not significantly differ ($p<.05$) from levels in 2004, 2009, and 2010.

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 the DEA's Chicago Field Division, the price for 1 pound of marijuana in FY 2012 generally ranged from \$1,800 to \$4,800 for high quality grades such as sinsemilla and "BC Bud" and was \$400–\$700 for lower quality domestic and Mexican grades. Ounce prices for marijuana were \$250–\$500 for high-grade varieties and \$30–\$225 for low-grade varieties, according to the DEA. Ethnographic reports in Chicago for late 2012 found prices for high quality marijuana of around \$3,000 per pound and \$350–\$450 per ounce and low quality marijuana prices of \$800 per pound and \$90–\$100 per ounce. On the street, marijuana was most often sold in bags for \$5–\$35 or as blunt cigars.

NFLIS laboratories analyzed more marijuana samples than samples for any other drug in 2012. Fifty-six percent of drug reports among items analyzed by NFLIS laboratories in Chicago in 2012 were identified as marijuana/cannabis (exhibit 2), a substantially larger proportion than for the Nation as a whole (33 percent).

According to the 2011 YRBS, lifetime marijuana use among 9th–12th grade public school students in Chicago was 14 percent lower than its 2001 peak of 49.3 percent, although the difference was not statistically significant. In 2011, 42.6 percent of students reported ever smoking marijuana. Marijuana use in the past 30 days was reported by 25.0 percent of students in 2011 (CI=21.4–28.9), compared with 22.2 percent (CI=19.2–25.5) in 2009; this difference was not statistically significant (exhibit 3). 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 percent (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 2012, there were 361 reports among drug items seized and analyzed in NFLIS laboratories identified as compounds designed to mimic marijuana (cannabimimetics), which was more than in 2011 ($n=180$). There were 21 distinct formulations of these items, and the most common was AM-2201 (at 41 percent of all such items), XLR-11 (at 21 percent of all such items), and UR-144 (at 13 percent of all such items). The sale of these 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, “ecstasy,” MDMA (3,4-methylenedioxyamphetamine), or drugs sold as ecstasy (primarily BZP [1-benzylpiperazine]) continued to be the most prominently identified of the “club drugs,” and their use in Chicago appeared to be most common among African-Americans. In FY 2012, there were only 37 treatment episodes for MDMA use in Chicago and 45 in other areas of Illinois. Treatment episodes in Chicago more often involved males (81 percent), African-Americans (89 percent, an increase from 77 percent in 2011), and clients age 18–25 (54 percent). In other areas of Illinois, treatment episodes most often involved males (71 percent), Whites (53 percent) and African-Americans (34 percent), and clients age 18–25 (66 percent). In Chicago and other areas of Illinois, the most commonly reported secondary drug was alcohol (41 percent), while in other areas of Illinois it was marijuana (58 percent).

According to the YRBS, lifetime use of MDMA among 9th–12th grade students in Chicago was 3.3 percent in 2005, compared with 6.4 percent in 2007, 6.5 percent (CI=4.6-9.0) in 2009, and 6.9 percent in 2011 (CI=5.6–8.4) (exhibit 3). The increase from 2005 to 2011 was statistically significant. 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.

The ED weighted rate for MDMA mentions was significantly higher ($p<.05$) in 2011 compared with 2010 (71 percent) and 2004 (220 percent).

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 and to 0.7 percent in 2012 (exhibit 3). BZP 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 to 461 in 2011 but then increased to 639 in 2012, when they constituted 0.9 percent of all NFLIS items (exhibit 2).

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. Ethnographic reports indicated that 2012 retail prices ranged from \$5 to \$30 per pill, and the drug most often sold for \$10–\$20.

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 increase in BZP reports observed in NFLIS data (exhibit 2) suggests that BZP may more often be present in drugs sold as ecstasy than in 2011.

Foxy Methoxy

“Foxy methoxy” (5-methoxy-N,N-diisopropyltryptamine [5-MeO-DIPT]), a tryptamine that produces a hallucinogenic experience for users, was the 13th ($n=245$) most frequently identified drug report among drug items seized and analyzed by NFLIS laboratories in 2012, a decline since 2011. There were also 25 reports of dimethyltryptamine (DMT) in 2012.

Substituted Cathinones

In 2012, there were 525 reports in NFLIS of psychoactive drugs commonly found in substances marketed as “bath salts” (substituted cathinones) among analyzed drug items, up from 159 reports in 2011. Among these items, there were 343 reports of MDPV (3,4-methylenedioxypropylvalerone), 90 reports of methylone (n-methyl-3,4-methylenedioxycathinone), 34 reports of 4-mec (4-methyl-n-ethylcathinone), 27 reports of alpha-PVP (alpha-pyrrolidinopentiophenone), and 15 reports of butylone.

GHB

GHB (gamma hydroxybutyrate) is a central nervous system depressant with hallucinogenic effects. There were 14 GHB reports among drug items seized and analyzed by NFLIS laboratories in Chicago in 2012. 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 2012 indicated the use of GHB in nightclubs was uncommon. No prices were obtained for GHB during this reporting period.

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 2012 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. Ketamine reports increased, however, to 50 reports in 2011 and then declined to 30 reports in 2012 (exhibit 2). No prices were obtained for ketamine during this reporting period.

PCP, LSD, and Other Hallucinogens

In FY 2007, treatment episodes in Chicago for PCP (phencyclidine) totaled 60, and “other hallucinogens,” which includes LSD (lysergic acid diethylamide), totaled 25. PCP episodes increased to 126 in 2009, 148 in 2011, and 155 in FY 2012. There were 42 treatment episodes for other hallucinogens in FY 2012. The majority of treatment episodes for PCP occurred among African-Americans (78 percent), while males and females were nearly equally represented (52 and 48 percent, respectively).

In general, both PCP and LSD use in Chicago remained low, although street reports suggested PCP use was fairly common in some neighborhoods. NFLIS reports for PCP (451) and LSD (34) among drug items seized and analyzed totaled 0.7 and 0.1 SAQ percent, respectively, of all reports in 2012 (exhibit 2). Only 0.8 percent of arrestees sampled for ADAM II in 2012 tested urinalysis-positive for PCP, the highest level among the five sites but less than the level in 2011 (1.4 percent).

Ethnographic reports on PCP use in 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 in the suburbs.

INFECTIOUS DISEASES RELATED TO DRUG ABUSE

There were 21,208 persons known to be living with HIV/AIDS in Chicago in 2010 and an estimated total of 25,000 persons infected when undiagnosed infections are included. Of the 953 new cases of HIV (not AIDS) diagnosed by the end of 2010, only 11 percent cited injection drug use as a risk factor; this proportion was well below the 26 percent reported in 2000. Male-to-male sexual contact continued to be the leading single mode of transmission (at 69 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 to increase 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 STIs. 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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Exhibit 1. Demographic Characteristics of Clients Served in Publicly Funded Treatment Programs, by Primary Substance and Percentage, in Chicago: FY¹ 2012

Characteristics N=50,424	Heroin n=15,360	Cocaine n=5,665	Alcohol n=7,984	Marijuana n=6,625	Other Opioids n=248	Metham- phetamine n=123
Percentage of Total	40	15	21	17	1	<1
Gender						
Male	56	61	75	80	51	80
Female	44	40	25	20	49	20
Race/Ethnicity						
White	15	10	23	7	52	46
African-American	74	80	53	72	36	26
Hispanic	10	9	21	18	10	10
Other	<1	<1	1	1	1	11
Other Single Race	1	1	2	2	1	7
Age						
17 or Younger	<1	<1	3	40	2	0
18–25	5	5	10	32	13	24
26–34	12	11	22	17	36	33
35 and Older	83	83	65	11	50	44
Route of Administration						
Oral	3	7	100	3	84	20
Smoking	3	82	—	96	4	40
Inhalation	72	9	—	1	10	7
Injection	21	1	—	<1	14	30
Secondary Drug	Cocaine: 29	Alcohol: 36	Cocaine: 21	Alcohol: 33	Marijuana: 14	Alcohol: 14

¹Fiscal year= July 1–June 30.

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

Exhibit 2. Drug Reports Among Items Seized and Analyzed by Forensic Laboratories, for Select Drugs, by Number and Percentage of Total, in the Chicago MSA: CYs¹ 2010–2012

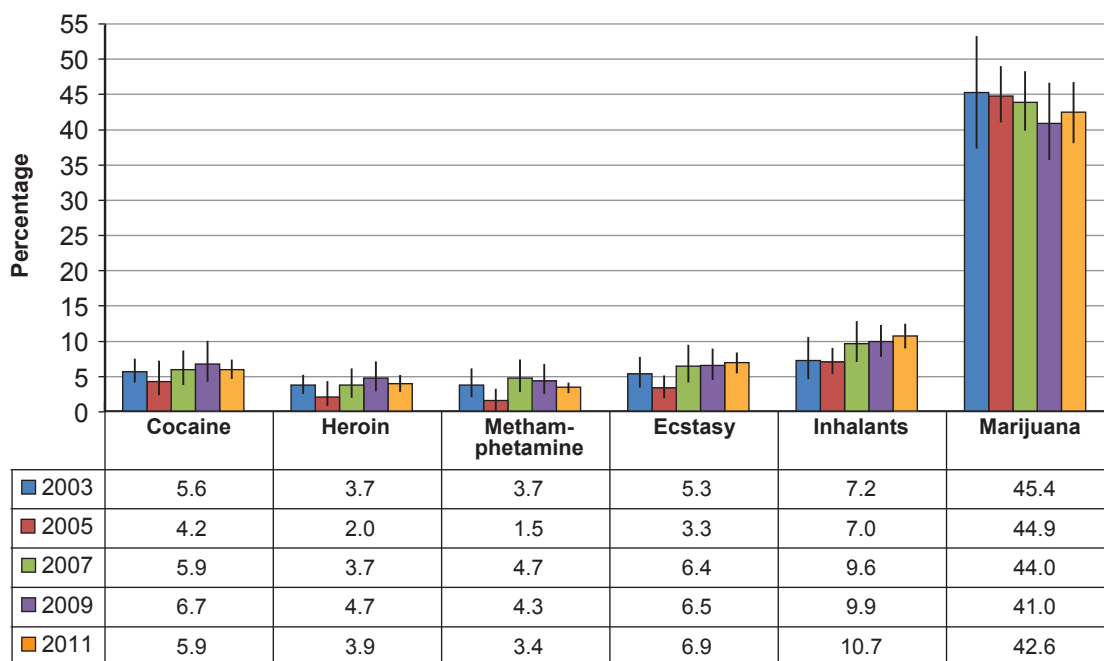
Selected Substance	2010		2011		2012	
	Count	Percent	Count	Percent	Count	Percent
Marijuana/Cannabis	47,710	59.25	41,165	56.97	38,634	56.17
Heroin	11,637	14.45	11,214	15.52	12,300	17.88
Cocaine	16,122	20.01	13,727	19.00	11,162	16.23
Clonidine	6	0.00	6	0.00	2	0.00
Methamphetamine	290	0.36	287	0.40	229	0.33
MDMA (3,4 Methyleneoxy-methamphetamine)	1,250	1.55	677	0.94	451	0.66
BZP (1-Benzylpiperazine)	542	0.67	461	0.64	639	0.93
PCP (Phencyclidine)	303	0.38	306	0.42	451	0.66
Hydrocodone	516	0.64	641	0.89	663	1.0
Methadone	105	0.13	102	0.14	90	0.96
Alprazolam	372	0.46	419	0.58	488	0.71
Psilocin	115	0.14	94	0.13	121	0.18
Codeine	62	0.08	90	0.12	143	0.21
Diazepam	51	0.06	69	0.10	55	0.08
Clonazepam	90	0.11	85	0.12	101	0.15
Oxycodone	94	0.12	128	0.18	114	0.17
Amphetamine	120	0.15	149	0.21	166	0.24
Ketamine	11	0.01	50	0.07	30	0.04
Dextropropoxyphene	16	0.02	9	0.00	3	0.00
Morphine	47	0.06	76	0.11	56	0.08
Psilocybine	22	0.03	22	0.03	18	0.03
Lorazepam	23	0.03	25	0.03	43	0.06
Pseudoephedrine	21	0.03	13	0.02	4	0.01
Chlordiazepoxide	2	0.00	1	0.00	0	0.00
LSD (Lysergic acid diethylamide)	51	0.06	39	0.05	34	0.05
Total Items Reported	80,530	100.0	72,261	100.0	68,776	100.0

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

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

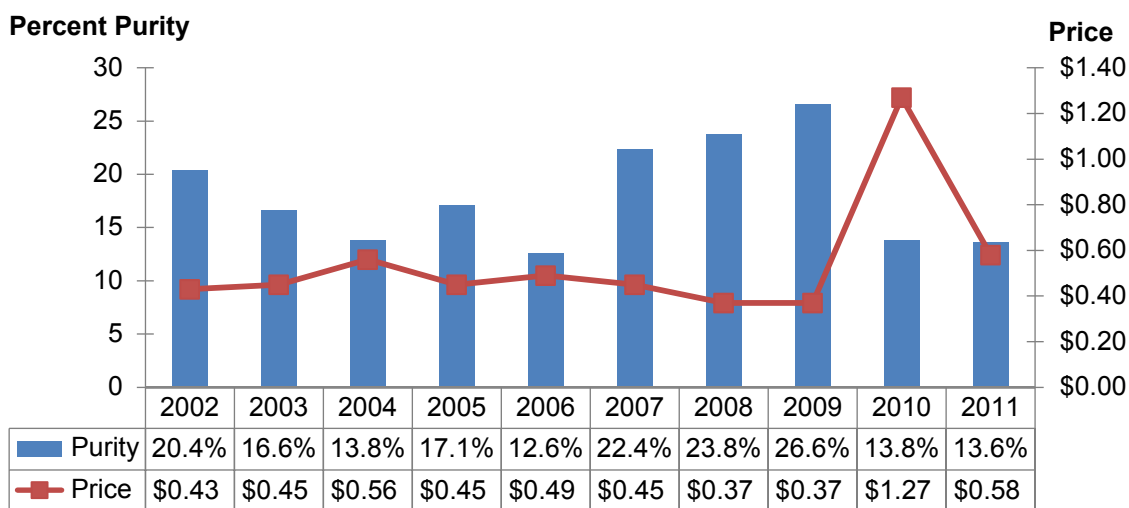
SOURCE: NFLIS, DEA

Exhibit 3. Percentage (With 95-Percent Confidence Intervals) of Lifetime Illicit Drug Use Among Public High School Students in Chicago, by Survey Year: 2003, 2005, 2007, 2009, and 2011



SOURCE: YRBS, CDC

Exhibit 4. Heroin¹ Price and Purity Trends in Chicago: 2002–2011



¹South American heroin.
SOURCE: DMP, DEA

Drug Abuse Patterns and Trends in Cincinnati, Ohio: 2012

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ABSTRACT

The two key findings in the Cincinnati area in 2012 were the increase in all heroin indicators and the decrease in all cocaine indicators. The predominant drug issues in Cincinnati continued to involve marijuana and heroin as primary drugs of abuse in 2012. Indicators for heroin continued to increase during 2012 versus the previous 4 years. Treatment for primary heroin use, combined with other opiate/opioid admissions, accounted for nearly 26 percent of all admissions. Reports for heroin from drug items submitted for forensic analysis increased by 46.5 percent in 2012 over 2011 and by 71 percent from 2010 data. The Medical Examiner recorded 54 deaths attributed to heroin alone and an additional 70 deaths with heroin in combination with other drugs. Indicators for marijuana in the Cincinnati region remained stable at high levels. Marijuana dominated all other reported illicit drugs among primary treatment admissions, accounting for 29.4 percent of the admissions during calendar year (CY) 2012. Marijuana also accounted for 38.1 percent of reports among drug items submitted for forensic analysis for Hamilton County. The indicators for crack and powder cocaine began to decrease in 2008 and continued to do so through 2012. Both the supply and quality of cocaine/crack cocaine on the street in Cincinnati dropped in 2008 as large drug seizures were recorded by law enforcement, and the effect carried over through 2012. Treatment for primary cocaine use accounted for only 8.0 percent of all admissions in 2012, compared with 9.1 percent in 2011. Methamphetamine indicators were low in Cincinnati compared with other drugs of abuse. There was a 59.7-percent increase in the number of clandestine methamphetamine laboratory seizures discovered during fiscal year (FY) 2012 compared with FY 2011. The increased number of clandestine laboratories discovered in 2012 was attributed to a higher number of one-pot method equipment findings. The increased data capture was surprising, especially in light of the loss of law enforcement funding used to clean up these sites in February 2011. 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 2012, compared with 2011. 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 use, with some indication of stabilization occurring in 2012 from 2011. A 9.7-percent decrease in human exposure cases reported to Ohio poison control centers involving buprenorphine-containing pharmaceuticals occurred in 2012 from the previous year, with 41 percent of these exposures involving children age 3 or younger. An increased number of exposures involving intentional abuse of buprenorphine were reported to poison control centers in 2012, representing 33 percent of the total cases recorded and an increase of 2 percent from the previous year. The Cincinnati poison control center recorded 198 human exposures to cannabimimetics and 371 human exposures to substituted cathinones from

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the last quarter of 2010 through June 8, 2013. The abuse of synthetic drugs continues to be an area of high concern and monitoring due to the significant 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. The U.S. Census Bureau projections indicated there were 802,038 Hamilton County residents in 2012, a decrease of 0.04 percent from the previous projection in 2011. The U.S. Census Bureau estimations from the 2012 census showed 296,550 residents in the city of Cincinnati, a loss of 0.1 percent from the previous projection in 2010. The Cincinnati population distribution recorded from the 2010 projection included 49.3 percent White, 44.8 percent African-American, and 2.8 percent Hispanic. By comparison, residents of Hamilton County were 67.6 percent White, 25.8 percent African-American, and 2.7 percent Hispanic according to the latest projection recorded in 2011.

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 continued to identify 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 Cincinnati/Northern Kentucky 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 drugs 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) 2010–2012 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 they may not correlate with previous data since the timeframe of the latter data capture was calendar year rather than fiscal year data. Data for CY 2012 were provided by the Ohio Department of Alcohol and Drug Addiction Services and do not provide for direct comparison to previous data capture or reports.

- **Poison control center data** were provided by the Cincinnati Drug and Poison Information Center (DPIC) for CYs 2005–2012. 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 two Ohio poison control centers—the Central Ohio Poison Control Center and the Northern Ohio Poison Control Center—for CYs 2007–2012. Additional data regarding human exposures to synthetic drugs of abuse, specifically synthetic (substituted) cathinones and THC (tetrahydrocannabinol) homologs (cannabimimetics), were provided for CYs 2010–2012 and the first 23 weeks of 2013.
- **Crime laboratory drug analyses data** for Hamilton County were provided by the National Forensic Laboratory Information System (NFLIS), Drug Enforcement Administration (DEA), for 2009–2012 and the Hamilton County Coroner’s Office for 2012. 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 2009–2012. Data for 2012 are provisional and subject to change.
- **Drug seizure data** were provided by the Cincinnati Regional Enforcement Narcotics Unit (RENU) for CYs 2006–2012.
- **Mortality data** were provided by the Hamilton County Coroner’s Office for CYs 2006–2012.
- **Drug purity and cost data** came from the DEA’s Cincinnati Resident Office for CYs 2007–2012.
- **Methamphetamine clandestine laboratory seizure data** were provided by the Ohio Bureau of Criminal Investigation (BCI) for FYs 2000–2012.

DRUG ABUSE PATTERNS AND TRENDS

Cocaine/Crack

Evidence of further decline in cocaine persisted in 2012 from the previous year. Lower cocaine availability and use continued to be reported by law enforcement. Primary cocaine accounted for only 8.0 percent of total treatment admissions during CY 2012, totaling 281 admissions (exhibit 1). The majority of these admissions involved individuals older than 35.

Poison control center data recorded a total of 50 cocaine (salt/crack) human exposure calls captured by the Cincinnati DPIC during 2012. This represented a 63-percent decrease from 2006, when 136 calls were recorded (exhibit 2). All cases involved the intentional use of cocaine (salt/crack).

The Hamilton County Coroner's Office recorded 70 deaths in which evidence of cocaine/crack use was documented by the Medical Examiner (ME) during 2012 (exhibit 3). This represented a 112-percent increase from such deaths in 2010. 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 less than 2,500 grams of cocaine from the streets of Cincinnati during 2012, representing a drop of 87.1 percent from the previous year (exhibit 4). Analysis of the purity of cocaine samples seized by the local DEA in 2012 showed that the purity of crack cocaine ranged from 31.5 to 52.5 percent, whereas the purity of cocaine hydrochloride (powder cocaine) ranged between 60.9 and 66.7 percent (exhibit 5). Impurities detected in the submitted items included tetramisole, caffeine, phenacetin, and heroin. Tetramisole (levamisole) was detected in 8 of 8 (100 percent) items submitted during 2012.

Of the 10,420 drug reports among items analyzed by NFLIS laboratories for Hamilton County in 2012, 19.2 percent were identified as containing cocaine, a decrease of nearly 31 percent from the previous year (exhibit 6).

Heroin

With persistent increases in abuse during 2012 and the previous 4 years, heroin is now one of the predominant illicit drug issues in Cincinnati after marijuana, displacing cocaine from the number two spot. Heroin and prescription opioid abuse accounted for 25.8 percent (907 admissions) of all primary treatment admissions during CY 2012 (exhibit 1). The number of heroin and opioid admissions to treatment has been rising steadily since 2007 and surpassed treatment admissions for cocaine in 2009. Slightly fewer than one-half of admissions for opioids were female, and more than 72 percent were between the ages of 18 and 34. More than 85 percent of those who cited heroin as a primary drug of abuse upon treatment entry reported injecting the drug.

Poison control center data showed that there were 119 heroin exposure calls related to intentional abuse reported during 2012, representing an increase of 54.5 percent from the 77 human exposure calls reported in 2011 (exhibit 2). The Hamilton County Coroner's Office recorded 124 deaths with evidence of heroin abuse contributing to death during 2012 (exhibit 3). This number represented a 121-percent increase over the previous year and a 342-percent increase since 2008. There were 123 deaths recorded as involving multiple substances, and of these, 56 percent of the cases involved heroin along with other substances. The majority of the heroin-related deaths were ruled accidental in nature by the Coroner's Office.

The Cincinnati RENU seized more than 8,154 grams of heroin during 2012, an increase of 287 percent from the previous year (exhibit 7). Laboratory analysis of drugs removed from the street indicated the presence of adulterants in the heroin samples submitted in 2012. Of the samples submitted, 10 different drugs were found in the heroin, 7 of which would increase the depressant effect of heroin when used together. The adulterants found that could increase harms associated with heroin use included methorphan isomer/salt, lidocaine, quetiapine, diphenhydramine, alprazolam, chloroquine, and diazepam.

Heroin accounted for 31.5 percent of reports among seized drug items analyzed by NFLIS laboratories in 2012. The proportion of heroin reports increased by 126 percent between 2010 (13.9

percent) and 2012 (exhibit 6). The purity of heroin varied greatly, ranging from 15.4 to 46.7 percent pure during 2012 (exhibit 5).

Other Opiates/Opioids

Primary admissions in CY 2012 for prescription opioid abuse were not separated from heroin users; together they accounted for 25.8 percent (907 admissions) of total admissions (exhibit 1). There was a slight predominance of females, 55 percent, among those entering treatment for primary prescription opioid abuse. The reported routes of administration of either sniffing (insufflation) or injection accounted for a total of 29.3 percent of these treatment admissions.

Poison control center data showed that hydrocodone and oxycodone pharmaceutical products were more likely to be abused than other opiates/opioids available (exhibit 8). There were a total of 273 exposure calls for intentional abuse, including suicide, of oxycodone products during CY 2012, representing a decrease of 19.2 percent from 2010. The number of hydrocodone-combination narcotic exposures in 2012 for intentional abuse, including suicide, totaled 330, representing a leveling off from 2011. The number of methadone cases recorded during 2012 was 36; this was a decrease of 25 percent from 2010 (exhibit 9). The number of oxymorphone cases recorded in 2012 was 17; this was a decrease of 54 percent from the previous year.

Among drug items analyzed by NFLIS laboratories in 2012, oxycodone accounted for 2.9 percent of the total reports, a decrease of 4.4 percentage reports from 2010. Hydrocodone represented 1.2 percent of all reports, and other opiates/opioids accounted for 1.4 percent of the reports among analyzed drug items in 2012 (exhibit 6).

The Hamilton County Coroner's Office recorded 120 deaths during 2012 that had evidence of prescription opioid use on the part of the decedent, representing a 25-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 15 deaths with measurable levels of methadone and 8 with fentanyl in 2012 (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. Several indicators showed a leveling off of oxycodone abuse in the 2 years following the reformulation. Qualitative sources and law enforcement previously described a shift from OxyContin® to Opana® (oxymorphone), as well as heroin and immediate-release oxycodone products. It was expected that the reformulation of Opana® ER would result in another shift in opioid abuse patterns. Some evidence of a decrease in Opana® abuse is beginning to emerge, so 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 but showed some variability from the previous year. Poison control data indicated a total of 15 intentional abuse exposures, including suicide, to methamphetamine reported in 2012.

Methamphetamine reports among drug items seized and analyzed by NFLIS laboratories in 2012 totaled 59, accounting for only 0.6 percent of the total drug reports (exhibit 6). This number represented a slight increase from the previous year.

There were 599 methamphetamine incidents involving laboratories, dumpsites, and chemical/glass findings throughout Ohio reported in FY 2012. This represented a nearly 60-percent increase in methamphetamine sites reported from the previous year (exhibit 11). Law enforcement lost funding in February 2011 that provided needed money to clean up methamphetamine laboratory sites in Ohio, and it was expected that a lower number of sites would be reported as a result. Law enforcement indicated that many of the sites reported during FY 2012 involved finding the remains of the “one pot” or “shake-n-bake” method of methamphetamine manufacture.

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, all four casinos have opened, the last being the Cincinnati casino (which opened March 5, 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 2012, and it was reported as both widely available and widely used. Marijuana accounted for 29.4 percent (1,032 admissions) of total treatment admissions in CY 2012 (exhibit 1). The majority of those entering treatment and citing marijuana as a primary drug of abuse were male (75.6 percent), and 33.7 percent of marijuana treatment admissions were age 17 or younger.

Poison control center data reported 69 human exposure cases involving intentional abuse of marijuana, including suicide, in 2012 (exhibit 2).

Marijuana/cannabis was the most frequently reported drug identified among items analyzed by NFLIS laboratories, representing 34.1 percent of the total drug reports for 2012 (exhibit 6). The Cincinnati RENU recorded seizures of nearly 234 kilograms of marijuana during 2012 (exhibit 12).

Benzodiazepines

Benzodiazepine reports among drug items seized and analyzed by NFLIS laboratories in 2012 totaled 2.1 percent of total reports (exhibit 6). Poison control center data showed 995 intentional human exposure cases reported with benzodiazepine use in 2012; 32.1 percent of the cases involved alprazolam, and another 35.6 percent involved clonazepam. Overall, there was a decrease of 8.6 percent for poison control center cases involving benzodiazepines in 2012 from the previous year.

MDMA

Indicators for MDMA abuse continued to be present at a low level in 2012. Poison control center data reported a total of 15 intentional abuse exposures to MDMA for 2012; this was a 40-percent decrease from 2011.

There were 13 MDMA reports among drug items seized and analyzed by NFLIS laboratories in 2012, accounting for 0.1 percent of total reports. BZP (1-benzylpiperazine), a piperazine derivative

sold as MDMA in the United States, accounted for 48 reports among drug items submitted to NFLIS laboratories for analysis (0.5 percent of total reports) (exhibit 6).

Emerging Patterns

Patterns of use of buprenorphine-containing pharmaceuticals began to become more evident in 2011, but they were not sustained in 2012. There were 41 buprenorphine reports among drug items seized and analyzed in NFLIS laboratories in 2012 (exhibit 6), ranking buprenorphine as 12th among all drug reports from drug items seized and analyzed in Hamilton County for 2012. Buprenorphine had been ranked eighth among NFLIS reports in 2011.

Human exposure data collected from all three Ohio poison control centers revealed a total number of 177 buprenorphine-related cases reported in 2012. This was a 9.7-percent decrease from 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 2012, 691 identification calls were received by the DPIC for buprenorphine-containing pharmaceuticals, a 19.3-percent decrease from 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, 33 percent of the human exposures involved intentional misuse or abuse of buprenorphine; this was a 2-percent increase from the previous year and a 12-percent increase from 2010.

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, 52 calls in 2012, and an additional 13 calls through June 8, 2013 (exhibit 14). A total number of 198 exposures were reported to the DPIC for these products to date. 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 and 11 reported in 2012. Those identified included AM-2201, JWH-250, and RCS-4 in 2011 and AM-2201, JWH-018, JWH-122, and JWH-250 in 2012.

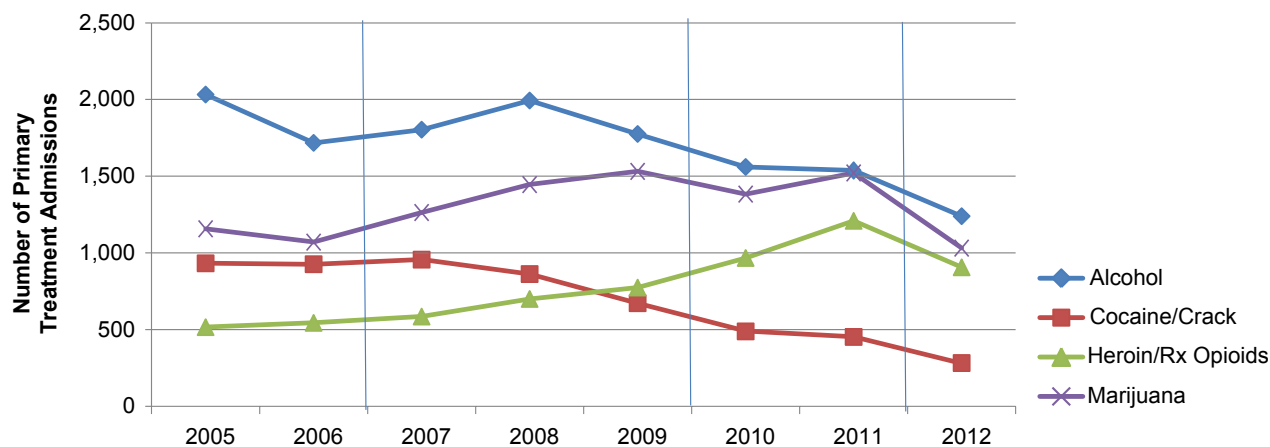
Human exposures to synthetic (substituted) cathinone products were recorded by the poison control centers during the last quarter of 2010, CYs 2011 and 2012, and through June 8, 2013. The Cincinnati DPIC recorded 2 exposures in 2010, 329 cases during 2011, 31 cases in 2012, and 9 through June 8, 2013 (exhibit 14). 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 substituted cathinones; it went into effect October 17, 2011. The six substituted cathinones banned included mephedrone (4-methylmethcathinone), methy-lone (N-methy-3,4-methylenedioxycathinone), MDPV (3,4-methylenedioxypyrovalerone), 4-MMC (4-methoxymethcathinone), 3-FMC (3-fluoromethcathinone), and 4-FMC (4-fluoromethcathinone). There were 6 drug reports of synthetic (substituted) cathinones among drug items seized and analyzed by NFLIS laboratories in Hamilton County in 2010, 4 in 2011, and 16 in 2012. 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 Dr. Bill Ralston 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), Sanford Star and Laura Potts (Ohio Department of Alcohol and Drug Addiction Services), Emily Kreager (Ohio Bureau of Criminal Investigation), and participating members of the Ohio poison control centers.

For inquiries regarding this report, contact Jan Scaglione, B.S., M.T., Pharm.D., D.ABAT, Cincinnati Children's Hospital Medical Center, Cincinnati Drug and Poison Information Center, 3333 Burnet Ave., ML-9004, Cincinnati, Ohio 45229, Phone: 513-636-5060, Fax: 513-636-5072, E-mail: Jan.Scaglione@cchmc.org.

Exhibit 1. Number of Primary Treatment Admissions, by Primary Drug of Abuse, in Hamilton County: FYs¹ 2005–2009² and CYs 2010–2012^{3,4}



¹FY=July to June.

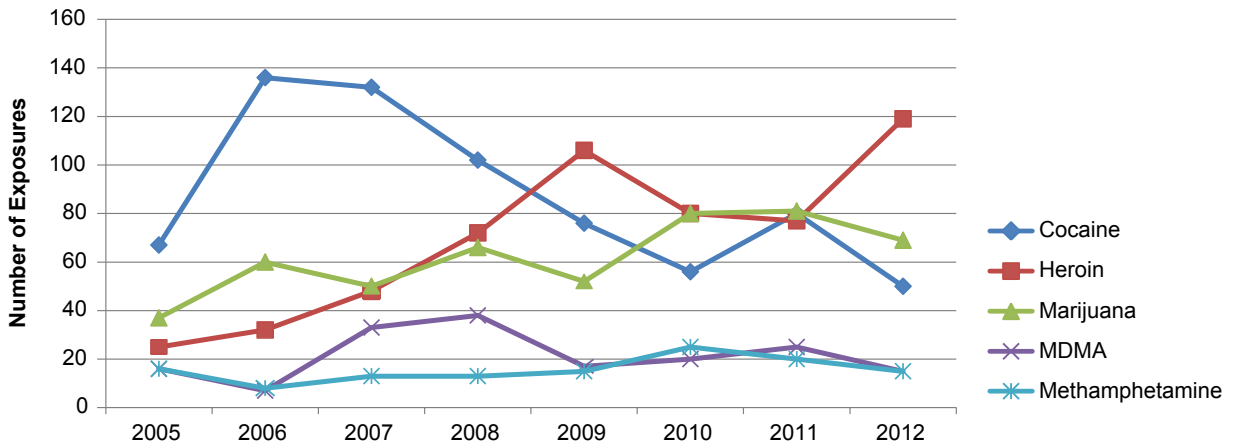
²Treatment data methodology from 2007 to 2009 differed from the previous years; direct comparison to years prior to 2007 cannot be made.

³Treatment data for 2010–2011 captured as calendar year; direct comparison to previous years cannot be made.

⁴Treatment data methodology for 2012 differed from the previous years; direct comparison to years prior to 2011 cannot be made; numbers are preliminary at press time.

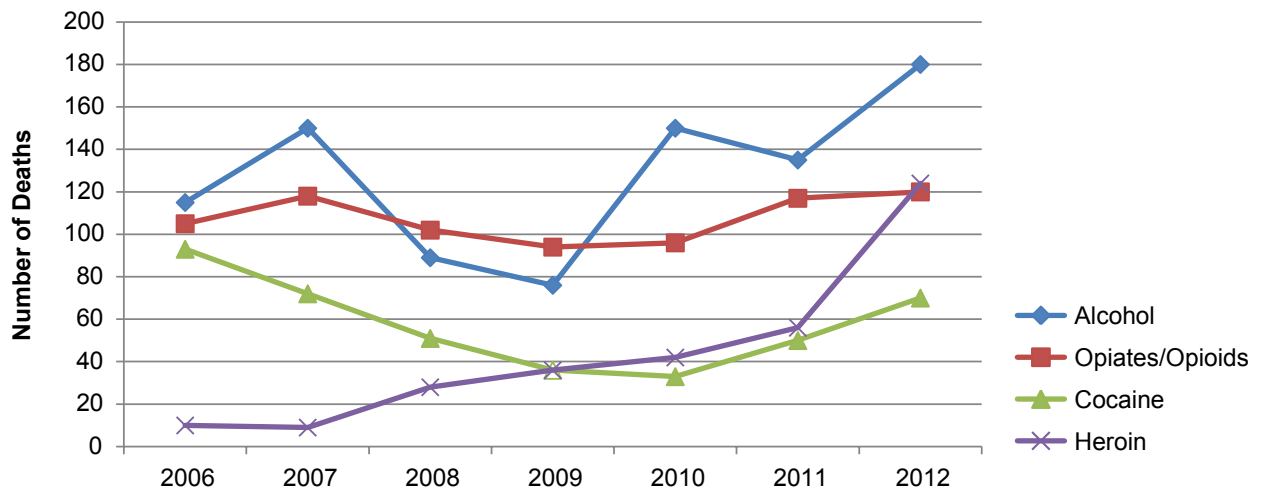
SOURCE: Hamilton County Mental Health and Recovery Services Board, Ohio Department of Alcohol and Drug Addiction Services

Exhibit 2. Number of Human Exposure Poison Control Center Cases, for Select Drugs, in Cincinnati: 2005–2012

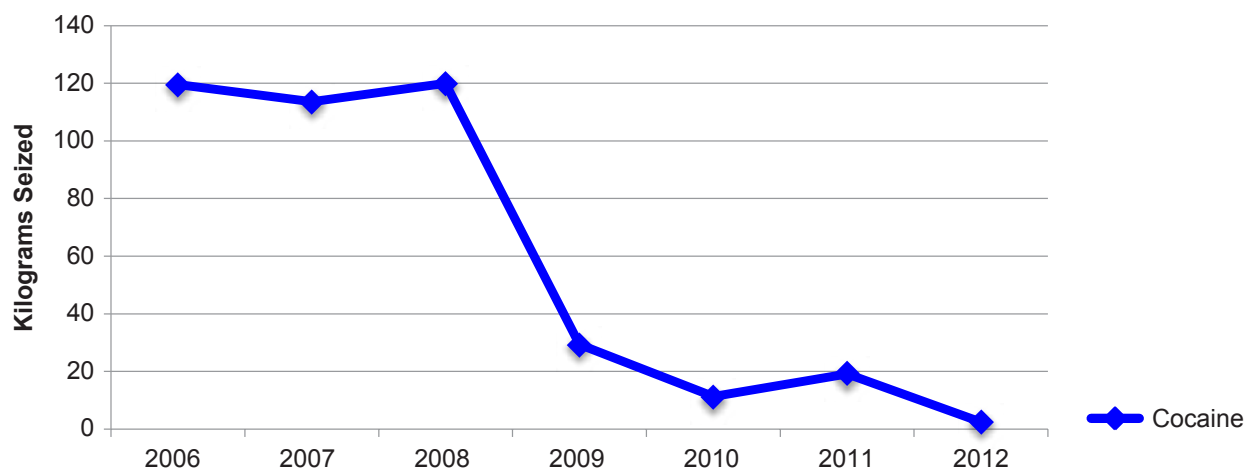


SOURCE: Cincinnati Drug and Poison Information Center

Exhibit 3. Number of Deaths, by Drugs Detected at Death, in Hamilton County: 2006–2012



SOURCE: Hamilton County Coroner's Office

Exhibit 4. Cocaine Seizures, in Kilograms, in Cincinnati: 2006–2012

SOURCE: Cincinnati Regional Enforcement Narcotics Unit

Exhibit 5. Purity Analysis of Drug Seizures, by Percentage, in Cincinnati: 2007–2012

Drug	2007 ¹	2008 ¹	2009	2010	2011	2012
	%	%	%	%	%	%
Powder Cocaine	57.5	45.8 ²	29.1–73.4 ^{2,3}	27.7–53.6 ^{2,3}	18.6–62.5 ^{3,5}	60.9–66.7 ^{3,6}
Crack Cocaine	77.0	39.2	39.4–77.5 ^{2,3}	24–81.5 ^{2,3}	70.2 ¹	31.5–52.5 ⁶
Heroin	68.0	—	24.6–94.3 ³	15.7–78.8 ³	4.2–51.9 ^{3,7}	15.4–46.7 ^{3,8}
Methamphetamine	56.3 ⁴	49.3 ⁴	46.1 ^{1,4}	—	—	92.5–99.7

¹Purity analysis represented by an average percent of all submitted items.²Impurities detected: benzocaine, tetramisole, diltiazem, sodium bicarbonate, and caffeine.³Purity analysis represented by range of purities analyzed for all items submitted.⁴Impurities detected: dimethyl sulfone (MSM).⁵Impurities detected: tetramisole, diltiazem, ibuprofen, dimethyl sulfone, diphenhydramine, and heroin.⁶Impurities detected: tetramisole, heroin, caffeine, phenacetin⁷Impurities detected: caffeine, methorphan isomer/salt, acetaminophen, lidocaine, phenobarbital, quetiapine, quinine, cocaine, diphenhydramine, alprazolam, niacinamide, chloroquine, diazepam, sodium bicarbonate, methadone, dextromethorphan, and hydroxyphenamate.⁸Impurities detected: acetaminophen, caffeine, chloroquine, methorphan isomer/salt, lidocaine, alprazolam, diazepam, diphenhydramine, quetiapine, cocaine

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: 2010–2012

Drug	2010 ¹		2011 ²		2012 ³	
	Number	Percentage of Total Items	Number	Percentage of Total Items	Number	Percentage of Total Items
Cocaine	3,637	26.37	3,022	27.74	1,998	19.17
Marijuana/Cannabis	5,448	39.51	4,284	39.33	3,975	34.15
Heroin	1,917	13.90	2,238	20.54	3,278	31.46
Oxycodone	1,016	7.37	324	2.97	304	2.92
Methamphetamine	98	0.71	26	0.24	59	0.57
Hydrocodone	347	2.52	167	1.53	125	1.20
Other Opiates/Opioids	347 ⁴	2.52	188 ⁵	1.72	144 ⁶	1.38
Benzodiazepines	427 ⁷	3.10	280 ⁸	2.57	220 ⁹	2.11
MDMA (3,4-Methylenedioxy-methamphetamine)	79	0.57	32	0.29	13	0.12
Amphetamines	73	0.53	34	0.31	31	0.30
BZP (1-Benzylpiperazine)	68	0.49	31	0.28	48	0.46

¹Total reports in items analyzed in 2010=13,790.

²Total reports in items analyzed in 2011=10,893.

³Total reports in items analyzed in 2012=10,420.

⁴Includes buprenorphine (106), morphine (74), methadone (68), codeine (26), tramadol (25), oxymorphone (17), hydromorphone (13), fentanyl (11), and dextropropoxyphene (7).

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

⁶Includes buprenorphine (41), morphine (31), methadone (31), codeine (15), hydromorphone (12), oxymorphone (8), dextropropoxyphene (1).

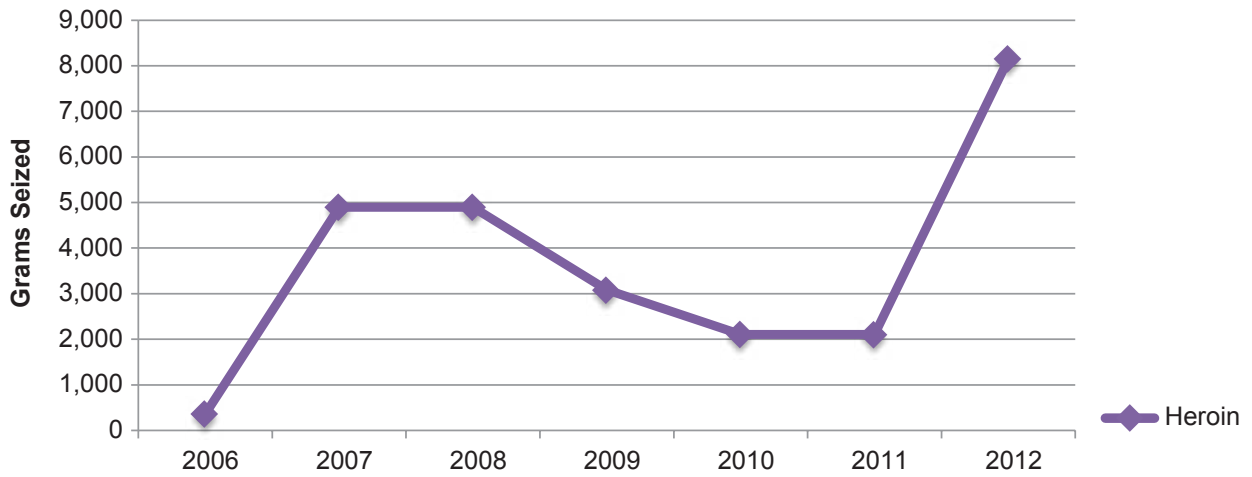
⁷Includes alprazolam (236), clonazepam (98), diazepam (72), lorazepam (16), oxazepam (2), temazepam (2), and chlordiazepoxide (1).

⁸Includes alprazolam (141), clonazepam (73), diazepam (54), lorazepam (10), and temazepam (2).

⁹Includes alprazolam (109), clonazepam (54), diazepam (53), and lorazepam (4).

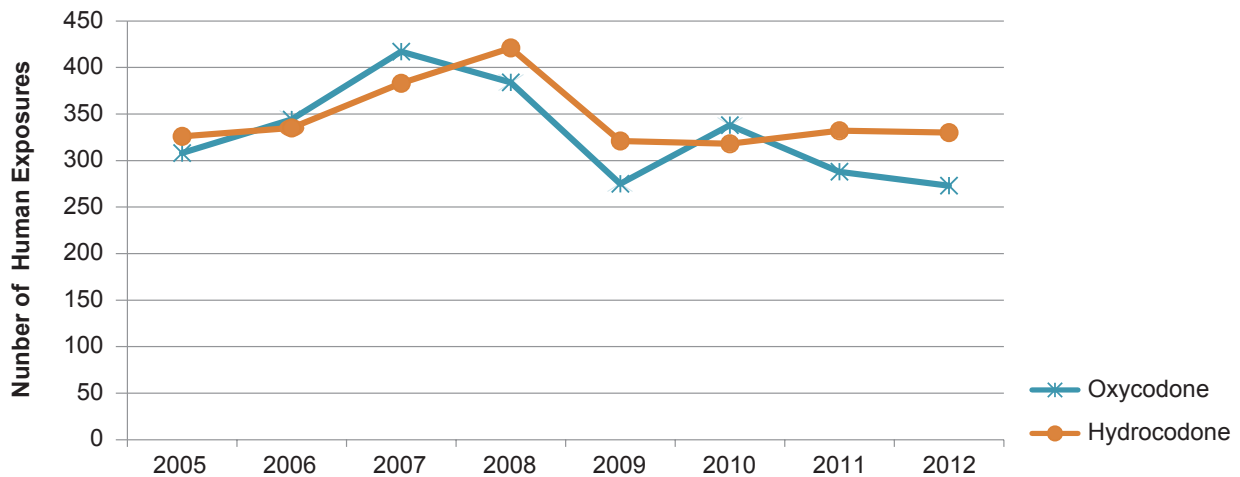
SOURCE: NFLIS, DEA

Exhibit 7. Heroin Seizures, in Grams, in Cincinnati: 2006–2012



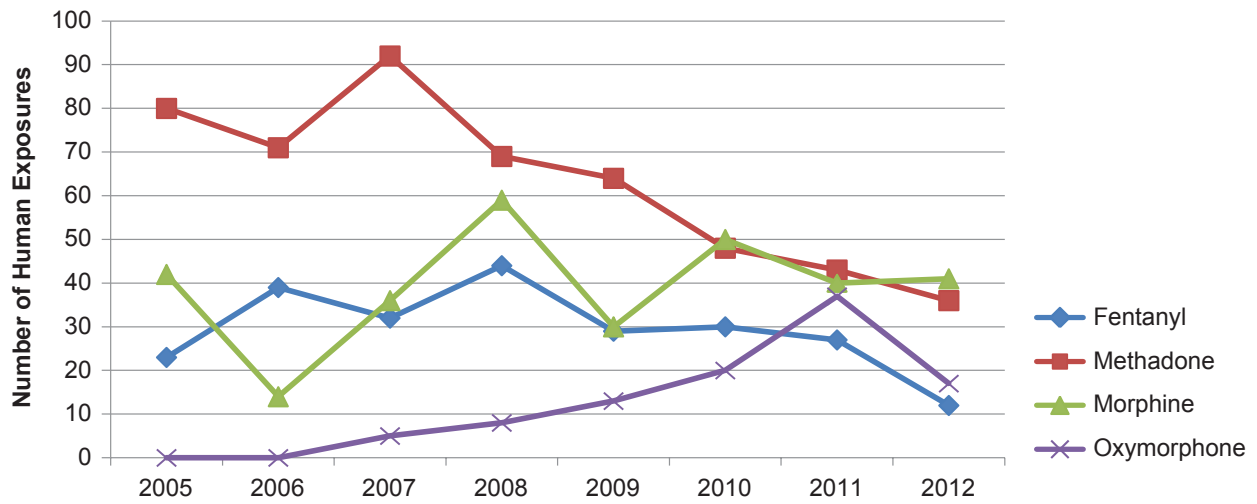
SOURCE: Regional Enforcement Narcotics Unit

Exhibit 8. Number of Human Exposure Cases, for Oxycodone and Hydrocodone, Cincinnati: 2005–2012



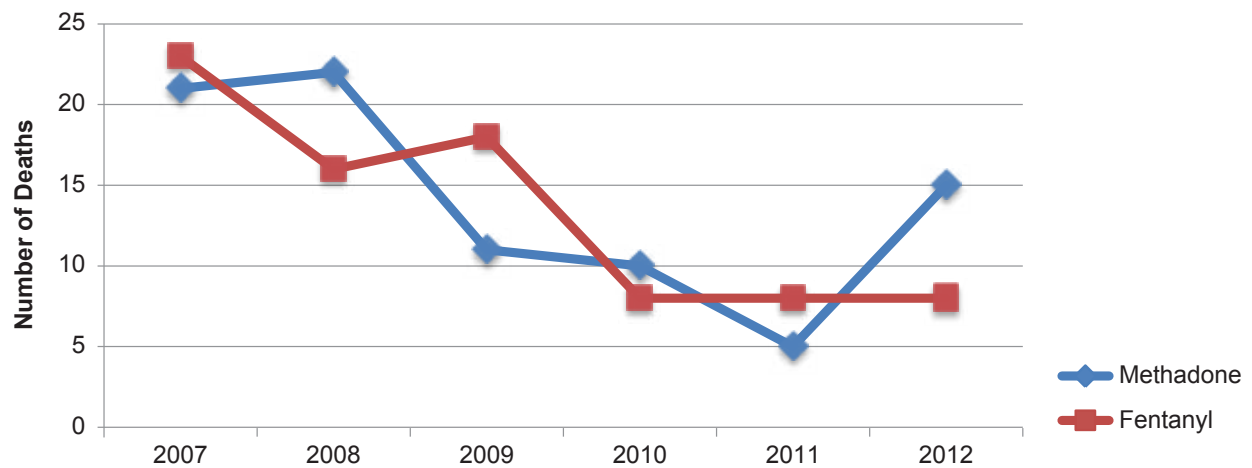
SOURCE: Cincinnati Drug and Poison Information Center

Exhibit 9. Number of Human Exposure Cases, for Select Drugs, in Cincinnati: 2005–2012



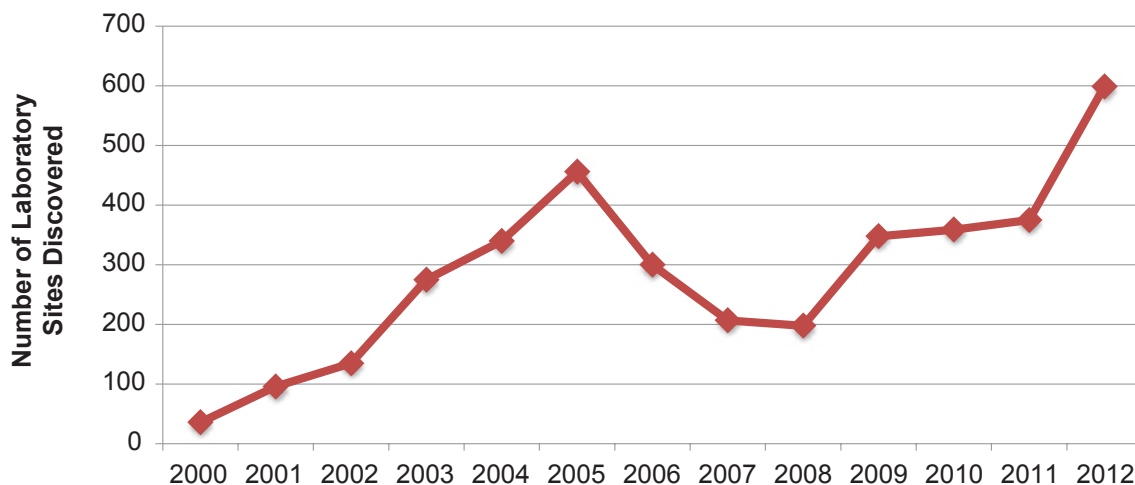
SOURCE: Cincinnati Drug and Poison Information Center

Exhibit 10. Number of Deaths, by Drugs Detected at Death, in Hamilton County: 2007–2012



SOURCE: Hamilton County Coroner's Office

Exhibit 11. Number of Methamphetamine Sites¹ in Ohio: FYs 2000–2012²



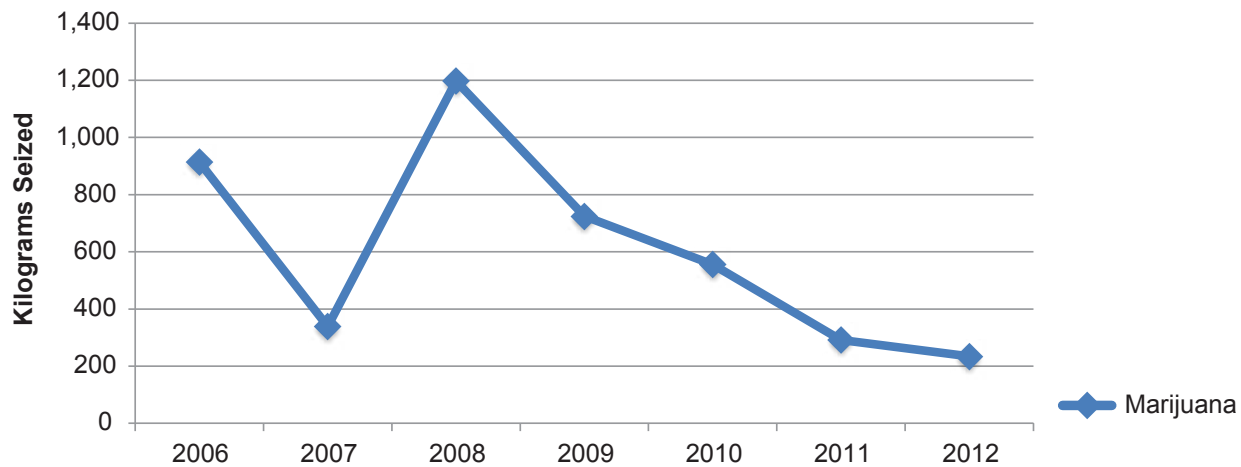
Note: Loss of grant money for cleanup in February 2011 may reflect underreporting of methamphetamine laboratories discovered in 2011 and 2012.

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

²FY=July to June.

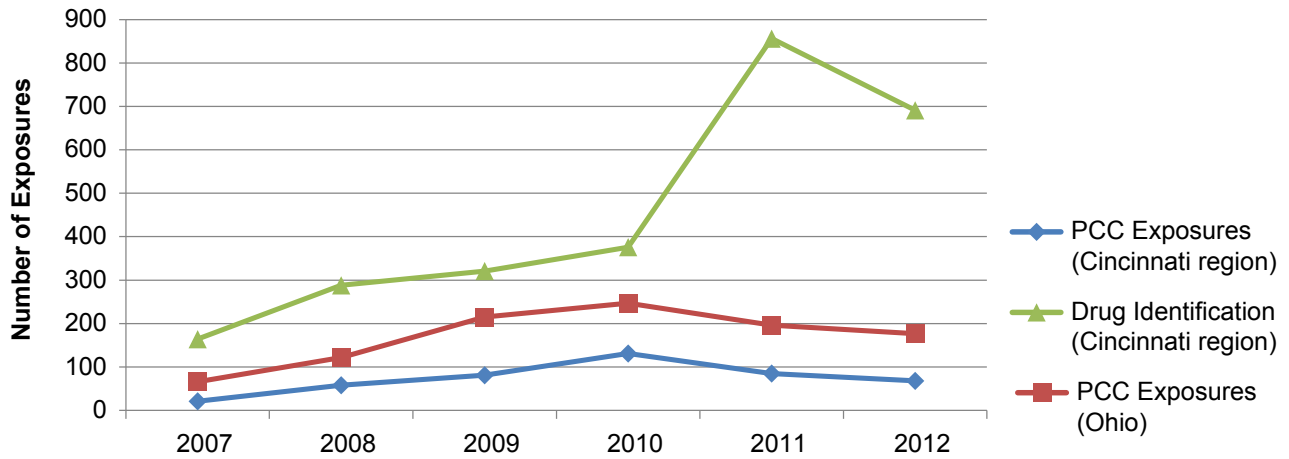
SOURCE: Ohio Bureau of Criminal Investigation

Exhibit 12. Marijuana Seizures, in Kilograms, in Cincinnati: 2006–2012



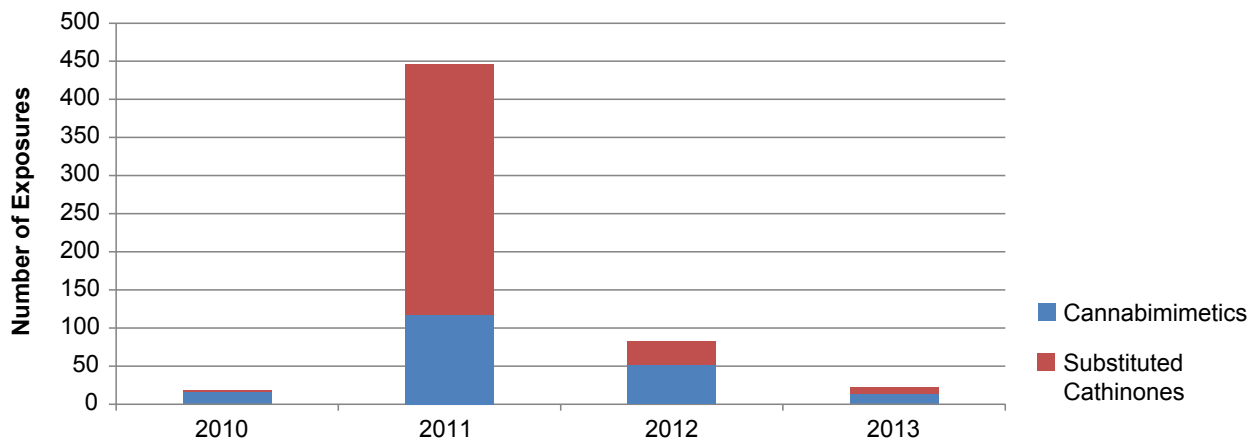
SOURCE: Cincinnati Regional Enforcement Narcotics Unit

Exhibit 13. Number of Human Exposures and Drugs Identified as Buprenorphine by Poison Control Centers (PCCs) in Cincinnati and Ohio: 2007–2012



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 Substituted Cathinones and Cannabimimetics in Cincinnati: 2010–2013¹



¹2013 data captured through June 8, 2013.

SOURCE: Cincinnati Drug and Poison Information Center

Patterns and Trends in Drug Abuse in Denver and Colorado: 2012

Kristen A. Dixon, M.A., L.P.C.¹

ABSTRACT

After alcohol, marijuana has continued to result in the highest number of primary treatment admissions in Denver and statewide in Colorado annually. Although indicators showed some mixed trends, marijuana continued to be a major drug of abuse in Colorado and in the Denver/Boulder metropolitan area, based on treatment admissions data, hospital discharges, availability, the National Survey for Drug Use and Health (NSDUH), and law enforcement drug testing. Statewide, the proportion of primary marijuana treatment admissions slightly decreased over the past couple of years, from 20.6 percent of all admissions in 2011 to 19.1 percent in 2012 (including alcohol). Similarly, Denver/Boulder metropolitan area (greater Denver) primary marijuana treatment admissions decreased in recent years, from 21.6 percent in 2011 to 20.0 percent in 2012. Marijuana ranked first in Colorado drug-related hospital discharges in 2011 (excluding alcohol); both the number and rate of discharges increased from 2010 to 2011. In the Denver area, marijuana/cannabis ranked second, at 21.0 percent, among drug reports detected in drug items seized and identified in 2012 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. Some of the high ranking indicators for cocaine continued to decline and were showing downward and mixed trends. In 2012, cocaine's rank dropped to fifth in statewide treatment admissions, and it declined to fourth place among Denver metropolitan treatment admissions. Primary cocaine treatment admissions for both areas have steadily decreased over the past 5 years. Cocaine ranked third (behind marijuana and other opioids) in 2011 Colorado drug-related hospital discharges, excluding alcohol. Cocaine was the second most common drug (excluding alcohol) behind other opioids in Colorado death mentions in 2011. In 2011, cocaine ranked second (behind marijuana) for statewide illicit drug-related calls to the RMPDC. In the Denver area, cocaine ranked first (at 27.6 percent) among drug reports detected in seized and analyzed items in 2012 in NFLIS laboratories. Methamphetamine indicators remained fairly stable with some mixed trends. Methamphetamine was more common than all other drugs except marijuana among treatment admissions both statewide and in the Denver/Boulder area in recent years. Although the proportion of statewide methamphetamine admissions steadily declined from 2005 to 2009, such admissions have since remained fairly stable (at 14.8 percent in 2012). The proportion of Denver area methamphetamine admissions remained fairly stable over recent years and represented 11.5 percent of treatment admissions in 2012. Stimulants ranked fourth in Colorado drug-related hospital discharges, excluding alcohol. Both the number and rate of discharges decreased slightly from 2010 to 2011. Stimulants (mostly methamphetamine) were tied for the third most common drug category in Colorado death mentions (excluding

¹The author was affiliated with the State of Colorado, Office of Behavioral Health at the time of this report.

alcohol) in 2011 and represented a very slight increase from 2010. Methamphetamine was readily available, due to heavy trafficking from Mexico. Overall, heroin indicators had some mixed ranks with increasing trends. Statewide and Denver area proportions of heroin treatment admissions have been increasing since 2008. Statewide heroin treatment admissions increased from 7.3 percent of all admissions in 2011 to 8.1 percent in 2012 (including alcohol). Denver area heroin treatment admissions increased also, from 10.4 percent of total admissions in 2011 to 11.1 percent in 2012 (including alcohol). Although heroin was not among the most common drugs found in Colorado death mentions, it increased from a rate of 0.9 per 100,000 population in 2010 to a rate of 1.6 per 100,000 in 2011. 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 trends. Both statewide and Denver area other opioid treatment admissions continued to increase over recent years. In 2012, statewide other opioid treatment admissions increased slightly, from 6.4 percent of all admissions in 2011 to 7.1 percent in 2012. Denver area primary treatment admissions for other opioids increased very slightly, to 6.5 percent in 2012. The rate of Colorado other opioid hospital discharges steadily increased over recent years, and other opioids were among the most common drugs found in Colorado drug-related decedents in 2011. Benzodiazepines (including the categories of “benzos,” barbiturates, clonazepam, other sedatives, and tranquilizers) represented less than 1 percent of State treatment admissions in 2012. Synthetic cannabinoids, such as “Spice,” “K2,” and “Black Mamba,” and “bath salts” marketed as “Cloud Nine,” “Vanilla Sky,” and “White Dove” have been a recent 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 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 in 2011. In 2012, the Denver Crime Laboratory (DCL) reported an increase in synthetic drug exhibits with various combinations. They also reported large amounts of DMT (dimethyltryptamine) in the form of ground acacia bark. Synthetic cannabinoids (cannabimimetics) have been scheduled in Colorado, which may limit future availability and use; however they continue to appear in the DCL data. Beyond abuse of illicit drugs, alcohol remained Colorado’s most frequently abused substance and accounted for the most treatment admissions, 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 U.S. Census).

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

At the time of this report, 2011 data were the most recent data available for Rocky Mountain Poison and Drug Center (RMPDC) data, drug-related hospital discharge data, and drug-related mortality data.

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 Office of Behavioral Health (OBH) 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 OBH. 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 2005–2012.
- **Hospital discharge data** for the State of Colorado were obtained from the Colorado Department of Public Health and Environment (CDPHE) and from the Colorado Hospital Association. Data include diagnoses (ICD-9-CM codes) for inpatient clients at discharge from all acute care hospitals and some rehabilitation and psychiatric hospitals. These data exclude emergency department (ED) care. These data represent 2011 and are the most recent data available.

- **Drug-related mortality data** for the State of Colorado were obtained from the CDPHE and represent 2011. These are the most recent data available.
- **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” (cannabimimetics) and “bath salts” (substituted cathinones). These are the most recent data available.
- **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 2012. 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 2012 are preliminary and subject to change.
- **Statistics on prescriptions** filled for Denver residents by drug type, for the first quarter of 2008 through the fourth quarter of 2012, 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 Denver Field Division of the DEA, including information from the DEA’s Trafficking and Trends Report for July 1, 2012, through December 31, 2012. Information was also obtained from the Denver Epidemiology Work Group (DEWG).
- **Heroin data** were obtained from the DEA’s Heroin Domestic Monitoring Program (HDMP) 2011 drug intelligence report.
- **Intelligence data and qualitative data** were obtained from the 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 CDPHE and are presented for 2008 through December 2012.
- **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 fifth among statewide primary treatment admissions, fourth among Denver metropolitan area treatment admissions, second among statewide calls to the RMPDC, second among Colorado death mentions, third among Colorado 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 continue to decline, with mostly downward and some mixed trends.

During 2012, cocaine was reported as a primary drug for 6.8 percent of primary treatment admissions (including alcohol) statewide; this reflects a new low (exhibit 2). Cocaine admissions statewide declined by 33 percent from 2008 to 2012. In the Denver metropolitan area, cocaine was reported for 8.7 percent of treatment admissions (including alcohol) during 2012 (exhibit 3).

Statewide, the proportion of male cocaine admissions (61.5 percent in 2012) 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 62.2 percent from 2008 to 2012 (exhibit 5). Historically, Whites have accounted for the largest proportion of cocaine admissions statewide (38.6 percent overall for 2008–2012). However, the proportion of White cocaine treatment admissions decreased from 43.4 percent in 2008 to 34.6 percent in 2012. The proportion of African-American cocaine treatment admissions increased from 18.4 percent in 2008 to 27.4 percent in 2012. Statewide, in 2012, the proportion of Hispanics/Latinos represented 33.9 percent of total admissions, and in Denver, Hispanic/Latinos represented 30.2 percent of cocaine admissions. From 2008 to 2012, the proportion of African-American treatment admissions increased, from 22.9 to 30.3 percent in the Denver metropolitan area.

Statewide, 1.3 percent of all primary cocaine admissions in 2012 were for clients younger than 18, and 9.9 percent were for clients age 18–24 (exhibit 4). The 25–44 age group's proportion of cocaine treatment admissions declined steadily, to 55.1 percent in 2012, while the proportion of admissions among clients older than 44 increased to 33.8 percent. 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 (54.1 percent in 2012), and there was a corresponding increase in clients older than 44 (34.1 percent in 2012).

Statewide, in 2012, the proportions of all admitted clients who smoked, inhaled, or injected cocaine as their primary route of administration were 59.1, 32.0, and 6.3 percent, respectively (exhibit 4). The proportion who smoked remained fairly stable, from 61.5 percent in 2008 to 59.1 percent in 2012. The proportion of cocaine admissions inhaling cocaine has also remained fairly stable in recent years, at 31.2 percent in 2008 and 32.0 percent in 2012. The proportion injecting remained fairly stable at 5.3 percent in 2008 and 6.3 percent in 2012. The 2012 Denver area proportions of cocaine users who smoked, inhaled, or injected the drug were 58.5, 33.0, and 6.2 percent, respectively (exhibit 5). Treatment admissions data showed that cocaine users most often used alcohol as a secondary drug (exhibits 4 and 5).

Cocaine ranked third (behind marijuana and other opioids) in 2011 Colorado substance abuse-related hospital discharges, excluding alcohol ($n=3,302$; rate per 100,000 population=64). Both the number and rate of discharges decreased slightly in 2011 from 2010 ($n=3,422$; rate per 100,000 population=68).

Cocaine was the second most common drug (excluding alcohol) behind other opioids in Colorado death mentions in 2011, at a rate of 2.6 per 100,000 population for the State; this rate had increased slightly from the previous year (2.2 per 100,000 in 2010).

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

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 6 for 2012 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 4 (27.6 percent) of the total, compared with approximately 1 in 6 (at 16.3 percent) for the United States (where cocaine ranked second).

Cocaine trafficking and distribution are controlled primarily by Mexican drug trafficking organizations (DTOs). The DEA Denver Field Division indicated that the once stable supply, price, and purity levels of cocaine in 2011 shifted to a sporadic supply, with stable higher prices and lower quality in 2012. In 2012, Denver cocaine samples averaged approximately 57 percent pure.

Based on the “Proceedings of the DEWG in 2013,” some Denver area clinicians and outreach workers reported that cocaine seemed less common than it was a few years ago, especially among noninjecting street users. Adolescent treatment programs did not report much cocaine use, because other drugs were more available and cheaper. 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 third (an increase from fourth statewide in 2011) among statewide and Denver metropolitan area treatment admissions, fifth among statewide calls to the RMPDC, third among Colorado death mentions (third place tie with methamphetamine), and fourth in drug reports among items seized and identified in Denver metropolitan area NFLIS laboratories. Overall, heroin indicators were mixed, with increasing trends.

From 2008 to 2012, the proportion of heroin primary treatment admissions steadily increased, from 4.2 to 8.1 percent statewide and from 6.3 to 11.1 percent in the Denver area (exhibits 2 and 3). The proportion of female admissions represented approximately one-third of the heroin treatment admissions over the past few years in both the State of Colorado and in the Denver area (exhibits 4 and 5).

Over the past 5 years, White treatment admissions gradually increased statewide, from 70.6 percent in 2008 to 79.5 percent in 2012. Statewide, the 2012 proportions of total admissions for Whites, Hispanics, and African-Americans, respectively, were 79.5, 15.0, and 3.0 percent. In Denver, in 2012, the proportions of White, Hispanic, and African-American admissions were 77.0, 16.5, and 4.3 percent, respectively.

Statewide, in 2012, the average age of heroin clients admitted to treatment was 29.8 (the median age was 27.0), down from 33.5 in 2010 (when the median age was 30.0). In 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. The proportion younger than 18 represented 1.4 percent in 2012. 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 2008 (17.8 percent) to 2012 (39.4 percent). In 2012, 11.2 percent of statewide heroin treatment admissions were for clients older than 44 (exhibit 4).

Treatment admission clients for heroin tended to be older than other drug-using groups, although the average age statewide has been decreasing in recent years. In Denver in 2012, the average age of heroin clients entering treatment was 30.9 (the median age was 28.0); this was down from 34.3 in 2010 (when the median age was 31.0). From 2008 to 2012, the Denver metropolitan area experienced a decline in heroin admissions of clients age 35–44 (from 21.3 percent in 2008 to 15.1 percent in 2012) and steady increases in clients younger than 25 (from 14.6 percent in 2008 to 36.1 percent in 2012) (exhibit 5).

Heroin is a drug that is predominantly injected. However, statewide, the proportion of heroin treatment clients who were injectors declined from 79.5 percent in 2008 to 74.9 percent in 2012 (exhibit 4). The proportion of clients smoking heroin continued a multiyear increase, increasing from 9.1 percent in 2010 to a new high of 18.4 percent in 2012. In 2012, 5.0 percent inhaled heroin statewide.

Denver area proportions were similar to statewide figures. The proportion of heroin treatment admissions injecting in Denver declined from 78.9 percent in 2008 to 72.0 percent in 2012 (exhibit 5). The proportion who smoked heroin gradually increased, from 11.9 percent in 2008, to 14.9 percent in 2009, to a high of 20.3 percent in 2012. In 2012, 6.0 percent inhaled heroin in the Denver area (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).

Although heroin was not among the most common drugs found in Colorado death mentions, it increased from a rate of 0.9 per 100,000 population in 2010 to a rate of 1.6 per 100,000 in 2011.

Colorado hospital discharge data combines 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 from 98 per 100,000 in 2010 to 117 per 100,000 in 2011. This represented a 20-percent increase, from 4,971 reports in 2010 to 5,965 reports in 2011.

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.

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 to Colorado and Utah through Arizona or southern California. 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. The Denver DEA reported that heroin availability was moderate in Denver. Heroin exhibits analyzed by the DEA's Western Laboratory reported average purity levels of 45 percent pure in Denver; street-level amounts averaged 34 percent pure. According to the DEA's HDMP, the Mexican heroin purity increased by 3.2 percentage points in 2011. The 37 qualified samples had an average purity of 22.9 percent pure and an average cost of \$0.68 per milligram pure.

Based on the April 2013 “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 they 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. 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 fourth among statewide treatment admissions. This is a change in rank from fifth to fourth statewide. Denver metropolitan area treatment admissions ranked fifth, which did not represent a change in rank from previous years. Other opioids ranked second among Colorado hospital drug-related discharges and first among Colorado death mentions. Oxycodone and hydrocodone ranked among the top 10 reports of drugs detected in seized items analyzed by NFLIS laboratories. Other opioid indicators had mixed ranks, with mostly increasing trends.

During 2012, opioids other than heroin were reported as primary drugs in 7.1 percent of statewide treatment admissions, including alcohol (exhibit 2); this proportion represented a 22-percent increase from 2011 to 2012. In Denver, other opioids constituted between 3.9 and 6.5 percent of all treatment admissions (including alcohol) from 2008 to 2012. The proportion of other opioid primary treatment admissions remained fairly stable from 2011 (6.4 percent) to 2012 (6.5 percent) (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 48.6 percent of these admissions in 2012, while males constituted 51.4 percent (exhibit 4). In Denver, females accounted for 51.8 percent of other opioid admissions in 2012 (exhibit 5).

Statewide and in Denver, Whites accounted for the largest proportion of primary treatment admissions related to other opioids. However, the proportion of Whites has been on the decline in recent years; they represented a new low of 73.0 percent in 2012 (exhibit 4). African-American treatment admissions for other opioids have remained stable in recent years, at approximately 2 percent. The proportion of Hispanic other opioid admissions in Colorado has increased steadily and reached a high of 22.7 percent in 2012 (they constituted 15.2 of all admissions in 2009).

In the Denver metropolitan area, the proportion of White other opioid admissions remained stable at 78.7 percent in 2012 (exhibit 5). In 2012, African-Americans represented 3.4 percent of admissions, down from a high of 7.0 percent in 2009. However, the moderate change in proportion is influenced by the small numbers of African-American other opioid admissions. Hispanics remained fairly stable in recent years and represented 14.9 percent of Denver area opioid admissions in 2012.

Like heroin users, treatment admission clients for other opioids tended to be older than other drug-using groups, although the average age statewide has been decreasing in recent years. Statewide, the average age of other opioid users entering treatment in 2012 was 32.1 (with a median age of 30); 2.7 percent were younger than 18, and 14.7 percent were older than 44. Two age ranges demonstrated a possible trend toward younger users. From 2008 to 2012, the proportion of clients age 18–34 increased from 53.9 to 64.9 percent, while clients 35 and older declined from 45.3 percent in 2008 to 32.4 percent in 2012 (exhibit 4). Similarly, in Denver, there was an overall increase in admissions for other opioids among clients age 18–34 (from 53.0 to 59.1 percent from 2008 to 2011) (exhibit 5).

Nonheroin opioids were most often taken orally. Statewide, in 2012, 69.1 percent of admissions for other opioids ingested the drugs orally, and 12.4 and 11.2 percent, respectively, inhaled and injected the drugs (exhibit 4). The proportion of clients inhaling the drugs increased from 8.2 percent in 2008 to 12.4 percent in 2012. The proportion injecting increased from 7.4 percent in 2009 to 11.2 percent in 2012.

Denver's proportions for preferred route of administration were similar to statewide figures. The proportion of other opioid admissions ingesting the drugs orally represented 77.5 percent in 2012. (exhibit 5). The 2012 proportions of clients who inhaled and injected were 10.6 and 6.3 percent, respectively. Injection of other opioids in Denver has remained fairly stable since 2008 (8.3 percent); however the proportion dropped slightly in 2012 (to 6.3 percent). Inhalation in the Denver area reached a high of 14.2 percent in 2010, but it declined to 10.6 percent in 2012. Treatment data, overall, showed that other opioid users most often used marijuana and alcohol as secondary and tertiary drugs (exhibits 4 and 5).

Other opiates/opioids ranked second in 2011 Colorado substance abuse-related hospital discharges, excluding alcohol ($n=5,965$; rate per 100,000 population=117); both the number and rate of discharges increased from 2010 ($n=4,971$; rate per 100,000=98). Other opiates/opioids were the most common type of drug in Colorado death mentions in 2011, with a rate of 7.1 per 100,000 population for the State; this was an increase from 5.9 per 100,000 in 2010. Other opiates/opioids were the most common drugs found in Colorado drug-related deaths from 2005 to 2011. These are the most recent data available.

Based on data from the Colorado PDMP, the number and rate of oxycodone prescriptions filled for Denver residents increased over the past several years. Oxycodone increased fairly steadily from 63.2 to 72.8 prescriptions per 1,000 population from the first quarter of 2008 to the fourth quarter of 2012. Hydrocodone prescriptions filled for Denver residents have fluctuated, with an overall decline from the first quarter of 2010 through the fourth quarter of 2012. Hydrocodone prescriptions peaked at 49,205 (79.3 per 1,000 population) in the first quarter of 2011; however, the number then decreased to 46,207 (73.6 per 1,000 population) in the fourth quarter of 2012. Drug reports among items seized and analyzed by NFLIS laboratories in the Denver area that were identified as containing oxycodone (2.0 percent of all reports) and hydrocodone (0.9 percent of all reports) were among the top 10 drugs analyzed in 2012 in Arapahoe, Denver, and Jefferson Counties.

The most recent combined 2010 and 2011 NSDUH data indicated that the rate of past-year non-medical use of prescription pain relievers among those age 12 or older in Colorado was in the top fifth quintile and ranked second in the country at 6.0 percent; this was higher than the national proportion of 4.6 percent.

Based on the “Proceedings of the DEWG,” local law enforcement and intelligence reported an increase in prescription opioid availability and use. The DEA reported that prescription drug rings are getting more sophisticated. The level of sophistication in diversion activities is increasing, making it more difficult for pharmacies to detect fraud. Law enforcement described several investigations of organized groups writing or calling in fraudulent opioid orders, as well as a ring with pharmacist involvement. 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.

Based on the “Proceedings of the DEWG,” Denver area clinicians reported that prescription abuse and diversion is a significant problem. 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. There have been efforts made to reduce the amount of prescription drugs available. The DEA has organized six successful National Take Back Initiatives (NTBIs). The spring 2012 NTBI event collected 17,775 pounds of prescription drugs in Colorado and more than 1 million pounds nationally. More than 65,000 pounds of prescription drugs have been collected in Colorado total.

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. It was reported by one Denver area clinician that most people who come into treatment have previously tried to get clean on their own by using buprenorphine or Suboxone®, which was supplied by their dealers. Additionally, the Denver DEA 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 2012. This drug category is not shown as a separate drug category on exhibits 2 or 3. Benzodiazepines have been somewhat infrequent among Colorado treatment admissions; there were 124 statewide benzodiazepine admissions in 2012, constituting 0.4 percent of all drug admissions, including alcohol. Denver metropolitan benzodiazepine admissions have also been somewhat infrequent; there were 56 Denver metropolitan benzodiazepine admissions in 2012, constituting 0.4 percent of all drug admissions, including alcohol.

Taken together, alprazolam, clonazepam, and diazepam accounted for 1.5 percent of the drug reports among items seized and analyzed by NFLIS laboratories in 2012 in the Denver area, compared with 3.6 percent in the Nation.

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.

Denver area clinicians also reported that Xanax® (alprazolam) 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 has continued through 2012. Methamphetamine ranked third among statewide calls to the RMPDC, third among Colorado death mentions, fourth among Colorado drug-related hospital discharges, 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 2012, methamphetamine was the primary drug reported for 14.8 percent of all treatment admissions (including alcohol) statewide (exhibit 2); this proportion has been relatively stable over recent years. Historically, primary methamphetamine admissions have remained second to marijuana admissions. In the Denver metropolitan area, methamphetamine represented a lower proportion of treatment admissions (11.5 percent in 2012) 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 slight decline from 2008 (12.7 percent) to 2011 (11.1 percent). In 2012, Denver area methamphetamine admissions remained fairly stable (11.5 percent).

After admissions for nonheroin opioids and sedatives, methamphetamine admissions had the highest proportion of female admissions statewide (46.2 percent) in 2012 (exhibit 4). In the Denver area, the proportion of female methamphetamine admissions represented 42.9 percent of all admissions in 2012 (exhibit 5). In 2012, methamphetamine admissions in Colorado and Denver were predominately White (exhibits 4 and 5). From 2008 to 2012, the proportion of White treatment admissions declined, from 78.0 to 73.2 percent statewide and from 78.3 to 75.1 percent in the Denver area. During the same time period, the proportion of Hispanic methamphetamine admissions increased, from 16.8 to 20.6 percent statewide and from 15.5 to 18.0 percent in Denver.

Compared with cocaine, methamphetamine admissions tended to be younger. In 2012, the average age of clients entering treatment was 33.6 (with a median age of 32.0) statewide and 34.0 (with a median age of 33) for Denver admissions. Also, 16.8 percent of statewide admissions and 14.1

percent of Denver admissions were younger than 25. Statewide, in 2012, 68.7 percent of admissions were clients age 25–44, compared with 70.4 percent for the Denver area.

In 2012, the proportions of clients statewide who smoked, injected, or inhaled methamphetamine were 61.2, 27.7, and 8.2 percent, respectively (exhibit 4). The proportion who smoked decreased from 2008 (64.8 percent) to 2012 (61.2 percent), while the proportion who inhaled also decreased during that time, from 10.1 percent in 2008 to 8.2 percent in 2012. Injectors increased from 22.7 percent in 2008 to 27.7 percent in 2012. In 2012, in the Denver area, the proportions of treatment admissions who smoked, injected, or inhaled methamphetamine were 60.1, 26.9, and 10.1 percent, respectively (exhibit 5). The proportion who smoked remained fairly stable from 2008 (59.4 percent) to 2012 (60.1 percent). The proportion of inhalers declined from 12.2 to 10.1 percent from 2008 to 2012. Over the last 5 years, the proportion of clients who injected ranged from 23.5 percent (2009) to 29.4 percent (2011). Treatment data, overall, showed that methamphetamine clients most often used marijuana as a secondary drug, followed by alcohol (exhibits 4 and 5).

Methamphetamine could not be identified separately, but rather it was included in the stimulants category in Colorado drug-related hospital discharge data. In 2011, stimulants ranked fourth (behind marijuana, other opiates/opioids, and cocaine) in Colorado drug-related hospital discharges, excluding alcohol ($n=1,982$; rate per 100,000 population=39); both the number and rate of discharges decreased slightly from 2010 ($n=2,059$; rate per 100,000=41).

Stimulants (mostly methamphetamine) were tied for the third most common drug category in Colorado death mentions (excluding alcohol) in 2011, with a rate of 1.6 per 100,000 population for the State; this represented a very slight increase from 2010.

Methamphetamine was third, after marijuana and cocaine (excluding alcohol calls), in the number of statewide drug-related calls to the RMPDC in 2011. 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 14.9 percent of all reports in the Denver area in 2012. Methamphetamine ranked third among the top 10 drug reports among items analyzed in 2012 in the Denver area, compared with 12.1 percent (also ranking third) across the Nation (exhibit 6).

Local law enforcement officials reported that most methamphetamine was produced and supplied by Mexican DTOs. In 2012, the Denver DEA Division reported that large loads of methamphetamine were transported from Mexico, Texas, Nevada, Arizona, and California to Colorado. In 2012, the Denver DEA reported that methamphetamine purity was very high, with levels at or near 100 percent. The DEA reported that methamphetamine availability was high, and the drug cost approximately \$660 per ounce. The DEA Western Laboratory analyzed 26 methamphetamine exhibits that averaged 88 percent pure; 14 of the exhibits exceeded 95 percent pure (July 1, 2012, through December 31, 2012). The Denver Crime Laboratory (DCL) also reported methamphetamine purity at 95 percent.

Based on the “Proceedings of the DEWG,” methamphetamine was reported to be readily available and inexpensive. Theories have surfaced indicating the possible “switch” of cocaine users to methamphetamine. There were continuing reports of 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. In a recent DEWG meeting (April 2013), there was some discussion related to the increased consequences for methamphetamine as a result of the increased and very high purity levels. A representative from the Harm Reduction Action Center also reported an increase in use over the past several months. In addition, it was reported that people are using “goofy balls” (heroin and methamphetamine), instead of speed balls (heroin and cocaine).

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 Colorado drug-related 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 remained a major substance of abuse.

Statewide, the percentage of marijuana treatment admissions decreased slightly, from 21.5 percent in 2008 to 19.1 percent in 2012 (exhibit 2). In Denver, the proportion of marijuana admissions decreased, from 23.7 percent in 2008 to 20.0 percent in 2012 (exhibit 3). Historically, marijuana admissions have represented the highest proportion of males among drug groups. In 2012, 78.3 percent of marijuana admissions statewide and 79.1 percent in Denver were male (exhibits 4 and 5).

In 2012, Whites, Hispanics, and African-Americans represented 49.8, 33.0, and 13.2 percent of marijuana admissions, respectively, statewide (exhibit 4). The proportion of White admissions has remained fairly stable in recent years: 50.9 percent in 2008 and 49.8 percent in 2012. Similarly, the statewide proportion of African-American marijuana admissions has remained stable: 13.5 percent in 2008 and 13.2 percent in 2012. However, the proportion of Hispanics among statewide admissions increased slightly, from 30.0 to 33.0 percent from 2008 to 2012.

In Denver, White marijuana admissions remained fairly stable from 2008 to 2012, at 42–45 percent. In 2012, the proportion of White marijuana users was 44.8 percent (exhibit 5). Remaining stable in 2012, African-American admissions in the Denver area represented 18.8 percent of all admissions. The proportion of Hispanics remained fairly stable in 2012 (32.5 percent).

In both Colorado and the Denver metropolitan area, marijuana clients were typically the youngest of the treatment admissions groups. More than one-quarter (25.9 percent) of marijuana admissions statewide and 30.3 percent of Denver admissions were younger than 18. In 2012, the average age of marijuana clients entering treatment was 25.9 statewide (with a median age of 23) and 25.2 in Denver (with a median age of 23). Treatment data, overall, showed that marijuana users most often used alcohol as a secondary or tertiary drug (exhibits 4 and 5).

Marijuana ranked first in Colorado drug-related hospital discharges in 2011, excluding alcohol ($n=5,984$; rate per 100,000 population=117); both the number and rate of discharges increased from 2010 ($n=5,744$; rate per 100,000=114). 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.

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 21.0 percent; this is compared with 32.7 percent for the United States, where it ranked first (exhibit 6).

Combined 2010 and 2011 NSDUH data indicated that Colorado ranked in the top fifth quintile for the following data: marijuana use in the past year among people age 12 or older, youth age 12–17, people age 18–25, and people age 26 or older; marijuana use in the past month among people age 12 or older, youth age 12–17, people age 18–25, and people age 26 and older; and first use of marijuana among people age 12 or older, youth age 12–17, and people age 18–25. In addition, substance use epidemiology has documented that the lower the perception that use involves risk, the higher the probability of use. Colorado was among five States with the lowest proportions of individuals who perceived smoking marijuana once a month as a great risk; this is evident for all age groups, including people age 12 or older, youth age 12–17, people age 18–25, and people age 26 and older.

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 2012, 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 that 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. The Denver police department continued to report that they have found medical marijuana in schools and in the hands of people who were not medical marijuana patients. They have 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 are warehouses dedicated to producing medical marijuana in and around the Denver area. For example, in 2011, 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,” 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. Another Denver area clinician reported that increasingly more adults in treatment are using marijuana as a secondary or supplemental drug. “Coming down through pot” is not uncommon, often with opiates. The increase in potency of marijuana is changing how it is used also. Previously, clients used to smoke all day, but now they only smoke once a day and can get the same effect.

MDMA

Morbidity and mortality for MDMA (3,4-methylenedioxymethamphetamine), or ecstasy, remained relatively low in Denver in 2012. 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 142 statewide club drug treatment admissions shown in 2012 (exhibit 2), which represented 0.4 percent of total admissions, 140 were for MDMA. In the Denver metropolitan area, “club drugs” accounted for 72 treatment admissions in 2012 (0.5 percent of total admissions) (exhibit 3). Of these, 70 were for MDMA.

Drug reports identified as MDMA among items analyzed by NFLIS laboratories accounted for 0.5 percent of the total items submitted for testing in 2012 in the Denver area, compared with 0.3 percent for the Nation. According to the Denver DEA, MDMA comes from sources of supply in California, the Pacific Northwest, or Canada. “Molly,” a powder form of MDMA, was reported to be increasingly available. MDMA is often sent through the mail from sources of supply to distributors in the Denver Field Division.

BZP

There were 49 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, 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 I 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 2012, the DCL analyzed 20 BZP exhibits, 2 TFMPP (1-3-trimethylphenyl)piperazine) exhibits, 2 BZP/TFMPP in combination exhibits, 1 methamphetamine/BZP/MDMA in combination exhibit, and 1 methamphetamine/BZP/TFMPP in combination exhibit. 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 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 DEWG meeting that their 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 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 received some exhibits marketed as being federally compliant and containing new compounds. In 2012, the DCL reported an increase synthetic drug exhibits with various combinations.

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.

Synthetic cannabinoid human exposure poison control center calls remained stable from 2010 to 2011, according to RMPDC data. The RMPDC captured data on synthetic cannabinoids (cannabimimetics) in 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 ($n=13$). These are the most recent data available.

In 2012, DEA offices in the Denver Field Division have all reported the presence of synthetic drugs including Spice, bath salts, and dimethyltryptamine (DMT).

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- methylenedioxypropylvalerone) 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.

Colorado has not passed SB 12-116 to date. This bill (SB 12-116) defines cathinones and establishes criminal penalties for possession of cathinones and for distributing, manufacturing, dispensing, or selling cathinones. Any person or entity that sells a product that is labeled as a “bath salt” or any other trademark and contains any amount of a cathinone commits a deceptive trade practice and is subject to a civil penalty.

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. In 2012, the DCL reported an increase in synthetic drug exhibits with various combinations. Other than RMPDC and DCL data, most of the information available on substituted cathinones was anecdotal.

INFECTIOUS DISEASES RELATED TO DRUG ABUSE

HIV/AIDS and Injection Drug Use

Of the 2,027 newly diagnosed HIV cases reported in Colorado through 2008–2012, 4 percent were classified as injection drug users (IDUs), and another 6 percent were classified as men who have sex with men (MSM) and IDUs. The proportion of newly diagnosed HIV cases attributed to injection drug use fluctuated between 3 and 5 percent over the last several years. In 2012, 3 percent of newly diagnosed HIV cases were attributed to injection drug use (exhibit 7). The proportion of newly diagnosed AIDS cases attributed to injection drug use has been less stable; the proportion ranged from 8 percent in 2009, to 2 percent in 2010, and back up to 7 percent in 2012.

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**Exhibit 1. Members Participating in the Eighth Meeting of the Denver Epidemiology Work Group:
Convened on March 1, 2013**

Alia Al-Tayyib – Denver Public Health & Colorado School of Public Health
Todd Bunger – Arapahoe House
Candace Cadena – Denver Office of Drug Strategy (DEWG Co-chair)
Kristen Dixon – Colorado Office of Behavioral Health (DEWG Co-chair)
Andrea Donato – Urban Peak
Margaret Everett – Drug Enforcement Administration (proxy for Wendi Roewer)
Jonathan Gray – Arapahoe House
Alissa Greer – Harm Reduction Action Center
April Hendrickson – OMNI Institute
James Henning – Denver Police Department, Vice and Narcotics Bureau
Chris Knoepke – Peer Assistance Services (proxy for Caitlin Kozicki)
Helen Kaupang, Drug Enforcement Administration!
Jodi Lockhart – Denver Office of Drug Strategy
Laurie Lovedale – Peer Assistance Services
Bruce Mendelson – Denver Office of Drug Strategy
Katie Page – OMNI Institute!
Carol Martens Price – Arapahoe House
Melissa Roark – Addiction Research and Treatment Svcs (proxy for Kristen Raymond)
Allison Sabel – Denver Health
Don Shriver – Denver Police Department Crime Laboratory
Melissa Simmons – Metro Crisis Services
Audrey Vincent – Denver Cares, Denver Health
Dale Wallis – Denver Police Department
Michelle Zucker – Urban Peak

Guests Present

Bob Burroughs, Denver Police Department Crime Laboratory
Gabriela Mohr – Denver Office of Drug Strategy
Kate Olsen – Arapahoe House
Laura Waechter – Peer Assistance Services

Members Absent

John Cohen – Drug Enforcement Administration
Barbara Gabella – Colorado Department of Public Health and Environment
Bob Dorshimer – Mile High Council and Comitis Crisis Center
Mark Fleecs – Denver Police Department
Ron Gowins – Office of Behavioral Health, Denver Health
Eric Lavonas – Rocky Mountain Poison and Drug Center
Amy Martin – Denver Office of the Medical Examiner
Liz Meade – Phoenix Multisport
William Nagle – Denver Police Department, Vice Drug Control Bureau
Steve Nederveld—Denver Public Schools
Linda Orr – Denver Office of Drug Strategy
Kristen Raymond – Synergy, Addiction Research and Treatment Services
David Salinas – Phoenix Multisport
John Simmons – Denver Public School

SOURCE: Denver Epidemiology Work Group

Exhibit 2. Number and Percentage of Treatment Admissions, by Primary Drug Type, in the State of Colorado: 2005–2012

Drug		2005	2006	2007	2008	2009	2010	2011	2012
Alcohol	<i>n</i>	10,189	11,481	10,977	11,755	12,040	12,364	12,179	13,620
	%	38.8	40.9	39.7	41.1	42.2	41.7	41.1	41.7
Marijuana	<i>n</i>	5,568	5,653	5,783	6,156	6,160	6,518	6,088	6,247
	%	21.2	20.1	20.9	21.5	21.6	22.0	20.6	19.1
	(excluding alcohol) %	34.7	34.0	34.7	36.6	37.4	37.7	35.0	32.8
Methamphetamine	<i>n</i>	5,084	5,053	4,914	4,543	4,123	4,322	4,226	4,842
	%	19.4	18.0	17.8	15.9	14.5	14.6	14.3	14.8
	(excluding alcohol) %	31.7	30.4	29.5	27.0	25.0	25.0	24.3	25.4
Cocaine	<i>n</i>	2,929	3,476	3,374	3,319	2,660	2,459	2,283	2,226
	%	11.2	12.4	12.2	11.6	9.3	8.3	7.7	6.8
	(excluding alcohol) %	18.3	20.9	20.3	19.7	16.2	14.2	13.1	11.7
Heroin	<i>n</i>	1,421	1,271	1,223	1,201	1,570	1,755	2,150	2,642
	%	5.4	4.5	4.4	4.2	5.5	5.9	7.3	8.1
	(excluding alcohol) %	8.9	7.6	7.3	7.1	9.5	10.2	12.3	13.9
Other Opioids ¹	<i>n</i>	713	824	961	1,113	1,475	1,715	1,894	2,306
	%	2.7	2.9	3.5	3.9	5.2	5.8	6.4	7.1
	(excluding alcohol) %	4.4	5.0	5.8	6.6	9.0	9.9	10.9	12.1
Depressants ²	<i>n</i>	97	121	127	141	143	120	140	177
	%	0.4	0.4	0.5	0.5	0.5	0.4	0.5	0.5
	(excluding alcohol) %	0.6	0.7	0.8	0.8	0.9	0.7	0.8	0.9
Other Amphetamines/ Stimulants	<i>n</i>	57	52	36	55	45	56	68	66
	%	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2
	(excluding alcohol) %	0.4	0.3	0.2	0.3	0.3	0.3	0.4	0.3
Hallucinogens ³	<i>n</i>	33	35	31	38	31	27	47	60
	%	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2
	(excluding alcohol) %	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3
"Club Drugs" ⁴	<i>n</i>	50	47	59	67	68	112	177	142
	%	0.2	0.2	0.2	0.2	0.2	0.4	.06	0.4
	(excluding alcohol) %	0.3	0.3	0.4	0.4	0.4	0.6	1.0	0.7
Other ⁵	<i>n</i>	92	88	142	181	195	191	346	326
	%	0.4	0.3	0.5	0.4	0.7	0.6	1.2	1.0
	(excluding alcohol) %	0.6	0.5	0.9	1.1	1.2	1.1	2.0	1.7
Total	N	26,233	28,101	27,627	28,569	28,510	29,639	29,598	32,654
(excluding alcohol)	N	16,044	16,620	16,650	16,814	16,470	17,275	17,419	19,034

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 (gamma hydroxybutyrate), and MDMA (ecstasy).

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

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

Exhibit 3. Number and Percentage of Treatment Admissions, by Primary Drug Type, in the Denver/Boulder Metropolitan Area: 2005–2012

Drug		2005	2006	2007	2008	2009	2010	2011	2012
Alcohol	<i>n</i>	3,575	4,408	4,321	4,586	4,597	4,826	4,782	5,482
	%	33.1	36.0	35.9	37.8	38.5	37.3	37.9	39.4
Marijuana	<i>n</i>	2,695	2,901	2,824	2,882	2,787	3,133	2,726	2,785
	%	24.9	23.7	23.5	23.7	23.3	24.2	21.6	20.0
	(excluding alcohol) %	37.2	37.0	36.6	38.2	37.9	38.6	34.8	33.0
Methamphetamine	<i>n</i>	1,494	1,696	1,672	1,540	1,373	1,520	1,400	1,608
	%	13.8	13.8	13.9	12.7	11.5	11.7	11.1	11.5
	(excluding alcohol) %	20.6	21.6	21.7	20.4	18.7	18.7	17.9	19.0
Cocaine	<i>n</i>	1,460	1,849	1,807	1,662	1,333	1,315	1,199	1,206
	%	13.5	15.1	15.0	13.7	11.2	10.2	9.5	8.7
	(excluding alcohol) %	20.2	23.6	23.4	22.0	18.1	16.2	15.3	14.3
Heroin	<i>n</i>	1007	810	807	761	960	1,130	1,314	1,545
	%	9.3	6.6	6.7	6.3	8.0	8.7	10.4	11.1
	(excluding alcohol) %	13.9	10.3	10.5	10.1	13.1	13.9	16.8	18.3
Other Opioids ¹	<i>n</i>	434	412	400	472	627	762	814	909
	%	4.0	3.4	3.3	3.9	5.2	5.9	6.4	6.5
	(excluding alcohol) %	6.0	5.3	5.2	6.3	8.5	9.4	10.4	10.8
Depressants ²	<i>n</i>	45	57	48	62	57	44	63	76
	%	0.4	0.5	0.4	0.5	0.5	0.3	.05	0.5
	(excluding alcohol) %	0.6	0.7	0.6	0.8	0.8	0.5	0.8	0.9
Other Amphetamines/ Stimulants	<i>n</i>	21	34	17	28	21	31	30	32
	%	0.2	0.3	0.1	0.2	0.2	0.2	0.2	0.2
	(excluding alcohol) %	0.3	0.4	0.2	0.4	0.3	0.4	0.4	0.4
Hallucinogens ³	<i>n</i>	17	25	17	16	15	9	19	34
	%	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2
	(excluding alcohol) %	0.2	0.3	0.2	0.2	0.2	0.1	0.2	0.4
"Club Drugs" ⁴	<i>n</i>	24	24	39	42	35	63	77	72
	%	0.2	0.2	0.3	0.3	0.3	0.5	0.6	0.5
	(excluding alcohol) %	0.3	0.3	0.5	0.6	0.5	0.8	1.0	0.9
Other ⁵	<i>n</i>	40	37	75	87	142	115	198	179
	%	0.4	0.3	0.6	0.7	1.2	0.9	1.6	1.3
	(excluding alcohol) %	0.6	0.5	1.0	1.2	1.9	1.4	2.5	2.1
Total	N	10,812	12,253	12,027	12,138	11,947	12,948	12,622	13,928
(excluding alcohol)	N	7,237	7,845	7,706	7,552	7,350	8,122	7,840	8,446

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 (gamma hydroxybutyrate), and MDMA (ecstasy).

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

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

Exhibit 4. Demographic Characteristics of Clients Admitted to Treatment, by Percentage, in the State of Colorado: 2012

Characteristics	Alcohol ¹ Only or in Combination	Marijuana (MJ)	Cocaine	Meth- amphetamine	Heroin	Other Opioids	Sedatives	Other Stimu- lants ²	Hallu- cinogens	“Club Drugs”	All Other ³
Total (N=32,654)	(13,620)	(6,247)	(2,226)	(4,842)	(2,642)	(2,306)	(177)	(66)	(60)	(142)	(326)
Gender	%	%	%	%	%	%	%	%	%	%	%
Male	69.1	78.3	61.5	53.8	66.0	51.4	46.3	54.5	91.7	70.4	71.8
Female	30.9	21.7	38.5	46.2	34.0	48.6	53.7	45.5	8.3	29.6	28.2
Race/Ethnicity	%	%	%	%	%	%	%	%	%	%	%
White	63.6	49.8	34.6	73.2	79.5	73.0	77.4	78.8	75.0	80.3	52.8
African- American	6.3	13.2	27.4	2.1	3.0	2.3	2.8	6.1	5.0	3.5	17.2
Hispanic	25.0	33.0	33.9	20.6	15.0	22.7	15.8	13.6	13.3	14.1	26.1
Other	5.2	4.0	4.0	4.0	2.6	1.9	4.0	1.5	6.7	2.1	4.0
Age at Admission											
Younger than 18	2.2	25.9	1.3	1.1	1.4	2.7	1.7	7.6	10.0	4.2	6.7
18–24	16.4	28.1	9.9	15.7	38.0	24.3	16.9	15.2	36.7	25.4	25.2
25–34	30.8	27.9	25.6	42.5	36.1	40.6	26.6	45.5	26.7	39.4	35.0
35–44	23.6	11.5	29.5	26.2	13.3	17.7	26.0	21.2	18.3	19.7	15.6
45–54	19.4	5.2	27.6	12.7	6.9	10.1	15.3	7.6	8.3	10.6	11.3
55 and Older	7.6	1.4	6.2	1.8	4.3	4.6	13.6	3.0	0.0	0.7	6.1
Route of Ingestion											
Smoking	0.2	93.5	59.1	61.2	18.4	7.3	5.1	21.2	15.0	45.8	10.1
Inhaling	0.3	3.6	32.0	8.2	5.0	12.4	3.4	15.2	8.3	15.5	11.3
Injecting	0.1	0.1	6.3	27.7	74.9	11.2	1.1	3.0	1.7	13.4	1.2
Oral/Other	99.4	2.8	2.6	2.9	1.7	69.1	90.4	60.6	75.0	25.3	77.4
Secondary Drug	MJ	Alcohol	Alcohol	MJ	Cocaine & Opioids	MJ & Alcohol	Alcohol & Other Opioid	MJ	MJ	MJ & Alcohol	Alcohol
	24.0	39.4	30.3	27.9	22.3 15.9	16.1 14.9	21.6 16.5	19.7	30.0	21.1 21.1	8.0
Tertiary Drug	MJ	Alcohol	Alcohol & MJ	Alcohol & MJ	MJ	Alcohol & MJ	Alcohol & MJ	MJ & Alcohol	MJ & Alcohol	MJ	MJ & Alcohol
	4.4	5.8	11.3 10.3	10.5 9.7	10.3	7.3 6.3	8.0 6.3	9.1 7.6	16.7 11.7	15.5	2.8

¹Includes alcohol only or in combination with other drugs.²Includes other stimulants (e.g., Ritalin®) and amphetamines (e.g., Benzedrine®, Dexadrine®, Desoxyn®).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: 2012

Characteristics	Alcohol ¹ Only or in Combo	Marijuana (MJ)	Cocaine	Meth- amphet- amine	Heroin	Other Opioid	Sedatives	Other Stimu- lants ²	Hallu- cinogins	“Club Drugs”	All Other ³
Total (N=13,928)	(5,482)	(2,785)	(1,206)	(1,608)	(1,545)	(909)	(76)	(32)	(34)	(72)	(179)
Gender	%	%	%	%	%	%	%	%	%	%	%
Male	66.0	79.1	62.2	57.1	65.8	48.2	44.7	53.1	91.2	69.4	76.0
Female	34.0	20.9	37.8	42.9	34.2	51.8	55.3	46.9	8.8	30.6	24.0
Race/Ethnicity											
White	61.7	44.8	35.6	75.1	77.0	78.7	78.9	71.9	70.6	77.8	43.0
African- American	9.4	18.8	30.3	2.4	4.3	3.4	2.6	9.4	5.9	2.8	27.4
Hispanic	24.4	32.5	30.2	18.0	16.5	14.9	13.2	15.6	14.7	16.7	24.6
Other	4.4	3.9	3.9	4.5	2.2	3.1	5.3	3.1	8.8	2.8	5.0
Age at Admission											
Younger than 18	1.7	30.3	1.5	1.2	1.3	2.9	2.6	9.4	11.8	2.8	6.7
18–24	14.9	25.7	10.3	12.9	34.8	18.4	13.2	15.6	32.4	31.9	20.1
25–34	30.5	27.6	24.1	44.3	35.4	40.7	21.1	56.3	26.5	26.4	34.1
35–44	25.3	10.6	30.0	26.1	15.1	21.8	34.2	9.4	14.7	19.4	17.9
45–54	20.0	4.5	27.5	13.8	8.0	10.5	15.8	9.4	14.7	18.1	14.5
55 and Older	7.6	1.3	6.6	1.6	5.4	5.8	13.2	0.0	0.0	1.4	6.7
Route of Ingestion											
Smoking	0.3	91.8	58.5	60.1	20.3	5.6	3.9	9.4	17.6	41.7	3.4
Inhaling	0.6	5.8	33.0	10.1	6.0	10.6	1.3	18.8	8.8	13.9	7.3
Injecting	0.1	0.1	6.2	26.9	72.0	6.3	2.6	0.0	0.0	18.1	1.1
Oral/Other	99.0	2.3	2.3	2.9	1.7	77.5	92.2	71.8	73.6	26.3	88.2
Secondary Drug											
MJ	MJ	Alcohol	Alcohol & MJ	MJ & Alcohol	Cocaine & Other Opioid	Alcohol & MJ	Alcohol & Other Opioid	MJ & Alcohol	MJ & Alcohol	Alcohol	Alcohol
25.0	25.0	40.8	31.5 21.8	24.7 21.6	23.6 15.1	16.5 15.6	31.6 14.5	12.5 12.5	23.5 20.6	25.0	6.1
Tertiary Drug											
Cocaine & MJ	Cocaine & MJ	Cocaine & Alcohol	Alcohol & MJ	MJ & Alcohol	MJ	Alcohol MJ	Other Opioid	MJ	MJ	MJ	MJ
4.3 3.9	4.3 3.9	6.2 4.7	11.3 10.9	11.6 9.3	10.4	7.9 6.9	8.0	6.3	17.6	19.4	2.2

¹Includes alcohol only or in combination with other drugs.
²Includes other stimulants (e.g., Ritalin®) and amphetamines (e.g., Benzedrine®, Dexadrine®, Desoxyn®).
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. Number and Percentage of NFLIS Reports Among Drug Items Analyzed, by Drug Type, Based on Denver Top 10 Drugs, in Denver¹ and the United States: 2012²

Drug	Denver Area		United States	
	N	%	N	%
Cocaine	2,364	27.6	229,595	16.3
Marijuana/Cannabis	1,802	21.0	460,497	32.7
Methamphetamine	1,277	14.9	170,301	12.1
Heroin	1,047	12.2	120,393	8.5
Oxycodone	175	2.0	50,184	3.6
AM-2201	137	1.6	13,889	1.0
Psilocin/Psilocybin/Psilocyn/Psilocybine	80	0.9	4,150 ³	0.3
Hydrocodone	78	0.9	38,240	2.7
Acetaminophen	61	0.7	18,742	1.3
Alprazolam	59	0.7	35,355	2.5

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

²Data are for January–December 2012 and include primary, secondary, and tertiary reports; data for 2012 are preliminary and subject to change.

³Not in U.S. top 10.

SOURCE: NFLIS, DEA, May 7, 2013

Exhibit 7. Number and Percentage of Newly Reported HIV Cases, by Exposure Category, in Colorado: 2012

Exposure Category	Newly Reported HIV Cases	
	Number	Percentage
MSM	246	64.1
IDU	12	3.1
MSM/IDU	21	5.5
Heterosexual	39	10.2
Pediatric	5	1.3
No Identified Risk/Other	61	15.9
Total	384	100.0

Note: MSM=men who have sex with men; IDU= injection drug user; Pediatric cases are individuals younger than 13 years at the time of HIV or AIDS diagnosis.

SOURCE: Colorado Department of Public Health and Environment

Drug Abuse in Detroit, Wayne County, and Michigan: 2012

Cynthia L. Arfken, Ph.D.¹

ABSTRACT

A key finding for the reporting period is the differing profile for Detroit when compared with the rest of the State of Michigan. There were no major changes in indicators in 2012 when compared with the previous year's report. Proportions of primary cocaine treatment admissions declined slightly to 15.5 percent of Detroit publicly funded admissions in the first half of fiscal year (FY) 2013, compared with 16.6 percent for FY 2012. The proportion for crack cocaine also declined slightly, from 91.4 to 90.0 percent. For the rest of the State, the proportion of primary cocaine treatment admissions declined slightly, to 6.0 percent in the first half of FY 2013 from 6.8 percent in FY 2012. The proportion of the cocaine admissions for crack cocaine also declined, from 71.5 to 67.2 percent between FY 2012 and the first half of FY 2013. Of the total primary cocaine admissions in Detroit, 66.7 percent were male; 92.9 percent were African-American; and 88.4 percent were older than 35. Cocaine accounted for the second highest percentage of drug reports among drug items seized and analyzed by National Forensic Laboratory Information System (NFLIS) laboratories for both Wayne County and the State of Michigan for 2012. In the first half of FY 2013, primary heroin treatment admissions decreased to 30.7 percent of Detroit publicly funded admissions, compared with 34.5 percent for FY 2012. Of the heroin admissions, 63.6 percent were male; 79.5 percent were African-American; and 85.8 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: 38.8 versus 53.2 years, respectively, and 76.5 versus 33 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: 30.7 versus 47.5 years, respectively, and 87.9 versus 51.5 percent, respectively. In Michigan, clients younger than 30 constituted 19.6 percent of heroin admissions in calendar year (CY) 2003; this proportion increased to 41.1 percent in CY 2012. 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 2012. In the first half of FY 2013, primary opioid treatment admissions were stable from the previous year at approximately 3 percent of Detroit publicly funded admissions. In contrast, the proportion for the rest of the State's publicly funded admissions reporting primary opioid abuse was 13.9 percent in first half of FY 2013, compared with 16.2 percent in FY 2012. In Michigan, clients younger than 30 constituted 38.8 percent of opioid admissions in CY 2003; this proportion increased to 48.1 percent in CY 2012. Treatment admissions for opioids or heroin accounted for 33.7 percent in Detroit and 34.1 percent in the rest of the State of Michigan. Treatment admissions for marijuana increased to 18.2 percent of the publicly funded admissions during the first half of FY 2013, compared with 13.8 percent in FY 2012.

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Of the marijuana admissions, 61.1 percent were male; 92.7 percent were African-American; and 20.9 percent were younger than 18. Marijuana accounted for the highest percentage of drug reports among drug items seized and analyzed by NFLIS laboratories in Wayne County and the State.

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 city 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 April 2013, the unemployment rate had declined to 8.4 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) 2013² 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.
- **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** in Wayne County and in the State of Michigan and analyzed were provided by the National Forensic Laboratory Information System (NFLIS) for calendar year 2012 as reported in May 2013. The total reports include primary, secondary, and tertiary substances detected. The totals are preliminary and subject to change.
- **Numbers of prescriptions filled in the State of Michigan** for 2011 and 2012 were provided by the Board of Pharmacy, MDCH.
- **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 2012.
- **Numbers of accidental drug-associated deaths** for Detroit were provided by the Office of the Medical Examiner (Wayne County) for 2008–2012.
- **Youth Risk Behavior Survey (YRBS) data** are from the 2005, 2009, and 2011 surveys of high school students funded by the Centers for Disease Control and Prevention.
- **Poison control center data** came from calls made to the Poison Control Center at Children's Hospital of Michigan for Eastern Michigan from January–June 2012.

DRUG ABUSE PATTERNS AND TRENDS

Accidental Drug-Associated Deaths

Between calendar year (CY) 2008 and 2010, the number of accidental drug-associated deaths exceeded the number of homicides in Detroit. The peak was in 2009 at 444. Since that time, the number of accidental drug-associated deaths has decreased. In 2012, the number of such deaths was 348. The average age of White accidental drug-associated decedents has remained steady: 40

²The first half of FY 2013 includes data from October 1, 2012, through March 31, 2013. Treatment admissions trend data in this report comparing 2003 with 2011 reflect CY data.

years in 2008 and 41 in 2012. For African-American decedents, there has been a gradual decline in mean age, from 51 in 2008 to 48 in 2012.

Cocaine

For the first half of FY 2013, 15.5 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 lower than the FY 2011 proportion (16.6 percent). Of the current cocaine treatment admissions, 90.0 percent were for crack cocaine. Clients seeking treatment for cocaine were predominately male (66.7 percent), African-American (92.9 percent), and older (88.4 percent were 35 or older). 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 2012 (exhibit 2). The percentage of high school students who reported ever using cocaine in 2011 (4.1 percent) was not significantly different from the national estimate.

Heroin

In the first half of FY 2013, 30.7 percent of Detroit publicly funded treatment admissions reported heroin as the primary drug of abuse (exhibit 1), compared with 34.5 percent in FY 2012. Clients seeking treatment for heroin were likely to be male (63.6 percent), African-American (79.5 percent), and older (85.8 percent were 35 or older). 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 38.8 years, compared with 53.2 years among African-American admissions. While 76.5 percent of Whites reported injection as the main route of administration, 33 percent of African-American heroin admissions reported injection as the main route of heroin administration in the first half of FY 2013. In the rest of the State, the mean age of White primary heroin admissions was 30.7, compared with 47.5 for African-American admissions. Among heroin admissions in the rest of the State, 87.9 percent of the White clients injected, compared with 51.5 percent among the African-American clients.

To address whether young adults (younger than 30) are increasingly being admitted for heroin in the State, admissions were analyzed by calendar year. In CY 2003, only 19.6 percent of heroin admissions were among young adults. The percentage peaked in CY 2010 at 44.5 percent and may be decreasing. In CY 2012, 41.1 percent of heroin admissions were among young adults. The percentage of young adults among treatment clients who reported heroin as the primary drug of abuse and injected may be falling. In CY 2003, young adults accounted for 23.5 percent of injecting heroin admissions. The percentage peaked in CY 2010 at 53.2 percent. In CY 2012, the percentage had declined to 48.6 percent.

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

Heroin is a prominent problem outside of Detroit based upon treatment admissions. Of the total number of heroin admissions in the State of Michigan for the first half of FY 2013, 82.5 percent were nonresidents of Detroit. Of the White admissions in Detroit, 24.1 percent were among young adults. Among the non-White admissions in Detroit, only 2.4 percent were among young adults. In contrast, for the rest of the State, 54.1 percent of the White admissions were among young adults, and 22.2 percent of the non-White admissions were among young adults.

Heroin ranked third among the number of drug reports from drug items seized and identified in Wayne County and in the State of Michigan by NFLIS laboratories during 2012 (exhibit 2). 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.

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.

Opioids

Opioids represented 3.1 percent of primary treatment admissions in Detroit during the first half of FY 2013 (exhibit 1). Of the 94 admissions, only 1 was for diverted methadone, with the remainder categorized as other opioids. For the State of Michigan, there were 270 treatment admissions for diverted methadone and 3,443 treatment admissions for other opioids, for a total of 13.8 percent of the treatment admissions. In Detroit, clients younger than 30 constituted 32.6 percent of the admissions for 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 percent in CY 2003 to 3.0 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.

To address whether young adults (younger than 30) are increasingly being admitted for opioids in the State, admissions were analyzed by calendar year. In CY 2003, 38.8 percent of opioid admissions were among young adults. The percentage peaked in CY 2009 at 55.9 percent and may be decreasing. In CY 2012, 48.1 percent of heroin admissions were among young adults.

Two opioids—hydrocodone (with 247 reports) and oxycodone (with 71 reports)—were among the top 10 drugs reported from drug items seized in Wayne County and identified in 2012 (exhibit 2). For the State of Michigan, hydrocodone (1,406 reports; 4.0 percent of all reports), oxycodone (404 reports; 1.2 percent of all reports), morphine (404 reports; 1.2 percent of all reports), and methadone (238 reports; 0.7 percent of all reports) were among the top 10 drugs reported from analyzed drug items. These data are subject to change.

The number of prescriptions filled in Michigan across different schedules, including for opioids, continued to climb in 2012. For Schedule II medications, the number of prescriptions filled increased

from 3,838,174 in 2011 to 4,323,434 in 2012. For Schedule III medications, the number of prescriptions filled increased from 8,059,758 in 2011 to 8,449,497 in 2012.

Methamphetamine and Amphetamine

In Detroit during the first half of FY 2013, treatment data showed that admissions for stimulants other than cocaine as primary drugs of abuse included one admission for methamphetamine. Admissions with methamphetamine as the primary drug of abuse totaled 382 in the State of Michigan (or 1.4 percent of total admissions), and there were 40 admissions for other amphetamines. Methamphetamine was not among the top 10 drugs reported from drug items seized in Wayne County and identified by forensic laboratories (exhibit 2). However, for the State of Michigan, there were 1,300 drug reports of methamphetamine (3.7 percent of all reports) identified by forensic laboratories in 2012. 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.

Amphetamines were among the top drugs seized in Wayne County (30 reports) and the State of Michigan (349 reports) and analyzed by forensic laboratories for 2012. Informal discussions with treatment clients indicate that amphetamines are easy to find.

Marijuana

Marijuana indicators remained mostly stable but at elevated levels in Detroit in 2012. Domestic, Canadian, and Mexican marijuana remained widely available. Among all publicly funded substance abuse admissions in Detroit, marijuana increased to 18.2 percent in the first half of FY 2013 from 13.8 percent in FY 2012 (exhibit 1). Clients seeking treatment for marijuana were more likely to be male (61.1 percent) and African-American (92.7 percent). Approximately one-fifth (20.9 percent) of the admissions in the first half of FY 2013 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 in Wayne County and the State of Michigan in 2012 (exhibit 2) and identified by forensic laboratories. 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. Certification has been valid for 2 years. As of April 30, 2013, 135,267 people (or 1.4 percent of the population) were active registered qualified patients.

Hallucinogens and Emerging Psychoactive Drugs

The emerging psychoactive drugs are a rapidly changing and hard to characterize group. Traditional drugs in this category include MDMA (3,4-methylenedioxymethamphetamine), GHB (gamma hydroxybutyrate), flunitrazepam (Rohypnol®), ketamine, PCP (phencyclidine), and hallucinogens. There was one treatment admission in Detroit for “club drugs” during the first half of FY 2012, with the self-report of “ecstasy” as the primary drug of abuse. In the State of Michigan, there were 35 such admissions for the first half of FY 2012. These admissions included 15 for inhalants, 12 for hallucinogens, 5 for ecstasy, and 2 for ketamine. None of these drugs ranked among the top 10

NFLIS drugs reported from drug items seized in Wayne County and identified by NFLIS laboratories in 2012 (exhibit 2).

Nontraditional drugs in this category include substances identified as synthetic cannabinoids (cannabimimetics) and synthetic (substituted) cathinones. The public health 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). Cathinones and synthetic cathinones were identified among drug items seized and analyzed by NFLIS laboratories in Wayne County and the State of Michigan in 2012. For the county, 4 different synthetic cathinones (23 reports) were identified, and for the State, 7 different synthetic cathinones (149 reports) were identified. For the county, 4 different synthetic cannabinoids (16 reports) were identified, and for the State, 10 different synthetic cannabinoids (135 reports) were identified.

According to drug intelligence, there was more talk of “Mollies,” and synthetics were “readily available.”

INFECTIOUS DISEASES RELATED TO DRUG ABUSE

During 2012, there were 133 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 (5 percent) was stable and low.

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Exhibit 1. Number and Percentage¹ of Primary Drug of Abuse for Treatment Admissions, in Detroit and the State of Michigan: First Half of 2013

Substance	Detroit		State of Michigan	
	Number	Percentage	Number	Percentage
Alcohol	991	32.2	10,205	38.3
Heroin	948	30.8	5,429	20.4
Marijuana	560	18.2	4,622	17.3
Cocaine	478	15.5	1,909	7.2
Opioids	94	3.1	3,713	13.9
Methamphetamine	1	<.1	382	1.4
Other Amphetamines	0	0	40	0.1
Other	8	0.3	367	1.4
Total	3,080	100.0	26,667	100.0

¹Percentage of treatment admissions with primary drug of abuse identified.

SOURCE: Bureau of Substance Abuse and Addiction Services, Division of Substance Abuse and Gambling Services, Michigan Department of Community Health, for those clients whose treatment was covered by Medicaid or Block Grant funds

Exhibit 2. Number and Percentage of Most Commonly Identified Drugs Among Reports¹ From Drug Items Seized in Wayne County, Michigan, and Analyzed by NFLIS Laboratories: 2012²

Substance	Number of Reports	Percentage of Reports ³
Marijuana/Cannabis	3,675	47.2
Cocaine	1,559	20.0
Heroin	1,179	15.1
Hydrocodone	247	3.2
Alprazolam	183	2.4
Oxycodone	71	0.9
TFMPP (1-3-(trifluoromethylphenyl)piperazine)	44	0.6
Amphetamine	31	0.4
Phenylimidothiazole Isomer Undetermined	31	0.4
BZP (1-benzylpiperazine)	30	0.4
Other	737	9.5
Total Items Reported	7,787	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 2012. Data are subject to change.

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

SOURCE: NFLIS, DEA, data retrieved May 7, 2013

Drug Abuse Trends in Honolulu and the State of Hawaii: 2012

D. William Wood, M.P.H., Ph.D.¹

ABSTRACT

This report presents 2012 data on drug use in Honolulu and the State of Hawaii. In 2012, total statewide primary treatment admissions were stable and overall Honolulu Police Department (HPD) drug-related arrest activity decreased. Heroin indicators were mixed during the year; heroin-related deaths in Oahu increased (as did all opiate-related deaths), statewide primary treatment admissions were low but increasing, and police arrests in Honolulu decreased. Treatment admissions for marijuana were increasing, and Medical Examiner decedent toxicology reports with THC (tetrahydrocannabinol) also increased. HPD marijuana arrests declined from 2011. The NFLIS method for processing and counting National Forensic Laboratory Information System (NFLIS) reports from drug items sized and analyzed changed in 2012 for Honolulu; this resulted in a higher number of reports per analyzed drug item than in previous years. Methamphetamine and cocaine reports from drug items seized and analyzed in laboratories were lower than in the previous 2 years, while marijuana reports among drug items seized and analyzed increased. MDMA (3,4-methylenedioxymethamphetamine) returned to the top 10 NFLIS reports for 2012, ranking fifth among reports.

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 24 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 the other drugs that are prevalent in Hawaii.

Area Description

Hawaii is perhaps the most geographically isolated population center on earth. Hawaii has a land mass of 5,081 square miles, much of which is uninhabitable due to the mountains, the coral sea shores, and the dense jungle-like growth. The population density is 188.8 persons per square mile, scattered across 8 islands of various sizes, of which 7 are inhabited. With a relatively small population of 1.3 million, Hawaii would seem to be a quiet tropical island. However, when you add the 6 million tourists from all over the world, that vision quickly disappears.

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When people are on holiday, they will do things they would never dream of doing at home. The State tries to accommodate these behaviors, but it is impossible to do so, and every year a small but well publicized number of visitors get into trouble and some die. As with many tourist destinations, the street economy had developed to meet the needs of the tourists with drugs, prostitutes, and other vices quite openly available within all the tourist areas. For the seller, this presents an opportunity to take advantage of people they will likely never see again. For the buyers, this should be seen as a high-risk endeavor that often leads to thefts, spread of disease, and receipt of unknown substances to ingest. Every year, reports of tourist drug overdoses are presented in the local news media. It is important to state that the majority of the drug use within the State is by local residents, even though drug use among visitors causes many problems.

The 1.3 million population of Hawaii normally contains roughly 10 percent (140,000) military residents and their dependents. The high levels of troop deployments (Active Duty, National Guard, and Reserves) to Iraq and Afghanistan in 2008–2011 have now returned to more normal levels, and the military was beginning to plan for new programs and developments when the sequester was implemented. While the true extent of this measure is unknown, it is clear that it will impact contracting of civilian employees for many routine services on the bases. Unemployment in Hawaii in 2012 averaged about 5 percent, having peaked in late 2008 at nearly 10 percent. Foreclosure rates in Hawaii in 2010 were the highest since statehood (1959) but have now slowed.

In the past year, Hawaii lost its senior Senator, who at the time of his death was the chair of the Senate Ways and Means Committee. In addition, a few months earlier the other Senator retired after a long career in the House of Representatives and the Senate. Also, within the past few years, one Congressman gave up his seat to run for and win the Governor's position in the State. Consequently, Hawaii has lost a great deal of influence in Washington, DC, and this has seriously impacted the availability of Federal programs and funds.

Data Sources

The Honolulu CEWG was again 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 by interview and interaction directly from the member agencies for inclusion in this report. Finally, newspaper searches were used to find major events related to substance abuse in Hawaii in 2012.

Specific data sources 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 report whenever 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. The Treatment Episode Data Set (TEDS) was consulted to verify treatment data.

- **Drug-related death data** were provided by the Honolulu City and County Medical Examiner's (ME's) Office for 1991 through 2012. 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 clear drug-related deaths. While the ME data are consistent, they are not comprehensive and account for only about one-third of all deaths on Oahu. To allow a direct comparison between ME data and treatment data, the ME data were multiplied by a factor of 10 on report exhibits.
- **Law enforcement case data (arrests)** for 2012 were received from the Honolulu Police Department (HPD), Narcotics and Vice Division, for Honolulu only. In previous reports, attempts were 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.
- **Uniform Crime Reports (UCR) data** were accessed from the State's Attorney General's Web site for 1975–2012. These data were consulted to verify other sources.
- **Data on drug reports of items seized** in Hawaii were provided by the Drug Enforcement Administration (DEA), National Forensic Laboratory Information System (NFLIS), for 2009–2012. The total reports include primary, secondary, and tertiary substances detected. The totals are preliminary and subject to change.
- **Acquired immunodeficiency syndrome (AIDS) data** came from the Hawaii State Department of Health.

DRUG ABUSE PATTERNS AND TRENDS

Cocaine/Crack

Powder cocaine and crack treatment admissions in Hawaii are shown on exhibit 1. Cocaine admissions decreased from 349 in 2007 to 139 in 2010. The reasons for the decline are uncertain and could relate to market restrictions, difficulties of treatment admission, shifts in patterns of demand, or simply choice of another drug by users. However, in 2011, powder cocaine/crack admissions increased to 314 and ranked fifth (with 2.9 percent of admissions) among primary drugs reported for treatment admissions, after methamphetamine, alcohol, marijuana, and other drugs. The number declined slightly to 291 admissions in 2012, but the proportion was stable at 2.9 percent of total admissions. The number of admissions with cocaine as a secondary or tertiary drug of abuse was not reported by ADAD.

The Honolulu ME reported 21 deaths with a cocaine-positive toxicology screen in 2012, compared with 22 deaths in 2011 and 24 in 2010 (exhibit 1). ME data have been adjusted by multiplying all death data by a constant of 10 to allow for their presentation along with treatment data in the exhibit. From 2007 through 2012, the number of deaths in which decedent toxicology was positive for cocaine ranged from 29 in 2007 to 21 in 2012.

As shown in exhibit 2, Honolulu Police cases for cocaine/crack decreased from 248 in 2007 to 54 in 2012.

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. With a high degree of certainty, it can be stated that heroin in Honolulu is black tar heroin from Mexico. Since 2009, data indicate that the presence of heroin has declined rapidly in Honolulu, even though black tar heroin remained readily available in all other areas of the State. NFLIS data over the past several years show that heroin, regardless of form, is found in seized samples at a rate of less than 2.0 percent (exhibit 9).

After remaining stable at 162–165 admissions in 2008–2009, heroin treatment admissions increased in 2010 to 238 (exhibit 3). The number of heroin admissions then decreased to 130 in 2011. In 2012, however, the number of admissions increased to 210. In 2011, heroin represented 1.2 percent of all admissions, and the drug accounted for 2.1 percent of the total in 2012.

The Honolulu ME reported that deaths in which heroin were detected in the toxicology screen totaled 29 in 2008, and they appear to have been increasing since then. In 2010, the number of deaths with heroin on the toxicology screen numbered 47. It was at this time that the ME's Office reported that the difficult job of detecting heroin from a group of opioids found in the same screen was not possible given the technology in their laboratories. As a result, it was requested that for 2010, and likely for 2009, the findings be noted as tentative and not definitive. For 2011 and 2012, the number of deaths with toxicology screens showing the presence of heroin was 42 and 53, respectively. The ongoing difficulty in specifying the residuals of heroin versus morphine and other opiates continued, leaving the ME unable to accurately determine which cases were heroin and which were not. Because of this, all opiate deaths, along with heroin deaths, are also shown in exhibit 3. Decedents with a positive toxicological result for other opiates were primarily composed of those in whom hydrocodone, oxycodone, morphine, or methadone was detected; they numbered 66 decedents in 2010, 54 in 2011, and 79 in 2012. The exact medication (e.g., OxyContin®) was not specified.

Between 2007 and 2012, the HPD reported an erratic pattern of heroin cases (19, 53, 7, 27, 24, and 11 cases, respectively) (exhibit 4).

Marijuana

The 2011 report noted that statewide marijuana treatment admissions reached their highest level since data collection began in 1991, with 2,497 primary marijuana admissions (exhibit 5). The number of treatment admissions with marijuana declared as the primary drug of use increased again in 2012 with 2,579 admissions (representing 25.7 percent of admissions). This represented a continuation of the increases in admissions that have occurred since 2005. As has been noted before, the 2012 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 2012 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 the specimens submitted for toxicology screening. 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, followed by the highest number of screened decedents since data collection began in 1991 being reported for 2010 at 54 (exhibit 5). In 2011, the number fell to

30. In 2012, the number of reports increased to 55. Marijuana was used with other drugs if there was a drug-related death.

The HPD continued to monitor, but to not specifically report, all case data for marijuana. Instead, marijuana cases are lumped together with other drugs under the Uniform Crime Reports (UCR) category “Detrimental Drugs,” an artifact of the UCR system. 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 134 arrests for detrimental drugs were reported by the HPD in 2012. These data represent a decline from 2011 ($n=290$) and represent the continued overall trend of fewer detrimental drug arrests.

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.” 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 purity². As mentioned in previous reports, 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. According to the High Intensity Drug Trafficking Area reports, the purity of several samples submitted during late 2005 was in the mid-50s rather than in the high 90s. The high purity is necessary for smoking the drug, Hawaii’s chosen route of administration.

As previously reported, statewide methamphetamine treatment admissions declined between 2005 and 2008. In 2009, however, admissions spiked to 3,693 from 2,726 in 2008. In 2010, methamphetamine admissions declined again, to 2,764 admissions. An increase was reported in 2011 and 2012, with 4,138 and 4,854 admissions, respectively (exhibit 7). The demand for treatment space for methamphetamine abusers has increased by nearly 2,000 percent since 1991, a situation that continues to outstrip the treatment system’s capacity. It seems plausible to suggest that the demonstrated need for treatment is much longer with methamphetamine than with many other drugs. Consequently, those arriving at treatment centers at present may be the active users of methamphetamine from the peak use years of the early to mid-1990s.

Between 1994 and 2000, the Oahu ME mentioned 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. Methamphetamine-positive toxicologies were reported for 76 decedents in 2010, 47 in 2011, and 97 in 2012 (exhibit 7). Within the ME reports is information that shows that cause of death is often paired with “effects of methamphetamine toxicity” but with another diagnosis listed first.

²Cunningham, 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).

Police data for methamphetamine were even more varied and at a much lower level than treatment data. 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 ($n=209$) was in 2012 (exhibit 8).

According to NFLIS data, methamphetamine reports among drug items seized and analyzed ranked second in 2012, behind marijuana, and totaled 33.4 percent of all reports from Honolulu. This is the second time since NFLIS data have been reported that methamphetamine has not been the major drug identified by laboratory examination of seized drug items. The proportion of methamphetamine reports declined from 36.7 percent in 2010 and 38.4 percent in 2011 (exhibit 9).

Other Drugs

MDMA

MDMA (3,4-methylenedioxymethamphetamine), or ecstasy, is present in Hawaii, although most indicators did not detect its presence. Individuals are not entering treatment with MDMA as their primary drug of use; MDMA users were not being arrested by the HPD; and, while they were present among ME data, the numbers were exceptionally low. In addition, NFLIS data did not show MDMA as one of the top five drug reports among items seized and analyzed in Honolulu until 2003. Between 2003 and 2010, MDMA reports among analyzed forensic laboratory drug samples increased to the point where, in 2010, MDMA moved past heroin into fourth place. For 2012, MDMA represented 0.9 percent of all samples, which placed the drug fifth among the top 10 drugs identified by NFLIS laboratories for Honolulu (exhibit 9).

Depressants

Barbiturates, sedatives, and sedatives/hypnotics are combined into this category. Few data were provided about these drugs in the islands. ADAD maintains three categories under this heading: benzodiazepines, other tranquilizers, and barbiturates. Treatment admissions for these drugs 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: 1991–2012

As has been the case for the past 24 years of reports from Hawaii, Hawaiians³ and Caucasians remained the majority (65 percent of all admissions) among the 29 identified ethnic groups (plus the “other” and “unknown/blank” categories) accessing ADAD services for treatment. During 2012, 43.2

³Hawaiians are defined as those who state on admission that they are of Hawaiian ancestry and may or may not be pure Hawaiian.

and 21.7 percent of the admissions to treatment services were for those self-identifying as Hawaiian or Caucasian, respectively. All other groups represented significantly lower proportions of admissions. Males accounted for 66.2 percent of all treatment admissions; clients younger than 18 (26.4 percent) and clients in the 25–34 (24.1 percent) and 35–44 (17.6 percent) age groups dominated admissions. One-third (33.5 percent) of all admissions were self-referrals. The criminal justice system and court referrals accounted for another one-third of admissions (33.7), and the balance were a series of small referral sources accounting for about one-fifth (18.9 percent) of admissions. Less than 30 percent (27.4 percent) of all admissions were students.

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 abuse 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 was at or near the major treatment category for many other admissions.

NFLIS DATA: 2009–2012

Exhibit 9 shows NFLIS data for Honolulu for 2009 through 2012. 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. For 2009–2012, the total reports include primary, secondary, and tertiary substances detected for each drug analyzed in the NFLIS laboratories.

Within the data presented in this exhibit are several findings that relate to the dominance of methamphetamine within the drug community of Hawaii. It is important to note that in 2011, marijuana replaced methamphetamine as the most commonly reported drug among items seized and analyzed by NFLIS and it led among reports again in 2012. Across the 4 years shown in the exhibit, cocaine usually ranked third among drug reports. Cocaine identifications ranged between 7 and 12 percent. Heroin was usually the fourth most common drug among reports of items seized and analyzed prior to 2010, representing from less than 1 to 1.3 percent (exhibit 9).

HPD DRUG CASE SUMMARY: 1991–2012

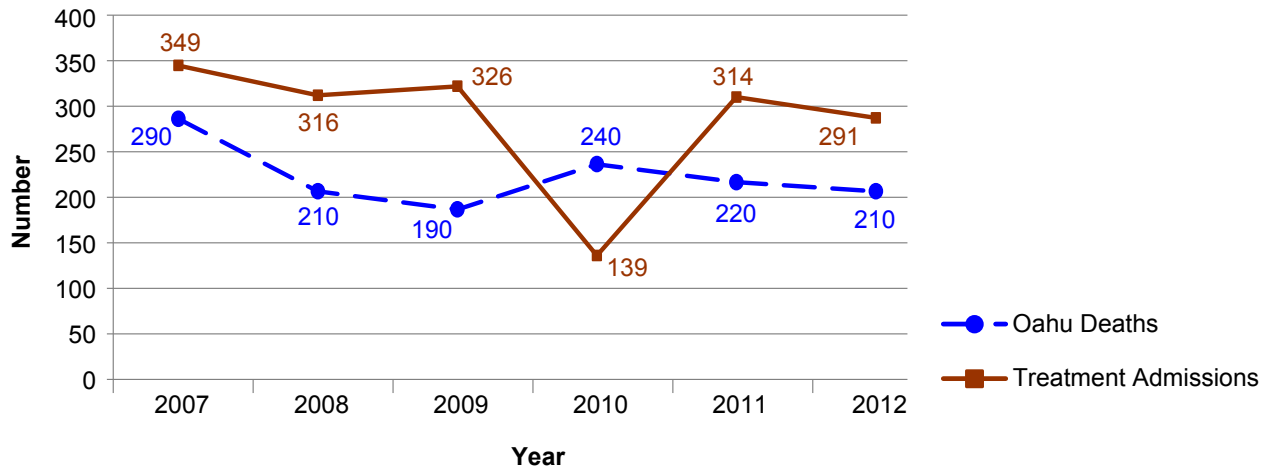
Exhibit 10 shows the numbers of HPD arrests for selected drugs by drug and by year. While there are some parallel increases and decreases in the number of drug arrests over time, for the most part the drugs appear to increase and decrease quite independently of one another. Exceptions are the concomitant 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. However, the one thing there can be little doubt about is that by drug or in total, the number of drug arrests has declined considerably over the past 21 years of data.

INFECTIOUS DISEASES RELATED TO SUBSTANCE ABUSE

As shown in exhibit 11, over the past two decades, men who have sex with men have dominated among those receiving positive diagnoses for AIDS in Hawaii. Other findings include the increased proportion of positive diagnoses for heterosexuals and the reduction in the proportion of positive diagnoses for perinatal cases.

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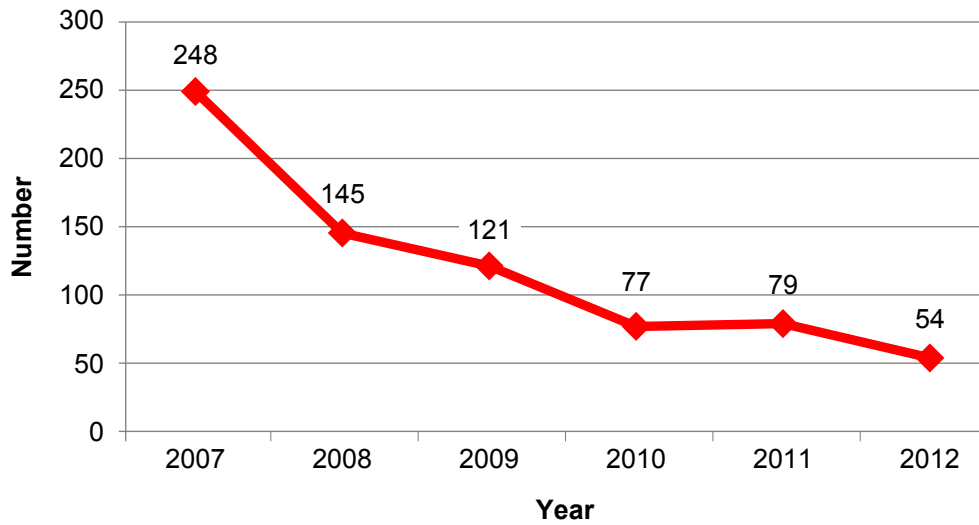
Exhibit 1. Number of Cocaine Deaths¹ in Oahu and Treatment Admissions in Hawaii: 2007–2012



¹Deaths are multiplied by a factor of 10.

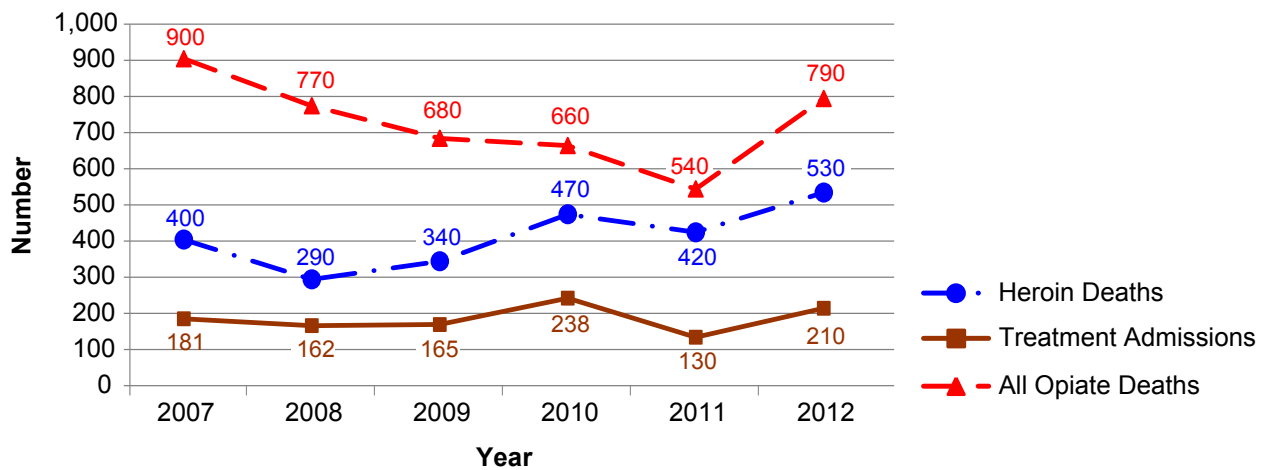
SOURCES: Honolulu City and County Medical Examiner's Office and Hawaii State Department of Health, Alcohol, and Drug Abuse

Exhibit 2. Number of Cocaine-Related Police Cases (Arrests) in Honolulu: 2007–2012



SOURCE: Honolulu Police Department

Exhibit 3. Number of Heroin/Opiate Deaths¹ in Oahu² and Heroin Treatment Admissions in Hawaii: 2007–2012

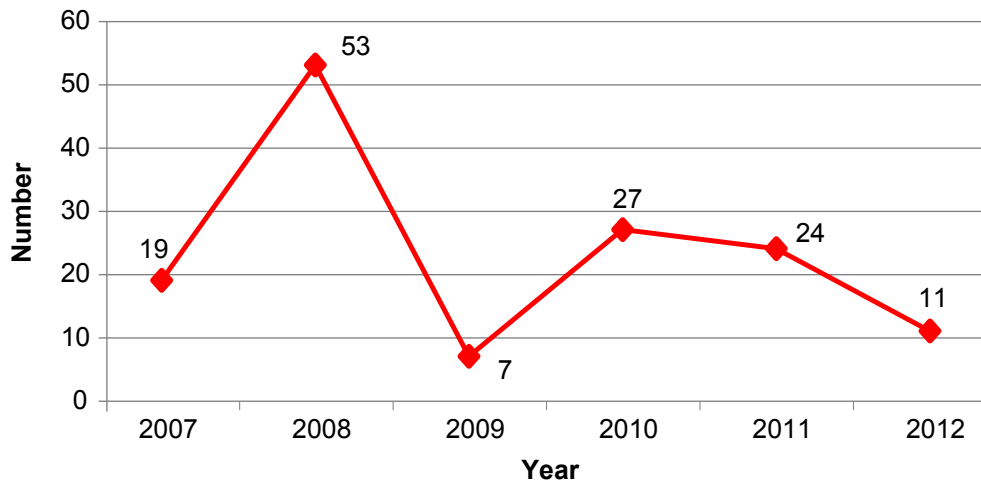


¹Due to the difficulty of detecting heroin in a toxicology screen that includes other opiates/opioids with the technology available in the Honolulu Medical Examiner’s laboratories, deaths with a positive screen for all opiates, along with heroin, are shown as “All Opiate Deaths.”

²Deaths are multiplied by a factor of 10.

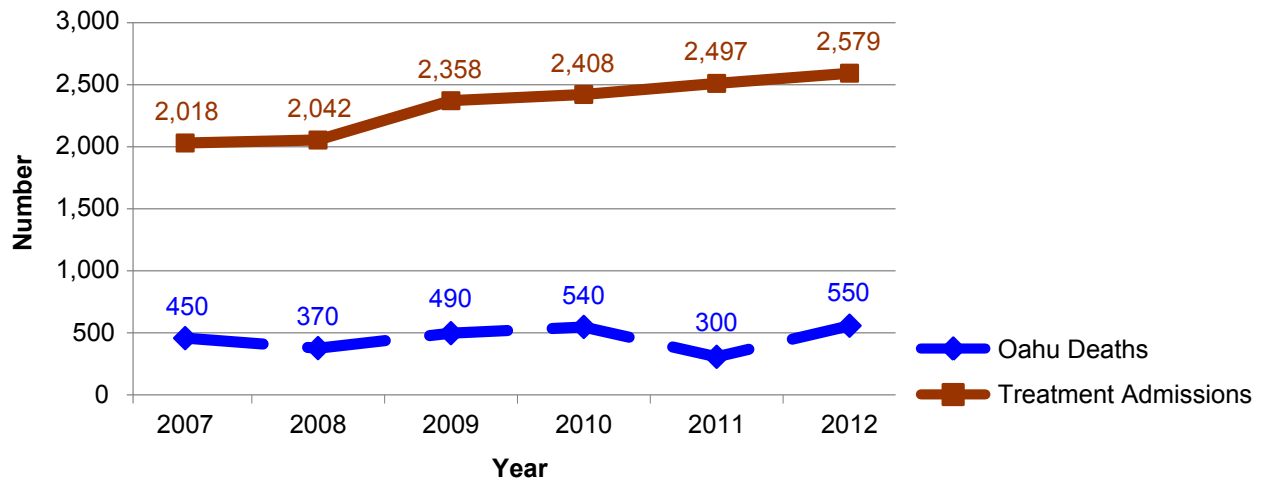
SOURCES: Honolulu City and County Medical Examiner’s Office and Hawaii State Department of Health, Alcohol, and Drug Abuse Division

Exhibit 4. Number of Heroin-Related Police Cases (Arrests) in Honolulu: 2007–2012



SOURCE: Honolulu Police Department

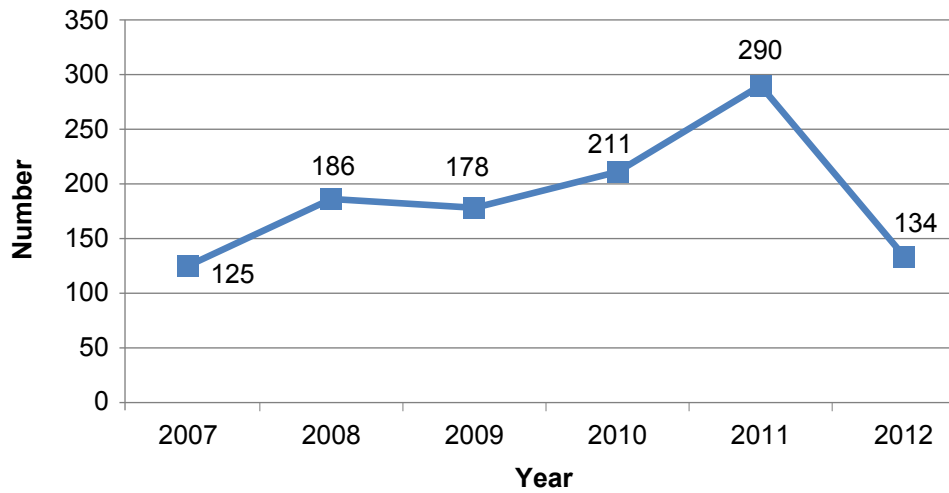
Exhibit 5: Number of Marijuana Deaths in Oahu¹ and Treatment Admissions in Hawaii: 2007–2012



¹Deaths are multiplied by a factor of 10.

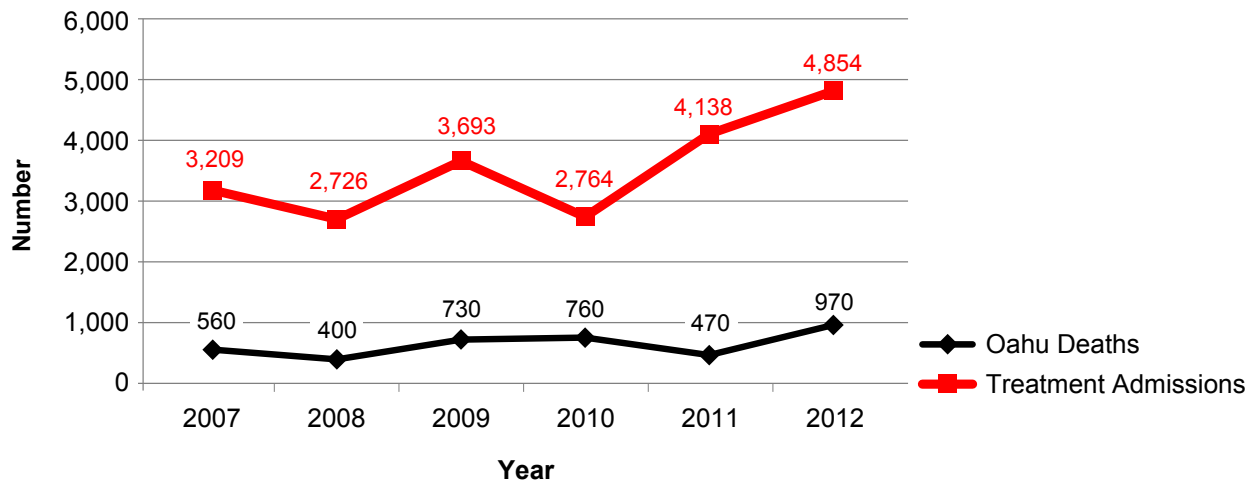
SOURCES: Honolulu City and County Medical Examiner's Office

Exhibit 6. Number of Marijuana-Related/Detrimental Drugs¹ Police Cases (Arrests) in Honolulu: 2007–2012



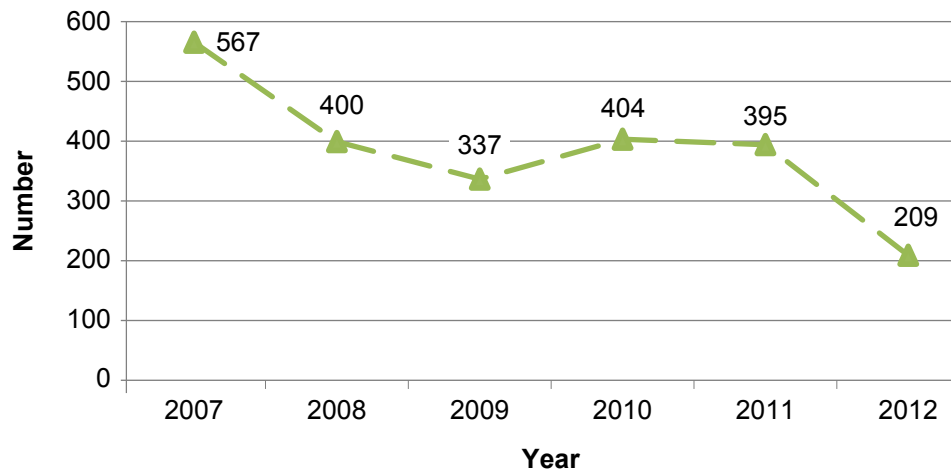
¹Marijuana cases are combined with other drugs under the category “Detrimental Drugs.”
SOURCE: Honolulu Police Department

Exhibit 7. Number of Methamphetamine Deaths¹ in Oahu and Treatment Admissions in Hawaii: 2007–2012



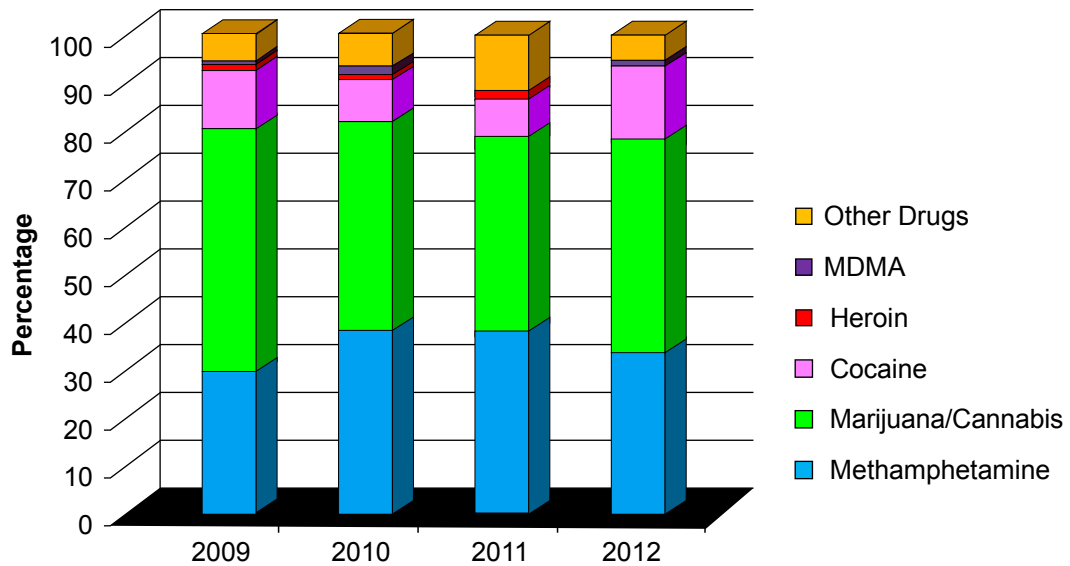
¹Deaths are multiplied by a factor of 10.
SOURCES: Honolulu City and County Medical Examiner’s Office and Hawaii State Department of Health, Alcohol, and Drug Abuse Division

Exhibit 8. Number of Methamphetamine-Related Police Cases (Arrests) in Honolulu: 2007–2012



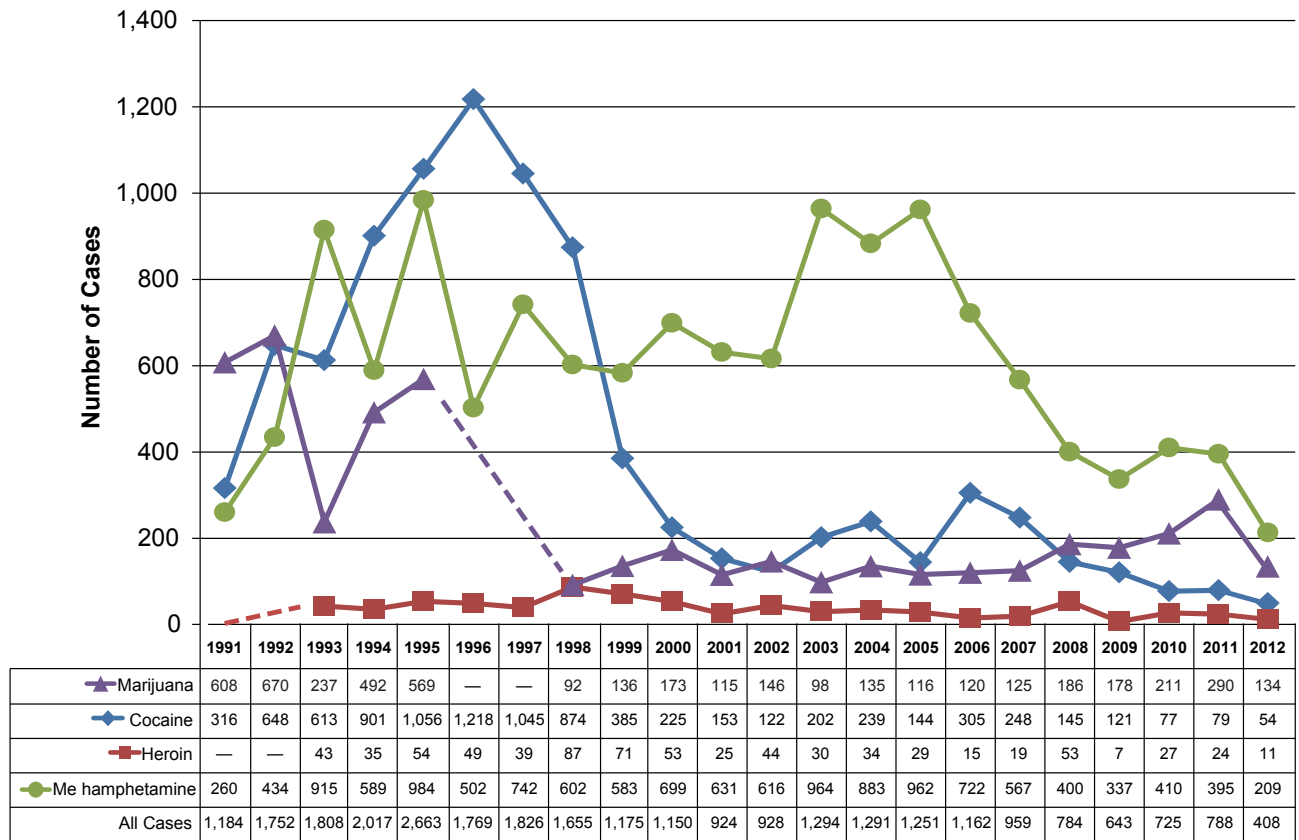
SOURCE: Honolulu Police Department

Exhibit 9: Percentage of Drug Reports, by Drug, Identified Among Drug Items Analyzed in NFLIS Laboratories, Honolulu: 2009–2012



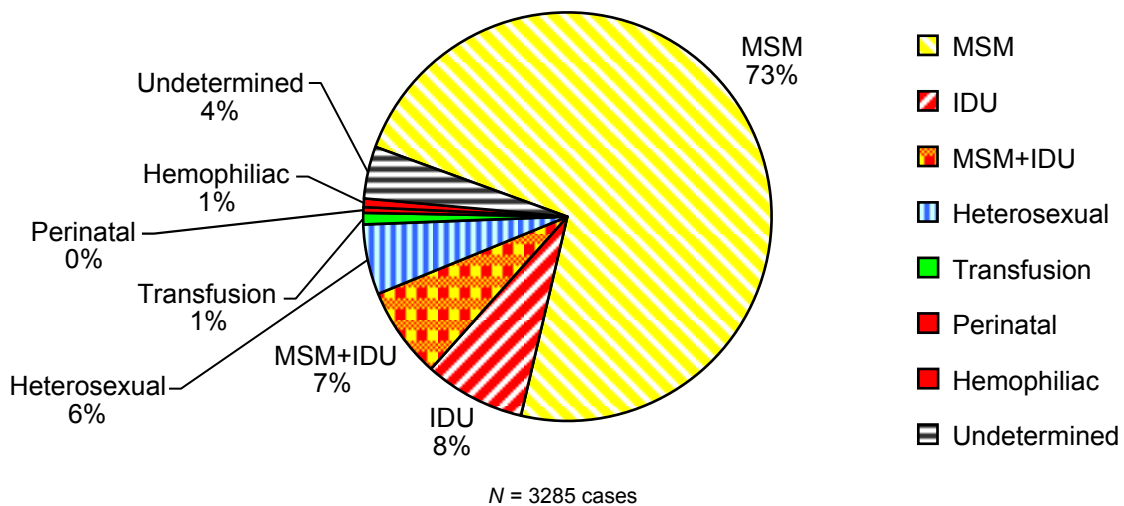
SOURCE: NFLIS, DEA, data retrieved on May 7, 2013

Exhibit 10. Numbers of Police Cases (Arrests), by Drug and Year, in Honolulu: 1991–2012



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

Exhibit 11. Percentage of AIDS Cases, by Exposure Factor in Hawaii: 1983–2012



Notes: MSM=men who have sex with men; IDU=injection drug user.
 SOURCE: Hawaii State Department of Health

Patterns and Trends in Drug Abuse in Los Angeles County, California: 2012

Mary-Lynn Brecht, Ph.D.¹

ABSTRACT

The key finding in the Los Angeles area in this reporting period was the continuing increase in methamphetamine indicators. The overall number of treatment admissions in 2012 (n=45,612) was similar to that of 2011 (n=45,736). The four primary substances accounting for the largest percentages of admissions were marijuana (27 percent), alcohol (23 percent), heroin (20 percent), and methamphetamine (17 percent), with marijuana admissions showing a very slight increase over 2011 (25 percent). There was little change for the others. Marijuana (35 percent), methamphetamine (28 percent), and cocaine (20 percent) accounted for a majority of Los Angeles-based reports from illicit drugs seized and analyzed by the National Forensic Laboratory Information System (NFLIS) for 2012; these results indicated decreases for marijuana and cocaine and an increase for methamphetamine. Cocaine accounted for 7 percent of Los Angeles County alcohol and other drug (AOD) treatment admissions in 2012, continuing a downward trend (from 13 percent in 2009). Twenty percent of drug reports from items analyzed by NFLIS laboratories in 2012 contained cocaine, a decrease from 2011 levels (when cocaine constituted 23 percent of reports from total drug items analyzed). For 2012, 20 percent of primary treatment admissions in Los Angeles County were for heroin, with little change from 2011 levels. Heroin reports among drug items analyzed by NFLIS laboratories in 2012 constituted 5 percent of total reports; this was similar to 2011 levels. During 2012, law enforcement officials expressed concern because of decreasing retail prices of heroin, purportedly to “undercut the market for prescription narcotics.” Slightly more than 3 percent of primary treatment admissions in 2012 were for other opioids/narcotics excluding heroin, stable from 2011 levels. Hydrocodone, oxycodone, and codeine together accounted for 2.2 percent of reports among drug items analyzed by NFLIS laboratories in 2012, similar to 2011. Benzodiazepines, tranquilizers, and sedatives together accounted for a very small percentage (0.3 percent) of total primary treatment admissions in 2012; this represented a slight decline from 2011 proportions (0.5 percent). The category of “other” amphetamines and stimulants, which includes several prescription drugs, such as Adderall® and Ritalin®, accounted for a small proportion (less than 0.1 percent) of treatment admissions in 2012. Methamphetamine remained prevalent and of concern to law enforcement agencies in the Los Angeles County region. For 2012, the percentage of AOD primary treatment admissions for methamphetamine (17 percent) remained relatively stable from 2011 levels. Twenty-eight percent of NFLIS drug reports among analyzed drug items were for methamphetamine; this was an increase from 2011 levels (22 percent), ranking it second among types of substances reported (after marijuana/cannabis). Retail prices for methamphetamine declined in late 2012 and early 2013. Increasing trends in methamphetamine were noted in emergency department admissions, coroner department toxicology cases, and poison control system reports.

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

Marijuana was reported as the primary drug for 27 percent of Los Angeles County treatment admissions in 2012, increasing from 24 percent in 2011. More than one-half (59 percent) of marijuana admissions were for adolescents younger than 18. Marijuana/cannabis was identified in 35 percent of reports from items analyzed by NFLIS laboratories in 2012, a slight decrease from 2011 (37 percent). Primary treatment admissions for MDMA (3,4-methylenedioxymethamphetamine) remained at a very low level (0.2 percent) in 2012, but they reflected a decrease from 0.6 percent in 2011. MDMA accounted for 0.7 percent of drug reports from items analyzed by NFLIS laboratories in Los Angeles County, a decrease from 1.8 percent in 2011. While still at very low levels, emerging synthetic drugs, including substituted cathinones, piperazines (e.g., BZP [1-benzylpiperazine] and TFMP [1-(3-trifluoromethylphenyl)piperazine]), tryptamines (e.g., “Foxy methoxy”), and cannabimimetics showed increases in 2012 NFLIS drug reports over 2011 levels. Patterns were up or stable for methamphetamine, heroin, and prescription opioids across multiple indicators; up for emerging synthetic drugs; down for MDMA; and mixed for marijuana/cannabis and cocaine.

INTRODUCTION

Area Description

Los Angeles County is the most populous county in the Nation (with the 2012 estimated population at 9,962,789, which was a 1.5-percent increase from 2010). Approximately 26 percent of California’s residents live in Los Angeles County. One-half of all Los Angeles County residents are female (50.7 percent); 24.1 percent are younger than 18; and 11.1 percent are 65 or older. The racial and ethnic composition of Los Angeles County residents is diverse, with 48.7 percent reporting Hispanic ethnicity; 27.3 percent are non-Hispanic White. Other racial categories (which could also include Hispanic ethnicity) included 13.5 percent Asian, 8.1 percent Black/African-American, and 2.4 percent other race/ethnicity or multiethnic.

Los Angeles County encompasses approximately 4,752 square miles, including land and ocean/island areas. It is bordered by the Pacific Ocean (with more than 70 miles of mainland coastline), and Ventura, Kern, San Bernardino, and Orange Counties. Los Angeles County is a mix of heavily urbanized areas, suburbs, and rural inland areas in the northern and eastern areas of the county, and the county includes portions of the Mojave Desert and San Gabriel Mountains (highest peak is 10,068 feet). There are 88 cities in Los Angeles County and 140 unincorporated areas. The Los Angeles County government worked with a budget of more than \$25 billion in 2012.

Data Sources

This report describes drug abuse-related indicators in Los Angeles County for 2012 (or most recent data available), as well as trends in selected indicators for several available years prior to and including 2012. Information was collected from the following sources:

- **Drug treatment data** were reported from the California Outcomes Monitoring System (CalOMS) and its predecessor, the California Alcohol and Drug Data System (CADDs) for 2000–2012. The statistics correspond to Los Angeles County alcohol and other drug (AOD) treatment program admissions for January–December 2012 (as available in April 2013). 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. All programs providing narcotic replacement therapy must report admissions to CalOMS (whether or not the program receives public funding).

- **Drug analysis results** from local forensic laboratories were derived from the Drug Enforcement Administration's (DEA's) National Forensic Laboratory Information System (NFLIS). The statistics correspond to reports of drugs identified (primary, secondary, or tertiary) from drug items seized and analyzed by NFLIS laboratories in 2012 for Los Angeles County.
- **Drug prices and trafficking data** were derived from U.S. Department of Justice sources. Prices were reported by the Los Angeles County Regional Criminal Information Clearinghouse (LA CLEAR) in reports for second and fourth quarters of 2012. 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 and the 2011 Heroin Domestic Monitoring Program report.
- **Drugs detected in Los Angeles County coroner toxicology cases** were extracted from data provided by the Los Angeles County Coroner's Office for 2012. Percentages reflect fractions of the total number of cases for which toxicology tests were conducted (i.e., not just drug-related deaths). Each case may have more than one drug detected; therefore, percentages should not be summed across drug categories.
- **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, "2012 Annual Surveillance Report" (March 2013).
- **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 2012 estimated 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 (most recent [2011] data accessed June 5, 2013). Incidents include poisoning ("overdose"), mental disorder, and physical disease in which AOD was reported as 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.
- **Poison control center calls** are summarized from data from the California Poison Control Center for 2012 (with reference to older reports from same source).

DRUG ABUSE PATTERNS AND TRENDS

Cocaine/Crack

Of Los Angeles County treatment admissions in 2012, 7.5 percent ($n=3,416$) reported crack or powder cocaine as the primary drug of abuse; this represents a continuing decrease from previous years (such admissions constituted 8.5 percent of total admissions in 2011, 9.7 percent in 2010, and 12.6 percent in 2009) (exhibit 1). As a percentage share of the total admissions, cocaine admissions in 2012 were the lowest since a peak (for the period 2000–2012) of 19.3 percent in 2002.

The majority (60.5 percent) of primary cocaine admissions in 2012 was male, with little change from 2011 (59.7 percent male) (exhibit 2 for 2012 distributions; earlier demographic data not shown in exhibits). Non-Hispanic Blacks continued to represent a majority of cocaine admissions (at 62.7 percent of the total in 2012), followed by Hispanics (at 20.0 percent), and non-Hispanic Whites (at 13.9 percent). Among substances accounting for more than 1 percent each of 2012 admissions, cocaine displayed the highest percentage of Blacks; for cocaine/crack admissions, Blacks were substantially overrepresented compared with their general representation across all treatment admissions (22.2 percent). Cocaine admissions were predominantly age 35 and older (with this age group constituting 77.3 percent of cocaine admissions), with the percentage in this age group higher than for any other primary substance for admission. Primary cocaine admissions were more likely than admissions for other drugs to report being homeless at admission (at 30.4 percent). More than one-half (57.4 percent) had earned a high school diploma/GED or reported post-high school educational levels. At the time of admission, 7.9 percent were employed full- or part-time.

Primary cocaine treatment admissions were more likely than treatment admissions for any other major illicit substances to report a secondary substance (59.7 percent). The most common secondary substance reported was alcohol (for 30.4 percent of cocaine admissions), followed by marijuana (for 20.5 percent). Smoking was the predominant reported route of administration (for 84.0 percent); another 13.1 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). Of the 2012 primary cocaine admissions, 44.1 percent reported no previous admission to treatment in the California public treatment system (exhibit 2).

Data from NFLIS for 2012 showed that of the 39,455 drug reports among items seized and analyzed by participating laboratories within Los Angeles County, 20.2 percent were found to contain cocaine/crack (exhibit 3). Cocaine/crack dropped to third in ranking among drug reports from drug items analyzed by NFLIS laboratories for the county, with a percentage lower than those for marijuana and methamphetamine.

Cocaine was detected in 11.4 percent of Los Angeles County coroner toxicology cases in 2012, continuing a downward trend (19.3, 13.7, and 12.1 percent in 2009, 2010, and 2011, respectively). This was a lower percentage of cases than for narcotic analgesics, heroin/morphine, or methamphetamine. Cocaine percentages were similar to those for antidepressants and benzodiazepines.

In 2011 (the most recent year available), the ED visit rate for cocaine as a primary diagnosis among nonfatal ED visits in Los Angeles County was 7.2 per 100,000 population, a slight increase from 6.2 in 2010 and attenuating a downward trend from a rate of 8.2 in 2006 (exhibit 4). Cocaine was

reported in 1.4 percent of 2012 Los Angeles County poison control center calls, continuing a slow decline from 2.1 percent in 2008 (data not shown in exhibits); note that all illicit drugs together accounted for 11.7 percent of the 6,456 total poison control center calls.

Wholesale prices for powder cocaine increased during 2012, from \$19,000–\$22,000 per kilogram in the first quarter of 2012 to \$24,000–\$27,500 by the fourth quarter, the highest levels in several years. The previously stable retail prices (approximately \$60–\$80 per gram) have also experienced some changes, both in variability and in upper-end prices (\$40–\$100 per gram).

Heroin

In 2012, 9,256 Los Angeles County treatment admissions reported heroin as the primary drug. These heroin admissions represented 20.3 percent of Los Angeles County admissions (exhibit 1). This percentage was similar to 2011 and 2010 levels (at 20.6 and 20.4 percent, respectively) but higher than 2009 levels (at 18.8 percent), offsetting a downward trend from 2001 to 2008.

In 2012, heroin admissions were predominantly male (72.5 percent) and were most likely to be non-Hispanic Whites (54.6 percent). Hispanics accounted for 34.3 percent of heroin admissions, and non-Hispanic Blacks accounted for 6.6 percent (exhibit 2). This distribution was similar to that in 2009–2011. Heroin clients remained predominantly age 35 and older (constituting 56.2 percent of heroin admissions); this proportion represented a continuing decreasing trend for this age group (from 74.5 percent in 2007 to 59.1 percent in 2011). Commensurately, an increase was observed for the 18–25 age group, from 9.0 percent in 2008 to 19.9 percent in 2011 and to 20.1 percent in 2012. Nearly 20 percent of primary heroin admissions were homeless at the time of admission in 2012. Employment rates (including full- or part-time) for heroin admissions were 11.9 percent in 2012, similar to 2011 (12.1 percent), but still considerably lower than the 18.0 percent in 2008. High school graduation/GED or higher education levels were reported by 61.6 percent of 2012 heroin clients. Almost two-thirds (61.5 percent) of heroin clients reported no secondary substance of abuse. However, methamphetamine was the most commonly reported secondary substance (at 9.1 percent), followed by cocaine/crack (at 8.4 percent). Injection use was reported as the primary route of administration by 71.4 percent of heroin admissions in 2012, while smoking was reported by 15.1 percent. The reported route of administration has shifted slightly over the past several years (from 84.2 percent injection and 9.2 percent smoking in 2007). Approximately one-fifth (22.6 percent) indicated that they had not previously participated in drug treatment (exhibit 2).

Of 39,455 NFLIS drug reports for Los Angeles County in 2012, 5.2 percent ($n=2,062$) were found to contain heroin (exhibit 3), a slight increase over 2011 (4.8 percent). Heroin ranked fourth for both Los Angeles County and the Nation as a whole among drug reports from drug items seized and analyzed by NFLIS laboratories in 2012.

Heroin/morphine was detected in 14.0 percent of Los Angeles County coroner toxicology cases in 2012, continuing a downward trend (19.8, 16.2, and 15.7 percent in 2009, 2010, and 2011, respectively).

The ED visit rate for the general category of opioids as a principal diagnosis (not distinguished in the data source by subcategory, e.g., heroin or other opioids) among 2011 nonfatal ED visits was 17.4 per 100,000, up from 14.7 in 2010 (exhibit 4). Heroin was reported in 0.8 percent of 2012 Los

Angeles County poison control center calls, in the mid-range of a fluctuating pattern ranging from 0.6 to 1.1 percent over the period 2008–2011.

According to LA CLEAR, the wholesale price per kilogram of the most prevalent type of heroin in Los Angeles, Mexican black tar, remained stable and high at \$20,000–\$22,000 in 2012. Retail prices dropped considerably at the beginning of 2012, to \$45–\$80 per gram, reportedly to garner market share from prescription opioids. However, the retail price rose slightly by the fourth quarter of 2012, to \$60–\$100 per gram.

Other Opioids/Narcotics

Other opioids/synthetics continued to constitute a small percentage ($n=1,504$, or 3.3 percent) of Los Angeles County treatment admissions in 2012. Although representing a relatively small share of admissions when compared with other major substances of abuse, other opioids/synthetics have shown a gradual but continuing upward trend since 2005 (exhibit 1).

In 2012, 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 for Los Angeles County. It constituted 1.1 percent ($n=425$) of NFLIS reports, ranking fifth among all drug reports for Los Angeles County (exhibit 3). Oxycodone was identified in 0.6 percent ($n=245$) of the total Los Angeles County NFLIS drug reports in 2012, and codeine was identified in 0.5 percent ($n=204$) 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, oxymorphone, fentanyl, and morphine.

Narcotic analgesics (not including heroin/morphine) were detected in 23.4 percent of Los Angeles County coroner toxicology cases in 2012, with little change from 22.9 percent in 2011 and 25.5 percent in 2010 (data not shown in exhibits). Narcotics were identified in a larger proportion of toxicology cases than were other specific categories of drugs, including cocaine, heroin/morphine, methamphetamine, antidepressants, THC (tetrahydrocannabinol, an active ingredient in marijuana), or benzodiazepines. Narcotic analgesics were reported in 17.5 percent of 2012 Los Angeles County poison control center calls, similar to 2011 levels (data not shown in exhibits); of these narcotic analgesic reports, more than two-thirds (68.7 percent) were for hydrocodone products, and 13.7 percent were for oxycodone products.

A decrease in street prices was noted for small quantities of OxyContin® (from about \$80 per 80-milligram tablet in early 2012 to \$20–\$30 for the same quantity near the end of 2012), reportedly to counter the drop in heroin prices earlier in the year, according to LA Clear drug price data.

Benzodiazepines, Barbiturates, and Sedative/Hypnotics

In 2012, 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 ($n=323$, or 0.8 percent) (exhibit 3). In 2012,

benzodiazepines and/or barbiturates were detected in 11.2 percent of Los Angeles County coroner toxicology cases, with little change from 12.1 percent in 2011. The sedatives category accounted for a rate of 22.4 per 100,000 population among ED visits in 2011; this rate continued an increasing trend from a 15.9 rate in 2006; sedatives had a higher rate than amphetamines, cocaine, opioids, or marijuana/cannabis. Benzodiazepines were reported in 22.0 percent of 2012 Los Angeles County poison control center calls, similar to 2011 levels.

Methamphetamine/Other Amphetamines

Methamphetamine accounted for 16.9 percent ($n=7,710$) of admissions to Los Angeles County substance abuse treatment programs in 2012. This slight increase over 2011 levels (16.3 percent) suggests a leveling or possible directional shift in the previous 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 49.0 percent) (exhibit 2); this percentage continues an increasing trend in female representation among methamphetamine admissions (from 41.2 percent in 2008). Methamphetamine admissions were most likely to be Hispanic (57.6 percent), followed by non-Hispanic Whites (30.3 percent). There was broad age diversity across methamphetamine admissions: age 18–25 constituted 22.2 percent; age 26–34 constituted 33.1 percent; and clients 35 or older represented 37.3 percent. More than one-half (53.5 percent) of methamphetamine admissions reported education levels of high school graduate/GED or higher; more than one-fourth (28.6 percent) were homeless at admission. Employment rates (part- or full-time) were at 8.5 percent in 2012.

While 42.6 percent of methamphetamine admissions reported no secondary substance problem, 25.3 percent reported marijuana, and 21.6 percent reported alcohol as a secondary substance problem (exhibit 2). Smoking continued as the most frequently mentioned route of administration by primary methamphetamine admissions (78.0 percent). Proportions of injectors and inhalers have been declining somewhat (e.g., from 15.2 and 29.9 percent, respectively, in 1999, to 7.4 and 11.1 percent, respectively, in 2011); however, a slight increase was noted in 2012 for injection reported as route of administration (8.4 percent). Past-year injection drug use (of any drug) was reported by 13.5 percent of primary methamphetamine admissions, a slight increase over 2011 levels (11.0 percent). Of 2012 primary methamphetamine admissions, 42.9 percent reported no previous treatment admission (exhibit 2).

According to NFLIS data, based on 39,455 drug reports from drug items analyzed in NFLIS laboratories in Los Angeles County in 2012, 27.6 percent ($n=10,878$) were found to contain methamphetamine (exhibit 3), accounting for the second largest proportion of reports for the county. This was a substantial increase over 2011 levels (22.2 percent, $n=8,973$).

Methamphetamine was detected in 18.3 percent of Los Angeles County coroner toxicology cases in 2012, increasing from 15.4 percent in 2011 and 14.0 percent in 2010. Among nonfatal ED visits in 2011, the category of amphetamines (including, but not distinguishing, methamphetamine) was the primary diagnosis, with a rate of 17.5 per 100,000 population, continuing an increasing trend (from 10.3 per 100,000 in 2009 and 14.7 in 2010) (exhibit 4). Methamphetamine was reported in 3.1

percent of 2012 Los Angeles County poison control center calls, the largest percentage among illicit drugs, continuing an increasing trend from 1.2 percent in 2008.

The wholesale price of methamphetamine remained stable during 2012 (at approximately \$8,000 to \$11,000 per pound), following a substantial decrease in 2008–2009. While street prices had remained stable at approximately \$240 for one-eighth ounce in 2008–2010, the decrease begun in 2011 (to \$180–\$200) continued through 2012 (to \$140–\$200). According to NDIC reports, methamphetamine availability has increased substantially since the initial decreases following the major control efforts and strict precursor chemical regulations that went into effect 5–10 years ago. 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.

Marijuana

Marijuana's percentage share of all Los Angeles County treatment admissions has steadily increased from 2002 to 2012, from 11.8 to 26.9 percent, respectively ($n=12,256$ total admissions in 2012) (exhibit 1). Approximately two-thirds of the primary marijuana admissions were male (64.8 percent) (exhibit 2). Marijuana admissions had the largest proportion of clients younger than 18 (59.3 percent, compared with 0.5 percent for heroin and 5.4 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 (22.8 percent) or higher education. Marijuana admissions also had low rates of employment (3.7 percent full- or part-time). Approximately 5.9 percent of marijuana admissions were homeless. A majority of marijuana admissions were Hispanics (at 56.0 percent), followed by non-Hispanic Blacks (at 30.8 percent). Of the major illicit substances, the smallest percentage of non-Hispanic Whites (8.9 percent) was reported for marijuana.

While 53.9 percent of primary marijuana admissions reported no secondary drug problem, alcohol was identified as a secondary drug problem for 33.6 percent; methamphetamine was a secondary problem for 6.5 percent; and cocaine/crack was a secondary problem for 2.8 percent. Smoking was the predominant route of administration reported by marijuana treatment admissions (97.3 percent). Few (1.0 percent) marijuana clients reported any past-year injection drug use (exhibit 2). More than three-fourths (78.3 percent) were entering treatment for the first time (exhibit 2).

According to NFLIS data from 39,455 drug reports for Los Angeles County in 2012, 34.7 percent ($n=13,692$) were found to contain marijuana/cannabis (exhibit 3). While marijuana/cannabis was the most frequently identified substance among drug items seized and analyzed by NFLIS laboratories in Los Angeles County (as well as for the Nation), there was a slight decrease over 2011 levels for Los Angeles County (from 36.7 percent).

THC was detected in 15.9 percent of Los Angeles County coroner toxicology cases in 2012, continuing a slight upward trend from 2010 (12.4 percent) and 2011 (14.8 percent), but it was still lower than 2009 and 2008 levels (19.3 and 19.7 percent, respectively). In 2012, marijuana/cannabis was reported as a primary diagnosis in nonfatal ED visits with a rate of 12.1 per 100,000 population; this represented a continuing increase from the 2006 level of 3.2 and 8.3 in 2010 (exhibit 4). Marijuana was reported in 2.9 percent of 2012 Los Angeles County poison control center calls, continuing an increasing trend from 1.4 percent in 2008.

The wholesale price of Mexican low-grade marijuana remained low at \$5–\$10 per gram in 2012, with wholesale prices at \$100–\$500 per pound. Prices of high-grade domestic marijuana remained stable (retail, at \$60–\$80 for one-eighth ounce; wholesale, at \$1,500–\$3,200 per pound).

Other Drugs

MDMA

Very few admissions to treatment for substance abuse in Los Angeles County in 2012 reported ecstasy (MDMA, 3,4-methylenedioxymethamphetamine) or “other club drugs,” (including, e.g., GHB [gamma hydroxybutyrate], ketamine, or Rohypnol®), as the primary drug of abuse (0.2 percent, data not shown in exhibits).

According to NFLIS, 0.7 percent ($n=272$) of drug reports from drug items analyzed in Los Angeles County were identified as containing MDMA (exhibit 3), at a lower level than in 2011 ($n=743$, 1.8 percent). MDMA was more likely to be found in Los Angeles County NFLIS reports (ranking 8th) than in the Nation as a whole (where it ranked 24th). MDMA was identified in four Los Angeles County coroner toxicology cases in 2012. MDMA was reported in 0.8 percent of 2012 Los Angeles County poison control center calls, a decrease from 2.4 percent in 2010.

At the wholesale level in 2012, MDMA prices were approximately \$2,500–\$3,000 per “boat” (1,000 pills); this was similar to 2007–2012 prices. At the retail level, ecstasy sold for \$10–\$12 per tablet, which was also consistent with 2007–2011 prices.

PCP and Hallucinogens

PCP (phencyclidine) and other hallucinogens accounted for 0.5 percent of the reported primary drugs among Los Angeles treatment admissions in 2012 (data not shown in exhibits); this proportion was similar to 2010 and 2011 levels. According to NFLIS data, 0.9 percent ($n=358$) of the 2012 drug reports for Los Angeles County contained PCP (exhibit 3). In 2012, PCP ranked fifth among all drugs identified by NFLIS in Los Angeles. PCP was identified in 1.1 percent of Los Angeles County coroner toxicology cases in 2012. PCP was reported in 0.4 percent of 2012 Los Angeles County poison control center calls.

Wholesale prices for a gallon of PCP in early 2012 ranged from \$12,000 to \$17,000, similar to 2011 prices. Retail prices have remained stable, with 2007 to 2012 levels at \$300–\$350 per ounce or \$10–\$20 for a “sherm” cigarette dipped in liquid PCP.

Other Pharmaceuticals (including Stimulants, Antidepressants)

Other stimulants (including prescription stimulants, such as methylphenidate) accounted for 0.3 percent of 2012 treatment admissions (a decrease from 1.7 and 1.0 percent in 2011 and 2010, respectively) (data not shown in exhibits). Antidepressants were detected in 12.1 percent of Los Angeles County coroner toxicology cases in 2012.

Other Substances including “Club Drugs,” Cathinones, Piperazines, Tryptamines, and Cannabimimetics

Small percentages (less than or equal to 0.1 percent) of Los Angeles County 2012 drug reports from items analyzed in NFLIS laboratories contained other “club drugs,” including GHB (gamma hydroxyl butyrate or its precursor gamma hydroxyl butyl lactone, $n=63$) and ketamine ($n=32$). Gabapentin, GHB, and/or ketamine were identified in 2.2 percent of Los Angeles County coroner toxicology cases in 2012.

Reports of cathinones ($n=31$) have increased among NFLIS drug reports for Los Angeles County, as have reports of various substituted/synthetic cathinones ($n=46$ including, e.g., 4-MEPP, 4-MEC, MDPV, methylone, pentedrone, and alpha-PVP), but numbers remained small. Cathinones were identified in two Los Angeles County coroner toxicology cases in 2012. Cathinones were reported in 0.5 percent of 2012 Los Angeles County poison control center calls, similar to 2011 levels.

NFLIS data indicated 46 reports of synthetic cannabinoids (cannabimimetics) among drug items seized and analyzed. Synthetic cannabinoids were reported in 1.3 percent of 2012 Los Angeles County poison control center calls, an increase from 0.6 percent in 2011.

NFLIS reports also included various piperazines ($n=76$, including BZP [1-benzylpiperazine] or TFMP [1-3-trifluoromethylphenylpiperazine]) or tryptamines ($n=4$, including 5-MEO-DIPT or dimethyltryptamine [DMT]) (data not shown in exhibits).

INFECTIOUS DISEASES RELATED TO DRUG ABUSE

The cumulative total of AIDS diagnoses reported in Los Angeles County through December 31, 2012, reached 60,263. This number represented approximately 36 percent of the cumulative diagnoses in California and 5 percent of those in the United States. As of 2012, approximately 44,474 Los Angeles County residents were living with HIV infection, and 26,563 were living with AIDS. Of the cumulative HIV/AIDS diagnoses reported in Los Angeles County, 43 percent were non-Hispanic Whites, 34 percent were Hispanics, and 19 percent were non-Hispanic Blacks. 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 2012 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 (from $n=1,872$ to $n=1,222$, respectively), increased slightly in 2008–2009 ($n=1,389$ and $n=1,405$, respectively), and declined to 1,165 in 2010. Declines appeared to be holding for 2011 and 2012. Because of reporting delays, figures for these years are still preliminary and may underestimate what completed reporting is likely to show, and thus they are not reported here. The recent (2010–2012) trend in injection drug use as an exposure vector for males appears stable, at 8 percent (3 percent injection drug user [IDU] and 6 percent MSM/IDU), and has declined from 14 percent in 2002.

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Exhibit 1. Frequency and Percentage of Annual Treatment Admissions, by Primary Drug of Abuse, in Los Angeles: 2003–2012

Primary Drug	2003 Freq. (%)	2004 Freq. (%)	2005 Freq. (%)	2006 Freq. (%)	2007 Freq. (%)	2008 Freq. (%)	2009 Freq. (%)	2010 Freq. (%)	2011 Freq. (%)	2012 Freq. (%)
Cocaine	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)	3,416 (7.5)
Heroin	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)	9,256 (20.3)
Marijuana	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)	12,256 (26.9)
Methamphetamine	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)	7,710 (16.9)
PCP	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)	227 (0.5)
Other Opiates/ Synthetics	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)	1,504 (3.3)
Other (Includes Alcohol)	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)	11,243 (24.6)
Total Admissions	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)	45,612 (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, by Percentage, in Los Angeles County: 2012¹

Demographic	Cocaine/ Crack	Heroin	Marijuana	Metham- phetamine	All Admissions ²
Gender³					
Male	60.5	72.5	64.8	50.7	61.2
Female	39.5	27.4	35.2	49.0	38.8
Race/Ethnicity					
White Non-Hispanic	13.9	54.6	8.9	30.3	29.5
Black Non-Hispanic	62.7	6.6	30.8	6.1	22.2
Hispanic	20.0	34.3	56.0	57.6	43.1
American Indian	0.4	0.7	0.4	0.8	0.7
Asian/Pacific Islander	1.4	1.1	1.4	2.6	1.9
Other	1.6	2.7	2.5	2.6	2.6
Age at Admission					
17 and Younger	1.6	0.5	59.3	5.4	21.4
18–25	6.4	10.1	19.2	22.2	16.7
26–34	14.7	23.3	10.1	35.1	19.1
35 and Older	77.3	56.2	11.5	37.3	42.8
Route of Administration					
Oral	1.4	1.5	2.4	1.6	28.7
Smoking	84.0	15.1	97.3	78.0	49.4
Inhalation	13.1	3.4	0.2	11.1	3.8
Injection	0.6	79.4	0.0	8.4	17.7
Unknown/Other	1.0	0.6	0.1	1.0	0.4
Secondary Substance⁴					
None	40.3	61.5	53.9	42.6	54.1
Alcohol	30.4	7.0	33.6	21.6	17.0
Cocaine/Crack	—	8.4	2.8	3.9	4.9
Heroin	1.7	—	0.3	3.1	1.1
Marijuana	20.5	4.8	—	25.3	12.0
Methamphetamine	4.6	9.1	6.5	—	5.8
Past-Year Injection Drug Use	2.7	79.9	1.0	13.5	19.9
Homeless	30.4	19.7	5.9	28.6	17.2
Employed Full- or Part-Time	7.9	11.9	3.7	8.5	8.1
Graduated from High School	57.4	61.6	22.8	53.5	48.6
First Treatment Episode	44.1	22.6	78.3	42.9	52.3
Total Admissions (N)	(3,416)	(9,256)	(12,256)	(7,710)	(45,616)

¹Data are for January–December 2012.

²Total also includes alcohol and other drugs.

³0.03 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 Laboratories, by Number and Percentage of Total Reports, in Los Angeles County, and Rankings for Los Angeles County and the United States: 2012¹

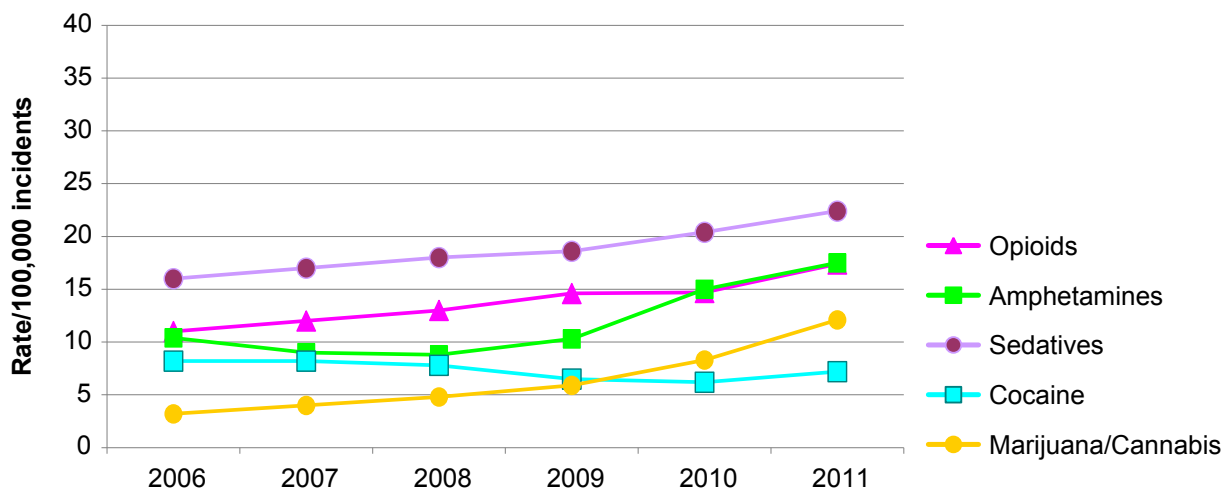
Drug (LA Ranking)	Number	Percentage	LA Rank	U.S. Rank ²
Marijuana/Cannabis	13,692	34.7	1	1
Methamphetamine	10,878	27.6	2	2
Cocaine	7,971	20.2	3	3
Heroin	2,062	5.2	4	4
Hydrocodone	425	1.1	5	6
PCP (Phencyclidine)	358	0.9	6	23
Alprazolam	323	0.8	7	7
MDMA (3,4-Methylenedioxy-methamphetamine)	272	0.7	8	24
Oxycodone	245	0.6	9	5
Codeine	204	0.5	10	31
Other	3,025	7.7	—	—
Total	39,455	100.0	—	—

¹Data are for January–December 2012.

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

SOURCE: NFLIS, DEA, May 7, 2013

Exhibit 4. Rates of Primary Diagnosis Among Nonfatal Emergency Department Visits, for Selected Major Drug Categories, Los Angeles County: 2006–2011¹



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

SOURCE: California Department of Public Health, EpiCenter CA Injury Data Online, accessed 6/15/13

Patterns and Trends of Drug Abuse in Maine: 2012 and Early 2013

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ABSTRACT

This report updates most drug abuse indicators in Maine through calendar year 2012 and early 2013. The two key findings in Maine in this reporting period were changes in indicators for pharmaceutical opioids and substituted cathinones. Pharmaceutical opioid misuse in Maine remained very high in 2012 and early 2013 indicators, but some indicators, including deaths, were decreasing for the first time in many years, even as all of the heroin indicators were rising. Compared with 2012, the variety of emerging synthetic drugs, particularly including substituted cathinones, decreased in Maine during the first 5 months of 2013, as indicated by law enforcement seizures. Parallel with a slight decline in leading indicators regarding abuse of pharmaceutical opioids, heroin has re-emerged as a problem, with moderate levels and increasing trends. Heroin deaths in 2010 and 2011 bottomed out at 4 percent, but they rose to 14 percent in 2012. Heroin arrests by the Maine Drug Enforcement Agency began to increase in 2011, and during the first quarter of 2013 they constituted 18 percent of arrests (compared with 5 percent in 2010). Primary treatment admissions increased from 7 percent in 2010 to 11 percent in the first half of 2012. Cocaine/crack abuse indicators were mostly in decline, except for a slight rise in the number of arrests. Deaths in which cocaine was mentioned on the death certificate as a cause or contributor, which peaked at 19 percent in 2006–2007, have remained at 5–8 percent in the last few years. Arrests reached a low point during 2012, but they began to increase slightly during the first quarter of 2013. Law enforcement cocaine seizure samples found to be adulterated with levamisole decreased from 47 percent in 2011, to 13 percent in early 2012, and to 9 percent in the first 5 months of 2013. Marijuana indicators have been mixed, with increasing use. Marijuana arrests continued to decline, reaching 6 percent in the first quarter of 2013, while the percentage of drug-impaired drivers with cannabinoid-positive urine increased, reaching 41 percent in the first 5 months of 2013. Primary marijuana treatment admissions remained at a 9-percent plateau for the fourth year in a row. Pharmaceutical opioid abuse remained very high in 2012 and early 2013 indicators, contributing to 61 percent of early 2012 deaths, 71 percent of early 2013 impaired driver toxicology tests, 37 percent of 2012 primary treatment admissions, 32 percent of early 2013 arrests, and 25 percent of early 2013 forensic laboratory samples. The proportion of pharmaceutical opioid arrests declined from 40 percent in 2012 to 32 percent in early 2013, but the level of admissions continued to rise. Primary treatment admissions for opiates/opioids outpaced those for heroin. Pharmacy robberies demanding opioids peaked at 56 in 2012, but they declined to 5 in the first 5 months of the 2013. Benzodiazepines continued to play a critical role as co-intoxicants with opioids in deaths and impaired drivers. Pharmaceutical opioids were detected along with one or more benzodiazepines in 41 percent of the

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urine tests of drug-impaired drivers in the first 5 months of 2013. There has been a decline in deaths caused by benzodiazepines to 26 percent in the first half of 2012. Methamphetamine indicators were at low levels, but arrest and admissions indicators showed an increase in 2012. In addition, the number of primary treatment admissions increased slightly, totaling 46 in 2012. MDMA (3,4-methylenedioxymethamphetamine) indicators were at extremely low levels, and have declined across all indicators. Synthetic cathinones have been an increasing problem statewide, involved with 14 percent of MDEA drug arrests in the first quarter of 2013, which was an increase from 6 percent in 2012. However, among analyzed drug seizures, the number and variety of different compounds decreased from 132 items, representing 14 drugs in 2012, to 34 items tested in the first 5 months of 2013, representing 3 different compounds, primarily alpha-PVP (alpha-pyrrolidinopentiophenone). Piperazines and tryptamines have both appeared in Maine since 2010, but numbers were small and declined in early 2013, as indicated by law enforcement seizures.

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 2012 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 2012 and all the toxicology reports on decedents through March 2013. 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 2013 (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 2012 and for the first 5 months of 2013 (exhibit 4).
- **Forensic laboratory data on urinalyses of drug-impaired drivers** were provided by the Maine State Health and Environmental Testing Laboratory, which tests urine samples of drivers suspected of driving under the influence of drugs. Data were provided for 2012 and for the first 5 months of 2013.
- **Pharmacy robbery data** were provided by the Maine Department of Public Safety public information service for the period 2008 through May 2013 (exhibit 5).

DRUG ABUSE PATTERNS AND TRENDS

Heroin

After several years of declining trends, heroin is increasing across all indicators. After a multiyear decline since a peak in 2005 of 24 percent, the proportion of heroin/morphine deaths hit bottom during 2010 and 2011 at 4 percent. During the first 6 months of 2012, the proportion of these deaths rose to 14 percent (exhibit 2). Beginning in 2008, some heroin/morphine deaths were found to involve pharmaceutical morphine; these have been removed from the totals if identified. Most confirmed heroin deaths in early 2012 were polydrug induced, including a few with cocaine, but about one-half included pharmaceutical opioids other than morphine and/or alcohol. Another indicator of heroin-involved mortality is the number of decedents with morphine or 6-monacetylmorphine present in their toxicology. During the first quarter of 2011, there were 6 such decedents; in the first quarter of 2012, there were also 6; but during the first quarter of 2013, there were 12.

There has been a fairly steady increase in heroin/morphine-positive urinalyses among drug-impaired drivers, from 8 percent in 2009, to 11 percent in 2012, and to 13 percent in the first 5 months of 2013. The majority of those with heroin/morphine also had one or more other drugs present, including pharmaceutical opioids.

Heroin arrests by the MDEA were stable, at 40–45 per year (approximately 5 to 8 percent of total arrests), from 2007 to 2010 (exhibit 3). However, in 2011, there were 58 heroin arrests, followed by 63 in 2012, a substantial increase. The projection based on the first quarter of 2013 suggests that number may double. Drug samples seized by law enforcement and identified as heroin rose from

²Numbers and proportions of items seized and analyzed in Maine by forensic laboratories will differ in this report from those shown in the June 2013 Volume I report, 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.

8 percent in 2010 to 22 percent in the first 5 months of 2013. In the 65 heroin samples identified in Maine's 2011 law enforcement seizures, 46 percent contained adulterants. In 2012, the number of items increased to 94, and the proportion with adulterants dropped to 6 percent in 2012; it remained at 6 percent in the first 5 months of 2013.

The proportion of primary heroin admissions was relatively stable at around 7–9 percent from 2006 to 2011. In 2012, however, it increased to 11 percent (exhibit 1). Males constituted 55 percent of heroin admissions in 2012, and 25 percent of these clients were age 35 and older, slightly more than the 21 percent in 2011. 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 and to 26 percent in 2012. There was a compensatory increase in clients age 26–34, from approximately 30 percent in 2003 to 48 percent in 2012.

Cocaine/Crack

Cocaine/crack abuse indicators have been low and generally decreasing or stable, with the exception of early 2013 arrests, which increased slightly (exhibit 3). Deaths in which cocaine or its metabolites were detected decreased in the first quarter of 2013, compared with the first quarters of 2012 and 2013. Impaired driver urinalyses in which cocaine was detected dropped by 50 percent during the first 5 months of 2013 compared with 2012. The proportion of seizures containing cocaine continued a downward trend that began in 2008.

Proportions of primary treatment admissions for cocaine declined from 6–7 percent in the years 2006–2008 to 3.3 percent in 2010, 3.6 percent in 2011, and 3.3 percent in 2012 (exhibit 1). In 2011, the proportion of primary admissions citing a smoking route of administration increased from 28 to 51 percent, while inhalation and injection declined. During 2012, the proportion of those smoking increased further, to 56 percent, and injecting dropped to 16 percent.

Deaths in which cocaine was mentioned on the death certificate as a cause or contributor peaked at approximately 19 percent in 2006 and 2007 and then decreased to 5–6 percent in 2009–2010. The proportion rose slightly to 8 percent in 2011 and remained there during the first half of 2012 (exhibit 2). Cocaine-narcotic combinations were seen both in deaths and in drug-impaired driver toxicology. Cocaine/crack arrests have constituted a declining proportion of MDEA arrests in recent years. In 2006, there were 235 arrests for cocaine, representing 45 percent of total drug arrests. The number of cocaine arrests dropped steadily to 172 (28 percent) in 2011 and again to 89 (16 percent) during 2012 (exhibit 3). Arrests during the first quarter of 2013 were roughly the same as in 2012, and the total for the year was projected to be 100 (16 percent). Cocaine/crack trafficking is linked to New York supplies.

The percentage of drug items seized by law enforcement that tested positive for cocaine continued a multiyear decline from a 2007 peak (50 percent), down to 27 percent in 2012 and 21 percent in the first 5 months of 2013 (exhibit 4). The frequency of levamisole presence, found in 47 percent of 2011 analyzed cocaine samples, dropped to 13 percent in 2012 and to 9 percent during the first 5 months of 2013. After these persistent declines, cocaine/crack no longer represents the largest category of drug samples seized and identified in Maine's drug testing laboratory. It is now ranked second along with heroin, and opiate analgesics are ranked first.

Marijuana

Marijuana indicators in Maine have been affected by its medical marijuana law licensing distributors, which was implemented in mid-2010. Both levels and trends have been mixed, with an increase in positive urine tests among impaired drivers, a substantial drop in the percentage of marijuana drug arrests, and a slight decrease in law enforcement seizures. Admissions have been stable.

MDEA arrests declined from a recent peak of 197 (23 percent) in 2010, to a low of 40 (7 percent) projected for 2013, based on the first quarter. The percentage of drug items from statewide law enforcement seizures identified as containing marijuana had been stable, at 10 percent, in 2010, 2011, and 2012, but it declined to 8 percent during the first 5 months of 2013 (exhibit 4).

Positive urine tests among impaired drivers increased from 21 percent of drivers in 2010 to 36 percent in 2012, and to a further increase to 41 percent during the first 5 months of 2013. These often co-occur with positive opioid and benzodiazepine results in the same drivers.

Proportions of primary treatment admissions for marijuana also stabilized after a multiyear decrease, at 9 percent in the 4-year period from 2009 to 2012 (primary treatment admissions for marijuana had constituted 14 percent of the total in 2002) (exhibit 1). The age and gender distribution of primary treatment admissions for marijuana also remained fairly stable. In 2012, such admissions were 72 percent male, 28 percent younger than 18, and 33 percent age 18–25.

Pharmaceutical Opiates/Opioids

Pharmaceutical opiate/opioid misuse in Maine remained very high in 2012 and early 2013 indicators, but some indicators were stable or decreasing for the first time in many years, even as heroin indicators were rising.

After a decade of record numbers of opioid-induced deaths, the number began to decline in 2011. In 2010, there were 124 deaths, which dropped to 109 in 2011; the projection for 2012 based on the first 6 months is 92 (61 percent). Methadone and oxycodone remained the most frequent opioids implicated in the deaths. Methadone-induced deaths, which peaked at 75 (46 percent) in 2004, gradually decreased to a low of 41 (26 percent) in 2011. Based on the first half of 2012, there will be a further reduction to about 32 deaths. Oxycodone-induced deaths in the last decade reached their lowest point in 2004 at 15 deaths (9 percent), just when methadone was at its highest frequency; however, they gradually increased to a high of 50 in 2009 (28 percent). The projected number of oxycodone deaths for 2012 is 42. It is important to note that most methadone and oxycodone-induced deaths have other co-intoxicants mentioned on the death certificate, including other opioids and benzodiazepines. These two drugs frequently co-occur.

Among drug-impaired drivers tested in 2011, 59 percent had urinalysis-positive tests for at least one opioid, compared with 60 percent in 2012 and 71 percent in the first 5 months of 2013. Roughly continuing the proportions seen in previous years, oxycodone was detected in 24 percent of the 2013 cases; methadone was detected in 18 percent. Frequently, more than one opiate was present, very often (37 percent) in combination with benzodiazepines. The presence of buprenorphine increased steadily, from 6 percent in 2009 to 19 percent in early 2013, whereas hydrocodone declined (from 19 percent in 2009 to 7 percent in early 2013).

Pharmacy robberies demanding opioids have been seen as a possible response to supply restrictions introduced by the increase in prescriber use of the State's Prescription Monitoring Program. These robberies had risen sharply from 2 in 2008, to 24 in 2011, and to 56 in 2012 (exhibit 5). Based on data from the first 5 months of 2013, however, they will drop to 12 in 2013. Law enforcement officials hypothesize this reduction may be due to the high apprehension rate, which is more than 90 percent, as well as to increased pharmacy security measures.

Arrests for pharmaceutical narcotics were trending down. There were 327 (39 percent) such MDEA arrests at their peak in 2010 (exhibit 3). That total declined to 236 in 2011 and again to 222 in 2012. The projection for 2013, based on the first quarter, was approximately 196 (32 percent of total arrests).

Drug items seized by law enforcement and identified as containing pharmaceutical narcotics by the State testing laboratory totaled 13 percent in 2009; these rose to 28 percent in 2011 and represented 27 percent in 2012 and 25 percent in the first 5 months of 2013 (exhibit 4). In 2012, 58 percent of the pharmaceutical narcotic items were identified as oxycodone; 16 percent were identified as buprenorphine; and 13 percent were identified as hydrocodone. These proportions are nearly the same as in 2011. In the first 5 months of 2013, the proportions of these key opioids continued at remarkably similar levels to the previous 2 years: oxycodone at 56 percent, buprenorphine at 16 percent, and hydrocodone at 15 percent.

Buprenorphine has emerged as a key drug in other opioid indicators of misuse and abuse. Buprenorphine, generally in combination with other drugs, was involved in five deaths during 2010, three in 2011, and three in the first half of 2012. The drug ranked sixth among all substances identified in drug items seized by Maine law enforcement and analyzed in 2012 and fifth in the first 5 months of 2013. Buprenorphine was found in 14 percent of drug-impaired driver urinalyses in 2012 and 19 percent during the first 5 months of 2013.

The percentage of primary admissions for pharmaceutical opioids has been rising every year for more than a decade. From 2002 to 2012, opioid admissions rose from 10 to 37 percent, whereas heroin admissions fluctuated from about 7 to 9 percent through 2011 and then rose to only 11 percent in 2012 (exhibit 1). The most common route of administration for pharmaceutical opioids by far was inhalation (43 percent in 2011 and 44 percent in 2012); 24 percent were injecting the drugs in both 2011 and 2012. Analysis of the age structure for opioid admissions demonstrates that the 26–34-year-old cohort is expanding at the expense of the 18–25-year-olds: at 46 and 26 percent, respectively, in 2012. Primary oxycodone treatment admissions constituted the most frequent single drug of the nonheroin opiate/opioid admissions.

Benzodiazepines

Benzodiazepines continued to play a critical and substantial role as co-intoxicants 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 proportions for 2011 and the first half of 2012 declined to 25 and 26 percent, respectively (exhibit 2).

Among drug-impaired drivers, 41 percent had urinalysis-positive tests for one or more benzodiazepine during the first 5 months of 2013, a slight reduction from 46 percent in 2012. In early 2013, 37

percent tested positive for a combination of narcotics and benzodiazepines, a slight reduction from 43 percent in 2012.

Numbers of primary benzodiazepine admissions peaked at 121 in 2011, but they declined to 91 in 2012, representing less than 1 percent of all admissions. Benzodiazepines were often mentioned as secondary problems in treatment admissions. For example, in 2012, there were 273 secondary benzodiazepine admissions and 236 tertiary benzodiazepine admissions.

Methamphetamine

Methamphetamine indicators were at low levels, but there were increases from 2011 to early 2013 among arrests and the number of clandestine laboratories. In addition, primary admissions increased from 2009 to 2012. Specifically, in 2011, 23 (4 percent) MDEA drug arrests were for methamphetamine; such arrests increased to 32 (6 percent) in 2012 and were projected to reach 52 in 2013 (8 percent), based on data from the first quarter (exhibit 3). There were 7 confirmed clandestine laboratories statewide in 2010, 5 in 2011, and 12 during 2012. Although very small in number, there was an increase from 33 primary methamphetamine admissions in 2009 to 46 in 2012 (exhibit 1). In 2012, methamphetamine accounted for only 0.4 percent of primary treatment admissions.

Methamphetamine was not present in any deaths during 2011 or in the first half of 2012. Among drug-impaired drivers in early 2013, only 1 percent tested positive for methamphetamine, unchanged from 2012 and down from 3 percent in 2011.

In 2011, only 12 seizure samples analyzed in the Maine forensic testing laboratory were positive for methamphetamine; there were 36 during 2012 and 10 in the first 5 months of 2013 (projected to 24 for the year). During the first 5 months of 2013, 2 of 10 seizure items tested were in tablet form; in 2012, 16 of 36 were tablets, and in 2011, 8 of 12 were tablets.

MDMA

Indicators for MDMA (3,4-methylenedioxymethamphetamine) were very small in number, with decreasing trends. There were only five MDMA primary treatment admissions during 2011. There were no deaths due to either MDMA or MDA (3,4-methylenedioxyamphetamine) during 2011 or the first 6 months of 2012. During 2012, there were four arrests for MDMA by the MDEA (constituting 1 percent of drug arrests, a percentage that continued through the first quarter of 2013). Among drug-impaired drivers, only 1 percent tested positive for MDMA.

Although the numbers were low, law enforcement drug seizures tested in the Maine State laboratory and identified as containing MDMA increased every year from 2007 to 2010, but they have since declined precipitously. In 2012, there were only eight such items, of which five were also positive for MDPV (3,4-methylenedioxypropylvalerone) and two for cocaine. In the first 5 months of 2013, there was only one (a powder in which dimethylsulfone, also known as methylsulfonylmethane or MSM, was also detected).

Synthetic (Substituted) Cathinones

Synthetic (substituted) cathinones were first reported by Maine law enforcement in 2011, particularly in several mid-State and coastal areas where they produced a spike of poison center calls midyear, as well as emergency room visits. In late 2011, a law was passed making eight of these substances illegal. There was a corresponding increase in arrests and law enforcement seizures during 2012, which has continued into early 2013. Also continuing into 2012 was an expansion of the types of similar chemicals that are being trafficked and abused.

In 2011, 17 items seized by law enforcement and analyzed were identified as containing synthetic (substituted) cathinones (3 percent of the total items tested). These included the following, some in combination: 10 items with MDPV; 5 items with FMC (4-fluoromethcathinone); 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 for 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.

By the end of 2012, a total of 132 items seized by law enforcement were shown to contain substituted cathinones (13 percent of items tested). These included 61 MDPV, 41 alpha-PVP, 7 pentadrone, 7 MDMC, 6 methylone, and 10 other substances with only 1 or 2 items for each. Officials in the MDEA noted that by 2012, the increase in cathinone activity within Maine was focused in the same general areas where methamphetamine trafficking and clandestine laboratories were also more frequently seen. The Office of Chief Medical Examiner reported that whereas toxicology reports with MDPV present were observed in 2011, by 2012, alpha-PVP was reported more often. However, the toxicology results do not include quantification of the amount, only presence/absence, making it difficult to attribute cause of death to these drugs.

By June 2013, there were further developments. There had been one confirmed death due to alpha-PVP during the first half of 2012. Whereas 6 percent of 2012 MDEA arrests were for cathinones, by the first quarter of 2013 that proportion had grown to 14 percent. Although there had been an abundance of synthetic (substituted) cathinones detected among 2012 law enforcement items tested by the State laboratory, during the first 5 months of 2013 there were only three (4-FMC, alpha-PVP, and MDPV); among these, most items contained alpha PVP. There were 12 impaired drivers with toxicology tests that detected cathinones during 2012, but there were none during the first 5 months of 2013.

Piperazines

Piperazines have appeared in items seized by Maine's law enforcement and analyzed in the last 4 years, but numbers have been declining. During 2010, 15 items seized by law enforcement were identified in the Maine State laboratory as containing BZP (1-benzylpiperazine). All of these were in tablet form, and most also contained other substances, such as TFMPP (1-(3-trifluoromethylphenyl)piperazine). During 2011, 10 items tested in the Maine forensic laboratory contained BZP; 8 combined BZP with TFMPP alone, and 2 were combined with TFMPP and MDMA. During 2012, by contrast, there were no analyzed samples that were identified as containing any piperazines. In the first 5 months of 2013, only one item was identified as containing BZP.

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 2011, but there were six in 2012. The MDEA confirmed two clandestine DMT laboratories, one each in 2010 and 2011. In the first five 5 months of 2013, there were two items that were identified as containing 5-MEO-DIPT.

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Exhibit 1. Frequency and Percentage of Annual Treatment Admissions, by Primary Drug, for the State of Maine: 2006–2012

Primary Drug	2006 Freq. (%)	2007 Freq. (%)	2008 Freq. (%)	2009 Freq. (%)	2010 Freq. (%)	2011 Freq. (%)	2012 Freq. (%)
Cocaine	764 (7.0)	902 (7.3)	768 (6.0)	575 (4.0)	454 (3.3)	456 (3.6)	429 (3.3)
Heroin/Morphine	1,007 (9.2)	991 (8.0)	1,092 (8.5)	1,250 (8.6)	928 (6.8)	1,058 (8.5)	1,386 (10.8)
Other Opiates and Opioids	2,282 (20.9)	3,142 (25.3)	3,951 (30.7)	4,185 (28.9)	4,372 (32.2)	4,409 (35.2)	4,698 (36.5)
Marijuana	1,169 (10.7)	1,349 (10.9)	1,304 (10.1)	1,303 (9.0)	1,275 (9.4)	1,179 (9.4)	1,113 (8.6)
Methamphetamine	49 (0.4)	34 (0.3)	31 (0.2)	33 (0.2)	41 (0.3)	44 (0.4)	46 (0.4)
Alcohol	5,519 (50.6)	5,800 (46.8)	5,531 (43.0)	6,481 (44.7)	5,904 (43.5)	4,726 (37.8)	4,473 (34.8)
Other	122 (1.1)	602 (4.9)	172 (1.3)	671 (4.6)	602 (4.4)	637 (5.1)	723 (5.6)
Total With Alcohol	10,912	12,395	12,849	14,498	13,576	12,510	12,868

SOURCE: Maine Office of Substance Abuse Treatment Data System

Exhibit 2. Frequency and Percentage of Key Drugs and/or Categories¹ Mentioned on the Death Certificate as a Cause of Death for the State of Maine: 2006–2012²

Key Drug	2006 Freq. (%)	2007 Freq. (%)	2008 Freq. (%)	2009 Freq. (%)	2010 Freq. (%)	2011 Freq. (%)	2012 est² Freq. (%)
Cocaine	32 (19.2)	30 (19.5)	12 (7.3)	9 (5.0)	10 (6.0)	13 (8.4)	12 (7.9)
Heroin/Morphine ³	32 (19.2)	25 (16.2)	18 (11.0)	13 (7.3)	7 (4.2)	7 (4.5)	22 (14.5)
Pharmaceutical Morphine			2 (1.2)	18 (10.1)	16 (9.6)	13 (8.4)	6 (3.9)
Oxycodone	24 (14.4)	38 (24.7)	27 (16.5)	50 (27.9)	48 (28.7)	34 (21.9)	42 (27.6)
Methadone	68 (40.7)	59 (38.3)	56 (34.1)	47 (26.3)	50 (29.9)	41 (26.5)	32 (21.1)
Benzodiazepines	36 (21.6)	36 (23.4)	39 (23.8)	56 (31.3)	57 (34.1)	39 (25.2)	40 (26.3)
Antidepressants	19 (11.4)	27 (17.5)	44 (26.8)	61 (34.1)	58 (34.7)	28 (18.1)	30 (19.7)
Illicit Drugs	59 (35.3)	49 (31.8)	30 (18.3)	22 (12.3)	17 (10.2)	17 (11.0)	26 (17.1)
Pharmaceuticals	134 (80.2)	136 (88.3)	155 (94.5)	164 (91.6)	160 (95.8)	140 (90.3)	144 (94.7)
Total Drug Deaths	167 (100.0)	154 (100.0)	164 (100.0)	179 (100.0)	167 (100.0)	155 (100.0)	152 (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 2012 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 Categories¹ in Maine: 2006–2013²

Key Drug	2006 Freq. (%)	2007 Freq. (%)	2008 Freq. (%)	2009 Freq. (%)	2010 Freq. (%)	2011 Freq. (%)	2012 Freq. (%)	2013 est ² Freq. (%)
Cocaine/Crack	235 (45.1)	252 (46.5)	230 (36.3)	203 (26.2)	189 (22.0)	172 (28.4)	89 (15.9)	100 (16.3)
Heroin	18 (3.5)	43 (7.9)	40 (6.3)	45 (5.8)	40 (4.7)	58 (9.6)	63 (11.2)	112 (18.3)
Metham- phetamine	30 (5.8)	17 (3.1)	8 (1.3)	25 (3.2)	30 (3.5)	23 (3.8)	32 (5.7)	52 (8.5)
Marijuana	103 (19.8)	94 (17.3)	108 (17.1)	160 (20.6)	197 (22.9)	69 (11.4)	96 (17.1)	40 (6.5)
Pharmaceutical Narcotics	123 (23.6)	118 (21.8)	218 (34.4)	308 (39.7)	327 (38.5)	236 (39.0)	222 (39.5)	196 (32.0)
Benzodiazepines	3 (0.4)	14 (2.6)	9 (1.4)	17 (2.2)	16 (1.9)	17 (2.8)	8 (1.4)	16 (2.6)
Total Arrests	521 (100.0)	542 (100.0)	633 (100.0)	776 (100.0)	859 (100.0)	605 (100.0)	562 (100.0)	Projected 612 (100.0)

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

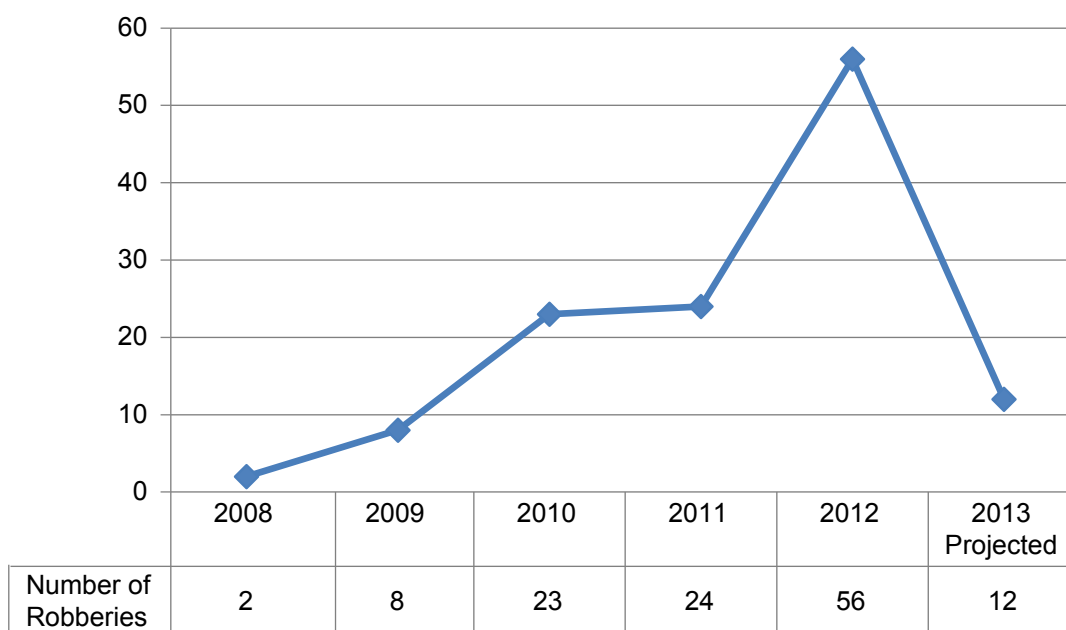
²Estimated 2013 totals were obtained by projecting the first 5 months to 12 months.

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 2013

Key Drug Category	2006	2007	2008	2009	2010	2011	2012	2013 Jan–May
Cocaine	43.3	50.1	44.1	43.4	41.1	29.0	26.8	21.3
Opiate Analgesic	18.3	14.8	12.2	13.3	17.7	27.9	27.2	24.8
Heroin	10.2	7.2	8.5	14.7	8.3	9.9	7.7	21.5
Marijuana	11.3	11.1	7.6	7.1	9.5	10.4	10.7	8.4
Benzodiazepine	4.9	3.0	3.7	1.6	2.7	3.5	2.9	3.1

SOURCE: Maine State Health and Environmental Testing Laboratory

Exhibit 5. Number of Pharmacy Robberies in Maine: 2008–2013¹

¹The projected 2013 total is extrapolated from the January through May total ($n=5$).
 SOURCE: Maine Department of Public Safety

Drug Abuse Trends in Miami-Dade and Broward Counties, South Florida: June 2013

James N. Hall¹

ABSTRACT

Significant shifts in drug abuse patterns were underway in 2012. Cocaine consequences stabilized or increased following several years of steady declines. Heroin indicators were rising, while deaths related to nonmedical prescription misuse declined sharply in the first half of 2012. The number of synthetic cannabinoids (e.g., “K2,” “Spice,” and “Mr. Nice Guy”) and substitute cathinones (e.g., “bath salt” stimulants) detected by South Florida crime laboratories increased tenfold between 2011 and 2012. While local retail sales of these now mostly illegal drugs have diminished, new venues of illicit distribution were appearing, ranging from online orders to courier delivery services, as street and club sales also continued. Emergency department (ED) reports for “ecstasy” pills of unknown composition increased in the South Florida area, and reports of methylone sold as “Mollys” also increased. Consequences of marijuana use and addiction continued at high levels, particularly among adolescents and young adults. Miniature vaporizers disguised as pens were widely available and used for heating glycerin cannabinoid cartridges whose smokeless vapor is inhaled. Numerous anecdotal sources reported increasing methamphetamine use, particularly among men who have sex with other men and heterosexual heavy “club drug” users. A key finding in drug trends for this reporting period is that deaths related to nonmedical misuse of prescription opioids declined by 17 percent across Florida in the first half of 2012 compared with the previous 6 months. That is when numerous diversion control strategies were launched, including the State’s Prescription Drug Monitoring Program. The decline translates to eight fewer deaths per week across the State attributable to prescription drug overdoses. Opioid-related deaths declined in the two South Florida counties as well. Overdose fatalities linked to other prescription medications also decreased locally and statewide. The second key finding for South Florida for 2012 is the increase in injection drug use among a new, young adult cohort of prescription opioid injectors, heroin initiates, and methamphetamine users. Most of these new injection drug users were born after 1990 and were only toddlers when the public learned about the high risk of infected syringes, as well as how to clean them. A public health threat of increased human immunodeficiency virus (HIV) and hepatitis C transmission is already occurring. Drug use prevalence and consequence trends do not always rise or fall together. Between 2008 and 2010, Broward County experienced the highest rates among all other counties in the Nation of prescription opioid diversion, “pill mill” retail sales, high-level opioid dispensing practitioners, prescription drug deaths, and medical emergencies; it also reported the lowest prevalence rate in the Nation for nonmedical use of prescription pain relievers. The Broward County proportion of 3 percent for residents reporting any past-year

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use of a prescription pain reliever was the lowest percentage for any of the 362 substate regions within the 50 States and the District of Columbia, as reported by the 2008–2010 National Survey on Drug Use and Health Substate Estimates of Substance Use and Mental Disorders, released in 2012.

INTRODUCTION

This report reviews data from 2011 and 2012 for drug-related deaths, addiction treatment admissions, poison information center exposure calls (through April 2013), and crime laboratory analysis. Information is presented by primary substance of abuse, with topics including cocaine, heroin, nonmedical use of prescription opioids, benzodiazepines, methamphetamine and amphetamines, marijuana (including synthetic cannabinoids), 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 19,317,566, according to the 2012 U.S. Census estimates, of whom 22.9 percent are Latino/Hispanics. White persons of all ethnicities constitute 78.1 percent, including 57.5 percent who are White non-Hispanic; 16.5 percent are Black; and 2.6 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 2,591,035 residents, according to the 2012 U.S. Census estimates. Latinos/Hispanics account for 64.5 percent of the population; White persons of all ethnicities represent 77.5 percent, including 16 percent who are White non-Hispanic; 19.3 percent are Black; and 1.7 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, plus 31 other municipalities and an unincorporated area. The county covers 1,197 square miles, including 25 miles of coastline. According to the 2012 U.S. Census, the Broward County population was 1,815,137. The population is 78.5 percent White, including 43.1 percent who are White, non-Hispanic; 27.4 percent are Black; and 3.5 percent are Asian. Latino/Hispanics constitute 25.8 percent of the population. Foreign-born persons account for 31.2 percent of the county's population. Broward County is the second most populated county in Florida and accounts for 9.4 percent of Florida's population.

Palm Beach County (population 1,356,545) is located due north of Broward County and is the third most populated county in the State. The county population is 77.4 percent White, including 59.6 percent who are White non-Hispanic; 17.8 percent are Black; and 2.5 percent are Asian. Latino/Hispanics constitute 19.6 percent of the population. Twenty-two percent of the county's population is foreign born. Together, the 5.7 million people of these three counties constitute 30 percent of the State's 19 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:

- **Data on drug-related mortality** presented were provided by the Florida Department of Law Enforcement (FDLE) Medical Examiners Commission's *2012 Interim Report of Drugs Identified in Deceased Persons between January and June 2012*. The report provides information on the total number of various drugs detected in 4,126 decedents, mostly for whom an autopsy was performed but not for all of the 85,810 deaths that occurred in Florida during the first 6 months of 2012. 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 local medical examiners 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 medical examiner 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 medical examiner 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 2012 should be released by August 2013.
- **Weighted emergency department (ED) data** were derived for Miami-Dade and Broward Counties from the Drug Abuse Warning Network (DAWN), Substance Abuse and Mental Health Services Administration's (SAMHSA) Center for Behavioral Health Statistics and Quality (CBHSQ). The data represent drug-related visits for illicit drugs (derived from the category of "major substances of abuse," excluding alcohol) and for the nonmedical use of selected prescription drugs (derived from the category of "other substances"). Drug reports exceed the number of ED visits,

because a patient may report use of multiple drugs (up to six drugs plus alcohol). Weighted DAWN data for calendar years 2004–2011 are included in this report and provide estimates of the total number of drug-related ED visits for selected substances for all of Miami-Dade County in those 7 years and for the DAWN Ft. Lauderdale Division (Broward and Palm Beach Counties) for 2008–2011, the years for which DAWN weighted estimates were provided in that division. The DAWN trend tables assess between-year changes by comparing estimates as follows: most current year to first year, most current year to year before last, and most current year to last year. In the DAWN data presented, 2011 estimates are compared with those for 2004 (first year), 2009 (year before last), and 2010 (last year). No significant testing of data for 2005, 2006, 2007, and 2008 versus 2011 was available. A full description of the system can be found on the DAWN Web site at <http://dawninfo.samhsa.gov>.

- **Drug treatment data** on primary admissions to all publicly funded addiction treatment programs in Miami-Dade and Broward Counties during calendar years 2010, 2011, and 2012 were provided by the Florida Department of Children and Families as of June 4, 2013.
- **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 7, 2013, for Miami-Dade, Broward, and Palm Beach Counties for the timeframe January through December 2012. 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 now appropriate to compare the 2012 NFLIS data with those from 2011 as reported in the June 2012 South Florida CEWG Report. 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 those submitted to local crime laboratories. Further information on the NFLIS methodology is available at: http://www.deadiversion.usdoj.gov/nflis/estimates_methodology_110711.pdf.
- **Heroin price and purity information** came from the U.S. DEA Heroin Domestic Monitor Program (HDMP) for 2011, published March 20, 2013.
- **Reports on poison exposure calls for emerging psychoactive substances** are from the Florida Poison Information Center–Miami for all of Florida for calendar years 2011 and 2012 and January–April 2013.
- **Prevalence of substance use data** are from the 2008–2010 National Survey on Drug Use and Health Substate Estimates of Substance Use and Mental Disorders by CBHSQ of SAMHSA, released in 2012.

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 Surveillance Support Committee.

DRUG ABUSE PATTERNS AND TRENDS

Cocaine/Crack

The relatively steady decline in cocaine consequences that began in 2007 halted or reversed starting in 2011. Cocaine problems in South Florida continued to be at the highest rates in the Nation. The numbers of cocaine-related deaths declined since 2007 across the State of Florida, with a modest increase in 2011 followed by a decline again in the first 6 months of 2012 (exhibit 1). In Miami-Dade and Broward Counties, the number of cocaine deaths stabilized in 2011 and in the first half of 2012. Treatment admissions for cocaine declined sharply across the State since 2007, but they stabilized in the South Florida counties between 2010 and 2012. The majority of cocaine-related deaths, ED reports, and addiction treatment admissions were among those older than 35. Many of the indicators reflected cocaine use in combination with other drugs, including all of the 2012 cocaine-related deaths in the three South Florida Counties.

Throughout Florida, the number of cocaine-related deaths decreased by 13 percent in the first half of 2012 ($n=668$) compared with the second half of 2011 ($n=765$), continuing a general overall decline since 2007 (exhibit 1). 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 2011, there were 1,444 cocaine-related deaths in Florida, compared with 1,402 in 2010, 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-related deaths increased by 97 percent between 2001 and 2007; the key factor for that rise appears to be a corresponding 105-percent increase in deaths with cocaine in combination with other drugs, particularly prescription medications. Among the 668 cocaine-related deaths in Florida during the first half of 2012, 93 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 668 cocaine-related deaths statewide in the first half of 2012, the drug was considered to be a cause of deaths in 274 (or 41 percent) of the cases. Among the decedents accounting for the cocaine-related deaths in the first half of 2011, 1.2 percent were younger than 18; 7.8 percent were age 18–25; 21.2 percent were 26–34; 43 percent were 35–50; and 27 percent were older than 50.

There were 93 deaths related to cocaine use in Miami-Dade County during the first half of 2012, for an annualized rate of 186 occurrences, compared with 184 in 2011 (exhibit 1). Cocaine was detected at a lethal level in 34 percent of the cases in the first half of 2012. Cocaine was found in combination with another drug in 100 percent of the cases. One of the cocaine-related decedents in the first half of 2012 was younger than 18; 7.5 percent were age 18–25; 23.6 percent were 26–34; 35.5 percent were 35–50; and 32.3 percent were older than 50. Miami-Dade County had the highest number of cocaine-related deaths in the first half of 2012 among the State's 24 ME Districts.

There were 58 deaths related to cocaine abuse in Broward County in the first half of 2012, for an annualized rate of 116 occurrences, compared with 115 in 2011 (exhibit 1). Cocaine was detected at a lethal level in 62 percent of the Broward County cases in the first half of 2012. Cocaine was found in combination with another drug in all of the cases. None of the 2010 cocaine-related fatalities was younger than 18; 2 of the decedents were age 18–25; 19 percent were 26–34; 38 percent were

35–50; and 40 percent were older than 50. Broward County's number of cocaine-related deaths ranked fourth among the 24 ME districts in the State during the first half of 2012.

The St. Petersburg ME district reported the second highest number of cocaine-related deaths in the State during the first half of 2012, with 74 cases, followed by the Jacksonville ME district with 72 reports, Broward County with 58, and the Orlando ME district with 52. Palm Beach County ranked sixth, with 44 cocaine-related deaths.

The DAWN weighted estimate of 7,955 cocaine-involved ED visits for Miami-Dade County during 2011 accounted for 49 percent of the 16,385 ED drug reports involving 6 categories of substances (cocaine, cannabinoids, illicit stimulants, and MDMA, as well as nonmedical use of prescription opioids and benzodiazepines). Between 2004 and 2011, the number of cocaine-involved ED visits declined by 16 percent in Miami-Dade County, from 9,469 to 7,955. No statistical changes were noted for 2009 and 2010 compared with 2011, and no significant testing of data for 2005, 2006, 2007, and 2008 versus 2011 was available. However, while the increase from 5,702 cocaine reports in 2010 to the 7,955 is not considered statistically significant because of high Relative Standard Error percentages, it was the first time since 2005 that cocaine ED reports increased. In 2011, the Miami-Dade rate of 311 cocaine ED visits per 100,000 population was higher than the national rate of 162 per 100,000 (exhibit 2). Those age 29–34 had the highest rate for cocaine ED reports among all age groups in Miami-Dade County, at 596 per 100,000 population, and all age groups from 35 to 54 years had rates above 546.

The DAWN weighted estimate of 6,211 cocaine-involved ED visits for the Ft. Lauderdale Division, which includes Broward and Palm Beach Counties, during 2011 accounted for 33 percent of 18,738 estimated ED visits for 7 categories of substances (cocaine, heroin, cannabinoids, illicit stimulants, and MDMA, as well as nonmedical use of prescription opioids and benzodiazepines). Between 2009 and 2011, the number of cocaine-involved ED visits increased by 39 percent in the Ft. Lauderdale Division, from 4,479 to 6,211. The increase was even greater between 2010 and 2011, at 52 percent, up from 4,081 that year. The 2011 rate of cocaine ED visits per 100,000 population in Broward and Palm Beach Counties was 199; this compares with the national rate of 162 per 100,000 and the Miami-Dade County rate of 311 per 100,000 (exhibit 2). Patients age 35–44 had the highest rate of cocaine ED reports among all age groups in the Ft. Lauderdale Division, at 454 per 100,000 population.

There were 551 primary treatment admissions for cocaine smoking (crack), and an additional 390 for powder cocaine in Miami-Dade County during 2012 (exhibit 3). These cases accounted for a total of 941 (or 24 percent) of the 3,988 publicly funded primary treatment admissions in which a primary drug was cited (including 1,069 for alcohol) in Miami-Dade County during 2012, as reported by the Florida Department of Children and Families. These totals represent an increase in the proportion of cocaine primary admissions from 2011 ($n=1,052$), when cocaine accounted for 20 percent of all admissions. Males accounted for 60 percent of the 2012 clients, and 63 percent ($n=594$) were age 35 or older; only 6 were 17 or younger.

In Broward County, there were 472 primary admissions for cocaine smoking (crack), and an additional 135 for powder cocaine, accounting for a total of 607 (or 11 percent) of the 5,435 publicly funded primary treatment admissions in which a primary drug was cited (including 1,302 for alcohol) in 2012 (exhibit 4). These totals represent a modest increase in the proportion of cocaine primary

admissions from 2011 ($n=555$), when cocaine accounted for 9 percent of all admissions. Males accounted for 72 percent of the 2012 clients; 68 percent ($n=412$) were age 35 or older; and 2 were 17 or younger.

Cocaine continued to be the most commonly analyzed substance by local crime laboratories. It accounted for 11,411 NFLIS reports, or 48.2 percent of the 23,671 total primary, secondary, and tertiary crime laboratory reports for Miami-Dade, Broward, and Palm Beach Counties combined in 2012 (exhibit 5). This represents a 16-percent decline in the percentage of cocaine crime laboratory reports compared with 2011. There were also 246 reports for phenylimidothiazole isomer assumed to be levamisole found along with cocaine in 2012.

Heroin

Heroin consequences remain at low levels across Florida, with deaths increasing during the most current 12-month reporting period. 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 declined in Miami-Dade, but they increased in Broward County between 2011 and 2012. Heroin purity increased in South Florida as the price per milligram pure decreased between 2010 and 2011, which is the most current data available from the HDMP. Many heroin consequences also involved the nonmedical use of prescription opioids.

Throughout the State, the number of heroin-related deaths increased by 60 percent during the 12 months from July 2011 through June 2012 ($n=77$) compared with the previous 12 months ($n=48$). There were 35 heroin-related deaths across Florida during the first half of 2012, down from 42 in the second half of 2011. Heroin continued to be the most lethal drug, with 94 percent ($n=33$) of heroin-related deaths in the first half of 2012 caused by the drug. Polysubstance abuse was noted in all but one of the 2011 heroin-related deaths and in all of the heroin-related deaths statewide in the first half of 2012. Deaths caused by heroin declined in Florida from 2001 to 2006, then increased between 2006 and 2008, before declining again in 2009 and 2010 and then increasing in 2011. Substantial increases in abuse and consequences of narcotic analgesic use occurred as heroin problems were waning, but as prescription opioid deaths started to decline in 2011, heroin deaths began to increase.

There were 10 heroin deaths in Miami-Dade County during the first half of 2012 for an annualized rate of 20 occurrences, compared with 15 in 2011. Lethal heroin deaths peaked in Miami-Dade County in 2000, with 61 fatalities. In the first half of 2012, heroin was found at a lethal dose level in all of the 10 deaths in which the drug was detected in the county. Other drugs were found in combination with heroin in all of the cases. One of the heroin-related fatalities was age 18–25, and one was age 26–34, while one-half ($n=5$) of the heroin-related decedents were age 35–50, and three (30 percent) were older than 50.

There were 2 heroin deaths in Broward County during the first half of 2012, compared with 3 in 2011, 5 in 2010, 8 in 2009, and 17 in 2008. Lethal heroin deaths peaked in Broward County in 2001 with 51 fatalities. As with all three deaths in 2011, both of the heroin deaths in the first half of 2012 were considered to be caused by the drug, and heroin was found in combination with at least one other drug. One of the 2012 heroin decedents was age 26–34, while the other was older than 50.

Weighted DAWN visit estimates for heroin were not available for Miami-Dade County in 2008, 2009, 2010, and 2011 because the sample numbers were not adequate to provide estimates. The last year for which heroin ED reports were provided in Miami-Dade County was 2006, when there were an estimated 1,058 heroin visits, at a rate of 44 per 100,000.

The DAWN weighted estimate of 394 heroin-involved ED visits for Broward and Palm Beach Counties during 2011 accounted for 2 percent of all ED visits among 7 substances (cocaine, heroin, cannabinoids, illicit stimulants, and MDMA, as well as nonmedical use of prescription opioids and benzodiazepines). The 2011 rate of heroin ED visits per 100,000 population in Broward and Palm Beach Counties was 12.6, compared with the national rate of 83 per 100,000.

There were 161 primary treatment admissions for heroin in Miami-Dade County during 2012 (exhibit 3). These cases accounted for 4 percent of the 3,988 publicly funded primary treatment admissions in which a primary drug was cited (including 1,069 for alcohol), as reported by the Florida Department of Children and Families. This proportion is stable with the proportion of primary heroin admissions in 2011 ($n=227$), when the drug also accounted for 4 percent of all admissions. Males accounted for 70 percent of the 2012 clients; none was 17 or younger, 20 percent were age 18–25; 30 percent were 26–34; and 50 percent ($n=81$) were age 35 or older. Injecting drug use was the primary route of administration for 85 percent of the 2012 treatment clients.

In Broward County, there were 292 primary admissions for heroin (or 5 percent) of the 5,435 publicly funded treatment admissions in which a primary drug was cited (including 1,360 for alcohol) in 2012 (exhibit 4). This total represents an increase in the proportion of primary heroin admissions from 2010 ($n=156$) and 2011 ($n=169$), when the drug accounted for 3 percent of all admissions. Males accounted for 73 percent of the 2012 clients; none were younger than 18, 18 percent were age 18–25; 39 percent were 26–34; and 43 percent were age 35 or older. Injecting drug use was the primary route of administration for 90 percent of the 2012 treatment clients.

Heroin accounted for 696 crime laboratory reports, or 2.9 percent of the 23,671 total primary, secondary, and tertiary NFLIS reports for Miami-Dade, Broward, and Palm Beach Counties combined in 2012 (exhibit 5), as reported by NFLIS. Heroin ranked fifth among all substances analyzed in the three counties in both 2011 and 2012, but the percentage of heroin crime laboratory reports increased by 21 percent between the 2 years.

In 2011, the Miami Field Division of the DEA purchased 16 qualified HDMP samples in the Miami area; 14 were classified as South American (SA) heroin. The SA exhibits purchased had an average purity of 22.1 percent, with an average price of \$2.27 per milligram pure, compared with the national average purity of 31.1 percent and price of \$1.18. Compared with 2010 HDMP data, the average purity for SA heroin in South Florida increased by 11.9 percentage points, while the average price per milligram pure decreased sharply by \$3.78. Of the 16 qualified South Florida HDMP samples purchased, 2 were Mexican heroin exhibits. These two exhibits had an average purity of 14.1 percent and an average price of \$2.49 per milligram pure, compared with the national average purity of 16.8 percent and price of \$1.35.

Nonmedical Use of Prescription Opioids

The nonmedical use of prescription opioids continued as Florida's most deadly and addictive drug problem; however, consequences declined in the first half of 2012. Numerous new laws and

regulations took effect in the second half of 2011, the impact of which may first be reflected in data beginning in 2012. Injection drug use is reported by most Broward County prescription opioid treatment clients as having been their primary method of use.

During the first half of 2012, 2,444 individuals died in Florida with 1 or more prescription drugs in their system, of which 43 percent ($n=1,054$) had at least 1 prescription medication that was considered a cause of death. That means that an average of 40.3 persons died per week in Florida from a lethal prescription drug overdose in the first half of 2012; that average, however, represents a decrease of 8.5 deaths per week from the 2011 average of 48.8 deaths per week. In total, there were 5,714 prescription drugs detected (including 2,759 opioids) during the first half of 2012, and 2,017 (or 35 percent of the total medication occurrences) were considered at a lethal dose and a cause of death, including 45 percent ($n=1,257$) of the opioids (exhibit 6). 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.

Between the second half of 2011 and the first 6 months of 2012, statewide reports in Florida related to the category of prescription opioids detected among deceased persons decreased by 17 percent, from 3,310 to 2,759. This followed a 3-percent decrease between 2010 and 2011, a 10-percent increase between 2009 ($n=6,006$) and 2010 ($n=6,608$), and another 10-percent rise between 2008 ($n=5,457$) and 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 four prescription opioids (oxycodone, morphine, hydrocodone, and methadone) detected among deceased persons during the first half of 2012 totaled 116 in Broward County, 96 in Palm Beach County, and 81 in Miami-Dade County.

Across Florida, the 185 hydrocodone reports detected among deceased persons in the first half of 2012 represented a 22-percent increase over the 151 reports in the previous 6 months. The 411 medical examiner reports for morphine in the first half of 2012 represent a modest 2-percent increase over the previous semiannual period. These were the only two prescription opioids with increasing reports in the first 6 months of 2012; nine others had declining occurrences.

The most lethal prescription opioids statewide in the first half of 2012 were methadone, which was considered a cause of death for 69 percent ($n=274$) of the decedents in which it was detected; fentanyl, which was a cause of death for 60 percent ($n=65$) of the deaths related to it; and oxycodone, which was a cause of death for 52 percent ($n=392$) of its occurrences (exhibit 6). Most of the statewide ME prescription opioid cases were polydrug episodes, including 96 percent of the oxycodone reports, 92 percent of the methadone cases, 91 percent of morphine cases, and 90 percent of the hydrocodone reports.

Miami-Dade County recorded 34 oxycodone occurrences among deceased persons in the first half of 2012 (exhibit 7), compared with 31 morphine reports, 17 for hydrocodone, and 5 for methadone. These 87 opioid occurrences during the first 6 months of 2012 compared equally to 175 combined

reports in all of 2011 for the same four narcotic analgesics. Among reports for these four opioids in the first half of 2012, 37 percent were considered lethal doses, and in 100 percent of the cases they were found in combination with at least one other substance. Most of the deaths occurred among those age 35 and older; 32 percent of Miami-Dade oxycodone deaths in the first half of 2012 were among those age 35–50, and 44 percent were older than 50.

Broward County recorded 60 oxycodone occurrences among deceased persons in the first half of 2012 (exhibit 7), compared with 35 reports for morphine, 12 for hydrocodone, and 11 for methadone. These 118 combined opioid occurrences during the first 6 months of 2012 also compared equally with 328 reports in the full year 2011 for the same 4 narcotic analgesics. Among reports for these four opioids in the first half of 2012, 54 percent were considered lethal doses, and in 100 percent of the cases they were found in combination with at least one other substance. Most of the deaths occurred among those age 35 and older; 37 percent of Broward County oxycodone deaths in the first half of 2012 were age 35–50; and 43 percent were older than 50.

Palm Beach County recorded 44 oxycodone occurrences among deceased persons in the first half of 2012 (exhibit 7), along with 21 for morphine, 16 for methadone, and 15 for hydrocodone. These 96 combined opioid occurrences during the first 6 months of 2012 compared with 470 reports in 2011 for the same 4 narcotic analgesics. Among reports for these four opioids in the first half of 2012, 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; 39 percent of Palm Beach County oxycodone deaths in the first half of 2012 were age 35–50, and 36 percent were older than 50.

The DAWN weighted estimate of 1,084 ED visits for nonmedical use of prescription opioids in Miami-Dade County during 2011 accounted for 7 percent of all ED visits among 6 substances (cocaine, cannabinoids, illicit stimulants, and MDMA—as well as nonmedical use of prescription opioids and benzodiazepines). Between 2004 and 2011, the estimated number of prescription opioid-involved ED visits increased by 133 percent in Miami-Dade County, up from 465 in 2004. No statistical changes were noted for 2009 and 2010 compared with 2011, and no significant testing of data for 2005, 2006, 2007, and 2008 versus 2011 was available. The rate of 42.4 nonmedical opioid ED visits per 100,000 population in Miami-Dade County compared with the national rate of 156.6 per 100,000 in 2011 (exhibit 8). Oxycodone was the most frequently involved opioid in nonmedical ED visits, totaling 462 ED visits in 2011 and representing a 264-percent increase in such cases since 2004. The Miami-Dade rate of 18.1 nonmedical oxycodone ED visits per 100,000 population compared with the national rate of 48.5 per 100,000 in 2011.

The DAWN weighted estimate of 3,699 ED visits for nonmedical use of prescription opioids in the Ft. Lauderdale Division of DAWN including Broward and Palm Beach Counties during 2011 accounted for 20 percent of all ED visits among 7 substances (cocaine, heroin, cannabinoids, illicit stimulants, and MDMA—as well as nonmedical use of prescription opioids and benzodiazepines). No statistical changes were noted for 2009 and 2010 compared with 2011, and no significant testing of data for 2008 versus 2011 was available. The Broward and Palm Beach Counties rate of nonmedical opioid ED visits was 118.7 per 100,000 population, compared with the national rate of 156.6 per 100,000 in 2011 (exhibit 8). Oxycodone was the most frequently cited opioid involved in nonmedical cases, totaling 1,981 ED visits in 2011. While the national rate was 48.5 per 100,000, the Broward and Palm Beach Counties' rate of nonmedical oxycodone ED visits was 63.6 per 100,000 in 2011.

The rates of nonmedical oxycodone ED reports were nearly double for those age 21–34 years in Broward and Palm Beach Counties compared with the same age groups nationally.

There were 139 primary treatment admissions for “opiates other than heroin” (prescription opioids) in Miami-Dade County during 2012 (exhibit 3). These cases accounted for a total of 3.5 percent of the 3,988 publicly funded treatment admissions in which a primary drug was cited (including 1,069 for alcohol). This total represents a decrease in the proportion of primary prescription opioid admissions in 2011 ($n=302$), when the drug accounted for 5.7 percent of all admissions. Males accounted for 57 percent of the 2012 opioid clients. Information on the ages of these clients was reported for only 74 of them, among whom none was younger than 18; 39 percent were age 18–25; 28 percent were 26–34; and 32 percent were age 35 or older. Among the 53 percent of the other prescription opioid clients ($n=74$) for whom the primary route of administration was recorded, 22 percent ($n=16$) reported injecting prescription opioids, while smoking was reported by 15 percent, sniffing by 12 percent, and oral administration by 51 percent as their primary method of use.

There were 1,260 primary treatment admissions for “opiates other than heroin” (prescription opioids) in Broward County during 2012 (exhibit 4). These cases accounted for 23 percent of the 5,435 publicly funded treatment admissions in which a primary drug was cited (including 1,360 for alcohol). This total is stable with the proportion of primary prescription opioid admissions in 2011 ($n=1,459$), when the drug accounted for 24 percent of all admissions. Males accounted for 51 percent of the 2012 opioid clients. Information on the ages of these clients was only reported for 826 of them; 8 (or 1 percent) were younger than 18; 25 percent were age 18–25; 44 percent were 26–34; and 30 percent ($n=123$) were age 35 or older. Among the 66 percent of the other prescription opioid clients ($n=826$) for whom the primary route of administration was recorded, 58 percent ($n=480$) reported injecting prescription opioids; sniffing was reported by 18 percent; 20 percent reported oral administration; and 4 percent cited smoking as their primary method of use.

Hospitals reported 55 cases of neonatal abstinence syndrome in Broward County during 2011 and 25 in Miami-Dade County. The number of cases in Broward declined by 25 percent between 2010 and 2011, but they increased in Miami-Dade County by 39 percent. 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 192 percent between 2007 and 2011, rising from 536 to 1,563.

Prescription opioids accounted for 975 crime laboratory reports, or 4.1 percent, of the 23,671 total primary, secondary, and tertiary NFLIS reports for Miami-Dade, Broward, and Palm Beach Counties combined in 2012 (exhibit 5). Prescription opioids ranked third among other substances analyzed in the three counties. The proportion of prescription opioid crime laboratory reports decreased by 31 percent between 2011 and 2012. Oxycodone accounted for 679 (or 70 percent) of the opioid reports and by itself ranked fifth among all substances. Additionally, there were 151 reports for hydromorphone (up from 24 in 2011), 122 for hydrocodone, 51 for morphine, 33 for methadone, 28 for buprenorphine, 31 for codeine, 11 for tramadol, and 10 each for oxymorphone and dihydronormorphinone (Paramorphone®). There were also 669 “unspecified controlled substance” crime laboratory reports in 2012 that may have included additional prescription opioids.

Between 2008 and 2010 as Broward County experienced the highest rates among all other counties in the Nation of prescription opioid diversion, “pill mill” retail sales, high-volume opioid dispensing

practitioners, prescription drug deaths, and medical emergencies, it also reported the lowest prevalence rate in the Nation for nonmedical use of prescription pain relievers. The Broward County proportion of 3 percent for residents reporting any past-year use of a prescription pain reliever was the lowest percentage for any of the 362 substate regions within the 50 States and the District of Columbia, as reported by the 2008–2010 National Survey on Drug Use and Health Substate Estimates of Substance Use and Mental Disorders released in 2012 (exhibit 9).

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 2,622 reports of a benzodiazepine present in deceased persons across Florida in the first half of 2012, representing a 17-percent decrease in the total number of benzodiazepine occurrences compared with the previous 6 months. Of the benzodiazepine occurrences in the first half of 2012, 25 percent ($n=660$) were considered “a cause of death.” Among the benzodiazepine ME reports statewide, 730 were attributed to alprazolam, and 409 were attributed to diazepam (Valium®); 44 percent of the alprazolam occurrences and 25 percent of the diazepam reports were considered to be a cause of death.

In Miami-Dade County, there were 49 reports of alprazolam detected in deceased persons during the first half of 2012, of which 47 percent were considered lethal. At least one other drug was involved in 100 percent of the reports. There were also 22 reports of diazepam detected in deceased persons in Miami-Dade County; 36 percent were considered to be the cause of death, and 100 percent of these deaths involved at least 1 other drug. These 80 medical examiner occurrences for the 2 benzodiazepines in the first 6 months of 2012 compare with 151 such reports for alprazolam and diazepam in 2011 and 169 in 2010. One of the benzodiazepine mentions in the first half of 2012 involved a person younger than 18; 7 percent of the decedents were age 18–25; 11 percent were 26–34; 33 percent were 35–50; and 46 percent were older than 50.

In Broward County, there were 72 reports of alprazolam detected in deceased persons during the first half of 2012, of which 53 percent were considered a cause of death. At least one other drug was involved in 100 percent of the reports. There were also 25 reports of diazepam detected in deceased persons in Broward County; 40 percent were considered to be the cause of death, and 100 percent of these deaths involved at least one other drug. These 97 ME occurrences for the 2 benzodiazepines in the first 6 months of 2012 compare with 284 such reports for alprazolam and diazepam in 2011 and 315 in 2010. None of the benzodiazepine mentions in the first half of 2012 involved a person younger than 18; 2 percent of the decedents were age 18–25; 14 percent were 26–34; 37 percent were 35–50; and 46 percent were older than 50.

In Palm Beach County, there were 47 reports of alprazolam detected in deceased persons during the first half of 2012, of which 55 percent were considered lethal. At least one other drug was involved in 100 percent of the reports. There were also 23 reports of diazepam detected in deceased persons in Palm Beach County; 30 percent were considered to be the cause of death, and 100 percent of these deaths involved at least 1 other drug. These 70 medical examiner occurrences for the 2 benzodiazepines in the first 6 months of 2012 compare with 320 such reports for alprazolam and diazepam in 2011 and 186 in 2010. None of the benzodiazepine mentions in the first half of 2012 involved a person younger than 18; 6 percent of the decedents were age 18–25; 24 percent were 26–34; 34 percent were 35–50; and 36 percent were older than 50.

The DAWN weighted estimate of 1,808 ED visits for nonmedical use of prescription benzodiazepines in Miami-Dade County during 2011 accounted for 11 percent of all ED visits among 6 categories of substances (cocaine, cannabinoids, illicit stimulants, and MDMA—as well as nonmedical use of prescription opioids and benzodiazepines). No statistical changes were noted for 2004, 2009, or 2010 compared with 2011, and no significant testing of data for 2005, 2006, 2007, and 2008 versus 2011 was available. The Miami-Dade rate of 70.8 nonmedical benzodiazepine ED visits per 100,000 population compared with the national rate of 114.8 per 100,000 in 2011. Alprazolam was the most frequently cited benzodiazepine in nonmedical cases, totaling 987 ED visits in 2011. The Miami-Dade rate of nonmedical alprazolam ED visits per 100,000 population was 38.6, compared with the 2011 national rate of 39.7 per 100,000.

The DAWN weighted estimate of 3,647 ED visits for nonmedical use of pharmaceutical benzodiazepines in the Ft. Lauderdale Division of DAWN including Broward and Palm Beach Counties during 2011 accounted for 19 percent of all ED visits among 7 categories of substances (cocaine, heroin, cannabinoids, illicit stimulants, and MDMA—as well as nonmedical use of prescription opioids and benzodiazepines). The Broward and Palm Beach Counties rate of 117.1 nonmedical benzodiazepine ED visits per 100,000 population was less than the national rate of 114.8 per 100,000 in 2011. The highest ED visit rates in the two counties for nonmedical use of benzodiazepines were among those age 21–24, at 246.9 per 100,000, and those age 25–29, at 250.8 per 100,000. These rates were similar to the national rates of 223.3 for those age 21–24 and 259.8 per 100,000 for those 25–29. Alprazolam was the most frequently cited benzodiazepine in nonmedical cases, totaling an estimated 1,780 ED visits in 2011. The Broward and Palm Beach Counties' rate of nonmedical alprazolam ED visits per 100,000 population of 57.1 was higher than the national rate of 39.7 per 100,000 in 2011.

There were 58 admissions for benzodiazepines reported as primary treatment admissions in Miami-Dade County during 2012, or 1.5 percent of the 3,988 total treatment admissions in which a primary drug was cited in Miami-Dade County (exhibit 3). This proportion is stable with such admissions in 2011, when 79 cases also represented 1.5 percent of the total. Females accounted for 55 percent of the 2012 benzodiazepine clients.

In Broward County, there were 93 primary admissions for benzodiazepines during 2012, or 1.7 percent of 5,435 primary admissions in which a primary drug was cited (exhibit 4). This total is a decrease from 2010, when 140 cases represented 2.5 percent of the total. Males accounted for 52 percent of the 2012 benzodiazepine clients.

Prescription benzodiazepines accounted for 882 crime laboratory reports, or 3.7 percent of the 23,671 total primary, secondary, and tertiary NFLIS reports for Miami-Dade, Broward, and Palm Beach Counties combined in 2012 (exhibit 5). This category of drugs ranked fourth among all substances analyzed in the three counties in both 2011 and 2012, but the percentage of prescription benzodiazepine crime laboratory reports decreased by 16 percent between the 2 years. Alprazolam accounted for 729 (or 83 percent) of the benzodiazepine reports and by itself ranked third among all substances. Additionally, there were 74 clonazepam (Klonopin®) reports, 46 for diazepam, 14 for lorazepam (Ativan®), 17 for temazepam (Restoril®), and 2 for triazolam (Halcion®). There were also 669 “unspecified controlled substance” crime laboratory reports in 2012 that may have included additional prescription benzodiazepines.

Methamphetamine/Amphetamines

Indicators of methamphetamine abuse reflect increases in the drug's use in the most recent reporting periods, but indicators still remained at low levels relative to other substances. Methamphetamine was cited as the primary drug for addiction treatment among less than 0.3 percent of addiction treatment clients in South Florida during 2012. Numerous anecdotal reports from private treatment counselors suggest a resurgence in methamphetamine abuse among men who have sex with men beginning in the first half of 2012. Methamphetamine use is also reported among heavy users of "club drugs."

It is suspected that the methamphetamine being used locally is produced in Mexico. Domestic clandestine laboratory production in Florida mostly appears still to be using the 2-liter soda bottles "shake and bake" method that 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 73 deceased persons during the first half of 2012 statewide in Florida, compared with 58 in the previous 6 months. There were 115 methamphetamine ME occurrences in 2011, 132 in 2010, 81 in 2009, and 114 in 2008. Methamphetamine was considered a cause of death in 29 (40 percent) of the 73 cases during the first half of 2012. There were also 123 reports of amphetamine detected among decedents across Florida in the first 6 months of 2012, representing a 21-percent increase from the 102 such occurrences in the previous semiannual period. Amphetamine was considered the cause of death in 20 percent of the 123 cases in the first half of 2012.

There were 271 DAWN weighted estimated reports for the combined category of illicit stimulants including both amphetamines and methamphetamine for Miami-Dade County during 2011, representing a 75-percent increase over the 155 such reports in 2009. This 2011 total included 150 reports for methamphetamine and 131 for other illicit amphetamines. In 2011, the rate of 10.6 illicit stimulant ED visits per 100,000 population was well below the national rate of 51.3 per 100,000.

There were 251 DAWN weighted estimates for the combined category of illicit stimulants, including both amphetamines and methamphetamine, for the Ft. Lauderdale Division that includes Broward and Palm Beach Counties during 2011. However, there were no estimates for the specific stimulants due to a low number from the DAWN sample. No statistical changes were noted for 2009 or 2010 compared with 2011, and no significant testing of data for 2008 versus 2011 was available. The 2011 rate of 9.8 illicit stimulant ED visits per 100,000 population in Broward and Palm Beach Counties was well below the national rate of 51.3 per 100,000.

There were 11 primary treatment admissions for methamphetamine in Miami-Dade County during 2012 (exhibit 3). These cases accounted for 0.3 percent of the 3,988 publicly funded primary treatment admissions in which a primary drug was cited (including 1,069 for alcohol). This proportion is stable from 2011, when the drug also accounted for 0.3 percent ($n=17$) of all admissions. All of the 2012 methamphetamine clients were male; none was younger than 18; 27 percent ($n=3$) were age 18–25; 9 percent ($n=1$) were 26–34; and 67 percent ($n=7$) were 35 or older. There were also four primary admissions for other amphetamines; three were male, and two each were age 18–25 and 26–34. Among the 11 methamphetamine clients, 6 cited smoking as their primary method of use, 3 reported sniffing, and 2 reported injecting.

There were 16 primary treatment admissions for methamphetamines in Broward County during 2012 (exhibit 4). These cases accounted for 0.3 percent of the 5,435 publicly funded primary treatment admissions in which a primary drug was cited (including 1,360 for alcohol). This proportion is stable from 2011, when the drug also accounted for 0.3 percent ($n=12$) of all admissions. All of the 2012 methamphetamine clients were male; none was younger than 25; 31 percent ($n=5$) were age 26–34; and 69 percent ($n=11$) were age 35 or older. There were also eight primary admissions for other amphetamines, none of whom was younger than 18 years; one was 18–25; two were age 25–34; and five were 35 or older. Among the 16 methamphetamine clients, 9 cited smoking as their primary method of use, 4 reported injecting, 2 reported sniffing, and 1 cited oral injection.

Methamphetamine accounted for 170 crime laboratory reports, or 0.7 percent of the 23,971 total primary, secondary, and tertiary NFLIS reports for Miami-Dade, Broward, and Palm Beach Counties combined in 2012 (exhibit 5). Methamphetamine ranked 10th among all substances analyzed in the three counties in both 2011 and 2012, and reports increased by 17 percent from 2011 to 2012. There were also 58 amphetamine crime laboratory reports in 2012.

Marijuana/Cannabis and Synthetic Cannabinoids

Marijuana was cited as the number one primary substance for addiction treatment in both South Florida counties in 2012, accounting for one-third of admissions for all substances. Consequences of marijuana use and addiction continued at high levels, particularly among adolescents and young adults. More than one-half of marijuana addiction treatment clients were younger than 18, and more than three-fourths were younger than 25 in Miami-Dade and Broward Counties.

Cannabinoids were detected in 384 deaths statewide in Florida during the first half of 2012, an 18-percent decrease from the 470 occurrences during the previous 6 months.

The availability of unregulated synthetic cannabinoids increased through retail sale throughout 2010 and the first half of 2011. Their use was mostly among those who were subject to frequent drug testing that did not identify these products. However, drug tests are now available for their detection. Also, the five synthetic cannabinoids that were federally scheduled in 2011 were also made illegal by the 2011 Florida Legislature, which also banned other cannabinoids in 2012. There were 537 exposure calls statewide to Florida Poison Information Centers in 2012 for various synthetic cannabinoids (e.g., “K2” or “Spice”), stable from 517 calls in 2011. Among the calls in 2012, 45 were from Miami-Dade County, 37 were from Broward County, and 24 were from Palm Beach County. More than two-thirds of the State’s 2012 synthetic cannabinoid poison exposure calls were in the first half of the year, and 271 (or 50 percent) were made in the first 4 months. In the first 4 months of 2013, these calls declined by 71 percent (to 78 in all of Florida) and were mostly from the St. Petersburg and Tampa Bay area. Exposure calls involve cases usually from a hospital ED where someone is experiencing adverse consequences after smoking or ingesting a substance.

The DAWN weighted estimate of 4,842 cannabinoid-involved ED visits for Miami-Dade County during 2011 accounted for 30 percent of all ED visits among 6 categories of substances (cocaine, cannabinoids, illicit stimulants, and MDMA—as well as nonmedical use of prescription opioids and benzodiazepines). No statistical changes were noted for 2004, 2009, or 2010 compared with 2011, and no significant testing of data for 2005, 2006, 2007, and 2008 versus 2011 was available. Forty-four of these ED reports in 2011 were for a synthetic cannabinoid. The rate of marijuana ED visits

per 100,000 population was 187.8, while the national rate was 146.2 per 100,000 (exhibit 10). Among those younger than 21, there were 1,036 cannabinoid-involved ED visits (or 21 percent) in 2011, representing a rate of 158.5 visits per 100,000; the national rate was 153.1 per 100,000. Among those age 21 and older, there were 3,806 marijuana ED visits (or 79 percent) in 2011, at a rate of 200.2 per 100,000; the national rate was 154.2 per 100,000.

The DAWN weighted estimate of 4,127 cannabinoid-involved ED visits for the Ft. Lauderdale Division that includes Broward and Palm Beach Counties during 2011 accounted for 22 percent of all ED visits among 7 categories of substances (cocaine, heroin, cannabinoids, illicit stimulants, and MDMA—as well as nonmedical use of prescription opioids and benzodiazepines). The estimated number of marijuana-involved ED visits in 2011 was a 40-percent increase compared with the 2,870 marijuana-involved visits in 2009. No statistical changes were noted for 2010 compared with 2011, and no significant testing of data for 2008 versus 2011 was available. Included in the 2011 reports were 120 for a synthetic cannabinoid. The rate of marijuana ED visits per 100,000 population was 128.6, compared with national rate of 146.2 per 100,000 population (exhibit 10). Among those younger than 21, there were 1,208 cannabinoid-involved ED visits (or 29 percent) in 2011 and a rate of 156.4 visits per 100,000; the national rate was 153.1 per 100,000. Among the local reports for those younger than 21, 32 were for a synthetic cannabinoid. Among those age 21 and older, there were 2,918 marijuana ED visits (or 71 percent) in 2011 and a rate of 124.6 per 100,000, compared with the national rate of 154.2 per 100,000.

There were 1,576 primary treatment admissions for marijuana in Miami-Dade County during 2012 (exhibit 3). These cases accounted for 40 percent of the 3,988 publicly funded primary treatment admissions in which a primary drug was cited (including 1,069 for alcohol), higher than for any other substance. This proportion of admissions was stable from 2011, when the drug accounted for 37 percent ($n=2,008$) of all admissions. Among the 2012 marijuana clients, 72 percent were male; 56 percent were younger than 18; 22 percent were age 18–25; 14 percent were 26–34; and 7 percent were age 35 or older.

In Broward County, there were 1,748 primary admissions for marijuana (or 32 percent) of the 5,435 publicly funded primary treatment admissions in which a primary drug was cited (including 1,360 for alcohol); this was higher than for any other substance (exhibit 4). The proportion of marijuana admissions was stable from 2011, when the drug also accounted for 32 percent ($n=1,949$) of all admissions. Males accounted for 80 percent of the 2012 clients; 51 percent were younger than 18; 26 percent were age 18–25; 12 percent were 26–34; and 11 percent were 35 or older.

Cannabis/THC (tetrahydrocannabinol) accounted for 5,388 crime laboratory reports, or 22.8 percent of the 23,671 total primary, secondary, and tertiary NFLIS reports for Miami-Dade, Broward, and Palm Beach Counties combined in 2012 (exhibit 5). This total increased by 8 percent from the number of marijuana crime laboratory cases in 2011. As in previous years, marijuana ranked second among all substances analyzed in the three counties. There were also 114 crime laboratory reports for the synthetic cannabinoid AM-2201, 27 reports for JWH-018, 25 for XLR-11, 6 for JWH-081, and 18 reports for 6 other synthetic cannabinoids. The total number of crime laboratory synthetic cannabinoid reports increased from 19 reports in 2011 to 190 in 2012.

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 or Ecstasy and Emerging Psychoactive Substances

Measures of MDMA abuse have declined in the South Florida area to relatively low numbers in recent years, while reports of other hallucinogenic amphetamines often sold as “ecstasy” or “Mollys” have increased. Indicators where there is no toxicology verification, such as hospital EDs, report “ecstasy” as MDMA with increasing numbers, while other measures, such as ME and crime laboratory reports with toxicological testing of the actual substance, reflect declining numbers of MDMA but increasing cases of other drugs, including bk-methylone, MDA (3,4-methylenedioxyamphetamine), Foxy methoxy or 5-MeO-DIPT (5-Methoxy-N,N-Diisopropyltryptamine), BZP (1-benzyl-piperazine), and TFMPP (1-3(3-trifluoromethyl-phenyl)-piperazine).

There were five MDMA-related deaths statewide in Florida in the first half of 2012, with the drug being cited as the cause of death in three of these cases. There were also five reports of MDA-related deaths statewide in Florida during the semiannual period, one of which was considered the cause of death. During the previous 6 months, there were four MDMA-related deaths and one for MDA.

There were 398 DAWN weighted estimates for MDMA-involved ED visits for Miami-Dade County during 2011, representing 2 percent of all ED visits among 6 categories of substances (cocaine, cannabinoids, illicit stimulants, and MDMA—as well as nonmedical use of prescription opioids and benzodiazepines). The 2011 total represented a 91-percent increase over the 209 MDMA reports in 2004 and a 107-percent increase over the 192 in 2009. The rate of 15.6 MDMA ED visits per 100,000 population was above the national rate of 7.2 (exhibit 11). Among those younger than 21, there were 153 MDMA ED visits in 2011, representing a rate of 23.3 visits per 100,000; the national rate was 11.6. Among those age 21 and older, there were 245 MDMA ED visits in 2011 with a rate of 7.7, compared with the national rate of 5.5.

The DAWN weighted estimate of 409 MDMA-involved ED visits for the Ft. Lauderdale Division that includes Broward and Palm Beach Counties during 2011 accounted for 2 percent of all ED visits among 7 categories of substances (cocaine, heroin, cannabinoids, heroin, MDMA—and nonmedical use of prescription opioids and benzodiazepines). The 409 MDMA ED visits in 2011 increased by 62 percent from the 253 such cases in 2009. The 2011 rate of 13.1 MDMA ED visits per 100,000 population was above the national rate of 7.2 (exhibit 11). Among those age 21 and older, there were 255 MDMA ED visits in 2011 with a rate of 12.9, almost double the national rate of 5.5. A local estimate of MDMA ED reports for those younger than 21 was not available for 2011.

In all of Florida, there were 47 Florida Poison Information Center exposure calls for “Mollys” in the first 4 months of 2013; these included 19 calls from Miami-Dade County, 8 from Broward County, and 4 from Palm Beach County. During the same 4 months in 2012, there were only two poison exposure calls for “Mollys” in the State, and none were from any of the three South Florida Counties.

There were 10 primary treatment admissions for MDMA in Miami-Dade County in 2012 and 4 in Broward County (exhibits 3 and 4). In 2011, there were four primary treatment admissions for MDMA in Miami-Dade County and seven in Broward County.

MDMA accounted for 107 crime laboratory reports, or 0.4 percent, of the 23,671 total primary, secondary, and tertiary NFLIS reports for Miami-Dade, Broward, and Palm Beach Counties combined in 2012. This number is down from 2011, when there were 299 MDMA crime laboratory reports, or 1.2 percent of the 25,697 total primary, secondary, and tertiary NFLIS reports from the 3 South Florida Counties that year. MDMA ranked 17th among all substances analyzed in the three counties during 2012, down from 8th in 2011.

There were also 496 crime laboratory reports for synthetic (substituted) cathinones in 2012, up from 74 in 2011 (exhibit 12). Methylone was detected in 388 of these samples, most of which were alleged to be “Molly” capsules. Finally, there were also 301 other emerging psychoactive substances crime laboratory cases in 2012, including 89 for 5-MeO-DIPT, 113 for BZP, and 86 for TFMPP (exhibit 13). BZP in combination with TFMPP is often sold as “ecstasy.”

GHB

Abuse of the anesthetic GHB declined substantially over the past decade, but deaths related to it have been slowly increasing since 2008 in Florida. There are several compounds that are converted by the body to GHB, including gamma butyrolactone (GBL) and 1,4-butanediol (1,4-BD). Over the past few years, GHB abuse had involved only the abuse of 1,4-BD, but crime laboratory cases for GHB and GBL appeared in 2012. 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.

There were seven GHB-related deaths statewide during the first half of 2012, and the drug was considered the cause of death in two of those cases. There were nine GHB-related deaths statewide in 2011, eight in 2010, six in 2009, three in 2008, five in 2007, four in 2006, and nine 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 no weighted estimates of GHB ED visits for either Miami-Dade County or the Ft. Lauderdale Division of DAWN in 2011 as in 2010, due to a low number of cases from the DAWN sample.

There were 5 crime laboratory reports for 1,4-BD and 3 each for GHB and GBL among the 23,671 total primary, secondary, and tertiary NFLIS reports for Miami-Dade, Broward, and Palm Beach Counties combined in 2012. In 2011, there were 9 crime laboratory reports for 1,4-BD and none for either GHB or GBL among the 25,697 South Florida crime laboratory reports.

Nonmedical Use of Prescription Muscle Relaxants

Muscle relaxants may be abused in combination with MDMA and other drugs, particularly with prescription opioids and benzodiazepines. There were 174 reports of carisoprodol (Soma®) or meprobamate among deceased persons in Florida during the first half of 2012, of which 53 (30 percent) were considered to be caused by the drug. There were 246 carisoprodol/ meprobamate occurrences the prior 6 months, and a total of 478 in 2011, 513 in 2010, 455 in 2009, and 415 deaths in 2008. The 29-percent decrease in muscle relaxant deaths between the second half of 2011 and the first half of 2012 reflects a similar decline as seen for other prescription medications over the same two reporting periods.

Weighted DAWN visit estimates for muscle relaxants were not available for Miami-Dade County from 2004 to 2011 because the sample numbers were not adequate. There were 300 DAWN weighted ED visits for nonmedical use of any pharmaceutical muscle relaxants in the Ft. Lauderdale Division of DAWN comprised of Broward and Palm Beach Counties during 2011. The Broward and Palm Beach Counties rate of nonmedical muscle relaxant ED visits per 100,000 population was 9.6, compared with the national rate of 3.3 in 2011. Carisoprodol was the most frequently cited muscle relaxant in nonmedical cases, totaling 256 estimated ED visits in 2011. The Broward and Palm Beach Counties 2011 rate of nonmedical carisoprodol ED visits per 100,000 population was 8.2, compared with the national rate of 1.4.

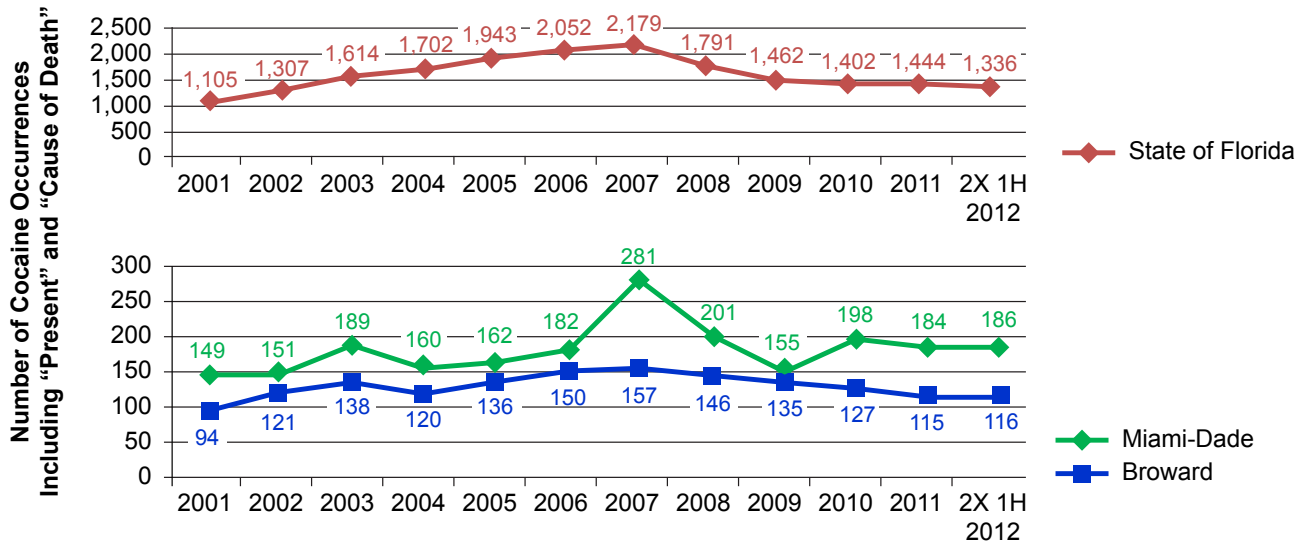
There were two primary treatment admissions for carisoprodol in Broward County in 2012 and none in Miami-Dade County. NFLIS laboratories analyzed 33 carisoprodol items in the South Florida MSA in 2012, a decrease from the 42 reports in 2011 and 55 in 2010.

INFECTIOUS DISEASES RELATED TO DRUG ABUSE

A major concern identified in the above sections of this report is the increase in injection drug use among a new, young adult cohort of prescription opioid injectors, heroin initiates, and methamphetamine users. Among 2012 treatment clients, 90 percent of those in Broward County and 85 percent of Miami-Dade County heroin treatment clients reported injecting as their major route of administration (exhibit 14). Even more surprising was the 58 percent of prescription opioid treatment clients in Broward County reporting injecting as their primary method of use, as did 22 percent of such clients in Miami-Dade. Among the relatively few methamphetamine treatment clients, 25 percent in Broward County and 18 percent in Miami-Dade County were injection drug users (IDUs). Most of these new IDUs were born after 1990 and were only toddlers when the public learned about the high risk of infected syringes and works, as well as how to clean them. A public health threat of increased HIV and hepatitis C transmission is already occurring.

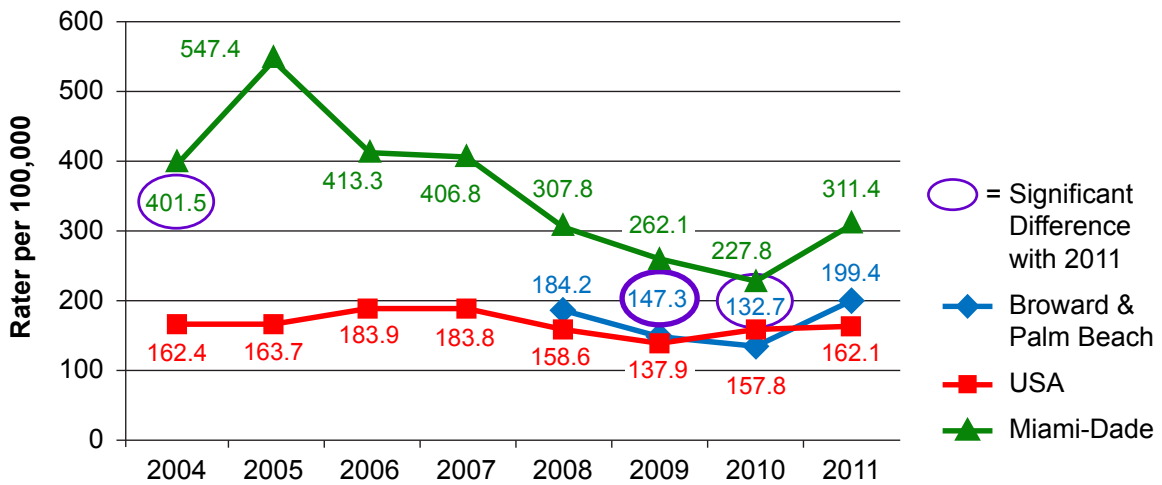
For inquiries regarding this report, contact James N. Hall, Director, Center for the Study and Prevention of Substance Abuse, Nova Southeastern University c/o Up Front, Inc., 13584 S.W. 114 Terrace, Miami, FL 33186, Phone: 786-547-7249, E-mail: upfrontin@aol.com.

Exhibit 1. Number of Cocaine Reports Detected Among Decedents in Miami-Dade and Broward Counties and the State of Florida: 2001–First Half (1H) 2012



SOURCE: Florida Medical Examiners Commission Interim Report, January–June 2012

Exhibit 2. Rate of Cocaine-Involved Emergency Department Visits, per 100,000 Population, in Miami-Dade, Broward, and Palm Beach Counties and the United States: 2004–2011



SOURCE: DAWN, CBHSQ, SAMHSA

Exhibit 3. Number of Primary Treatment Admissions, by Substance, in Miami-Dade County, Florida: 2009–2012

Primary Treatment Substance	2009	2010	2011	2012
Alcohol	1,289	1,242	1,406	1,069
Crack Cocaine	867	549	615	551
Powder Cocaine	690	369	437	390
Heroin	150	183	227	161
Rx Opioids	113	246	302	139
Marijuana	2,118	1,741	2,008	1,576
Methamphetamine	55	22	17	11
Amphetamine	2	5	5	4
MDMA	3	6	4	10
PCP	29	0	1	1
Benzodiazepine	1	71	79	58
All Other Drugs	108	30	230	18
Substance Unknown	117	84	91	78
Total Admissions	5,542	4,548	5,338	4,066

SOURCE: Florida Department of Children and Families, data submitted June 4, 2013

Exhibit 4. Number of Primary Treatment Admissions, by Substance, in Broward County, Florida: 2009–2012

Primary Treatment Substance	2009	2010	2011	2012
Alcohol	1,254	1,142	1,302	1,360
Crack Cocaine	610	424	432	472
Powder Cocaine	159	57	123	135
Heroin	105	156	169	292
Rx Opioids	336	1,118	1,459	1,260
Marijuana	2,030	1,689	1,949	1,748
Methamphetamine	20	34	12	16
Amphetamine	6	2	8	8
MDMA	0	5	7	4
PCP	0	0	0	0
Benzodiazepine	47	101	140	93
All Other Drugs	689	37	219	47
Substance Unknown	422	304	178	430
Total Admissions	5,678	5,069	5,851	5,865

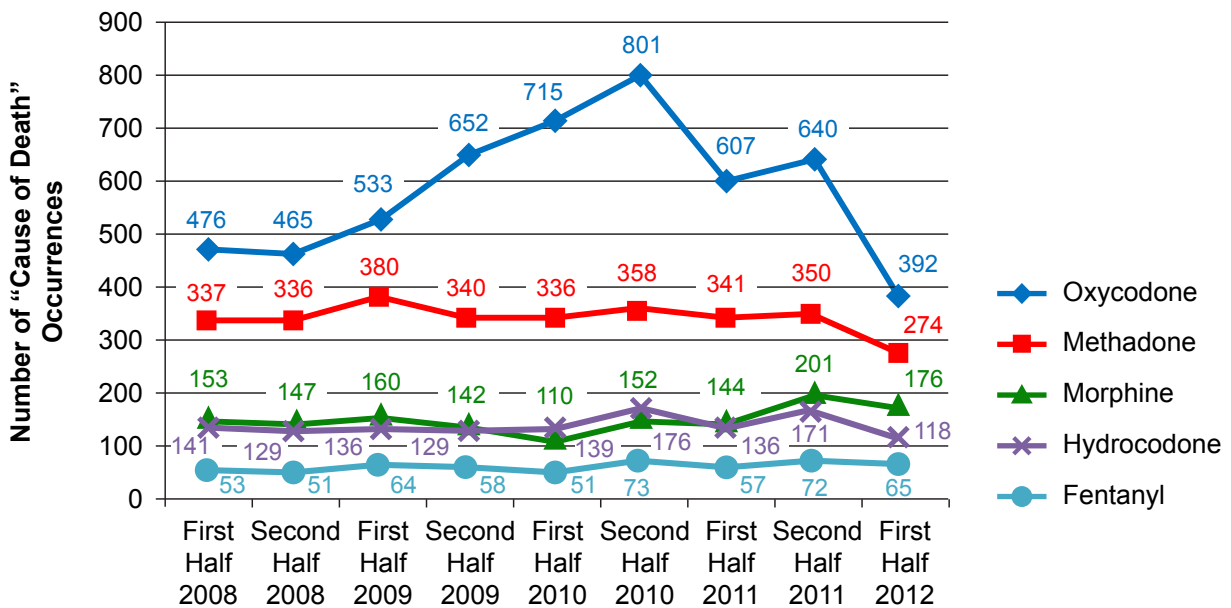
SOURCE: Florida Department of Children and Families, data submitted June 4, 2013

Exhibit 5. Top 10 Most Frequently Identified Reports Among Drug Items Analyzed, by Number, Percentage, and Percentage Change From 2011, Miami-Dade, Broward, and Palm Beach Counties, Florida: 2012¹

Drug	2012 Number	2012 Percentage	Percentage Change From 2011
Cocaine	11,411	48.2	Down 16 %
Marijuana/Cannabis	5,388	22.8	Up 8 %
Rx Opioids	975	4.1	Down 31 %
Rx Benzodiazepines	882	3.7	Down 16 %
Heroin	696	2.9	Up 21 %
Hallucinogen	524	2.2	Up 16 %
Methylone (N-Methyl-3,4-Methylenedioxycathinone)	388	1.6	Up 1500 %
Phenylimidothiazole Iso Undetermed	246	1.0	Down 9 %
Caffeine	237	1.0	Down 17 %
Methamphetamine	170	0.7	Up 17 %
All Other Analyzed Drugs	2,754	11.6	Up 5 %
Total	23,671	100.0	

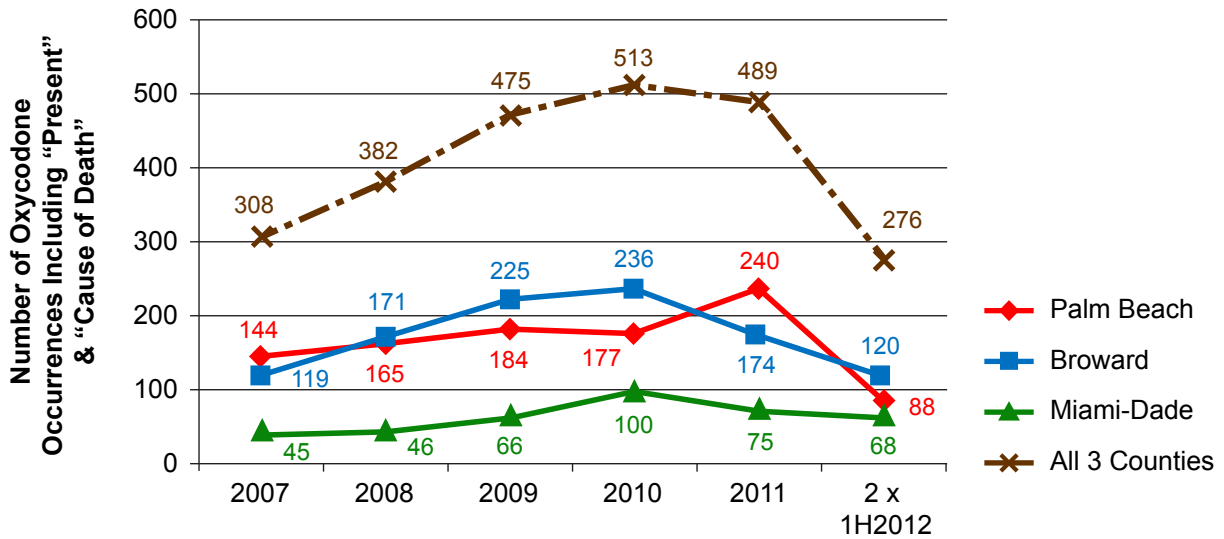
¹Data are for January–December 2012 and include primary, secondary, and tertiary reports.
SOURCE: NFLIS, DEA, data retrieved May 7, 2013

Exhibit 6. Number of Lethal Prescription Opioid Occurrences Among Deceased Persons Living in Florida: January 2008–June 2012



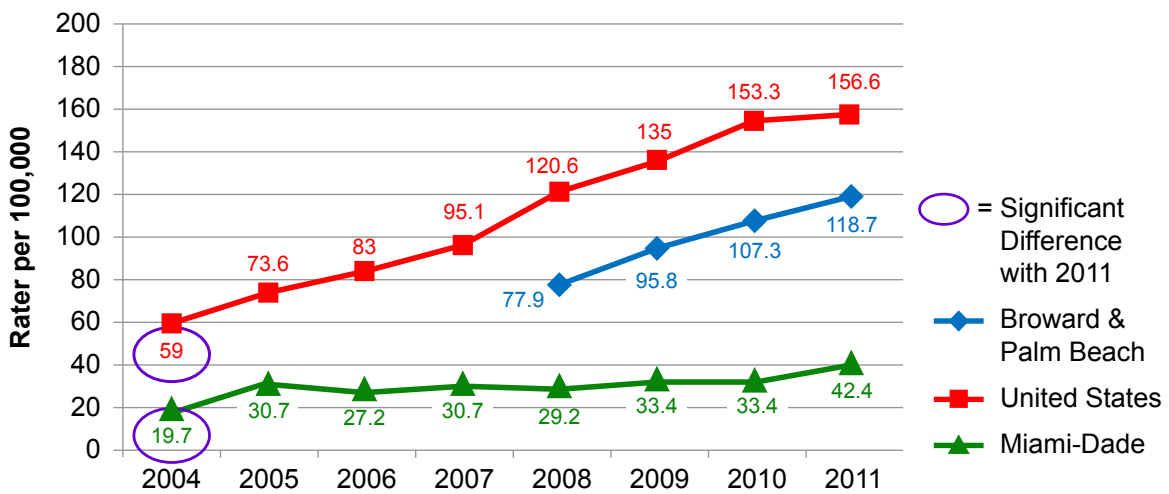
SOURCE: *Drugs Identified in Deceased Persons by Florida Medical Examiners, January 2007–June 2012 Reports*

Exhibit 7. Number of Oxycodone Reports Detected Among Decedents in South Florida: 2007–June 2012



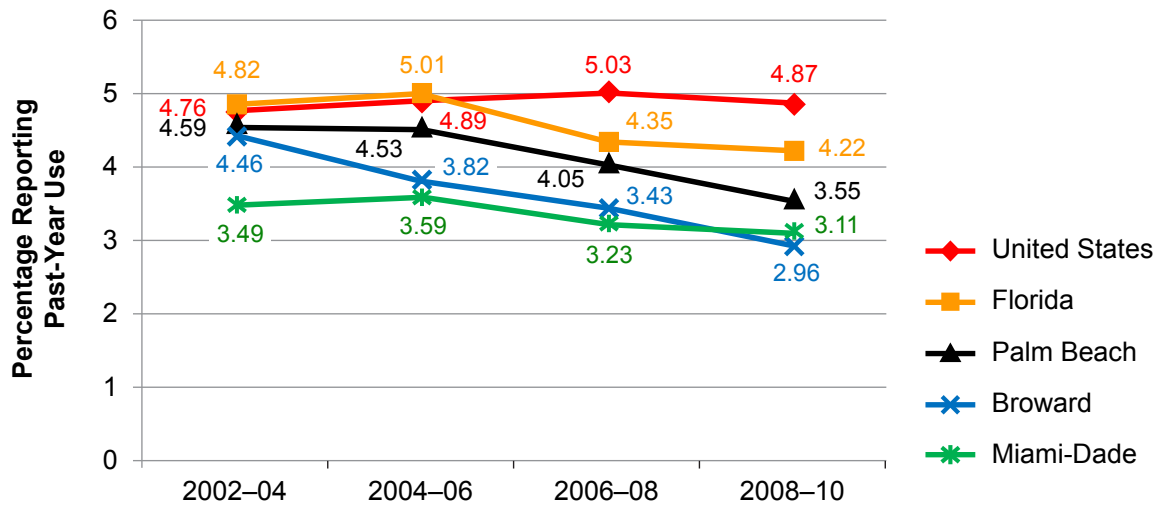
SOURCE: Florida Medical Examiners Commission Interim Report, 2012

Exhibit 8. Rates of Nonmedical Use of Prescription Opioid-Involved Emergency Department Visits, per 100,000 Population, in Miami-Dade, Broward, and Palm Beach Counties and the United States: 2004–2011



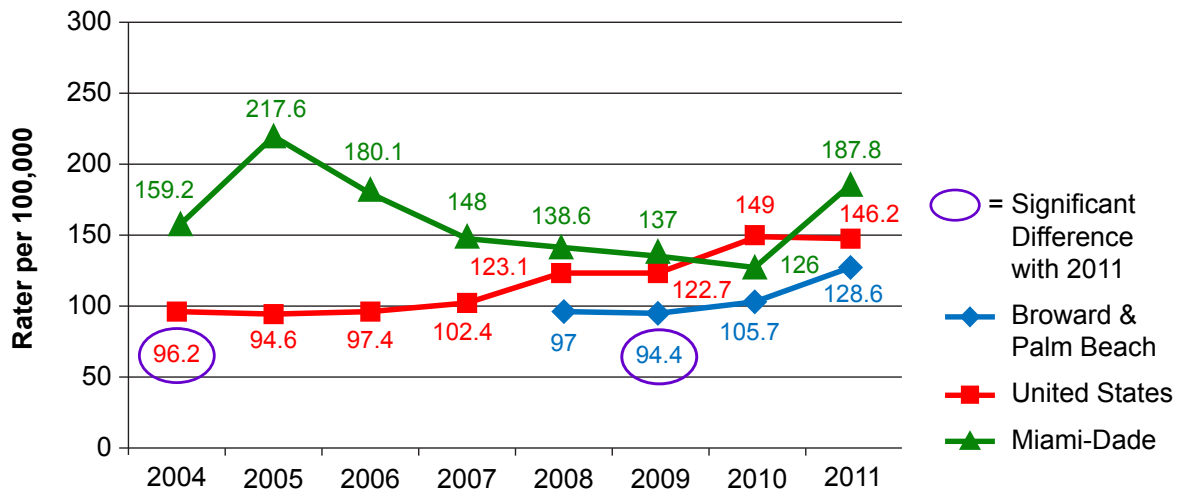
SOURCE: DAWN, CHBSQ, SAMHSA

Exhibit 9. Percentage of People Age 12 and Older Reporting Nonmedical Use of Prescription Pain Relievers in the Past Year in Miami-Dade, Broward, and Palm Beach Counties, Florida, and the United States: 2002–2011



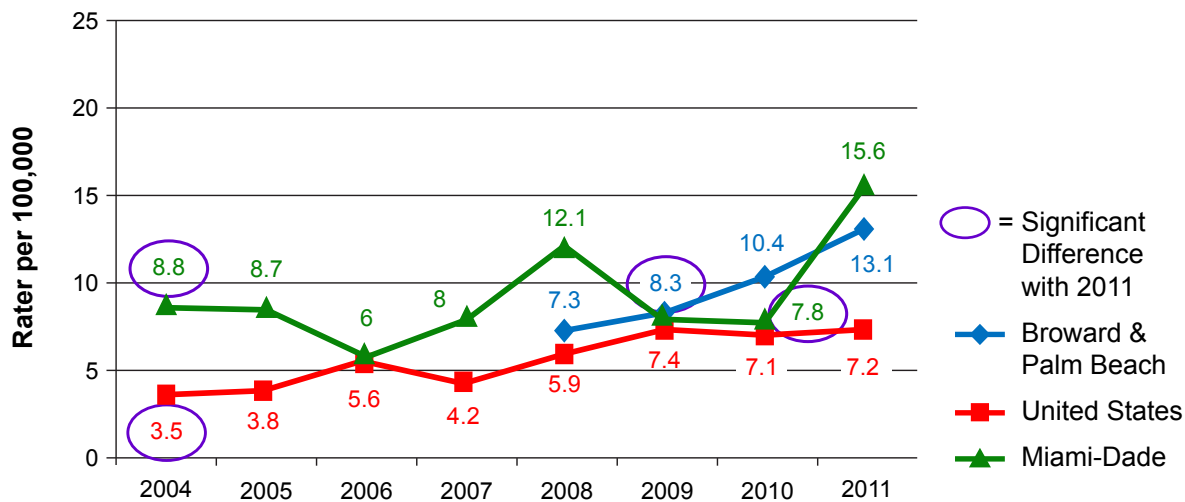
SOURCE: NSDUH, SAMHSA

Exhibit 10. Rates of Marijuana-Involved Emergency Department Visits, per 100,000 Population, in Miami-Dade, Broward, and Palm Beach Counties and the United States: 2004–2011



SOURCE: DAWN, CHBSQ, SAMHSA

Exhibit 11. Rates of MDMA-Involved Emergency Department Visits, per 100,000 Population, in Miami-Dade, Broward, and Palm Beach Counties and the United States: 2004–2011



SOURCE: DAWN, CHBSQ, SAMHSA

Exhibit 12. Number of Synthetic Cathinone Crime Laboratory Reports in Miami-Dade, Broward, and Palm Beach Counties: 2011 and 2012

Synthetic Cathinones	2011	2012
Methylone	27	388
4-MEC	3	36
3,4-METHYLENEDIOXYDIMETHYLCATHINONE	0	2
MDPV	32	58
Mephedrone	12	2
TOTAL	74	496¹

¹This total includes two reports for alpha-PVP and fluoromethcathinone and six reports for butylone.
SOURCE: NFLIS, DEA, retrieved on May 8, 2012 and May 7, 2013

Exhibit 13. Number of Crime Laboratory Reports for Other New Drugs in Miami-Dade, Broward, and Palm Beach Counties: 2011 and 2012

OTHER EMERGING PSYCHOACTIVE SUBSTANCES	2011	2012
BZP	130	113
5-MEO-DIPT	133	89
TFMPP	83	86
DMT	6	4
2C-B	2	2
4-METHOXYMETHAMPHETAMINE	0	2
5-MEO-MIPT	0	2
MMDA	0	1
ALPHA-METHYLTRYPTAMINE	0	1
TRYPTAMINE	0	1
TOTAL	354	301

SOURCE: NFLIS, DEA, retrieved on May 8, 2012 and May 7, 2013

Exhibit 14. Percentage of Addiction Treatment Clients Reporting Injecting Drug Use at Admission, Miami-Dade and Broward Counties, Florida: 2012

Treatment Primary Drug	Miami-Dade Percentage	Broward Percentage
Prescription Opioid	22	58
Heroin	85	90
Methamphetamine	18	25

SOURCE: Florida Department of Children and Families

Drug Abuse Trends in Minneapolis/ St. Paul, Minnesota: June 2013

Carol Falkowski, B.A.¹

ABSTRACT

The two key findings in the Minneapolis/St. Paul area in this reporting period were the increases in indicators for heroin and methamphetamine. Heroin and prescription opiates dominated the drug abuse situation in the Minneapolis/St. Paul metropolitan area in 2012. From 2011 to 2012, opiate-related deaths increased in Ramsey County (from n=36 to n=45) but remained stable in Hennepin County (n=84). Heroin-involved visits at hospital emergency departments (EDs) nearly tripled from 2004 to 2011 (from n=1,189 to n=3,493), and they rose by 54.8 percent from 2010 to 2011 alone. ED visits involving prescription narcotic analgesics more than doubled from 2004 to 2011 (from n=1,940 to n=4,836), a 149.3-percent increase. From 2011 to 2012 in the metropolitan area, the number of heroin primary treatment admissions increased by 20.9 percent, while primary treatment admissions for other opiates fell slightly (by 6.5 percent). Admissions to addiction treatment programs for heroin accounted for 12.9 percent of all admissions to treatment in 2012, compared with 10.7 percent in 2011. Among these, 41.6 percent were individuals age 18–25. Treatment admissions for other opiates accounted for 9.5 percent of total admissions in 2011 and 9.0 percent in 2012. Still, combining these, one in five treatment admissions (21.9 percent) were for heroin or other opiates in 2012. Reversing a continuing decline in indicators since 2005, methamphetamine indicators increased in 2012. From 2011 to 2012 methamphetamine-related deaths increased from 7 to 14 in Hennepin County and from 3 to 7 in Ramsey County. Methamphetamine-related hospital ED visits increased by 58.8 percent from 2009 to 2011, and proportions of primary methamphetamine treatment admissions increased from 2011 to 2012. Cocaine-related deaths and treatment admissions continued to decline. The use of synthetic THC (tetrahydrocannabinol) products (cannabimimetics) and “bath salts” (substituted cathinones) continued. From 2011 to 2012, reported exposures to the Hennepin Regional Poison Center involving THC homologs increased from 149 to 157, while substituted cathinone exposures decreased from 144 to 87.

INTRODUCTION

This report analyzes current and emerging trends in substance abuse 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 21 U.S. metropolitan areas.

¹The author is an Epidemiology Specialist with Drug Abuse Dialogues.

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, roughly one-half of Minnesota's 5.3 million population.

Regarding race/ethnicity, 80.1 percent of the Minneapolis/St. Paul metropolitan area population is White. African-Americans constitute the largest minority group (9.1 percent), with Asians accounting for 6.1 percent, American Indians constituting 0.7 percent, and Hispanics of all races totaling 6.0 percent. The estimated size of the Twin Cities Somali immigrant population ranges from 30,000 to 60,000. The Hmong population in Minnesota is estimated at 60,000 to 70,000, making it one of the largest Hmong communities in the country.

Minnesota shares a northern, international border with Canada. To the west, Minnesota borders North Dakota and South Dakota, two of the country's most sparsely populated States, with less than 1 million residents each.

Illicit drugs are distributed and sold by Mexican drug trafficking organizations, street gangs, independent entrepreneurs, and other criminal organizations. Drugs concealed in private or commercial vehicles are typically shipped or transported into the Twin Cities area for further distribution throughout the State. Interstate Highway 35 starts in Minnesota at the United States–Canadian border and runs south all the way to the United States–Mexican border.

According to the most recent data from the Behavioral Risk Factor Surveillance System, 63.6 percent of Minnesotans used alcohol in the past month, compared with 57.1 percent nationally, and 22.1 percent reported binge drinking, compared with 18.3 percent nationally. (Binge drinking is defined as four or more drinks on one occasion for females and five for or more for males.) According to the most recent National Survey on Drug Use and Health, 6.97 percent of Minnesota residents reported using illicit drugs in the past month, compared with 8.82 percent nationally.

Data Sources

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

- **Survey data** are from two sources: the Behavioral Risk Factor Surveillance System Survey Data 2011, U.S. Centers for Disease Control and Prevention, and the National Survey on Drug Use and Health, Substance Abuse and Mental Health Services Administration, State Estimates from the National Survey on Drug Use and Health: 2009–2010.
- **Mortality data** on drug-related deaths are from the Ramsey County Medical Examiner and the Hennepin County Medical Examiner (through December 2012). Hennepin County cases include accidental overdose 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 overdose deaths in which drug toxicity or mixed drug toxicity was the cause of death.

- **Hospital emergency department (ED) data** are from the Drug Abuse Warning Network, Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, accessed 9/12/2012. These weighted estimates of ED visits are based on a representative sample of non-Federal, general, short-stay hospitals with 24-hour EDs in the 11-county Minneapolis/St. Paul/Bloomington, Minnesota-Wisconsin Metropolitan Statistical Area (MSA) (through December 2011).
- **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 2012).
- **Data on human exposures** to various substances are reported from the Hennepin Regional Poison Center (through April 2013).
- **Crime laboratory data** are from the National Forensic Laboratory Information System (NFLIS), U.S. Drug Enforcement Administration (DEA), queried on May 7, 2013, according to location of seizure. All Federal, State, and local laboratory data are included in the total number of drug reports of items seized as primary, secondary, or tertiary drugs in the seven-county metropolitan area, including the counties of Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington in 2012. St. Paul crime laboratory data were not reported after May 2012.
- **Arrestee drug use data** are from the Arrestee Drug Abuse Monitoring Program conducted by the Office of National Drug Control Policy of the Executive Office of the President. Hennepin County participated in this program through 2011. Arrestees are sampled to represent all adult male arrestees who are booked in each 24-hour period over 1 consecutive 21-day data collection period. Data are statistically annualized to represent the entire year.
- **Drug seizure and arrest data** are from the multijurisdictional drug and violent crime task forces that operate throughout the State, compiled by the Office of Justice Programs, Minnesota Department of Public Safety (through 2012). As of January 2012, there were 23 drug and violent crime task forces operating throughout Minnesota, staffed by more than 200 investigators from more than 120 agencies.
- **Prescription drug data** are from the Minnesota Prescription Monitoring Program, Minnesota Board of Pharmacy. In April 2013, 566,453 prescriptions were dispensed and reported to the Minnesota Prescription Monitoring Program. As of March 2013, roughly 30 percent of Minnesota prescribers were enrolled in this system.
- **Data on hepatitis C virus (HCV) and human immunodeficiency virus (HIV) infection** are from the Minnesota Department of Health (through 2012).
- **Heroin price and purity data** are from the DEA's Heroin Domestic Monitoring Program (HDMP), through 2009.
- **Additional information** is from interviews with addiction treatment providers, narcotics agents, and school-based drug specialists (ongoing).

DRUG ABUSE PATTERNS AND TRENDS

Cocaine

Most indicators related to cocaine have fallen continuously in the Twin Cities area over the past several years. Cocaine-related deaths declined in both major metropolitan counties in 2012 (exhibit 1). In Ramsey County, there were three cocaine-related deaths in 2012, compared with six in 2011. All were White males, and the average age was 42.3. In Hennepin County, there were 18 cocaine-related deaths in 2012, compared with 28 in 2011 and 59 in 2007. Three listed cocaine toxicity as the cause of death, and 15 listed recent cocaine use as a significant condition contributing to the death. Nine decedents were African-American; seven were White (including one stillborn); and two were Hispanic. The ages ranged from 20 to 60, with an average age of 41.6.

Cocaine-involved visits at Twin Cities hospital EDs declined by 36.7 percent from 2006 to 2011, although they rose slightly in number from 4,141 in 2010 to 4,279 in 2011 (exhibit 2). None of these trends were statistically significant.

Cocaine-related treatment admissions declined as well, dropping by 52.5 percent from 2007 to 2012 (exhibit 3). Cocaine was the primary substance problem for 5.2 percent of total treatment admissions in 2012 and 2011 (exhibit 4), compared with 14.1 percent of admissions in 2006. Most cocaine-related treatment admissions in 2012 (74 percent) were for crack cocaine (exhibit 5). One-half (50.6 percent) were African-American, and 34.1 percent were White. Females accounted for 41.8 percent, and almost three-quarters (72.4 percent) were age 35 and older.

Cocaine was present in 17.9 percent of the drug reports among items analyzed by NFLIS laboratories in 2012 (exhibit 6). Gangs remained 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; an ounce ranged from \$1,200 to \$1,700; and a kilogram cost \$35,000–\$45,000. As was the case in other U.S. cities, the age of arrestees who tested positive for cocaine in Hennepin County increased from 2000 to 2011 (exhibit 7).

Heroin and Other Opiates

Measurable, adverse consequences related to heroin and other opiate addiction in the Twin Cities increased over the past decade. Most quantitative indicators remained at heightened levels.

From 2011 to 2012, opiate-related deaths increased in Ramsey County and were stable in Hennepin County (exhibit 1). Of the 84 opiate-related decedents in Hennepin County in 2012, 67.8 percent were White; 17.8 percent were African-American; 13 percent were American Indian; and 1.1 percent were Hispanic. The decedents ranged in age from 18 to 73, with an average age of 42.5. At least 28 cases involved heroin (33.3 percent); 15 involved cocaine used in combination with an opiate (17.8 percent); 13 involved methadone (15.5 percent); 4 involved oxycodone; 6 involved fentanyl; and 2 involved the use of methamphetamine in combination with an opiate.

From 2011 to 2012, opiate-related deaths in Ramsey County increased from 36 to a record-high 45, a 25-percent increase. Of these 45 decedents, 77.8 percent were White; 15.5 percent were African-American; and 6.6 percent were Hispanic. They ranged in age from 14 to 76, with an average age of 42.9. One-quarter of the cases (26.7 percent) involved methadone; 24 percent involved cocaine

used in combination with opiates; 22.5 percent involved oxycodone; 15.5 percent involved heroin; and one case involved fentanyl.

Heroin-involved hospital ED visits nearly tripled from 2004 to 2011 (from 1,189 to 3,493), growing 54.8 percent from 2010 to 2011 alone (exhibit 2). ED visits for prescription opioids grew as well. Most notably visits for “unspecified opioids/opiates” increased tenfold from 2004 ($n=162$) to 2011 ($n=1,619$), and those for “total narcotic analgesics” more than doubled from 1,940 in 2004 to 4,836 in 2011 (a 149-percent statistically significant increase). From 2009 to 2011, those involving “unspecified opioids/opiates” increased by 96 percent, and visits for “total narcotic analgesics” increased by 24 percent.

Methadone-involved hospital ED visits nearly doubled from 2004 to 2011 (from $n=437$ to $n=893$ visits, an 89-percent increase). Similarly, hydrocodone/combinations increased by 86 percent from 2004 to 2011. Hospital ED visits involving oxycodone/combinations grew by 259 percent from 2004 to 2011, and by 32 percent from 2009 to 2011 (exhibit 2).

From 2011 to 2012, heroin treatment admissions increased by 20.9 percent, while treatment admissions for other opiates (prescription pain medications and opium) fell by 6.5 percent (exhibit 3). Addiction treatment admissions for heroin and other opiates combined accounted for 21.9 percent of all treatment admissions in the Twin Cities in 2012, second only to alcohol admissions (exhibit 4).

Heroin accounted for 12.9 percent of admissions to addiction treatment programs in 2012, compared with 10.7 percent in 2011, 7.8 percent in 2010, and 3.3 percent in 2000. Anecdotally, many of these young patients entering treatment reported initially using prescription opiates and eventually progressing to heroin addiction. Of the 2,724 heroin admissions in 2012, 41.6 percent were age 18–25, compared with 34.9 percent in 2010 (exhibit 5). Very few (1.5 percent) were younger than 18. Whites accounted for 66.1 percent; African-Americans constituted 20.7 percent; and American Indians represented 6.1 percent. Injection was the most common route of administration (60.6 percent).

“Other opiates” include prescription narcotic analgesics, opium, and all opiates other than heroin. Other opiates were the primary substance problem reported by 1,879 admissions in 2012, representing 9.0 percent of total treatment admissions. This compares with 9.5 percent in 2011, 8.4 percent in 2010, and 1.4 percent in 2000. Of these admissions, almost one-half were female (47.8 percent) (exhibit 5). More than one-quarter (26.2 percent) were age 18–25, and 2.7 percent were younger than 18. Whites accounted for 77.9 percent, followed by American Indians (8.3 percent) and African-Americans and Hispanics (both 4.1 percent). Oral was the most common route of administration (65.4 percent), followed by snorting (15.4 percent) and injection (11.1 percent).

From 2011 to 2012, heroin exposures reported to the Hennepin Regional Poison Center grew from 78 to 127, a 62.8-percent increase. Hydrocodone exposures increased by 8.8 percent, and oxycodone exposures grew by 10.6 percent from 2011 to 2012 (exhibit 8).

All levels of law enforcement in the metropolitan area and statewide reported increased activities focused on heroin in 2012. Minnesota multijurisdictional drug and violent crime task forces seized 588.1 percent more heroin and 51.6 percent less oxycodone in 2012 than in 2011. From 2011 to 2012, heroin arrests by these task forces rose from 206 to 482, a 133.9-percent increase (exhibit

9). Heroin was present among 10.2 percent of the drug reports of items analyzed by NFLIS in 2012, and oxycodone was detected in 2.0 percent (exhibit 6).

The proportion of arrestees age 18–24 who tested positive for opiates grew from 13 percent in 2000–2003 to 34 percent in 2010–2012 (exhibit 7).

Hydrocodone with acetaminophen was the most frequently prescribed drug reported on the Minnesota Prescription Monitoring Program in April 2013 (exhibit 10). It accounted for 22 percent of all prescriptions, compared with 8.9 percent for oxycodone with acetaminophen and 7.1 percent for oxycodone hydrochloride.

Mexico and, to a lesser extent, South America were the primary sources of heroin in the Twin Cities and Minnesota. This includes both black tar heroin and the brownish-colored heroin powder. Mexican heroin typically cost \$20 per dosage unit and \$100 per gram. An “eight-ball” (1/8 of an ounce) cost roughly \$400. The DEA’s HDMP in 2009 found that the purity of Mexican heroin in Minneapolis was among the highest in the country (53 percent), and it sold at the lowest cost (\$0.25 per pure milligram).

Opium smoking within the Twin Cities’ Hmong community remained an ongoing concern. The opium is typically concealed in various packages, some of which are intercepted by U.S. Customs and Border Protection as they arrive in the Twin Cities after being shipped from Asia.

Methamphetamine and Other Stimulants

Methamphetamine and Amphetamine

In both metropolitan counties, methamphetamine-related deaths doubled from 2011 to 2012 (exhibit 1). In Ramsey County, there were seven methamphetamine-related deaths in 2012, compared with three in 2011. These included five White males, one White female, and one African-American male. The ages ranged from 36 to 53, with an average age of 46.7. In Hennepin County, there were 14 methamphetamine-related deaths in 2012, compared with 7 in 2011. Nine listed methamphetamine toxicity as the cause of death, and five involved recent methamphetamine use as a significant condition contributing to the death. These decedents included a stillborn, nine Whites, two African-Americans, and two American Indians. The ages ranged from 23 to 60, with an average age of 41.1.

Methamphetamine-involved hospital ED visits numbered 1,741 in 2004, 970 visits in 2009, 1,660 visits in 2010, and 1,541 visits in 2011 (exhibit 2). The 59-percent increase from 2009 to 2011 was statistically significant. Amphetamine-related hospital ED visits grew from 255 in 2004 to 644 in 2011, a 153-percent increase.

Methamphetamine-related treatment admissions accounted for 6.4 percent of total admissions in both 2010 and 2011. In 2012, they rose to 7.4 percent (exhibit 4). Of these 1,562 admissions in 2012, 37.1 percent were female; 80.9 percent were White; 5.3 percent were Hispanic; and 4.5 percent were Asian (exhibit 5). Smoking was the most common route of administration (66.2 percent). Only 1.2 percent were younger than 18, and 23.2 percent were between the ages of 18 and 25.

Methamphetamine was present in 22.6 percent of drug reports of items analyzed by NFLIS laboratories in 2012 (exhibit 6). Methamphetamine cost \$20 per dosage unit and ranged in price as follows: \$80–\$150 per gram, \$1,000–\$1,400 per ounce, and \$13,000–\$15,000 per pound. Statewide, Minnesota drug and violent crime task forces seized 27 methamphetamine laboratories in 2012.

Other Stimulants

Other stimulants of abuse include:

- 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.
- Methylphenidate (Ritalin®), a prescription medication used in the treatment of attention deficit hyperactive disorder, is also abused nonmedically to increase alertness and suppress appetite, often by 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.” In April 2013, 5.9 percent of prescriptions reported to the Minnesota Prescription Monitoring Program were for methylphenidate, and 9.0 percent were for amphetamines (exhibit 10).
- MDMA (3,4-methylenedioxymethamphetamine), also known as ecstasy, “X,” or “e,” sold for \$20 per pill. MDMA has stimulant and hallucinogenic properties. It produces feelings of energy and euphoria in users, but it can adversely heighten body temperature and precipitate feelings of confusion and agitation. There were 19 exposures involving MDMA reported to the Hennepin Regional Poison Center in 2012 and 8 through April 2013 (exhibit 8).
- “Molly” (slang for “molecular”) refers to the pure crystalline powder form of the drug MDMA. The Hennepin Regional Poison Center received six reports of Molly exposures from January through April 2013 and none in 2012.

Marijuana

Marijuana-involved visits at hospital EDs numbered 4,455 in 2004, 5,596 in 2009, 6,794 in 2010, and 6,627 in 2011 (exhibit 2). The 18-percent increase from 2009 to 2011 was statistically significant.

In 2012, marijuana was the primary substance problem for 16.3 percent of total treatment admissions, compared with 16.6 percent in 2011 (exhibit 4). Of these, 32.3 percent were younger than 18; 36.8 percent were age 18–25; and only 12.8 percent were 35 and older (exhibit 5). More than one-half (54.2 percent) were White; 28.4 percent were African-American; 6.7 percent were Hispanic; and 2.9 percent were American Indian. Females accounted for 22.4 percent, the lowest percentage of female admissions in any drug category.

Marijuana/cannabis was present in 17.8 percent of drug reports of items analyzed by NFLIS laboratories in 2012 (exhibit 6). Marijuana sold for \$5 per joint and for up to \$225 per ounce. The cost of standard grade Mexican marijuana ranged from \$600 to \$1,000 per pound, and “BC Bud” cost \$3,400–\$4,200 per pound. The drug and violent crime task forces operating throughout the State

reported a substantial increase in the number of wild marijuana plants seized in 2012 (exhibit 11). Arrests for marijuana cultivation fell from 57 in 2011 to 49 in 2012.

Synthetic cannabinoids (cannabimimetics) refer to dried herbal mixtures that have been sprayed with synthetically produced chemicals that when smoked mimic the effects of THC (tetrahydrocannabinol), the active ingredient in plant marijuana. They are sold as “herbal incense,” with a warning “not for human consumption.” Although many such products are illegal to sell or possess under State and Federal laws, they continue to be sold online and at retail outlets under many names, such as “K2,” “Spice,” “Smoke XXXX,” “Stairway to Heaven,” or “California Dreams.” The Hennepin Regional Poison Center reported 149 THC homolog exposures in 2011, 157 in 2012, and 30 in 2013 through April (exhibit 8). From 2010 to 2011, hospital ED visits for synthetic cannabinoids rose from 170 to 418, an increase of 147 percent (exhibit 2).

Hallucinogens and Emerging Synthetic Drugs

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 37 LSD exposures in 2012 and 10 in 2013 through April.

Other emerging synthetic drugs include the following:

- Substituted cathinones are sold as so-called “bath salts” online and in “head shops” and are consumed to produce effects similar to those of illegal drugs, such as cocaine or MDMA. The Hennepin Regional Poison Center reported 144 bath salt exposures in 2011, 87 in 2012, and 16 in 2013 through April (exhibit 8). 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). These are sold under names such as “Vanilla Sky,” “Bliss,” and “Ivory Wave.” Mephedrone by itself is also known as “Meow Meow,” “M-CAT,” “Bubbles,” or “Mad Cow.” Because the actual ingredients are unknown, the effects are unpredictable and can include agitation, paranoid delusions, and extreme psychosis.
- Exposures to the 2C-E phenethylamines and related analogs reported to the Hennepin Regional Poison Center numbered 23 in 2011, 24 in 2012, and 9 in 2013 through April. Sold online as a “research drug” that is “not intended for human consumption,” the chemical compound known as 2C-E (2,5-dimethoxy-4-ethylphenylethylamine) was intentionally consumed by a group of young people at a party in suburban Blaine, Minnesota, in March 2011, who were seeking effects similar to the stimulant drug MDMA or “ecstasy.” All 11 users experienced profound hallucinations, became distressed, and sought hospital emergency department services. One 19-year-old male was pronounced dead at the hospital. The person who provided the substance was eventually convicted of third degree murder and sentenced to 10 years in prison.
- The chemical compound BZP (1-benzylpiperazine) was present in 1.6 percent of drug reports from items analyzed by the National Forensic Laboratory Information System in 2012 (exhibit 6). It is abused for its amphetamine-like effects.

Alcohol

Roughly one-half (46.5 percent) of total admissions to addiction treatment programs reported alcohol as the primary substance problem in 2012 (exhibit 5). Of these 9,798 patients, more than one-half (57.3 percent) were 35 and older; 73.2 percent were White; 14.6 percent were African-American; and 4.1 percent were of Hispanic origin.

INFECTIOUS DISEASES RELATED TO DRUG ABUSE

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 chronic disease. 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, 2012, there were 39,303 people living in Minnesota with past or present HCV infection, of which 62 percent resided in the seven-county Twin Cities metropolitan area (exhibit 12). The median age was 55 years. The population-based rate in Minnesota was highest for American Indians, with 2,929 cases per 100,000 population, followed by 2,136 for African-Americans, 425 for Hispanic-origin persons, 383 for Whites, and 362 per 100,00 population for Asian/Pacific Islanders (exhibit 13).

As of December 31, 2012, 7,516 persons residing in Minnesota were known to be living with HIV/AIDS (acquired immunodeficiency syndrome), an increase of 5.3 percent from 2011. Most individuals resided in the seven-county Twin Cities metropolitan area (exhibit 12). Regarding the mode of exposure among these cases, male-to-male sex (MSM) accounted for 67 percent of cases among males; injection drug use accounted for 5 percent; and MSM and injection drug use accounted for 7 percent. Among females, heterosexual contact accounted for 73 percent, and injection drug use accounted for 9 percent (exhibit 14).

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Exhibit 1. Number of Drug-Related Deaths for Select Drugs, by County, Minneapolis/St. Paul: 2006–2012

	2006	2007	2008	2009	2010	2011	2012
HENNEPIN COUNTY							
Methamphetamine	8	6	9	6	9	7	14
Cocaine	48	59	21	10	25	28	18
Opiates	69	67	84	77	65	84	84
RAMSEY COUNTY							
Methamphetamine	6	7	5	7	4	3	7
Cocaine	13	11	10	11	7	6	3
Opiates	27	39	31	36	27	36	45

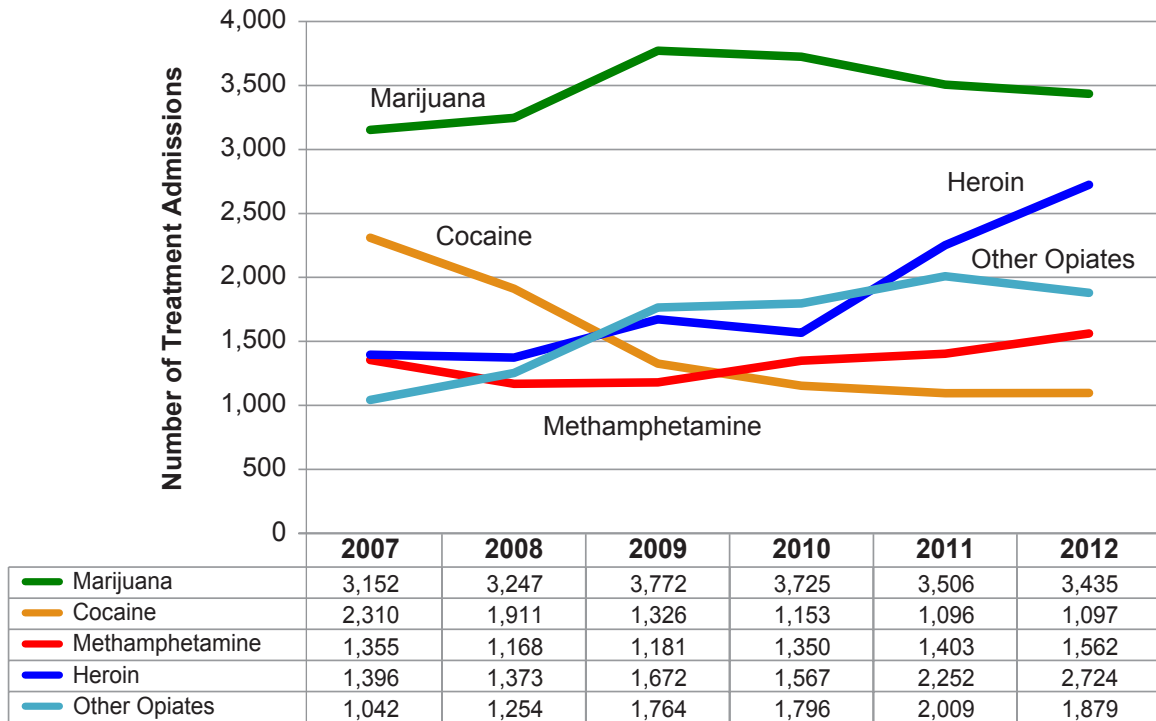
SOURCE: Hennepin County and Ramsey County Medical Examiners, 2013

Exhibit 2. Estimates of Numbers of Drug-Involved Emergency Department Visits in the Minneapolis/St. Paul/Bloomington MSA: 2004–2011

Drug	2004	2005	2006	2007	2008	2009	2010	2011
Cocaine	6,228	6,076	6,764	5,189	5,390	3,843	4,141	4,279
Heroin	1,189	1,023	1,312	1,691	1,651	1,855	2,256	3,493
Marijuana	4,455	4,468	4,302	5,757	5,617	5,596	6,794	6,627
Synthetic Cannabinoids	—	—	—	—	—	—	170	418
Amphetamines	255	388	278	335	361	230	361	644
Methamphetamine	1,741	2,209	1,120	1,103	1,001	970	1,660	1,541
MDMA (Ecstasy)	204	254	252	433	485	475	362	397
PCP	—	69	132	—	—	80	—	—
Miscellaneous Hallucinogens	123	68	—	142	134	115	138	153
Inhalants	183	128	—	80	100	92	126	—
Opiates/Opioids, Unspecified	162	282	495	559	1,052	826	1,150	1,619
Total Narcotic Analgesics	1,940	1,872	2,491	3,391	3,905	3,890	4,697	4,836
Hydrocodone/Combinations	562	506	625	985	1,016	1,019	1,092	1,044
Hydromorphone/Combinations	—	87	115	142	252	256	297	284
Methadone	437	430	547	643	794	757	893	828
Morphine/Combinations	108	120	193	272	265	288	334	413
Oxycodone/Combinations	668	742	954	1,484	1,657	1,810	2,397	2,397

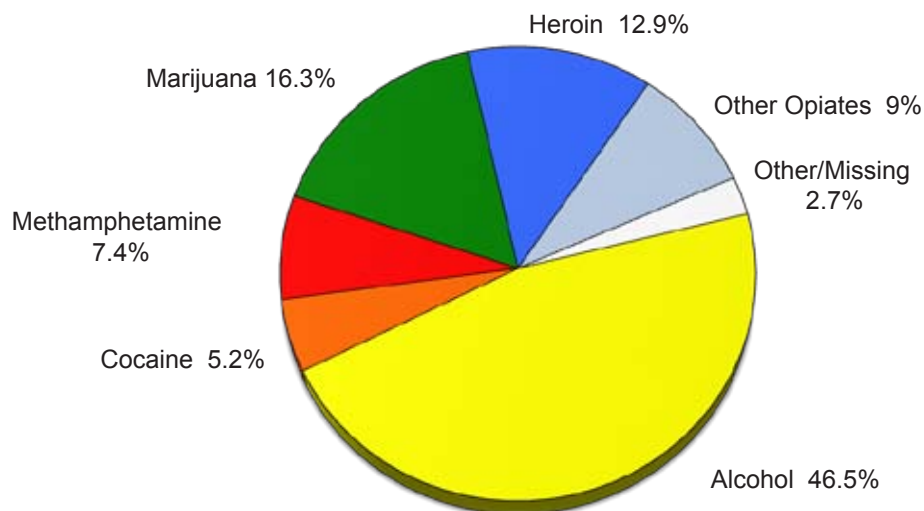
SOURCE: DAWN, CBHSQ, SAMHSA

Exhibit 3. Number of Admissions to Area Addiction Treatment Programs, by Primary Substance Problem (Excluding Alcohol), Minneapolis/St. Paul: 2007–2012



SOURCE: Drug and Alcohol Abuse Normative Evaluation System, Minnesota Department of Human Services, Performance Measurement and Quality Improvement Division, 2013

Exhibit 4. Percentage of Admissions to Area Addiction Treatment Programs, by Primary Substance Problem, Minneapolis/St. Paul: 2012



SOURCE: Drug and Alcohol Abuse Normative Evaluation System, Minnesota Department of Human Services, Performance Measurement and Quality Improvement Division, 2013

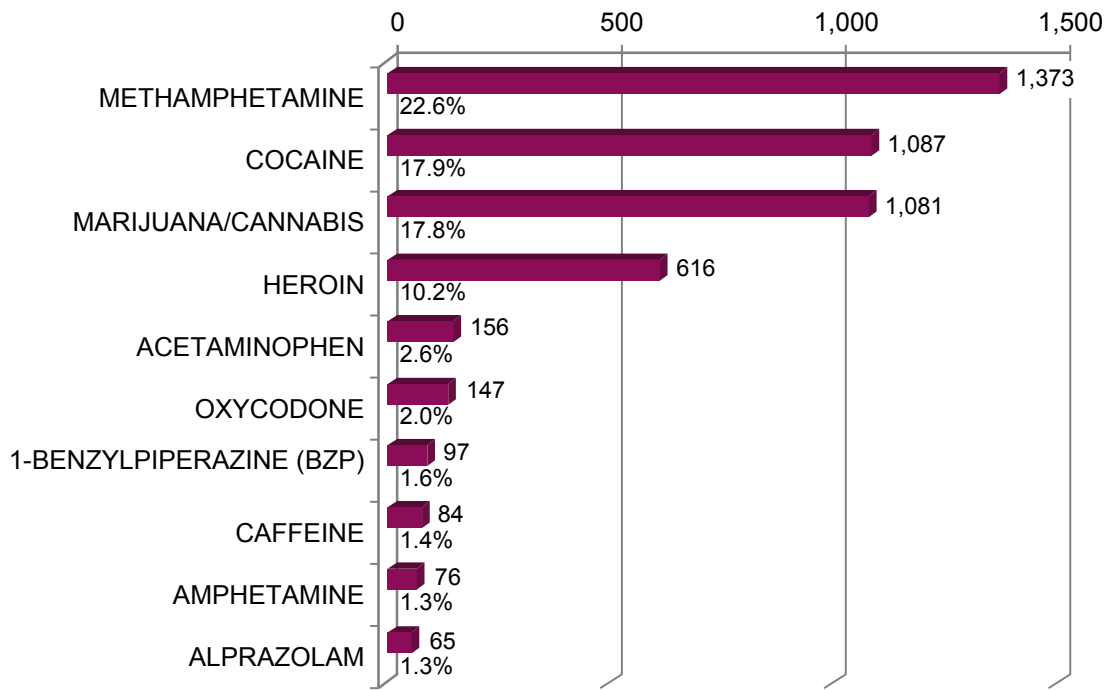
Exhibit 5. Characteristics of Patients Admitted to Addiction Treatment Programs, by Primary Substance Problem and Percentage, Minneapolis/St. Paul: 2012

TOTAL ADMISSIONS 21,051	ALCOHOL 9,798 46.5%	MARIJUANA 3,435 16.3%	COCAINE 1,097 5.2%	METHAMPHET-AMINE 1,562 7.4%	HEROIN 2,724 12.9%	OTHER OPIATES 1,879 9.0%
GENDER						
Male	67.3	77.6	58.2	62.9	64.6	52.2
Female	32.7	22.4	41.8	37.1	35.4	47.8
RACE/ETHNICITY						
White	73.2	54.2	34.1	80.9	66.1	77.9
African-American	14.6	28.4	50.6	2.6	20.7	4.1
American Indian	3.5	2.9	4.5	3.5	6.1	8.3
Hispanic	4.1	6.7	6.4	5.3	3.7	4.1
Asian/Pacific Islander	1.6	1.5	1.3	4.5	1.0	3.1
Other	3.0	6.2	3.2	3.2	2.4	2.4
AGE						
17 and Younger	1.8	32.3	0.9	1.2	1.5	2.7
18–25	16.8	36.8	10.1	23.2	41.6	26.2
26–34	24.1	18.2	16.6	38.7	24.2	32.5
35 and Older	57.3	12.8	72.4	36.8	32.5	38.7
ROUTE OF ADMINISTRATION						
Oral/Multiple	100	2.5	0	3.7	1.0	65.4
Smoking	0	97.1	74.0	66.2	10.3	6.0
Snorting	0	0	22.4	6.9	26.3	15.4
Injection	0	0	1.4	20.6	60.6	11.1
Unknown	0	0.4	2.2	2.7	1.9	2.1

Note: Unknown primary drug=134 (0.6 percent); all other primary drugs=422 (2 percent).

SOURCE: Drug and Alcohol Abuse Normative Evaluation System, Minnesota Department of Human Services, Performance Measurement and Quality Improvement Division, 2013

Exhibit 6. Numbers and Percentages of Top 10 Drug Reports Among Items Seized by Law Enforcement and Analyzed in Forensic Laboratories in the Minneapolis/St. Paul Metropolitan Area: 2012



Note: All other reports=1,285.
SOURCE: NFLIS, DEA

Exhibit 7. Percentage Changes for Male Arrestees Who Tested Positive for Cocaine and Opiates in Minneapolis, Compared with Other U.S. Cities: 2000–2012

Changes in cocaine- and opiate- positive arrestees							
Average Age of Arrestees Testing Positive for Cocaine Metabolites				Percentage of Arrestees 18–24 Testing Positive for Opiates			
ADAM Site	2000–2003	2007–2009	2010–2012	ADAM Site	2000–2003	2007–2009	2010–2012
Atlanta*	35.1	40.8	41.2	Atlanta	25%	14%	23%
Charlotte*	33.4	38.3	37.5	Charlotte	26%	17%	35%
Chicago	36.0	37.2	37.2	Chicago	7%	13%	12%
Denver*	33.6	36.7	38.0	Denver	26%	19%	16%
Indianapolis*	34.3	37.3	37.8	Indianapolis*	13%	33%	30%
Minneapolis*	34.5	37.5	38.7	Minneapolis*	13%	16%	34%
New York*	37.5	39.4	42.7	New York	11%	11%	11%
Portland*	35.3	37.7	37.6	Portland*	18%	22%	27%
Sacramento	37.0	37.4	35.4	Sacramento	20%	19%	30%
Washington, DC*	37.4	44.9	43.7	Washington, DC	5%	3%	3%

Note: The symbol "*" denotes a statistical difference over time.

SOURCE: ADAM, ONDCP, 2012 Highlights (presented by M. Fe Caces at the June 2013 CEWG meeting and used by permission)

Exhibit 8. Number of Exposures to Selected Drugs Reported to Hennepin Regional Poison Center, Minneapolis/St. Paul: 2010–April 2013

	2010	2011	2012	2013 Through April
THC Homologs	28	149	157	30
"Bath Salts" (Substituted Cathinones)	5	144	87	16
2C-E and Analogues	10	23	24	9
MDMA	26	24	19	8
Hydrocodone	621	655	713	207
Oxycodone	580	575	636	193
Heroin	52	78	127	41

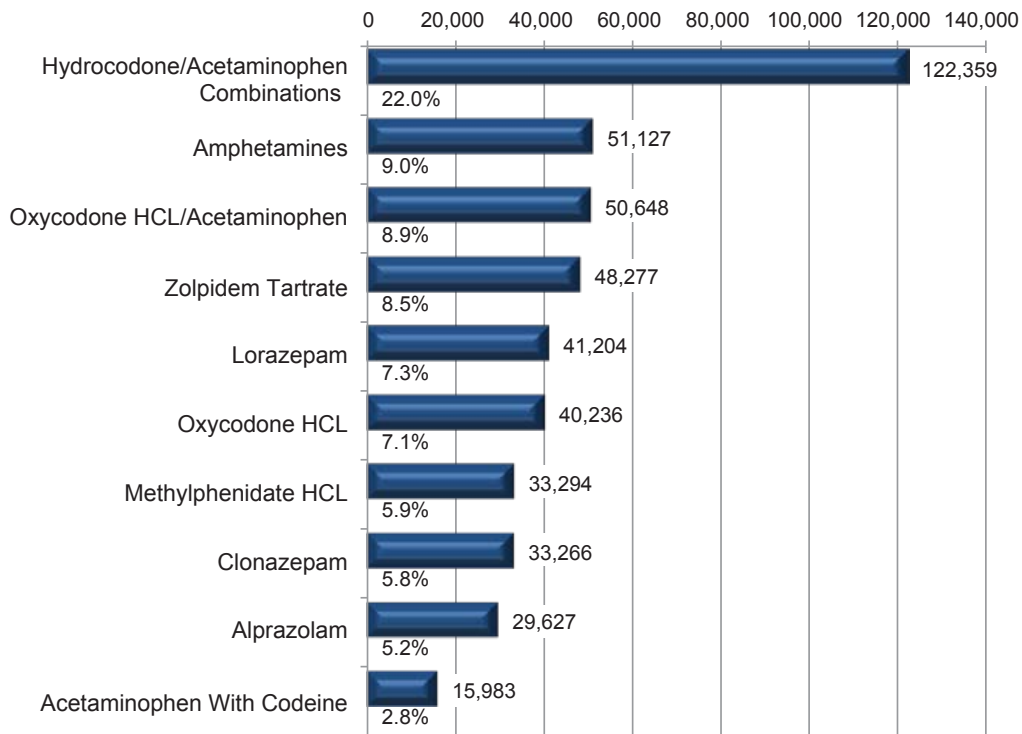
SOURCE: Hennepin Regional Poison Center, Hennepin County Medical Center, 2013

Exhibit 9. Opiate Enforcement Summary of Number of Quantities Seized and Arrests by Minnesota Drug and Violent Crime Task Forces: 2010–2012 and Percentage Change From 2011 to 2012

	2010	2011	2012	% change 2011 to 2012
Heroin Seized (Grams)	228	406	2,794	588.1
Heroin Arrests	108	206	482	133.9
Oxycodone Seized (Dosage Units)	944	3,409	1,649	51.6
Prescription Drugs Seized (Dosage Units)	16,414	10,711	14,254	33.1
Pill Arrests	483	531	577	8.7

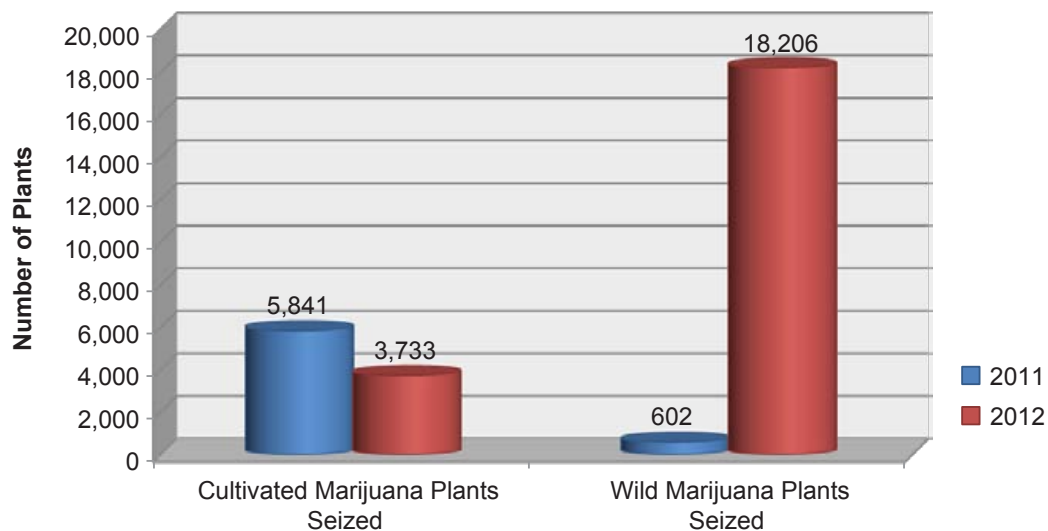
SOURCE: Office of Justice Programs, Minnesota Department of Public Safety, 2013 (unaudited)

Exhibit 10. Top 10 Prescriptions Dispensed, by Number and Percentage of Total Prescriptions¹ in Minnesota: April 2013



¹566,453 prescriptions were dispensed and reported to the Minnesota Prescription Monitoring Program in April 2013.
 SOURCE: Minnesota Prescription Monitoring Program, Minnesota Board of Pharmacy, May 2013

Exhibit 11. Number of Marijuana Plants Seized by the Minnesota Drug and Violent Crime Task Forces: 2011–2012



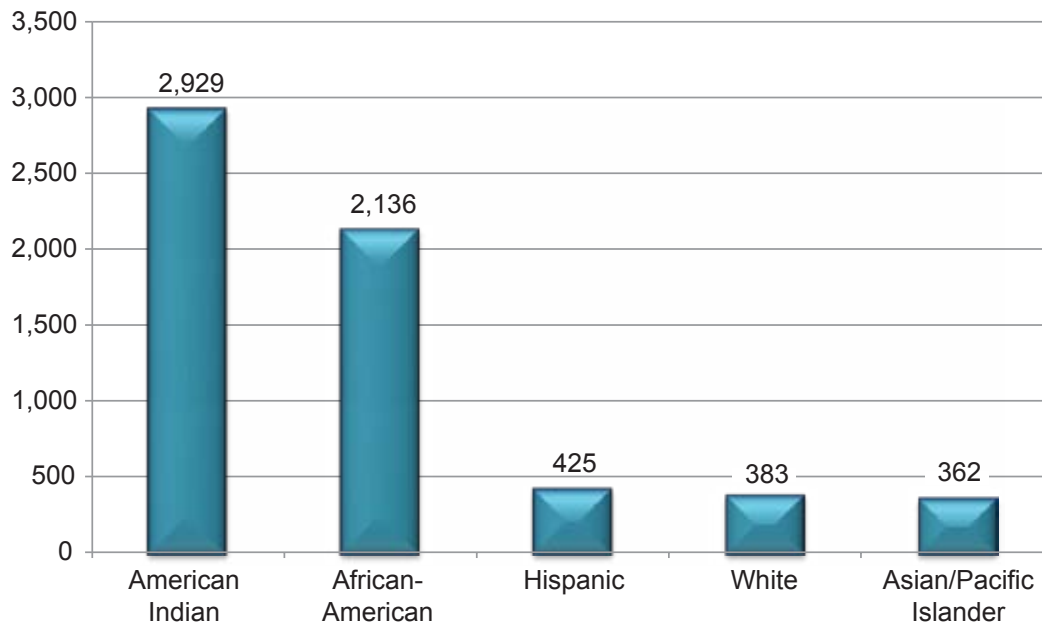
SOURCE: Office of Justice Programs, Minnesota Department of Public Safety, 2013 (unaudited)

Exhibit 12. Number of Persons Living with Hepatitis C (HCV), HIV (non-AIDS), and AIDS, by Area of Residence in Minnesota: 2012

	HCV	HIV	AIDS
St. Paul	11	13	14
Minneapolis	23	40	39
Suburban Metropolitan Area	28	32	32
Rest of State	38	14	15

SOURCE: Minnesota Department of Health

Exhibit 13. Rates Per 100,000 Population of Past or Present HCV, by Race, in Minnesota: 2012



SOURCE: Minnesota Department of Health

Exhibit 14. Number of Persons Living with HIV (non-AIDS) and AIDS, by Gender and Mode of Exposure, and Percentage of Total, in Minnesota: 2012

Mode of Exposure	Males				Females			
	HIV (non-AIDS)	AIDS	Total		HIV (non-AIDS)	AIDS	Total	
			Cases	%			Cases	%
MSM	2,112	1,745	3,857	67%	—	—	—	—
IDU	105	156	261	5%	69	89	158	9%
MSM/IDU	176	206	382	7%	—	—	—	—
Heterosexual (Total)	(91)	(135)	(226)	4%	(711)	(559)	(1270)	73%
with IDU	23	47	70	—	71	85	156	—
with Bisexual Male	—	—	—	—	50	43	93	—
with Hemophiliac/other	2	2	4	—	7	1	8	—
with HIV+	66	86	152	—	262	165	427	—
Heterosexual, unknown risk	0	0	0	—	321	265	586	—
Perinatal	25	17	42	1%	41	10	51	3%
Other	9	20	29	1%	3	2	5	0%
Unspecified	292	329	621	11%	81	55	136	8%
No Interview, Unspecified	180	173	353	6%	79	46	125	7%
Total	2,990	2,781	5,771	100%	984	761	1,745	100%

Notes: MSM=Men who have sex with men. IDU=Injection drug user. Heterosexual=for males, heterosexual contact with a female known to be HIV+, an IDU, or a hemophiliac/blood product or organ transplant recipient. For females, heterosexual contact is with a male known to be HIV+, bisexual, an IDU, or a hemophiliac/blood product or organ transplant recipient. Perinatal=Mother to child HIV transmission. Other=Hemophilia patient/blood product or organ transplant recipient. Unspecified=Cases who did not acknowledge any of the risks listed above. No Interview, Unspecified=Cases who refused to be, could not be or have not yet been interviewed.

SOURCE: Minnesota Department of Health; cases reported as of 12/31/2012 assumed to be alive and currently residing in Minnesota

Drug Use Trends in New York City: 2012

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ABSTRACT

This report describes drug patterns and trends for the five boroughs of New York City in 2012. The two key findings for New York City for 2012 were the continuing predominance in indicators for cocaine, heroin, and marijuana and an increase in the use and consequences of opiate analgesics. While cocaine remained a major problem in New York City, cocaine indicators were mixed for this reporting period. Primary cocaine treatment admissions declined in 2012 to the lowest level in more than two decades, but many clients in treatment had a primary, secondary, or tertiary problem with cocaine. Cocaine ranked second, just behind marijuana/cannabis, among reports from drug items analyzed in National Forensic Laboratory Information System (NFLIS) laboratories; it was detected in 33 percent of all drug reports. Arrestee Drug Abuse Monitoring (ADAM) II program data for 2012 showed significant decreases in cocaine use among male arrestees in Manhattan compared with earlier years, but there was no significant change since 2010. There were more drug-involved emergency department (ED) visits in the Drug Abuse Warning Network (DAWN) for cocaine than for any other drug, and these increased by 36 percent between 2004 and 2011. Heroin also remained a major problem in New York City, with heroin indicators mixed in this reporting period. More than one-quarter of all primary treatment admissions were for heroin in 2012. Among primary heroin treatment admissions, the percentage of injectors increased to 44 percent. Purity for South American heroin rose to 37.5 percent pure from 31.6 percent pure in 2010; the price per milligram pure rose from \$0.92 to \$0.99. Eleven percent of all NFLIS reports were for heroin in 2012. DAWN data revealed no significant changes for heroin. ADAM II data for male arrestees in Manhattan showed significant decreases in opiate use for 2012. Marijuana indicators remained at a high level, although most were stable or decreasing after several years of increases. Marijuana primary treatment admissions decreased but still represented one-quarter of all primary treatment admissions. More than one-third of reports among drug items analyzed in NFLIS laboratories were identified as marijuana, the most of any drug. One-half of male arrestees tested positive for marijuana, the highest of all drugs, and ADAM II data revealed significant increases in marijuana use. Many kinds of prescription drugs were available, and the indicators appeared to be increasing. According to the New York City Department of Health and Mental Hygiene, opioid analgesic death rates increased by 65 percent between 2005 and 2011, and these death rates increased by 261 percent on Staten Island. According to the New York State Prescription Drug Monitoring Program data, opioid analgesic prescriptions in New York City increased by 31 percent between 2008 and 2011, and oxycodone prescriptions increased by 73 percent during that period. DAWN data revealed an increase of 168 percent in opiates/opiate ED visits between 2004 and 2011. Oxycodone ED visits increased by 459 percent between 2004 and 2011, while hydrocodone ED visits decreased between 2009 and 2011. DAWN benzodiazepine visits increased 134 percent between 2004 and 2011, and alprazolam visits increased by 164 percent during that

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period. According to ADAM II data, only 0.5 percent of male arrestees in Manhattan tested positive for oxycodone. Methamphetamine indicators remained relatively low. Primary methamphetamine treatment admissions, drug reports for methamphetamine among drug items analyzed in NFLIS laboratories, and proportions of ADAM II arrestees with positive tests for methamphetamine were all at very low levels. Although only 576 DAWN ED visits in 2011 involved methamphetamine, this represented increases of 169 percent since 2004 and 66 percent since 2009. PCP (phencyclidine) ranked sixth among the NFLIS top 10 drugs. There were 3,239 DAWN ED visits involving PCP in 2011; this was an increase of 618 percent since 2004, 194 percent since 2009, and 60 percent since 2010. There were 113,319 New Yorkers living with human immunodeficiency virus (HIV) or acquired immune deficiency syndrome (AIDS) as of December 31, 2011. This represented an increase of 28.4 percent from 2001. There were 3,404 new diagnoses of HIV in 2011: 77.7 percent were among males and 78 percent were among Blacks and Hispanics. Deaths from all causes declined 27.4 percent since 2007. For the first time, more than one-half of all new HIV diagnoses were among men who have sex with men.

INTRODUCTION

Area Description

New York City, with more than 8.3 million people, is the largest city in the United States. It is situated in the southeastern corner of the State on the Atlantic coast and encompasses an area of more than 300 square miles. New York City has nearly 600 miles of waterfront and one of the world's largest harbors.

According to U.S. Census Bureau population estimates, New York City's population increased from 8,175,133 in April of 2010 to 8,336,697 in July 2012, an increase of 2 percent. Among the five boroughs, Brooklyn had the largest percentage change (2.4 percent), followed by Manhattan (2.1 percent), Queens (1.9 percent), and the Bronx (1.7 percent). Staten Island had the smallest gain (0.4 percent)². If the New York City 5 boroughs were compared with other cities, 4 out of the 5 would rank among the top 10 U.S. cities in population, with Brooklyn ranking 4th, Queens ranking 5th, Manhattan ranking 7th, and the Bronx ranking 10th. Historically, New York City has been home to a large multiracial, multiethnic population. New York City is the largest and most racially/ethnically diverse city in the country. As has been true throughout its history, immigration continues to shape the character of New York City. It has contributed to a substantial shift in the racial/ethnic composition of New York. Findings from the 2010 census show that the population diversity continues: 33 percent are White non-Hispanic; 23 percent are Black/African-American non-Hispanic; 29 percent are Hispanic; and 13 percent are Asian non-Hispanic.

According to the New York City Department of City Planning, approximately 1 in every 36 people living in the United States resides in New York City. New York City has the highest population density of any major city in the United States, with more than 27,000 people per square mile. Approximately two-thirds of New York City dwellings are renter-occupied, more than twice the national average. More than 3 million New York City residents are foreign born, and more than one-quarter arrived

²This information was accessed from www.nyc.gov/html/dcp/html/census/popcur.shtml.

in 2000 or later. The average commute for New Yorkers is just under 40 minutes, about 15 minutes longer than the national average. New York City has the largest Chinese population outside of Asia and the largest Puerto Rican population of any U.S. city. Among Latinos in New York City, however, Puerto Ricans currently rank third, following Dominicans and Mexicans. An estimated 200 languages are spoken in New York City, and almost one-half of all New Yorkers speak a language other than English at home³.

New York City remains the economic hub of the Northeast. Its main occupations include management and professional, sales and office, and service. The unemployment rate in New York City for April 2013 was 8.4 percent; the rate for New York State was 7.8 percent. The unemployment rate for the Nation was 7.5 percent. The unemployment figures for April 2012 were 9.4 percent for New York City, 8.6 percent for New York State, and 8.1 percent for the Nation. According to the U.S. Census Bureau, American Community Survey, the median household income in New York City in 2011 was \$49,461, with 18 percent living below the Federal poverty level.

Data Sources

This report describes current drug abuse trends in New York City from 1997 to 2012, using the data sources summarized below:

- **Treatment admissions data** were provided by the New York State Office of Alcoholism and Substance Abuse Services (OASAS) for 1997–2012 and included admissions to both State-funded and nonfunded programs (extracted May 5, 2013). Demographic data are for 2012.
- **Emergency department (ED) data** were derived from the *Drug Abuse Warning Network, 2011: Selected Tables of National Estimates of Drug-Related Emergency Department Visits*, Rockville, MD: Center for Behavioral Health Statistics and Quality (CBHSQ), SAMHSA, 2013. Weighted ED visit data for calendar years 2004–2011 are based on a representative sample of hospitals in the five boroughs of New York City. The data are presented as estimates or rates per 100,000 population for ED visits involving selected drugs, with confidence intervals (denoted by CI) indicating the lower and upper bounds of the estimates/rates at the 95-percent confidence level. This report follows the Substance Abuse and Mental Health Services Administration (SAMHSA) convention of providing confidence intervals when making comparisons based on estimates or rates, and of not reporting estimates when the relative standard error is greater than 50 percent, or the number is less than 30. All increases or decreases in estimated ED visits noted are statistically significant at or below $p=.05$. Only weighted DAWN data released by SAMHSA can be used for trend analysis. A full description of the DAWN system can be found at <http://dawninfo.samhsa.gov/>.
- **Forensic laboratory testing data** for New York City were provided by the Drug Enforcement Administration (DEA)'s National Forensic Laboratory Information System (NFLIS) for January–December 2012. The data include New York Police Department laboratory data for the five boroughs of New York City from local as well as New York State and DEA laboratories. NFLIS 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. Data for 2012 are provisional and are subject to change.

³This information was accessed from www.nyc.gov/html/dcp/html/census/pop-facts.shtml.

- **Arrestee data** were derived from the Arrestee Drug Abuse Monitoring (ADAM) II program, *ADAM II 2012 Annual Report, Arrestee Drug Abuse Monitoring Program II, Office of National Drug Control Policy (ONDCP), May 2013*, and include weighted data on urinalysis test positivity for selected drugs from male arrestees in Manhattan, New York City.
- **Drug price, purity, and trafficking data** were provided by the DEA *2011 Heroin Domestic Monitor Program (DMP)*, March 2013, and the *DEA New York Field Division Unified Intelligence Division: New York Area Drug Prices, July–December 2012*.
- **Prescription drug data** for New York City were derived from Paone, D., Tuazon, E., Bradley O'Brien, D. Unintentional Opioid Analgesic Poisoning (Overdose) Deaths in New York City, 2011. *New York City Department of Health and Mental Hygiene: Epi Data Briefs (27)*, May 2013.
- **Acquired immunodeficiency syndrome (AIDS) and human immune-deficiency virus (HIV) data** were provided by the New York City Department of Health and Mental Hygiene, *HIV Epidemiology Program, for 1981–2011, including the HIV Epidemiology and Field Services Semiannual Report, Vol. 7, No. 2, January 1, 2011–December 31, 2011*.

DRUG ABUSE PATTERNS AND TRENDS

Cocaine/Crack

Cocaine indicators were mixed during this reporting period, with some remaining stable and some decreasing (exhibit 1). Nevertheless, the drug still accounted for major problems in New York City. Primary cocaine treatment admissions to State-funded and nonfunded programs in New York City declined from 17,572 in 1998 to 10,189 in 2012. Cocaine admissions reached the lowest number in more than 2 decades in 2012 and constituted 14 percent of New York City's 74,146 total drug and alcohol treatment admissions. In addition to these primary cocaine admissions, 15,248 admissions reported cocaine as a secondary substance, and 3,651 reported cocaine as a tertiary substance. Among the 74,146 drug and alcohol treatment admissions in 2012, 29,088 (39 percent) mentioned cocaine as a primary, secondary, or tertiary substance of abuse.

Exhibit 2 shows demographic characteristics of cocaine treatment admissions for 2012 by the two primary modes of use: smoking crack (representing 61 percent of cocaine admissions) and using cocaine intranasally (representing 36 percent). Clients who smoked crack were more likely than intranasal users to be female (35 versus 23 percent), Black (67 versus 42 percent), and without income (36 versus 30 percent). Clients using intranasally were more likely to be Hispanic or White. For both groups, the secondary drugs of abuse tended to be alcohol and marijuana. Admissions for primary cocaine represented an aging population, and clients smoking crack tended to be older than those using cocaine intranasally.

Weighted DAWN emergency department estimates were available for New York City for the years 2004–2011. According to these estimates, 27,752 (CI=20,421–35,083) DAWN ED visits involved cocaine in 2011 (exhibit 3). Overall, this was a 36-percent increase from 2004, when there were an estimated 20,445 visits (CI=13,141–27,749). There was no change between 2011 and either 2010 or 2009.

DEA's NFLIS showed that of the 48,613 total drug reports (primary, secondary, or tertiary) identified by forensic laboratories in seized drug items in New York City in 2012, 16,161 (33.2 percent) were identified as cocaine. While in prior years there had been more NFLIS reports for cocaine than for any other drug, for this reporting period there were slightly more reports for marijuana/cannabis. Phenylimidothiazole isomer undetermined (possible levamisole), an adulterant sometimes found in cocaine laboratory analysis, was identified in 279 reports.

ADAM II data for Manhattan male arrestees in 2012 showed that 22.7 percent of arrestees tested positive for cocaine. This represented significant declines from 2000, 2001, 2002, 2003, 2007, and 2009. Changes between 2012 and both 2010 and 2011 were not significant. The 2012 percentage represented a substantial decline from 50 percent in 2000.

The DEA New York Field Division (NYFD) Unified Intelligence Division reported that prices for cocaine powder for July–December 2012 were \$28,000–\$48,000 per kilogram; mid-level sales were \$260–\$1,250 per ounce; and retail prices were \$125–\$200 per 8-ball, \$28–\$80 per gram, and \$10–\$50 per bag/glassine. The DEA NYFD Unified Intelligence Division reported that crack sold for \$28,000–\$44,000 per kilogram, \$650–\$1,600 per ounce, \$120–\$350 per 8-ball, \$32–\$120 per gram, and \$3–\$20 per rock.

Heroin

Heroin continued to be a major drug problem in New York City (exhibit 4). Overall, the trends in heroin indicators were mixed. For example, more than one-quarter of New York City's primary treatment admissions in 2012 were for heroin. Primary heroin admissions to treatment programs in New York City for the first half of 2012 decreased to the lowest half-yearly total since 1996. For the entire year, however, the numbers were similar to 2011 and constituted more than 25 percent of New York City's 74,146 drug treatment admissions. In addition to the 19,075 primary heroin admissions in 2012, heroin was reported as a secondary substance of abuse for 2,370 admissions and as a tertiary drug for 1,068 admissions.

Other changes were observed in mode of heroin use. Intranasal heroin use may have peaked in the second half of 1998, with 62 percent of heroin admissions to all New York City drug treatment programs reporting this as their primary route of administration. Since then, the proportions reporting intranasal use have declined. In 2012, the proportion using primarily intranasally was 55 percent. Meanwhile, heroin injection increased among heroin admissions, from 32 percent in the second half of 1998 to 44 percent in 2012, the highest percentage of injectors since 1995.

Exhibit 5 highlights general demographic characteristics of heroin abusers admitted to all New York City treatment programs in 2012 by primary mode of use. In general, primary heroin admissions were predominantly male (77 percent) and 35 and older (76 percent). They were more likely to be Hispanic (43 percent) than Black (24 percent) or White (26 percent), and they were likely to have cocaine identified as a secondary drug of abuse (40 percent). Compared with heroin injectors, intranasal users were more likely to be Black (35 versus 11 percent). In contrast, heroin injectors were more likely than intranasal users to be White (40 versus 15 percent), to have cocaine identified as a secondary drug of abuse (44 versus 36 percent), and to have started use before reaching age 20 (52 versus 40 percent).

In addition to heroin admissions to traditional treatment programs, heroin admissions for detoxification or crisis services in New York City have become sizable in number. These special services are usually short-term, provided in a hospital or community-based setting, and are medically supervised. In 1995, 4,503 such admissions were reported involving heroin abuse. In 2012, the number of heroin admissions was 12,500. While that represents an overall increase since 1995, the number of heroin admissions for crisis services in 2012 was essentially the same as in 2010 and 2011 (when there were 12,517 and 12,609 heroin admissions, respectively).

For the 5 boroughs of New York City, weighted DAWN data for 2004 through 2011 showed that in 2004, there were 13,383 (CI=8,541–18,225) estimated heroin-involved ED visits, while in 2011, there were 12,015 (CI=8,782–15,248) such visits. There were no significant changes for heroin-involved visits between 2004 and 2011.

NFLIS data showed that 11 percent of the 48,613 total drug reports identified among drug items seized and analyzed by NFLIS laboratories in New York City in 2012 ($n=5,311$) were identified as heroin.

According to the DEA NYFD, prices for July to December 2012 were \$40,000–\$85,000 per kilogram for South American (SA) heroin. Mid-level prices were \$2,100–\$2,500 per ounce of SA heroin. Retail prices for SA heroin were \$55–\$100 per gram and \$90 per bundle. According to the DEA DMP, the purity of heroin in 2011 rose to 37.5 percent pure for SA heroin from 31.6 percent in 2010. From 1992 to 2000, the purity was generally greater than 60 percent pure, but since 2004, it has remained below 50 percent. The price per milligram pure rose from \$0.92 in 2010 to \$0.99 in 2011. While SA heroin continued to be the predominant heroin being purchased at the street level in New York City, Southwest Asian (SWA) heroin purchases in the DMP were also reported in the New York area. The average purity of the 2011 SWA purchases was 30.6 percent pure, and the average price was \$0.94 per milligram pure. There was also one sample of Mexican heroin with a purity of 11.5 percent and a price per milligram pure of \$4.14.

According to the ADAM II data for Manhattan male arrestees in 2012, 9.2 percent of arrestees tested positive for opiates. This represented a significant decline in those testing positive for opiates in the current reporting period, compared with 2000 and 2001. Changes from 2007 to 2011 were not significant. While 20 percent of arrestees tested positive for opiates in 2000, that proportion dropped to less than one-half of that starting in 2007. The opiate number seems to be associated with heroin use, since only 0.5 percent of Manhattan arrestees tested positive for oxycodone.

Other Opiates/Narcotics

Many kinds of prescription drugs were available on the street, and the indicators appeared to be increasing. Treatment admissions for other opiates/narcotics represented only 3.4 percent of admissions in New York City in 2012, but they have continued to increase in both New York City and elsewhere in New York State.

DAWN weighted estimates for 2011 revealed an estimated 9,709 (CI=7,751–11,667) ED visits for opiates/opioids (exhibit 3). This represented a 168-percent increase since 2004, when there were 3,615 (CI=2,657–4,573) such estimated visits, a 20-percent increase from 2009, and a 4-percent increase from 2010. Most narcotic analgesic-involved ED visits were for methadone, with

an estimated 4,882 (CI=3,613–6,152) methadone-involved ED visits in 2011; this represented a 113-percent increase from the estimated 2,288 (CI=1,580–2,996) such visits in 2004. There were also an estimated 324 (CI=237–411) visits involving hydrocodone/combination in 2011, showing no change since 2004 and 2010, but representing a 23-percent decrease from 2009. However, the largest increase within the category of narcotic analgesics involved oxycodone/combination ED visits, with 1,443 (CI=1,143–1,743) ED visits in 2011, representing a 459-percent increase from 2004 and a 54-percent increase from 2009. It should be noted that none of these three (methadone, hydrocodone, and oxycodone) showed a significant change between 2010 and 2011.

According to NFLIS data, 2,058 (4.2 percent) of the total drug reports identified by forensic laboratories among drug items seized and analyzed in New York City in 2012 were identified as oxycodone, ranking fourth among drugs reported. Other prescription opiate/narcotics reported most often in the NFLIS system were buprenorphine ($n=725$), ranking 7th; methadone ($n=615$), ranking 8th; and hydrocodone ($n=361$), ranking 10th. ADAM II data for Manhattan male arrestees revealed that 0.5 percent of arrestees tested positive for oxycodone in 2012.

According to the New York City Department of Health and Mental Hygiene (NYC DOHMH) analysis of the New York Prescription Drug Monitoring Program, prescriptions for opioid analgesics filled by New York City residents increased from approximately 1.6 million in 2008 to 2.2 million in 2011, an increase of 31 percent. Oxycodone prescriptions in New York City increased by 73 percent from 2008 to 2011. In 2011, oxycodone prescriptions accounted for 53 percent of all opioid prescriptions filled. Another analysis by the NYC DOHMH revealed that while rates of unintentional drug poisoning deaths decreased by 22 percent between 2005 and 2011, the rate of unintentional opioid analgesic poisoning deaths increased by 65 percent during that same period. In 2011, 35 percent of unintentional drug poisoning deaths involved an opioid analgesic, compared with 16 percent in 2005. While rates of opioid analgesic overdose deaths increased in New York City overall between 2005 and 2011, the most dramatic increases were in the borough of Staten Island, where the rates increased by 261 percent.

According to the DEA NYFD Unified Intelligence Division, OxyContin® sold on the street for \$9–\$40 per pill. Other prices for opiates on the street included Vicodin® selling for \$5–\$25 per dosage unit, Percocet® selling for \$4–\$8 per dosage unit, and Opana® selling for \$35–\$60 for a 40-milligram tablet.

Benzodiazepines/Barbiturates

In 2011, for the 5 boroughs of New York City, 5,175 (CI=3,916–6,435) benzodiazepine-involved DAWN ED visits were estimated (exhibit 3). This was a significant increase (by 134 percent) from 2004, when there were an estimated 2,213 visits (CI=1,677–2,748) involving benzodiazepines. From 2009 to 2011, benzodiazepine ED visits increased by 43 percent. Within this class of substances, the specific drugs most frequently mentioned in 2011 ED visits were alprazolam ($n=2,515$, CI=1,866–3,165), which increased by 164 percent between 2004 and 2011, by 48 percent between 2009 and 2011, and by 18 percent between 2010 and 2011; clonazepam ($n=1,143$, CI=790–1,497), which increased by 83 percent between 2004 and 2011 and by 53 percent between 2009 and 2011; diazepam ($n=254$, CI=159–350), which showed no change; and lorazepam ($n=313$, CI=211–414), which increased by 82 percent from 2004.

According to NFLIS data, 4.0 percent ($n=1,939$) of the total drug reports identified by laboratories among seized and analyzed drug items in New York City in 2012 were identified as alprazolam, ranking fifth among drugs reported. Clonazepam ranked ninth and was found in 583 reports. According to the DEA NYFD, Xanax® sold on the street for \$2–\$5 per pill, and Valium® sold for \$5–\$7 per pill.

Methamphetamine/Amphetamines

Although methamphetamine was popular in other parts of the Nation, most indicators related to the drug in New York City in 2012 remained at low levels. With respect to law enforcement indicators, NFLIS data showed that less than 1.0 percent of the 48,613 drug reports among drug items seized and analyzed in forensic laboratories in New York City in 2012 were identified as methamphetamine. In ADAM II data for Manhattan male arrestees in 2012, a very low percentage (0.2 percent) of arrestees tested positive for methamphetamine.

In New York City, there were an estimated 882 weighted DAWN ED visits involving stimulants in 2011, including 576 (CI=320-831) methamphetamine-involved visits (exhibit 3). Although the numbers are small, methamphetamine-involved estimated DAWN ED visits showed significant increases. The estimated 576 methamphetamine-involved visits in 2011 represented a 169-percent increase from 2004 and a 66-percent increase from 2009.

According to the DEA NYFD, the wholesale price of methamphetamine for July–December 2012 was \$27,000–\$30,000 per pound for “crystal ice.” At the retail level, the range was \$1,200–\$2,800 per ounce and \$350–\$600 per 8-ball of “crystal ice.” The price per gram of “crystal ice” was \$120–\$250.

Marijuana

In New York City, marijuana indicators remained at a high level, although most were stable or decreasing after several years of increases. Overall, the number of primary marijuana admissions declined to 18,182 in 2012 from 19,960 in 2011 (exhibit 6). In 2012, primary marijuana admissions represented 25 percent of admissions to all New York City treatment programs. In addition, a higher percentage of clients in treatment had a primary, secondary, or tertiary problem with marijuana than with any other drug.

Exhibit 7 shows demographic characteristics of primary marijuana admissions to all New York City treatment programs in 2012. The vast majority were male (77 percent), and 43 percent were 25 and younger. More than one-half (55 percent) were Black; approximately one-third (30 percent) were Hispanic; and 7 percent were White. Alcohol was the secondary drug of abuse for 34 percent of the 2012 primary marijuana admissions.

In 2004, there were 5,920 (CI=4,246–7,593) estimated marijuana-involved DAWN ED visits in the 5 boroughs of New York City. Marijuana-involved ED visits increased to 19,224 in 2011 (CI=15,635–22,813), a 225-percent increase (exhibit 3). Between 2009 and 2011, visits involving marijuana increased by 26 percent, and between 2010 and 2011, they increased by 6 percent.

According to NFLIS data, 33.7 percent ($n=16,388$) of the drug reports identified among drug items seized and analyzed by laboratories in New York City in 2012 were identified as marijuana/cannabis, the most of any drug. According to the DEA NYFD, marijuana prices at the end of 2012

were \$5,400 per pound wholesale for high-quality hydroponic marijuana, \$500–\$800 per pound for Mexican marijuana, and \$400–\$800 per pound for domestic marijuana. At mid-level, the price for domestic was \$180–\$250 per ounce.

ADAM II data revealed that one-half (49.9 percent) of male arrestees in Manhattan in 2012 tested positive for marijuana, the highest percentage testing positive among all drugs. This represented a significant increase compared with 2000, 2001, 2002, 2003, 2007, 2008, and 2009.

Other Drugs

MDMA

“Club drugs” are a collection of various synthetic chemical compounds that are often abused by young people in a variety of social settings, such as dance clubs, after-hour clubs, and other special events. Club drugs include MDMA (3,4-methylenedioxymethamphetamine), ketamine, and GHB (gamma hydroxybutyrate). Many of the club drugs have stimulant or hallucinogenic properties.

According to the weighted DAWN ED data for the 5 boroughs of New York City, an estimated 372 (CI=257–488) MDMA-involved ED visits were reported in 2004 (exhibit 3). The estimate in 2011 was 956 (CI=789–1,122), representing a 157-percent increase from 2004. ED visits involving MDMA also increased by 39 percent between 2009 and 2011.

In 2012, 260 of the drug reports detected among seized and analyzed drug items were identified by NFLIS laboratories in New York City as MDMA. According to the DEA NYFD for the end of 2012, MDMA sold for \$2.25–\$4.50 per dosage unit mid-level and \$12–\$30 per dosage unit retail.

Ketamine

Ketamine was found in 339 (0.7 percent) of the drug reports among items seized and analyzed in NFLIS laboratories in New York City in 2012. Ketamine reports ranked in 11th place among all drug reports.

PCP (Phencyclidine)

PCP (“angel dust”) continued to be available in some areas of New York City. For the 5 boroughs of New York City, there were an estimated 3,239 (CI=2,562–3,916) DAWN PCP-involved ED visits in 2011, representing a 618-percent increase from the 451 (CI=335–567) visits in 2004. These visits also increased by 194 percent since 2009 and by 60 percent since 2010. PCP-involved DAWN visits represented the highest proportion of any illicit drug other than cocaine, heroin, and marijuana (exhibit 3). PCP ranked sixth ($n=796$) among all drug reports identified by NFLIS laboratories among analyzed drug items in New York City in 2012.

LSD

LSD (lysergic acid diethylamide) is a strong hallucinogen that has not been a major problem in New York City since the late 1960s and early 1970s. According to DAWN ED data for New York City, there were an estimated 158 (CI=95–122) LSD-involved visits in 2011. Despite the fact that these numbers are small, they represent a 107-percent increase since 2004 and an 84-percent increase since 2009.

BZP

There were 204 drug reports identified as BZP (1-benzylpiperazine), an illegal synthetic stimulant, among drug items seized and analyzed by New York City NFLIS laboratories in 2012.

INFECTIOUS DISEASES RELATED TO DRUG ABUSE

The AIDS epidemic, with its impact on injection drug users (IDUs), has played a crucial role in shaping the New York City drug scene over the last two decades. HIV first emerged in New York City in the mid- to late-1970s. AIDS reporting was mandated in 1983, but reporting of HIV infection began in June 2000.

As of December 31, 2011, 113,319 New Yorkers had been diagnosed with HIV or AIDS. This represented an increase of 28.4 percent from 2001. In 2011, 46,237 (41 percent) were living with HIV (non-AIDS), and 67,082 (59 percent) were living with AIDS. According to the New York City Department of Health and Mental Hygiene, the true number of persons living with HIV/AIDS (PLWHA) was actually higher, since they estimate that one-quarter of persons living with HIV have never been tested and do not know that they are infected. In 2011, there were 1,690 deaths among persons with HIV/AIDS in New York City.

Of the 113,319 PLWHA in New York City as of December 31, 2011, 71 percent were male, and 29 percent were female. In terms of race/ethnicity, 45 percent were Black; 33 percent were Hispanic; and 21 percent were White. For transmission risk factors, 35 percent ($n=39,846$) were men who have sex with men (MSM); 18 percent ($n=20,115$) had an injection drug use history; 20 percent reported a heterosexual transmission factor; 2 percent had a perinatal transmission risk factor; less than 1 percent had another risk factor; and 25 percent had an unknown risk factor or were under investigation.

According to the New York City Department of Health and Mental Hygiene *HIV Epidemiology Program 2nd Semiannual Report*, important trends include the following. In 2011, there were 3,404 new diagnoses of HIV in New York City. Approximately three-quarters (77.7 percent) of these new diagnoses were male; 22.3 percent were female. Seventy-eight percent of new diagnoses were among Blacks and Hispanics.

Comparing 2011 with previous years, annual AIDS diagnoses in New York City continued to decrease, including a 12.4-percent decrease in the number of AIDS diagnoses between 2010 and 2011. New HIV diagnoses decreased since 2010 from 3,481 to 3,404, although the number of diagnoses among persons age 13–29 increased from 1,211 to 1,268. For the first time, more than one-half (51.4 percent) of all new HIV diagnoses were among MSMs. Deaths from all causes declined by 27.4 percent since 2007.

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Exhibit 1. Trends in Selected Indicator Data for Cocaine in New York City: 1997–2012 (Semiannual and Annual)

Year	Semiannual/ Annual Periods	Deaths Involving Cocaine ¹	Cocaine- Involved Estimated ED Visits ²	Treatment Admissions: Cocaine as Primary Drug of Abuse ³	Cocaine Arrests ⁴	Births to Women Using Cocaine ⁵
1997	1H	—	—	9,048	—	—
	2H	—	—	8,401	—	—
	Total	—	—	17,449	35,431	864
1998	1H	—	—	8,999	—	—
	2H	—	—	8,573	—	—
	Total	—	—	17,572	35,577	742
1999	1H	—	—	8,346	—	—
	2H	—	—	7,567	—	—
	Total	—	—	15,913	31,781	626
2000	1H	—	—	7,337	—	—
	2H	—	—	6,722	—	—
	Total	—	—	14,059	31,919	490
2001	1H	—	—	7,343	—	—
	2H	—	—	7,032	—	—
	Total	—	—	14,375	23,498	438
2002	1H	—	—	7,736	—	—
	2H	—	—	7,872	—	—
	Total	—	—	15,608	26,773	363
2003	1H	—	—	8,203	—	—
	2H	—	—	7,911	—	—
	Total	—	—	16,114	25,868	354
2004	1H	—	—	8,410	—	—
	2H	—	—	8,301	—	—
	Total	—	20,445	16,711	27,963	337
2005	1H	—	—	8,215	—	—
	2H	—	—	7,741	—	—
	Total	—	30,478	15,956	26,773	301
2006	1H	—	—	8,582	—	—
	2H	—	—	8,868	—	—
	Total	—	36,791	17,450	27,992	298
2007	1H	—	—	8,618	—	—
	2H	—	—	7,988	—	—
	Total	394	35,706	16,606	—	—
2008	1H	—	—	8,180	—	—
	2H	—	—	7,568	—	—
	Total	357	31,647	15,748	—	—
2009	1H	—	—	6,978	—	—
	2H	—	—	6,766	—	—
	Total	—	25,951	13,744	—	—
2010	1H	—	—	6,491	—	—
	2H	—	—	6,183	—	—
	Total	—	27,726	12,674	—	—
2011	1H	—	—	5,927	—	—
	2H	—	—	5,405	—	—
	Total	—	27,752	11,332	—	—
2012	1H	—	—	5,393	—	—
	2H	—	—	4,796	—	—
	Total	—	—	10,189	—	—

¹Drug Abuse Warning Network (DAWN), Substance Abuse and Mental Health Services Administration (SAMHSA), Drug-Related Mortality, 2008, for the five boroughs of New York City.

²ED=Emergency Department, 2011, Center for Behavior Statistics and Quality (CBHSQ), SAMHSA.

³New York State Office of Alcoholism and Substance Abuse Services (OASAS)-funded and nonfunded treatment admissions.

⁴New York City Police Department.

⁵New York City Department of Health and Mental Hygiene.

SOURCES: DAWN, OAS, SAMHSA, Drug-Related Mortality, 2008; DAWN, CBHSQ, SAMHSA; New York State Office of Alcoholism and Substance Abuse Services (OASAS); New York City Police Department; and New York City Department of Health and Mental Hygiene

Exhibit 2. Characteristics of Primary Cocaine Admissions¹ to State-Funded² and Nonfunded³ Treatment Programs, by Route of Administration and Percentage, in New York City: 2012

Demographic Characteristic	Percentage of Total (N=10,189)	Percentage Smoking Crack (n=6,198)	Percentage Using Cocaine Intranasally (n=3,628)
Gender			
Male	70	65	77
Female	30	35	23
Age at Admission			
25 and Younger	5	3	7
26–34	14	11	18
35 and Older	81	85	75
(Average Age)	(43.4)	(44.4)	(42.0)
Race			
Black	57	67	42
Hispanic	24	18	33
White	14	11	18
No Source of Income ⁴	34	36	30
Readmissions	82	86	75
Age of First Use			
14 and Younger	7	6	9
15–19	31	28	37
20–29	43	45	39
30 and Older	19	22	15
Secondary Drug of Abuse			
Alcohol	36	38	33
Marijuana	23	22	25
Heroin	8	7	9

¹Figures on this table may differ somewhat from figures cited on other tables, because computer runs may have been executed at different times and files are being updated continuously.

²State-funded programs receive some or all funding through the New York State Office of Alcoholism and Substance Abuse Services (OASAS).

³Nonfunded programs receive funding through sources other than OASAS, including Medicaid, private insurance reimbursements, and patient fees (self-pay).

⁴Defined as not earning income, not receiving support from family or significant others, and not receiving any public assistance.

SOURCE: New York State Office of Alcoholism and Substance Abuse Services (OASAS)

Exhibit 3. Estimated Drug-Related ED Visits in New York City for Selected Illicit, Psychotherapeutic, and CNS¹ Drugs of Abuse, with Relative Standard Errors and Confidence Intervals²: 2011

Selected Drugs	Estimated Number of Visits³	Relative Standard Error (RSE) as Percentage	Lower 95% Confidence Limit²	Upper 95% Confidence Limit²
Nonalcohol Illicit Drugs	79,149	9.6	64,187	94,110
Cocaine	27,752	13.5	20,421	35,083
Heroin	12,015	13.7	8,782	15,248
Marijuana	19,224	9.5	15,635	22,813
Methamphetamine	576	22.6	320	831
MDMA	956	8.9	789	1,122
PCP	3,239	10.7	2,562	3,916
Nonmedical Use of Pharmaceuticals	24,300	7.5	20,710	27,891
<i>Psychotherapeutic Agents</i>				
Benzodiazepines	5,175	12.4	3,916	6,435
<i>Selected CNS Agents</i>				
Opiates/Opioids	9,709	10.3	7,751	11,667
<i>Narcotic Analgesics</i>				
Hydrocodone	324	13.7	237	411
Methadone	4,882	13.3	3,613	6,152
Morphine	228	11.3	178	279
Oxycodone	1,443	10.6	1,143	1,743

¹CNS=Central Nervous System.

²Confidence intervals showing the lower and upper bounds at 95-percent confidence level.

³Summing or combining visits produces incorrect and inflated counts.

SOURCE: Site-specific data obtained by request from DAWN, CBHSQ, SAMHSA

Exhibit 4. Trends in Selected Indicator Data for Heroin in New York City: 1997–2012 (Semiannual and Annual)

Year	Semiannual/ Annual Period	Deaths Involving Heroin ¹	Heroin/Morphine ED Estimated Visits ²	Treatment Admissions: Heroin as Primary Drug of Abuse ³	Heroin Arrests ⁴	Average Purity of Street Heroin (%) ⁵
1997	1H	—	—	10,276	—	—
	2H	—	—	10,431	—	—
	Total	—	—	20,707	35,325	(62.5)
1998	1H	—	—	10,793	—	—
	2H	—	—	10,203	—	—
	Total	—	—	20,996	37,483	(63.6)
1999	1H	—	—	10,690	—	—
	2H	—	—	10,189	—	—
	Total	—	—	20,879	32,949	(61.8)
2000	1H	—	—	10,944	—	—
	2H	—	—	10,672	—	—
	Total	—	—	21,616	33,665	(62.9)
2001	1H	—	—	11,324	—	—
	2H	—	—	11,455	—	—
	Total	—	—	22,779	27,863	(56.0)
2002	1H	—	—	11,357	—	—
	2H	—	—	11,157	—	—
	Total	—	—	22,514	34,098	(61.4)
2003	1H	—	—	11,540	—	—
	2H	—	—	12,023	—	—
	Total	—	—	23,563	—	(53.5)
2004	1H	—	—	12,059	—	—
	2H	—	—	11,743	—	—
	Total	—	13,383	23,802	—	(43.3)
2005	1H	—	—	11,127	—	—
	2H	—	—	10,665	—	—
	Total	—	18,179	21,792	—	(49.4)
2006	1H	—	—	11,189	—	—
	2H	—	—	11,055	—	—
	Total	—	17,892	22,244	—	(44.5)
2007	1H	—	—	11,356	—	—
	2H	—	—	11,256	—	—
	Total	96	16,884	22,612	—	(49.0)
2008	1H	—	—	11,024	—	—
	2H	—	—	11,700	—	—
	Total	155	16,084	22,724	—	(47.1)
2009	1H	—	—	10,689	—	—
	2H	—	—	11,242	—	—
	Total	—	12,802	21,931	—	(44.1)
2010	1H	—	—	10,008	—	—
	2H	—	—	9,200	—	—
	Total	—	12,226	19,208	—	(31.6)
2011	1H	—	—	9,401	—	—
	2H	—	—	9,315	—	—
	Total	—	12,015	18,716	—	(37.5)
2012	1H	—	—	9,221	—	—
	2H	—	—	9,854	—	—
	Total	—	—	19,075	—	—

¹DAWN, OAS, SAMHSA, Drug-Related Mortality 2008 for the 5 boroughs of New York City.²DAWN, 2011, CBHSQ, SAMHSA.³New York State Office of Alcoholism and Substance Abuse Services (OASAS)-funded and nonfunded treatment admissions.⁴New York City Police Department.⁵DEA.

SOURCES: DAWN, OAS, SAMHSA, Drug-Related Mortality, 2008. DAWN, CBHSQ, SAMHSA; New York State Office of Alcoholism and Substance Abuse Services (OASAS); New York City Police Department; and DEA

Exhibit 5. Characteristics of Primary Heroin Admissions¹ to State-Funded² and Nonfunded³ Treatment Programs by Route of Administration and Percentage, in New York City: 2012

Demographic Characteristic	Percentage of Total (N=19,075)	Percentage Using Heroin Intranasally (n=10,454)	Percentage Injecting Heroin (n=8,303)
Gender			
Male	77	77	77
Female	23	23	23
Age at Admission			
25 and Younger	7	4	11
26–34	17	11	25
35 and Older	76	85	64
(Average Age)	(42.9)	(45.2)	(40.1)
Race			
Black	24	35	11
Hispanic	43	44	43
White	26	15	40
No Source of Income ⁴	36	34	38
Readmissions	87	86	89
Age of First Use			
14 and Younger	11	10	13
15–19	34	30	39
20–29	38	38	38
30 and Older	17	22	10
Secondary Drug of Abuse			
Alcohol	12	13	10
Marijuana	10	11	8
Cocaine	40	36	44

¹Figures on this table may differ somewhat from figures cited on other tables, because computer runs may have been executed at different times and files are being updated continuously.

²State-funded programs receive some or all funding through the New York State Office of Alcoholism and Substance Abuse Services (OASAS).

³Nonfunded programs receive funding through sources other than OASAS, including Medicaid, private insurance reimbursements, and patient fees (self-pay).

⁴Defined as not earning income, not receiving support from family or significant others, and not receiving any public assistance.

SOURCE: New York State Office of Alcoholism and Substance Abuse Services (OASAS)

**Exhibit 6. Trends in Selected Indicator Data for Marijuana in New York City: 1997–2012
(Semiannual and Annual)**

Year	Semiannual/ Annual Period	Marijuana ED Estimated Visits ¹	Treatment Admissions: Marijuana as Primary Drug of Abuse ²	Marijuana/ Cannabis Arrests ³
1997	1H	—	3,794	—
	2H	—	3,657	—
	Total	—	7,451	27,531
1998	1H	—	4,554	—
	2H	—	4,473	—
	Total	—	9,027	42,030
1999	1H	—	5,119	—
	2H	—	5,100	—
	Total	—	10,219	43,122
2000	1H	—	5,664	—
	2H	—	5,487	—
	Total	—	11,151	60,455
2001	1H	—	6,677	—
	2H	—	6,593	—
	Total	—	13,270	47,651
2002	1H	—	7,512	—
	2H	—	6,798	—
	Total	—	14,310	47,250
2003	1H	—	6,844	—
	2H	—	6,627	—
	Total	—	13,471	—
2004	1H	—	6,835	—
	2H	—	6,468	—
	Total	5,920	13,303	—
2005	1H	—	7,161	—
	2H	—	6,954	—
	Total	10,192	14,115	—
2006	1H	—	8,158	—
	2H	—	8,128	—
	Total	12,938	16,286	—
2007	1H	—	8,809	—
	2H	—	8,514	—
	Total	14,500	17,323	—
2008	1H	—	9,836	—
	2H	—	9,821	—
	Total	16,204	19,657	—
2009	1H	—	9,977	—
	2H	—	10,899	—
	Total	15,310	20,876	—
2010	1H	—	11,541	—
	2H	—	10,530	—
	Total	18,102	22,071	—
2011	1H	—	10,566	—
	2H	—	9,394	—
	Total	19,224	19,960	—
2012	1H	—	9,490	—
	2H	—	8,692	—
	Total	—	18,182	—

¹ED=Emergency Department; DAWN, CBHSQ, SAMHSA.

²New York State Office of Alcoholism and Substance Abuse Services (OASAS)-funded and nonfunded treatment admissions.

³New York City Police Department.

SOURCES: DAWN, CBHSQ, SAMHSA, New York State Office of Alcoholism and Substance Abuse Services (OASAS), and New York City Police Department

Exhibit 7. Characteristics of Primary Marijuana Admissions¹ to State-Funded² and Nonfunded³ Treatment Programs, by Percentage, in New York City: 2012

Demographic Characteristic	Percentage of Total (N=18,182)
Gender	
Male	77
Female	23
Age at Admission	
17 and Younger	10
18–25	33
26–34	31
35 and Older	26
(Average Age)	(29.1)
Race	
Black	55
Hispanic	30
White	7
No Source of Income ⁴	29
Readmissions	60
Age of First Use	
14 and Younger	51
15–19	41
20–29	6
30 and Older	1
Secondary Drug of Abuse	
Alcohol	34
Cocaine	9

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⁴Defined as not earning income, not receiving support from family or significant others, and not receiving any public assistance.

SOURCE: New York State Office of Alcoholism and Substance Abuse Services (OASAS)

Drug Use in Philadelphia, Pennsylvania: 2012

Suet T. Lim, Ph.D., Roland C. Lamb, M.A., and Marvin F. Levine, M.S.W.¹

ABSTRACT

The two key findings in 2012 in Philadelphia were the continuing increases in heroin (based on treatment admissions, mortality data, and heroin reports among seized and analyzed drug items) and continuing problems with polydrug use. During 2012, indicators of drug use in Philadelphia were mixed. Depending on the indicator (market, treatment, criminal justice, or mortality), alcohol, heroin, marijuana, and cocaine ranked consistently as the most frequently reported or detected drugs of abuse. Indicators for heroin and cocaine suggested increased use. Despite decreases in reports, alcohol and marijuana retained their top rankings as primary drugs of choice among treatment admissions. As the most frequently detected drug in the National Forensic Laboratory Information System (NFLIS) data for Philadelphia County, marijuana accounted for 32.9 percent of all positive drug reports in 2012. There was no change in the criminal justice indicator data, with 30 percent of individuals entering probation or parole for the first time in 2012 testing positive for marijuana, similar to 2011. In the 3 years prior to 2012, cocaine and marijuana had alternated as having the first or second highest percentages of NFLIS positive reports. In 2012, cocaine ranked second, following a large decrease in the proportion of positive reports (from 33 percent in 2011 to 27 percent in 2012). However, treatment data showed a slight increase, from 10.2 to 11.6 percent between 2011 and 2012, while mortality data showed a large increase (from 26.5 percent in 2011 to 39.0 percent in 2012) among all Medical Examiner Office (MEO) cases with the presence of drugs. Data from the Adult Probation and Parole Department (APPD) indicated cocaine use was stable among this population, and it remained the second most frequently detected drug in APPD urinalysis. It would appear that cocaine remained one of the more popular street drugs in Philadelphia, despite less availability. It consistently ranked fourth as the primary drug of choice for treatment admissions, after alcohol, heroin, and marijuana. Smoking continued as the preferred route of administration for cocaine. Alcohol remained the overwhelming primary drug of choice among treatment admissions (39.7 percent); alcohol also led among detections in mortality cases with the presence of drugs (20 percent in 2011 and 26.7 percent in 2012). Data from different sources indicated increasing use of heroin/morphine. At 36.8 percent, heroin/morphine ranked second as the most frequently detected drug for mortality cases with a presence of drugs. Among deaths caused by alcohol and/or drug intoxication, heroin/morphine was the most frequently detected drug (57.7 percent). Heroin represented the third most frequent positive reports from the NFLIS data, with a small increase in 2012. Of note, the proportion of treatment admissions with heroin as the primary drug of choice showed a large increase (from 17.7 percent in 2011 to 24.0 percent in 2012), ranking it second among total admissions for the first time. The reported preferred route of administration shifted from injection (59.1 percent in 2011) to other (74.0 percent in 2012), which included oral ingestion. Treatment admissions for other opiates

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experienced a substantial decline during this period, but mortality cases with any prescription opioid detected increased (from 51.6 percent in 2011 to 65.5 percent in 2012). Oxycodone ranked fourth in NFLIS data, with a lower proportion of positive reports in 2012 than in 2011. The number and percent of mortality cases with oxycodone detected declined in 2012, dropping from fourth to fifth in rank. Treatment and mortality indicators showed increases in the use of benzodiazepines. As secondary and tertiary mentions, benzodiazepines moved into the top 5 drugs used, with marijuana and cocaine as the primary drugs of choice. Alprazolam remained the benzodiazepine of choice; it was the most commonly detected benzodiazepine among MEO cases with a presence of drugs. Additionally, there was an increase in positive reports in the NFLIS data. PCP (phencyclidine) had more consistent indicators, with slight declines in the proportions admitted for treatment and testing positive for APPD urinalysis, as well as a decline in the proportion of MEO cases. Detection of antipsychotic and over-the-counter drugs, such as antihistamines, showed large increases in the mortality indicator. MEO cases with antipsychotic-class drugs increased to 9 percent, following a decrease in 2011. Antihistamine-class drugs were detected in 39 percent of mortality cases, up from 13 percent in 2011. There was a very large increase in the proportion of treatment admissions with over-the-counter drugs (unspecified) as primary and secondary drugs of choice. Methamphetamine and other amphetamines have historically been low-level drugs in Philadelphia, and they remained so in 2012. In contrast to NFLIS reports for the Nation, these speed-type drugs have not appeared among the top 10 positive reports in Philadelphia in the past 4 years. Trend data in HIV/AIDS (human immunodeficiency virus/ acquired immunodeficiency syndrome) transmission showed a slight increase in cases associated with injection drug use in 2012. The rates of HIV/AIDS and newly diagnosed HIV cases showed a clear decline in transmission risk associated with sharing infected needles.

INTRODUCTION

Area Description

Philadelphia, the largest city in the Commonwealth, is located in the southeastern corner of Pennsylvania. The 2010 U.S. Census population count of 1,526,006 showed an increase of 0.56 percent (8,456 persons) from the 2000 census count for Philadelphia. The population is 53.2 percent female. Since the 2000 census, the White-only population decreased to 41 percent, and all other racial groups increased. As of 2010, Black/African-American constituted 43.4 percent of the City's population. Other racial groups included Asian only (6.3 percent), other race only (6.5 percent), and two or more races (2.8 percent). The population with Hispanic or Latino origin (12.3 percent) also increased since 2000. These demographic data are provided to assist the reader in understanding the comparative impact of substance use by various populations.

Data Sources

This report focuses primarily on the city and county of Philadelphia and includes data from the sources shown below. Unless otherwise noted, fiscal year (FY) refers to a year starting July 1 and ending the following June 30.

- **Treatment admissions data** for residents of Philadelphia County were provided by Behavioral Health Special Initiative, funded by the Office of Addiction Services, Philadelphia Department of Behavioral Health and Intellectual disAbility Services. The data represent self-reported mentions

of use of different drugs by people admitted to treatment in 2012. This report focuses on primary choice of drugs at treatment admission. This database covers the uninsured and underinsured population of Philadelphia.

- **Mortality data** were provided by the Medical Examiner Office (MEO), Philadelphia Department of Public Health. These data cover mortality cases with toxicology reports indicating the detection of drugs in persons who died in Philadelphia from January 1, 2007, to December 31, 2012. Cause of death designations changed, effective January 1, 2009. These cases included persons who died from alcohol and/or drug intoxication of one or multiple drugs, as well as persons with some substance detected but who died from other causes. Alcohol cases are only reported in combination with one or more other drugs detected in the system. The MEO does not test for the presence of marijuana/tetrahydrocannabinol(THC)/cannabis.
- **Crime laboratory drug analysis data** came from the National Forensic Laboratory Information System (NFLIS). Data include analysis of drug samples tested by the Philadelphia Police Department Forensic Science Laboratory from 2009 to 2012. Recent changes in NFLIS methodology resulted in reports, not items, as units of analysis. NFLIS methodology allows for the accounting of up to three drugs positively identified per item submitted for analysis. The data presented are a combined count of primary, secondary, and tertiary positive reports for drug items analyzed. Therefore, the data in this report are on positive reports, not items analyzed. Data for this report were retrieved in May 2013 and are considered preliminary and subject to change.
- **Criminal justice urinalysis data** for adults who are in probation or parole status were derived from reports from the First Judicial District of Pennsylvania, Adult Probation and Parole Department (APPD), from January 1, 2007, to December 31, 2012. Data represent the first-time test for individuals when placed on probation or parole status.
- **Heroin prices** were retrieved from the Drug Enforcement Administration (DEA), Heroin Domestic Monitor Program (HDMP), 2011 report. The HDMP report indicated that price information was derived from undercover purchases and informants.
- **Acquired immunodeficiency syndrome (AIDS) and human immunodeficiency virus (HIV) data** were obtained from the Philadelphia Department of Public Health's AIDS Activities Coordinating Office (AACO) Surveillance Report 2012. At the time of this report, the 2012 Surveillance Report is preliminary for cases reported through December 31, 2012.

DRUG ABUSE PATTERNS AND TRENDS

Data for 2012 showed mixed indicators for drug use and abuse. Data on treatment admissions (shown in exhibits 1–2) and APPD urinalyses indicated the continuing decline in cocaine use that began in 2008. Three heroin indicators (NFLIS, treatment, and mortality data) experienced increases in 2012 compared with 2011. The four drugs of most concern in Philadelphia continued to be alcohol, heroin, marijuana, and cocaine. Together, these drugs constituted 94.9 percent of the primary treatment admissions in 2012 with known drug of abuse (exhibit 1); these four drugs have consistently been the most frequently reported drugs at treatment admission. After declining for the last few years, cocaine and heroin primary admissions increased in 2012. In contrast to these two drugs, primary treatment admissions for alcohol and marijuana experienced declines from 2011 to

2012. The increase in primary treatment admissions for prescription opioids observed from 2010 to 2011 did not continue; admissions instead decreased to pre-2010 levels (4.5 to 1.5 percent). Treatment admissions for benzodiazepines also continued to decline during this reporting period. Drugs whose use was considered at low or very low levels included antidepressants, antipsychotics, and the “speed-type” drugs (amphetamines, methamphetamine, and MDMA [3,4-methylenedioxymethamphetamine]). The demographic characteristics of people who entered treatment in 2012 revealed the overrepresentation of males and Blacks (exhibit 2).

Exhibit 3 shows that in 2012, the average number of drugs detected in decedents with drug-positive toxicology reports was the highest in the last 5 years. Single-drug deaths remained relatively uncommon, with about 1 in 10 deaths detected with only 1 drug (exhibit 4). In 2012, cocaine was the most frequently detected drug among decedents (exhibit 3). The leading drug group was “any prescription opioid” not including heroin/morphine (exhibit 5).

Exhibit 6 shows the distribution of mode of death in 2012 for Philadelphia MEO’s cases with the presence of drugs. As in the previous annual report, the majority of 2012 deaths with the presence of drugs were accidents (60.19 percent). Statistics in exhibit 6 in this report are comparable to those in exhibit 6 in the June 2012 report but not to earlier reports due to the interchangeable use of mode and cause of death in the earlier reports. In keeping with death certification terminology, analysis of mortality data for this report considered mode or manner to reflect the intent, while the cause of death represented the physical events that brought on death. The underlying cause is the disease or injury that initiated the train of events leading directly to death or the circumstances of the accident or violence that produced the fatal injury. For deaths caused by alcohol and/or drug intoxication, almost all of the deaths were accidental in nature (96.2 percent) (exhibit 6a). Both deaths due to alcohol and/or drug intoxication and all other causes continued to experience increases in the average number of drugs detected in cases. The average number of drugs in a decedent who died accidentally from alcohol and/or drug intoxication was 7.5, while deaths from all other causes averaged 5.7 drugs per decedent. Consistent with 2011 findings, mortality cases with the presence of drugs are suggestive of high polydrug use among the drug-abusing population in Philadelphia.

The total number of positive drug reports among drug items analyzed by the Philadelphia Police Forensic Science Laboratory and reported by NFLIS was 26,735, slightly lower than in 2011 (27,172). The leading drugs identified among NFLIS positive reports were marijuana (32.9 percent, $n=8,789$) and cocaine (27.0 percent, $n=7,216$) (exhibit 7). The 2012 data were considered preliminary, and the reader is cautioned about comparisons to previous years, as 2012 data may be less complete at the point of data retrieval (May 2013).

The Philadelphia APPD analyzed urine specimens from people placed on probation or parole status. The results of the first testing of each probationer/parolee from 2007 to 2012 (exhibit 8) showed continued decline in the rates of positive drug tests.

To gauge the amount of drug overdoses among the drug-abusing population in Philadelphia, this report utilizes data from the Philadelphia Fire Department’s Emergency Medical Services (EMS). EMS responds to calls for overdoses. Due to a change in the data reporting system, data were only available for the second half of 2012 (June through December). The EMS unit responded to 141,028 calls in the second half of 2012, of which 2,988 were due to overdoses or poisonings. These represent 2 percent of all calls to EMS for that time period.

Heroin/Morphine

Treatment admissions data revealed that heroin moved up in ranking to second place in 2012 and constituted 23.4 percent of primary treatment admissions (exhibit 1). Males constituted 72.6 percent of primary heroin admissions in 2012. Whites accounted for 67.0 percent of primary heroin treatment admissions in 2012, followed by Blacks (20.0 percent) and Asians and others (13.0 percent). Hispanics of any race constituted 14.4 percent of primary heroin treatment admissions. There was an increase in White primary treatment admissions for heroin and a decrease in Black primary treatment admissions for heroin. Primary treatment admissions for heroin increased in 2012 across all age groups; this increase comes after 5 years of a trending decline, with a slight bump in 2010. Reported preferred route of administration shifted from injection (59.1 percent in 2011) to other (74.0 percent in 2012), which included oral ingestion.

In 2012, deaths with the presence of morphine/heroin ($n=358$) were the highest since 2007. Morphine/heroin detection remains in the ranking of the 10 most frequently detected drugs in mortality cases, ranking second in 2012. For the purpose of understanding the epidemiology of illicit drug use, the count includes morphine, 6-MAM, and 6-acetylmorphine. Detections for 6-acetylmorphine, a heroin metabolite, increased in 2012 ($n=220$) from 2011 ($n=162$). In deaths caused by alcohol and/or drug intoxication, morphine/heroin is the most frequently detected drug, represented in 57.7 percent of these deaths (exhibit 3a).

NFLIS data revealed that reports identified as heroin among drug items seized and analyzed in NFLIS laboratories constituted the third highest number of positive drug reports ($n=3,648$) in 2012, representing 13.6 percent of all positive reports (exhibit 7). The NFLIS data for 2012 show a slight increase in the proportion of positive reports for heroin from 2011 (12.9 percent).

According to DEA HDMP data, the average street-level purity of heroin in Philadelphia declined every year from 2000, when it was 73.0 percent pure, to 2010. In 2011, however, the average street-level purity of heroin purchased in Philadelphia increased to 63.6 percent pure, which was an increase of 55.6 percent from 40.9 percent pure in 2010. While this is not the highest recorded purity level for heroin in Philadelphia, it is a considerable increase in purity. Of the 15 HDMP cities in the East, purity is highest in Philadelphia for qualified exhibits from South America. Heroin purity among exhibits identified as South America origin ranged from 13.6 to 63.6 percent across the cities with HDMP. There was a slight increase in the average purity level among all HDMP cities to 27.6 percent (up from 25.9 percent in 2010). Pricing of heroin in Philadelphia is relatively low, reportedly selling at \$0.60 per milligram pure. Comparing Philadelphia's pricing and purity rates across the other HDMP cities indicates Philadelphia's heroin market as a buyers' market—Philadelphia ranks the highest in purity and is one of the lowest for pricing.

Cocaine/Crack

Although cocaine continued to be a drug of abuse in Philadelphia, the declines in several cocaine indicators that were noted in 2008 continued through 2012. As a primary drug of choice, cocaine continued to rank fourth, similar to the previous year; cocaine constituted 11.6 percent of total primary treatment admissions in 2012 (exhibit 1). Cocaine and heroin in combination continued to be popular among Philadelphia users, but the numbers were declining. Treatment admissions data indicated that the most frequent secondary drug mentioned for primary cocaine admissions was marijuana in 2012; in 2011, the most commonly mentioned secondary drug was heroin. Cocaine, however, remained the most frequent secondary drug mentioned at admission for primary heroin

treatment admissions. The proportion of primary admissions that was male in 2012 (69.6 percent) did not change substantially from 2011 (72.2 percent). Blacks constituted the majority of cocaine treatment admissions (62.6 percent), while less than one-quarter of primary admissions were White (24.7 percent). Asians and other races constituted 12.7 percent. Hispanics of any race represented 14.8 percent of total primary cocaine admissions in 2012. More than one-half of primary treatment admissions for cocaine, 62.9 percent, were in the older adult category (age 35 and older).

The number of deaths with the presence of cocaine in 2012 was higher ($n=379$) than in 2011 ($n=264$), a reversal of the decline observed since 2006. In 2011, cocaine was surpassed by morphine/heroin as the most frequently detected drug in mortality cases with the presence of drugs, but in 2012, cocaine detections were higher. For the purpose of understanding the epidemiology of illicit drug use, cocaine counts include detection of metabolites including benzoylgonine, ecgonine methyl ester, and ecgonine ethyl ester. When the cause of death was alcohol and/or drug intoxication, cocaine was detected in 51.5 percent of the deaths (exhibit 3a), placing it as the second most detected drug among those deaths.

NFLIS data in 2012 revealed that cocaine continued to be among the top three drugs identified among reports of items seized and analyzed in NFLIS laboratories. Cocaine represented the second highest number of positive reports ($n=7,216$) and accounted for 27.0 percent of all positive drug reports (exhibit 7).

APPD urinalysis data of adults entering probation or parole in 2012 revealed the presence of cocaine in 23.0 percent of all drug-positive tests, similar to 2011 (22.9 percent) (exhibit 8). There was a slight increase in the number of individuals tested in 2012 ($n=5,219$), and 10.3 percent of all individuals tested were positive for cocaine. Cocaine continued to rank as the second most frequently detected drug on the APPD panel.

Other Opioids/Opiates

The nonmedical use of pharmaceutically produced opioid products was increasingly reported by clients entering treatment. As primary drug of choice, "Other Opiates/Synthetics" represented 1.5 percent of primary treatment mentions (exhibit 1). The proportion of primary treatment admissions for other opioids had been steadily increasing since 2007, but it decreased in 2012. Of the 125 primary treatment admissions, 64.8 percent were male; 60.0 percent were White; 33.6 percent were Black; 6.4 percent were Asian and other races; and 2.6 percent were of Hispanic ethnicity. The largest age category among primary other opioids/opiates was 26–34-year-olds (44.8 percent).

Not including morphine or heroin, deaths with the presence of "any opioid" (65.5 percent) exceeded all other drug groups in 2012 (exhibit 5). The presence of "any opioid" at death has steadily increased and rose by 26.6 percent since 2009.

APPD urinalysis data for adults on probation or parole do not distinguish heroin from all opiates/opioids. In 2012, opiates/opioids were detected in 8.2 percent of all tests, ranking third (exhibit 8).

Oxycodone

In 2012, oxycodone was detected in 220 decedents. Oxycodone moved down a ranking to the fifth spot for most frequently detected drugs. In 2012, oxycodone was present in 22.6 percent of drug-positive deaths.

Oxycodone represented the fourth most frequently identified drug among all reports of drug items seized and analyzed in NFLIS laboratories in 2012 ($n=1,472$); this represented the same ranking as in 2010 and 2011. As a percentage of all positive drug reports, oxycodone represented 5.5 percent, a slight decrease from 2011 (exhibit 7).

Methadone

The reader is cautioned in interpreting data in this section. When methadone was detected among MEO cases, it was uncertain whether methadone was used as directed by a physician for the management of pain, as a prescribed adjunctive measure in treatment/recovery programs, and/or in an abusive or recreational manner. MEO detections of methadone in decedents numbered 108, a slight increase from detections in 2011 ($n=100$). Deaths with the presence of methadone ranked eighth in 2012 (exhibit 3).

Hydrocodone

The number of detections of hydrocodone in mortality cases in the 5 years prior to 2011 averaged 27 per year; the number jumped to 67 in 2011. In 2012, there were 51 deaths with positive hydrocodone screens. Hydrocodone was the 21st most frequently detected drug in mortality cases in 2012; in 2011, hydrocodone ranked 13th. Hydrocodone ranked eleventh in 2012 NFLIS data in the number of positive drug reports among all drug items seized and analyzed in Philadelphia.

Codeine

Based on MEO toxicology results, medications containing codeine appeared to be commonly abused, and use was increasing in Philadelphia. The number of codeine-positive cases almost doubled from 2010 ($n=98$) to 2011 ($n=188$), and in 2012 they reached 259. Codeine moved up several positions from ranking ninth in 2011 to ranking fourth among MEO cases with the presence of drugs in 2012 (exhibit 3). At 41.3 percent, it was also the third most frequently detected drug among alcohol and/or drug intoxication deaths in 2012 (exhibit 3a).

Benzodiazepines

Benzodiazepines, particularly alprazolam, continued to be used in combination with other drugs in Philadelphia, based on death data. At 92 admissions, benzodiazepines moved down to seventh place rank among primary treatment admissions (exhibit 1).

The MEO detected the presence of “any benzodiazepine” in 51.2 percent of all drug-positive decedents in 2012; this is second highest drug group (exhibit 5). APPD urinalysis data for adults on probation or parole in 2012 revealed the presence of benzodiazepines in 6.7 percent of all individuals tested (exhibit 8).

Alprazolam

Among users of benzodiazepines, alprazolam has been the preferred drug since 2001, based on MEO reports and NFLIS data. Alprazolam was detected in 220 decedents in 2012, a slight decrease from 2011 ($n=242$). Alprazolam was the fifth most frequently detected drug among mortality cases with the presence of drugs. In the past 5 years, detections of alprazolam had been steadily

increasing, with a slight dip in 2012 (exhibit 3). It was detected in 30.2 percent of alcohol and/or drug intoxication deaths, placing it as the fourth most frequently detected drug among these deaths (exhibit 3a).

In 2012, alprazolam reports represented the fifth highest number of positive drug reports among drug items analyzed in NFLIS laboratories ($n=1,327$), slightly higher than in 2011 ($n=1,233$). As a percentage of all positive drug reports, alprazolam constituted 5.0 percent of total reports; this is a continual increase from 2010 (exhibit 7).

Diazepam

Diazepam was detected in 103 decedents in 2012, making it the 10th most frequently detected drug during that time period (exhibit 3). Diazepam has consistently ranked among the top 10 most frequently detected drugs among mortality cases with the presence of drugs.

Clonazepam

Detections of clonazepam among mortality cases have been declining. Clonazepam was detected in 23 decedents in 2012. Clonazepam ranked eighth in the number of positive drug reports among drug items seized and analyzed in NFLIS laboratories in 2012 ($n=216$), accounting for 0.81 percent of all positive reports (exhibit 7).

Other Benzodiazepines

Other benzodiazepines that were detected frequently in 2012 MEO data included nordiazepam ($n=97$), 7-aminoclonazepam ($n=82$), and oxazepam ($n=78$). These benzodiazepines have been detected at a higher frequency than clonazepam since 2011 among decedents with presence of drugs.

Methamphetamine, Amphetamines, MDMA, and MDA

Methamphetamine and amphetamines remained a relatively minor problem in Philadelphia, and use of these drugs appeared to be confined to a small portion of the population, based on various indicators. Treatment admissions data revealed a very small proportion of methamphetamine and amphetamine mentions (0.09 percent) in 2012 (exhibit 1). As the primary drug of choice, methamphetamine and amphetamine combined only represented 0.04 percent of treatment admissions with known drug of abuse.

MEO data revealed that in 2012, there were 18 detections of amphetamines, 11 detections of methamphetamines, 15 detections of other amphetamines (not including cocaine), no detections of MDMA, and no detections of MDA (3,4-methylenedioxyamphetamine). Historically, these drugs ranked very low among the most frequently detected drugs in MEO cases.

NFLIS data for 2012 revealed that out of 26,735 drug-positive results, methamphetamine reports ranked 16th among total reports detected in analyzed drug items ($n=78$); amphetamine ranked 18th ($n=49$); MDMA ranked 23rd ($n=29$); and there were no positive results for MDA. Together ($n=156$), these detections accounted for 0.6 percent of the total positive reports among drug items seized and analyzed by NFLIS laboratories.

APPD urinalysis data of adults on probation or parole in 2012 revealed the presence of amphetamines in 0.4 percent of adults who tested positive for any drug and in 0.9 percent of all individuals tested (exhibit 8).

Marijuana

Until 2012, marijuana was consistently ranked second in the number of primary treatment admissions; it ranked third in 2012 (exhibit 1). Males represented 87.3 percent of primary marijuana treatment admissions in 2012. Blacks accounted for 76.0 percent of primary marijuana treatment admissions, followed by Whites (11.1 percent) and Asians and others (12.9 percent). The age categories 18–25 and 26–34 constituted the majority of primary marijuana treatment admissions. For youths age 17 and younger, marijuana was overwhelmingly the primary drug of choice for treatment admissions from 2007 to 2009. While the number of youths admitted for treatment has increased in the past few years, the number of youths admitted primarily for marijuana did not increase until 2012. There were 82 primary treatment admissions for youths in 2012, which was above the average of 75 per year for the previous 5 years. Preliminary NFLIS data for 2012 showed marijuana accounted for 32.9 percent of positive reports among drug items seized and analyzed (exhibit 7). In the prior 3 years, marijuana consistently represented the highest percentage of positive reports.

APPD urinalysis data, the first tests of adults placed on probation or parole, continued to detect the presence of marijuana in more samples than any other drug, with marijuana representing two-thirds (66.7 percent) of the tests that were positive for any drug in 2012 (exhibit 8). Marijuana continued to be the most frequently detected drug among first-timers to probation or parole.

PCP (Phencyclidine)

As a primary drug of choice at treatment admission, PCP has historically been low, averaging 1.0 percent of primary drug mentions per year. In 2012, PCP primary treatment admissions were higher, accounting for 1.3 percent of all primary admissions (exhibit 1). Despite low numbers of treatment admissions for PCP, it has been consistently mentioned as a primary drug of choice over the years, which implied a persistent culture of PCP use in Philadelphia.

There were 69 PCP detections in MEO cases in 2012, moving PCP out of the top 10 most frequently detected drugs (2011 $n=92$). PCP reports represented the seventh highest number of positive reports among total reports from drug items seized and analyzed in NFLIS laboratories in 2012 ($n=527$), accounting for 2.0 percent of the total (exhibit 7). APPD urinalysis data of adults on probation or parole in 2012 revealed the presence of PCP in 10.6 percent of the drug-positive tests. PCP positivity ranked sixth in the APPD panel, with 4.8 percent testing positive among all tested.

Antidepressants

In 2012, 36.4 percent of all deaths with the presence of drugs ($n=354$) tested positive for at least 1 antidepressant. This percentage represented an increase in the detection of antidepressants among mortality cases from 2011 to 2012. The antidepressants most frequently detected by the MEO were citalopram ($n=86$) and trazodone ($n=44$).

Antipsychotics

MEO toxicology reports revealed the presence of antipsychotic drugs (exhibit 9). In past analyses, the relatively rare presence of more than one antipsychotic in a decedent led to the hypothesis that these drugs were not abused. The close correspondence between the numbers of different antipsychotic drugs that were detected to the number of individuals with antipsychotic detections had lent support to that hypothesis. In 2011, the ratio of number of detections to number of decedents increased, suggesting that antipsychotics were being used beyond what was prescribed. In 2012, the number of antipsychotics detected increased, but the ratio of detections to decedents decreased. The most frequently detected antipsychotic drug in 2012 was quetiapine, consistent with the observation from the previous 5 years. The second highest antipsychotic drug detected was olanzapine, which tripled from 5 to 15 in 2012 (exhibit 9).

Alcohol

As a primary drug of choice, alcohol ranked first among the treatment admissions in 2012 (exhibit 1). Males constituted 78.7 percent of primary alcohol treatment admissions in 2012. Blacks accounted for 61.2 percent of primary alcohol treatment admissions in 2012, followed by Whites (27.8 percent) and Asians and others (11.0 percent). Hispanics of any race accounted for 10.5 percent. While youths (17 and younger) represented 3.9 percent of primary treatment admissions for alcohol, 36.6 percent of youths seeking treatment were seeking treatment primarily for alcohol abuse. The expansion of adolescent intervention services in recent years resulted in more youths seeking treatment for alcohol abuse.

The number of deaths with the presence of alcohol in combination numbered 260 in 2012 (exhibit 3). After continuous decline from 2007 to 2011, the number of detections in 2012 increased to a level similar to the 2007 level. Alcohol in combination with other drugs ranked as the third most detected substance in 2012. Among decedents whose cause of death was determined to be alcohol and/or drug intoxication, 29.2 percent of these deaths tested positive for alcohol (exhibit 3a).

INFECTIOUS DISEASES RELATED TO DRUG ABUSE

In 2012, Philadelphia recorded 647 adult HIV/AIDS cases. Surveillance investigation indicated that 8.8 percent ($n=57$) of these cases were associated with injection drug use. Trend data in HIV/AIDS transmission showed a slight increase in cases associated with injection drug use in 2012. Of the 644 newly diagnosed cases in 2012, 57 cases, or 8.8 percent, resulted from infected needle sharing. The rates of HIV/AIDS and newly diagnosed HIV cases were showing a clear decline in transmission risk associated with sharing infected needles; however, 2012 data showed a slight increase (exhibits 10 and 11).

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Exhibit 1. Number and Percentage of Primary Drugs of Abuse at Treatment Admission by Uninsured and Underinsured Individuals in Philadelphia: 2012

Primary Drug of Abuse	Number of Treatment Admissions	Percentage with Known Drugs of Abuse
Alcohol	3,222	39.68
Heroin	1,947	23.98
Marijuana	1,598	19.68
Cocaine: Crack/Powder	939	11.57
Other Opiates/Synthetics	125	1.54
PCP	108	1.33
Benzodiazepines	92	1.13
Methamphetamine & Amphetamine	7	0.09
MDMA	0	0.00
All Other Known Drugs	81	1.00

SOURCE: Behavioral Health Special Initiative

Exhibit 1a. Number and Percentage of Route of Administration of Primary Drugs of Abuse Reported at Treatment Admission by Uninsured and Underinsured Individuals in Philadelphia: 2012

Route of Administration	Number of Treatment Admissions	Percentage of Treatment Admissions
Smoking	2,419	28.6
Sniffing	8	0.1
Injection	527	6.2
Other	5,501	65.1
Unknown	0	0.0

SOURCE: Behavioral Health Special Initiative

Exhibit 2. Demographic Profiles by Number and Percentage of Individuals Who Entered Substance Abuse Treatment in Philadelphia: 2012

Demographics	Number of Treatment Admissions	Percentage of Treatment Admissions
GENDER		
Male	6,498	76.85
Female	1,957	23.15
RACE/ETHNICITY		
Black	4470	52.87
White	2942	34.80
Asian/Other Race(s)	1043	12.34
Unknown/Unrecorded		
Hispanic (Any Race)	1055	12.48
AGE		
17 and Younger	344	4.07
18–25	1771	20.95
26–34	2883	34.10
35 and Older	3457	40.89

SOURCE: Behavioral Health Special Initiative

Exhibit 3. Number of Medical Examiner Office (MEO) Cases With the Presence of the Most Frequently Detected Drugs, and Average Number of Drugs per Death, in Philadelphia: 2007–2012¹

MEO-Identified Drugs	2007	2008	2009	2010	2011	2012
Cocaine	389	338	311	233	264	379
Morphine/Heroin	228	246	221	206	323	358
Alcohol in Combination With Other Drugs	264	223	227	216	200	260
Codeine	153	152	93	98	188	259
Oxycodone	127	183	159	181	226	220
Alprazolam ²	121	172	200	204	242	220
Diphenhydramine	170	172	201	158	126	133
Methadone	116	120	104	82	100	108
Oxymorphone	—	—	—	—	42	108
Diazepam	89	120	118	110	111	103
Total Deaths with the Presence of Drugs	964	1,040	1,024	936	995	972
Total Drugs Detected	3,531	3,908	3,735	3,341	4,550	4,730
Average Number of Drug Detections per Death	3.7	3.8	3.7	3.6	4.6	5.7

¹Based on 2012 rankings.²Increased testing protocols for benzodiazepines were instituted July 2008.

SOURCE: Medical Examiner Office, Philadelphia Department of Public Health

Exhibit 3a. Number and Percentage of the Most Frequently Detected Drugs Among Alcohol and/or Drug Intoxication Deaths in Medical Examiner Office (MEO) Cases in Philadelphia: 2012

MEO-Identified Drugs	Number	Percentage of Intoxication Deaths
Heroin/Morphine	287	57.7
Cocaine	256	51.5
Codeine	214	43.1
Alprazolam	150	30.2
Alcohol	145	29.2
Oxycodone	124	24.9
Ibuprofen	88	17.7
Diphenhydramine	77	15.5
Methadone	77	15.5
Oxymorphone	72	14.5
Nordiazepam	72	14.5
Total Alcohol and/or Drug Intoxication Deaths	497	—
Average Number of Drug Detections per Decedent	7.46	—

SOURCE: Medical Examiner's Office, Philadelphia Department of Public Health

Exhibit 4. Number and Percentage of Single-Drug Mortality Cases Detected by the Medical Examiner Office, in Philadelphia: 2007–2012

	2007	2008	2009	2010	2011	2012
Number	158	160	145	123	100	97
Percentage	16.4	15.4	14.2	13.1	10.0	10.0

Note: Denominator is the number of Medical Examiner Office cases with presence of drugs that meet the criteria for reporting to CEWG ($n=972$ for 2012).

SOURCE: Medical Examiner Office, Philadelphia Department of Public Health

Exhibit 5. Percentage of Most Commonly Detected Classes of Drugs Among Medical Examiner Office Cases with Presence of Drugs in Philadelphia: 2009–2012

Year	Percentage 2009	Percentage 2010	Percentage 2011	Percentage 2012
Any Prescription Opioid	39.3	42.7	51.6	65.5
Any Benzodiazepine	34.3	35.7	37.3	51.2
Any Antidepressant	26.1	28.1	17.2	37.1
Any Antipsychotic	5.7	6.6	1.0	9.0
Any Speed-Type Drug	3.7	2.6	2.0	3.4
Any Antihistamine	— ¹	— ¹	13.0	39.4

¹Not previously tabulated

Note: Heroin and cocaine are not included in these classifications.

SOURCE: Medical Examiner Office, Philadelphia Department of Public Health

Exhibit 6. Distribution of Mode or Manner of Death for Medical Examiner Office Cases with Presence of Drugs, and Average Number of Drugs Detected by Mode, in Philadelphia: 2012

Mode/Manner	Count Of Deaths	Percentage by Mode	Average Number Of Drugs Per Case
Accident	585	60.2	6.9
Homicide	181	18.6	3.5
Natural	90	9.3	4.9
Suicide	109	11.2	4.2

SOURCE: Medical Examiner Office, Philadelphia Department of Public Health

Exhibit 6a. Distribution of Mode or Manner of Death for Alcohol and/or Drug Intoxication Deaths, by Number and Percentage, in Philadelphia: 2012¹

Mode/Manner	Count Of Deaths	Percentage by Mode
Accident	478	96.2
Suicide	17	3.4
Homicide	1	0.2

¹Statistics for this table are not comparable to exhibit 6 tables in reports prior to 2011.

SOURCE: Philadelphia Medical Examiner Office

Exhibit 7. Number and Percentage of Top 10 Drug Reports Identified Among Drug Items Analyzed by NFLIS Laboratories in Philadelphia: 2010–2012

2012 Rank	Drug	2010 Reports		2011 Reports		2012 Reports	
		Number	Percentage	Number	Percentage	Number	Percentage
1	Marijuana/Cannabis	12,865	37.90	8,834	32.50	8,789	32.9
2	Cocaine	10,923	32.20	8,967	33.00	7,216	27.0
3	Heroin	3,910	11.50	3,499	12.90	3,648	13.6
4	Oxycodone	1,513	4.50	1,715	6.30	1,472	5.5
5	Alprazolam	1,278	3.80	1,233	4.50	1,327	5.0
6	Acetaminophen	22	0.06	33	0.12	1,027	3.8
7	PCP (Phencyclidine)	652	1.90	475	1.80	527	2.0
8	Clonazepam	241	0.70	248	0.90	216	0.8
9	Codeine	286	0.80	281	1.00	150	0.6
10	Buprenorphine	164	0.50	144	0.50	149	0.6

SOURCE: NFLIS, DEA

Exhibit 8. Number of Drug-Positive Urinalysis Results of Adults in Probation or Parole Status Who Were Tested for the First Time, and Percentage Positive for Any Drug, in Philadelphia: 2007–2012

Drug/Drug Group	2007	2008	2009	2010	2011	2012
Marijuana/Cannabis	1,741	1,904	1,406	1,560	1,598	1,564
Cocaine	1,176	1,148	581	520	547	539
Benzodiazepines	338	477	296	335	371	349
Methadone	239	258	164	— ¹	— ¹	— ¹
Opioids	325	441	317	297	369	427
PCP (Phencyclidine)	301	354	263	285	255	249
Alcohol	169	189	113	— ¹	— ¹	21
Barbiturates	30	50	27	— ¹	— ¹	— ¹
Amphetamines	23	35	18	19	23	21
Propoxyphene	0	12	26	2	0	0
Total Persons Tested	6,077	6,835	4,752	4,806	5,165	5,219
Total Positive Persons	3,133	3,437	2,337	2,281	2,384	2,345
Percentage Who Tested Positive	51.6	50.3	49.2	47.5	46.2	44.9

¹There was no test for these drugs in these years.

Note: Some people tested positive for more than one drug.

SOURCE: Adult Probation/Parole Department, First Judicial District, Philadelphia

Exhibit 9. Number of Antipsychotic Drugs Detected by the Medical Examiner Office in Decedents in Philadelphia: 2007–2012

Drug	2007	2008	2009	2010	2011	2012
Quetiapine	29	49	37	44	38	50
Olanzapine	19	19	9	8	5	15
Clozapine	5	2	6	7	2	6
Haloperidol	2	2	1	1	1	5
All others	5	3	8	6	11	16
Total detections	60	75	61	66	57	92
Unique cases	57	74	58	62	34	87

SOURCE: Philadelphia Medical Examiner Office

Exhibit 10. Number and Percentage, by Exposure Category, of AIDS Diagnoses in Philadelphia: 2010–2012

Exposure Category	AIDS 2010		AIDS 2011		AIDS 2012	
	Number	Percentage	Number	Percentage	Number	Percentage
IDU ¹	78	10.4	53	7.6	57	8.8
MSM ² and IDU	7	0.9	9	1.3	8	1.2
MSM	311	41.8	285	41.3	268	41.4
Heterosexual Contact	319	42.9	332	48.1	289	44.6
No Identified Risk	27	3.6	10	1.4	25	3.8

¹IDU=injection drug user.

²MSM=men who have sex with men.

SOURCE: Philadelphia Department of Public Health, AIDS Activities Coordinating Office

Exhibit 11. Number and Percentage, by Exposure Category, of Newly Diagnosed HIV Cases in Philadelphia: 2010–2012

Exposure Category	HIV 2010		HIV 2011		HIV 2012	
	Number	Percentage	Number	Percentage	Number	Percentage
IDU ¹	76	10.2	53	7.6	57	8.8
MSM ² and IDU	7	0.9	9	1.3	8	1.2
MSM	306	41.4	285	41.1	267	41.3
Heterosexual Contact	317	42.8	332	47.9	288	44.6
No Identified Risk	27	3.6	10	1.4	24	3.7

¹IDU=injection drug user.

²MSM=men who have sex with men.

SOURCE: Philadelphia Department of Public Health, AIDS Activities Coordinating Office

Illicit Drug Trends in Phoenix and Arizona: 2012

James K. Cunningham, Ph.D.¹

ABSTRACT

The two key findings in the Phoenix area in 2012 were the continuing decline in cocaine indicators and a rise in hospital admissions among aging methamphetamine users. Cocaine-related inpatient hospital admissions in Maricopa County (Phoenix area) declined from 2007 through 2012. Cocaine treatment episodes (as a percentage of total treatment episodes) were also lower in 2012 compared with 2007. Amphetamine-related hospital admissions increased during 2009–2012 (most amphetamine-related hospital admissions are probably related to methamphetamine, a type of amphetamine). The bulk of this increase in amphetamine-related hospital admissions was among patients age 40 and older (i.e., older users). Heroin/opioid-related hospital admissions rose in 2012, extending an upward trend that has continued since 2005 (heroin/opioid-related hospital admissions include admissions related to heroin and other opioids). Primary heroin treatment episodes (as a percentage of total treatment episodes) decreased in 2011 and remained lower in 2012. Marijuana/cannabis-related hospital admissions were flat in 2012. In order, the top four drugs submitted to the National Forensic Laboratory Information System (NFLIS) from the Maricopa County area during 2012 were marijuana/cannabis, methamphetamine, heroin, and cocaine. Oxycodone, a prescription opioid, was the fifth most common drug report identified among drug items seized and analyzed by NFLIS laboratories. MDMA (3,4-methylenedioxymethamphetamine) (ecstasy) reports among drug items analyzed by NFLIS laboratories decreased in 2012. Poison control center calls for THC (tetrahydrocannabinol) homologs (e.g., “Spice”/“K2”) and “bath salts” (substituted cathinones) decreased in 2012. The ability to cultivate poppy crops (for opium/heroin) and marijuana/cannabis crops in northern Mexico is possibly being compromised by drought. Some smugglers are apparently using air cannons to shoot marijuana/cannabis over the border from Mexico into Arizona. Emergent human immunodeficiency virus (HIV)/acquired immunodeficiency syndrome (AIDS) rates related to injection drug use have declined slowly but steadily over the past several years.

INTRODUCTION

Area Description

Maricopa County, which includes the State’s capital, Phoenix, is Arizona’s primary population center, with 3,942,169 residents in 2012, making it the fourth most populous county in the United States. Whites (non-Latino) constituted 58.3 percent of the population in 2011; 30.0 percent were Latino; 5.4 percent were Black; 3.7 percent were Asian; and 2.7 percent were American Indian/Alaska Native. Maricopa County is located in the central part of the State and includes more than 20 cities

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and towns, as well as multiple Indian reservations, the largest of which are the Salt River Pima Maricopa Indian Community and the Gila River Indian Community.

Data Sources

This report is based on the most recent available data obtained from the following sources:

- **Treatment episodes data** came from the Arizona Department of Health Services (ADHS), Division of Behavioral Health Services (DBHS), Division of Clinical Recovery Services, Bureau of Grants Management, Training and Administration, Evaluation Unit. Treatment data include data for clients age 18 and older. The amount of funding available for treatment in Arizona has fluctuated in recent years, largely due to the economic recession. This fluctuation could have artificially impacted some types of drug treatment episodes more than others, making temporal trends in drug treatment episodes challenging to interpret. All treatment episode data in this report should therefore be considered with this caveat in mind.
- **Hospital admissions (inpatient) data** came from analyses conducted by the University of Arizona, Department of Family and Community Medicine, using hospital discharge records from the Arizona Hospital Discharge Data System operated by the Arizona Department of Health Services.
- **Law enforcement data**, including price information and drug trafficking patterns, were obtained from the Drug Enforcement Administration (DEA) Phoenix Field Division and the DEA Heroin Domestic Monitor Program.
- **Self-reported youth drug use data** were obtained from the Arizona Youth High School Survey, Arizona Criminal Justice Commission.
- **Forensic drug analysis data** were obtained from the National Forensic Laboratory Information System (NFLIS). 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.
- **Human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS) data** were obtained from the ADHS, Bureau of Epidemiology and Disease Control, Office of HIV/STD Services.
- **Poison control center call data** were obtained from Banner Health, Banner Good Samaritan Poison and Drug Information Center (all calls reported in this report are exposure calls).
- **Population data** were obtained from the U.S. Census Bureau.

DRUG ABUSE PATTERNS AND TRENDS

Cocaine/Crack

In 2012, ADHS/DBHS data indicated that primary cocaine treatment episodes constituted 5 percent of the total treatment episodes in Maricopa County (Phoenix area) (exhibit 1). Primary cocaine treatment episodes (as a percentage of total treatment episodes) declined during 2007–2009 and

then remained fairly stable through 2012 (exhibit 2). Cocaine-related inpatient hospital admissions in Maricopa County declined during 2007–2012 (exhibit 3). In 2012, cocaine-related hospitalizations were substantially lower than heroin/opioid-related and amphetamine-related admissions (most amphetamine-related hospital admissions involve methamphetamine, a type of amphetamine). In 2012, approximately 1.1 percent of 8th, 10th, and 12th grade students in Arizona reported use of cocaine in the past 30 days (exhibit 4), down from 1.9 percent in 2008; 3.7 percent reported lifetime use of cocaine, down from 5.9 percent in 2008 (exhibit 5). Poison control center calls for cocaine declined in the second half of 2012 (exhibit 6).

Cocaine was the fourth most common drug report among drug items seized and identified by NFLIS laboratories in Maricopa County (exhibit 7). The price for an ounce of powder cocaine was approximately \$600–\$800 in the second half of 2012; the price for an ounce of crack cocaine was approximately \$650–\$800.

Heroin

Primary heroin treatment episodes, as a percentage of total treatment episodes, increased from 10 percent in 2007, to 20 percent in 2010, and then decreased to 14 percent in 2012 (exhibit 2). Heroin/opioid-related hospital admissions in Maricopa County increased in 2012, extending an upward trend that has generally continued since 2005 (exhibit 3). Heroin/opioid admissions included admissions related to heroin and admissions related to other opioids (e.g., oxycodone and hydrocodone). Hospital data coding is such that specific types of opioids cannot be separated for analysis. In 2012, approximately 0.4 percent of 8th, 10th, and 12th grade students in Arizona reported use of heroin in the past 30 days (exhibit 4), compared with 0.6 percent in 2008; 1.2 percent reported lifetime use, compared with 1.8 percent in 2008 (exhibit 5). Poison control center calls for heroin were flat in 2012 (exhibit 8).

Heroin was the third most common drug report among items seized and identified by NFLIS laboratories in Maricopa County (exhibit 7). The DEA Heroin Domestic Monitor Program examined 16 samples of Mexican-origin heroin in 2011 (the dominant type of heroin in Arizona) and reported that they averaged 27.3 percent in purity and \$0.65 per pure milligram in price.

The ability to cultivate poppy crops (for opium/heroin) in northern Mexico, the primary source of heroin in Arizona, is possibly being compromised by drought.

Other Opiates/Narcotics

In 2012, approximately 7 percent of the treatment episodes in Maricopa County had opioids other than heroin/morphine as the primary drug of abuse (exhibit 1). In 2012, oxycodone and hydrocodone were the fifth and seventh most common drug reports, respectively, among items analyzed by NFLIS (exhibit 7). NFLIS reports of oxycodone, hydrocodone, and buprenorphine were lower in 2012 than in 2011 (exhibit 9). In 2012, approximately 6.2 percent of 8th, 10th, and 12th grade students in Arizona reported use of prescription pain relievers in the past 30 days (exhibit 4), down from 8.1 percent in 2008; 13.8 percent reported lifetime use, down from 17.6 percent in 2008 (exhibit 5). In the second half of 2012, the street low-high pill prices for selected pain medications were as follows—codeine, \$2–\$3; hydrocodone, \$1–\$2; methadone, \$10–\$13; morphine, \$1–\$2; oxycodone, \$6–\$40; OxyContin®, \$15–\$80; Percocet®, \$2–\$6; and Vicodin®, \$2–\$5. Poison control center

calls for opioids (other than heroin) were down slightly in the second half of 2012 and were lower than in 2011 (exhibit 10). Poison control center calls for oxycodone and buprenorphine (which were included in the “opioids other than heroin” exhibit) were flat in 2012 and lower than in 2011 (exhibits 11 and 12).

Benzodiazepines/Barbiturates

Two benzodiazepines—alprazolam and clonazepam—were among the top 10 drugs most frequently reported by NFLIS for Maricopa County in 2012 (exhibit 7). In 2012, approximately 2.7 percent of 8th, 10th, and 12th grade students in Arizona reported use of prescription sedatives in the past 30 days (exhibit 4), down from 4.1 percent in 2008; 6.9 percent reported lifetime use of prescription sedatives, down from 10.5 percent in 2008 (exhibit 5).

Methamphetamine/Amphetamines

In 2012, methamphetamine was the most common primary illicit drug involved in treatment episodes in Maricopa County (exhibit 1). In 2011, marijuana/cannabis was the most common illicit drug involved in treatment episodes in Maricopa County (exhibit 2). This flip-flop between the two drugs may be an artifact due to fluctuation in funding and, consequently, may not reflect changes in use of the drugs or in the drug market. Amphetamine-related hospital admissions were flat during 2008 and the first half of 2009, but they began to rise in the second half of 2009 and continued increasing through 2012 (exhibit 3).

In 2012, in Maricopa County, 16 percent of the amphetamine-related hospital admissions involved persons younger than age 25, whereas 43 percent involved persons age 40 and older (exhibit 13). (Most amphetamine-related hospital admissions are probably related to methamphetamine, a type of amphetamine.) The ratio of amphetamine-related hospital admissions of those younger than 25 to admissions of those age 40–59 showed a pronounced reversal in the past 20 years (exhibit 14). During 1991–1994, the ratio of amphetamine-related hospital admissions for those younger than 25 to amphetamine-related hospital admissions for 40–59-year-olds rose and eventually reached a level of about 3.5 to 1 (i.e., those younger than 25 outnumbered 40–59-year-olds by about that ratio). A more even ratio of the two age groups was seen from 1996 through 2006. But in 2007, admissions for 40–59-year-olds began outpacing admissions for those younger than 25, reaching a ratio of about three 40–59-year-olds to one admission younger than 25 in 2010.

In 2012, approximately 0.4 percent of 8th, 10th, and 12th grade students in Arizona reported use of methamphetamine in the past 30 days (exhibit 4), compared with 0.6 percent in 2008; 1.2 percent reported lifetime use, down from 2.2 percent in 2008 (exhibit 5). Poison control center calls for amphetamines in the second half of 2012 were lower than those in the first half (exhibit 15). That said, poison control center calls in 2012 exceeded those in 2011.

Methamphetamine was the second most common drug report among items analyzed by NFLIS (exhibit 7). In the second half of 2012, the price of an ounce of methamphetamine was estimated to be approximately \$500–\$1,000. Twelve small clandestine laboratories were reported in the Maricopa County area in 2012; no methamphetamine laboratories were reported in the Tucson/Pima County area of Arizona in 2012.

Marijuana/Cannabis

Twenty percent of treatment episodes in 2012 involved marijuana/cannabis as the primary drug of abuse, making it the second most common illicit drug associated with treatment episodes (exhibit 1). Marijuana/cannabis hospital admissions increased from 2007 through the first half of 2011, then dropped slightly and remained lower with little change through 2012 (exhibit 3). In 2012, approximately 14.3 percent of 8th, 10th, and 12th grade students in Arizona reported use of marijuana/cannabis in the past 30 days (exhibit 4), up from 12.5 percent in 2008; 28.7 percent reported lifetime use of marijuana/cannabis, compared with 27.4 percent in 2008 (exhibit 5). Poison control center calls for marijuana/cannabis declined in 2012 (exhibit 16).

Marijuana/cannabis was the most common drug report among items seized and identified by NFLIS laboratories in 2012 (exhibit 7). In 2012, the price for a pound of marijuana/cannabis in Arizona was approximately \$400–\$550.

The ability to cultivate marijuana/cannabis crops in northern Mexico is possibly being compromised by drought. Some smugglers are apparently using air cannons to shoot marijuana/ cannabis over the border from Mexico into Arizona.

“Club Drugs”

The percentages of treatment episodes with MDMA (3,4-methylenedioxymethamphetamine)/ecstasy and LSD (lysergic acid diethylamide) as the primary drugs of abuse were relatively low in 2012 (such episodes were included in the “other drugs” category of exhibit 1). In 2012, approximately 1.4 percent of 8th, 10th, and 12th grade students in Arizona reported use of hallucinogens (including LSD) in the past 30 days (exhibit 4), about the same as in 2008; 4.4 percent reported lifetime use, again about the same as in 2008 (exhibit 5). In 2012, approximately 1.4 percent of the students reported use of ecstasy in the past 30 days; 6.1 percent reported lifetime use of ecstasy. There were 36 reports of MDMA; 45 reports of TFMPP [1-(3-trifluoromethylphenyl)piperazine] and 19 reports of BZP (1-benzylpiperazine), which are sometimes marketed as MDMA; and no reports of LSD among drug items analyzed by NFLIS laboratories in 2012.

PCP (Phencyclidine)

There were 15 PCP reports among drug items analyzed by NFLIS laboratories in 2012.

Other Drugs

Student reports of steroid use and prescription stimulant use changed little in 2012 compared with 2008 (exhibits 4 and 5). There were 99 reports of carisoprodol among items analyzed by NFLIS in 2012. Poison control center calls for THC (tetrahydrocannabinol) homologs and “bath salts” (substituted cathinones) decreased in 2012 (exhibits 17 and 18).

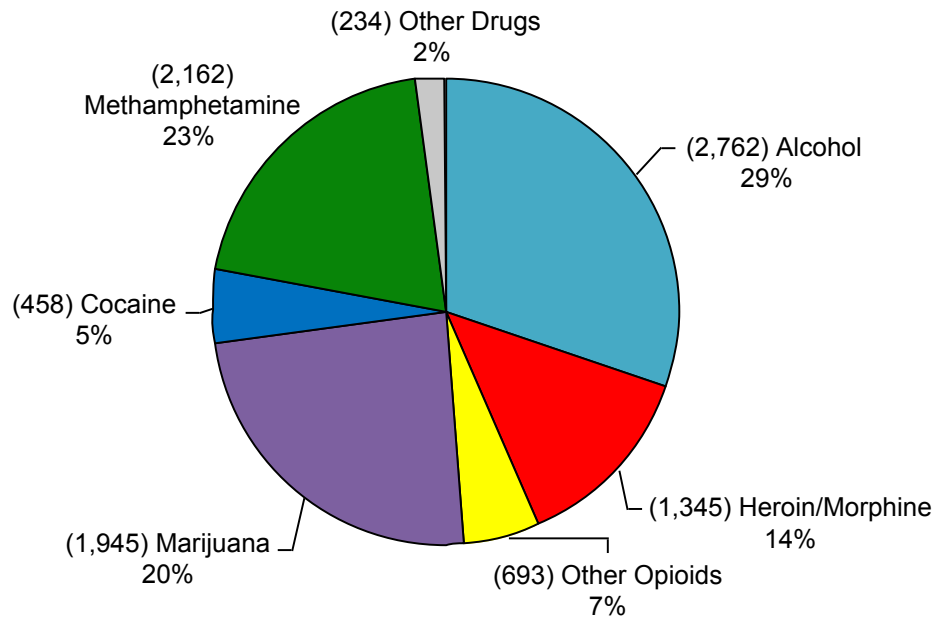
INFECTIOUS DISEASES RELATED TO DRUG ABUSE

HIV/AIDS

In Arizona, 5-year emergent HIV/AIDS rates (per 100,000 per year) have declined over the past several years (exhibits 19 and 20). Five-year emergent HIV/AIDS rates related to injection drug use have also declined over the past several years (exhibit 20).

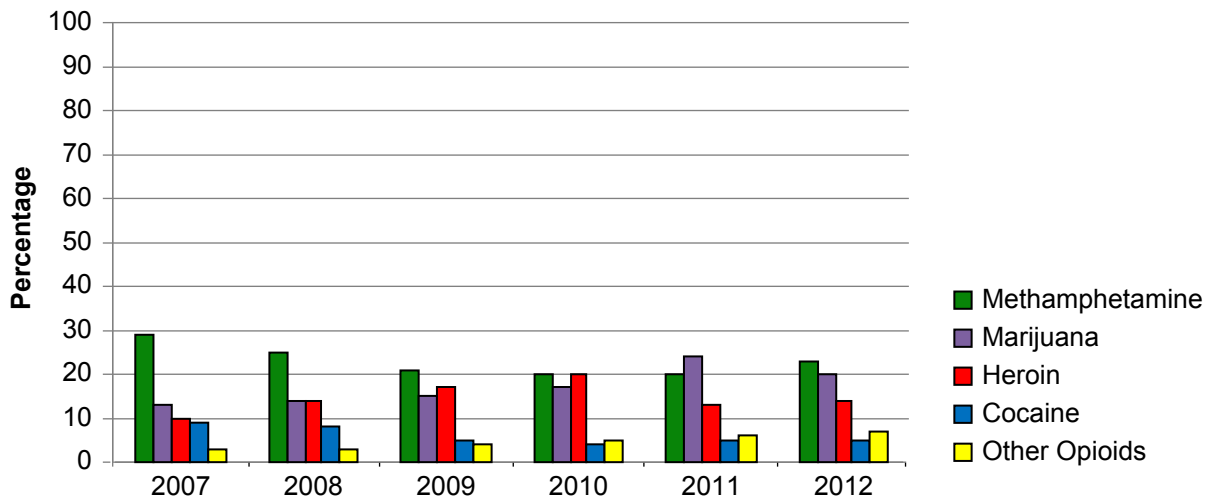
For inquiries concerning this report, contact James K. Cunningham, Ph.D., Department of Family and Community Medicine, College of Medicine, The University of Arizona, 1450 N. Cherry Avenue, Tucson, AZ 85719, Phone: 520-615-5080, Fax: 520-577-1864, E-mail: jkcunnin@email.arizona.edu.

Exhibit 1. Number and Percentage of Treatment Episodes, by Primary Substance Used, in Maricopa County (Phoenix Area): 2012



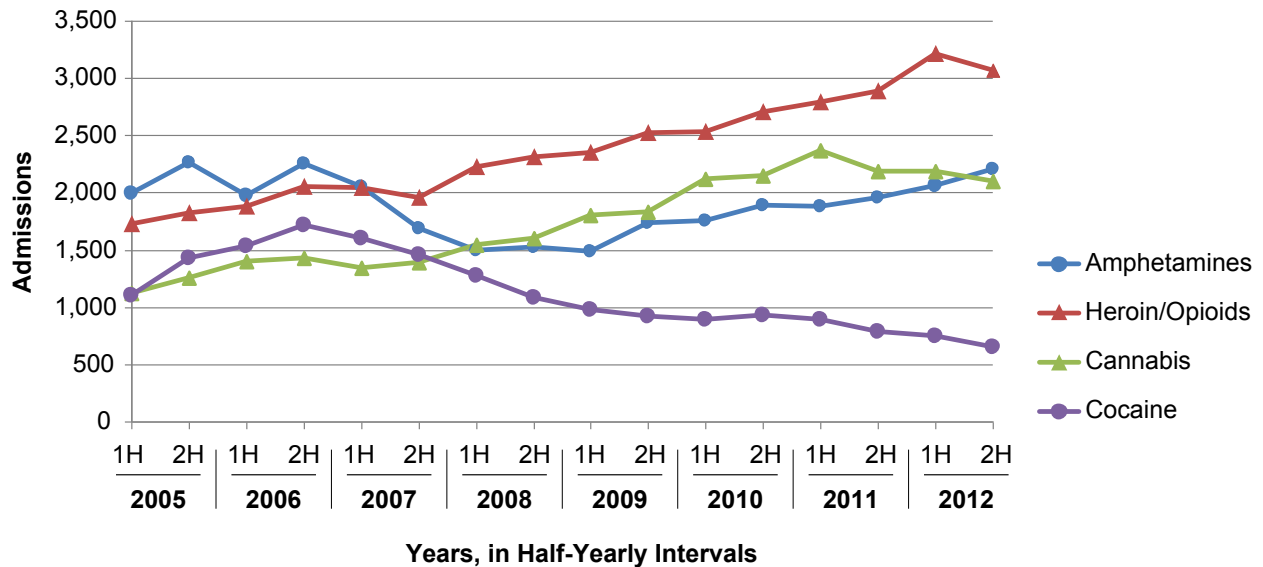
SOURCE: Arizona Department of Health Services

Exhibit 2. Percentage of Treatment Episodes, by Primary Substance Used, in Maricopa County (Phoenix Area): 2007–2012



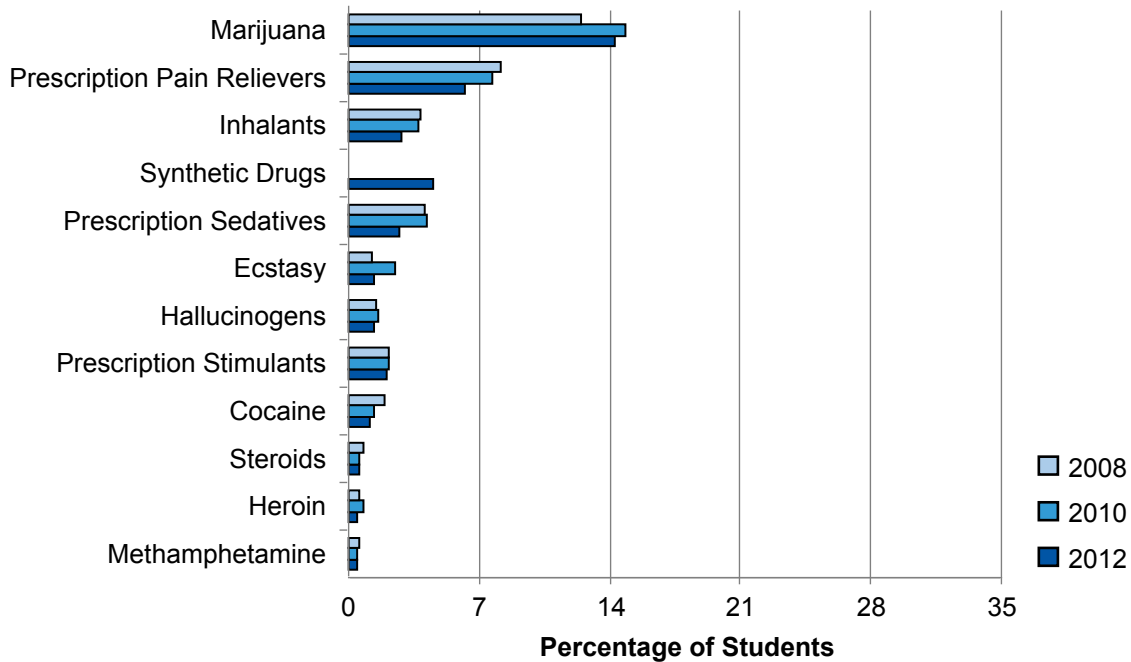
SOURCE: Arizona Department of Health Services

Exhibit 3. Number of Cocaine-, Amphetamine-, Cannabis-, and Heroin/Opioid-Related Hospital Admissions in Maricopa County (Phoenix Area): 2005–2012, by Half-Years



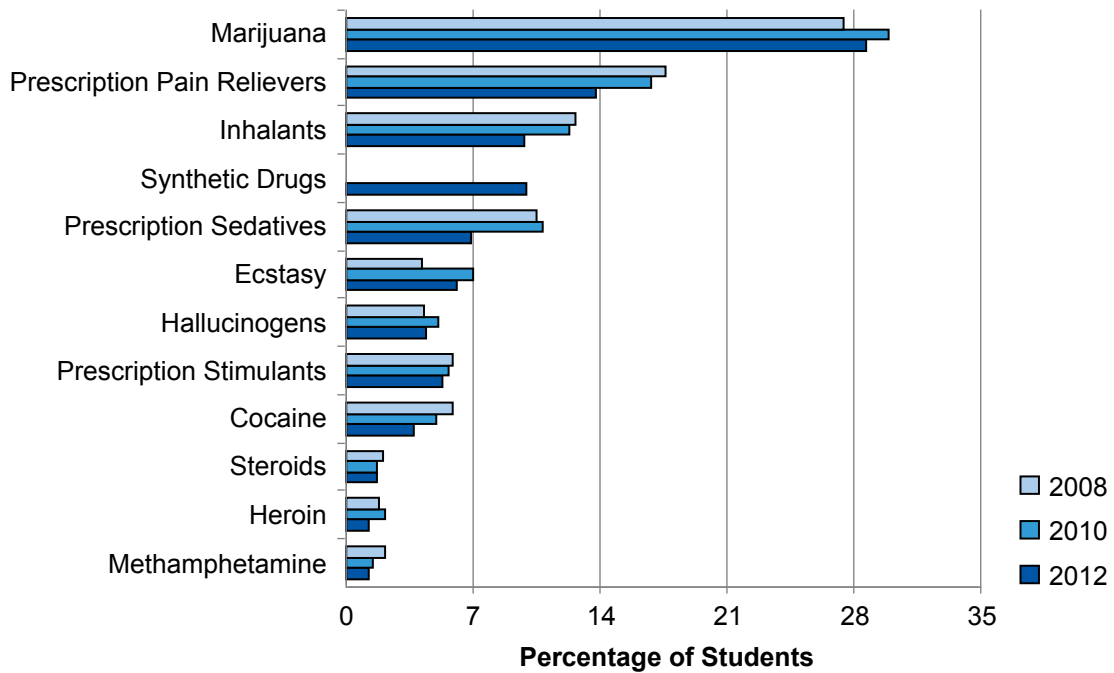
SOURCE: Arizona Hospital Discharge Data System, Arizona Department of Health Services; analysis by the University of Arizona Department of Family and Community Medicine

Exhibit 4. Percentage of 8th, 10th, and 12th Grade Students in Arizona Reporting Selected Drug Use in the Past 30 Days: 2008, 2010, and 2012



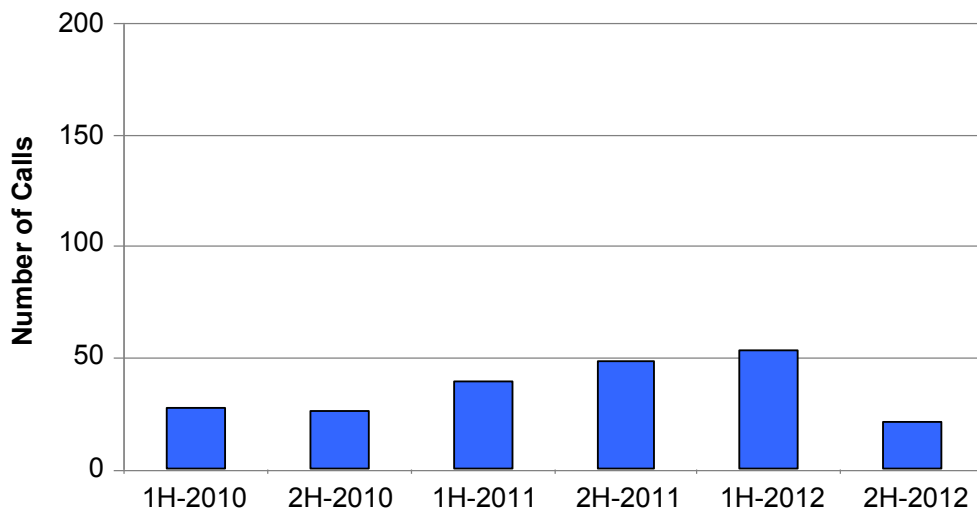
SOURCE: Arizona Youth High School Survey, Arizona Criminal Justice Commission

Exhibit 5. Percentage of 8th, 10th, and 12th Grade Students in Arizona Reporting Selected Lifetime Drug Use: 2008, 2010, and 2012



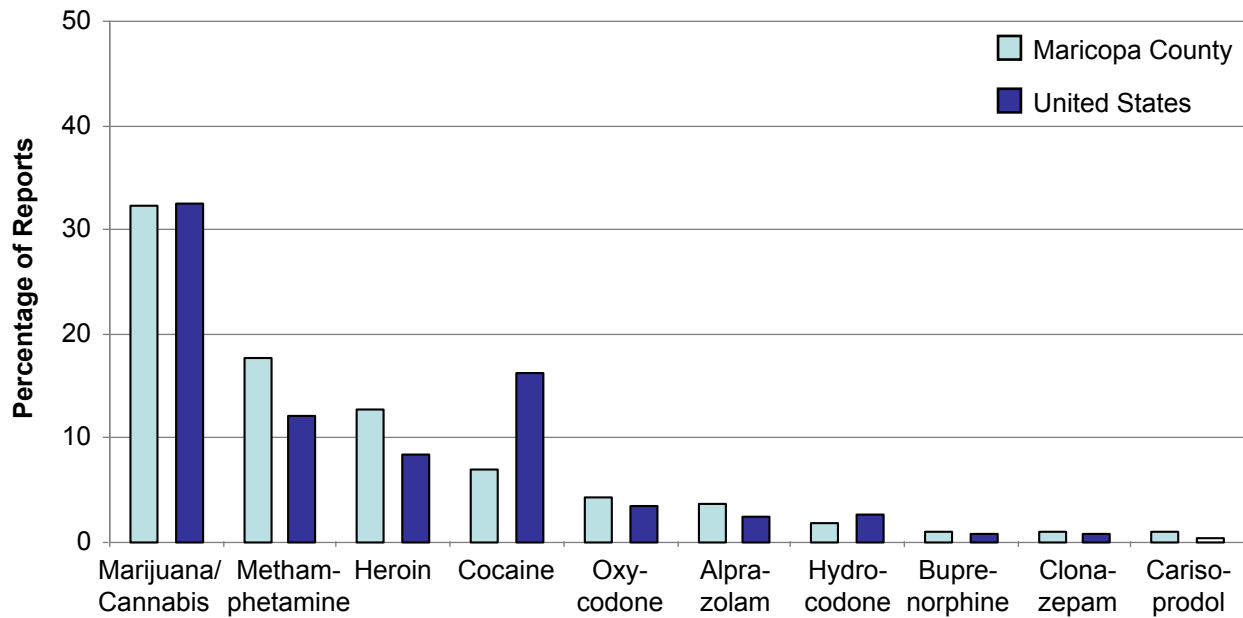
SOURCE: Arizona Youth High School Survey, Arizona Criminal Justice Commission

Exhibit 6. Number of Cocaine Poison Control Center Calls in Maricopa County (Phoenix Area): First Half (1H) 2010–Second Half (2H) 2012



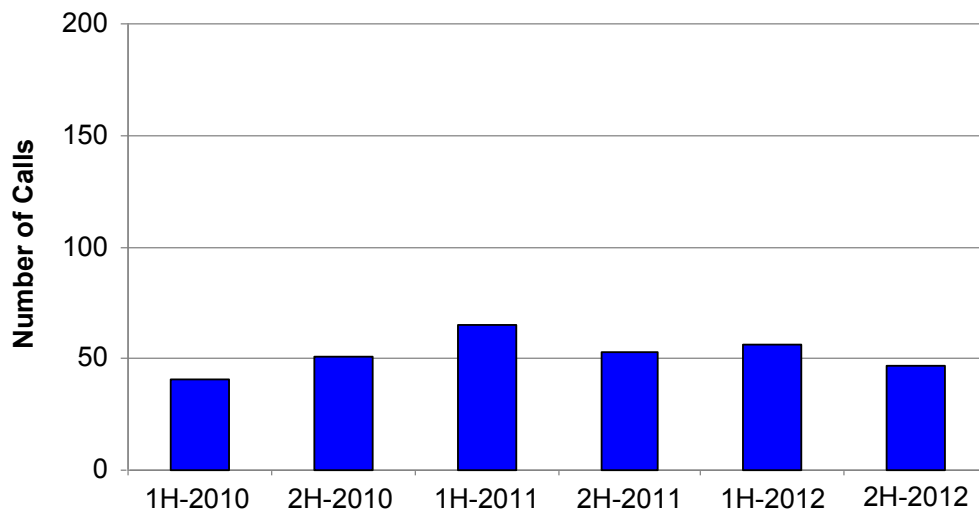
SOURCE: Banner Health: Banner Good Samaritan Poison and Drug Information Center

Exhibit 7. The 10 Most Common Drug Reports Among Drug Items Analyzed by NFLIS Laboratories in Maricopa County and in the United States, as a Percentage of Total Reports: 2012



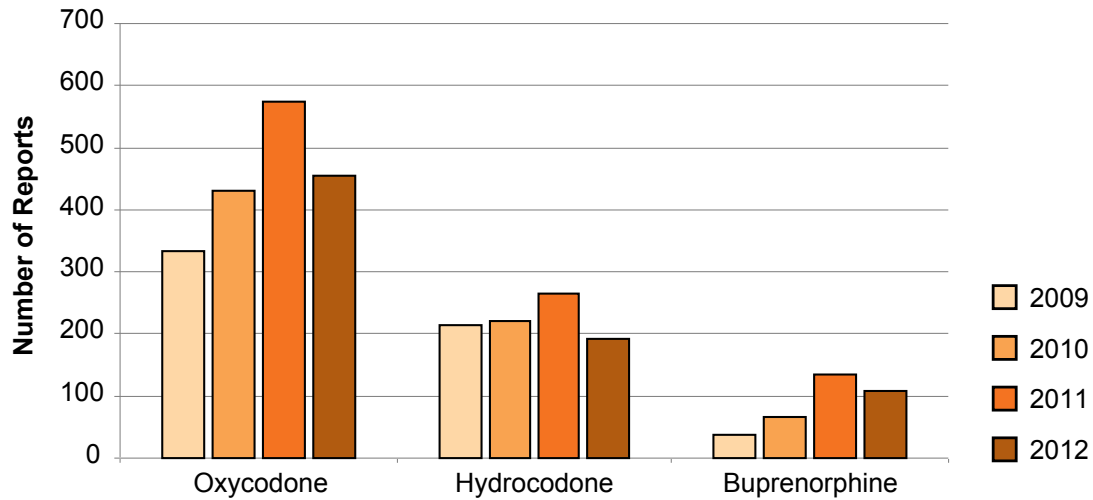
SOURCE: NFLIS, DEA

Exhibit 8. Number of Heroin Poison Control Center Calls in Maricopa County (Phoenix Area): First Half (1H) 2010–Second Half (2H) 2012



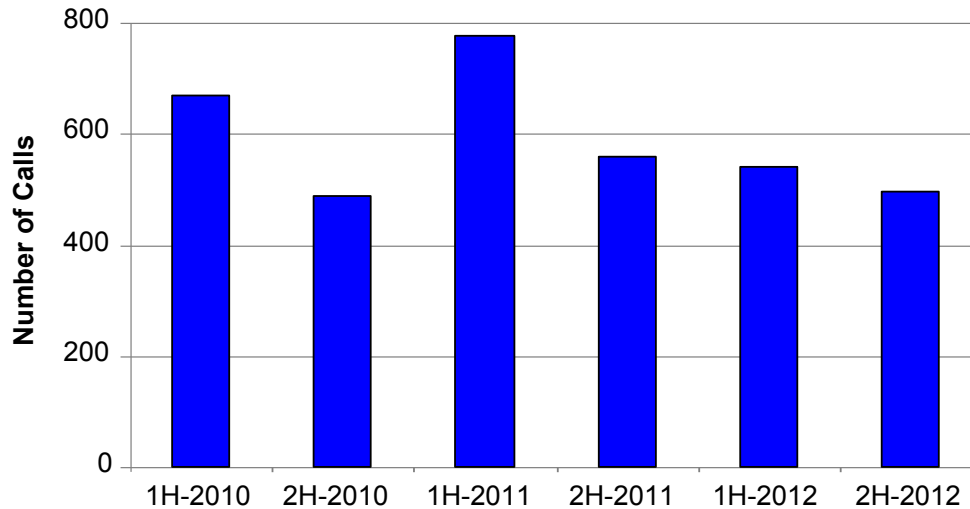
SOURCE: Banner Health: Banner Good Samaritan Poison and Drug Information Center

Exhibit 9: Number of Oxycodone, Hydrocodone, and Buprenorphine Reports Among Drug Items Analyzed by NFLIS Laboratories in Maricopa County (Phoenix Area): 2009–2012



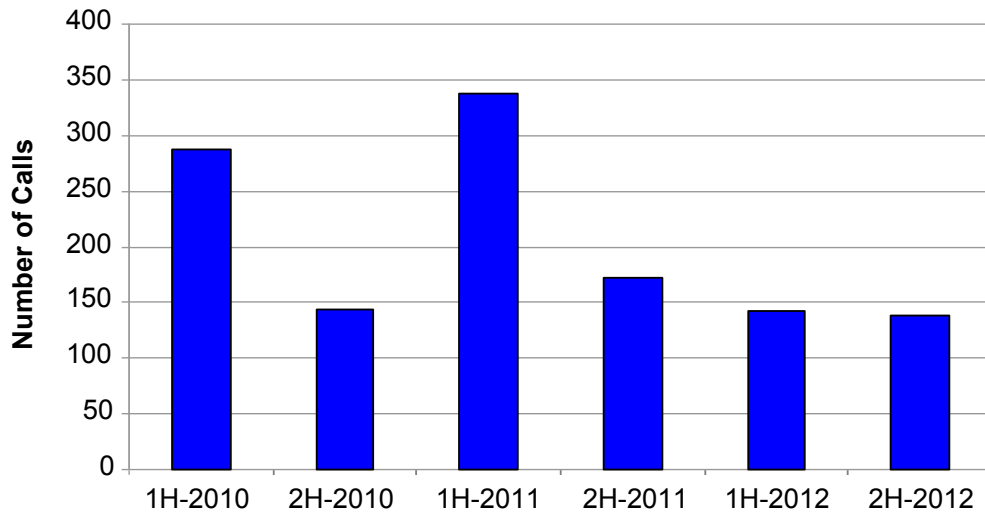
SOURCE: NFLIS, DEA

Exhibit 10. Number of Opioid (Other than Heroin) Poison Control Center Calls in Maricopa County (Phoenix Area): First Half (1H) 2010–Second Half (2H) 2012



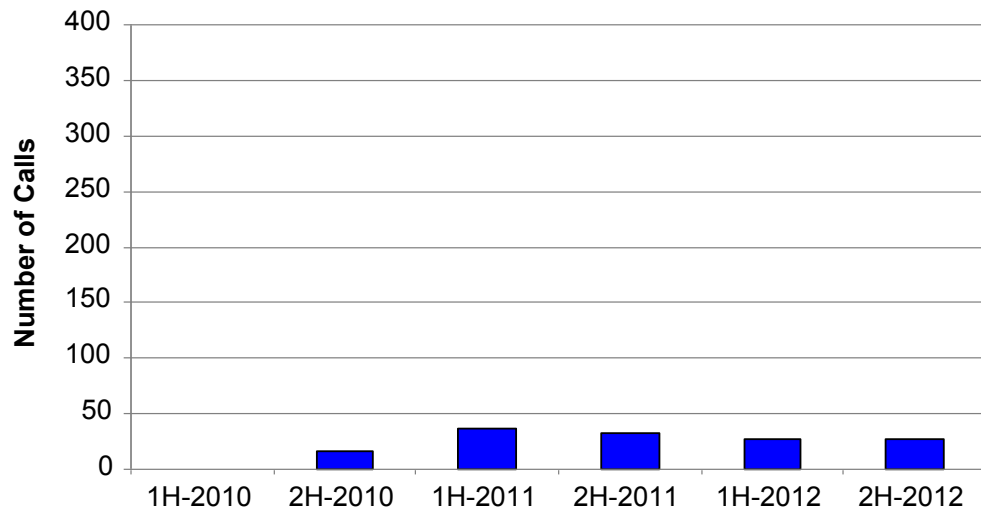
SOURCE: Banner Health: Banner Good Samaritan Poison and Drug Information Center

Exhibit 11. Number of Oxycodone Poison Control Center Calls in Maricopa County (Phoenix Area): First Half (1H) 2010–Second Half (2H) 2012



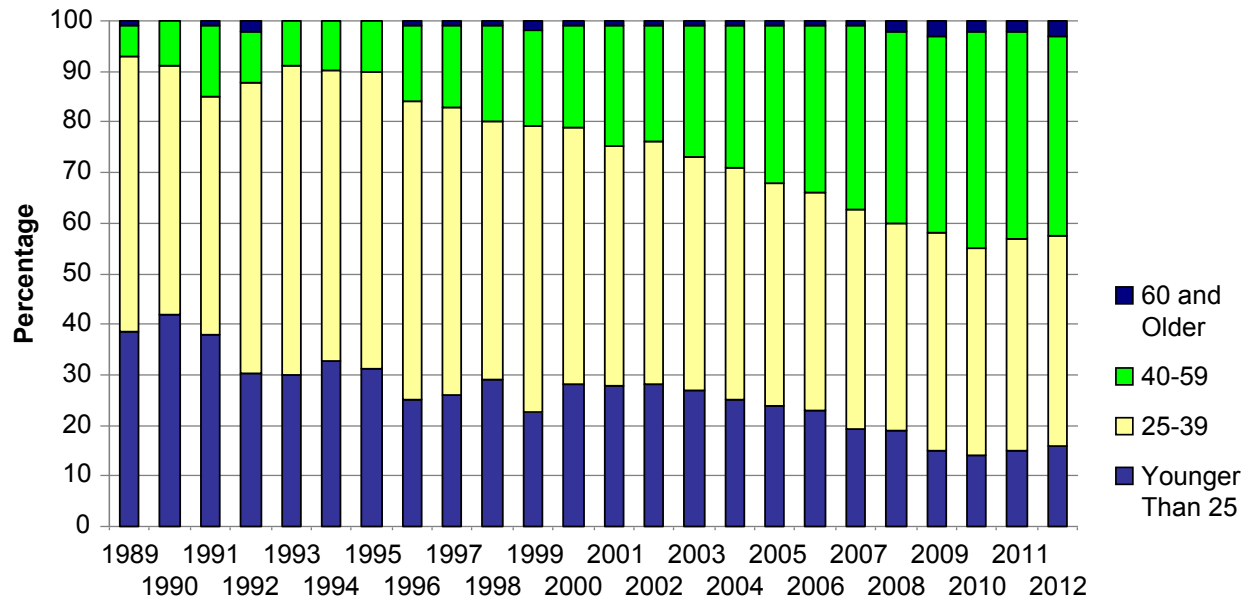
SOURCE: Banner Health: Banner Good Samaritan Poison and Drug Information Center

Exhibit 12. Number of Buprenorphine Poison Control Center Calls in Maricopa County (Phoenix): First Half (1H) 2010–Second Half (2H) 2012



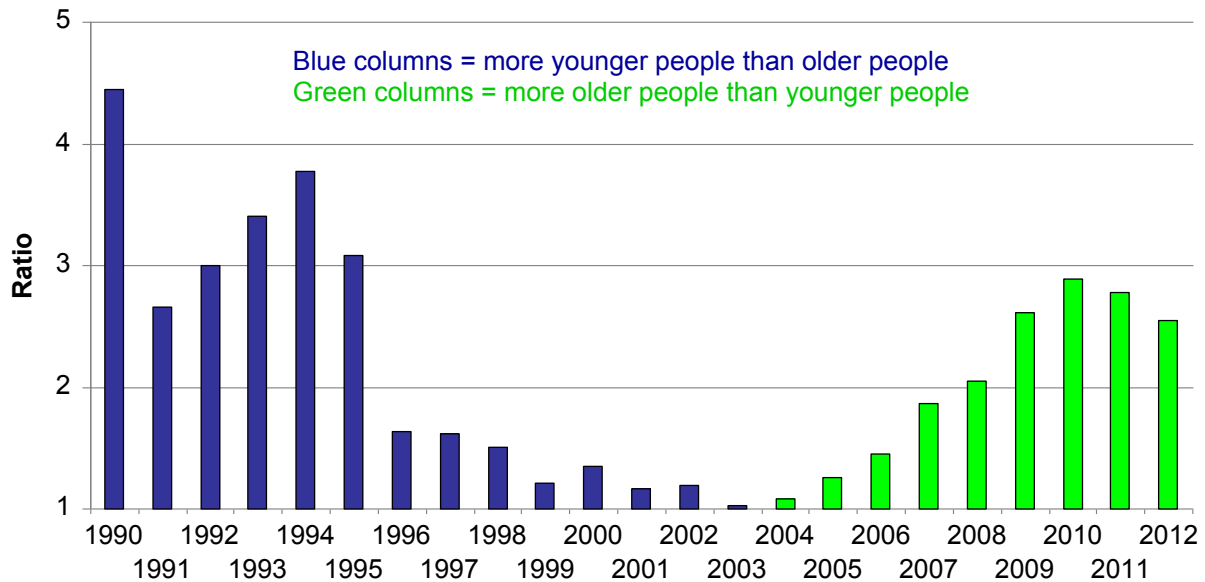
SOURCE: Banner Health: Banner Good Samaritan Poison and Drug Information Center

Exhibit 13. Percentage of Amphetamine-Related Hospital Admissions, by Age Group, in Maricopa County (Phoenix Area): 1989–2012



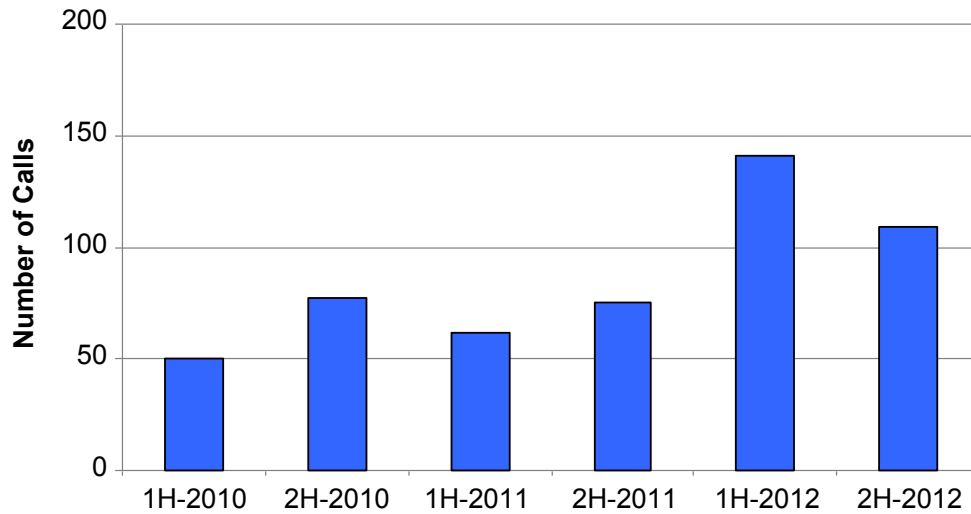
SOURCE: Arizona Hospital Discharge Data System, Arizona Department of Health Services; analysis by the University of Arizona Department of Family and Community Medicine

Exhibit 14. Ratios of Amphetamine-Related Hospital Admissions in Maricopa County for Those Younger Than 25 at Time of Admission and Those Age 40–59: 1990–2012



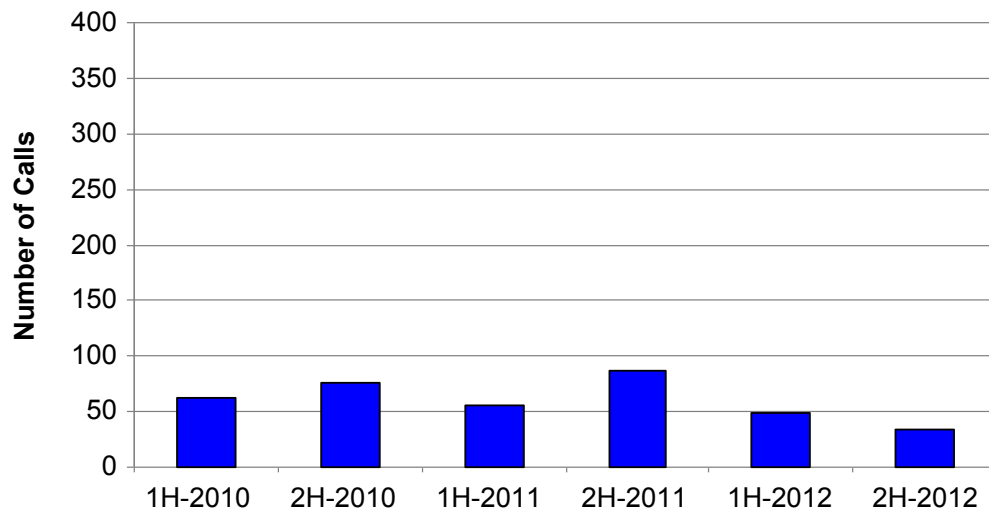
SOURCE: Arizona Hospital Discharge Data System, Arizona Department of Health Services; analysis by the University of Arizona Department of Family and Community Medicine

Exhibit 15. Number of Amphetamine Poison Control Center Calls in Maricopa County (Phoenix Area): First Half (1H) 2010–Second Half (2H) 2012



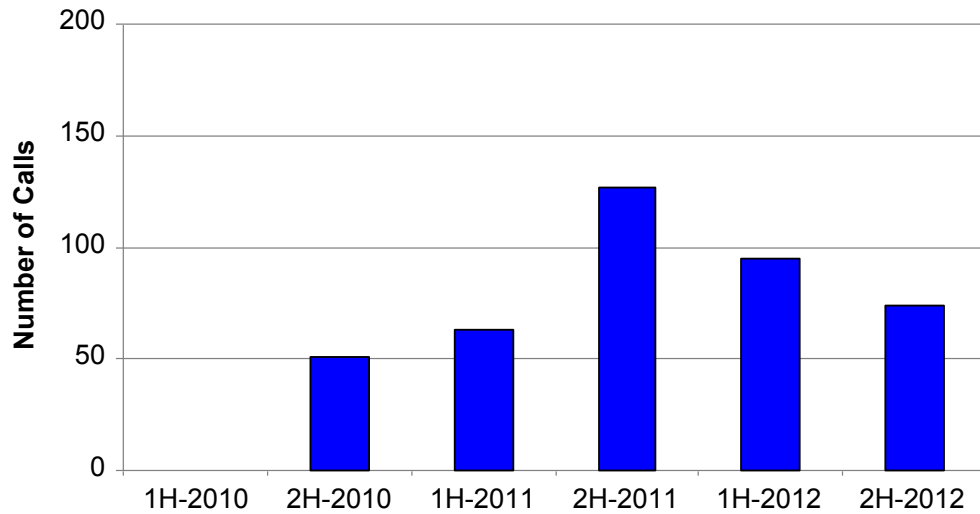
SOURCE: Banner Health: Banner Good Samaritan Poison and Drug Information Center

Exhibit 16. Number of Marijuana Poison Control Center Calls in Maricopa County (Phoenix Area): First Half (1H) 2010–Second Half (2H) 2012



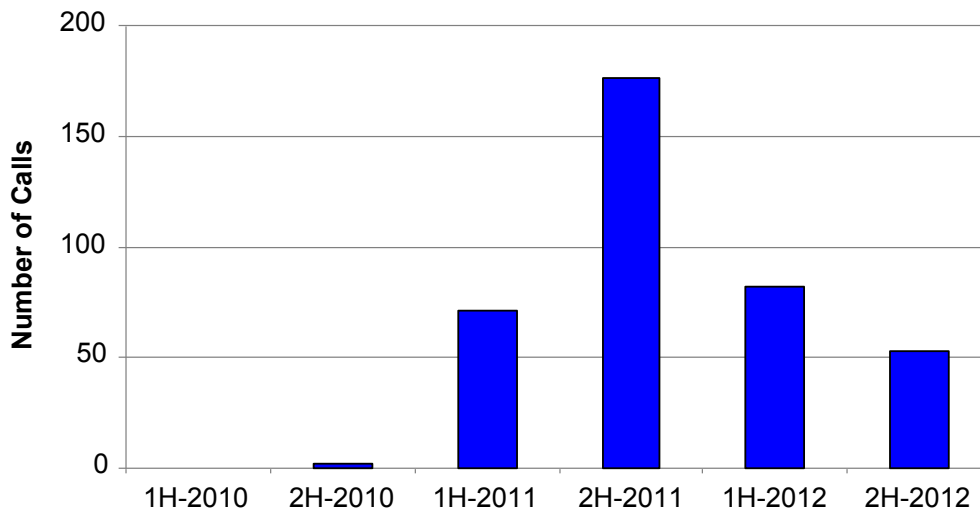
SOURCE: Banner Health: Banner Good Samaritan Poison and Drug Information Center

Exhibit 17. Number of THC Homolog (“Spice”/“K2”) Poison Control Center Calls in Maricopa County (Phoenix Area): First Half (1H) 2010–Second Half (2H) 2012



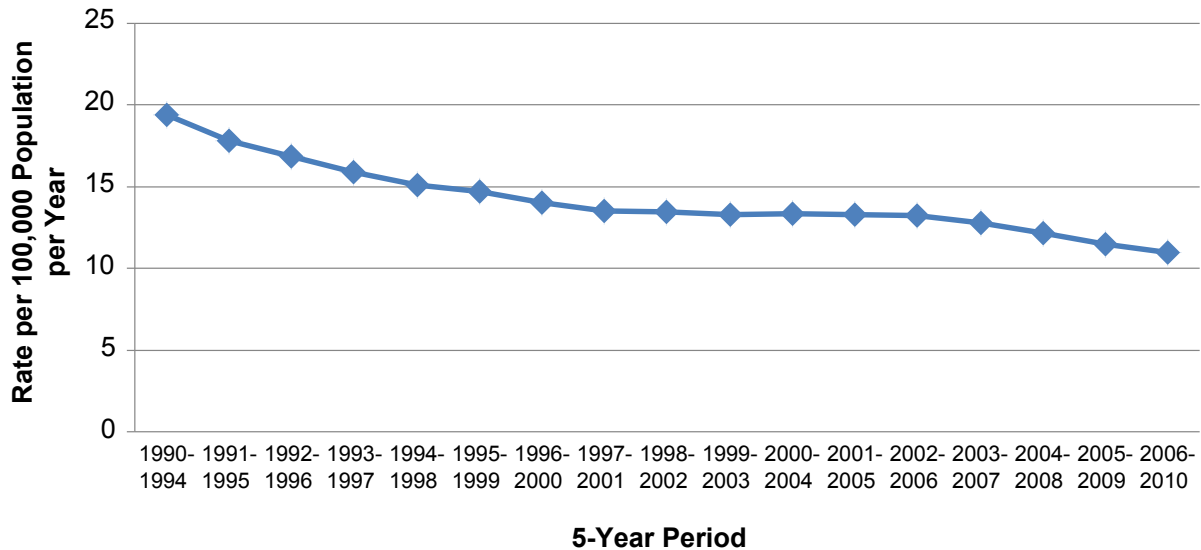
SOURCE: Banner Health: Banner Good Samaritan Poison and Drug Information Center

Exhibit 18. Number of “Bath Salts” (Substituted Cathinones) Poison Control Center Calls in Maricopa County (Phoenix Area): First Half (1H) 2010–Second Half (2H) 2012



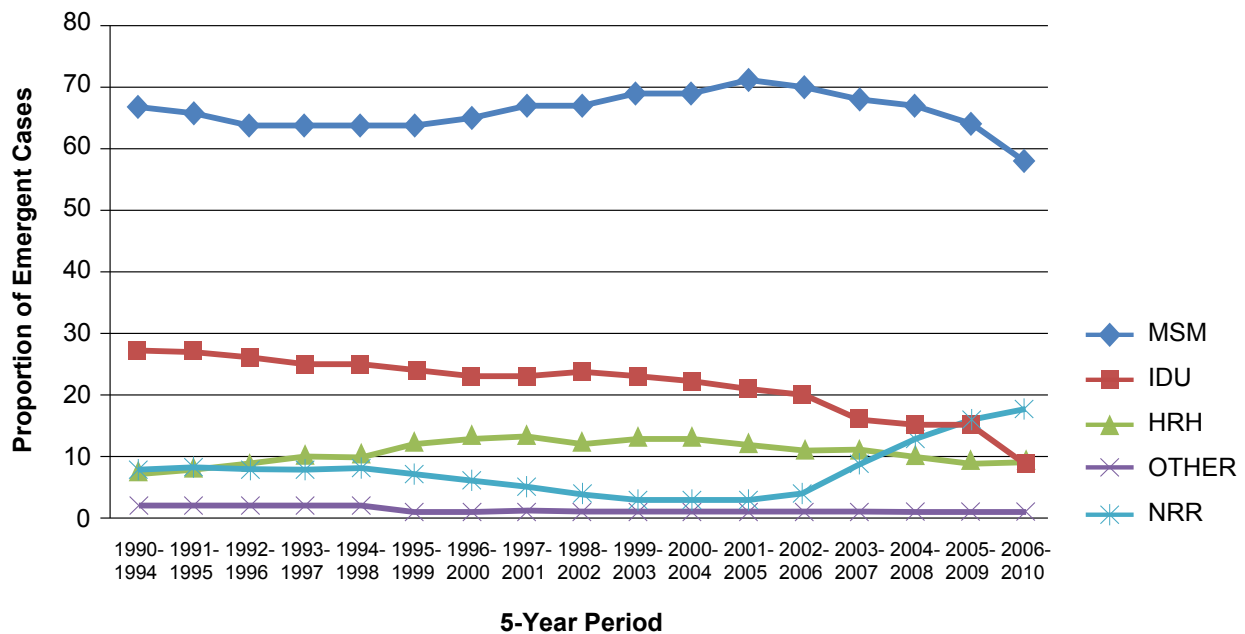
SOURCE: Banner Health: Banner Good Samaritan Poison and Drug Information Center

Exhibit 19. Five-year Emergent HIV/AIDS Case Rate per 100,000 Population per Year in Arizona: 1990–2010



SOURCE: Arizona Department of Health Services

Exhibit 20. Estimated 5-Year Emergent HIV/AIDS Rates per 100,000 per Year, by Reported Risk, in Arizona: 1990–2010



Note: MSM=men who have sex with men; IDU=injection drug user; HRH=high-risk heterosexual; NRR=no reported risk.
 SOURCE: Arizona Department of Health Services

Patterns and Trends in Drug Abuse in St. Louis, Missouri: 2012

Heidi Israel, Ph.D., A.P.N., F.N.P., L.C.S.W.¹

ABSTRACT

Key findings in the St. Louis area included changes in the heroin/cocaine picture (along with a media focus and grass-roots efforts with heroin) and methamphetamine problems, including a high number of clandestine laboratories. Heroin availability and its widespread presence in the St. Louis rural and suburban areas continued to be a concern in 2011. Two types of heroin were available in the St. Louis Metropolitan Statistical Area—Mexican black tar and Mexican off-white powder. The proportion of St. Louis area primary treatment admissions for heroin exceeded those for alcohol. The number of deaths involving heroin remained high and were identified in rural medical examiner (ME) data as well as in metropolitan area data. All sources (from school surveys and emergency department visits to law enforcement data) have reported access to heroin to be consistent, with the drug at high purity. Methamphetamine indicators remained low but stable in St. Louis City; access in rural areas was reported and noted in death data and statewide treatment data. The number of methamphetamine clandestine laboratories remained high. Social networks using “cooks” continued to produce small amounts of the drug locally. Methamphetamine from Mexico and the Southwest supplied most of the methamphetamine in the city and county of St. Louis and the surrounding five Missouri counties. Crack cocaine, formerly the major stimulant problem in the area, continued to decrease in all indicators for 2012 but remained available, particularly in the city. Marijuana indicators remained stable in 2012. Reports of “club drug” abuse continued to be sparse, primarily through anecdotal reports of MDMA (3,4-methylenedioxy-methamphetamine) use and a few GHB (gamma hydroxybutyrate), PCP (phencyclidine), and ketamine ME cases. “Bath salts” (substituted cathinones) have been noted in poison control center reports; their use and deaths involving them decreased with new control legislation. In the St. Louis area, less than 5 percent of human immunodeficiency virus (HIV) cases had a primary risk factor of injection drug use, with most new cases identified among men who have sex with men (79.1 percent) and women of color who contracted it through heterosexual contact (17.2 percent).

INTRODUCTION

Area Description

The St. Louis Metropolitan Statistical Area (MSA) includes approximately 2.2 million people. Most of the population lives in the city of St. Louis and St. Louis County; others live in the surrounding rural Missouri counties of Franklin, Jefferson, Lincoln, St. Charles, and Warren. Redefinition of the MSA has resulted in an area that includes a total of eight Missouri counties and eight Illinois counties,

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reflecting the population sprawl since the last U.S. Census. St. Louis City's population continued to decrease to less than 350,000, many of whom are indigent and minorities. However, revitalization, with an increase in young professionals, has led to conflicts with marginalized populations in the city. Most violent crime statistics for the city remained stable in 2012. With severe budget cutbacks, it is impossible to sort out the reported decrease in crime and the lack of manpower to follow up on all cases. St. Louis County, which surrounds St. Louis City, has more than 1 million residents and is a mix of established affluent neighborhoods and middle- and lower-class housing areas on the north and south sides. The most rapidly expanding population areas are in St. Charles and Jefferson Counties in Missouri and St. Clair and Madison Counties in southern Illinois, which have a mixture of small towns and farming areas. The population in these rural counties totals more than 800,000. Living conditions and cultural differences between the urban and rural areas have resulted in contrasting drug use patterns.

Much of the information included in this report is specific to St. Louis City and County and the near surrounding rural counties, with caveats that apply to the total MSA. Anecdotal information and some medical examiner (ME) data and treatment data are provided for rural areas surrounding St. Louis.

Policy Issues

Even with legislation for precursor drugs, such as pseudoephedrine, methamphetamine use and local production continued for several reasons. The policy cannot address the vast majority of methamphetamine imported from Mexico and the social networks that produce smaller amounts of methamphetamine. Attention is now focused on heroin, prescription opiates, and marijuana. The city has passed a decriminalization law making possession of small amounts of marijuana a "fine," which met with resistance from abstinence groups.

Missouri has been in a budget crisis for years, resulting in cuts in services, particularly in health services and those for drug treatment and mental health. Limited treatment availability continues for drug abusers and may underestimate the scope of the substance abuse problem when used as an indicator. Medicaid offers treatment services to women and children on a limited outpatient basis. The future funding of mental health and substance abuse treatment is the subject of potential cutbacks as the State attempts to balance its budget.

Data Sources

The data sources used in this report are listed below:

- **Drug treatment data** were derived from the Treatment Episode Data Set database for 2012. Private treatment programs in St. Louis County provided anecdotal information.
- **Drug price and purity information** was provided by the Drug Enforcement Administration (DEA), Domestic Monitor Program (DMP), through 2012, and the National Drug Intelligence Center (NDIC).
- **Drug-related mortality data** were provided by the St. Louis City and County ME Office for 2012.

- **Intelligence data** were provided by the Missouri State Highway Patrol; Aubrey Grant, Program Specialist/Policy Bureau, Office of the Illinois Attorney General; and the DEA.
- **Data on drug reports among drug items seized and analyzed in forensic laboratories** were provided by the DEA, National Forensic Laboratory Information System (NFLIS) for 2012. NFLIS methodology allows for the accounting of up to three drug reports per item submitted for analysis. The data are a combined count including primary, secondary, and tertiary reports for each drug item.
- **Client ethnographic information** was obtained from user/key informant interviews.
- **Human immunodeficiency virus (HIV), acquired immunodeficiency syndrome (AIDS), and sexually transmitted disease (STD) data** were derived from the St. Louis Metropolitan Health Department and the Missouri Department of Health and Senior Services for 2011.
- **Methamphetamine clandestine incident information** for 2012 came from the Missouri State Highway Patrol.
- **Anecdotal reports** were provided by the DEA, local agencies that provide crisis interventions services, and the St. Louis County Toxicology Laboratory and Poison Control project.

DRUG ABUSE PATTERNS AND TRENDS

The poor city economy continued to foster drug abuse and distribution. Regionally, indicators for the major substances of abuse remained stable or decreasing in 2012. Cocaine availability, proportions of treatment admissions, and numbers of deaths decreased, while heroin availability and treatment admissions remained high and stable and deaths decreased substantially. Anecdotal information from the DEA and local agencies indicated that heroin use, purity, and availability have increased regionally, including rural and suburban areas surrounding St. Louis. Heroin indicators surpassed cocaine and marijuana indicators in treatment admissions data. Death data for St. Louis City and County showed decreases in heroin and other opiates over the past year. Two types of heroin continued to be available in the area; the heroin remained pure and less expensive than that which was available in previous years. St. Louis is a destination market and is subject to all the changes that occur in the supply chain. Heroin is also cheaper and easier to obtain for addicted users.

Fentanyl, methadone, oxycodone, and hydrocodone continued to be reported in ME and treatment admissions data. Prescription narcotic analgesics were reported to be available in the more rural areas of the MSA.

Methamphetamine indicators were mixed in 2012, but methamphetamine indicators remained high as a drug of abuse in cities other than St. Louis and in the rural areas of Missouri. The influence of the distribution networks and combining of distribution networks for cocaine and heroin has led to increased availability throughout the region. Clandestine laboratories reached their highest number in 2011. Deaths overall were higher than in previous years.

Marijuana continued to be a very popular drug of abuse among younger adults. Gangs continued to be involved in the drug trade and related violence, with Latino, African-American, and Asian youth

and young adults involved in these groups. Interdiction programs are active in the city and along major interstate highways.

The use of “bath salts” (substituted cathinones), which has been widely publicized, has decreased dramatically due to an aggressive legislative and enforcement campaign. Prescription narcotics, hypothesized to contribute to younger users’ introduction into the heroin culture, and diversion of prescription drugs have changed the past picture of the urban and suburban drug user.

Drug education and prevention activities have continued at the community level, particularly about heroin and its effects. The National Council on Alcoholism and Drug Abuse and other local education programs target prevention of drug use in the area. Faith-based initiatives are also involved in prevention. These groups are particularly active in the surrounding counties of St. Louis.

Alcohol and other categories remained more stable. While not reported separately, alcohol abuse and underage use of alcohol continued to be community concerns. Many of the polydrug deaths and personal violence incidents have included alcohol use. In St. Louis, in 2012, 31.7 percent of treatment admissions were for alcohol alone.

Crack/Cocaine

The ME data report for 2012 for the St. Louis area showed that deaths in which cocaine was involved were decreasing, with a decline in the number of such deaths from 167 in 2007 to 49 in 2012 (exhibit 1). Cocaine was the fourth most common primary drug of abuse among all treatment admissions in 2012, following heroin, alcohol, and marijuana. This represents a change for the region over the past 7 years, as the numbers of primary cocaine admissions have decreased, while admission numbers for drugs such as heroin have increased. Cocaine represented 8.2 percent of admissions (5.9 percent for crack), compared with 16.9 percent for marijuana and 34.2 percent for heroin admissions (exhibit 1). In 2012, males constituted 66.5 percent and females constituted 33.5 percent of cocaine admissions. Of these cocaine treatment clients, 83.6 percent were older than 35. Marijuana, heroin, and alcohol were the most frequently cited secondary and tertiary drugs of abuse among primary cocaine admissions in 2012.

While the DEA’s emphasis in the St. Louis area has shifted from cocaine to methamphetamine and heroin, reports from law enforcement sources, the DEA, and street informants indicated increasing quality and availability for cocaine, with continuing higher prices in urban St. Louis (exhibit 2). The price per rock was reported to be climbing. Anecdotal information indicated that all cocaine in St. Louis is initially in powder form and is converted to crack for distribution. In the past, cocaine was readily available on the street corner in rocks or grams, but this picture was changing. No new information was available on cocaine pricing in Kansas City and smaller cities outside St. Louis.

NFLIS data indicated that 1,568 (9.1 percent) drug reports among drug items seized and identified in NFLIS laboratories 2012 for the St. Louis MSA were identified as containing cocaine. This placed cocaine as the third most frequently identified substance in the NFLIS system during 2012, a lower ranking than in previous reporting periods.

Most primary cocaine treatment clients (87.7 percent) reported smoking crack cocaine in 2012. A decrease in the use of combined cocaine and heroin (“speedball”) by injection drug users (IDUs) has been noted anecdotally, but that has been replaced with many other combinations (such as

cocaine with methamphetamine or other opiates). Polydrug use was also evident in the treatment data. The reported use of marijuana, heroin, and alcohol in addition to cocaine suggested this trend will likely continue.

Heroin

Heroin was mixed in the St. Louis area in all indicators in 2012 (exhibit 1). The ME data report for 2012 showed a decrease in heroin-related deaths in an area covering St. Louis City and St. Louis County and rural counties of Franklin, Jefferson, and St. Charles. The ME identified 206 heroin-related deaths, down from 310 in 2011. Of these deaths, 28 percent were younger than 30; 70 percent were Caucasian. There were 81 deaths in the city and 79 heroin-related deaths in St. Louis County. Of the total heroin deaths, 36 were reported from Jefferson, Franklin, and St. Charles Counties. While these numbers are similar to the 2009 death total, the availability and purity of heroin is much higher. In 2009, heroin was identified in 180 deaths in St. Louis City and County. In 2008, heroin was present in 137 deaths, while in 2007 and 2006, heroin was present in 65 and 47 deaths, respectively, in St. Louis. Even with the decreased availability of cocaine, a small percentage of these deaths represented use of heroin and cocaine together, many times also mixed with alcohol.

Heroin availability and purity began to climb in late 2008. Prior to that increase in availability and purity, heroin was found among small pockets of IDUs. With this increase in deaths and spreading use, many communities became alarmed. Grassroots public awareness efforts may be responsible for an effect with the young potential new user.

Heroin treatment admissions in 2012 represented 34.2 percent of all admissions; this proportion exceeded those for alcohol admissions. A trending upward began in 2006, when heroin admissions increased by 15.5 percent from 2006 to 2007; such admissions grew by another 49.0 percent in 2008. In 2009, treatment admissions continued to climb among clients younger than 35. In 2012, 65.6 percent of heroin treatment admissions were younger than 35 (although this was slightly lower than in the previous 2 years), and 21.6 percent were younger than 25 (exhibit 1). Admissions to some available treatment depended on ability to pay. Some heroin abusers in need of treatment utilized private pay methadone programs. Rapid detoxification, using naltrexone or buprenorphine, is a treatment option at private centers, but it is expensive. Some younger users were reporting initial addiction to prescription pain pills prior to starting to use heroin. Of the methods of administration, 65.6 percent of heroin treatment clients reported injection use, a slight increase over 2011 (exhibit 1). Discussion of open-air markets indicates availability of heroin. This trending back to injection has not coincided with lower purity, but widespread experimentation in the use of the drug in social circles that previously would not use heroin has been reported throughout the region. The decrease in deaths, increase in treatment admissions, and consistently high purity of heroin presents a mixed picture of heroin currently. Among heroin treatment admissions, males accounted for 63.3 percent, while females represented 36.7 percent. Admissions for African-Americans were less common than those for White heroin abusers. Cocaine and marijuana were the most frequently cited secondary and tertiary drugs of abuse for heroin clients. Most heroin clients entering treatment referred themselves or were referred by the courts.

A steady supply of what is presumed to be Mexican heroin remained available; both the DEA and DMP made heroin buys in the region. Mexican black tar heroin purity was up from earlier reporting periods, to 40 percent pure in 2009. Purities of 20–55 percent pure have been reported for Mexican

brown powder or a slightly bleached version of this powder. The consistently higher purity in St. Louis has allowed for expansion into a larger market with inexperienced users. Most heroin was purchased in a capsule (one-tenth-gram packages of heroin) for \$10–\$20 or as one-half-gram baggies that sold for \$100 each (exhibit 2). Quetiapine (Seroquel®) has been identified as a cutting agent in many samples, as well as the standard cutting agents typically used (such as diphenhydramine).

The city of St. Louis is an end-user market and is dependent on transportation of heroin from points of entry into the Midwest. The wholesale price remained at \$100–\$400 per gram, depending on heroin type. On street corners, heroin sold for \$150 per gram, according to anecdotal reports. In St. Louis and other smaller urban areas, small distribution networks sold heroin. Kansas City's heroin supply differed from that of St. Louis, due to trafficking source differences. Mexican black tar heroin was primarily available there. The lighter color, more potent heroin did not appear to be available in the Kansas City metropolitan area. Of the reports among drug items seized and identified by NFLIS laboratories in 2012, 14.0 percent were identified as containing heroin.

Other Opiates/Narcotics

Other opiates represented 3.4 percent of all treatment admissions in 2012. These admissions for abuse of other opiates seem to represent a decrease in treatment admissions, but this may also be the result of treatment availability and fewer treatment slots. Prescription opiates are believed to be linked to the introduction of younger users to the effects of opiates, possibly assisting in the fueling of heroin use by a wide range of users. No pharmacy database exists in Missouri to monitor these prescriptions.

Methadone remained available, due to prescription abuse as well as patient diversion. The two most frequently identified opiates, following heroin, among reports detected in drug items seized and analyzed by NFLIS laboratories in the St. Louis MSA were hydrocodone and oxycodone. NFLIS data for 2012 indicated that the proportion of hydrocodone reports from drug items seized and identified by forensic laboratories ranked sixth among all reports (2.9 percent), while oxycodone reports ranked seventh and represented 2.6 percent of the total reports identified among drug items.

OxyContin® (a long-lasting, time-release version of oxycodone) abuse remained a concern for treatment providers and law enforcement officials and was seen in emergency departments by patients requesting refills. Many emergency rooms have adopted refill policies for narcotics to prevent abuse. Abuse of oxycodone remained a concern in medical settings, where the drug is preferentially sought. The use of hydromorphone remained common among a small population of White chronic addicts, based on anecdotal information (exhibit 2).

Fentanyl continued to appear in ME data, with 25 deaths in St. Louis City and County and the 3 targeted rural counties (St. Charles, Jefferson, and Franklin) in 2012. Methadone overdoses were reported in 2012 in 36 cases. The use of illicit methadone versus prescription methadone has been difficult to quantify.

Benzodiazepines/Depressants

The remaining few private treatment programs in the State often provided treatment for benzodiazepine admissions, antidepressant clients, and primary alcohol abusers. Social setting detoxification and day hospitals have become the treatment of choice for individuals who abuse these substances.

Since many of the private treatment admissions were polysubstance abusers, particular drug problems were not clearly identified.

Stimulants/Methamphetamine

Methamphetamine (“crystal” or “speed”), along with alcohol, remained a primary drug of abuse in both the outlying rural areas and statewide (most of Missouri, outside of St. Louis and Kansas City, is rural). Methamphetamine continued to be identified as a problem in rural communities. The drug appeared regularly in treatment data in rural areas, but methamphetamine has been identified as a problem in all parts of the State. Primary treatment admissions for methamphetamine in 2012 in St. Louis represented 3.4 percent of total admissions ($n=437$), compared with 2.5 percent in 2011 ($n=320$) (exhibit 1). While the treatment admission numbers have increased gradually over the past few years in St. Louis, methamphetamine is available and used at higher levels in other parts of the State. Males entering treatment for methamphetamine (at 53.7 percent) slightly outnumbered females (46.3 percent) (exhibit 1). Marijuana and alcohol and some heroin were the most frequently cited secondary and tertiary drugs of abuse among these clients. Clients entering treatment were typically self-referred. The number of reported methamphetamine deaths remained low, but the 27 deaths reported in the region by the ME represented an increase. Some African-American use of methamphetamine was reflected in these reported deaths. In other parts of the State, methamphetamine use increased 8 percent in the St. Louis region in the second half of 2012, compared with increases of 3 percent in northwest Missouri and 5 percent in southeast Missouri. Treatment admissions were much higher in other parts of the State in 2012: there were 839 methamphetamine admissions in central Missouri, 1,747 admissions in the northwestern region, 1,224 admissions in the southeastern region, and 1,878 admissions in the northwestern region.

Statewide, 1,985 clandestine laboratories were identified in Missouri in 2012, with many of these laboratories located in the rural counties surrounding St. Louis. Missouri continued to rank first in the country for clandestine laboratories, even after Senate Bill 10, the pseudoephedrine control law, came into effect in July 2005.

Hispanic traffickers were the predominant methamphetamine distributors in St. Louis. Shipments from “super laboratories” in the Southwest were trucked in on the interstate highway system. This network contrasts with the local “mom and pop” laboratories that fueled much of the methamphetamine debate in the State over the past 10 years. The purity of the methamphetamine obtained through this source has improved in recent years. Crystallized methamphetamine was available in Kansas City and outlying areas of the State, with some availability in St. Louis.

Mexican ice sold for \$100 per gram in St. Louis in 2012 and for as little as \$80–\$100 per gram in the Kansas City area (exhibit 2). NFLIS data for 2012 showed methamphetamine was present among 8.7 percent of drug reports among drug items seized and analyzed, ranking fourth.

Pseudoephedrine reports represented 2.1 percent of total reports among seized drug items analyzed during this period. Because methamphetamine is so inexpensive and appeals to a wide audience, it is likely that its use will continue.

Marijuana

Marijuana admissions in 2012 ($n=2,182$) accounted for 16.9 percent of all admissions in the St. Louis region; this may be related to heroin prevalence and treatment slot availability (exhibit 1). Marijuana, viewed by young adults as acceptable to use, was often combined with alcohol. Some prevention organizations reported resurgence in marijuana popularity, and a recent decrease in penalties in St. Louis City brought opposition from prevention organizations. The 25-and-younger age group accounted for 57.9 percent of primary marijuana treatment admissions in 2012. A large increase in the 12–17 age group entering treatment was seen in 2011, and this group represented 31.7 percent of treatment admissions in 2012. Increased THC (tetrahydrocannabinol) content of marijuana should not be ignored as a component of voluntary admissions.

Marijuana was available from Mexico or domestic indoor growing operations; marijuana from Mexico was classed as lower grade and less expensive (\$200–\$400 per ounce) (exhibit 2). Indoor production makes it possible to produce marijuana throughout the year; marijuana grown indoors was a higher grade and more expensive (\$400–\$600 per ounce). The going rate for an “eighth” (about 3.5 grams) was \$60. Marijuana prices in Illinois were similar. The Highway Patrol Pipeline Program monitors the transportation of all types of drugs on interstate highways. Much of the marijuana grown in Missouri is shipped out of the State. Marijuana was the most frequently identified substance among reports of drug items seized and analyzed by the NFLIS system in the St. Louis area in 2012.

Hallucinogens

PCP (phencyclidine) has been available in limited quantities in the inner city and has generally been used as a dip on marijuana joints. While PCP was not seen in quantity, it remained in most indicator data and police exhibits and as a secondary drug in two cases in the 2012 ME data. Most of the users of this drug in the inner city were African-American; it remained an indigenous drug of choice.

“Club Drugs”

Indicators for MDMA (3,4-methylenedioxymethamphetamine) and other “club drugs” indicated levels were low. The number of reports identified as MDMA among drug items seized and analyzed by NFLIS laboratories may support anecdotal reports (through special epidemiology projects on general substance use) of use of this substance in the St. Louis area. GHB (gamma hydroxybutyrate) and ketamine were noted in three cases in the 2012 ME data.

“Bath Salts” (Substituted Cathinones) and Synthetic Cannabinoids (Cannabimimetics)

“Bath salts” (substituted cathinone) sales have been legislated to stop sales in a number of communities, and good response to aggressive enforcement has closed “head shops” attempting to sell and repackage these substances. No reports were noted in the 2012 ME data. “K2” synthetic cannabinoids were reported in 149 exposure calls to Poison Control in 2012. This is in contrast with 286 exposure calls in 2011.

INFECTIOUS DISEASES RELATED TO DRUG ABUSE

HIV/AIDS

New seropositive HIV and AIDS cases among IDUs remained low in the St. Louis HIV region, which includes St. Louis City and County and Franklin, Jefferson, St. Charles, Lincoln, and Warren Counties (exhibit 3). In 2011, as in preceding years, the predominant number of new HIV cases occurred among men who have sex with men (MSM) (79.1 percent), followed by cases resulting from heterosexual contact (17.2 percent). The largest increases were found among young African-American females, who were infected through heterosexual or bisexual contact, and young homosexual African-American males. Of new HIV cases in the St. Louis region, African-American females and African-American males accounted for more than one-half of new cases. Increased specialized minority prevention and testing efforts have been initiated.

Of the total cases of persons living with HIV/AIDS ($n=5,308$) through 2011, the same primary exposure categories are reflected: MSM, representing approximately 79 percent, and heterosexual contact, accounting for approximately 17 percent. Among new cases from 2011, injection drug use was noted in 3.7 percent of HIV cases and 2.9 percent of AIDS cases (exhibit 3).

In the Centers for Disease Control and Prevention (CDC)'s Behavioral Risk Factor Surveillance System, 33.4 percent of adults age 18–64 had ever been tested for HIV. Significantly more African-Americans (57.2 percent) than Whites (29.9 percent) had been tested in the State of Missouri.

STDs and Hepatitis C

Increased efforts in more tertiary prevention and active education campaigns in the highest risk populations have been used in an attempt to change STD rates. This effort has been successful with syphilis in the past year. In addition, there is a law that allows providers to treat partners without an exam in person. Rates of gonorrhea have remained steady, as have chlamydia rates. The St. Louis Metropolitan Health Department reported 9,460 chlamydia cases and 2,686 gonorrhea cases during 2012. In addition, 235 cases of syphilis were diagnosed in 2012. The leveling off and decrease in some STDs is hypothesized to be due to better antibiotics, single-dose treatments, and better screening in the community. Syphilis/gonorrhea rates were high in neighborhoods known to have high levels of drug abuse and in the MSM cohorts, underscoring the concept of assortative mixing in cohorts. Exhibit 4 includes historic HIV and hepatitis C data for the immediate St. Louis City area.

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Exhibit 1. Indicators From Mortality and Treatment Admissions Data for Cocaine, Heroin, Marijuana, and Methamphetamine in St. Louis: 1996–2012 for Mortality Data and 2006–2012 for Treatment Admissions Data

Indicator	Cocaine	Heroin	Marijuana	Methamphetamine
Number of Deaths¹ by Year				
1996	93	51	NA ²	9
1997	43	67	NA	11
1998	47	56	NA	9
1999	51	44	NA	4
2000	66	47	NA	9
2001	75	20	NA	3
2002	76	50	NA	—
2003	78	61	NA	—
2004	38	64	NA	—
2005	106	31	NA	—
2006 ³	42	47	NA	—
2007 ³	167	65	NA	4
2008 ³	95	137	NA	7
2009	70	180	NA	1
2010	44	129	NA	3
2011	91	310	NA	21
2012	49	206	NA	27
Treatment Admissions Data				
Percent of all Admissions (2012)	8.2	34.2	16.9	3.4
Percent of all Admissions (2011)	10.8	31.4	19.1	2.5
Percent of all Admissions (2010)	10.6	26.5	21.5	2.8
Percent of all Admissions (2009)	12.0	22.5	21.3	2.5
Percent of All Admissions (2008)	17.8	18.8	23.7	2.7
Percent of All Admissions (2007)	22.8	15.5	20.3	2.5
Percent of All Admissions (2006)	25.6	13.2	22.7	3.0
Gender (%) (2012)				
Male	66.5	63.3	70.8	53.7
Female	33.5	36.7	19.2	46.3
Age (%) (2012)				
12–17	<0.1	<1.0	31.7	2.0
18–25	2.3	21.6	26.2	15.3
26–34	17.8	43.5	22.6	38.9
35 and Older	83.6	34.3	19.5	43.8
Route of Administration (%) (2012)				
Smoking	87.7	<1.0	100.0	39.8
Intranasal	7.5	33.2	0.0	7.6
Injecting	1.9	65.6	0.0	49.6
Oral/Other	2.9	1.0	0.0	3.0

¹Excludes rural deaths.

²NA=Not applicable.

³St. Louis City/County Medical Examiner's Office Data manual reports.

SOURCES: St. Louis City/County Medical Examiner's Office; TEDS database

Exhibit 2. Other Combined Indicators for Cocaine, Heroin, Marijuana, and Methamphetamine in St. Louis

Indicator	Cocaine	Heroin	Marijuana	Methamphetamine And Other Drugs
Multisubstance Combinations	Older users combine with heroin, alcohol	Available, Mix with cocaine, amphetamines, opiates, alcohol	Alcohol	Marijuana commonly used in combination, alcohol use
Market Data (2008–2012)	Powder \$200–\$400/g, 70% pure; crack \$20–\$40/rock	\$100/1/2 g baggie; \$10–\$20 per gel capsule; depending if MBP ¹ , SA ¹ ; \$200/g, 20–40 percent pure, street reports higher purity available	Low grade: \$200–\$400/oz; High grade (indoor grow, includes various types): \$1,400/oz	Methamphetamine \$100/g, Mexican (80 percent pure) and local (80 percent pure); Prescription opiates; no prescription monitoring data base; hydromorphone \$80/4-mg pill; OxyContin® \$20–\$40, Tramadol®, Percocet®, Vicodin®, Fentanyl
Qualitative Data ²	Increasing availability; increased urban choice	Younger users, 22% younger than 25, consistent availability and purity	Readily available, younger users in treatment (58%)	Rural/suburban users of amphetamine increase in deaths, larger rural treatment admissions
Other Data of Note	NR ³	MBP, Mex white—increased injection use, young users able to smoke/snort	NR	Methamphetamine local laboratories slightly down; laboratory seizures increase 2012: mom/pop laboratories; producers in super laboratories controlled by Hispanic groups

¹MBP=Mexican brown and white powder; SA=South American.

²Obtained from user/key informant interviews.

³NR=Not reported.

Note: g=gram; oz=ounce; mg=milligram.

SOURCES: DEA; NDIC; Client Ethnographic Information

Exhibit 3. Number and Percentage of Persons with HIV (New HIV/AIDS and Existing Cases), by Exposure Category, in the St. Louis Metropolitan Area: Through 2011

Exposure Category	New Cases HIV 2011 Number (Percentage)	Living with HIV Through 2011 Number (Percentage)	New Cases AIDS 2011 Number (Percentage)	Living with AIDS Through 2011 Number (Percentage)
MSM	129 (79.1)	1,826 (72.3)	50 (80)	1,936 (70.6)
IDU/MSM	9 (0)	68 (2.7)	0	110 (4.0)
IDU	6 (3.7)	88 (3.5)	2 (2.9)	156 (5.7)
Heterosexual	28 (17.2)	536 (21.2)	12 (17.1)	521 (19.0)
Hemophilia/ Coagulation Disorder	0	6 (0.2)	0	19 (0.7)
Blood Transfusion	0	1 (0)	1 (0)	0
Pediatric Population	1	25	0	14
Total	164	2,551	70	2,757

Note: MSM=men who have sex with men; IDU=injection drug user .
 SOURCES: St. Louis City Health Department; Missouri Department of Health

Exhibit 4. Number of New HIV and Hepatitis C Cases in St. Louis: 2002–2011

Year	Number of New HIV Cases	Number of New Hepatitis C Cases
2002	178	227
2003	197	488
2004	122	540
2005	171	512
2006	227	305
2007	198	1,217
2008	212	1,415
2009	259	1,252 ¹
2010	300	1,489 ¹
2011	234	1,805 ¹

¹St. Louis MSA.

SOURCES: St. Louis City Health Department; Missouri Department of Health

Drug Use and Abuse in San Diego County, California: 2011

Karla D. Wagner, Ph.D., and Silvia R. Verdugo, M.D.¹

ABSTRACT

Overall, a large amount of stability was observed when comparing drug indicators in San Diego County in 2012 with 2011. Despite the overall stability in all drugs and in all indicators for San Diego for 2012, a key finding was a gradual upward trend for heroin that differentiated it from other drugs. Methamphetamine indicators were largely stable for the second year, after declines observed since 2005. The number of primary methamphetamine treatment admissions was fairly stable at 3,990 in 2012, compared with 3,968 in 2011. The proportion of primary methamphetamine admissions was 29 percent for the past 3 years; in 2012, methamphetamine accounted for 28 percent of all treatment admissions. A notable exception to the overall stability in methamphetamine indicators was the proportion of arrestees testing positive for methamphetamine in 2012. Among adult male arrestees, 31 percent tested positive for methamphetamine, an increase of 5 percentage points from 2011. Among female arrestees, 47 percent tested positive, an 8-percentage-point increase from 2011. Among juvenile arrestees, prevalence was stable at 4 percent for the second year in a row. The number of overdose deaths involving amphetamine (including methamphetamine) was fairly stable at 116 in 2012, compared with 119 in 2011, and the rate remained fairly stable at 3.7 per 100,000. Methamphetamine ranked first among reports from drug items seized and analyzed in the National Forensic Laboratory Information System (NFLIS) laboratories; 39 percent of reports from the NFLIS laboratories tested positive for methamphetamine in 2012. Methamphetamine street prices were mostly stable. Marijuana indicators were largely stable, with the exception of small changes among arrestees and a decrease in the proportion of NFLIS reports. Primary marijuana treatment admissions were stable as a proportion of total treatment admissions (at 18.9 percent in 2012, compared with 18.4 percent in 2011). Marijuana ranked second in NFLIS data, representing 18 percent of reports—a decrease from 29 percent in 2011. Marijuana prevalence among adult male arrestees increased from 39 percent in 2011 to 42 percent in 2012, while prevalence decreased among juveniles, from 51 percent in 2011 to 47 percent in 2012. Cocaine indicators also remained stable at low levels in 2012. Primary treatment admissions for cocaine/crack were stable in both number (558 in 2012, compared with 577 in 2011) and proportion (4 percent in both 2012 and 2011). Prevalence among male adult arrestees was slightly higher (8 percent in 2012, compared with 6 percent in 2011), while prevalence among female adult arrestees was slightly lower (5 percent in 2012, compared with 7 percent in 2011). Prevalence among juvenile arrestees was just 1-percentage-point higher in 2012 compared with 2011. Cocaine ranked third among reports from drug items analyzed in NFLIS laboratories; 11 percent of primary, secondary, and tertiary reports contained cocaine. Street prices remained stable. Heroin indicators were generally stable from 2011, but unlike other drugs, a very gradual upward trend has been observed over the longer term. The number of primary treatment admissions increased

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from 3,019 in 2011 to 3,328 in 2012. The proportion of total primary treatment admissions increased by only 1 percentage point, to 23 percent in 2012. The number of overdose deaths decreased slightly, from 118 to 114, although the rate remained relatively stable at 3.6 per 100,000 (compared with 3.8 per 100,000 in 2011). Prevalence of heroin/opioid-positive test results among adult arrestees was 10 percent for males and 12 percent females, representing small increases from 2011 (when it was 9 percent among both males and females). Among juvenile arrestees, 3 percent tested positive in 2012, compared with 2 percent in 2011. Heroin ranked fourth among reports from drug items seized and analyzed by NFLIS laboratories, with 10 percent of primary, secondary, and tertiary reports testing positive for heroin. Drug treatment admissions data suggested abuse of prescription opioids was also stable, though a 1-percentage-point increase in the proportion of primary treatment admissions has been observed over the long term (4.6 percent in 2012, compared with 3.4 percent of primary treatment admissions in 2006).

INTRODUCTION

Area Description

San Diego County is the southwestern-most county of California and shares 80 miles of border with Mexico. The San Ysidro border crossing, which links San Diego with its sister city of Tijuana, Mexico, is the busiest border crossing in the world, accommodating approximately 40 million legal crossings annually. Both Tijuana and San Diego County are located on major drug trafficking routes that bring illicit drugs from Mexico and South America to the United States. In particular, San Diego is a major transshipment point for both methamphetamine and marijuana. San Diego County's total population was reported at more than 3 million in 2010 (exhibit 1). The county is home to a growing Hispanic (predominantly Mexican) population. Overall, 32 percent of county residents are Hispanic, and 48 percent are non-Hispanic White. Smaller proportions of the population are Asian and Pacific Islander (11 percent), non-Hispanic African-American (5 percent), American Indian (less than 1 percent), and other races/ethnicities (3 percent) (exhibit 1).

Data Sources

The data sources used in this report are listed below:

- **Arrestee data** were provided by the San Diego Association of Governments (SANDAG) Substance Abuse Monitoring (SAM) program, a regional continuation of the Federal Arrestee Drug Abuse Monitoring (ADAM) program that was discontinued in 2003. This report presents preliminary 2012 urinalysis-positive data for adult ($N=855$) and juvenile ($N=120$) arrestees.
- **Drug price data** came from the San Diego Law Enforcement Coordination Center's "Street Drug Price List (January 2013)," which reports on street-level drug buys conducted in San Diego County.
- **Forensic laboratory data** came from the National Forensic Laboratory Information System (NFLIS), Drug Enforcement Administration (DEA), for 2012. These data were queried on May 7, 2013. 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 current NFLIS data with those in CEWG reports prior to 2011.

- **Treatment data** were provided by the San Diego Department of Alcohol and Drug Programs (ADP) (tables produced by the California Department of Alcohol and Drug Programs) using the California Outcomes Measurement System (CalOMS). CalOMS is a statewide client-based data collection and outcomes measurement system for alcohol and other drug (AOD) prevention and treatment services. Submission of admission/discharge information for all clients is required of all counties and their subcontracted AOD providers, all direct contract providers receiving public AOD funding, and all private pay licensed narcotic treatment providers. Data for this report include admissions to San Diego County for the period January–December 2012. CalOMS was implemented in early 2006 (replacing the earlier California Alcohol and Drug Data System [CADDSS]); data reported for periods prior to July 2006 may not be comparable to more recent periods.
- **Mortality data** were obtained from the Emergency Medical Services Medical Examiner Database, which is maintained by the County of San Diego Health and Human Services Agency.
- **Acquired immunodeficiency syndrome (AIDS) data and human immunodeficiency virus (HIV) data** were taken from the San Diego County Health and Human Services Agency's 2012 *HIV/AIDS Epidemiology Report*. Data through December 31, 2011, are included in this report.

DRUG ABUSE PATTERNS AND TRENDS

Cocaine/Crack

Cocaine remained a low-level drug in San Diego County; from 2007 to 2010, most indicators signaled a decreasing trend. In 2011, indicators leveled a bit, and this steady or slightly decreasing trend continued in 2012. The number of primary cocaine treatment admissions was fairly stable at 558 in 2012, compared with 577 in 2011 (exhibits 2 and 3). Cocaine accounted for 3.9 percent of total admissions in 2012, compared with 4.2 percent in 2011. The demographic characteristics of cocaine users in 2012 were largely unchanged from 2011. Three-quarters (75.3 percent) of cocaine admissions in 2012 were age 35 or older; slightly more than two-thirds (67.6 percent) were male; and nearly two-thirds (64.5 percent) were African-American non-Hispanic. The majority (77.2 percent) reported smoking as their primary route of administration. A majority (69.9 percent) cited at least one secondary substance of abuse, most commonly alcohol (30.8 percent) or marijuana (22.6 percent) (exhibit 3).

Among adult arrestees, 8 percent of males and 5 percent of females tested urinalysis-positive for cocaine in 2011. This represented a 2-percentage-point increase for males and a 2-percentage-point decrease among females (exhibit 4). This is compared with a high of 11 percent among males and 16 percent among females in 2007. Juvenile prevalence increased by 1 percentage point to 3 percent in 2012.

Cocaine ranked third overall among reports from drug items seized and analyzed in NFLIS laboratories, with 11 percent of primary, secondary, and tertiary reports testing positive for cocaine (exhibit 5). Cocaine prices in San Diego County have remained relatively stable since 2008 (exhibit 6).

Heroin

Overall, heroin indicators in 2012 were relatively stable when compared with 2011, but unlike other drugs in San Diego County, heroin indicators suggest a gradual upward trend since 2006. There were 3,328 primary treatment admissions for heroin in 2012, accounting for 23.1 percent of all treatment admissions (exhibits 2 and 3). This compares with 3,019 primary heroin admissions (22.0 percent) in 2011 and 2,969 primary heroin treatment admissions (21.4 percent) in 2010. Clients admitted to treatment in 2012 for heroin were predominantly male (70.9 percent) and were mostly White non-Hispanic (63.4 percent). Treatment admissions data suggested that individuals admitted to treatment for heroin were increasingly younger. Clients younger than 35 constituted the majority (65.9 percent) of heroin admissions in 2012. This proportion was stable since 2011 (65.6 percent), but it represents a longer-term gradual trend, increasing from 63.2 percent in 2010 and 55.7 percent in 2009. Although not as dramatic as the long-term changes in age composition of heroin admissions, the primary route of administration also appears to be changing over the long term, with a smaller proportion of primary admissions reporting injection as their preferred route. The proportion of heroin admissions reporting injection as their primary route of administration in 2012 was 71.7 percent, compared with 69.0 percent in 2011, 72 percent in 2010, 75 percent in 2009, and 78 percent in 2008. Almost two-thirds (62 percent) of heroin admissions reported at least one secondary drug of abuse. The most common secondary drugs reported were methamphetamine (27.3 percent), marijuana (11.2 percent), alcohol (8.0 percent), and cocaine/crack (5.4 percent) (exhibit 3).

Heroin/opiate urinalysis-positive prevalence among adult arrestees was 10 percent among males and 12 percent among females in 2012. This represents an increase of 1 percentage point among males and 3 percentage points among females since 2011 (exhibit 4). Among juvenile arrestees, 3 percent tested positive for heroin/opiates in 2012, compared with 2 percent in 2011 and 5 percent in 2010. It should be noted that the urine test upon which this indicator is based cannot discern between heroin and prescription opioids. Heroin ranked fourth among reports from drug items seized and analyzed in NFLIS laboratories, with 10 percent of primary, secondary, and tertiary reports identified as heroin (exhibit 5).

In 2012, there were 114 overdose deaths involving heroin/morphine in San Diego County, compared with 118 in 2011, 105 in 2010, and 118 in 2009. In 2012, the rate of drug overdose deaths involving heroin/morphine was 3.63 per 100,000 population; the rate of overdose deaths has remained fairly stable since 2007 (exhibit 7). Overdose deaths are based on preliminary Medical Examiner data, so the number could change as more cases are closed.

Changes in the street price of heroin were mixed in 2012. Slight increases in the upper end of the price of one-quarter gram were observed (from \$25–\$30 in 2011 to \$25–\$40 in 2012), and slight decreases occurred in the upper end of the pound price (from \$8,000–\$12,000 in 2011 to \$8,000–\$11,500 in 2012) (exhibit 6).

Oxycodone and Other Prescription Opioids/Synthetics

There were 670 treatment admissions for oxycodone and other opioids/synthetics in 2012, representing 4.7 percent of all admissions. This is compared with 580 treatment admissions (4.2 percent) in 2011 and 576 (4.1 percent) in 2010 (exhibits 2 and 3). Of the 2012 admissions for prescription opioids, 318 admissions were for oxycodone/OxyContin®, and 352 were for other opioids/synthetics.

The number and proportion of oxycodone admissions has been gradually decreasing since 2008, while the number and proportion of other opioids/synthetics has been gradually increasing. In 2012, both classes of prescription opioids increased slightly. In 2012, primary treatment admissions for prescription opioids were about one-half male (54.8 percent). Fifteen percent of admissions for prescription opioids were younger than 26; 37.6 percent were age 26–34; and 45.8 percent were age 35 or older. The majority (74 percent) reported White non-Hispanic race/ethnicity. The majority reported oral administration (86.6 percent), although some admissions reported sniffing (7.0 percent), injection (3.1 percent), or smoking (2.5 percent) as their preferred route of administration. Forty-nine percent of primary admissions reported no secondary drug of abuse, compared with 60 percent in 2011. The most commonly reported secondary drugs were heroin and marijuana, at 8.4 percent each.

Of the drug reports identified among items seized and analyzed by NFLIS laboratories for San Diego County in 2012 (exhibit 5), 402 (3 percent of all reports) were identified as hydrocodone. Hydrocodone ranked fifth among total drug reports identified in 2012, behind methamphetamine, marijuana/cannabis, cocaine, and heroin. Also identified were 285 oxycodone reports (2 percent of total reports), ranking oxycodone sixth. Morphine, buprenorphine, methadone, codeine, and hydro-morphone each represented 1 percent or less of reports in 2012.

Methamphetamine

Methamphetamine indicators were mixed in 2012, showing stability in the number and proportion of treatment admissions and overdose deaths, but increases in the proportion of adult arrestees testing positive. The number of methamphetamine primary treatment admissions indicated a long-term decline from 5,547 in 2006 to 3,968 in 2011, which stabilized in 2012 with 3,990 primary admissions (exhibit 2). The proportion of primary treatment admissions for methamphetamine decreased by 1 percentage point to 28 percent in 2012, following 3 years in which methamphetamine accounted for 29 percent of admissions. Nonetheless, primary methamphetamine treatment admissions continued to account for the highest proportion of treatment admissions in San Diego in 2012 (27.7 percent). The demographics of primary methamphetamine admissions have been fairly stable since 2010. A majority of the methamphetamine treatment admissions were male (58.1 percent) in 2012. Almost one-half (49.0 percent) were non-Hispanic White, and 34.9 percent were Hispanic, showing an overall racial and ethnic distribution similar to that of the San Diego population. The most common route of administration reported by primary methamphetamine admissions was smoking (72.4 percent), followed by injection (18.9 percent). More than two-thirds of clients (65.1 percent) reported at least one secondary drug of abuse. The most common secondary drug among primary methamphetamine clients was marijuana (28.2 percent), followed by alcohol (23.6 percent) (exhibit 3).

The prevalence of methamphetamine-positive urine tests among arrestees in San Diego County showed relatively steady declines from 2005 to 2008, but in 2009, this downward trend appeared to show signs of reversal. Preliminary data from 2012 suggest increases in prevalence among adults. Among adult males, the prevalence increased from 26 percent in 2011 to 31 percent in 2012, while among females, the prevalence increased from 39 percent in 2011 to 47 percent in 2012 (exhibit 4). Among juveniles, prevalence was stable at 4 percent in 2011 and 2012, compared with a high of 10 percent in 2008.

Methamphetamine ranked first among drug reports from items seized and analyzed in NFLIS laboratories, with 5,144 reports (representing 39 percent of all primary, secondary, and tertiary reports) (exhibit 5).

Similar to 2011, methamphetamine prices appeared mostly stable in 2012, with the exception of small decreases in the price of “ice” methamphetamine in larger quantities. The price for an ounce of ice was \$800–\$1,100 in 2012, compared with \$1,100–\$1,400 in 2011. A similar change was observed in the pound quantity (\$9,500–\$11,500 in 2012, compared with \$11,000–\$15,000 in 2011).

There were 116 overdose deaths involving amphetamines (including methamphetamine) in 2012, compared with 119 in 2011 and 115 in 2010. These years signal an increase since 2008, when 83 overdose deaths were recorded. The rate per 100,000 population has remained stable over the past 3 years, at approximately 3.7 deaths per 100,000. This is also an increase from 2008, when the rate was 2.7 per 100,000 (exhibit 7).

Marijuana

Marijuana indicators were relatively stable in 2012, with the exception of small changes among arrestees and a decrease in the number and proportion of NFLIS reports. The number of primary treatment admissions was relatively unchanged in 2012 (2,596 in 2012, compared with 2,520 in 2011), and the proportion of treatment admissions reporting marijuana as their primary drug was also relatively unchanged (18.0 percent in 2012, compared with 18.4 percent in 2011) (exhibits 2 and 3). Similar to previous years, three-quarters of the admissions were male (74.4 percent). The proportion of admissions in the younger than 18 age group has been decreasing since 2010. In 2012, 45.1 percent of primary marijuana admissions were younger than 18, compared with 50.8 percent in 2011 and 54.7 percent in 2010. Hispanics were overrepresented, constituting 46.1 percent of marijuana admissions. Sixty-five percent of marijuana clients reported at least one secondary drug of abuse. Alcohol was the most commonly reported (39.1 percent), followed by methamphetamine (16.8 percent) and cocaine (2.8 percent).

The proportion of arrestees with urinalysis-positive tests for marijuana in 2012 showed a slight increase among adult males, but small decreases among adult females and juveniles (exhibit 4). In 2012, 42 percent of adult males tested positive for marijuana, a 3-percentage-point increase from 2011. Among adult females, 30 percent tested positive for marijuana, compared with 31 percent in 2011. Among juveniles, the decrease was greater, with 47 percent testing positive for marijuana, compared with 51 percent in 2011.

Of the drug reports from seized items analyzed in NFLIS forensic laboratories in 2012, 18 percent (2,355 reports) were identified as marijuana, compared with 29 percent (4,477 reports) in 2011 (exhibit 5). Although a decrease in the total number of reports was observed, marijuana/cannabis continued to rank second among total reports from items analyzed in NFLIS laboratories, after methamphetamine.

Prices for marijuana were largely stable in 2012, with the exception of a decrease in the price of an ounce of domestic marijuana, from \$320–\$400 in 2011 to \$200–\$320 in 2012 (exhibit 6).

MDMA (Ecstasy)

There were 17 primary treatment admissions for ecstasy or MDMA (3,4-methylenedioxymethamphetamine), in 2012, down from 39 in 2011 and 54 in 2010 (data not shown). MDMA admissions were 52.9 percent male. MDMA admissions were ethnically diverse: 29.4 percent were White non-Hispanic and 17.6 percent were African-American, Asian, and Hispanic. Seventy percent were younger than 26. There were 114 reports identified as MDMA among drug items seized and analyzed in NFLIS forensic laboratories in 2011, representing 1 percent of all reports (exhibit 5). Among juvenile arrestees, there was a decline in self-reported ecstasy use in the past year in 2012 (15 individuals in 2012, compared with 41 in 2011). Prevalence of self-reported lifetime ecstasy use among arrestees was 34 percent among juveniles, 27 percent among adult males, and 32 percent among adult females in 2012.

Alcohol

There were 3,059 primary treatment admissions (21.3 percent) for alcohol in 2012 (exhibit 3). Clients admitted for alcohol were predominantly male (67.5 percent), White non-Hispanic (56.5 percent), and age 35 or older (60.9 percent). Forty-three percent of primary alcohol admissions cited no secondary drug of abuse. Marijuana was the secondary drug in 26.0 percent of cases, followed by methamphetamine (17.8 percent) and cocaine/crack (6.8 percent).

INFECTIOUS DISEASES RELATED TO DRUG ABUSE

AIDS

Data on HIV/AIDS for San Diego County are reported biannually, with the most recent report issued in 2012 and covering the period through December 31, 2011. San Diego County ranks third among California counties in terms of the number of HIV and AIDS cases. There were 14,805 cumulative AIDS cases in San Diego County as of December 31, 2011, including 7,221 currently living with AIDS. There were 251 new cases reported in 2011, although this number was expected to increase in 2012 due to reporting delays. Eight percent of adult/adolescent AIDS diagnoses were among females. This represents a much smaller proportion than in the United States as a whole, where 20 percent of AIDS cases are among females, but is consistent with the State of California, where 9 percent of AIDS cases are among females.

Among males, 7 percent of AIDS cases were attributable to injection drug use, while 11 percent are among men who have sex with men (MSM) who also inject drugs (MSM/IDU). Among females, 33 percent of AIDS cases are among injection drug users (IDUs) for the period 1981–2011. In the more recent reporting period (2007–2011), the proportion of female cases attributable to injection drug use was 22 percent, which represents a decline from a high of 42 percent in 1997–2001. Among female cases attributable to heterosexual transmission from 1981 to 2011 (56 percent of total cases), 19 percent of cumulative cases are attributable to sex with an IDU. In more recent years (2007–2011), this proportion also decreased, to 10 percent.

In terms of race/ethnicity, there was evidence of shifts in the demographic makeup of injection-related cases over time for both genders. Overall, African-American males represent a larger proportion of IDU cases and a smaller proportion of MSM cases than Whites or Hispanics. The proportion of

AIDS cases attributed to injection drug use among White males in 1987–1991 was 2 percent, which increased to 6 percent in the more recent period 2007–2011. Among African-American and Hispanic males, the proportion of cases attributed to injection drug use decreased during the two time periods (from 17 to 10 percent among African-Americans, and from 8 to 6 percent among Hispanics). The trends in the MSM/IDU group were similar, with increases among Whites (from 9 to 13 percent) and decreases among African-Americans (from 15 to 10 percent) and Hispanics (from 8 to 7 percent). It should be noted that these reductions among African-Americans and Hispanics were offset by increases in cases attributed to heterosexual transmission.

Among females, similar trends in the racial/ethnic distribution were observed. The proportion of AIDS cases attributed to injection drug use among White females in 1987–1991 was 28 percent and increased to 35 percent in 2007–2011. Among African-American females, the proportion of cases attributable to injection drug use decreased from 56 to 21 percent, and among Hispanic females the proportion decreased from 29 to 14 percent. As with males, there were substantial increases in the proportion of cases attributable to heterosexual transmission, which could include sex with an IDU.

HIV

In 2006, the State of California transitioned to names-based reporting of HIV cases, consistent with recommendations from the Centers for Disease Control and Prevention (CDC). Effective April 2006, the State stopped reporting updated statistical information on HIV cases reported before implementation of the names-based system. Accordingly, cumulative HIV case counts now reflect unduplicated HIV case counts reported by name to the California Department of Health Services, Office of AIDS, beginning April 17, 2006. From April 17, 2006, through December 31, 2011, there were 4,910 cumulative HIV cases in San Diego County. Ninety percent of HIV diagnoses ($n=4,436$) were male. African-Americans had the highest HIV incidence rate (22 per 100,000 population), followed by Hispanics (10 per 100,000 population) and Whites (7 per 100,000 population). The average age at HIV diagnosis was 34.

Among males, 4 percent of cumulative HIV cases through 2011 were attributable to injection drug use, and 7 percent were among MSM/IDUs. In terms of race/ethnicity, IDUs accounted for 6 percent of White male cases in the most recent time period (2007–2011). This compares with 9 percent of African-American male cases in 2007–2011 and 4 percent among Hispanic males. This represents an increase among White and African-American males and stability among Hispanic males.

Among females, 22 percent of cumulative HIV cases through 2011 were attributable to injection drug use. Among the heterosexual transmission cases, which represented 72 percent of cases overall, 11 percent were attributable to sex with an IDU. IDUs accounted for 27 percent of White female cases in 2007–2011, for 9 percent of African-American female cases, and for 16 percent of Hispanic female cases. Substantial decreases were observed for White and African-American (but not Hispanic) females when comparing the 2007–2011 reporting period with 2002–2006.

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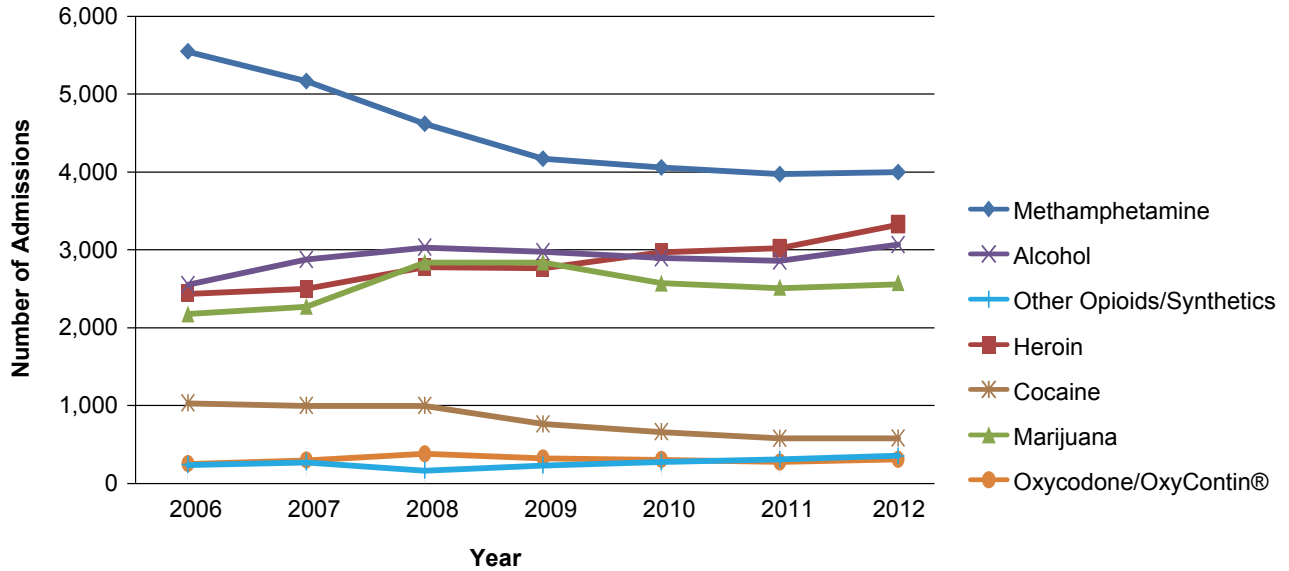
Exhibit 1. San Diego County Demographics, by Percentage: 2010

Race/Ethnicity	2010 (N=3,095,313)
White	48
Black or African-American	5
Asian/Pacific Islander	11
American Indian	<1
Other Race	3
Hispanic/Latino	32
Median Household Income (Current \$)	\$62,771

SOURCE: San Diego Association of Governments http://www.sandag.org/resources/demographics_and_other_data/demographics/fastfacts/regi.htm

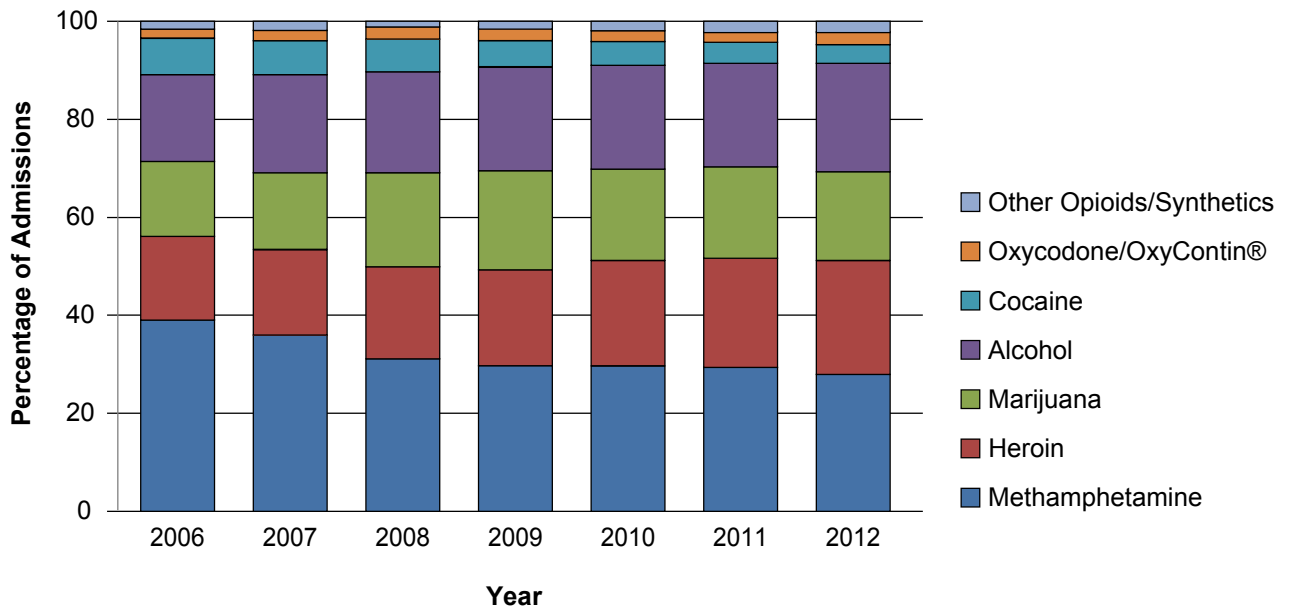
Exhibits 2a & 2b. Number and Percentage of Treatment Admissions, by Primary Drug, in San Diego County: 2006–2012

2a. Number of Treatment Admissions, by Primary Drug, in San Diego: 2006–2012



Note: 2006 N=14,345; 2007 N=14,523; 2008 N=15,041; 2009 N=14,258; 2010 N=13,892; 2011 N=13,696; 2012 N=14,383; charts exclude Ecstasy and "Other."

2b. Percentage of Treatment Admissions, by Primary Drug, in San Diego County: 2006–2012



Notes: 2006 N=14,345; 2007 N=14,523; 2008 N=15,041; 2009 N=14,258; 2010 N=13,892; 2011 N=13,696; 2012 N=14,383; charts exclude Ecstasy and "Other."

SOURCE: California Outcomes Measure System (CalOMS)

Exhibit 3. Characteristics of Clients Admitted to Treatment, by Numbers and Percentage, in San Diego County: 2012

Characteristics	Alcohol	Cocaine/ Crack	Heroin	Other Opiates	Marijuana	Metham- phetamine Only	All Other	Total
Total N (%):	3,059 (21.3)	558 (3.9)	3,328 (23.1)	670 (4.7)	2,596 (18.0)	3,990 (27.7)	182 (1)	14,383 (100.0)
Gender								
Male	2,066 (67.5)	377 (67.6)	2,358 (70.9)	367 (54.8)	1,932 (74.4)	2,317 (58.1)	124 (68.1)	9,541 (66.3)
Female	993 (32.5)	181 (32.4)	970 (29.1)	303 (45.2)	664 (25.6)	1,673 (41.9)	58 (31.8)	4,842 (33.6)
Unknown	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Age at Admission								
17 and Younger	172 (5.6)	*	27 (0.8)	*	1,172 (45.1)	88 (2.2)	34 (18.7)	1,493 (10.4)
18–25	374 (12.2)	*	1,064 (31.9)	100 (14.9)	610 (23.5)	675 (16.9)	*	2,865 (19.9)
26–34	650 (21.2)	86 (16.9)	1,102 (33.1)	252 (37.6)	430 (16.6)	1,318 (33.0)	53 (29.1)	3,692 (25.6)
35 and Older	1,863 (60.9)	420 (75.3)	1,135 (34.1)	307 (45.8)	384 (14.8)	1,909 (47.8)	53 (29.1)	5,817 (40.4)
Unknown	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Race/Ethnicity								
White Non-Hispanic	1,728 (56.5)	105 (18.8)	2,109 (63.4)	496 (74.0)	744 (28.7)	1,955 (49.0)	68 (37.4)	7,205 (50.0)
African-American	369 (12.1)	360 (64.5)	76 (2.3)	25 (3.7)	420 (16.2)	232 (5.8)	34 (18.7)	1,516 (10.5)
American Indian	47 (1.5)	*	38 (1.1)	*	24 (0.9)	31 (0.8)	*	140 (0.9)
Asian/Pacific Islander	34 (1.1)	*	35 (1.1)	*	41 (1.6)	183 (4.6)	*	293 (2.0)
Hispanic	757 (24.7)	75 (13.4)	938 (28.2)	92 (13.7)	1,198 (46.1)	1,392 (34.9)	50 (27.5)	4,502 (31.3)
Other/Multi	121 (4.0)	*	126 (3.8)	31 (4.6)	163 (6.3)	180 (4.5)	17 (9.3)	638 (4.4)
Route of Administration								
Smoking	0 (0)	431 (77.2)	830 (24.9)	17 (2.5)	2,566 (98.8)	2,887 (72.4)	80 (44.0)	6,811 (47.3)
Sniffing/Inhaling	0 (0)	96 (17.3)	81 (2.4)	47 (7.0)	*	288 (7.2)	*	512 (3.5)
Injection	0 (0)	*	2,385 (71.7)	21 (3.1)	0 (0)	754 (18.9)	*	3,177 (22.0)
Oral	3,059 (100)	*	28 (0.8)	580 (86.6)	*	61 (1.5)	90 (49.5)	3,844 (26.7)
Other/Not Given	0 (0)	*	*	0 (0)	0 (0)	0 (0)	*	0 (0)

Exhibit 3 (continued). Characteristics of Clients Admitted to Treatment, by Numbers and Percentage, in San Diego County: 2012

Characteristics	Alcohol	Cocaine/ Crack	Heroin	Other Opiates	Marijuana	Metham- phetamine Only	All Other	Total
Total N (%):	3,059 (21.3)	558 (3.9)	3,328 (23.1)	670 (4.7)	2,596 (18.0)	3,990 (27.7)	182 (1.3)	14,383 (100.0)
Secondary Drug								
None	1,299 (42.5)	168 (30.1)	1,265 (38.0)	327 (48.8)	898 (34.6)	1,391 (34.9)	41 (22.5)	5,389 (37.4)
Alcohol	—	172 (30.8)	265 (8.0)	54 (8.1)	1,015 (39.1)	941 (23.6)	27 (14.8)	2,474 (17.2)
Cocaine/Crack	208 (6.8)	—	179 (5.4)	21 (3.1)	72 (2.8)	131 (3.3)	*	611 (4.2)
Heroin	71 (2.3)	17 (3.0)	—	56 (8.4)	43 (1.7)	278 (7.0)	*	465 (3.2)
Other Opiates	47 (1.5)	*	84 (2.5)	55 (8.2)	*	39 (1.0)	23 (12.6)	248 (1.7)
Marijuana	795 (26.0)	126 (22.6)	374 (11.2)	56 (8.4)	—	1,126 (28.2)	56 (30.8)	2,533 (17.6)
Methamphet- amine	545 (17.8)	54 (9.7)	907 (27.3)	36 (5.4)	435 (16.8)	—	*	1,977 (13.7)
All Other	80 (2.6)	16 (2.9)	140 (4.2)	79 (11.8)	88 (3.4)	72 (1.8)	—	475 (3.3)

Note: * indicates cell sizes of <15, masked at request of California State Alcohol and Drugs Program. In columns where one cell contains <15, the second smallest cell is also masked.

SOURCE: California Outcomes Measurement System (CalOMS)

Exhibit 4. Percentage of Positive Tests for Illicit Drugs Among Adult and Juvenile Arrestees in San Diego County: 2006–2012

	Percentage in 2006	Percentage in 2007	Percentage in 2008	Percentage in 2009	Percentage in 2010	Percentage in 2011	Percentage in 2012 ¹
Methamphetamine							
Male Adults	36	24	20	22	25	26	31
Female Adults	47	44	31	39	33	39	47
Juveniles	10	8	10	6	8	4	4
Cocaine							
Male Adults	13	11	8	7	6	6	8
Female Adults	21	16	12	11	11	7	5
Juveniles	5	3	2	1	2	2	3
Heroin/Opiates							
Male Adults	5	6	6	6	10	9	10
Female Adults	8	8	7	8	10	9	12
Juveniles	1	1	1	1	5	2	3
Marijuana							
Male Adults	40	37	36	37	39	39	42
Female Adults	31	29	26	28	29	31	30
Juveniles	43	40	44	51	43	51	48

¹Data for 2012 are preliminary.

SOURCE: San Diego Association of Governments, Substance Abuse Monitoring Program

Exhibit 5. Number and Percentage of Primary, Secondary, and Tertiary Reports Among Drugs Items Analyzed by Forensic Laboratories in San Diego County: 2012

Rank	Drug	Number	Percentage
1	Methamphetamine	5,144	38.9
2	Marijuana/Cannabis	2,355	17.8
3	Cocaine	1,493	11.3
4	Heroin	1,251	9.5
5	Hydrocodone	402	3.0
6	Oxycodone	285	2.2
7	Alprazolam	259	2.0
8	Dimethyl sulfone	235	1.8
9	Phenylimidothiazole Isomer Undetermined (possible levamisole)	211	1.6
10	MDMA	114	0.9
	All Other Drugs	1,489	11.2
Total		13,238	100.0

SOURCE: NFLIS, DEA, preliminary data retrieved in May 2013; data are subject to change

Exhibit 6. Retail Prices for Selected Drugs in San Diego County: 2007–2012

Drug	2007	2008	2009	2010¹	2011¹	2012¹
Cocaine						
One-Quarter Gram	\$50–\$100	\$50–\$100	\$50–\$100	\$25–\$30	N/A	N/A
Gram	\$60–\$150	\$60–\$150	\$60–\$150	\$80–\$100	\$75–\$100	\$75–\$100
Ounce	\$600–\$1,000	\$600–\$1,000	\$700–\$1,000	\$800–\$1,200	\$700–\$1,200	\$600–\$1,200
Pound	\$6,000–\$10,000	\$8,000–\$10,000	\$8,000–\$10,000	\$8,000–\$10,000	\$8,000–\$11,000	\$8,000–\$11,500
Heroin (Black Tar)						
One-Quarter Gram	\$25–\$40	\$15–\$50	\$15–\$50	\$25–\$35	\$25–\$30	\$25–\$40
Gram	\$80	\$80–\$100	\$60–\$80	\$80–\$100	\$80–\$100	\$80–\$100
Ounce	\$600	\$600–\$1,200	\$600–\$1,200	\$700–\$1,200	\$700–\$1,200	\$700–\$1,200
Pound	\$17,000	\$10,000–\$17,000	\$8,000–\$10,000	\$8,000–\$12,000	\$8,000–\$12,000	\$10,000–\$14,000
Marijuana						
One-Quarter Ounce	\$30–\$50	\$40–\$100	\$40–\$100	N/A	N/A	\$100–\$120
Ounce	\$80–\$100	\$80–\$150	\$60–\$100	\$80–\$120 ²	\$300–\$400 ²	\$200–\$320 ²
Pound	\$250–\$300	\$300–\$400	\$400–\$600	\$400–\$600	\$400–\$600	\$2,500–\$3,200
Methamphetamine						
One-Quarter Gram	\$20–\$25	\$20–\$25	\$20–\$50	\$25–\$40	\$25–\$40	\$20–\$30
Gram	\$50–\$100	\$75–\$100	\$75–\$100	\$80–\$120	\$80–\$120	\$80–\$100
Ounce	\$750–\$1,000	\$500–\$1,500	\$500–\$1,500	\$750–\$1,200	\$750–\$1,200	\$900–\$1,200
Pound	\$9,000–\$12,500	\$10,000–\$20,000	\$8,000–\$15,000	\$15,000–\$20,000	\$15,000–\$20,000	\$15,000–\$20,000

¹Data for 2010 come from the July 2010 report. Data for 2011 come from the January 2012 report. Data for 2012 come from the January 2013 report.

²Price data for marijuana in 2010 were reported for “Mexican” marijuana, while price data in 2011 were reported as “low-grade” marijuana, and the 2012 price data were reported for “Domestic” marijuana in the Law Enforcement Coordination Center Street Drugs Price List.

SOURCE: San Diego Law Enforcement Coordination Center Street Drugs Price List

Exhibit 7. Number and Rate of Deaths Due to Drug Overdose Involving Amphetamine and/or Heroin/Morphine in San Diego County: 2001–2012

Year	Amphetamine-Involved Drug Deaths		Heroin/Morphine-Involved Drug Deaths	
	Number	Rate¹	Number	Rate¹
2001	58	2.03	107	3.76
2002	93	3.22	129	4.46
2003	99	3.38	116	3.96
2004	105	3.55	87	2.95
2005	113	3.81	90	3.03
2006	90	3.02	84	2.82
2007	100	3.34	109	3.64
2008	83	2.74	105	3.46
2009	88	2.87	118	3.85
2010	115	3.72	105	3.39
2011	119	3.82	118	3.79
2012	116	3.69	114	3.63

¹Rates per 100,000 population were re-calculated for previous years in 2012, based on most recent population estimates.

SOURCE: County of San Diego Health and Human Services Agency, Emergency Medical Services Medical Examiner Database

Drug Abuse Patterns and Trends in the San Francisco Bay Area—Update: June 2013

Alice A. Gleghorn, Ph.D.¹

ABSTRACT

In San Francisco, an earlier and continuing decline in heroin consequence indicators (heroin-involved ED reports and heroin purity levels, which had declined from 5.7 percent in 2010 to 3.9 percent in 2012) was a key finding for the area. However, the proportion of primary heroin treatment admissions was stable from 2011 to 2012, while the sharp increase in nonfatal overdose episodes in spring 2012 suggested a possible trend change. A second key finding was an increase in indicators for prescription drugs. Various opiate, sedative hypnotic, and stimulant pharmaceuticals were frequently prescribed throughout the five Bay Area counties, and they appeared with increasing frequency in reports from drug items seized and analyzed by the Drug Enforcement Administration, National Forensic Laboratory Information System (NFLIS). When these drugs were combined, they accounted for 10.6 percent of the identified reports. With the exception of methadone, many of these same drugs individually showed significant long- and shorter-term increases in nonfatal emergency department (ED) visits, as reported by the Substance Abuse and Mental Health Services Administration's Drug Abuse Warning Network (DAWN), in 2011 as compared with 2004, 2009, or 2010 (methadone-related visits decreased by 17 percent from 2009 to 2011). Alcohol, cocaine, heroin, methamphetamine, gamma hydroxybutyrate (GHB), and lysergic acid diethylamide (LSD) also showed similar ED visit decreases during the same time comparisons. However, marijuana rates increased by 146 percent from 2004 to 2011, and then slowed to a 40-percent increase between 2009 and 2011. Methamphetamine ranked first and marijuana ranked second among items seized and analyzed by NFLIS, followed by cocaine (third), heroin (fourth), and MDMA (3,4-methylenedioxymethamphetamine) (ninth). Alcohol continued to dominate treatment admissions, ranking as the most frequent primary drug in bay area treatment admissions, particularly among males older than 35. Methamphetamine ranked second as the primary drug at admission, followed in order by heroin, cocaine, marijuana, and other prescription drugs. Smoking was the primary route of administration for methamphetamine, cocaine, and marijuana, while injection was used mainly with heroin and methamphetamine. Prescription drugs were chiefly administered orally, while infrequently heroin, methamphetamine, and cocaine were inhaled. Opiate-related deaths reported by the DAWN Medical Examiner report decreased from 2009 (n=133) to 2010 (n=120), but opiates ranked first among drug-related deaths, followed by cocaine, alcohol, stimulants, and benzodiazepines. Heroin price and purity continued to decline, reaching \$1.40 per milligram pure, with purity only at 3.9 percent. AIDS (acquired immunodeficiency syndrome) incidence and mortality have dropped to baseline levels, with approximately 18 percent of cases including injection drug use as a transmission factor. Field reports found "bath salts" (substituted cathinones) and cocaine present in drug-involved deaths. Laboratory analysis of a drug sold as "gunpowder heroin" indicated the primary contents as heroin, lidocaine, codeine, and morphine.

¹The author is the County Alcohol and Drug Administrator for San Francisco Department of Public Health.

INTRODUCTION

Area Description

The San Francisco and Northern California area that is the focus of this report includes all five of the bay area counties. The five bay area counties include Alameda (population 1,554,720) and Contra Costa (population 1,079,597) in the east bay, Marin (population 256,069) in the north bay, San Mateo (population 739,311) in the south bay, and San Francisco (population 825,863) (Population Estimates, U.S. Census Bureau, 2012). The population size of the area has been growing in recent years across all five counties. The city and county of San Francisco attract immigrants, both legal and undocumented, from many foreign countries (35.6 percent of the total population are foreign born, and nearly one-half, or 45.5 percent, speak a language other than English in the home), and as a result have an ethnically diverse population that includes the following: 41.9 percent non-Hispanic White, 33.3 percent Asian, 15.1 percent Latino, 6.1 percent Black, 4.7 percent two or more races, 0.5 percent American Indian/Alaskan Native, and 0.4 percent Native Hawaiian or Other Pacific Islander. The population is largely adult and older adults; there are few children younger than 5 (4.4 percent) or younger than 18 (13.4 percent). The area has more elderly adults (13.6 percent) than the State of California (which has the following proportions: 6.8 percent children younger than 5, 25 percent younger than 18, and 11.4 percent elderly adults).

In general, California was hit hard by economic declines over the past several years, but the state-wide economy has improved recently. The State has continued to experience reduced unemployment rates that began to improve in the second half of 2011, with bay area unemployment decreasing to 5.4 percent (Bureau of Labor Statistics, 2013) in April 2013. California Governor Jerry Brown achieved a balanced State budget for the first time in more than a decade and reported surplus funds as a result of voter-approved tax increases, State fiscal realignment strategies, and improvements in the California economy and sales tax revenues. San Francisco's largely tourism-based economy continued to improve, benefiting from several high-profile sports-tourism events (America's Cup, baseball's World Series Championship), and the city was recently named to host the 50th Super Bowl in 2016. The real estate market is also experiencing rapid growth, in part due to expansion of the information technology sector in the city.

Data Sources

The sources of data for the drug abuse indicators cited in this report are described below:

- **Treatment admissions data** for Alameda, Contra Costa, Marin, San Francisco, and San Mateo Counties were provided by the Department of Alcohol and Drug Programs, California Outcomes Measurement Systems (CalOMS), for calendar year 2012.
- **Emergency department (ED) data** were accessed from the Drug Abuse Warning Network, 2011: Selected Tables of National Estimates of Drug-Related Emergency Department Visits. Rockville, MD: Center for Behavioral Health Statistics and Quality, SAMHSA, 2013.
- **Overdose death data** were obtained from the DAWN 2010, Center for Behavioral Health Statistics and Quality (CBHSQ), Substance Abuse and Mental Health Services Administration (SAMHSA),

Area Profiles of Drug-Related Mortality: <http://www.samhsa.gov/data/2k12/DAWNMEAnnualReport2010/DAWN-ME-AnnualReport2010-009-CA.htm>.

- **Nonfatal overdose episode data** were obtained from the San Francisco Drug Overdose Prevention Education (DOPE) Project, a program of the Harm Reduction Coalition.
- **Population data** were obtained from *Annual Estimates of the Resident Population: April 1, 2010, to July 1, 2012*, U.S. Census Bureau, Population Division, December 2012; retrieved on June 3, 2013.
- **Unemployment data** were accessed through the Bureau of Labor Statistics, <http://data.bls.gov/map/MapToolServlet>.
- **Drug seizure data** were provided by the National Forensic Laboratory Information System (NFLIS), Drug Enforcement Administration (DEA). Data were retrieved on Identified Drugs of Total Analyzed Drug Reports, San Francisco, 2012, NFLIS, DEA, May 7, 2013, for the five bay area counties for 2011–2012. 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.
- **Heroin price and purity data** for 2001–2011 were provided by the U.S. Department of Justice, DEA's *2011 Heroin Domestic Monitoring Program (HDMP) Report*, March 2013.
- **Acquired immunodeficiency syndrome (AIDS) surveillance data** were provided by the San Francisco Department of Public Health (SFPDH), *HIV Epidemiology Section, Quarterly HIV/AIDS Surveillance Report, HIV/AIDS Cases Reported Through March 2013*, accessed at: www.sfdph.org/dph/files/reports/RptsHIVAIDS/qReport201303.pdf.
- **Data for the top prescribed drugs** for the five bay area counties for 2011–2012 were provided by the California Department of Justice, Law Enforcement Support Program, Bureau of Criminal Identification and Investigative Services, from the Controlled Substance Utilization Review and Evaluation System (CURES), California Prescription Drug Monitoring Program (PDMP) (<http://oag.ca.gov/ures-pdmp>).

Data Limitations

Drug laboratory data from Alameda and San Francisco Counties were not included in the 2011 NFLIS reports, impacting comparisons between 2011 and 2012. Drug treatment data for San Francisco are reported only in combination with other bay area counties.

Overview of Findings

The growth in the misuse of prescription drugs throughout the bay area continued to raise concerns, although the indicators of this use generally remained below the indicator levels of the main other illicit drugs and alcohol. Various opiate, sedative hypnotic, and stimulant pharmaceuticals were frequently prescribed throughout the five bay area counties (exhibit 1). These drugs also appeared with increasing frequency in reports from drug items seized and analyzed by the DEA's NFLIS (exhibit 2). When these drugs were combined, they accounted for 10.6 percent of total NFLIS reports.

Many of these same prescription drugs individually showed significant long- and short-term increases in nonfatal ED visits, as reported by SAMHSA's DAWN, in 2011, as compared with 2004, 2009, and 2010 (exhibit 3). Methadone was the exception to the pattern of other prescription drugs; methadone-related ED visits decreased by 17 percent from 2009 to 2011. ED reports of some individual prescription opiates (oxycodone, hydrocodone, methadone, and morphine) (exhibit 4), miscellaneous anxiolytics/sedatives hypnotics, alprazolam, and anticonvulsants (exhibit 5) exceeded reports for "club drugs," including GHB (gamma hydroxybutyrate), PCP (phencyclidine), LSD (lysergic acid diethylamide), and miscellaneous hallucinogens (exhibit 6). Additionally, the volume of combined ED reports for narcotic analgesics exceeded ED reports for heroin (exhibits 4 and 6). Alcohol, cocaine, heroin, methamphetamine, GHB, and LSD each showed long- or short-term ED visit decreases in comparisons between 2011 and 2004, 2009, and 2010 (exhibit 7). However, marijuana visits rose by 146 percent from 2004 to 2011, and marijuana visits experienced a slower 40-percent increase between 2009 and 2011.

Among items seized and analyzed by NFLIS laboratories, reports identified as methamphetamine ranked first, and marijuana reports ranked second, followed by cocaine (third), heroin (fourth), and MDMA (3,4-methylenedioxymethamphetamine) (ninth) (exhibit 2). Items commonly reported for other NFLIS sites in the United States, including synthetic cannabinoids, acetaminophen, and buprenorphine, were not identified among the top 10 San Francisco reports (exhibit 8).

Alcohol continued to dominate treatment admissions, ranking as the most frequent primary drug in bay area treatment admissions ($n=6,939$) (exhibit 9), particularly among males older than 35. Methamphetamine ranked second as the primary drug at admission ($n=4,658$), followed in order by heroin ($n=3,672$), cocaine ($n=3,255$), marijuana ($n=2,137$), and other prescription drugs ($n=1,523$). Smoking was the primary route of administration for methamphetamine, cocaine, and marijuana, while injection was used mainly with heroin and methamphetamine (exhibit 10). Prescription drugs were chiefly administered orally, while infrequently heroin, methamphetamine, and cocaine were inhaled.

Opiate-related deaths reported by the DAWN Medical Examiner (ME) report decreased from 2009 ($n=133$) to 2010 ($n=120$) (exhibit 11). However, opiates ranked first among drug-related deaths, followed by cocaine, alcohol, stimulants, and benzodiazepines (exhibit 12). Field reports found "bath salts" and cocaine present in drug-involved deaths.

Heroin price and purity continued to decline, reaching \$1.40 price per milligram pure, with purity only at 3.9 percent (exhibit 13). This price is equal to 2001 pricing, but it represents a decline from 2009 and 2010 costs, while the purity levels are the lowest in a decade. Laboratory analysis of a drug sold as "gunpowder heroin" indicated the primary contents as heroin, lidocaine, codeine, and morphine.

AIDS incidence and mortality have dropped to early 1980s rates, with nearly 10,000 individuals reportedly living with AIDS in San Francisco (HIV Surveillance, March 2013) (exhibit 14). Among the cumulative adult/adolescent reported cases of HIV/AIDS in San Francisco identified between 1980 and 2013, approximately 18 percent of HIV and 22.6 percent of AIDS cases involved injection drug use as a transmission factor (exhibit 15).

DRUG ABUSE TRENDS AND EMERGING PATTERNS

Alcohol

Alcohol remained the top primary drug among admissions for substance abuse treatment across the five bay area counties (exhibit 9). Alcohol was the primary drug for more males ($n=4,916$) than females ($n=2,023$), and it was reported for more adults age 36 and older ($n=4,976$) than for 26–35-years-olds ($n=1,304$), those age 18–25 ($n=433$), and youth 17 and younger ($n=226$). Alcohol ranked first among ED reports in San Francisco (exhibit 6), but this rank reflected a 10-percent decrease from 2010; there were no significant changes between 2011 and either 2004 or 2009 (exhibit 7). Alcohol ranked third among drug-related deaths reported in the DAWN ME 2010 Annual Report ($n=42$), and all of these deaths involved alcohol in combination with other drugs (exhibit 12).

Cocaine

Cocaine continued to figure prominently in death data, according to the 2010 DAWN ME Annual Report, ranking second in drug-related deaths (exhibit 12). Ten of these deaths involved only cocaine, while 44 involved cocaine and at least 1 other substance in combination. Field reports suggest that a majority of drug-related deaths among homeless women involved cocaine. Cocaine ranked third among reports of items seized and analyzed by the DEA and reported by NFLIS in 2012, accounting for 16.7 percent of total reports among drug items seized and analyzed in the San Francisco Bay area (exhibit 2). The proportion and rank were the same as those reported for the United States overall (16.3 percent), and they were consistent with the rank and proportion of total cocaine reports in the San Francisco Metropolitan Statistical Area (MSA) for 2011 (16.3 percent) (exhibit 8). Cocaine was the fourth most frequently reported primary drug among individuals seeking admission to substance abuse treatment across the five bay area counties (exhibit 9). Smoking cocaine was the most common route of administration ($n=2,903$), followed by sniffing ($n=277$), injection ($n=32$), and other various means ($n=43$) (exhibit 10). DAWN ED reports for cocaine continued to show significant long- and short-term declines (exhibits 6 and 7). Cocaine ranked second among ED reports, but the 2011 total was 29-percent lower than in 2004, 24-percent lower than in 2009, and 26-percent lower compared with 2010.

Methamphetamine

Methamphetamine remained the most frequently identified drug report among items seized and analyzed by the NFLIS in 2012, accounting for 33.5 percent of the total sample (exhibit 2). This rank is consistent with the prior year, and the proportion is a slight decline from 2011 (34.1 percent). Methamphetamine was more commonly identified among drug reports in the San Francisco area than in the United States, where methamphetamine ranked third at 12.1 percent (exhibit 8). Treatment admissions were also high in the five bay area counties; methamphetamine was identified as the primary drug at admission for 20.8 percent of admissions ($n=4,658$) (exhibit 9). A majority indicated they smoked the drug ($n=3,347$), followed by injection ($n=857$), sniffing ($n=353$), and various other methods of administration ($n=111$) (exhibit 10). ED reports of methamphetamine dropped significantly (by 18 percent) between 2010 and 2011 (exhibit 7), but there was no significant change reported between 2004 or 2009 and 2011. Although not specifically identified as methamphetamine, noncocaine stimulant-related deaths ranked third among drug-related deaths by the ME (exhibit 11);

a majority of these were associated with multiple drugs ($n=19$), while 13 were single drug-related deaths.

Marijuana

Marijuana continued to rank third among ED reports of drug-related visits reported by DAWN (exhibit 6). However, in contrast to other illicit drugs, marijuana showed a significant long-term increase between 2004 and 2011 (by 146 percent) and between 2009 and 2011 (by 40 percent), although the rate of growth slowed from 2010 to 2011 (exhibit 7). While marijuana was the top drug report among items seized and analyzed by the United States in 2012, it ranked second in the San Francisco Bay area (exhibits 2 and 8). Marijuana accounted for a smaller percentage of the total sample (20.7 percent) than in the overall United States (32.7 percent). Among primary drugs identified by those seeking treatment, marijuana ranked fifth ($n=2,137$) (exhibit 9). More youth 17 and younger ($n=965$) listed marijuana as a primary drug than did other groups of adults: 453 were 18–25-year-olds, 385 were 26–35-year-olds, and 334 were age 36 and older.

Heroin

Several data indicators for heroin continued to decline. ED reports for heroin-related visits showed both short- and long-term significant decreases. Compared with 2011, there was a 70-percent decrease from 2004, a 40-percent decrease from 2009, and a 41-percent decrease from 2010 (exhibit 7). Heroin price and purity continued to decline, reaching a price of \$1.40 per milligram pure in 2011, with purity only at 3.9 percent (exhibit 13). This price was equal to 2001 pricing, but it represented a decline from 2009 and 2010 costs. At the same time, the purity levels were the lowest in a decade. Concerns about an increase in nonfatal overdose episodes in spring 2012 led to a sample of a substance identified as “gun powder” heroin being submitted to a local laboratory for analysis. Following extensive testing, the analysis identified the primary contents as heroin, lidocaine, codeine, and morphine. This provided additional evidence of the low purity levels of substances identified and sold as heroin. Heroin was associated with a relatively small proportion of opiate-related deaths, and the number deceased between 2009 and 2010, from 13 to 8 (exhibit 11). There were 107 opiate-involved deaths in 2010, with 10 being single-drug deaths. The majority of opiate-related deaths were associated with “other opiates” (59 percent) or methadone (34 percent). Heroin continued to rank third in treatment admissions across the bay area (exhibit 9). A majority of clients admitted were age 36 and older (60 percent); injection was the primary route of administration (72 percent), followed by sniffing (22 percent) and smoking (4 percent) (exhibit 10). Heroin ranked fourth among reports from drug items seized and analyzed by NFLIS laboratories in both San Francisco and in the United States (exhibits 2 and 8), with the bay area showing a smaller proportion (5.5 percent) than the United States (8.5 percent). In San Francisco, the 2012 proportion was a slight increase over that of the previous year (3.6 percent).

Other Opiates and Prescription Drugs

Opiates as a general category had the highest number of drug-related deaths in 2010 DAWN data for San Francisco, with the majority of deaths (90.6 percent) involving multiple drugs, although there were fewer opiate-related deaths reported in 2010 than in 2009 ($n=133$ versus $n=120$) (exhibits 11 and 12). Benzodiazepines were ranked fifth in drug-related deaths in 2010, and were reported in 28 deaths; they were always in association with other drugs (exhibit 12). ED reports of specific opiates

and opiates in combined categories (opiates with two subcategories: narcotic analgesics and opiates unspecified) showed significant increases in recent-year DAWN reports (exhibit 3). The general opiate category reflected a significant increase of 148 percent between 2004 and 2011, narcotic analgesics increased by 133 percent, and opiates unspecified increased by 197 percent during the same time period. Between 2004 and 2011, the following significant increases were noted for ED reports in San Francisco: hydrocodone, by 122 percent; oxycodone, by 424 percent; and morphine, by 164 percent. Additionally, morphine ED visits increased by 51 percent between 2009 and 2011. Other prescription drugs showed similar increases in ED reports: anticonvulsants increased by 94 percent between 2009 and 2011; alprazolam increased by 164 percent between 2004 and 2011; miscellaneous anxiolytics and sedative hypnotics showed short- and long-term changes between 2004 and 2011 (a 104-percent increase) and 2010 and 2011 (a 23-percent increase) (exhibit 5). Methadone was the only prescription opiate to show a decrease, demonstrating a significant 17-percent decrease between 2009 and 2011 (exhibit 3).

Various opiate, sedative hypnotic, and stimulant pharmaceuticals were frequently prescribed throughout the five bay area counties (exhibit 1), and they appeared with increasing frequency in reports from drug items seized and analyzed by NFLIS (exhibit 2). When these drugs were combined, they accounted for 10.6 percent of total reports. Individual prescription drugs ranking in the top 10 NFLIS items reported for San Francisco among items seized and analyzed included oxycodone (ranked 5th at 3.7 percent), hydrocodone (ranked 6th at 3.6 percent), methadone (ranked 7th at 1.3 percent), morphine (ranked 8th at 1.1 percent), and alprazolam (ranked 10th at 0.09 percent). Information on the top 50 prescribed drugs recorded in CURES, California's Prescription Drug Monitoring System, for each bay area county was available for 2011–2012 for this report. CURES showed increased numbers of prescriptions between 2011 and 2012 for categories of sedative hypnotics, stimulants, oxycodone, codeine, and hydromorphone. Methadone prescriptions dropped slightly (with 4,300 fewer prescriptions), while hydrocodone prescriptions also dropped (by 163,380 fewer prescriptions). However, hydrocodone still ranked as the most frequently prescribed medication in the bay area, with more than 1.6 million prescriptions in 2012. Among treatment admissions, prescription drugs ranked sixth for primary drug (exhibit 9), and the vast majority were administered orally (exhibit 10).

Other Drugs

The category of “club drugs” has experienced continued decline in indicators in San Francisco, with various prescription drugs exceeding this category in several areas. While MDMA ranked ninth in NFLIS reports of drug items seized (representing 1.1 percent of samples identified, tied with morphine) in San Francisco, oxycodone, hydrocodone, and methadone were identified more frequently (exhibit 2). ED reports of various prescription drugs (exhibit 4) exceeded reports for GHB, LSD, PCP, miscellaneous hallucinogens, and MDMA (exhibit 6). Significant decreases in ED visits in San Francisco were reported for both GHB (a 22-percent decline from 2009 to 2011) and LSD (a 33-percent decline from 2009 to 2011, along with a 32-percent decline from 2010 to 2011) (exhibit 7). Other drugs, such as synthetic cannabinoids, have been noticeably absent from various indicator reports. However, field reports have indicated the presence of “bath salts” in some recent overdose deaths.

INFECTIOUS DISEASES RELATED TO DRUG ABUSE

As of March 31, 2013, there were 29,343 cumulative AIDS cases and 6,110 HIV non-AIDs cases in San Francisco (exhibit 15). A total of 22.6 percent of these AIDS cases were associated with drug-related transmission categories, including 2,124 heterosexual male and female injection drug users (IDUs), 4,422 men who have sex with men/IDUs, and 71 lesbian or bisexual female IDUs. New infections continued to decline.

MAJOR TRENDS

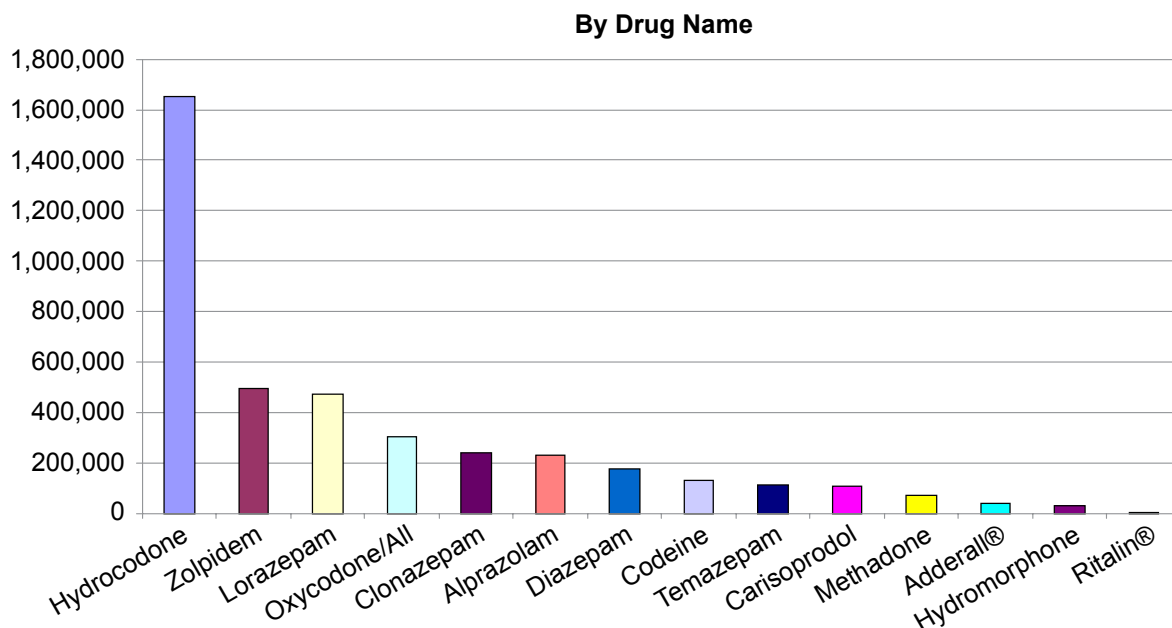
The Heroin Story

There are continued declining indicators of heroin use consequences, as evidenced by reduced heroin-related ED reports, treatment admissions, and deaths. The low purity rates may also contribute to reduced use. Mixtures of drugs being sold as different types of heroin may also reduce use, as the quality and impact of the drug becomes more unpredictable. Heroin users may also turn to prescription opiates to replace low purity heroin.

Prescription Drug Tales

ED reports, CURES data, and NFLIS seizures all showed that various pharmaceuticals were readily available in the bay area. Negative health consequence indicators (ED visits, deaths, and treatment admissions) for these drugs have been steadily increasing. Pharmaceuticals (morphine and lidocaine) were also detected in a laboratory analysis of a drug sold as heroin. This trend has corresponded to the decline in heroin indicators. Perhaps a shift is transpiring from the less pure opiate to more predictable and available manufactured drugs.

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Exhibit 1. Numbers of Top Prescribed Drugs for Five Bay Area Counties¹ in California: 2012

¹Alameda, Contra Costa, Marin, San Francisco, and San Mateo Counties.

SOURCE: California Department of Justice, Law Enforcement Support Program, Bureau of Criminal Identification and Investigative Services, from the Controlled Substance Utilization Review and Evaluation System (CURES), California Prescription Drug Monitoring Program

Exhibit 2. Number and Percentage of the Top 10 Most Frequently Identified Drug Reports Among Total Items Seized and Analyzed by NFLIS Laboratories in the San Francisco MSA¹: 2011 and 2012

Drug	2011 Number	2011 Percentage	2012 Number	2012 Percentage
Methamphetamine	2,813	34.1	4,571	33.5
Marijuana	1,646	20.0	2,815	20.7
Cocaine	1,339	16.3	2,271	16.7
Heroin	298	3.6	756	5.5
Oxycodone	206	2.5	511	3.7
Hydrocodone	333	4.0	489	3.6
Methadone	72	0.9	164	1.2
Morphine	—	—	156	1.1
MDMA	193	2.3	149	1.1
Alprazolam	—	—	121	0.9
Other/Unknown	1,156	14.0	1,627	11.9
Possible Levamisole	99	1.2	—	—
Dimethyl Sulfone	83	1.0	—	—
Total	8,238	100.0	13,630	100.0

¹The San Francisco/Oakland/Fremont MSA includes Alameda, Contra Costa, Marin, San Francisco, and San Mateo Counties; 2011 data were not included for Alameda and San Francisco Counties, impacting comparisons between 2011 and 2012 data.

SOURCE: NFLIS, DEA, accessed May 8, 2012 and May 7, 2013

Exhibit 3. Number of Opiate-Involved Emergency Department Visits, and Percentage Changes for Recent Time Periods, in San Francisco: 2004, 2010, and 2011

Drugs	2004	2010	2011	Percent Change ($p < 0.05$)		
				Change 2011 versus 2004	Change 2011 versus 2009	Change 2011 versus 2010
Opiates	1,055	2,474	2,614	148	—	—
-Opiates, Unspecified	243	659	723	197	—	—
-Narcotic Analgesics	839	1,863	1,953	133	—	—
—Fentanyl/Combination	—	—	171	—	—	—
—Hydrocodone/Combination	239	546	529	122	—	—
—Hydromorphone/Combination	—	—	180	—	—	—
—Methadone	311	521	421	—	-17	—
—Morphine/Combination	107	270	283	164	51	—
—Oxycodone/Combination	104	504	543	424	—	—

SOURCE: DAWN, SAMHSA

Exhibit 4. Number of Opiate-Involved Emergency Department Visits in San Francisco¹: 2004–2011

Drugs	2004	2005	2006	2007	2008	2009	2010	2011
Opiates/Opioids	1,055	2,172	1,703	1,369	1,784	2,043	2,474	2,614
-Opiates, Unspecified	243	475	446	255	317	433	659	723
-Narcotic Analgesics	839	1,804	1,332	1,152	1,504	1,649	1,863	1,953
—Buprenorphine/Combination	—	—	—	—	—	—	—	—
—Codeine/Combination	69	—	—	—	—	—	—	—
—Fentanyl/Combination	—	—	—	—	—	124	—	171
—Hydrocodone/Combination	239	440	335	299	434	351	546	529
—Hydromorphone	—	—	—	—	—	141	—	180
—Methadone	311	805	560	496	514	508	521	421
—Morphine/Combination	107	180	131	121	155	188	270	283
—Oxycodone/Combination	104	251	246	217	315	449	504	543

¹Data are weighted.

SOURCE: DAWN, SAMHSA

Exhibit 5. Number of Emergency Department Drug-Involved Visits for Selected “Other Drugs” and Percentage Changes for Recent Time Periods in San Francisco: 2004–2011 and 2011 Versus 2004, 2009, and 2010

Drugs	2004	2005	2006	2007	2008	2009	2010	2011	Change 2011 Versus 2004	Change 2011 Versus 2009	Change 2011 Versus 2010
Misc. Anxiolytics, Sedative Hypnotics	188	407	251	321	371	291	311	384	104	—	23
Alprazolam	68	134	109	132	96	123	191	179	164	—	—
Anticonvulsants	163	228	165	190	116	128	138	249	—	95	—

SOURCE: DAWN, SAMHSA

Exhibit 6. Number of Emergency Department Drug-Involved Visits¹ for Selected Drugs in San Francisco: 2004–2011

Drugs	2004	2005	2006	2007	2008	2009	2010	2011
Alcohol	4,481	7,387	5,680	6,808	5,573	5,654	6,254	5,631
Cocaine	4,419	6,944	5,773	6,055	4,160	4,149	4,290	3,156
Marijuana	1,166	2,179	1,566	1,549	1,629	2,053	2,947	2,868
Methamphetamine	2,149	4,343	2,429	1,794	1,670	1,946	3,044	2,505
Heroin	2,424	3,138	1,994	1,993	1,616	1,224	1,242	731
GHB	—	200	114	188	135	269	240	211
PCP	93	111	116	159	88	111	114	149
Misc. Hallucinogens	—	—	—	—	—	104	94	100
LSD	—	—	61	99	90	124	121	83

¹Data are weighted.

Exhibit 7. Percentage Changes in Emergency Department Drug-Involved Visits for Selected Drugs in San Francisco: 2011 Versus 2004, 2009, and 2010

Drugs	Percentage Change 2011 versus 2004	Percentage Change 2011 versus 2009	Percentage Change 2011 versus 2010
Alcohol	—	—	-10
Cocaine	-29	-24	-26
Marijuana	146	40	—
Methamphetamine	—	—	-18
Heroin	-70	-40	-41
MDMA	—	—	—
GHB	—	-22	—
PCP	—	—	—
Misc. Hallucinogens	—	—	—
LSD	—	-33	-32

SOURCE: DAWN, SAMHSA

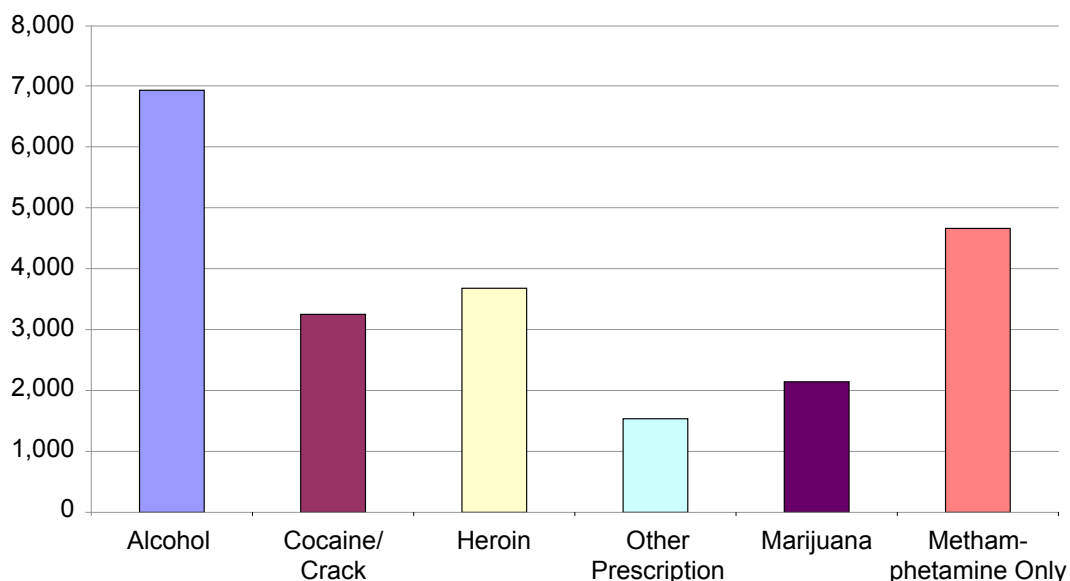
Exhibit 8. Top 10 Most Frequently Identified Drug Reports Among Total Items Seized and Analyzed by NFLIS Laboratories in the San Francisco MSA¹ and in the United States, by Rank and Percentage: 2012

Drug	National Percentage	U.S. Rank	S.F. Rank	S.F. MSA Percentage
Methamphetamine	12.1	3	1	33.5
Marijuana	32.7	1	2	20.7
Cocaine	16.3	2	3	16.7
Heroin	8.5	4	4	5.5
Oxycodone	3.6	5	5	3.7
Hydrocodone	2.7	6	6	3.6
Methadone	—	—	7	1.3
Morphine	—	—	8	1.1
MDMA	—	—	9	1.1
Alprazolam	2.5	7	10	0.9
Acetaminophen	1.3	8	—	—
Synthetic Cannabinoid	1.0	9	—	—
Buprenorphine	0.7	10	—	—
Other/Unknown	18.5	—	—	11.9

¹The San Francisco/Oakland/Fremont MSA includes Alameda, Contra Costa, Marin, San Francisco, and San Mateo Counties; 2011 data were not included for Alameda and San Francisco Counties, impacting comparisons between 2011 and 2012 data.

SOURCE: NFLIS, DEA, accessed May 7, 2013

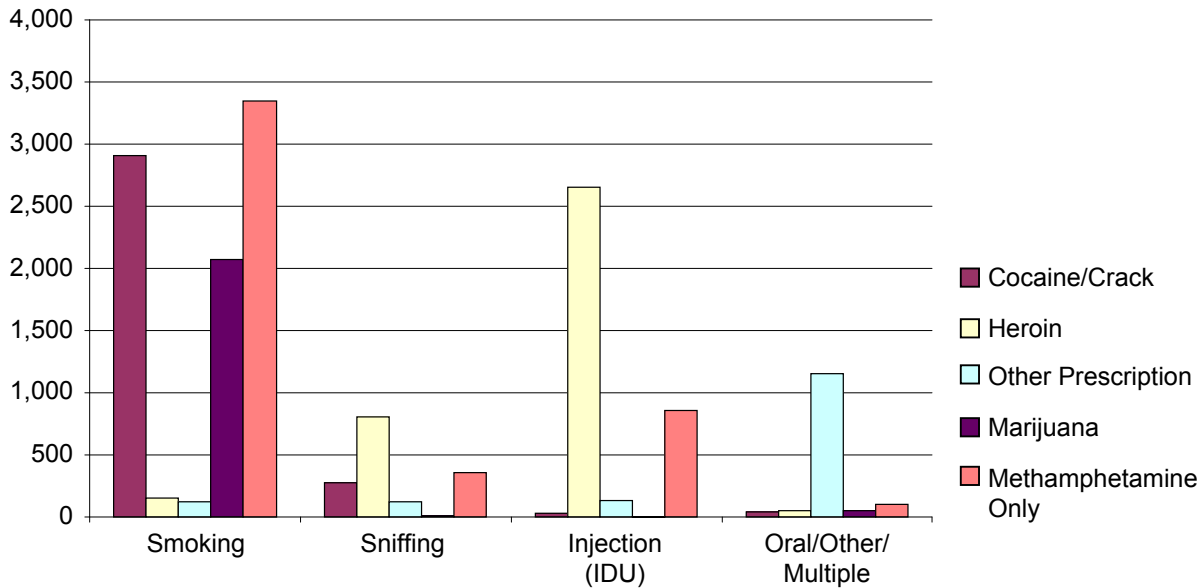
Exhibit 9. Number of Primary Drug Admissions, by Drug, in Five Bay Area Counties¹ in California: 2012



¹Alameda, Contra Costa, Marin, San Francisco, and San Mateo Counties.

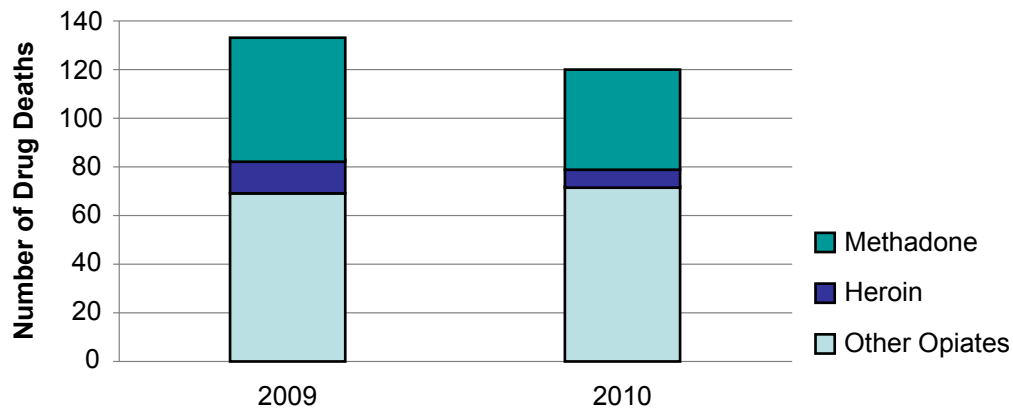
SOURCE: Department of Alcohol and Drug Programs, California Outcomes Measurement Systems

Exhibit 10. Primary Route of Administration Reported by Treatment Admissions for Primary Drugs of Abuse, by Number and Drug, in Five Bay Area Counties¹ in California: 2012

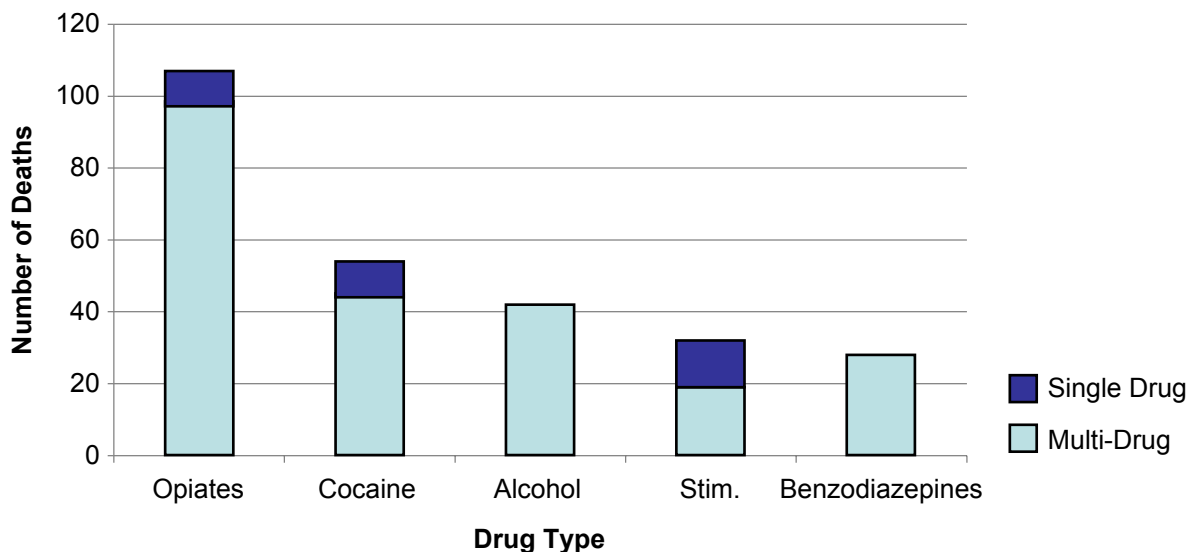


¹Alameda, Contra Costa, Marin, San Francisco, and San Mateo Counties.
 SOURCE: Department of Alcohol and Drug Programs, California Outcomes Measurement Systems

Exhibit 11. Opiate-Related Deaths, by Number and Specific Drug, in San Francisco: 2009–2010



SOURCE: DAWN, SAMHSA

Exhibit 12. Number of Top Five Drugs Involved in Drug-Related Deaths in San Francisco: 2010

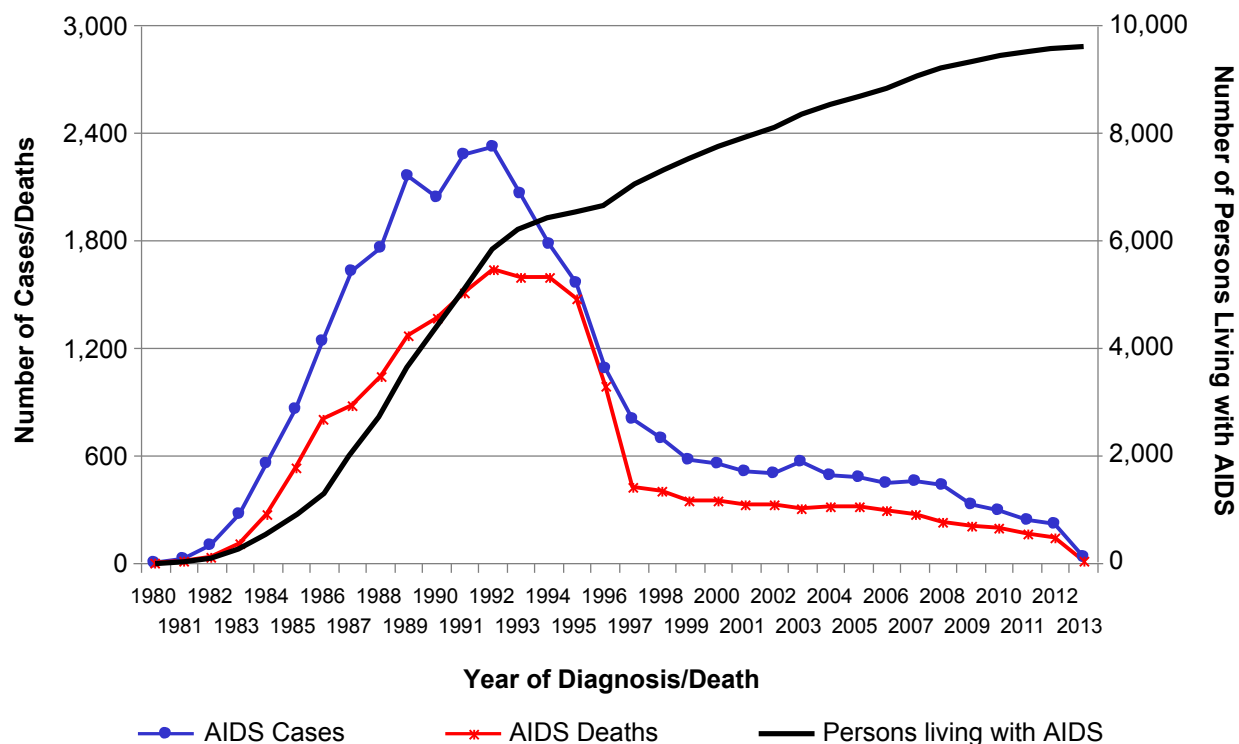
SOURCE: DAWN, SAMHSA

Exhibit 13. Heroin Price¹ and Percentage Purity, in San Francisco: 2001–2011

	Price	Purity Percentage
2001	\$1.40	10
2002	\$0.99	12
2003	\$0.98	11
2004	\$0.98	11
2005	\$0.89	12
2006	\$0.69	10
2007	\$1.28	8.1
2008	\$1.07	7.8
2009	\$2.09	5.8
2010	\$2.32	5.7
2011	\$1.40	3.9

¹Heroin price is reported per milligram pure.

SOURCE: HDMP, DEA

Exhibit 14. AIDS Incidence, Mortality, and Prevalence, by Number, in San Francisco: 1980–2013

SOURCE: San Francisco Department of Public Health

Exhibit 15. Adult/Adolescent¹ HIV/AIDS Cases, by Transmission Category, Number, and Percentage, in San Francisco: 1980–2013

Transmission Category	AIDS		HIV	
	Number	(Percentage)	Number	(Percentage)
Gay or bisexual male	21,371	(72.8)	4,479	(73.3)
Heterosexual male injection drug user	1,396	(4.8)	197	(3.2)
Heterosexual female injection drug user	728	(2.5)	144	(2.4)
Gay or bisexual male injection drug user	4,422	(15.1)	736	(12.0)
Lesbian or bisexual injection drug user	71	(0.2)	25	(0.4)
Transgender	446	(1.5)	136	(2.2)
Hemophiliac	16	(0.1)	2	(0.0)
Heterosexual contact male	170	(0.6)	54	(0.9)
Heterosexual contact female	334	(1.1)	138	(2.3)
Transfusion recipient	140	(0.5)	1	(0.0)
Risk not reported/Other	249	(0.8)	198	(3.2)
Total	29,343	(100)	6,110	(100)

¹Cases age 12 and younger.

SOURCE: San Francisco Department of Public Health

Drug Abuse Trends in the Seattle/King County Area: 2012

Caleb Banta-Green¹, T. Ron Jackson², Steve Freng³, Michael Hanrahan⁴, Cynthia Graff⁵, Steve Reid⁵, John Ohta⁶, Mary Taylor⁷, Richard Harruff⁸, Robyn Smith⁹, and Geoff Miller¹⁰

ABSTRACT

The two key findings for the Seattle area in 2012 were an increase in heroin, along with a geographical spread to nonmetropolitan areas and an increase in use among young adults, and a decrease in prescription-type opiate indicators. Cocaine indicators have been down for the past several years, including police evidence, drug-involved deaths, and primary treatment admissions. First-time heroin treatment admissions were up in 2012, particularly for young adults age 18–29, with a faster rate of growth outside of King County. Police evidence positive for heroin was up substantially in King County and across much of the State. Heroin-involved deaths were up again in 2012, with the increase primarily among clients younger than 30 in King County. Prescription-type opiate-involved deaths continued to decrease, as did police evidence for these substances. Methamphetamine indicators, including deaths, have increased in the last 1 to 2 years. Marijuana use is widespread; treatment admissions have held fairly steady in recent years. In 2012, approximately one-half of admissions were younger than 18, and three-quarters were male, showing very different demographic characteristics compared with other drugs. Although perceptions of risk associated with marijuana have decreased over the past decade, past-month use among 10th graders has remained steady. MDMA (3,4-methylenedioxymethamphetamine) indicators remained low. Cannabimimetics (synthetic marijuana/cannabis, e.g., “Spice,” “K2”) and substituted cathinones (synthetic drugs related to the plant khat and colloquially, but incorrectly, called “bath salts”) were occasionally detected in law enforcement evidence. HIV (human immunodeficiency virus) incidence and prevalence remained low; hepatitis C prevalence among injection drug users was very high (75 percent); and utilization of the syringe exchange was extremely high, with more than 5,000,000 syringes distributed in 2012. Overdose education/ naloxone programs and resources were increasing, and the antidote naloxone (Narcan®) is now available in multiple types of settings in the county and increasingly statewide.

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INTRODUCTION

Data Sources

The primary sources of information used in this report are listed below:

- **Help Line data** for 2012 are provided for all callers from King County. The data are combined from the Washington Recovery Help Line, King County, and Crisis Clinic with mentions of specific drugs. A new agency oversees the Recovery Help Line, and data are not directly comparable to data from prior years. Percentages reported exclude cigarettes and alcohol from the denominator (exhibit 1).
- **Drug treatment data** were provided by Washington State Department of Social and Health Services (DSHS), Division of Behavioral Health and Recovery, Treatment Report and Generation Tool (TARGET), from 1999 through 2012. Treatment modalities included outpatient, intensive inpatient, recovery house, long-term residential, and opiate substitution admissions. Only admissions paid with public funds are included (exhibits 2–4).
- **Tenth graders' use of drugs** was documented with the Health Youth Survey with data presented for the entire State for past-month use of prescription-type opiates “to get high,” as well as use of alcohol and marijuana. Lifetime use of heroin is reported (no past-month measure is available). Data were obtained from www.askHYS.net with data supplied by the Washington State Department of Health. Comparisons were statistically significant at the p -value level of 0.05.
- **Fatal drug overdose data** were obtained from the King County Medical Examiner (KCME), Public Health – Seattle & King County (PHSKC). The other opiates category indicates pharmaceutical opioids, including pharmaceutical morphine where noted, and oxycodone, hydrocodone, methadone, and other opioids; codeine is excluded. The heroin/opiate category includes heroin, morphine (unless noted to be pharmaceutical), and cases in which there was an indication that the death was “heroin related” in the KCME database (exhibit 5).
- **Data on seized drug samples submitted for analysis** were obtained from the National Forensic Laboratory Information System (NFLIS), Drug Enforcement Administration (DEA) for 2009–2012. Drug testing results for local, State, and Federal law enforcement seizures in King County were reported (exhibit 6). 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. A separate dataset was obtained directly from the Washington State Patrol Crime Laboratory with data just from local and State jurisdictions, not Federal; data are from 2001 through 2012 (exhibit 7). Washington State Patrol Crime Laboratory chemists provide qualitative impressions of drug seizure evidence tested.
- **Data on infectious diseases related to drug use and injection drug use**, including the human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS), were provided by PHSKC. Data on HIV cases (including exposure related to injection drug use) in Seattle/King County (1982 through 2012) were obtained from the “HIV/AIDS Epidemiology Report” (exhibit 8). Hepatitis C data were obtained from HIV/AIDS Epidemiology Report, First Half 2012: Volume 80. Data for the number of syringes distributed were also provided by PHSKC (exhibit 9).

DRUG ABUSE PATTERNS AND TRENDS

Cocaine

All indicators point to continued lower levels of cocaine; however, use and impacts are still present. Among Recovery Help Line callers, 400 mentioned cocaine; this was lower than the other major drugs of abuse (exhibit 1). Police evidence data point to a dramatic drop in evidence positive for cocaine (exhibit 7). This appears to be due to legal/policy changes, as well as generally reduced availability locally, similar to national reports. Crime laboratory chemists reported that most cocaine was also positive for levamisole (a potentially dangerous adulterant). Treatment admissions for cocaine dropped in King County to levels seen a decade ago (exhibit 3a), while statewide cocaine admissions dropped to approximately one-half the number from a decade ago. In 2012, the vast majority (87 percent) of people entering treatment for cocaine reported smoking it, and most were much older compared with users of other drugs (two-thirds were age 40 or older) (exhibit 2). Cocaine-involved deaths have been stable at about 50 per year, less than one-half the peak number from 2006 (exhibit 5).

Heroin

Recovery Help Line calls for heroin led all other drug types in 2012 (exhibit 1). While data are not directly comparable, in 2003, heroin calls were less common than those for cocaine, marijuana, and methamphetamine. However, they have since substantially surpassed each of those drugs. In King County, police evidence positive for heroin increased dramatically in 2011 and again in 2012 (exhibit 7). The NFLIS dataset, including Federal seizures along with local seizures, indicated heroin reports were the most common among drug items seized and analyzed in 2012 (exhibit 6). Statewide, heroin has also increased dramatically, and it has spread geographically across much of the State (see county numbers, rates, and maps at <http://adai.uw.edu/pubs/InfoBriefs/ADAI-IB-2013-02.pdf>). Statewide, 5 percent of 10th graders reported ever using heroin in 2012. However, the proportion was 23 percent among those who reported using prescription-type opiates “to get high” in the past month. This indicated a strong correlation, though the data are cross-sectional and cannot be used to show causation.

Treatment admissions with heroin as the primary drug in King County increased by approximately one-third in 2012, to the highest number since at least 1999 (exhibit 3a). Increases were greater among clients age 18–29; heroin was the drug with the most admissions in this age group, surpassing even alcohol (exhibit 3b). Similar patterns and even larger increases were evident statewide. Analyses were also conducted on first-time admissions to treatment, which are unique individuals, not duplicated like all admissions. Statewide, from 2003 to 2012, 8,606 people entered treatment for the first time and reported their primary drug as heroin (exhibit 4). The number per year has more than doubled over this period, with all of the increase among clients age 18–29 (who constituted 64 percent of admissions in 2012). Most of the increase was also outside of the Puget Sound region, most notably north of King County and along the west coast of the State, although increases were also evident in many eastern Washington counties (maps and tables are available at the link above). In 2012, in King County, 83 percent of clients admitted to treatment for heroin reported injecting the drug, with most of the rest reporting smoking heroin (exhibit 2).

Deaths involving heroin totaled 84 in 2012, up from 49 in 2009 (exhibit 5). This increase was attributable to clients younger than 30. An analysis of the issue of heroin increases over the past 3 years reveals some interesting issues. Among the 201 heroin-involved deaths over the past 3 years, a minority, 28 percent, involved only heroin; among clients age 30 or younger, however, 49 percent involved only heroin. Heroin-involved deaths were found all across King County; however, in suburbs northeast of Seattle, almost all of the deaths were among these younger adults. These mortality data are striking, particularly given the relative youth of many decedents recently and the short lag relative to increases in other indicators. Statewide, there is some evidence that heroin-involved deaths may have begun to increase in the period between 2009 and 2011 compared with the prior decade; however, the classification of heroin in these deaths is less sensitive (data and maps are presented in the report linked to above).

Prescription-Type Opiates

Indicators for prescription-type opiates have generally declined or been level over the past few years. Washington State had several policy and legal changes to address opiate prescribing, and there was a notable leveling off in prescriptions for oxycodone, morphine, and methadone, beginning in 2008 and persisting through at least 2010, according to DEA Automation of Reports and Consolidated Orders System (ARCOS) data (not shown). Recovery Help Line calls for prescription pain pills totaled 829 in 2012, second only to heroin (exhibit 1). Directly comparable data were not available, but a decade ago, the number of calls regarding prescription-type opiates was lower than clients for marijuana and methamphetamine and similar to heroin. The first significant decline among 10th graders reporting past-month use of prescription-type opiates “to get high” was seen in 2012, dropping to a level of 6.0 percent, compared with 8.3 percent in 2010.

Police evidence data show a substantial overall decline in evidence positive for prescription-type opiates, from a high of 292 in 2007 to 138 in 2012 in local and State evidence (exhibit 7). NFLIS data, including Federal seizures, show a substantial decline in oxycodone reports among items seized and analyzed, from 184 in 2009 to 91 in 2012 (exhibit 6). Buprenorphine reports also declined, from 39 to 15 from 2009 to 2012; methadone was generally level, with 21 reports in 2012. Fentanyl, however, showed substantial increases, from 0 reports in 2009 to 41 in 2012. According to crime laboratory chemists, fentanyl was “Mostly illicit manufactured...powders or powder residues. Of note, two items had fentanyl mixed with other drugs (one with methamphetamine, one with MDMA).” In 2010, OxyContin® was reformulated to be crush resistant. The crime laboratory reported that in 2012, the OxyContin® observed was “Mostly the newest tablet formulation (OP’s). Very little of the old ‘OC’ version...” In 2012, extended-release oxycodone that is in a crushable form began to be sold in Canadian pharmacies. The Washington State crime laboratory was actively looking for this new form in evidence from Washington and did not find any in evidence tested at the Seattle laboratory through May 2013.

Almost one-half of treatment admissions in King County in 2012 for other opiates were younger than 30, and it was the only drug category for which a majority of admissions were female (exhibit 2). Most took other opiates orally (59 percent), although many reported smoking (27 percent), and some reported intranasal (9 percent) or injecting (4 percent) routes of administration. Treatment admissions for prescription-type opiates as primary drug totaled 678 in 2012, the smallest number among the major drugs of abuse and fairly comparable to the prior 3 years in King County. Among

18–29-year-olds, the numbers of admissions during 2011 and 2012 were one-third lower than the peak in 2010.

Deaths involving prescription-type opiates continued to decline, with 112 deaths in 2012, down from the peak of 164 in 2009 (exhibit 5). While there were declines among all age groups, the decline was smallest among clients age 50 and older, for whom there were 60 deaths in 2009 (representing 37 percent of all prescription-type opiate-involved deaths) compared with 50 in 2012 (constituting 45 percent of all prescription-type opiate-involved deaths).

Methamphetamine

Recovery Help Line calls for methamphetamine totaled 680 in 2012 and ranked third among major drugs, a substantial drop in ranking compared with the period 5–10 years ago (exhibit 1). Other indicators all point to increases in methamphetamine in King County over the last 1–2 years. The lowest number of reports for methamphetamine in police evidence occurred in 2010, but this total increased by more than 50 percent by 2012 (exhibit 7). Despite the increase, evidence levels were well below clients from 2001, when there was substantial local methamphetamine manufacturing.

Treatment admissions have increased slightly over the last few years, although totals remained at somewhat lower levels compared with the mid-2000's (exhibit 3a). The majority of methamphetamine admissions reported smoking in 2012 (66 percent), with a substantial minority still injecting (24 percent) (exhibit 2). A minority, 42 percent, were younger than 30 at the time of treatment entry.

Deaths involving methamphetamine increased substantially in 2012 to 42, a much higher annual total than typical since 2003, a period during which there have been approximately 20 per year (exhibit 5). Deaths have increased across the age span, contradicting the idea that simply older users are dying. A comparison of 2011 data, when there were 20 methamphetamine-involved deaths, with 2012 data, when there were 42, reveals that the exact same proportion, 50 percent, were single-drug deaths. Historically, methamphetamine has been present as the only drug among decedents in a higher proportion than that for other drugs. With the general decline in cocaine indicators, researchers explored whether “goof balls,” heroin and methamphetamine combined, were evident in deaths. In 2011, 2 of the 20 methamphetamine-involved deaths involved heroin, compared with 10 of the 42 in 2012. Heroin co-ingestion is therefore not associated with all of the increase in methamphetamine-involved deaths, but it appears to play a part.

Marijuana

In 2012, Washington voters passed initiative 502, which legalizes marijuana sales and use for adults; a medical use law was approved by voters in 1998. Many medical marijuana dispensaries are located throughout King County. Illegal grows are predominately indoor in western Washington and outdoors in eastern Washington. Law enforcement reported a substantial decline in marijuana seized at the border coming in from Canada.

Tenth graders in the State have reported on past-month use of marijuana every 2 years since 2002, and the rate has held steady at approximately 19 percent. Over the same period, there has been a significant increase in the proportion reporting no/low risk from regular use, from 17 to 29 percent.

Among Recovery Help Line callers, marijuana was the third most commonly mentioned drug in 2012, with 700 calls by King County residents (exhibit 1).

Males represented 74 percent of marijuana treatment admissions in 2012, a higher proportion than for alcohol or any other drug (exhibit 2). Youth represented 48 percent of marijuana admissions, a much higher proportion than for other substances. Marijuana was down slightly in terms of total number of all admissions (exhibit 3a). Additionally, marijuana admissions for clients age 18–29 declined substantially between 2009 and 2012 (exhibit 3b); marijuana admissions dropped below heroin admissions among all age groups.

Police evidence positive for marijuana/cannabis dropped dramatically in King County and state-wide, most likely as a result of policy, resources, and increases in some field testing for marijuana (exhibit 7).

Other Drugs of Abuse

Benzodiazepines and other sedative medicines continue to be widely used with opioids, heroin or pharmaceutical, and remain a serious risk factor for overdose. Pharmaceutical sedatives are rarely a primary drug of abuse, and in drug-caused deaths, they are almost always present in combination with other drugs. Benzodiazepines were present in 69 of 274 deaths in 2012, a number similar to other years. The death data table includes the broader category of prescription-type sedatives, which includes benzodiazepines along with barbiturates, muscle relaxants, GHB (gamma hydroxybutyrate), and tricyclic antidepressants, which were present in 98 of 274 deaths in 2012 (also a generally similar number and proportion as in recent years) (exhibit 5). The most commonly identified benzodiazepines in NFLIS reports of items seized and analyzed were alprazolam and clonazepam, with no major changes in recent years (exhibit 6).

MDMA (3,4-methylenedioxymethamphetamine) has not been identified in drug-caused deaths since 2010 (exhibit 5). While MDMA is still identified in police evidence, the numbers were much lower than 5 years ago (exhibit 7). Other substances identified in tablets sold as MDMA include BZP (1-benzylpiperazine) and TFMPP (1-(3-trifluoromethylphenyl)piperazine), and although levels were down from 2009, these drugs persisted in police evidence.

Cannabimimetics (synthetic drugs with some properties similar to marijuana/cannabis) persist in the area, although it is difficult to get a sense of the prevalence. Testing has improved in the past few years, and NFLIS data identified five different cannabimimetics in 2012 in the Seattle area.

Methylone and MDPV (3,4-methylenedioxyprovalerone) (synthetic drugs related to the khat plant and its active compound cathinone) also had small numbers in NFLIS data in 2011 and 2012.

INFECTIOUS DISEASES RELATED TO DRUG USE

HIV/Hepatitis

HIV incidence and prevalence remain relatively low in King County, with approximately three-quarters of clients infected having an exposure category of men who have sex with men, along with 5 percent for injection drug use, and 9 percent with both exposure categories during 2010–2012

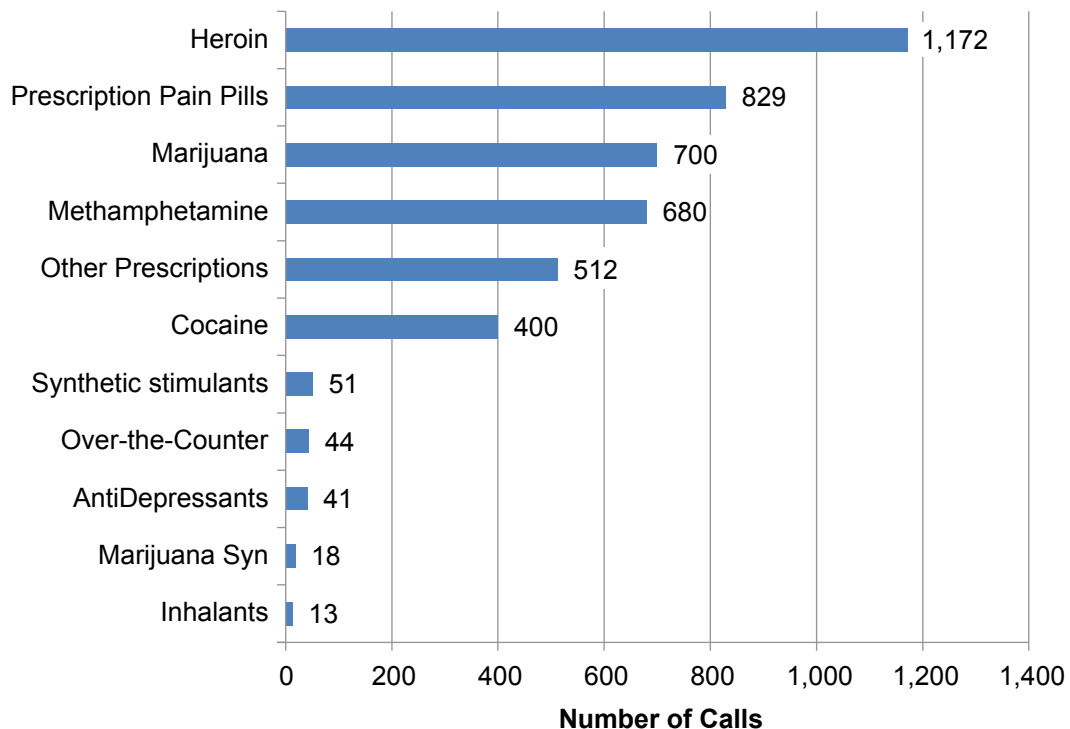
(exhibit 8). In King County, it is estimated that 75 percent of injection drug users are infected with hepatitis C. King County has very active syringe exchange/distribution programs that distributed more than 5 million syringes in 2012 (exhibit 9).

DRUG OVERDOSE PREVENTION EFFORTS

Syringe exchange programs are also providing overdose education and distributing the antidote naloxone (Narcan®). In addition, a pharmacy in Seattle began to directly dispense the antidote to people at risk for having or witnessing an overdose in 2012. Through a collaborative practice agreement with a physician, the pharmacists can dispense to a customer who has not visited a health care provider to receive a prescription. Overdose education and resources for medical patients, drug users, the general public, law enforcement, and health care providers are available at www.stopoverdose.org. The Web site received 2,882 visits from people within Washington, of which 1,662 visits were from people living in the Seattle area.

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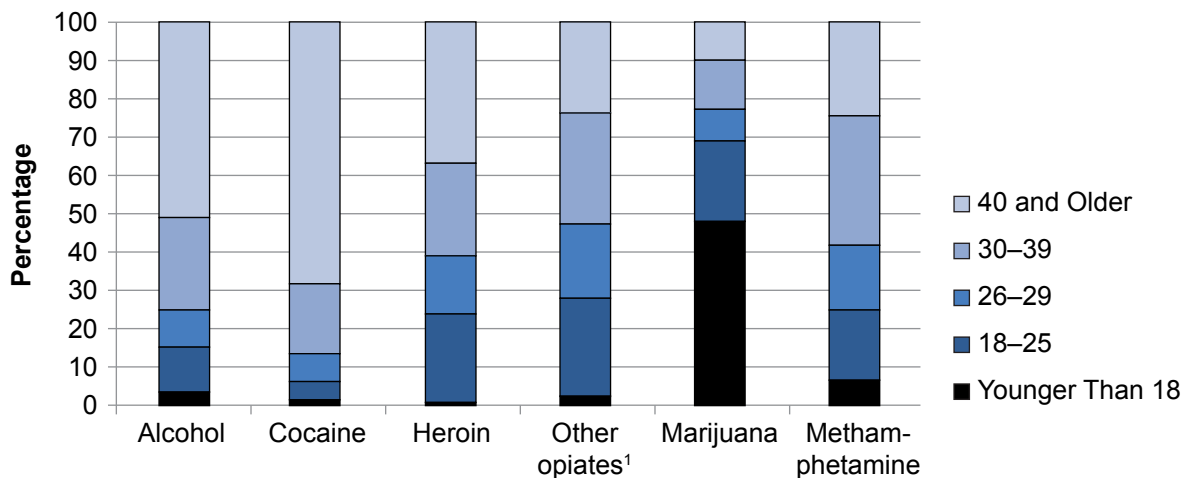
Exhibit 1. Number of Calls to the Recovery Help Line, by Drug, King County (Seattle Area): 2012



SOURCE: Recovery Help Line, King County, and Crisis Clinic

Exhibit 2. Number of Treatment Admissions, by Primary Drug and Demographic Characteristic, in King County (Seattle Area): 2012

	Alcohol	Cocaine	Heroin	Other opiates ¹	Marijuana	Methamphetamine	Other drugs ²	Total
Male	2,384	551	1,221	294	1,359	536	158	6,503
Female	1,055	303	843	384	475	419	182	3,661
Route of Ingestion								
Inhalation	5	9	32	9	6	7	3	71
Injection	0	16	1,713	29	1	226	19	2,004
Intranasal	0	79	33	60	0	43	6	221
Oral	3,428	10	30	397	24	40	148	4,077
Smoking	4	739	254	183	1,802	636	79	3,697
Other/none provided	2	1	2	0	1	3	1	94
Age at Admission								
Younger than 18	127	14	23	18	879	64	31	1,156
18–25	405	40	475	172	385	174	56	1,707
26–29	328	64	310	131	157	162	43	1,195
30–39	832	155	500	197	234	323	77	2,318
40 and older	1,747	581	756	160	179	232	133	3,788
Total	3,439	854	2,064	678	1,834	955	340	10,164

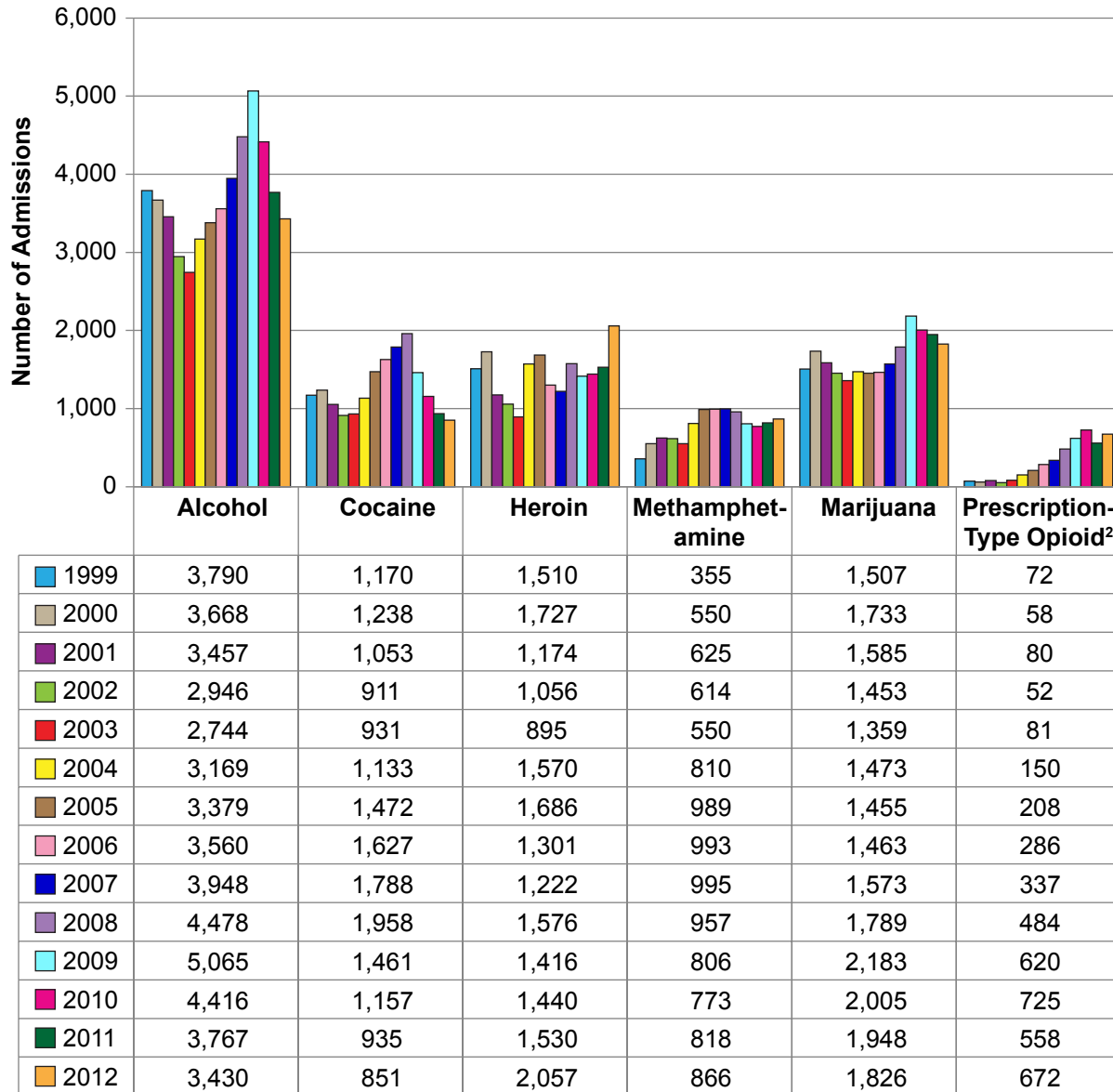


¹Other opiates=Other opiates, oxycodone, and hydrocodone.

²Other drugs=hallucinogens, inhalants, PCP, benzodiazepines, tranquilizers, other sedatives, prescribed opiate substitute, and over the counter drugs.

SOURCE: Washington Division of Behavioral Health and Recovery

Exhibit 3a. Number of Publicly Funded Treatment Admissions¹, for All Modalities and Ages, for King County (Seattle Area) Residents, by Primary Drug: 1999–2012

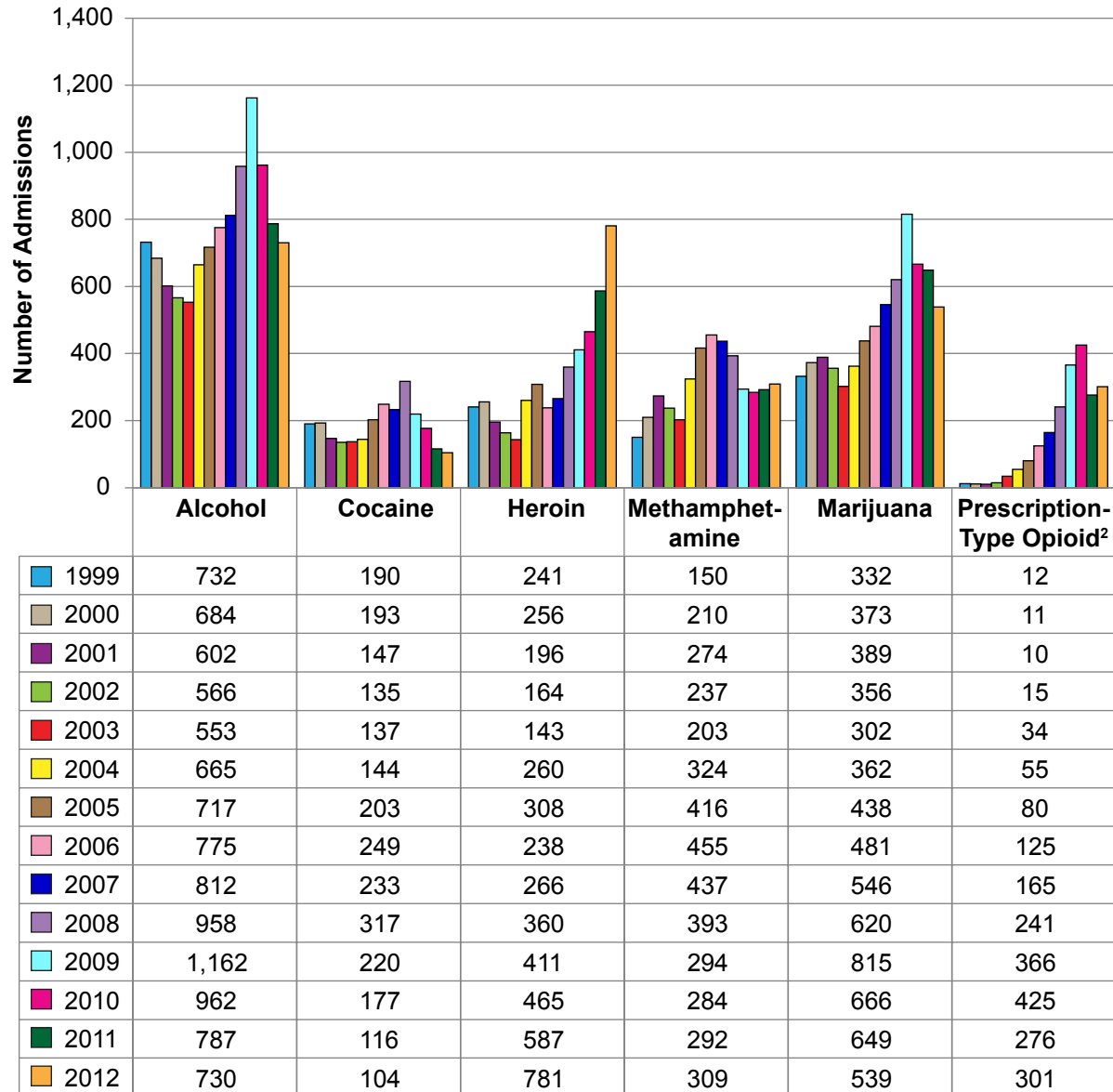


¹Admissions are duplicated numbers.

²Prescription-Type Opioid=nonprescription methadone, oxycodone, hydrocodone, and other opiates.

SOURCE: Washington Division of Behavioral Health and Recovery

Exhibit 3b. Number of Publicly Funded Treatment Admissions¹, for 18–29-Year-Olds for All Modalities, for King County (Seattle Area) Residents, by Primary Drug: 1999–2012

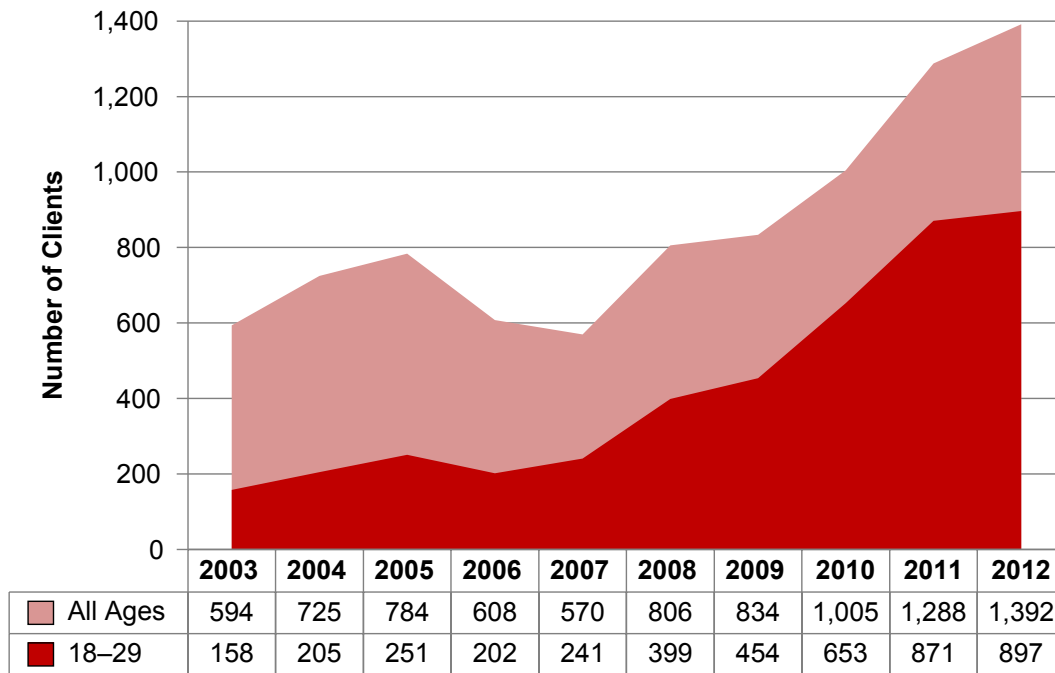


¹Admissions are duplicated numbers.

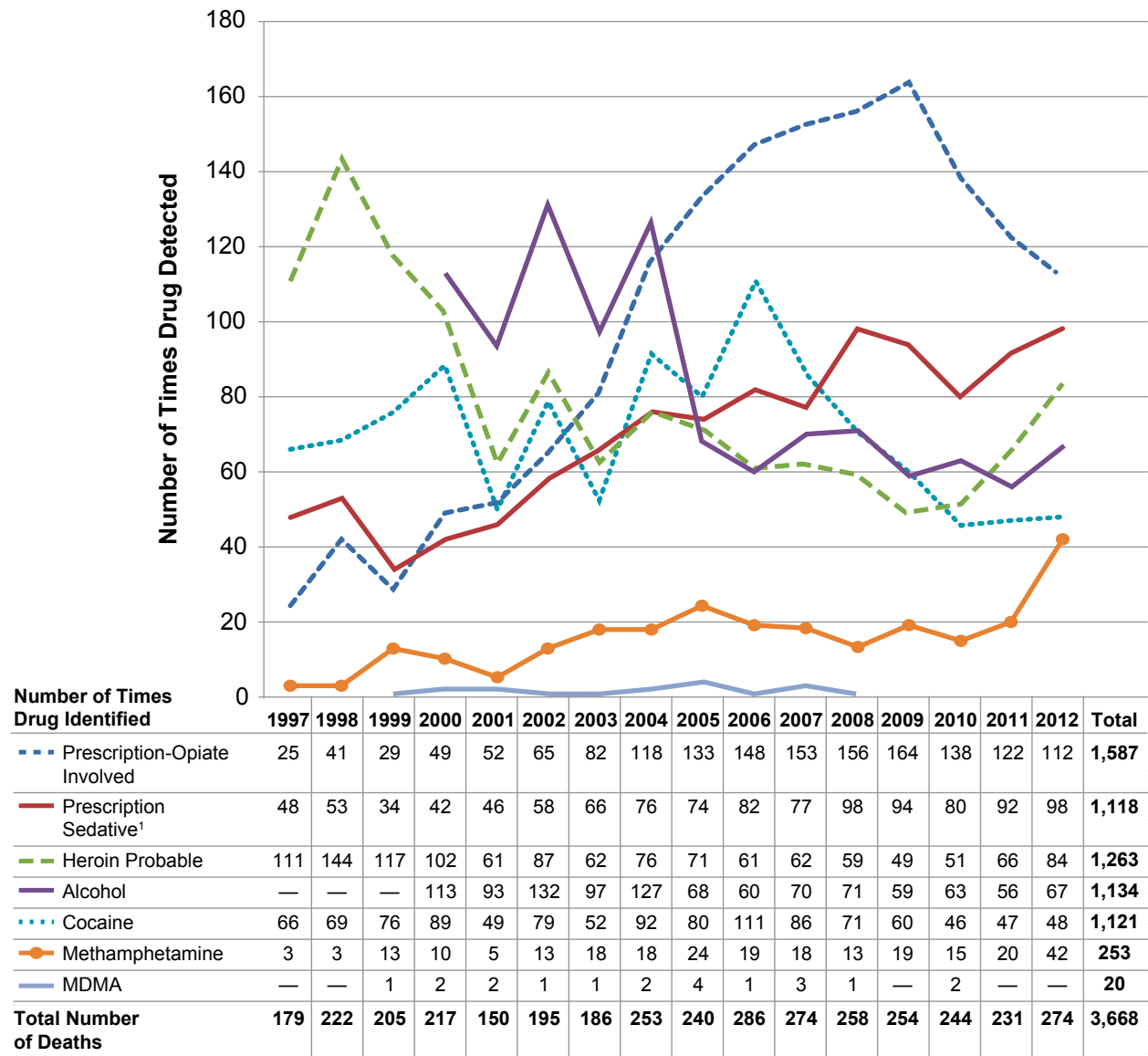
²Prescription-Type Opioid=nonprescription methadone, oxycodone, hydrocodone, and other opiates.

SOURCE: Washington Division of Behavioral Health and Recovery

Exhibit 4. Number of First-Time Treatment Admissions for a Primary Heroin Problem, for All Ages and 18–29-Year-Olds, in Washington State: 2003–2012



SOURCE: Washington Division of Behavioral Health and Recovery

Exhibit 5. Drug-Caused Deaths, by Drug and Number of Times Detected, in King County (Seattle Area): 1997–2012

¹Prescription sedatives include benzodiazepines, barbiturates, muscle relaxants, GHB, and tricyclic antidepressants.

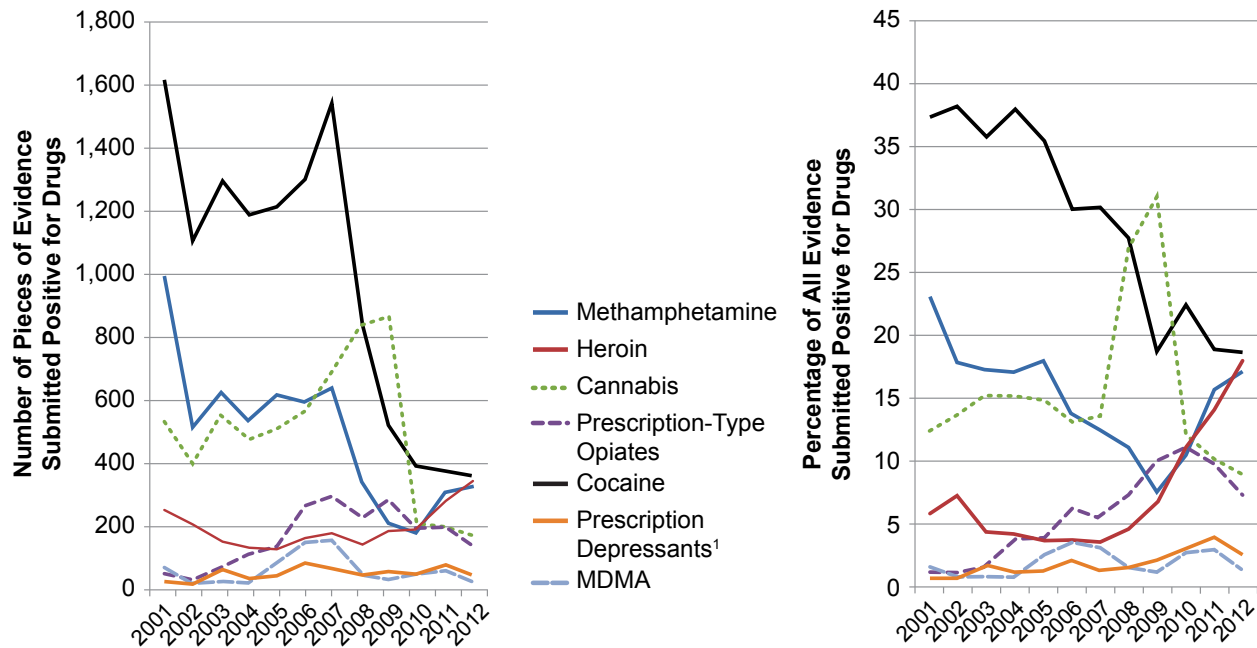
SOURCE: Public Health - Seattle & King County, King County Medical Examiner

Exhibit 6. Number of Reports Among Drug Items¹ Analyzed by NFLIS Laboratories, by Drug, in King County (Seattle Area): 2009–2012

Drug	2009	2010	2011	2012	Category
Cocaine	644	429	405	421	
Methamphetamine	332	261	325	422	
Heroin	239	232	310	430	
Marijuana/Cannabis	927	224	272	192	
MDMA	81	57	82	22	
PCP (Phencyclidine)	24	19	19	24	
Psilocybine (Psychedelic Mushroom)	3	5	15	10	
Psilocin (Psychedelic Mushroom)	16	9	7	5	
BZP (1-Benzylpiperazine)	62	15	15	26	Sold as MDMA
TFMPP (1-(3-trifluoromethylphenyl) piperazine)	27	6	7	7	Sold as MDMA
Alprazolam	26	28	30	23	Benzodiazepine
Clonazepam	16	13	17	13	Benzodiazepine
Diazepam	8	5	10	2	Benzodiazepine
Lorazepam		4	8		Benzodiazepine
Synthetic Cannabinoid			8		Cannabinoid homolog
AM-1220				1	Cannabinoid homolog
AM-2201			4	10	Cannabinoid homolog
MAM-2201				7	Cannabinoid homolog
JWH-018			1	1	Cannabinoid homolog
JWH-122			1	1	Cannabinoid homolog
JWH-250			1		Cannabinoid homolog
Oxycodone	184	149	114	91	Prescription Opiate
Methadone	23	11	28	21	Prescription Opiate
Hydrocodone	32	30	27	15	Prescription Opiate
Buprenorphine	39	33	25	15	Prescription Opiate
Fentanyl		8	10	41	Prescription Opiate
Hydromorphone		2	7	3	Prescription Opiate
Morphine	7	8	7	11	Prescription Opiate
Codeine	6	4	3	4	Prescription Opiate
Oxymorphone	1		3	1	Prescription Opiate
Testosterone	1		2	7	Steroid
Mesterolone	1				Steroid
Methandrostenolone (Methandienone)	1				Steroid
Oxymetholone		1			Steroid
Stanozolol	1			1	Steroid
Methylone			4		Substituted Cathinone
MDPV (3,4-Methylenedioxypropylvalerone)			2	3	Substituted Cathinone
OTHER	421	171	209	435	
TOTAL (Excluding "Unknown")	3,122	1,724	1,978	2,091	

¹Evidence provided by Federal, State, and local sources.
SOURCE: NFLIS, DEA

Exhibit 7. Law Enforcement Evidence Seized by State or Local Law Enforcement, by Drug, Number, and Percentage of the Total, in King County (Seattle Area): 2001–2012



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total
Methamphetamine	995	511	625	536	612	594	640	344	207	182	310	329	5,885
Heroin	250	208	155	131	126	160	180	143	186	193	277	346	2,355
Cannabis	532	394	555	476	506	563	698	835	868	211	200	173	6,011
Prescription-Type Opiates	48	32	66	114	134	267	292	227	278	194	193	138	1,983
Cocaine	1,612	1,100	1,295	1,191	1,208	1,298	1,549	862	516	391	374	358	11,754
Prescription Depressants ¹	28	19	62	37	45	87	66	45	58	53	78	49	627
MDMA	68	22	27	25	87	152	158	48	32	47	58	27	751
Other Drugs	787	595	839	632	688	1,192	1,555	610	642	472	490	506	9,008
Total	4,320	2,881	3,624	3,142	3,406	4,313	5,138	3,114	2,787	1,743	1,980	1,926	38,374

¹Prescription depressants include benzodiazepines, barbiturates, muscle relaxants, GHB, and zolpidem.
SOURCE: Washington State Patrol Forensic Laboratory Services Bureau

Exhibit 8. Demographic Characteristics of Residents Diagnosed with HIV, by Number and Percentage and by Date of Diagnosis, in King County (Seattle Area): 1982–2012¹

	1982–2003		2004–2006		2007–2009		2010–2012 ¹		Trend ²
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	2004–2012
TOTAL	9,102	100	972	100	942	100	893	100	
HIV Exposure Category									
Men Who Have Sex With Men (MSM)	6,648	76	602	70	595	74	593	77	Up
Injection Drug User (IDU)	525	6	53	6	32	4	35	5	—
MSM-IDU	924	11	90	10	68	8	72	9	—
Heterosexual Contact ³	572	7	113	13	106	13	63	8	Down
Blood Product Exposure	97	1	1	0	1	0	0	0	—
Perinatal Exposure	27	0	1	0	5	1	6	1	—
SUBTOTAL- Known Risk	8,793	—	860	—	807	—	769	—	—
Undetermined/Other ⁴	309	3	112	12	135	14	124	14	—

¹Due to delays in reporting, data from recent years are incomplete.

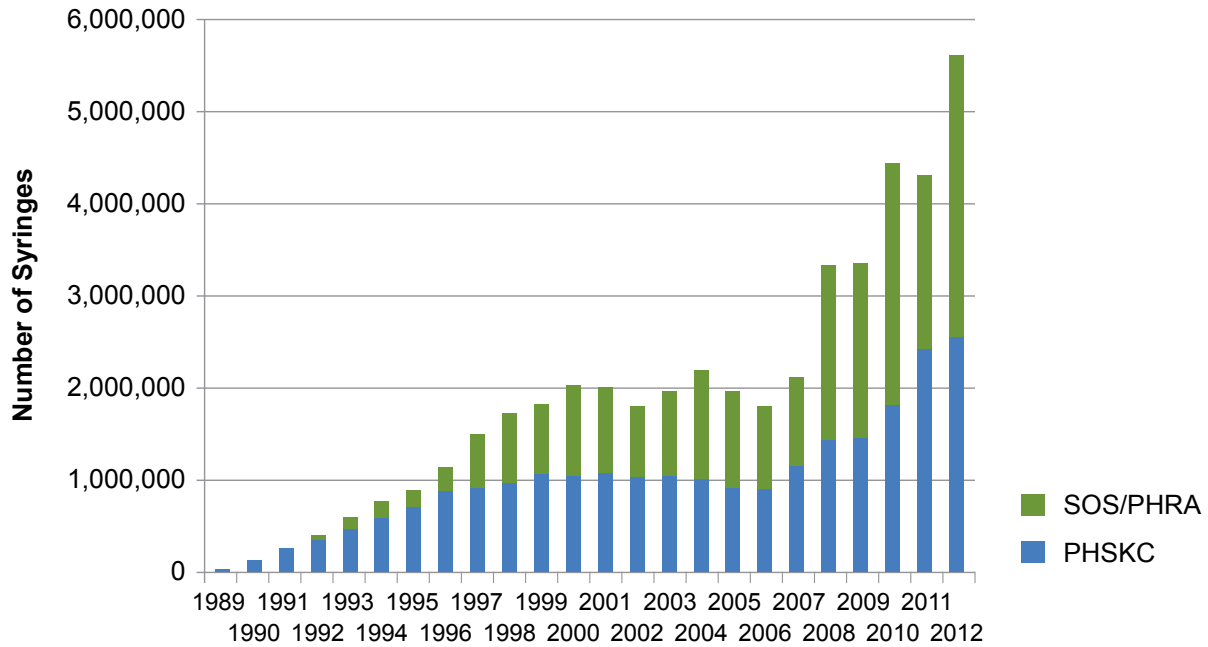
²Chi-square statistical trends in proportions ($p < .05$) were calculated for cases with known characteristics for the periods 2004–2006, 2007–2009, and 2010–2012.

³Includes presumed heterosexual cases (females who deny injection drug use but have sex with men not known to be HIV-infected).

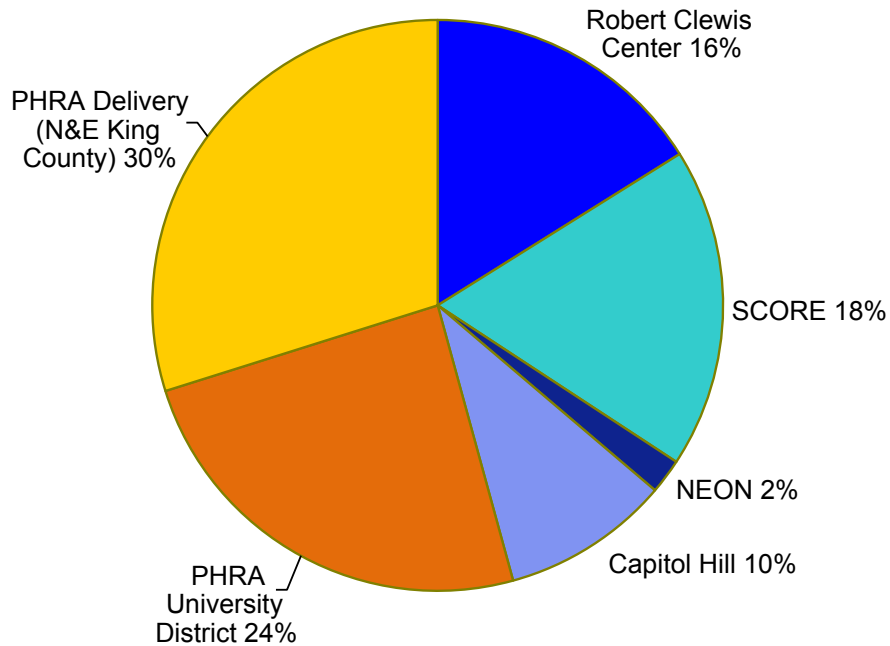
⁴Includes persons for whom exposure information is incomplete (due to death, refusal to be interviewed, or loss to followup), persons exposed to HIV through their occupation, and patients whose mode of exposure remains undetermined.

SOURCE: Public Health – Seattle & King County, reported through 12/31/2012

Exhibit 9. Number of Syringes Distributed in King County (Seattle Area), by Agency: 1989–2012



Percentage Syringe Volume by Site: 2012



Notes: SOS=Street Outreach Services; PHRA=Peoples Harm Reduction Alliance; PHSKC=Public Health - Seattle & King County; SCORE=South County Outreach Referral and Exchange; NEON=Needle Exchange and Sex Education Outreach Network.
SOURCE: Public Health - Seattle & King County

Substance Abuse Trends in Texas: June 2013

Jane C. Maxwell, Ph.D.¹

ABSTRACT

This report updates indicators of drug abuse in Texas since the June 2012 report and describes trends by calendar year from 1987 through May 2013. Cannabis demand indicators (poison control calls, treatment admissions, and toxicology laboratory items identified) were mixed, and supply indicators were down. The quality of Mexican cannabis is poor, and availability is down due to drought in Mexico. Indoor grows and hydroponic grows in Texas provide large quantities of high-quality cannabis. Synthetic cannabis indicators were increasing, and the number of items and types of cannabinoids identified in toxicology laboratories was growing. Cocaine indicators (poison control calls, treatment, toxicology findings, and deaths) continued to decrease, with fewer seizures at the border, more diversion to Europe, use of levamisole as filler, and increased prices. Some users on the street reported the available cocaine is so weak that it is not worth the cost. Heroin demand indicators were increasing, as were the supply indicators, although the amounts seized were down, with lower prices. Users are young, and the average age of a person dying with heroin identified in the body has dropped from 40 to 36 in 5 years. Other opiate indicators were increasing, with users of street methadone becoming more similar to users of other opioids. Drinking codeine cough syrup continued to be driven by music extolling the use of “syrup”. Abuse of prescription narcotic drugs was identified in two groups: teenagers/young adults seeking euphoria and older baby boomers seeking pain relief. Pain clinics in Houston remained a problem, even after the Drug Enforcement Administration’s (DEA’s) “King of the Pill” operation (a series of raids conducted by the DEA as part of an eight month probe on medical offices and pharmacies in Houston suspected of prescription fraud). A key finding for this reporting period in Texas, based on numbers of calls to poison control centers and forensic laboratory report data, was the strong and growing “love affair” and increasing use of amphetamine-type substance (ATS) drugs, some of which may be emerging because of the world-wide shortage of MDMA and its precursors. The demand for some of these substances may be interrelated with the availability and quality of the other ATS drugs and cocaine. For instance, demand indicators were down for the ATS drug, MDMA, while the 2-C-xx phenethylamines (which were replacements for MDMA in the 1980s) were increasing both in use and in variations. Youth were reported to be “researching chemicals” such as the synthetic cathinones, with use increasing with more items and more types identified in forensic laboratories each year. Methamphetamine demand indicators were close to approaching the levels of use before the pseudoephedrine ban. Supplies were increasing; prices were decreasing; and very large seizures have been reported. Liquid methamphetamine is coming in from Mexico and being converted to “ice” locally. Methamphetamine and cocaine trends may be inversely related. As of the first quarter of 2013, the purity of the P2P (phenyl-2-propanone) methamphetamine nationally was 95 percent, the potency was 83 percent, and 95 percent

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of the methamphetamine examined in the DEA's special laboratory was made using the P2P process. PCP (phencyclidine) indicators were varied; increasing treatment admissions and recent seizures may indicate a resurgence of the drug. Psilocin and psilocybin indicators were emerging, as were 5-MeO tryptamines.

INTRODUCTION

Area Description

The population of Texas in 2010 was 25,145,561, with 45 percent White, 11 percent Black, 38 percent Hispanic, and 5 percent "Other." Illicit drugs continue to enter from Mexico through cities such as El Paso, Laredo, McAllen, and Brownsville, as well as through smaller towns along the border. The drugs then move northward for distribution through Dallas/Fort Worth and Houston. In addition, drugs move eastward from San Diego through Lubbock and from El Paso to Amarillo and Dallas/Fort Worth.

Data Sources

This report updates the June 2012 CEWG report. To compare the June 2013 report with earlier periods, please access <http://www.utexas.edu/research/cswr/gcattc/drugtrends.html>.

Data for this report include the following sources:

- **Student substance use data** for 2012 came from reports on the Texas School Survey of Substance Abuse: Grades 7–12, 2012, which was authored by L.Y. Liu and published by the Department of State Health Services (DSHS). For 2011, the data for high school students in grades 9–12 came from the Youth Risk Behavior Survey (YRBS)—United States, 2011, MMWR Surveillance System, downloaded June 8, 2012, at <http://apps.nccd.cdc.gov/youthonline/App/Default.aspx?SID=HS>.
- **Data on drug use** by Texans age 12 and older came from the Substance Abuse and Mental Health Services Administration's (SAMHSA's) National Surveys on Drug Use and Health (NSDUH). The statewide estimates are from the 2008–2009 and 2010–2011 NSDUH.
- **Poison control center data** came from the Texas Poison Center Network, DSHS, for 1998 through 2012, with updates on cannabis homologs and synthetic cathinones through May 31, 2013, courtesy of Mathias Forrester. The information on the 2Cxx phenethylamine drugs is taken from an article, "2C Series Phenethylamine Derivative Exposures in Texas" by Mathias Forrester in *Substance Abuse* 34:1, 81-82, 2013.
- **Treatment data** were provided by the DSHS data system on clients admitted to treatment in DSHS-funded facilities from January 1, 1987, through December 31, 2012. Analysis of the 2012 data was by Lesli San Jose of the DSHS Decision Support Program and by the author. The DSHS treatment data changed beginning with calendar year 2010 with additional drug categories. The 2012 data were downloaded on April 23, 2013, and the file may not be complete due to additional records being submitted later.

- **Information on drug mortality** through 2012 came from the Bureau of Vital Statistics, DSHS, on May 31, 2012, courtesy of Lyudmila Baskin. These deaths are defined as “drug poisoning deaths,” which involve deaths with an underlying cause of poisoning from drug overdose or other misuse of drugs. The 2012 data are provisional and subject to change as additional cases are analyzed.
- **Information on seized drugs identified by laboratory tests** came from forensic laboratories in Texas, which reported results from analyses of substances for 1998 through partial 2013 to the National Forensic Laboratory Information System (NFLIS) of the Drug Enforcement Administration (DEA). The drugs reported include not only the first drug reported in a case of multiple substances, but also the second and third drugs in any combination. The 2009 and 2011 data are not complete due to missing data from some reporting units, and the 2012 data are missing 2 months of data due to changes in the computer system at the Texas Department of Public Safety.
- **Price, trafficking, distribution, and supply information** was gathered from the July–December 2012 reports on Trends in the Traffic Report System (TTRS) from the Dallas, El Paso, and Houston Field Divisions (FDs) of the DEA.
- **Purity data** were provided by the DEA. The purity of methamphetamine nationally came from DEA’s Methamphetamine Profiling Project (MPP), and the Texas purity data for heroin came from the DEA Domestic Monitor Program (DMP).
- **Reports by users and street outreach workers** on drug trends for last quarter of 2012 and the first quarter of 2013 were reported to DSHS by workers at local HIV (human immunodeficiency virus) counseling and testing programs across the State. Information was also gathered from outreach staff at AIDS (acquired immunodeficiency syndrome) Services of Austin.
- **Sexually transmitted disease (STD) and AIDS** data through 2012 were provided by Nicole Hawkins of DSHS.

DRUG ABUSE PATTERNS AND TRENDS

Alcohol

Alcohol is the primary drug of abuse in Texas. In 2012, 58 percent of Texas secondary school students in grades 7–12 had ever used alcohol, and 25 percent had consumed alcohol in the last month. Of particular concern is heavy consumption of alcohol, or binge drinking, which is defined as drinking five or more drinks at one time. In 2012, 12 percent of all secondary students said that when they drank, they usually drank five or more beers at one time, and 11 percent reported binge drinking of liquor (exhibit 1).

The 2011 YRBS reported that 73 percent of Texas high school students in grades 9–12 had ever drunk alcohol; 40 percent had drunk alcohol in the past month; and 24 percent had drunk five or more drinks in a row in the last month. In comparison, in 2001, 81 percent had ever drunk alcohol; 49 percent had used alcohol in the last month; and 31 percent had drunk five or more drinks at a time. In 2011, 22 percent of females and 25 percent of males reported binge drinking.

The 2010–2011 NSDUH estimated that 49.6 percent of all Texans age 12 and older had drunk alcohol in the past month, compared with 51.8 percent nationally. In 2008–2009, 49.6 percent of

Texans and 51.8 percent nationally had drunk alcohol in the past month. In 2010–2011, 6.6 percent of Texans age 12 and older were estimated to be alcohol dependent or abusers in the past year, compared with 6.8 percent of the U.S. population.

In 2012, 29 percent of all clients admitted to publicly funded treatment programs in Texas had a primary problem with alcohol. The characteristics of alcohol admissions have changed over the years. In 1988, 82 percent of the clients were male, compared with 67 percent in 2012. The average age increased from 33 to 39 years. During this time, alcohol clients were also becoming more likely to be polydrug users: the proportion reporting no secondary drug problem dropped from 67 to 52 percent. The most common secondary drugs were marijuana/cannabis (42 percent) and cocaine (17 percent).

Marijuana/Cannabis

Marijuana/cannabis indicators remained mixed (exhibit 2). Among Texas secondary students (grades 7–12), 26 percent in 2012 had ever tried marijuana/cannabis, and 11 percent had used in the past month. Past-month use was lowest among seventh graders (exhibit 3). The use of blunt cigars (cheap cigars split open with cannabis replacing the tobacco) has driven the increase in the use of marijuana/cannabis. Exhibit 4 shows the impact of blunt cigars after they appeared in Texas in 1993. Since then, rates have increased for all race/ethnic groups. By 2008, however, the levels for Whites and Hispanics were back to their 1992 levels, while the levels for Black students are still above the rates prior to the introduction of blunts. The 2012 survey provided further insight into this phenomenon. Of those youths who used marijuana/cannabis, 63 percent smoked “blunts” at least one-half of the time, compared with 58 percent who smoked “joints” at least one-half of the time. The relationship between tobacco use, marijuana/cannabis use, and cigars was also seen in the finding that of those youths who had ever used tobacco and never used marijuana/cannabis, 5 percent had ever used cigars. In comparison, of those who had ever used tobacco and ever used marijuana/cannabis, 77 percent had ever used cigars. In 2011, the YRBS reported that 41 percent of Texas high school students in grades 9–12 had ever smoked marijuana/cannabis, compared with 37 percent in 2009, 38 percent in 2007, 42 percent in 2005, and 41 percent in 2001.

The 2010–2011 NSDUH estimated that 9.3 percent of Texans age 12 and older had used marijuana/cannabis in the past year (compared with 11.6 percent nationally); in 2008–2009, 8.3 percent reported past-year use, compared with 10.8 percent nationally.

The Texas Poison Center Network reported 133 calls of human exposure to marijuana/cannabis in 1998, compared with 401 calls in 2012 (exhibit 2).

Marijuana/cannabis was the primary problem for 23 percent of admissions to treatment programs in 2012, compared with 8 percent in 1995. While 43 percent of marijuana/cannabis admissions in 2012 reported no second substance abuse problem, 29 percent had a problem with alcohol. The average age of marijuana/cannabis clients was 23. Approximately 43 percent were Hispanic; 25 percent were White; and 26 percent were Black. Nearly three-quarters (72 percent) were male. Seventy-eight percent were involved with the criminal justice system, and only 13 percent were employed fulltime.

Marijuana/cannabis was identified in 28 percent of drug reports among items analyzed by Texas forensic laboratories in 2012 (exhibit 2). DEA’s System to Retrieve Information from Drug Evidence

(STRIDE) statistics showed a 27-percent drop in cannabis seizure amounts between 2011 (245,219 kilograms) and 2012 (179,645 kilograms). DEA's El Paso Intelligence Center (EPIC) data showed cannabis seizure amounts in Texas declined by 28 percent, from 1,080,426 kilograms in 2011 to 780,087 kilograms in 2012.

The DEA's Dallas FD is a major transshipment and distribution center for cannabis imported from Mexico. Sophisticated indoor grows continue to be frequently encountered. The organizations responsible for the indoor grows have the capability to cultivate and distribute multiple hundred pounds of high-grade cannabis. During several recent seizures, elaborate indoor cannabis grow operations were found in residences.

While marijuana/cannabis was the controlled substance most frequently seized in the DEA's El Paso FD, cannabis levels have dropped since 2008. Northern Mexico is suffering the worst drought since the government began to record rainfall 72 years ago. The El Paso FD reported availability was still high, but marijuana/cannabis was less available than a year ago. Most of the marijuana/cannabis in the region is Mexican, with some hydroponic grown in the Midland area.

Marijuana/cannabis continued to be highly available throughout the DEA's Houston FD, but some areas reported a noticeable reduction in quality, with some of the marijuana/cannabis seized on the border of poor quality (insect-infested, moldy, and likely stored for a longer period of time before crossing the border). Hydroponic/indoor grows were increasingly detected, as were outdoor marijuana/cannabis grows in the area. The popcorn variety of marijuana/cannabis was also in demand, and traffickers raised prices on this product.

Exhibit 5 shows an increase of the cost for a pound of marijuana/cannabis since 1992. In 2012, a pound of domestic cannabis cost \$360–\$400 in Houston, \$300–\$500 in Dallas, and \$300–\$900 in El Paso. A pound of Mexican cost \$400–\$1,900, in Dallas, \$150–\$400 in El Paso, and \$180–\$500 in Houston. A pound of hydroponic cost \$1,900–\$7,500 in Dallas, \$4,000–\$6,000 in Midland, and \$3,600–\$5,500 in Houston.

Synthetic Cannabis

Cannabis homologs (synthetic cannabis or cannabimimetics), which mimic delta-9-tetrahydrocannabinol (THC) but with different chemical structures, continue to be a problem. Many of the newer varieties cannot be identified in standard drug tests, so they are used by probationers, parolees, or persons required to submit to drug tests. A new problem is that these synthetic drugs are also being used by individuals in drug treatment programs to avoid testing positive for marijuana/cannabis.

The most common types include JWH, AM, UR, MAM, and XLR. The compounds had been developed by researchers to investigate the part of the brain responsible for hunger, memory, and temperature control. The products are known and sold under a wide variety of names, such as "K2," "K2 Summit," "Spice," and "Spice Gold." They have been available through gas stations and specialized stores, such as "head shops," and marketed as herbal incense.

On March 1, 2011, the DEA designated 15 of these synthetic cannabinoids as Schedule I, with 3 more scheduled on May 16, 2013. On September 1, 2011, Texas also made these substances Schedule I. Since then, the drugs that are banned are primarily obtained over the Internet, and those that are not banned are obtained from smoke shops and head shops. As exhibit 6 shows, use

declined immediately after scheduling but then increased. Human exposure events continue to be reported to the poison control centers.

Symptoms associated with use of the cannabis homologs include tachycardia, respiratory issues, agitation, confusion, drowsiness, hallucinations, delusions, nausea and vomiting, ocular problems, and other problems. The substances may also produce withdrawal and dependence in users.

From 2010 through May 31, 2013, the Texas Poison Center Network received 1,793 calls involving human exposures to the substances (504 in 2010, 588 in 2011, 470 in 2012, and 227 through May 2013). Of all the calls, the age range was between 7 and 75; 46 percent were younger than 20; 76 percent were male; and 89 percent had either misused or abused the substance. Of these calls, 6 percent resulted in “major” or life-threatening conditions; three deaths from synthetic cannabinoids were reported to the poison control centers between 2010 and 2013.

In 2012, 156 persons with a primary problem with synthetic cannabinoids entered Texas treatment programs. The average age was 23; 62 percent were White; and 26 percent were Hispanic. Seventy-four percent were male, and 46 percent used the substance daily.

The Texas forensic laboratories identified 79 synthetic cannabis drug reports among items seized and analyzed in 2010, 2,001 in 2011, and 3,108 in 2012. The number of varieties of these synthetics increased from 19 in 2010, to 37 in 2011, to 55 in 2012.

The DEA’s El Paso FD reported some local distributors were making their own “Spice” by spraying potpourri with acetone and chemicals obtained in Ciudad Juarez or from China. The forensic laboratory in Laredo reported that the third and fifth most prevalent drugs were types of synthetic cannabis, which shows a trafficking route for these drugs through Mexico. In comparison, heroin ranked seventh in terms of items identified by the Laredo laboratory.

Cocaine/Crack

Cocaine indicators have decreased (exhibit 7). The changes are due to increasing demand for cocaine in Europe; production declines in the Andes; and the addition of levamisole, a filler that can dilute the potency of the cocaine.

The 2012 Texas School Survey of Substance Abuse: Grades 7–12 reported that lifetime use of powder and crack cocaine had dropped from a high of 9 percent in 1998 to 7 percent in 2012, while past-month use dropped from 4 percent in 1998 to 2 percent in 2012. The 2011 YRBS reported that 9.4 percent of Texas high school students had ever used cocaine, compared with 8.5 percent in 2009. In 2010–2011, the NSDUH reported that 1.5 percent of the Texas population age 12 and older had used cocaine in the past year, below the national rate of 1.6 percent.

Texas Poison Center Network abuse and misuse calls involving the use of cocaine increased from 497 in 1998, to 1,410 in 2008, and then declined to 552 in 2012 (exhibit 7). Sixty-five percent of the cocaine cases in 2012 were male, and the average age was 33.

Cocaine (both crack and powder) represented 13 percent of all admissions to DSHS-funded treatment programs in 2012, down from 35 percent in 1995. Among all cocaine admissions, cocaine inhalers were the youngest and most likely to be Hispanic (exhibit 8). Cocaine injectors were older

than inhalers but younger than crack smokers, and they were the most likely to be White. Crack smokers were more likely to be Black and more likely to be homeless. The term “lag” refers to the period from first consistent or regular use of a drug to the date of admission to treatment. Powder cocaine inhalers averaged 11 years between first regular use and entrance to treatment, while injectors averaged 19 years of use before they entered treatment. Exhibit 9 shows the changes in treatment admissions between 1993 and 2012 by route of administration and race/ethnicity. The proportion of Blacks among crack cocaine smokers has decreased, and the proportion of Whites increased.

The number of poisoning deaths that involved cocaine increased from 321 in 1999 to 778 in 2006, before dropping to 487 in 2012 (exhibit 7). In 2012, the average age was 46; 8 percent were male; 77 percent were White; 11 percent were Hispanic; and 10 percent were Black.

Exhibit 7 shows that the proportion of drug reports identified as cocaine by the forensic laboratories has decreased. In 1998, cocaine accounted for 40 percent of all reports of items examined, compared with 19 percent in 2012. The DEA laboratory has been finding levamisole (phenyltetrahydroimidazole) (“PIT”) in cocaine exhibits for a number of years, and the decrease in purity may reflect increased use of PIT as filler to increase the volume of the drug. There were 700 items identified as PIT in 2012, according to the forensic laboratories in Texas.

Street outreach workers in Austin report crack use is continuing among older Black males, but few new users are appearing. Crack users who want to inject the drug continue to use packets of lemon juice to liquefy the drug. In order to minimize vein damage, vitamin C powder dissolved in water is a harm reduction option to using lemon juice. Some users in Austin also are reporting that the cocaine is so weak that it is not worth the cost. Other outreach programs around the State also reported crack use was down, and that mixing synthetic cathinones with cocaine to increase its effect is reported to cause hallucinations and paranoia.

Data from the EPIC National Seizure System (NSS) for 2012 reflected a significant decline in cocaine seizures in the Southwest border. Cocaine seizures fell in Texas by 62 percent, from 14,301 kilograms in 2011 to 5,440 kilograms in 2012.

Along with the decrease in cocaine supply, there was an increase in price. Whereas cocaine was available at \$23,500 per kilogram in late 2011 and early 2012, current per kilogram quotes typically range from \$29,000 to \$30,000, with some quotes as high as \$34,000 (exhibit 10). DEA intelligence indicates that, in many cases, cocaine sources are “dry,” regardless of price. Recent cocaine seizure totals corroborate Dallas FD intelligence.

In Houston, cocaine availability decreased throughout the FD, which resulted in an increase in cocaine prices. This reduction in the cocaine supply in the Brownsville area was likely caused by dysfunction in the organizational structure of the cartel in the Brownsville/Matamoros area, increased Mexican military presence, and skirmishes between competing cartels. Crack cocaine’s availability varied within the region.

Cocaine was readily available in El Paso. The source of supply in Ciudad Juarez and pricing in El Paso was stable. The loads typically encountered were less than 50 kilograms, which is smaller than typical load sizes encountered prior to 2008.

A gram of powder cocaine cost \$50–\$90 in Dallas, \$40–\$140 in El Paso, and \$60–\$100 in Houston. An ounce of powder cocaine in 2012 cost \$450–\$1,400 in Dallas, \$600–\$1,600 in El Paso, and \$360–\$1,000 in Houston. A gram of crack cocaine cost \$69–\$100 in Dallas, \$20–\$100 in El Paso, and \$50–\$200 in Houston.

Heroin

Heroin indicators show a growing problem, particularly among teenagers and young adults. This was first noticed with the “cheese heroin” situation in Dallas in the mid-2000s, but heroin use indicators by youth and young adults are now increasing statewide. The primary types of heroin in Texas are Mexican black tar and powdered brown, which is black tar turned into a powder by combining it with diphenhydramine or other ingredients.

The proportion of Texas secondary students reporting lifetime use of heroin dropped from 2.4 percent in 1998 to 1.1 percent in 2012. The 2011 YRBS found 3.3 percent of Texas high school students reported having ever used heroin, compared with 2.1 percent in 2009, 2.4 percent in 2007, and 3.0 percent in 2005 and 2001.

Calls to the Texas Poison Center Network involving confirmed exposures to heroin ranged from 181 in 1998 to 268 in 2012 (exhibit 11). Heroin was the primary drug of abuse for 13 percent of clients admitted to treatment in 2012 (exhibit 11). The characteristics of these users varied by route of administration, as exhibit 12 illustrates. Most heroin addicts entering treatment inject the drug, but the proportion inhaling heroin increased from 4 percent of all heroin admissions in 1996 to 18 percent in 2012. Smoking black tar heroin is very rare in Texas, because the chemical composition tends to flare and burn rather than smolder.

While the number of individuals who inhale heroin was small, the lag period between first use and seeking treatment for this group was 8 years, compared with 12 years for injectors. This shorter lag period means that, contrary to the street rumors that “sniffing or inhaling is not addictive,” inhalers can become dependent on heroin and enter treatment sooner while still inhaling. Alternatively, they will shift to injecting—increasing their risk of hepatitis C and HIV infection, becoming more impaired, and entering treatment later.

Of the 2012 heroin admissions, 43 percent reported no second substance problem, and 18 percent reported a problem with cocaine, which shows the tendency to “speedball,” or use heroin and cocaine sequentially. Ten percent reported a second problem with cannabis, followed by 8 percent with alcohol.

The increase in young clients entering treatment for dependence on heroin is a concern. The proportion of heroin clients younger than 30 increased from 40 percent in 2005 to 48 percent in 2012, while the proportion of older admissions decreased correspondingly (exhibit 13). The proportion of teenagers entering treatment remained low, but given the lag between first use and dependence, many of the admissions in their twenties began their heroin use as teenagers. Exhibit 14 shows the changes in race/ethnicity over the years. In 2011 and 2012, the proportion of White admissions increased, and the proportion of Hispanic admissions decreased.

In 2012, there were 354 heroin poisoning deaths in Texas. The decline in the average age of the decedents from 40 in 2008 to 36 in 2012 is evidence of the increasing use by young adults (exhibit

15). Of these deaths, 51 percent involved only heroin, and 24 percent also involved cocaine. Of these decedents, 85 percent were male; 52 were White; 90 percent were Hispanic; and 8 percent were Black. Exhibit 11 shows that the proportion of heroin drug reports among items analyzed by forensic laboratories has remained low (4 percent in 2011).

STRIDE statistics comparing 2011 with 2012 showed heroin seizure amounts dropped from 98 to 33 kilograms. EPIC data comparing 2011 with 2012 showed heroin seizure amounts in Texas remained stable at 636 and 641 kilograms, respectively.

Mexican black tar heroin remained the most prevalent form of heroin available in the Dallas FD. The heroin seizures were increasing, along with reports that wholesale quantities of white heroin were transiting the Dallas area en route to consumer markets in the Northeast. Intelligence indicated that this new “China White” is made using similar chemicals and methods similar to those used to make methamphetamine in Mexico, and the process results in a cardboard-colored heroin. While large amounts of it transit through the Dallas Division, this form is only distributed in larger markets, such as New York, Chicago, and Atlanta.

The El Paso DEA FD reported that heroin was moderately available, but more available than 1 year ago. Seizures of heroin in the FD had risen recently, which could signal an increase in smuggling in the region. Users cross to Ciudad Juarez to obtain their supply.

There has been an increase in the street-level availability of heroin within the Houston area, especially Mexican brown heroin (aka “Sugar”). Colombian heroin is smuggled to and through the Houston area and is sold for higher prices than brown heroin.

The predominant form of heroin in Texas is black tar, which has a dark, gummy, oily texture that can be diluted with water and injected. Exhibit 16 shows the decline in price over the years. Depending on the location, black tar heroin was sold on the street in 2012 for \$5–\$20 per paper, balloon, or capsule; \$50–\$150 per gram; \$800–\$3,000 per ounce; and \$19,000–\$60,000 per kilogram.

Mexican brown heroin, which is black tar heroin that has been cut with diphenhydramine, lactose, or another substance and then turned into a powder to inject or inhale, cost \$100 per gram. An ounce cost \$1,200–\$1,600 in Houston. Source reporting indicates that the price for the “China White” heroin made in Mexico is estimated at \$75,000–\$80,000 per kilogram, compared with \$19,000–\$60,000 for Mexican Black Tar. Exhibit 17 shows the purity and price of heroin purchased by the DEA in Texas cities under the DEA’s DMP from 1995 to 2011.

Other Opioids

The “other opioids” group excludes heroin but includes drugs such as methadone; codeine; hydrocodone (Vicodin®, Tussionex®); oxycodone (OxyContin®, Percodan®, Percocet-5®, Tylox®); buprenorphine; hydromorphone (Dilaudid®); morphine; meperidine (Demerol®); tramadol (Ultram®); and opium.

The 2012 indicators for poison control center cases and forensic laboratory reports from items analyzed were far greater for hydrocodone than for oxycodone (exhibit 18). This reflects the more stringent controls on oxycodone, which is Schedule II, compared with hydrocodone, which is Schedule III.

The pain pill problem continued to increase with the spread of the “Houston Cocktail,” consisting of carisoprodol, alprazolam, and hydrocodone. Two new laws designed to eliminate doctor shopping and prescription fraud became effective in September 2011.

Abuse of codeine cough syrup sweetened with jelly beans dissolved in a soft drink continued; this phenomenon has been popularized by rap music that celebrates “sippin’ syrup.” The marketing of soft drinks that imitate the codeine cough syrup pattern, such as “Lean” and “Drank,” remained a concern.

The 2012 Texas secondary school survey queried about use of other opiates “to get high,” and reported that 8 percent had ever used hydrocodone; 11 percent had ever consumed codeine cough syrup “to get high;” and 4 percent had ever used oxycodone in that manner.

The 2010–2011 NSDUH reported that 4.3 percent of Texans age 12 and older had used pain relievers nonmedically in the past year, compared with 4.6 percent nationally. The 2011 YRBS reported 22 percent of high school students in Texas have ever taken prescription pills without a doctor’s prescription.

Eight percent of all clients who entered publicly funded treatment during 2012 had a primary problem with opioids other than heroin, compared with 1 percent in 1995. Appendix 1 shows users of these various opioids differed in their characteristics. They tended to be White; between 31 and 35 years of age; and, other than for oxycodone, were more likely to be female. However, over time, the proportion of admissions younger than 30 has increased, from 35 percent in 2005 to 42 percent in 2012 (exhibit 19).

Poisoning deaths involving “methadone,” “other opiates,” and “other synthetic narcotics” are classified based on the International Classification of Diseases (ICD) categories and, other than methadone, they do not provide data on the specific opiate drug involved.

In 2012, 147 poisoning deaths involved methadone, with 24 percent of these also involving benzodiazepines. The average age of the methadone decedent was 41. There were also 485 deaths involving other opioids (exhibit 18); 53 percent involved no other drug; and 25 percent involved benzodiazepines. The average age was 43. Of those deaths involving synthetic narcotics (124 in 2012), the average age was 46.

The number of reports of opioids from items analyzed by forensic laboratories has increased over time, with some variations between years. Methadone reports peaked in 2009, while hydrocodone and oxycodone reports peaked in 2010 (exhibit 18).

In Dallas, promethazine with codeine is used to soak marijuana/cannabis cigarettes to give them an extra boost. Soma© (carisoprodol), Valium© (diazepam), Adderall©, methadone, and OxyContin© (oxycodone) continued to be other popular drugs used in the illicit market in the Dallas/Fort Worth area. Dallas continued to see sibutramine, a Schedule IV controlled, substance used as an appetite suppressant.

The indiscriminate prescribing by practitioners, doctor shopping, prescription fraud, and illegal sales by pharmacists remained the primary diversion methods for controlled pharmaceuticals within the El Paso FD. The international border facilitates the diversion of legal drugs into the illegal market.

Prescription drugs and “trial” drugs not approved for human consumption in the United States are readily and legally available along the border, where medications can be sold over-the-counter. This continued to be a popular source of prescription drugs in El Paso.

Diversion trafficking trends in the area continued to center around illicit pain clinics, pharmacies, and physicians. The DEA reported prescriptions from Houston pain management clinics were filled in pharmacies as far north as Oklahoma, as far east as Alabama, and as far west as El Paso. Large numbers of patients from Louisiana and other States continued to travel to the Houston area for the purpose of prescription fraud. Furthermore, pill crews continued to recruit “patients” to fraudulently obtain multiple prescriptions from pain clinics that were subsequently filled at local area pharmacies and then given to the pill crew leader for illicit distribution. At the same time, Houston area physicians were found to be mailing prescriptions for Schedule II and Schedule III pharmaceuticals to patients in other States (primarily Louisiana and Mississippi), who then sent these medical practitioners money orders.

Illicit pain management clinics remained a primary threat in the Houston area. The most desired pharmaceuticals continued to be the three that comprise the “Houston Cocktail:” hydrocodone, carisoprodol (Soma©), and alprazolam (Xanax©). During this reporting period, the Houston FD’s “Operation King of the Pill” successfully executed 50 search warrants at area pain clinics, pharmacies, and an MRI facility. These warrants resulted in the seizure of approximately 3,500 boxes of nondrug evidence; more than \$1.1 million in assets; the arrest of 31 individuals; and the voluntary surrender for cause of 35 DEA registration numbers. Additionally, the Texas Medical Board temporarily suspended the medical licenses of 19 physicians and physician assistants.

In 2012, a hydrocodone pill sold for \$2–\$6 on the street. OxyContin® cost \$1 per milligram in Dallas. A 10-milligram methadone tablet cost \$2–\$5 in El Paso, \$7–\$8 in Fort Worth, and \$4–\$8 in San Antonio. A pint of codeine cough syrup with promethazine cost \$550–\$640.

Benzodiazepines

Benzodiazepines include diazepam (Valium®), alprazolam (Xanax®), flunitrazepam (Rohypnol®), clonazepam (Klonopin® or Rivotril®), flurazepam (Dalmane®), lorazepam (Ativan®), and chlordiazepoxide (Librium® and Librax®). Flunitrazepam (Rohypnol®) is discussed separately in the “Club Drugs” and Emerging Psychoactive Drugs section of this report.

The 2012 Texas secondary school survey reported lifetime use of “downers” was 6 percent, and past-month use was 2 percent.

Approximately 2 percent of the clients entering DSHS-funded treatment in 2012 reported a primary problem with benzodiazepines (Appendix 1). Exhibit 20 shows that the number of treatment admissions with problems with alprazolam increased from 581 in 2010 to 1,144 in 2012. In 2012, the average age of clients was 27, and 38 percent were male.

Exhibit 20 shows the increases in deaths due to benzodiazepine poisoning, from 55 in 1999 to 327 in 2012, as well as the dominance of alprazolam as the most abused benzodiazepine in terms of calls to poison control centers. Of the deaths involving benzodiazepines, 79 percent involved other drugs; the average age was 41; 38 percent were female; 75 percent were White; 15 percent were

Hispanic; and 8 percent were Black. Some 87 percent of the deaths also involved opioids such as heroin, synthetic opiates, other opiates, or methadone.

Alprazolam, clonazepam, and diazepam were among the most commonly identified substances among drug reports from items analyzed in 2012 by NFLIS, although none of them represented more than 5 percent of total drug reports in the year (exhibit 20). Alprazolam sold for \$3–\$5 for a 5-milligram tablet in Fort Worth.

Amphetamine-Type Substances

Amphetamine-type substances come in different forms and with different names. This section provides the latest Texas data on a range of speed-type substances, including MDMA (3,4-methylenedioxymethamphetamine, ecstasy); 2 C-xx phenethylamine drugs designed in the 1980s as replacements for MDMA; BZP (1-benzylpiperazine) and TFMPP (1-(3-trifluoromethylphenyl)piperazine), which can produce an ecstasy-like effect if taken in combination; synthetic cathinones, which are synthetic versions of the khat plant in Africa; amphetamines; and methamphetamine.

“Pills” can be pharmaceutical-grade stimulants, such as dextroamphetamine, Dexedrine®, Adderall®, Concerta®, Vyvanse®, Ritalin® (methylphenidate), or phentermine, or they can be methamphetamine powder that has been pressed into tablets and sold as amphetamines, “Yaba,” ecstasy, or synthetic cathinones. Stimulant pills can be taken orally, crushed for inhalation, or dissolved in water for injection.

While pharmaceutical-grade amphetamines are quite different from the illegally manufactured methamphetamine, some reporting systems, such as the treatment data system, are unable to distinguish between them. However, the information from NFLIS has clarified that most of these substances are methamphetamine, not amphetamine. The forensic laboratories reported in 2012 that there were 13,096 drug reports of methamphetamine among items analyzed in Texas, compared with 603 reports for amphetamine.

MDMA (Ecstasy) and MDA

The 2012 Texas secondary school survey reported that lifetime ecstasy use dropped from a high of 9 percent in 2002 to 6 percent in 2012. The YRBS reported that 12 percent of students had ever used ecstasy in 2011, compared with 9 percent in 2009, 10 percent in 2007, and 8 percent in 2005.

Indicators of use of MDMA have varied over time, as exhibit 21 shows. The Texas Poison Center Network reported 292 calls involving misuse or abuse of ecstasy in 2006, compared with 215 in 2007, 253 in 2008, 310 in 2009, 272 in 2010, 258 in 2011, and 1,600 in 2012. In 2012, the average age of these cases was 24, and 55 percent were male.

Ecstasy is often used in combination with other drugs, as shown by secondary problems with marijuana/cannabis, alcohol, or cocaine (Appendix 1). In 2012, the average age of MDMA treatment admissions was 24, and they had been using the drug more than 5 years before coming to treatment.

Forensic laboratories identified MDMA in 1,626 exhibits in 2006, 1,758 exhibits in 2007, 1,898 exhibits in 2008, 2,192 reports in 2009, 1,534 reports in 2010, 993 reports in 2011, and 368 reports in 2012 (exhibit 21). MDA (3,4-methylenedioxy-amphetamine) was identified in 268 exhibits in 2006, 225 in 2007, 149 in 2008, 45 reports in 2009, 98 reports in 2010, 69 reports in 2011, and 35 reports in 2012.

The Dallas DEA FD reported MDMA wholesale and retail distribution continued to be dominated primarily by Asian drug trafficking organizations. However, current DEA investigations indicate that younger Black males are increasingly becoming involved with retail level distribution of MDMA.

The El Paso DEA FD reported an increase in rave parties where participants use ecstasy. Due to the violence in Ciudad Juarez, young adults were staying in the United States to party. The drug was brought in from Ciudad Juarez in batches of 200–800 pills.

According to the Houston DEA FD, during this reporting period, MDMA continued to be found in gymnasiums, night clubs, restaurants, and other businesses frequented by young adults. The majority of MDMA entered the Houston area from sources of supply in Canada, Europe, and California, and it was most often trafficked by Asians. In 2011, single dosage units of ecstasy sold for \$5–\$20 in Houston, \$2–\$10 in El Paso, \$2–\$10 in Dallas, and \$30 in Austin.

Molly

“Molly” is a slang term for a very pure crystalline form of MDMA. Given the shortage of MDMA in 2012, laboratories that test for MDMA are reporting that the drug that is sold as Molly actually contains 4-MEC (4-Methyl-N-Ethylcathinone), cocaine, MDA, or methylene, and it is often sold in a powder-filled capsule or in an Eppendorf tube, which is a small pipette. Desired effects include euphoria, but there are also reports of increased paranoia, agitated delirium, hallucinations, psychotic episodes, or violent or destructive self-harm behavior. Street outreach workers reported that Molly was making a comeback, particularly in bars, gay clubs, and in the hip-hop scene.

2 C-xx Phenethylamines

There are a broad range of abused compounds that share a common phenylethan-2-amine structure. Some are naturally occurring neurotransmitters (dopamine and epinephrine), while others are psychoactive stimulants (amphetamine), entactogens (MDMA), or hallucinogens (the 2C-xx series of compounds).

Common street names for 2 C-B include “Nexus,” “Bees,” “Venus,” “Bromo Mescaline,” and BDM-PEA. The drug first gained popularity as a legal ecstasy replacement in the mid-1980s. It is known for having a strong physical component to its effects and a moderate duration. Other phenethylamines include 2C drugs with a third letter of B, E, C, I, P, and T. These drugs have been extremely difficult to identify due to the lack of peer-reviewed scientific data.

The Texas Poison Control Center reported 1 case each of a 2C drug in 2005, 2006, and 2007; with 2 cases in both 2008 and 2009; 4 in 2010; 18 in 2011; 12 in 2012; and 4 through April 2013. Of these cases, 14 involved 2C-I, and 12 involved 2C-E. The patients were predominately adolescents and male. A variety of adverse clinical effects were reported, the most frequent being tachycardia (45 percent), agitation (24 percent), hallucinations (24 percent), drowsiness (21 percent), mydriasis (21

percent), confusion (17 percent), and hypertension (17 percent). At least five deaths due to overdoses have been reported in the literature worldwide as of March 2013.

2C-xx can be snorted or dissolved into a liquid and placed on blotter paper under the tongue. It may last 6–10 hours; onset takes 15–120 minutes. Street outreach workers report the 2-C drugs and DMT (dimethyltryptamine) pose problems because they are white or creamy crystalline in appearance, so it is difficult to tell what the drug is. Forensic laboratories reported that in Texas in 2012, there were 63 drug reports of a 2C-xx drug among items analyzed.

BZP and TFMPP

BZP (1-benzylpiperazine) has pharmacological effects that are qualitatively similar to those of amphetamine. It is a Schedule I drug that is often taken in combination with TFMPP (1-(3-trifluoromethylphenyl)piperazine), a noncontrolled substance, in order to enhance its effects as a substitute for MDMA. It is generally taken orally, but it can be smoked or inhaled. Piperazines are a broad class of chemicals that include several stimulants, such as BZP and TFMPP, as well as antivertigo agents (cyclizine, meclizine) and other drugs (e.g., sildenafil/Viagra®).

The Texas forensic laboratories analyzed 2 BZP and 0 TFMPP exhibits in 2006, 16 BZP and 7 TFMPP exhibits in 2007, 274 BZP and 190 TFMPP exhibits in 2008, 744 BZP and 677 TFMPP reports in 2009, 470 BZP and 391 TFMPP reports in 2010, 342 BZP and 168 TFMPP reports in 2011, and 110 BZP and 170 TFMPP reports in 2012.

Synthetic Cathinones

Emerging psychoactive substances (EPS) include the substituted or synthetic cathinones, as well as mephedrone (4-methyl-methcathinone) and MDPV (3,4-methylenedioxypropyl-valerone). Mephedrone is a designer substance of the phenethylamine class and is a cathinone derivative from the khat plant. Its pharmacology and structure are similar to MDMA and amphetamine. MDPV is another cathinone derivative with effects similar to cocaine and amphetamine.

These drugs are usually supplied as white crystalline powders, although they also are available in tablet form. They are sold over the Internet and through head shops, convenience stores, gas stations, tattoo parlors, and truck stops. They are often labeled as “bath salts,” “plant food,” or “insect repellent.” Their street names include “bubbles,” “snow,” “bath salts,” “M-cat,” and “meow meow.” They are usually ingested or inhaled, and they are reported to produce euphoria, increased energy, empathy, talkativeness, intensification of sensory experiences, and sexual arousal.

A final order to temporarily schedule these drugs under the Federal Controlled Substances Act went into effect on October 21, 2011, and it became Penalty Group 2 in Texas on September 1, 2011. Exhibit 6 shows the number of cases per month reported to the Texas poison control centers before and after the ban.

The Texas Poison Center Network reported 22 human exposures to “bath salt” substances in 2010, 340 in 2011, 157 in 2012, and 21 through May 31, 2013. Fifteen percent were younger than 20, with an age range of 12–67. Nearly three-quarters (74 percent) were male; 88 percent intended to abuse or misuse the drug; and common symptoms included tachycardia, hypertension, agitation, confusion, and hallucinations. For 46 percent of the cases, a moderate effect was reported (patient

returns to pre-exposure state). For 11 percent of the cases, there was a “major” effect that was life-threatening or caused significant residual disability. Three deaths were reported by the Texas poison control centers between 2010 and 2013.

Street outreach workers reported that people were using bath salts when they could not find or afford methamphetamine and were suffering abscesses and pain from injecting bath salts.

The forensic laboratories in Texas identified 156 reports from analyzed drug items that were synthetic cathinones in 2010, 613 drug reports in 2011, and 996 synthetic cathinone reports in 2012. In 2010, there were 17 variations of the cathinones, compared with 34 varieties in 2011 and 247 in 2012.

The Austin DEA seized a multikilogram amount of methylene, the first significant methylene seizure in the Austin area. The raw methylene powder was ordered via the Internet, shipped from sources in China, and then distributed in Austin area nightclubs and raves throughout Texas. Doses of synthetic cathinones sold for \$5–\$25 in Houston and \$20–\$70 in El Paso.

Methamphetamine and Amphetamine

Methamphetamine and amphetamine indicators were increasing after the declines following the precursor regulations in 2005–2006 (exhibit 22). Local “cooking” of “ice” was reported, using over-the-counter pseudoephedrine with the “one pot” or “shake and bake” method, in which the precursor chemicals are placed in a 2-liter soft drink bottle and then shaken to start the chemical reaction. This method has continued to be used to produce small amounts of methamphetamine, but as of the first quarter 2013, only 1 percent of the samples from across the United States examined in the DEA’s MPP were produced from the pseudoephedrine method. Ninety-five percent was produced from the phenyl-2-propanone (P2P) method used in Mexico. During this period, the average purity was 96.2 percent, and the average potency was 93.0 percent. Importation of liquid methamphetamine from Mexico into Texas has also increased, with the liquid being converted to ice or powder within the State.

The 2012 Texas secondary school survey reported that that lifetime use of “uppers” was 5 percent, and past-month use was 2 percent in 2012. Three percent of students surveyed responded positively to a separate question regarding lifetime use of “methamphetamine,” and 1 percent reported past-month methamphetamine use. The 2011 YRBS reported lifetime use of methamphetamine by Texas high school students was 5 percent, compared with 4 percent in 2009 and 7 percent in both 2007 and 2005.

There were 336 calls to the Texas Poison Center Network involving exposure to methamphetamine in 2006, 315 in 2007, 298 in 2008, 190 in 2009, 180 in 2010, 197 in 2011, and 279 in 2012 (exhibit 22). Of the 2012 methamphetamine exposures, 63 percent were male, and the average age was 30. There were also 215 calls for exposure to pharmaceutical amphetamines or phentermine. More than one-half (57 percent) were male, and the average age was 23, which shows the problems with misuse of these drugs by children and youth.

Methamphetamine/amphetamine admissions to treatment programs increased from 3 percent of all admissions in 1995 to 11 percent in 2007, dropped to 8 percent in 2009, and then rose to 12 percent of admissions in 2012. The average age of clients admitted for a primary problem with these

stimulants increased from 26 in 1985 to 32 in 2012 (exhibit 23). Unlike most other drug categories, more than 59 percent of the clients entering treatment were female. Clients with a primary problem with methamphetamine reported secondary problems with marijuana/cannabis (29 percent), alcohol (17 percent), or cocaine (8 percent). Thirty-three percent reported no second substance problem. Users of methamphetamine tend to differ depending on their route of administration, as exhibit 23 shows. Methamphetamine injectors were more likely to be homeless and to not be employed fulltime.

Since the precursor bans, the availability of the different forms of methamphetamine changed. This was demonstrated among treatment admissions: the percentage smoking ice decreased slightly, and the proportion injecting increased in 2009. However, by 2012, smoking had increased to a slightly higher level than in 2006 (exhibit 24), which is an indication that the supply of ice had increased.

Exhibit 22 shows the number of deaths that involved poisoning by psychostimulants, which include methamphetamine and amphetamine. There were 128 in 2006, 114 in 2007, 111 in 2008, 134 in 2009, 157 in 2010, 203 in 2011, and 248 in 2012. Some 11 percent also involved benzodiazepines. The average age was 42; 77 percent were male; 83 percent were White; 16 percent were Hispanic; and 1 percent were Black.

Methamphetamine represented 21 percent of all items analyzed by forensic laboratories in 2005. In 2011, drug reports for methamphetamine among items analyzed dropped to 13 percent, and such reports rose to 17 percent in 2012 (exhibit 22). Amphetamine was present in less than 1 percent of the drug reports of items examined in 2012.

With regard to methamphetamine, HIV outreach workers in Austin in the spring of 2013 were reporting more psychosis, better “highs,” and more use of needles, particularly in closed social groups of men who have sex with men. Outreach programs elsewhere in the State reported methamphetamine use was increasing and was considered by some as more popular than alcohol or cocaine. There were also reports of increasing syphilis cases among those using crystal methamphetamine, especially in social circles that engage in risky sex. Some of these individuals were injecting methamphetamine and also using GHB (gamma hydroxybutyrate), Rohypnol® (flunitrazepam), and ketamine. Smoking ice was also reported as increasing, with more “shelving” or “plunging” methamphetamine powder (inserting into the anus), along with shelving cocaine powder.

STRIDE statistics comparing 2011 with 2012 showed methamphetamine seizure amounts decreased slightly, from 397 to 356 kilograms. However, EPIC data comparing 2011 with 2012 showed methamphetamine seizure amounts in Texas rose 65 percent, from 1,966 to 3,251 kilograms, respectively.

The Dallas DEA FD reported an increase in methamphetamine availability and a corresponding decrease in price. Since January 2012, the FD has made multiple seizures of methamphetamine in excess of 100 pounds. Investigative sources indicate that the abundance of low-price methamphetamine may, at least in part, explain the cocaine shortage. Some investigative sources reported the price of the methamphetamine sent to the United States is capped at the \$20,000–\$22,000 range due to its sheer abundance, which is down significantly from a high of around \$36,000 towards the end of 2009. In addition, the DEA is reporting increases in methamphetamine conversion laboratories used to change liquid methamphetamine imported from Mexico into crystal or powder methamphetamine for sale in Texas.

Methamphetamine has increased in availability throughout the Permian Basin in western Texas. The drug is being distributed in larger amounts, and an ongoing investigation has indicated that at least one trafficker who previously distributed cocaine has switched to methamphetamine. During the current 6-month reporting period, methamphetamine accounted for 53 percent of cases initiated, with marijuana/cannabis and cocaine constituting 35 and 6 percent, respectively.

One reason for this increase in the Permian Basin may be the increasing population with its relative affluence due to the oil boom. Much of the new population is predominately young males, single or unaccompanied, who work the oilfields. They have few if any ties to the community, are extremely well paid, and their lives consist largely of working and “partying.”

There was an increase in methamphetamine availability in the Brownsville area during the reporting period, perhaps due to a shortage of cocaine. Methamphetamine was seen in ice, powder, and liquid forms. Pound quantities of methamphetamine decreased from \$11,000–\$17,500 to \$8,000–\$10,000.

In 2012, a pound of powder methamphetamine sold for \$12,000–\$34,000 in Dallas, \$12,000–\$23,000 in El Paso, and \$16,000–\$19,000 in Houston. A pound of ice sold for \$16,500–\$20,000 in Dallas and \$13,000–\$16,000 in Houston. A gram of ice cost \$43–\$120 in Dallas, \$80–\$180 in El Paso, and \$60–\$100 in Houston.

“Club Drugs” and Emerging Psychoactive Substances

Exhibit 25 shows characteristics of clients entering DSHS-funded treatment programs statewide with a problem with a “club drug.” The treatment data include a broader category of “Hallucinogens,” which consists of LSD (lysergic acid diethylamide), DMT, STP (phencyclidine and 2,5-Dimethoxy-4-methylamphetamine), mescaline, psilocybin, and peyote. Among the clients shown in exhibit 25, the GHB clients were the most likely to be White, while the Rohypnol® users came to treatment at an average age of 17 after 4 years of use. The second most common drug problem for these club drug users was marijuana/cannabis, with users of PCP (phencyclidine) reporting more secondary problems with different drugs.

DXM (Dextromethorphan)

The most popular DXM products are Robitussin-DM®, Tussin®, and Coricidin Cough and Cold Tablets HBP®, which can be purchased as over-the-counter drugs and can produce hallucinogenic effects if taken in large quantities. Coricidin HBP® pills are known as “Triple C” or “Skittles.”

The 2012 Texas school survey reported that 5 percent of secondary students indicated they had ever used DXM, and 2 percent had used in the past year. Highest past-month use was among students in the eighth grade.

The Texas Poison Center Network reported the number of abuse and misuse cases involving DXM increased from 99 in 1998 to 598 in 2012. The average age of these cases was 21. The number of cases involving abuse or misuse of Coricidin HBP® was 288 in 2006 and dropped to 216 in 2012; the average age in 2012 was 21.

Forensic laboratories analyzed 15 substances in 2006 that were DXM items, compared with 9 in 2007, 20 in 2008, 47 reports in 2009, 62 reports in 2010, 27 reports in 2011, and 13 reports in 2012.

GHB, GBL (Gamma Butyrate Lactone), and 1,4-BD (1-4-Butanediol)

Cases of misuse or abuse of GHB or its precursors reported to the Texas Poison Center Network totaled 43 in 2006, 56 in 2007, 49 in 2008, 46 in 2009, 55 in 2010, 36 in 2011, and 52 in 2012. In 2012, 17 clients were admitted to DSHS-funded treatment who used GHB; their average age was 30. All were White, and 65 percent were female (Appendix 1).

There were 88 items identified by forensic laboratories as being GHB in 2006, compared with 64 in 2007, 63 in 2008, 99 reports in 2009, 69 reports in 2010, 53 reports in 2011, and 56 reports in 2012. There were nine items identified as GBL in 2006, compared with none in 2007, five in 2008, four in 2009, none in 2010, three reports in 2011, and six reports in 2012. There were no items identified as 1,4-BD in 2006, 2007, or 2008; two reports were identified in 2009, along with six reports in 2010, two reports in 2011, and one report in 2012.

The Dallas DEA FD reported GHB availability was stable, as did the Houston FD. In Dallas, a gallon sold for \$1,200–\$1,600, and in Houston, a dose cost \$20–\$65 and a 16-ounce bottle of GHB cost \$100. HIV outreach workers reported that GHB was readily available, with users “stacking” the drug with other steroids every 3 hours.

Ketamine

Three cases of misuse or abuse of ketamine were reported to the Texas Poison Center Network in 2006, compared with 1 each in 2007, 2008, and 2009; 3 in 2010; 7 in 2011; and 10 in 2012.

In 2006, 161 substances were identified as ketamine by forensic laboratories. There were 235 items identified in 2007, compared with 129 in 2008, 123 in 2009, 60 in 2010, 16 reports in 2011, and 12 reports in 2012. A dose sold for \$20–\$40 in Lubbock; in San Antonio, 0.2 grams sold for \$25–\$60.

LSD and Other Hallucinogens

The Texas secondary school survey showed that use of hallucinogens (defined as LSD, PCP, or mushrooms) continued to decrease. Lifetime use peaked at 7.4 percent in 1996 and dropped to 4.1 percent in 2012. Past-month use dropped from a peak of 2.5 percent in 1998 to 1.3 percent in 2012.

The Texas Poison Center Network reported 33 mentions of abuse or misuse of LSD in 2006, compared with 31 in 2007, 17 in 2008, 26 in 2009, 18 in 2010, 16 in 2011, and 58 in 2012. There were also 96 cases of intentional misuse or abuse of hallucinogenic mushrooms reported in 2006, 125 in 2007, 93 in 2008, 96 in 2009, 85 in 2010, 59 in 2011, and 108 in 2012. The average ages in 2012 were 19 for the LSD cases and 22 for the mushroom cases.

Of the 78 hallucinogen treatment admissions in 2012, the average age was 30; 64 percent were male; and 58 percent were involved in the criminal justice system. Another 17 individuals entered treatment with a primary problem with LSD. The average age was 23; 59 percent were male; and 53 percent were involved in the criminal justice system. For both groups, marijuana/cannabis was the second most common drug of abuse (exhibit 25 and Appendix 1).

Forensic laboratories identified 34 substances as LSD in 2006, compared with 41 in 2007, 36 in 2008, 59 reports in 2009, 71 reports in 2010, 19 reports in 2011, and 14 reports in 2012.

A powerful psychedelic tryptamine, 5-MeO-DMT, has reappeared. It is found in a wide variety of plant and psychoactive toad species. Reports from items analyzed in forensic laboratories as 5-MeO-DMT numbered 3 in 2010, compared with 204 reports in 2011 and 76 reports in 2012.

PCP (Phencyclidine)

The Texas Poison Center Network reported cases of “Fry,” “Amp,” “Water,” “Wet,” “Wack,” “PCP,” or formaldehyde (exhibit 26). Often, marijuana/cannabis joints are dipped in formaldehyde that contains PCP, or PCP is sprinkled on the joint or cigarette. The number of poison control center cases involving PCP declined from 290 in 2008 to 140 in 2012; the average age in 2012 was 29.

Exhibit 26 shows an increase in the number of clients entering treatment statewide with a primary problem with PCP, from 487 in 2008 to 716 in 2012. Of the clients in 2012, 91 percent were Black; 39 percent were male; 44 percent were involved in the criminal justice system; and 6 percent were employed fulltime (Appendix 1).

Forensic laboratories identified 273 PCP items in 2006, compared with 326 in 2007, 382 in 2008, 370 reports in 2009, 394 reports in 2010, 368 reports in 2011, and 359 reports in 2012 (exhibit 27).

The El Paso FD reported 16 pounds of PCP was seized in route from California to Fort Worth, with another large seizure in Arizona, which may indicate a resurgence of the drug. PCP cost \$20 per dipped cigarette and \$700–\$1,200 per gallon in San Antonio.

Psilocybin and Psilocybin

Psilocybin and psilocin “Magic Mushrooms” are naturally occurring psychedelics with a long history of human use. Both are present in “psychedelic” or “magic” mushrooms. Psilocybin, the better known of these two chemicals, is metabolized after ingestion into psilocin, which is the primary active chemical.

In 2012, there were 107 human exposure calls to Texas poison control centers involving use of mushrooms or psilocybin. The average age was 22, and 77 percent were male. There were also four treatment admissions, with an average age 21; all were White and male.

Forensic laboratories reported 239 psilocin reports from analyzed drug items in 2010, compared with 172 reports in 2011 and 204 reports in 2012. There were 12 psilocybin/psilocin reports in 2010, compared with 6 reports in 2011 and 6 reports in 2012. There were also 4 psilocybine reports identified from drug items in 2010, compared with 4 reports in 2011 and 20 reports in 2012.

Rohypnol®

Rohypnol® is the benzodiazepine, flunitrazepam, which has not been approved for use in the United States. The drug is legal in Mexico, but since 1996, it has been illegal to bring it into the United States. Rohypnol® continues to be a problem along the Texas–Mexico border.

The 2012 secondary school survey found that students from the border area were more likely to report Rohypnol® use than those living elsewhere in the State (5 versus 1 percent lifetime, and 2 versus 1 percent current use). Use in both the border and nonborder areas has declined since its peak in 1998.

The numbers of confirmed exposures to Rohypnol® reported to the Texas Poison Control Network were 10 in 2006, 11 in 2007, 12 in 2008, 23 in both 2009 and 2010, 22 in 2011, and 10 in 2012.

The number of youths and adults admitted into treatment with a primary problem with Rohypnol® has varied. In 2012, clients abusing Rohypnol® were the youngest of the “club drug” clients (age 17), and most were Hispanic, reflecting the availability and use of this drug along the border (exhibit 25 and Appendix 1).

Forensic laboratory exhibits for flunitrazepam numbered 10 in 2006, compared with 2 in 2007, none in 2008, 3 reports in 2009, 1 report in 2010, and no reports in 2011 or 2012. Rohypnol® sold for \$2–\$4 per pill in San Antonio in 2012.

Other Abused Substances

Inhalants

The 2012 secondary school survey found that 16 percent of students in grades 7–12 had ever used inhalants, and 5 percent had used in the past month. Inhalant use has a peculiar age pattern not observed with any other substance (exhibit 27). The prevalence of lifetime and past-month inhalant use was higher in the lower grades and lower in the upper grades. This decrease in inhalant use as students' age may be partially related to the fact that some inhalant users drop out of school early and are not in school in later grades to participate in later surveys. In addition, the Texas school surveys have consistently found that eighth graders reported use of more kinds of inhalants than any other grade, which may be a factor that exacerbates the damaging effects of inhalants and leads to dropping out of school. The 2011 YRBS reported that 11.4 percent of Texas high school students had ever used inhalants, compared with 11.9 percent in 2009, 12.9 percent in 2007, 13.2 percent in 2005, and 13.9 percent in 2001.

Of the calls to the Texas Poison Center Network in 2012 that involved human exposure to the inhalation of chemicals, there were 76 calls for misuse of air fresheners or dusting sprays containing tetrafluoroethane or difluoroethane or freon (58 percent were male and the average age was 28); 40 calls for exposure to automotive products, such as carburetor cleaner, transmission fluid, and gasoline (85 percent were male and the average was age 25); 31 calls for abuse or misuse of spray paint or toluene (71 percent were male and the average age was 29); and 21 calls for helium, butane, or nitrous oxide gas (86 percent were male and the average age 19). Inhalant abusers represented 0.1 percent of the admissions to treatment programs in 2012 (Appendix 1).

Steroids

The Texas school survey reported that 1.7 percent of all secondary students surveyed in 2012 had ever used steroids, and 0.5 percent had used steroids during the month before the survey. The 2011 YRBS found lifetime use among Texas high school students was 4.8 percent, compared with 2.9 percent in 2009 and 3.9 percent in 2007.

The forensic data for Texas reported that testosterone was the steroid most likely to be identified in forensic testing, although it constituted only 0.1 percent of all drug reports in 2012.

Carisoprodol (Soma®)

On January 11, 2012, carisoprodol became a Schedule IV drug nationally. Texas poison control centers confirmed that exposure cases of intentional misuse or abuse of this muscle relaxant increased from 83 in 1998 to 222 cases in 2012; the average age was 36.

Forensic laboratory exhibits identified as carisoprodol have fluctuated in the past 7 years. The numbers of such drug items were 1,047 in 2006, compared with 1,256 in 2007, 902 in 2008, 1,097 reports in 2009, 1,464 reports in 2010, 1,079 reports in 2011, and 771 reports in 2012.

Soma®, which cost \$0.75 to the pharmacy, sold for \$5 on the street. Carisoprodol is one of the most popular drugs in the illicit drug market in the Dallas/Fort Worth area and is part of the combination with hydrocodone and alprazolam that is known as the “Houston Cocktail” or “Holy Trinity.”

Drug Abuse Patterns on the Texas–Mexico Border

Exhibit 28 shows the lifetime prevalence of use of different drugs by Texas secondary school students. Border students were more likely to report use of Rohypnol, cocaine or crack, and ecstasy than nonborder students.

When asked which substances were very easy to obtain, border students were more likely than nonborder students to report Rohypnol® (5 versus 1 percent), cocaine or crack (7 versus 4 percent), and ecstasy (8 versus 5 percent). Both groups reported powder cocaine was easy to obtain, as was crack cocaine.

Different patterns were also seen in border and nonborder admissions to DSHS-funded treatment in 2012 (exhibits 29 and 30). Border clients were more likely to report problems with marijuana/cannabis (31 versus 27 percent), cocaine (15 versus 13 percent), and heroin (14 versus 12 percent). Nonborder clients were more likely to report problems with methamphetamine (11 versus 1 percent).

Reports from the three forensic laboratories on the border show different trafficking patterns (exhibit 31). The laboratory in El Paso in 2012 reported that approximately 50 percent of the drug reports were marijuana/cannabis, followed by cocaine (28 percent) and methamphetamine (5 percent). In Laredo, 48 percent of the drug reports were marijuana/cannabis, 21 percent were cocaine, and 6 percent were heroin. In McAllen, 50 percent of the drug reports were cocaine, 23 percent were marijuana/cannabis, and 11 percent were alprazolam.

INFECTIOUS DISEASES RELATED TO DRUG ABUSE

Hepatitis C

Hepatitis C virus (HCV) is the leading cause of liver failure and liver transplantation in the United States, and injection drug users (IDUs) are particularly susceptible to this disease (with as many as 70 percent or more of this population testing positive for the virus). In addition, many IDUs have little, if any, consistent health care and are largely unaware of their HCV infection status. Those who are

successful in accessing health care and are diagnosed with hepatitis C are rarely offered antiviral treatment. If they are offered HCV treatment, they often face additional treatment challenges, since many suffer from mental disorders and/or HIV in addition to HCV and drug addiction.

The Texas DSHS estimated in 2011 that 1.8 percent of Texans were infected with HCV. The number of acute HCV cases has fluctuated from 57 in 2006, to 68 in 2007, to 598 in 2008, to 36 in 2009, to 35 in 2010, to 37 in 2011, and to 44 in 2012.

Sexually Transmitted Diseases

Street outreach workers were reporting increasing numbers of syphilis cases among young males engaging in homosexual activity, along with reports of both males and females selling their bodies for drugs or to obtain money for other needs. There were more reports of people using the Internet and classified ads to market their services.

From 2007 to 2012, the number of chlamydia cases reported in the State of Texas increased each year, from 84,784 to 124,835 cases, respectively. The number of gonorrhea cases reported during this same time period averaged 31,000 cases annually.

Primary and secondary syphilis peaked in 2009, with 1,644 cases reported. The case numbers decreased in 2010 (1,231) and 2011 (1,162), but they greatly increased in 2012 (1,624). Reflecting the similar trend in primary and secondary syphilis cases, total syphilis cases peaked in 2009, with 6,989 cases reported, and the case numbers decreased in 2010 (6,382) and in 2011 (6,142) and then increased in 2012 (7,058).

The case rates for gonorrhea and chlamydia were higher for females between the ages of 15 and 24; the case rates for syphilis were higher for males than for females for all age groups (exhibit 32).

AIDS Cases

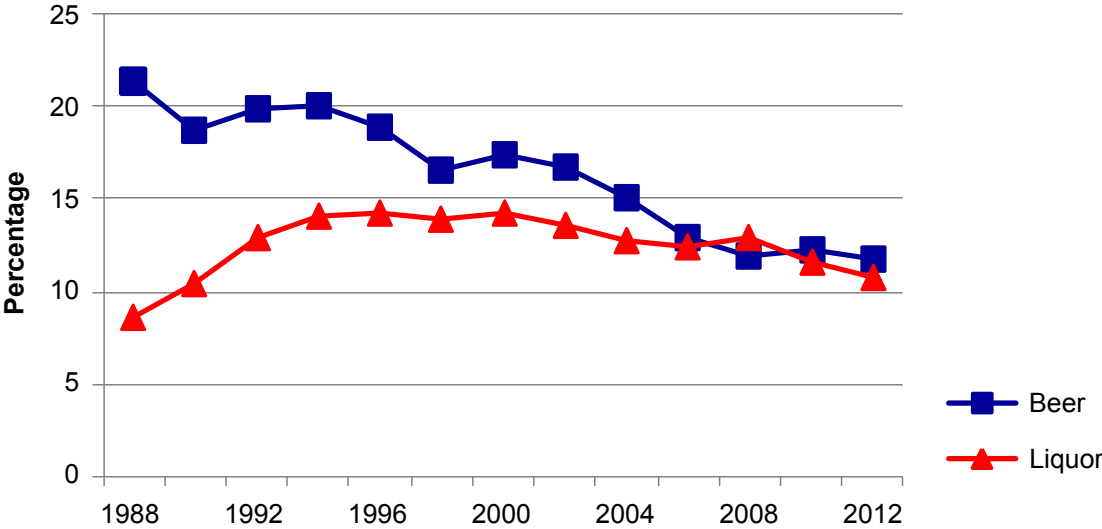
The proportion of AIDS cases among men who have sex with men (MSM) decreased from 81 percent in 1987 to 49 percent in 1999 before rising to 57 percent in 2012 (exhibit 33). Of the 2012 cases, 28 percent reported heterosexual mode of exposure, and 10 percent were IDUs. The proportions of cases involving IDUs or IDUs/MSM have decreased over time.

Persons infected with AIDS were increasingly likely to be people of color. Of the AIDS cases in 2012, 45 percent were Black; 23 percent were White; and 32 percent were Hispanic (exhibit 34).

The proportion of IDUs entering DSHS-funded treatment programs decreased from 32 percent in 1988 to 15 percent in 2012.

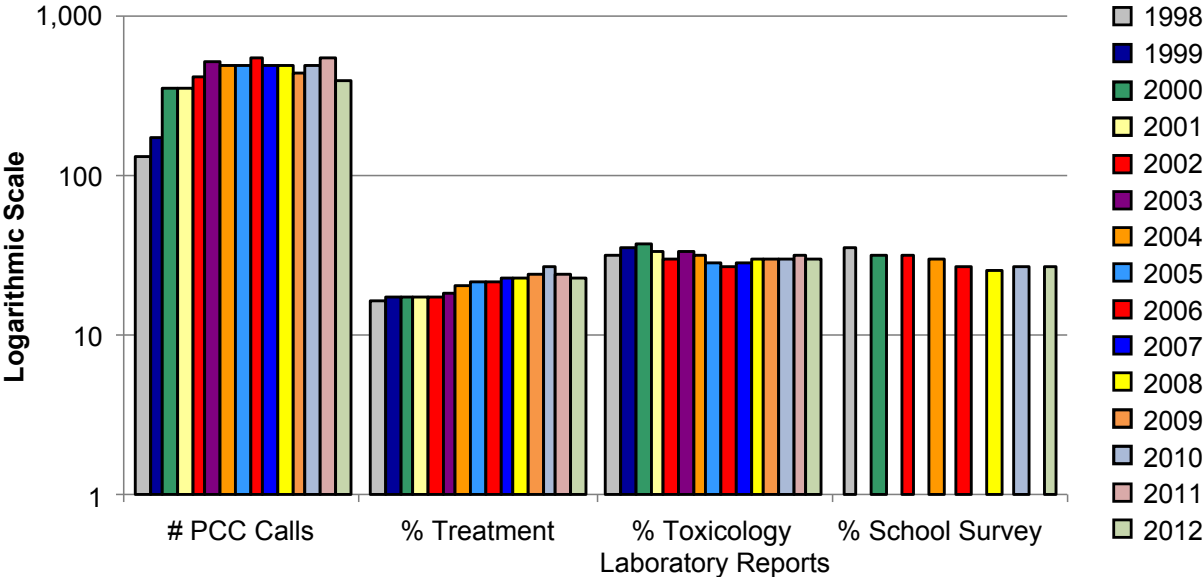
For inquiries regarding this report, contact Jane C. Maxwell, Ph.D., Senior Research Scientist, School of Social Work, The University of Texas at Austin, Suite 335, 1717 West 6th Street, Austin, TX 78703, Phone: 512-232-0610, Fax: 512-232-0617, E-mail: jcmaxwell@utexas.edu.

Exhibit 1. Percentage of Secondary Students Who Reported They Normally Consumed Five or More Drinks at One Time, by Alcoholic Beverage: 1988–2012



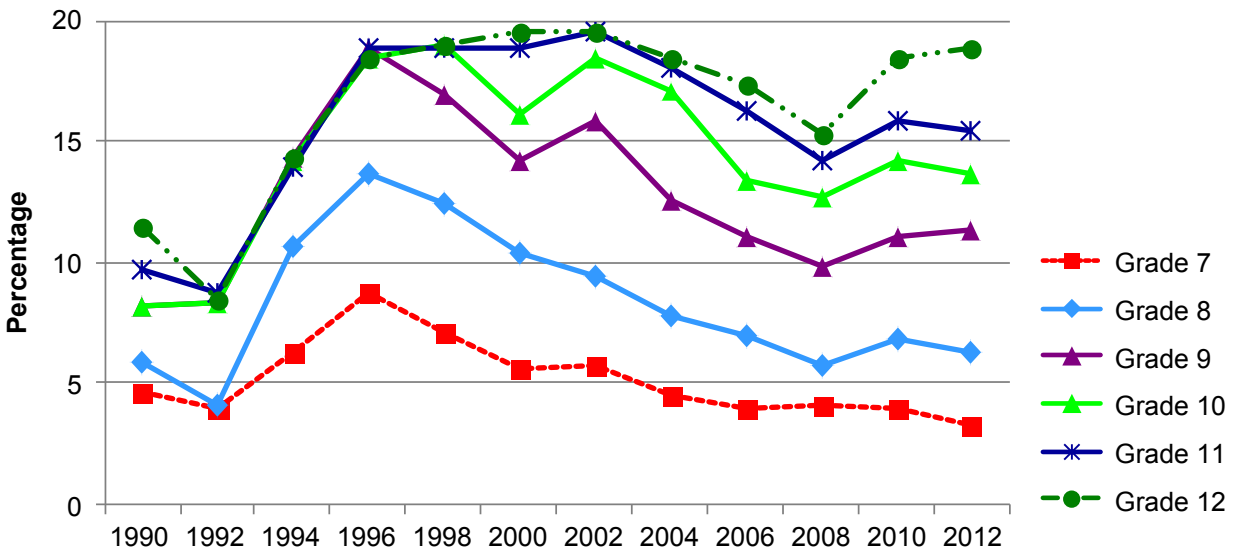
SOURCE: Texas Department of State Health Services (DSHS)

Exhibit 2. Number of Poison Control Center (PCC) Calls and Proportion of Treatment Admissions, Toxicology Laboratory Reports, and Secondary Students Who Had Ever Used Marijuana/Cannabis: 1998–2012



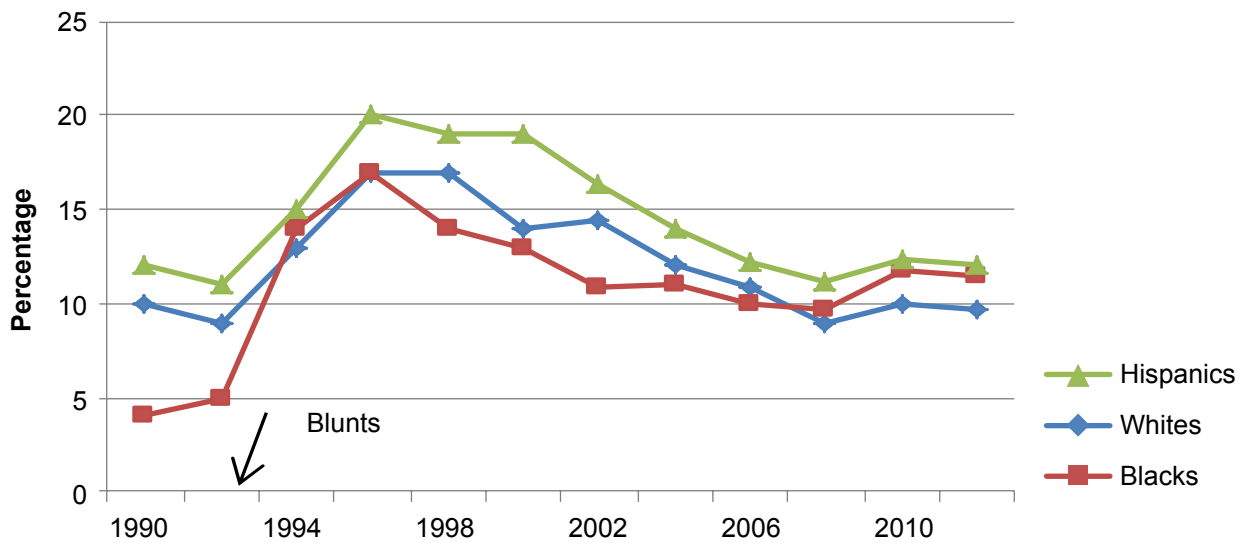
SOURCES: Texas poison Control Network; Texas Department of State Health Services (DSHS); NFLIS, DEA

Exhibit 3. Percentage of Secondary Students Who Had Used Marijuana/Cannabis in the Past Month, by Grade, in Texas: 1990–2012



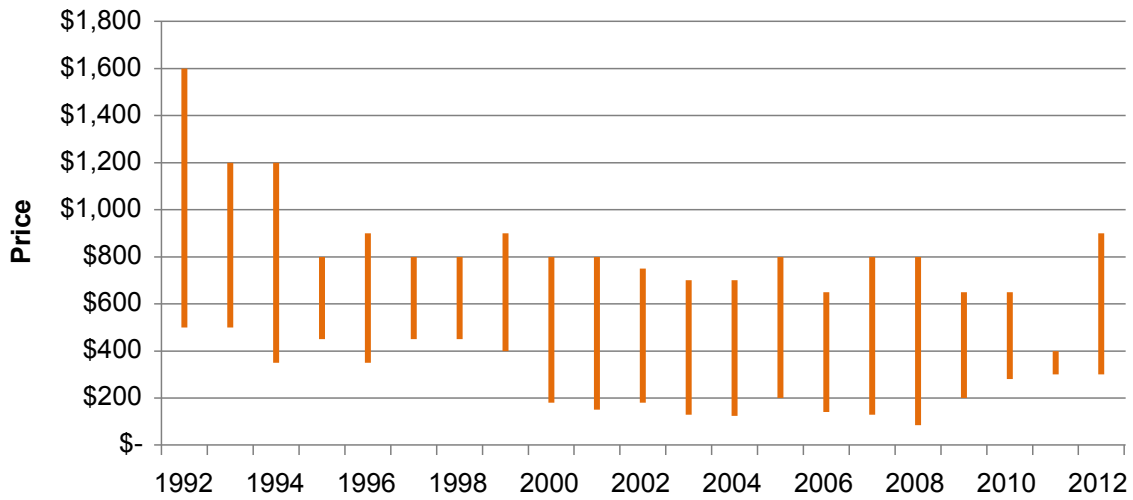
SOURCE: Texas Department of State Health Services (DSHS)

Exhibit 4. Percentage of Secondary Students Who Had Used Marijuana/Cannabis in the Past Month, by Ethnicity, in Texas: 1990–2012



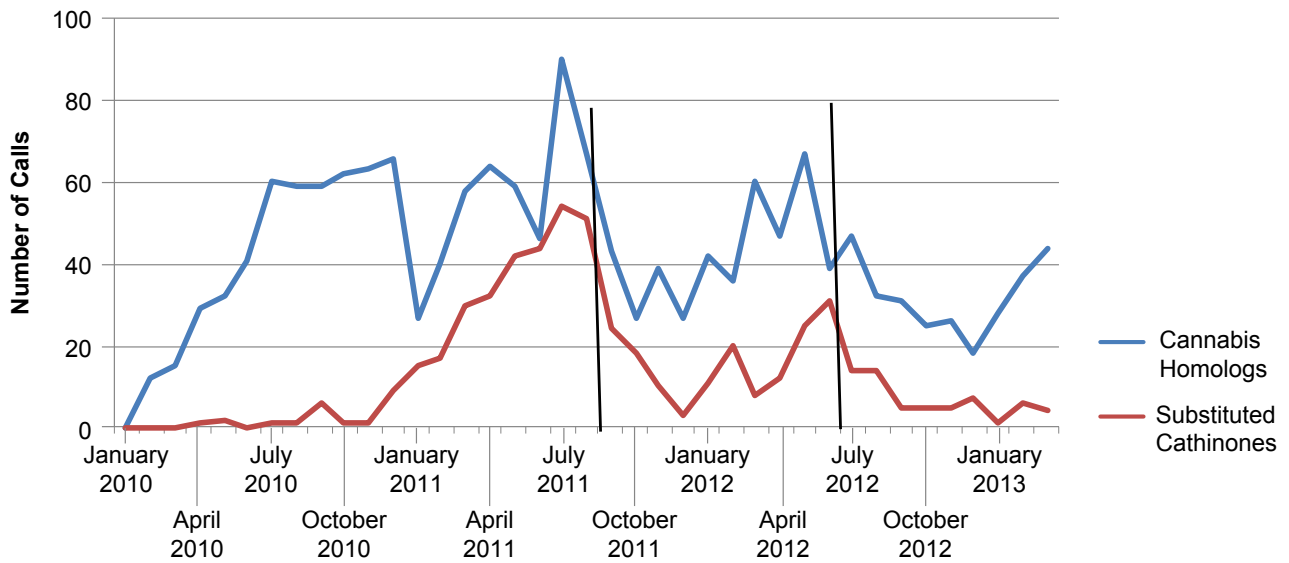
SOURCE: Texas Department of State Health Services (DSHS)

Exhibit 5. Price of a Pound of Commercial Grade Marijuana/Cannabis as Reported by the DEA: 1992–2012



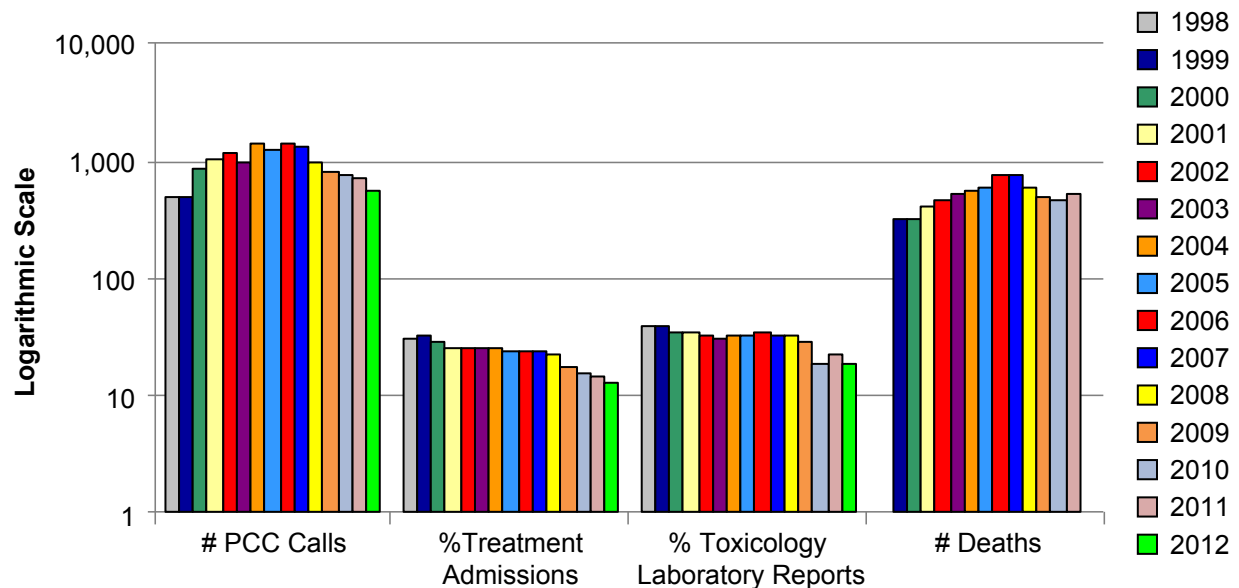
SOURCE: DEA

Exhibit 6. Number of Poison Control Center Calls Involving Human Exposure to Cannabis Homologs (Cannabimimetics) and Substituted Cathinones, Before and After Scheduling, In Texas: 2010–2013



SOURCE: Texas Department of State Health Services (DSHS)

Exhibit 7. Number of Poison Control Center (PCC) Calls and Deaths and Proportion of Treatment Admissions and Toxicology Laboratory Reports: 1998–2012



SOURCES: Texas poison Control Network; Texas Department of State Health Services (DSHS); Texas Department of Public Safety (DPS), Texas Bureau of Vital Statistics; NFLIS, DEA; MDP, DEA

Exhibit 8. Characteristics of Clients Admitted to Treatment With a Primary Problem With Cocaine, by Route of Administration, in Texas: 2012

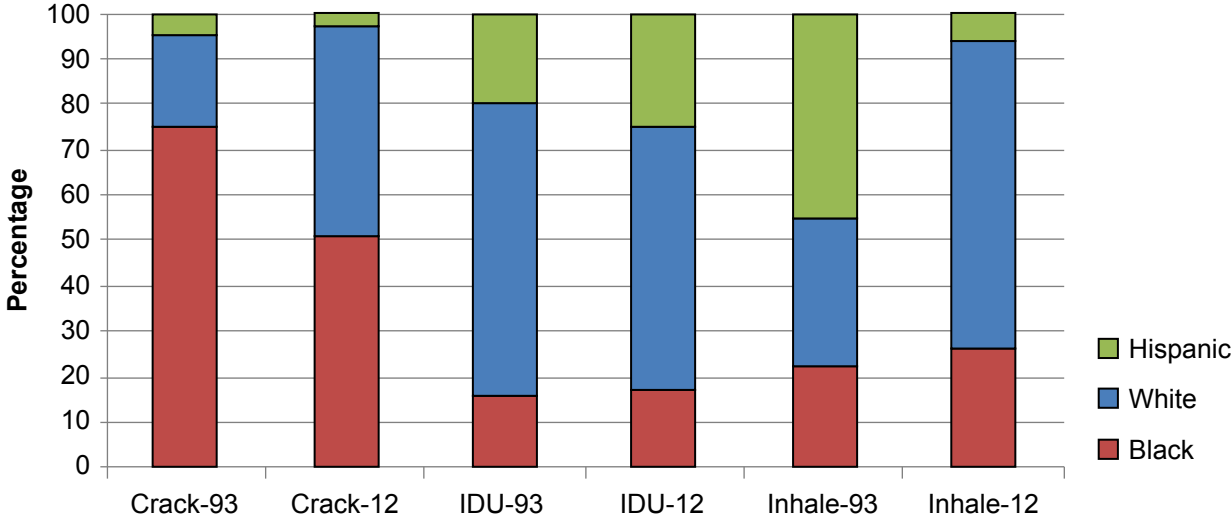
	Crack Cocaine Smoked	Powder Cocaine Injected	Powder Cocaine Inhaled	Cocaine All ¹
# Admissions	5,538	292	3,310	9,735
% of Cocaine Admits	61	3	34	100
Lag-1st Use to Tmt-Yrs.	17	19	11	15
Average Age	42	39	32	38
% Male	50	59	51	51
% Black	56	17	27	44
% White	26	58	20	25
% Hispanic	15	23	48	27
% CJ Involved ²	45	40	64	52
% Employed Full Time	7	10	18	11
% Homeless	20	16	5	15

¹Total includes clients with other routes of administration.

²CJ=criminal justice system.

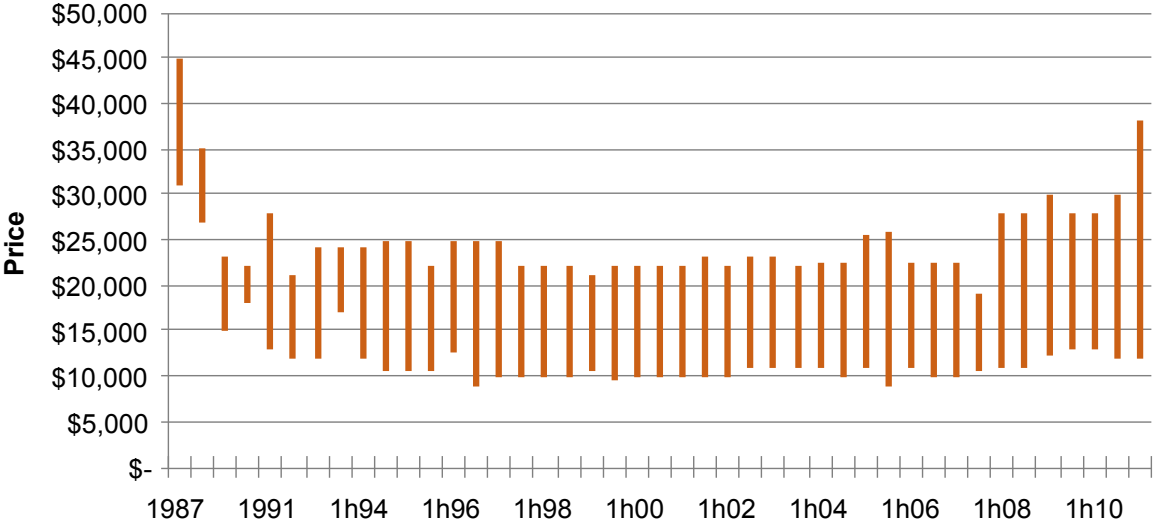
SOURCE: Texas Department of State Health Services (DSHS)

Exhibit 9. Percentage of Route of Administration of Cocaine, by Race/Ethnicity, in Treatment Admissions, in Texas: 1993 and 2012



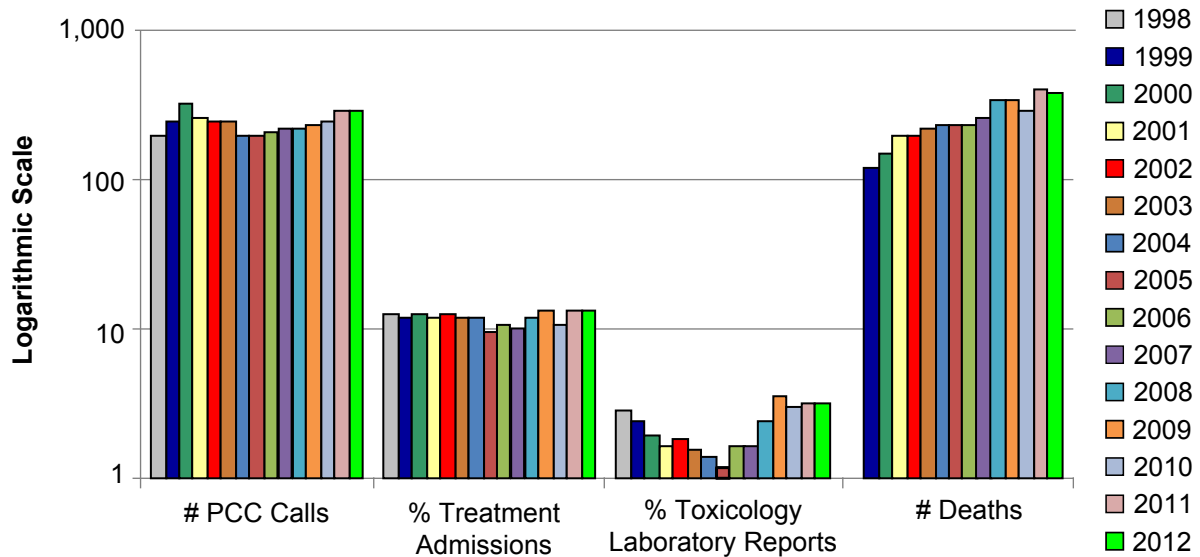
SOURCE: Texas Department of State Health Services (DSHS)

Exhibit 10. Price of a Kilogram of Cocaine, as Reported by the DEA, in Texas: 1987–2012¹



¹Prices reported by half-year since 1993; 1H=first half.
SOURCE: DEA

Exhibit 11. Number of Poison Control Center (PCC) Calls and Deaths, Proportion of Treatment Admissions and Toxicology Laboratory Reports, and Purity for Heroin in Texas: 1998–2012



SOURCES: Texas poison Control Network; Texas Department of State Health Services (DSHS); Texas Department of Public Safety (DPS), Texas Bureau of Vital Statistics; NFLIS, DEA; MDP, DEA

Exhibit 12. Characteristics of Clients Admitted to Treatment With a Primary Problem With Heroin, by Route of Administration, Texas: 2012

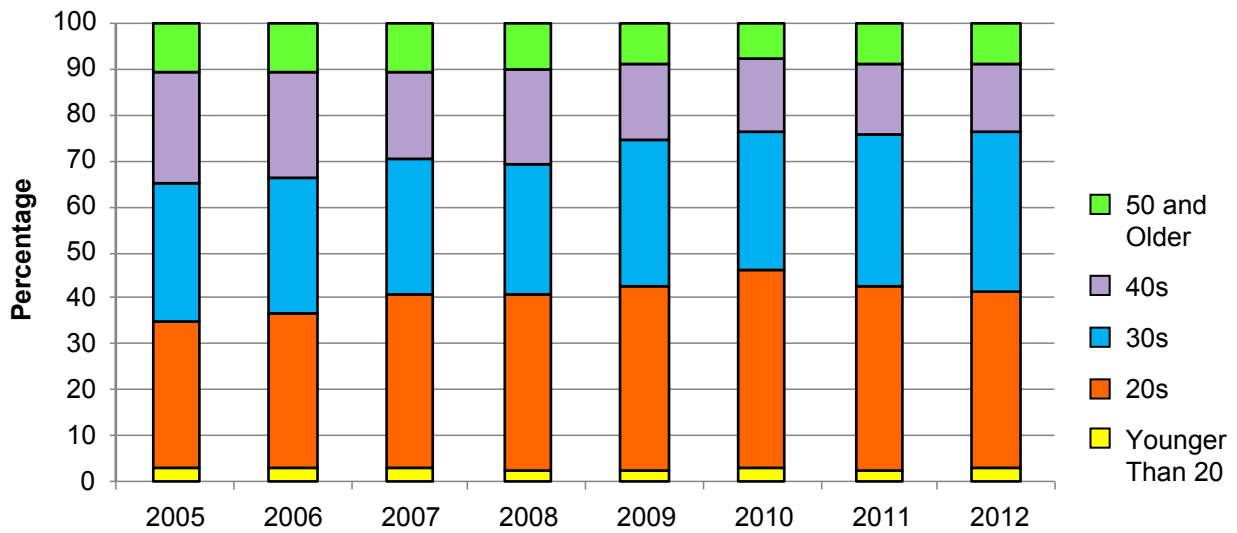
	Injected	Inhaled	Smoked	All ¹
# Admissions	7,439	1,695	282	9,416
% of Heroin Admits	79%	18%	2%	100%
Lag-1st Use to Tmt-Yrs.	12	8	6	11
Average Age	34	29	28	33
% Male	63	55	60	62
% Black	6	14	6	7
% White	41	53	40	43
% Hispanic	47	26	48	43
% CJ Involved ²	37	42	38	38
% Employed Full Time	6	6	11	6
% Homeless	22	9	10	19

¹Total includes clients with other routes of administration.

²CJ-criminal justice system.

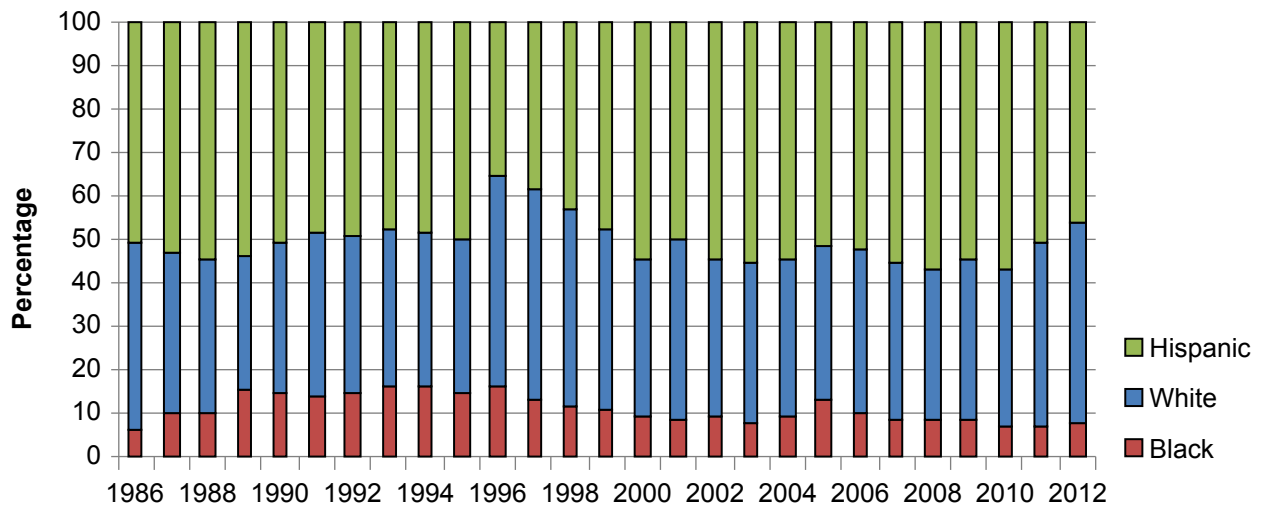
SOURCE: Texas Department of State Health Services (DSHS)

Exhibit 13. Percentage of Heroin Admissions to Treatment, by Age Groups, in Texas: 2005–2012



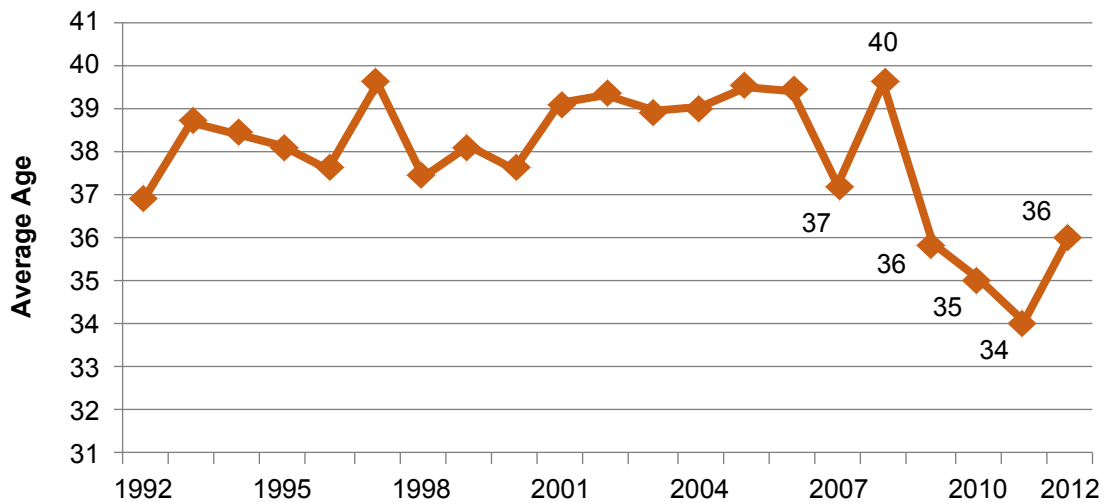
SOURCE: Texas Department of State Health Services (DSHS)

Exhibit 14. Percentage of Heroin Admissions to Treatment, by Race/Ethnicity, in Texas: 1986–2012



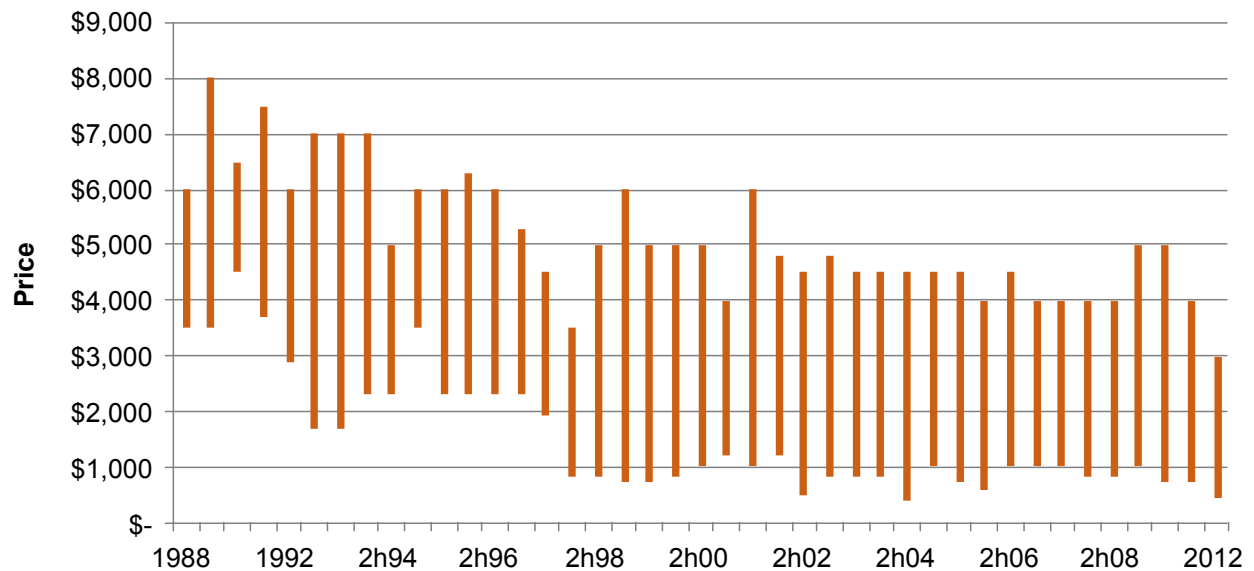
SOURCE: Texas Department of State Health Services (DSHS)

Exhibit 15. Average of Heroin Deaths in Texas: 1992–2012



SOURCE: Texas Department of State Health Services (DSHS)

Exhibit 16. Price of an Ounce of Mexican Black Tar, as Reported by the DEA, in Texas: 1988–2012¹



¹Prices reported by half-year since 1993; 1H=first half.
SOURCE: DEA

Exhibit 17. Price and Purity of Heroin Purchased in Dallas, El Paso, Houston, and San Antonio: 1995–2011

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Dallas Purity (%)	6.8	3.5	7.0	11.8	14.0	16.0	13.4	17.2	13.3	16.3	11.6	17.7	20.6	13.5	21.6	15.5	13.2
Price/ Milligram Pure	\$2.34	\$6.66	\$4.16	\$1.06	\$1.01	\$0.69	\$1.36	\$0.75	\$0.98	\$0.90	\$1.11	\$1.10	\$1.09	\$0.93	\$0.91	\$1.31	\$0.84
El Paso Purity (%)	—	—	—	—	56.7	50.8	41.8	40.3	44.7	50.5	44.7	44.8	39.8	41.1	30.5	—	—
Price/ Milligram Pure	—	—	—	—	\$0.49	\$0.34	\$0.44	\$0.27	\$0.40	\$0.27	\$0.40	\$0.33	\$0.49	\$0.61	\$0.69	—	—
Houston Purity (%)	16.0	26.1	16.3	34.8	17.4	18.2	11.3	28.2	27.4	24.8	24.4	18.1	7.0	6.2	6.0	3.1	3.9
Price/ Milligram Pure	\$1.36	\$2.15	\$2.20	\$2.43	\$1.24	\$1.14	\$1.51	\$0.64	\$0.45	\$0.44	\$1.11	\$1.90	\$1.66	\$3.05	\$3.42	\$6.77	\$5.94
San Antonio Purity (%)	—	—	—	—	—	—	—	—	8.2	6.4	11.2	17.4	7.1	7.6	8.7	7.7	8.1
Price/ Milligram Pure	—	—	—	—	—	—	—	—	\$1.97	\$2.24	\$0.56	\$0.79	\$1.88	\$1.42	\$1.03	\$1.09	\$0.85

SOURCE: DMP, DEA

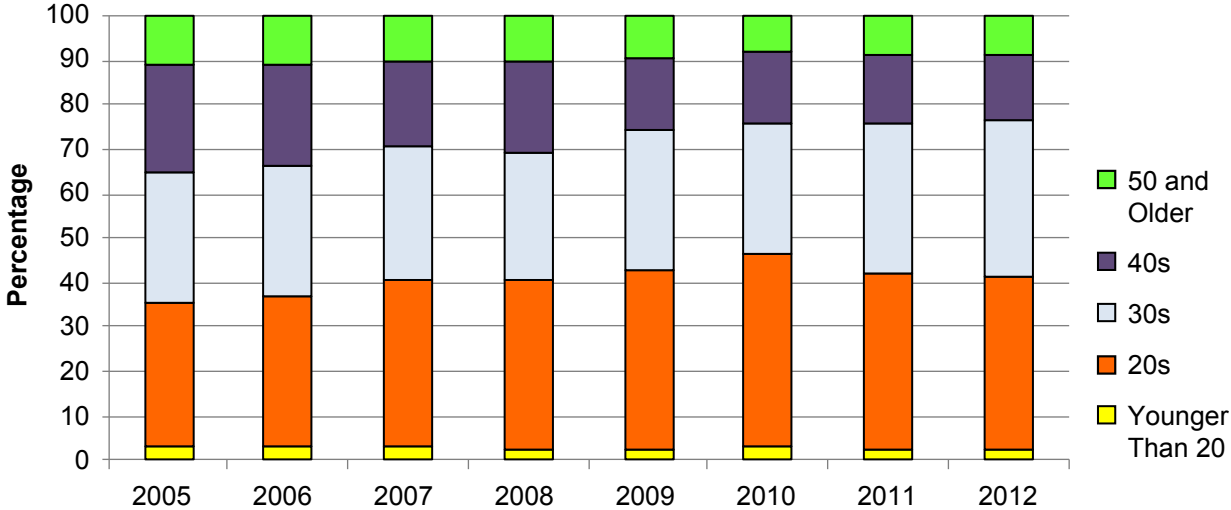
Exhibit 18. Indicators of Abuse of Opiates in Texas: 1998–2012

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Poison Control Center Cases of Abuse and Misuse															
Buprenorphine	—	—	4	0	2	12	12	27	33	61	83	109	130	138	116
Fentanyl	—	—	9	1	3	11	17	11	139	155	120	143	109	132	110
Hydrocodone	—	—	236	123	348	465	747	431	657	703	723	748	838	869	814
Methadone	—	—	66	91	46	103	378	477	402	1,081	1,169	1,134	1,104	794	575
Oxycodone	—	—	62	99	68	67	112	50	68	67	81	74	101	95	129
DSHS Treatment Admissions															
Methadone	55	69	44	52	75	86	63	91	101	113	160	145	132	180	193
“Other Opiates” ¹	553	815	890	1,386	2,084	2,794	3,433	3,482	3,903	4,529	5,221	5,844	2,679	2,047	1,851
Codeine ²	—	—	—	—	—	—	—	—	—	—	—	—	—	109	102
Hydrocodone ²	—	—	—	—	—	—	—	—	—	—	—	—	—	3,102	3,277
Hydromorphone ²	—	—	—	—	—	—	—	—	—	—	—	—	—	222	275
Oxycodone	—	—	—	—	—	—	—	—	—	—	—	—	—	342	323
Deaths with Mention of Substance (DSHS)															
Other Opioids	—	122	168	224	313	370	369	402	577	572	535	555	564	526	485
Synthetic Narcotics	—	52	52	80	120	80	94	93	113	142	120	171	165	114	124
Methadone	—	27	62	89	141	161	164	205	222	224	198	183	190	187	147
Drug Reports Identified by NFLIS Laboratories³															
Hydrocodone	61	530	661	1,010	1,162	1,701	2,036	2,651	3,201	3,835	3,663	4,239	5,271	4,604	3,173
Methadone	4	9	23	52	62	79	150	184	204	251	302	320	285	315	236
Oxycodone	11	41	77	150	164	232	309	334	335	333	397	456	519	457	326
Buprenorphine	—	20	12	6	10	11	6	6	13	25	43	89	131	113	65

¹“Other Opiates” refers to all other opioids until 2010.²As of 2010, information on most common opioids is reported separately.³NFLIS toxicology laboratory data are not complete for 2009 and 2011.

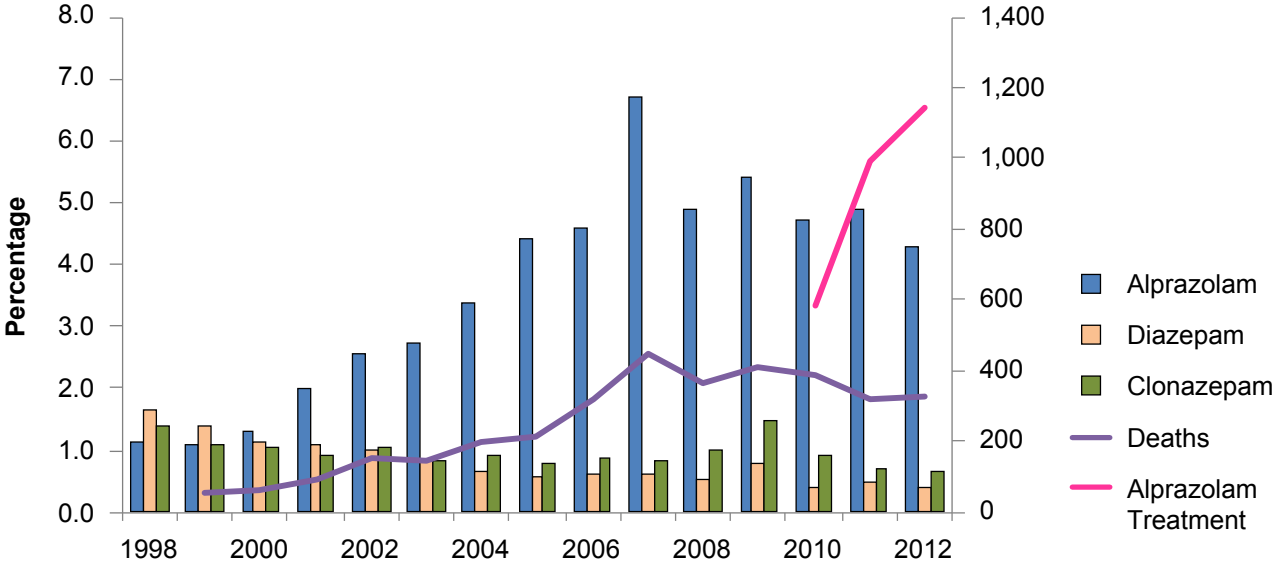
SOURCE: Texas Department of State Health Services (DSHS); NFLIS, DEA

Exhibit 19. Percentage of Other Opiate Treatment Admissions, by Age Groups, in Texas: 2005–2012



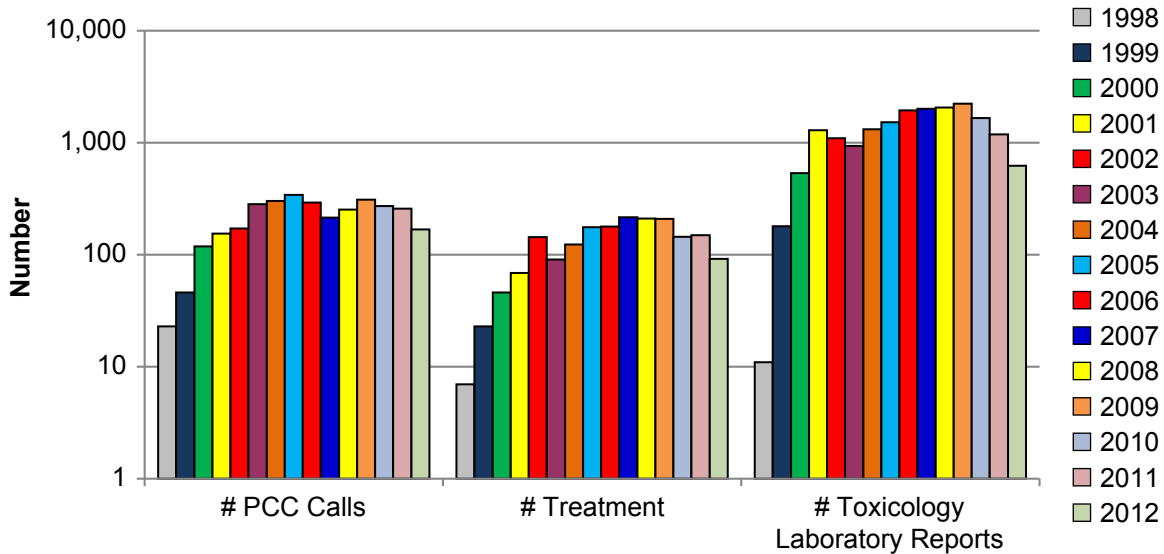
SOURCE: Texas Department of State Health Services (DSHS)

Exhibit 20. Benzodiazepines, as Percentage of All Items Identified by Toxicology Laboratories, and Number of Deaths and Treatment Admissions in Texas: 1998–2012



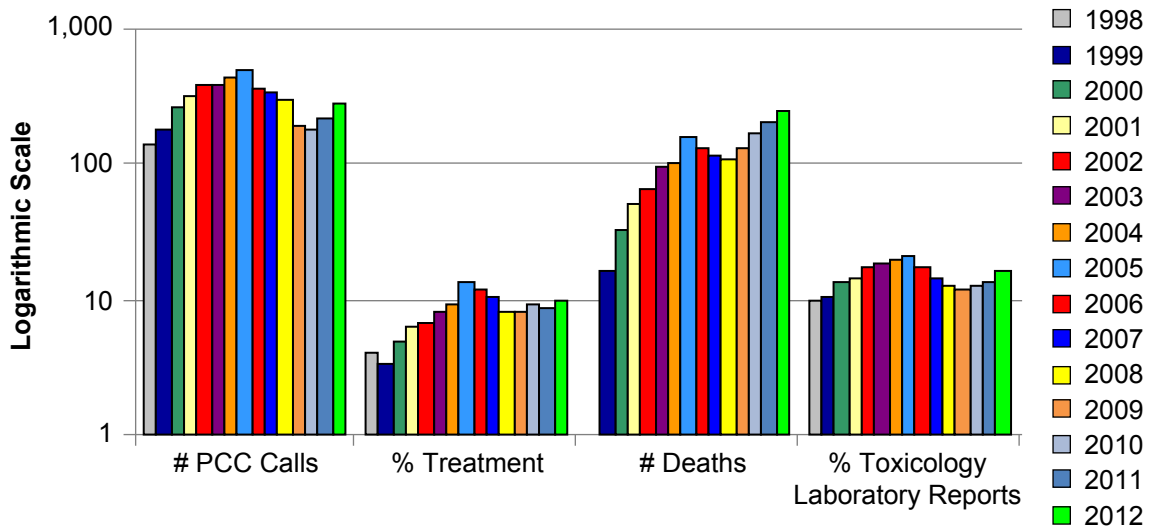
SOURCES: NFLIS, DEA; Texas Department of State Health Services (DSHS)

Exhibit 21. Number of Poison Control Center (PCC) Calls, Treatment Admissions, and Toxicology Laboratory Reports for MDMA in Texas: 1998–2012



SOURCES: Texas Poison Control Network; Texas Department of State Health Services (DSHS); NFLIS, DEA

Exhibit 22. Number of Poison Control Center (PCC) Calls, Proportion of Treatment Admissions and Toxicology Laboratory Reports, and Number of Deaths for Methamphetamine in Texas: 1998–2012



SOURCES: Texas Poison Control Network; Texas Department of State Health Services (DSHS); Texas Department of Public Safety (DPS); NFLIS, DEA

Exhibit 23. Characteristics of Clients Admitted to Treatment With a Primary Problem With Amphetamines or Methamphetamines, by Route of Administration, in Texas: 2012

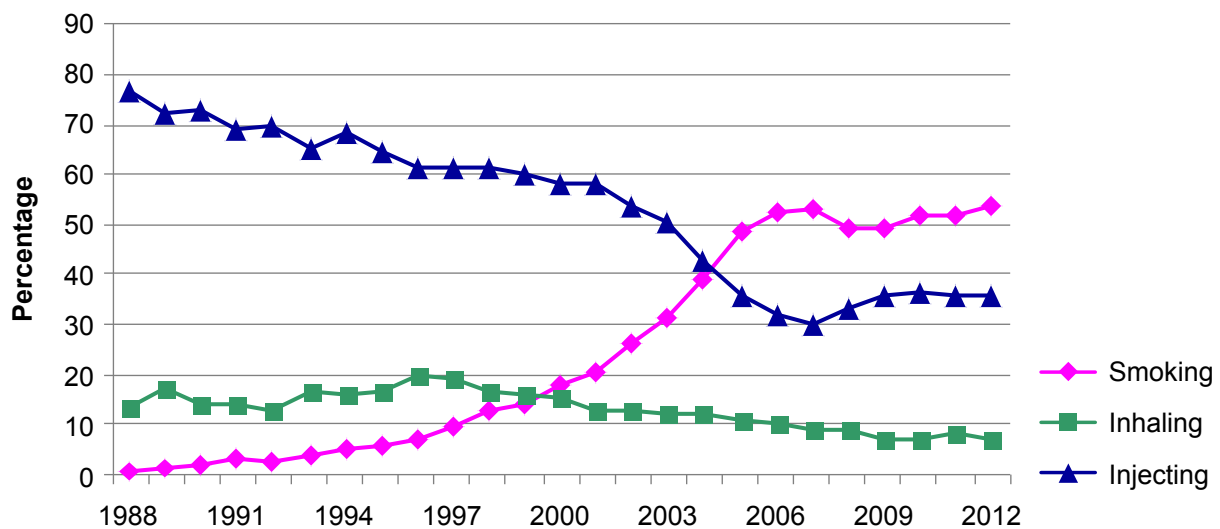
	Injected	Inhaled	Smoked	Oral	All ¹
# Admissions	2,754	535	4,054	229	7,649
% of Stimulant Admits	36	7	53	3	100
Lag-1st Use to Tmt-Yrs.	13	10	10	10	11
Average Age-Yrs.	33	33	32	33	32
% Male	43	45	39	37	41
% Black	1	3	3	3	2
% White	89	74	75	84	80
% Hispanic	8	20	20	8	15
% CJ Involved ²	56	54	56	58	56
% Employed Full Time	8	17	14	12	12
% Homeless	19	9	9	11	12

¹Total includes clients with "other" routes of administration.

²CJ=criminal justice system.

SOURCE: Texas Department of State Health Services (DSHS)

Exhibit 24. Percentage of Route of Administration of Methamphetamine, by Clients Admitted to Treatment in Texas: 1998–2012



SOURCE: Texas Department of State Health Services (DSHS)

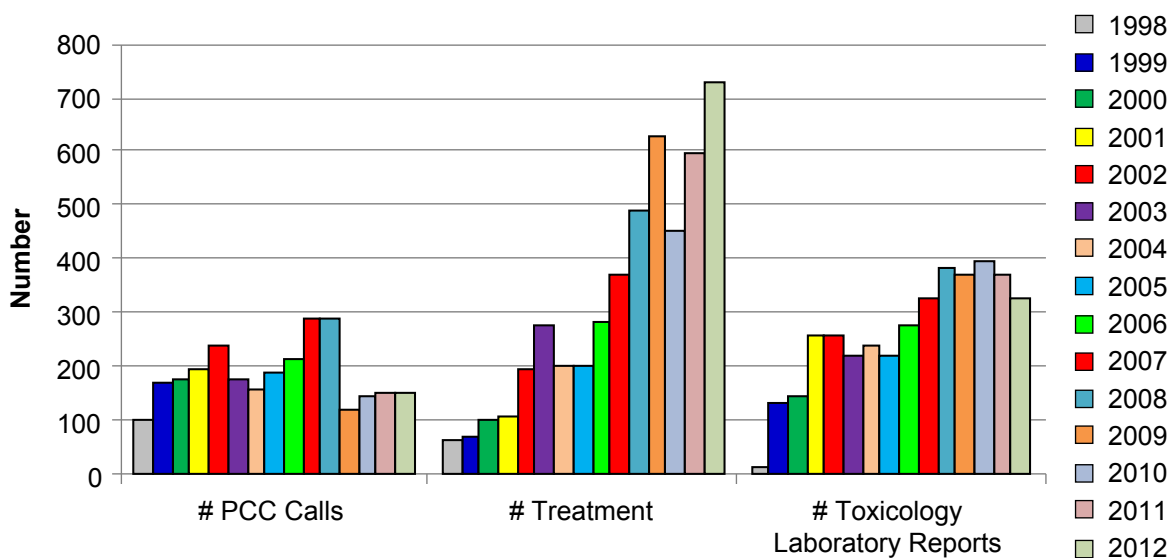
Exhibit 25. Characteristics of Clients Admitted to DSHS-Funded Treatment With a Primary Problem with “Club Drugs” in Texas: 2012

Club Drug	GHB	Hallucinogens	LSD	MDMA	PCP	Rohypnol®
# Admissions	17	78	17	100	730	14
Other Secondary Drug Problem						
% Cannabis	*	31	35	49	29	79
% Alcohol	*	10	0	7	10	*
% Methamphetamine	*	7	*	7	1	*
% Cocaine	*	9	*	9	11	*
% Crack	*	*	*	*	2	*
% Heroin	*	*	*	*	*	*
% Other Opiates	*	*	*	*	*	*
% Benzodiazepines	*	4	*	4	3	*

Note: The symbol “*” denotes fewer than three cases.

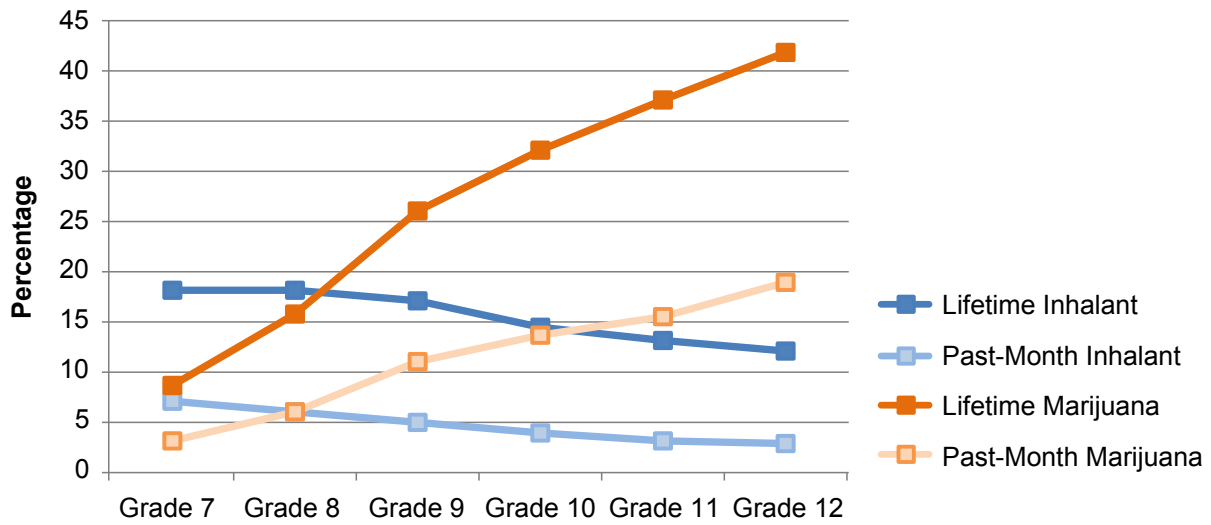
SOURCE: Texas Department of State Health Services (DSHS)

Exhibit 26. Number of Poison Control Center (PCC) Calls, Treatment Admissions, and Toxicology Laboratory Reports for PCP in Texas: 1998–2012



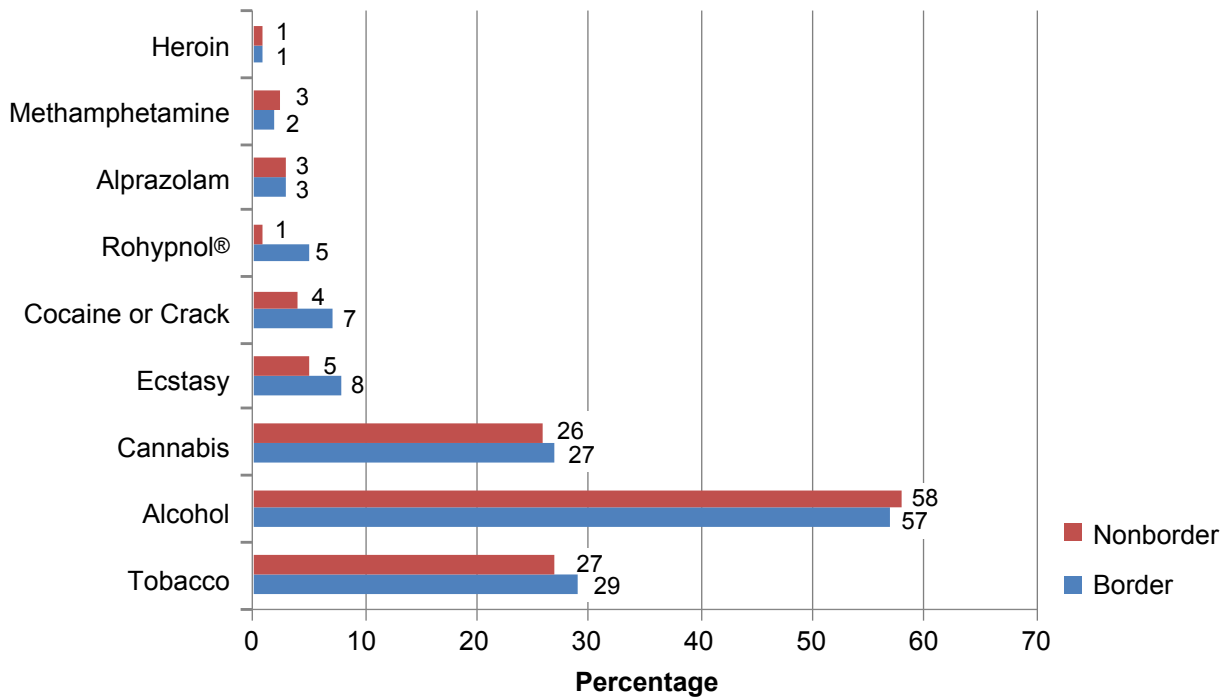
SOURCES: Texas Poison Control Network; Texas Department of State Health Services (DSHS); NFLIS, DEA

Exhibit 27. Percentage of Lifetime and Past-Month Use of Inhalants and Marijuana/Cannabis, Among Students in Grades 7–12, Texas: 2012



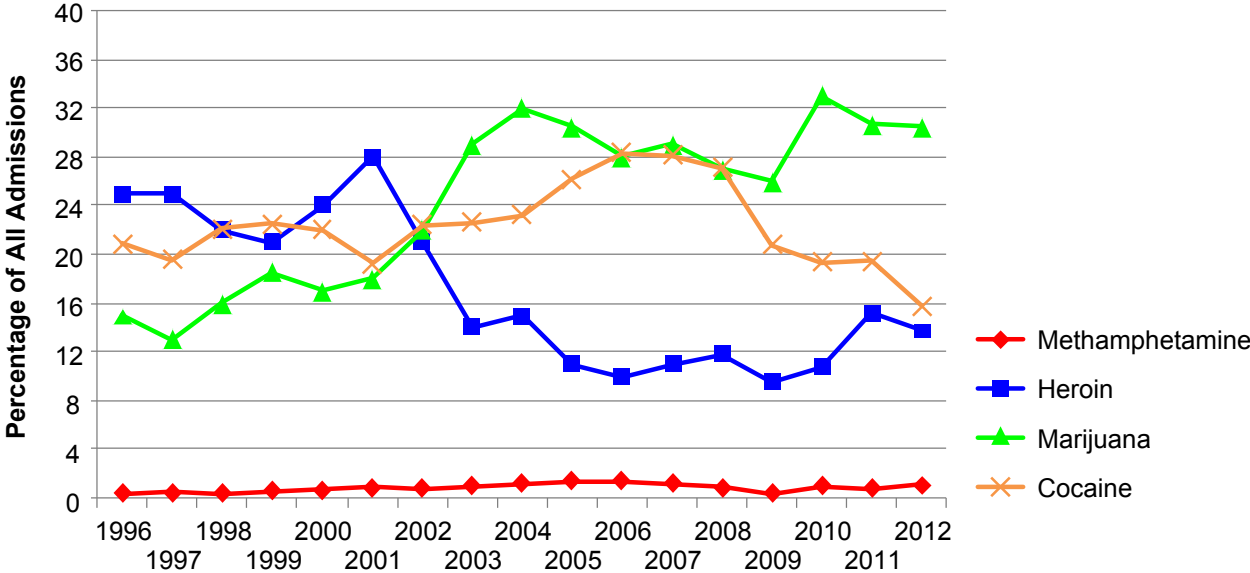
SOURCE: Texas School Survey, Texas Department of State Health Services (DSHS)

Exhibit 28. Percentage of Border and Nonborder Secondary Students Who Had Ever Used Drugs, Texas: 2012



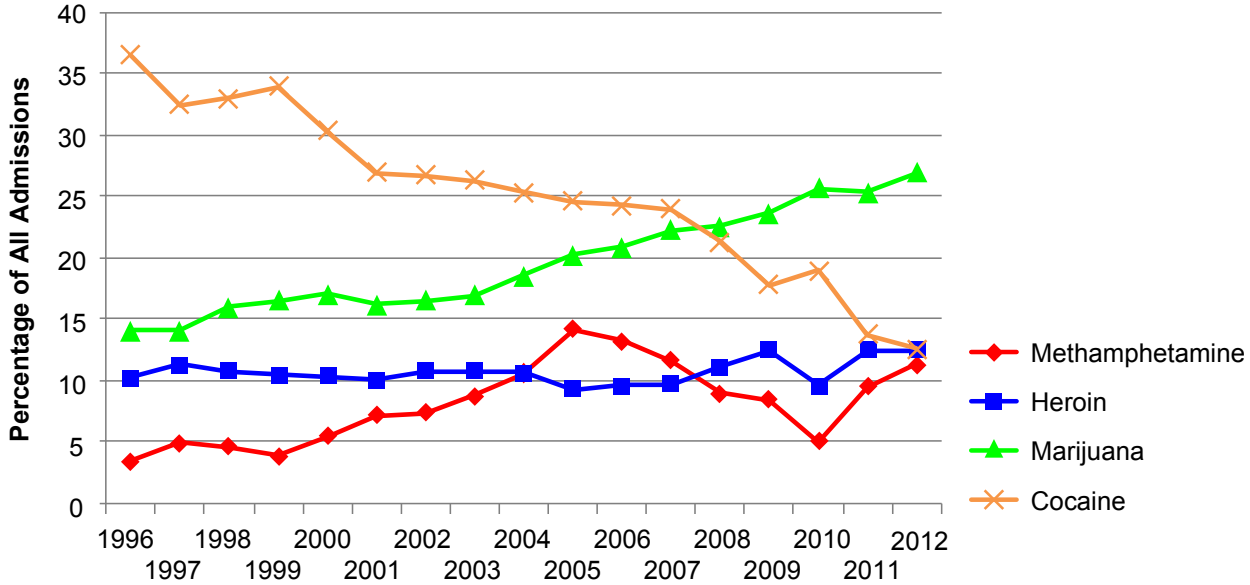
SOURCE: Texas Department of State Health Services (DSHS)

Exhibit 29. Percentage of Admissions to Texas DSHS-Funded Treatment, for Select Drugs, on the Border: 1996–2012



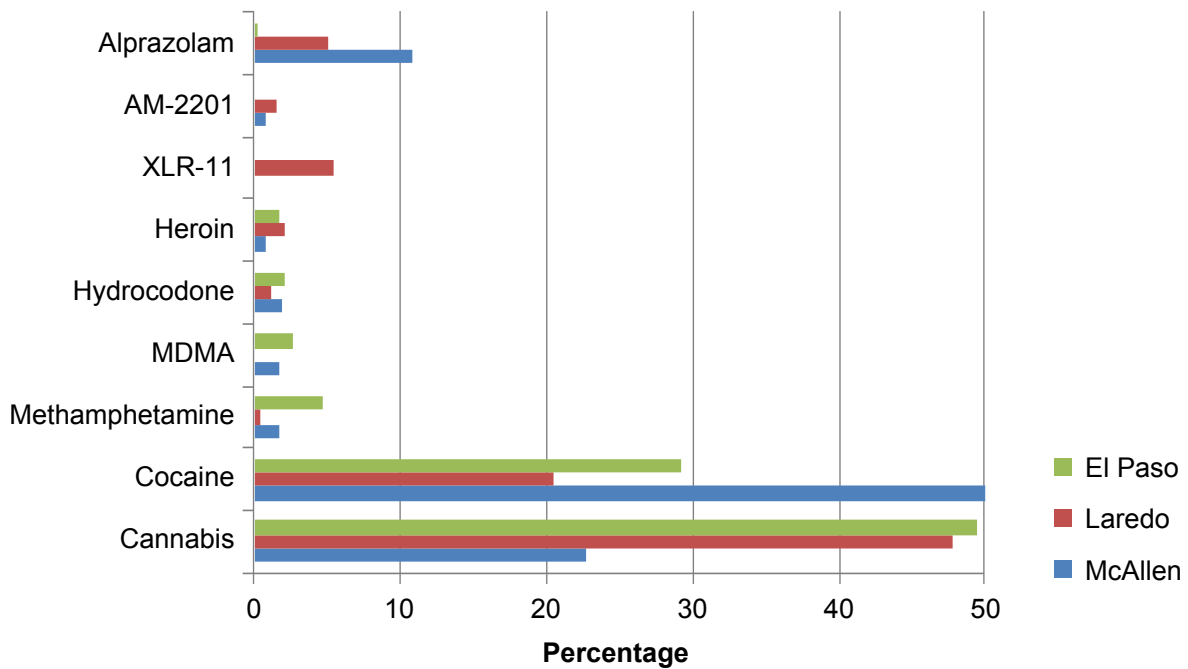
SOURCE: Texas Department of State Health Services (DSHS)

Exhibit 30. Admissions to Texas DSHS-Funded Treatment, for Select Drugs, Nonborder: 1996–2012



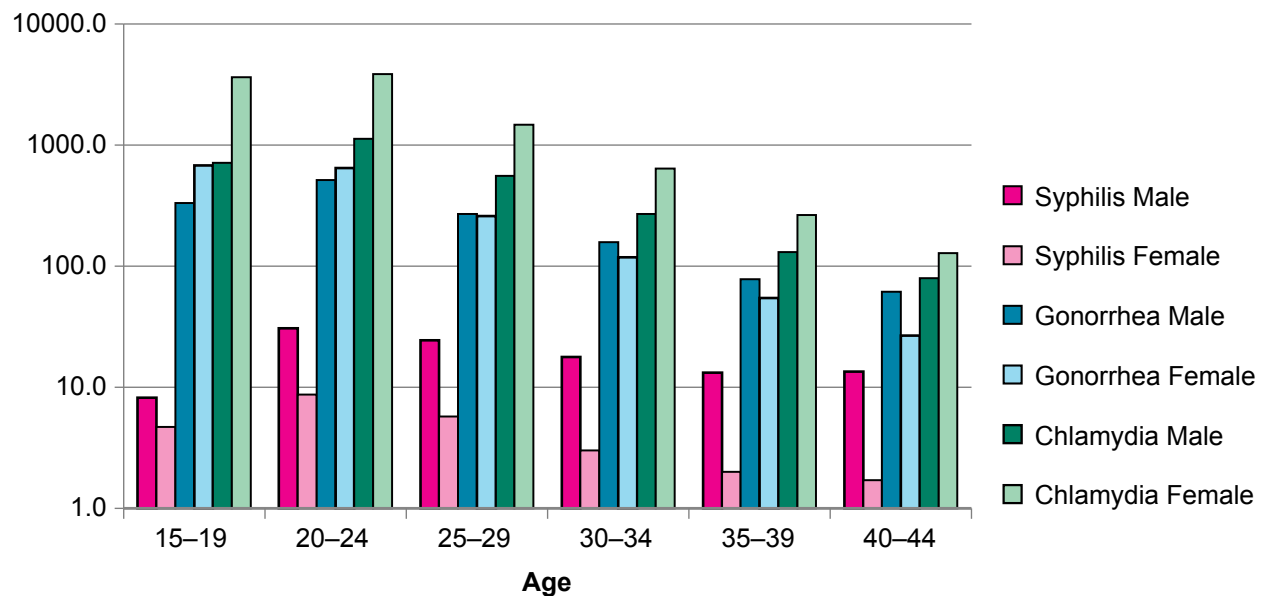
SOURCE: Texas Department of State Health Services (DSHS)

Exhibit 31. Percentage of Drug Reports from Items Seized and Analyzed on the Texas Border: 2012



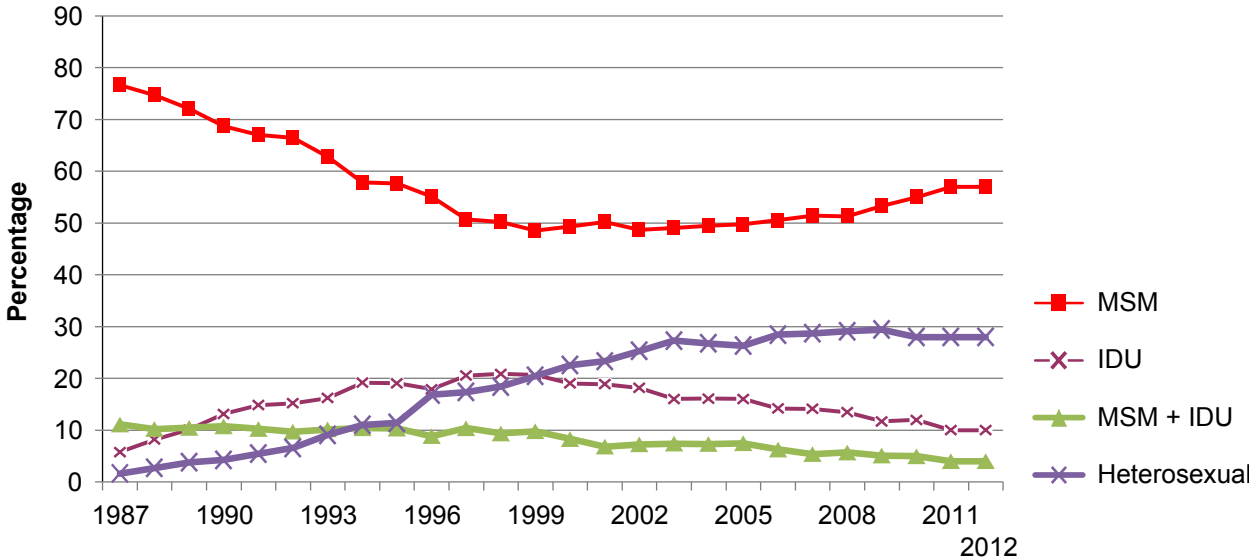
SOURCE: NFLIS, DEA

Exhibit 32. STD Case Rates in Texas, by Age: 2012



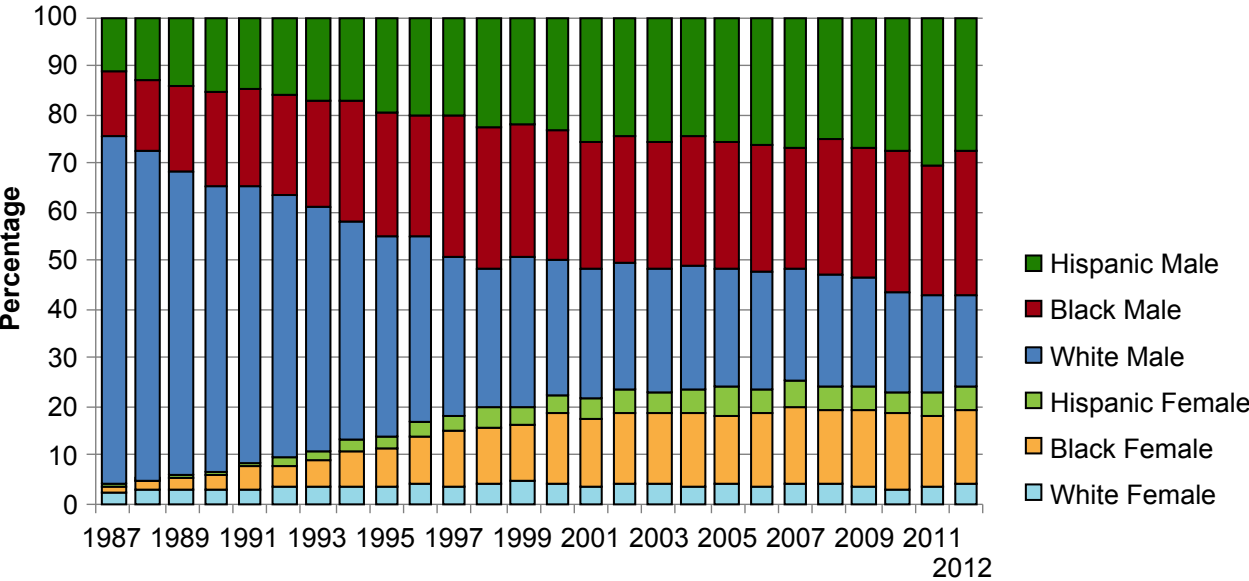
SOURCE: Texas Department of State Health Services (DSHS)

Exhibit 33. Percentage of AIDS Cases by Mode of Exposure in Texas: 1987–2012



Notes: MSM=men who have sex with men; IDU=injection drug user.
SOURCE: Texas Department of State Health Services (DSHS)

Exhibit 34. Percentage of Male and Female AIDS Cases by Race/Ethnicity in Texas: 1987–2012



SOURCE: Texas Department of State Health Services (DSHS)

Appendix 1. Characteristics of Clients at Admission to DSHS-Funded Treatment Programs: 2012

	Total Admissions	% of All Admissions	Average Age	(Yrs) 1st Use to Admission	% Black	% White	% Hispanic
All Drugs	75,103	100%	32.7	14.2	18.2	45.6	31.4
Aerosols	15	0.0%	34.6	6.0		40.0	46.7
Alcohol	22,117	29.4%	38.6	22.8	12.5	52.2	30.4
Amphetamines or Methamphetamine	7,649	10.2%	32.4	11.4	2.0	80.2	14.9
Anesthetics (Nitrous Oxide, Others)	4	0.0%	32.0	1.8			
Ativan® (Lorazepam)	20	0.0%	34.8	3.2		60.0	25.0
Barbiturate Sedatives	8	0.0%	45.6	12.1		62.5	
Benzodiazepines	140	0.2%	30.6	9.2	9.3	69.3	18.6
Cocaine or Crack	9,735	13.0%	38.3	14.7	44.3	24.8	27.3
Codeine	102	0.1%	28.4	9.7	44.1	42.2	10.8
Cough Syrup	50	0.1%	25.3	8.6	22.0	46.0	20.0
Darvocet Darvon® (D-Propoxyphene)	23	0.0%	36.3	7.9		73.9	21.7
Dilaudid® (Hydromorphone)	275	0.4%	32.4	5.9		92.0	4.7
Ephedrine/Pseudoephedrine	4	0.0%	17.3	3.0		100.0	
GHB/GBL (Gamma Hydroxybutyrate/Gamma Butyrolactone)	17	0.0%	30.2	6.0		82.4	
Hallucinogens	78	0.1%	30.3	9.8	17.9	60.3	17.9
Heroin	9,416	12.5%	32.8	11.2	7.0	42.6	43.9
Inhalants	16	0.0%	31.8	11.2		75.0	
Klonopin® (Clonazepam)	53	0.1%	38.5	7.2		88.7	
LSD	17	0.0%	22.6	7.6		52.9	41.2
MDMA/Ecstasy (3,4-methylenedioxymethamphetamine)	100	0.1%	23.7	5.4	30.0	38.0	25.0
Marijuana/Hashish	17,241	23.0%	22.6	8.7	25.6	25.1	43.3
Mescaline	16	0.0%	19.1	5.9		25.0	62.5
Methadone (Non-Prescription)	193	0.3%	33.7	6.9	2.1	75.6	19.2
Opiates and Synthetics	1,826	2.4%	33.2	10.5	5.6	73.9	17.7
Other Cannabinoids	156	0.2%	22.7	4.0	9.6	61.5	26.3
Other Drugs	126	0.2%	30.9	2.7		81.0	13.5
Other Sedatives	21	0.0%	38.6	8.9		76.2	
Over-the-counter	13	0.0%	27.9	9.9		61.5	38.5
Oxycodone	323	0.4%	32.5	7.7	1.9	86.4	8.7
PCP (Phencyclidine)	730	1.0%	30.7	9.7	88.2	5.6	4.1
Psilocybin Mushrooms	4	0.0%	21.3	4.5		100.0	
Ritalin® (Methylphenidate)	6	0.0%	21.5	1.8		83.3	
Rohypnol® (Flunitrazepam)	14	0.0%	16.9	3.6			92.9
Sedatives	83	0.1%	31.1	8.3	15.7	69.9	14.5
Solvents (Paint Thinner, Gasoline)	15	0.0%	30.9	17.4			80.0
Special K (Ketamine)	6	0.0%	43.5	2.5		100.0	
Stimulants	17	0.0%	30.9	4.8		58.8	23.5
Ultram® (Tramadol)	25	0.0%	32.8	5.8		72.0	20.0
Valium® (Diazepam)	28	0.0%	32.3	8.4		85.7	
Vicodin® (Hydrocodone)	3,277	4.4%	33.9	9.0	8.1	72.6	15.9
Xanax® (Alprazolam)	1,144	1.5%	27.2	7.7	19.1	52.4	24.0

Appendix 1. Characteristics of Clients at Admission to DSHS-Funded Treatment Programs: 2012 cont.

	% Male	% Injecting	% Use Daily	% Work Full Time	% No Legal Problem	% Homeless	Av. Yrs. Education
All Drugs	59.99	14.97	40.9	13.4	43.8	11.9	11.5
Aerosols	46.7		33.3		33.3	*	11.7
Alcohol	67.3	0.0	42.6	20.1	46.3	16.5	12.1
Amphetamines or Methamphetamine	41.4	36.0	30.8	12.3	43.7	12.3	11.6
Barbiturate Sedatives	50.0		75.0		75.0		12.3
Cocaine or Crack	50.8	3.5	29.3	10.9	47.6	14.8	11.4
Codeine	70.6		33.3	13.7	35.3	3.9	11.7
Cough Syrup	90.0		42.0	8.0	48.0		11.1
Dilaudid® (Hydromorphone)	55.6	80.4	62.9	8.0	59.3	8.7	12.1
Ephedrine/Pseudoephedrine							9.0
GHB/GBL (Gamma Hydroxybutyrate/Gamma Butyrolactone)	35.3		58.8				13.2
Hallucinogens	64.1	5.1	24.4	21.8	42.3	5.1	11.5
Heroin	61.4	78.4	76.2	5.8	62.6	19.8	11.5
Inhalants	62.5		31.3		56.3		11.8
Klonopin® (Clonazepam)	34.0		69.8		64.2	9.4	12.1
LSD	58.8				47.1		11.9
MDMA/Ecstasy (3,4-methylenedioxymethamphetamine)	55.0	4.0	14.0	7.0	24.0	8.0	11.6
Marijuana/Hashish	72.0		22.2	13.1	21.9	1.8	10.6
Mescaline	81.3						9.9
Methadone (Non-Prescription)	43.5	4.1	66.8	9.3	63.7	15.5	12.0
Opiates and Synthetics	51.4	24.7	64.5	9.3	59.9	11.4	12.1
Other Cannabinoids	73.7		45.5	12.2	30.8		11.0
Other Drugs	56.3	8.7	66.7	8.7	57.1	16.7	11.9
Other Sedatives	23.8		66.7		47.6		13.3
Over-the-counter	46.2		46.2		38.5		10.9
Oxycodone	55.1	13.3	60.7	11.5	66.6	7.4	12.4
PCP (Phencyclidine)	38.4		27.7	6.3	43.4	6.0	10.9
Psilocybin Mushrooms	100.0						12.0
Ritalin® (Methylphenidate)					66.7		11.2
Rohypnol® (Flunitrazepam)	35.7						8.6
Sedatives	24.1		44.6	7.2	37.3	4.8	12.1
Solvents (Paint Thinner, Gasoline)	60.0		53.3		33.3		8.4
Special K (Ketamine)					83.3		10.4
Stimulants	52.9	35.3	58.8		47.1		12.4
Ultram® (Tramadol)	36.0		80.0		60.0		13.3
Valium® (Diazepam)	35.7		57.1		53.6	17.9	12.1
Vicodin® (Hydrocodone)	35.1	0.3	69.4	11.0	64.6	8.3	12.1
Xanax® (Alprazolam)	37.7		39.2	7.2	41.6	6.8	11.6

**INTERNATIONAL
REPORTS**

Monitoring the Drug Situation in Canada: June 2012

Judy Snider, M.Sc.¹

Abstract

Monitoring the drug situation in Canada is carried out by the country's National Drugs Observatory (NDO). Based on the European Monitoring Centre for Drugs and Drug Addiction and the Inter-American Drug Control Commission of the Organization of American States Model, the NDO brings data from many sources to report on drugs and drug addiction. Canada's NDO has three main areas of activity: an Early Warning System, which includes high risk population monitoring, tracking the introduction of new substances through monitoring the Internet, analyzing the Drug Analysis Service (DAS)'s drug seizure data for emerging substances, and monitoring media reports and scientific and medical literature; Routine Monitoring, which includes general population and student surveys, drug supply surveillance, emergency department monitoring, and a network of drug and alcohol surveillance experts; and information dissemination, both nationally and internationally. The NDO is the cornerstone of Canada's drug monitoring and information sharing activities.

New Psychoactive Substances (NPS)

In 2012, monitoring new psychoactive substances (NPS) in Canada was undertaken by the NDO with several sources of information used to inform the Early Warning System and Routine Monitoring. In 2012, there was an increase in the number of exhibits analyzed which contained substances from the 2C family phenethylamines (both controlled and noncontrolled) ($n=869$); BZP (1-benzylpiperazine) and TFMPP (1-(3-trifluoromethylphenyl)piperazine) ($n=3,775$); and MDPV (3,4-methylenedioxypropylvalerone) ($n=1,358$). Exhibits containing alpha-PVP (alpha-pyrrolidinopentiophenone) ($n=22$) were seen for the first time in 2012.

Results from the qualitative segment of the 2012 High Risk Population study indicated that there was some discussion about "bath salts" in various cities across Canada; however, there was little reported use—three reports in the study's wave 1 (April 19 to September 11, 2012) and no reports in wave 2 (September 28 to December 30, 2012)). Most of the mentions of bath salts were from street-involved youth in Calgary, Toronto, and Montreal and recreational drug users² in Montreal. Mentions of Krokodil (desomorphine) were made by street-involved youth in Montreal, while recreational drug users in the Prairies talked about 2C family drugs. Recreational drug users in Toronto talked about "research chemicals." However, no details on these substances were collected.

Preliminary results from the Internet monitoring project identified that 8 Web sites were purportedly selling "research chemicals" in Canada, with over 50 substances listed for sale. The most common noncontrolled substances included 2C family substances, NBOME compounds, 4'-substituted

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²Recreational drug users are those who attend the bar, club and rave scene and have used drugs (not including tobacco and alcohol) at least once a month for each of the 6 months prior to interview.

tryptamines, 5'-substituted tryptamines and kratom extract. The most common controlled substances listed included AM-2201 (1-(5-fluoropentyl)-3-(1-naphthoyl)Indole), UR-144 ((1-phenylindol-3-yl)-(2,2,3,3-tetramethylcyclopropyl) methanone), etizolam, and methylone (N-methyl-3,4-methylenedioxycathinone).

Routine Monitoring of Illicit Drugs

Only data from the chemical analyses of exhibits containing controlled substances (DAS's Laboratory Information Management System) are presented, and the standard caveats associated with these data must be mentioned, including that these data may not reflect actual trends in illicit drug availability.

Cannabis continues to be the dominant illicit drug in Canada from laboratory analysis of exhibits from seized substances. The vast majority of exhibits analyzed from substances seized by police and border services are cannabis, followed by cocaine (cocaine and crack cocaine). The number of exhibits containing cannabis decreased in 2012, to levels seen prior to 2010. After 4 years of decline (2008–2011), the number of exhibits containing cocaine increased slightly in 2012. The number of exhibits containing methamphetamine decreased in 2012, after having increased year over year between 2005 and 2011. The number of exhibits containing ecstasy has shown a substantial 65-percent decrease from 2010 to 2012. The number of exhibits containing prescription opioids more than doubled between 2005 and 2011 but levelled off in 2012. In 2012, there was a large increase in the number of exhibits containing heroin, compared with 2011, to almost double what was seen in 2009. The number of exhibits containing hallucinogens continued to decrease in 2012, after reaching a peak in 2007.

Prescription Drug Strategy

On March 27, 2013, the Canadian Centre on Substance Abuse launched a National Prescription Drug Strategy, "First Do No Harm: Responding to Canada's Prescription Drug Crisis." The strategy contains 58 recommendations with timelines, stakeholder roles, and responsibilities. There are five action streams that include prevention, education, treatment, monitoring and surveillance, and enforcement. Currently, the implementation phase has begun.

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Drug Information Networks in Latin America

Marya Hynes¹, M.H.S.

Abstract

To date, the Inter-American Drug Abuse Control Commission (CICAD) of the Organization of American States assisted the Dominican Republic and Honduras in holding their first national meetings of their drug information networks. Meetings are scheduled for El Salvador and Panama later in the year. The following summarizes major points from the Dominican Republic and Honduras meetings.

The Dominican Republic The major drug of concern in the Dominican Republic is heroin. In 2012, the Dominican Republic carried out a study of 2,182 clients in treatment centers across the country. The study found that slightly fewer than 5 percent of treatment clients in the Dominican Republic were seeking treatment for heroin use. This is considered to be significant, given that admitting use of any illicit drug in the Dominican Republic is punishable with incarceration. The majority initiated heroin use between the ages of 23 and 25, and 62 percent began their heroin use outside the Dominican Republic, mostly in the United States. Approximately 50 percent of the heroin users in treatment reported injecting; compared with 72 percent of those on the street. Approximately 38 percent of those who injected reported needle sharing. The study indicated that there is a high rate of treatment abandonment among heroin users, mainly because the treatment centers cannot manage the withdrawal symptoms since methadone is illegal and unavailable in the country. Police and military reports indicated that the heroin available in the Dominican Republic originates in Colombia.

Honduras has identified cocaine and crack as the primary substances of concern; however, there are also alerts for possible synthetic marijuana use in the country. Honduras does not have numeric data on clients in treatment. Informal reports from local treatment providers estimate that approximately 7 out of 10 adults requesting drug treatment seek treatment primarily for crack use. The representative from treatment for minors indicated that among youth, the primary drug for seeking treatment is cocaine. There are no prevalence estimates for Honduras, as there have been no formal drug use studies in that country since 2008. However, according to treatment providers, records between 1998-2002 showed that the primary drug for which people sought treatment was alcohol and to a lesser extent marijuana. As of 2002, the primary drug for which treatment was sought was cocaine, but over the past 5 years the primary drug for treatment changed to crack. Information from military reports indicates that cocaine base is shipped from South America for further processing in Honduras, resulting in a wide availability of cocaine, crack, and a substance known as “paco.” No data were available on “paco,” but it bears the same street name as smokeable cocaine base from South America. Police reported that there are regular seizures of chemical precursors for methamphetamine production, and three cocaine laboratories have been dismantled. Synthetic marijuana is sold in boutique stores, and apparently is not yet illegal in the country.

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CICAD continues to support Central American countries in organizing, gathering, and reporting data through their networks to work toward the long-term goal of developing a Central American Drug Information Network.

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Drug Use in México: Data From Student Surveys in Tijuana, Jalisco, and Mexico City

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INTRODUCTION

This paper shows data from a study conducted in November and December of 2012 in the city of Tijuana to assess drug use in the population attending fifth and sixth grade of elementary school and seventh to ninth grade of high school. These findings are contrasted with findings from studies in Jalisco and Mexico City.

First, sociodemographic information from Baja California and Tijuana will be presented to establish the context, followed by study results.

Demographic Findings

Life expectancy in Baja California is 73.2 years for males and 76.9 years for females. Unemployment rate in this State is 4.5 percent.

Tijuana is one of the municipalities of Baja California; it has an area of 339.5 square miles (XX Ayuntamiento de Tijuana, n.d) and a population of approximately 1,559,683, with almost the same number of males and females.

The human development index of the State of Baja California is above the average of the country (PNUD, 2009); of the five municipalities in which it is divided, Tijuana has the highest human development index (0.8778).

Tijuana is an important reception city for migrant populations. The census in 2010 showed that 47.7 percent of its population was born in another entity (INEGI, 2010). In the same year, according to the U.S. Department of Homeland Security, there were nearly 40 million border crossings through its border.

Method

To achieve comparability with similar studies in school population, the methodology in this study maintained the basic aspects of previous measurements conducted in students from 7th to 12th grade in Mexico City and in other States of the country.

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The aim of the study was to determine the prevalence of use of legal drugs (tobacco and alcohol) among students from fifth and sixth grades of elementary school, as well as the use prevalence of illegal drugs and medical drugs without prescription among students from seventh to ninth grades from high school in Tijuana.

Sample and Population

The units of analysis on which information was gathered were students from fifth and sixth grades of elementary school and students from seventh to ninth grades of high school enrolled in the 2011–2012 school year in Tijuana. Each grade level was considered a study domain.

A sample of 10,000 students was calculated, consisting of 2,000 in each school grade, in order to achieve representation by study domain.

Schools were randomly selected within each school grade. The sample design was stratified cluster, and the grade was the stratification variable, thus providing 5 different strata, as shown here.

Sample and Population Distribution by Sex and Grade in Elementary Schools and High Schools in Tijuana: 2011–2012 School Year

	Males		Females		Total	
	<i>n</i> Sample	<i>N</i> Population	<i>n</i> Sample	<i>N</i> Population	<i>n</i> Sample	<i>N</i> Population
Elementary School						
5th Grade	847	16,719	878	16,696	1,725	33,416
6th Grade	931	14,413	934	14,023	1,865	28,437
Subtotal	1,778	31,133	1,812	30,720	3,590	61,852
High School						
7th Grade	939	14,379	881	13,700	1,820	28,078
8th Grade	856	13,285	942	13,081	1,798	26,366
9th Grade	906	11,810	934	11,996	1,840	23,805
Subtotal	2,701	39,474	2,757	38,776	5,458	78,249
Total	4,479	70,607	4,569	69,495	9,048	140,102

The information was obtained through standardized questionnaires, which included scales applied in previous surveys (Medina-Mora, Gomez-Mont, and Campillo, 1981; Villatoro et al., 2002; Rodríguez, S., 2007). New scales included were previously validated. Due to the differences between students, different questionnaires were used in elementary schools and high schools.

Regarding alcohol and tobacco use, the following indicators were used in the five school grades: lifetime, last-year, and last-month prevalence; age of onset; last time it was used; consumption occasions; and, in the case of alcohol, binge drinking.

For seventh to ninth graders, indicators about drug use were added. For each drug (amphetamines, tranquilizers, marijuana, cocaine, crack, hallucinogens, inhalants, methamphetamine, heroin, and sedatives), indicators included lifetime, last-year, and last-month use; number of times the drug has

been used; when it was first used (incidence); and circumstances surrounding the onset of use (age and how drugs were obtained). For alcohol, besides prevalence and binge drinking, frequency of drunkenness is queried. For tobacco, students were also asked whether they consumed more than 100 cigarettes during their lifetime.

Procedure

The operational design of the survey included 2 coordinators and 16 interviewers. The training course lasted 2 days, and it included conceptual issues related to addictions, study background and objectives, questionnaire management, and instructions for the application and group selection. Special care was taken that the interviewers knew how to transmit instructions to guarantee confidentiality and anonymity of the student responses.

This study was approved by the ethics committee of the National Psychiatry Institute Ramón de la Fuente Muñiz.

RESULTS

Alcohol and Tobacco

Tobacco use among fifth and sixth grade students in Tijuana is low. Among male high school students in grades 7–9, the tobacco use rate in Tijuana (12.1 percent) is similar to that in the other States. Female high school students in Tijuana have a tobacco use rate similar to females of Jalisco (9.8 and 8.8 percent, respectively) and lower than females in Mexico City (12.1 percent) (exhibit 1).

Among elementary school students in Tijuana, alcohol use in the last year is higher in males than among females (11.7 and 8.6 percent, respectively). Among high school students, males and females from Tijuana have lower consumption rates than in the other States (exhibit 2). In Tijuana, prevalence of binge drinking in male and female elementary school students is similar, at below 3 percent. Meanwhile, male and female high school students in Tijuana have lower prevalence of binge drinking (8.3 and 8.2 percent, respectively) than students in the other States (between 12.4 and 14.2 percent) (exhibit 3).

Nonprescription Medical and Illegal Drug Use

Medical and illegal drug use was assessed only in students from seventh to ninth grade from high school.

Regarding any drug use, male high school students from Tijuana (7.9 percent) have a lower prevalence compared with those in the other States. However, among female high school students from Tijuana (8.8 percent), consumption of any drug is similar to female students in Jalisco (9.9 percent) and lower than those in Mexico City (13.1 percent) (exhibit 4).

Male high school students from Tijuana (4.1 percent) have a higher prevalence of nonprescription medical drug use than those in the other States, which have prevalence of approximately 2.9 percent. Meanwhile, among female high school students, the prevalence in the three States was similar at 4.5–5.2 percent (exhibit 5).

The prevalence of amphetamines use in male high school students from Tijuana is similar to that of male students in Mexico City and Jalisco (between 1.2 and 1.6 percent). Similarly, female high school students also had low prevalence of amphetamines use in all three areas (between 1.7 and 2.2 percent) (exhibit 6).

Regarding tranquilizers use in the last year, Tijuana male students present a higher prevalence (3.0 percent) than those in Jalisco and Mexico City (1.6 and 2.1 percent, respectively). Female students from Tijuana have a similar prevalence to those in Mexico City (at approximately 3.0 percent) and lower than female students in Jalisco (3.7 percent) (exhibit 7).

Among male and female high school students, the lowest consumption rates of any illicit drug are in Tijuana (6.3 and 6.1 percent, respectively), and the highest rates are in Mexico City (nearly 11 percent) (exhibit 8).

Specifically for marijuana use in the last year, prevalence among male students in Tijuana is similar to those in Jalisco (approximately 5 percent) and lower than in Mexico City (7.2 percent), while female students in Tijuana have a rate similar to those in Mexico City (approximately 5 percent) and higher than female students in Jalisco (3.3 percent) (exhibit 9).

Male high school students in Tijuana have a prevalence of cocaine use in the last year higher (2.6 percent) than that of male students in Jalisco (1.3 percent) and similar to those in Mexico City (1.8 percent). Similar results were found for female students from Tijuana (exhibit 10).

Lifetime crack use is higher among male high school students from Tijuana (2.9 percent) compared with the other States. Consumption of crack among Tijuana female students is the same as those in Mexico City (1.4 percent) and higher than female students in Jalisco (0.7 percent) (exhibit 11).

Regarding inhalant use, the prevalence is lowest among male and female students from Tijuana, below 2 percent. Inhalant use is higher Mexico City, especially among female students (7.3 percent) (exhibit 12).

Consumption of methamphetamines in the last year had similar prevalence in the three States, and prevalence is approximately 2 percent for both male and female students (exhibit 13).

Finally, heroin use in the last year is higher among male students in Tijuana (1.4 percent) than among those in the other States. For female students, the situation is similar, although the difference is not statistically significant (exhibit 14).

CONCLUSIONS

Alcohol and tobacco consumption is low among students in fifth and sixth grades in elementary school. The highest prevalence corresponds to alcohol consumption, with a prevalence ranging from 11.7 percent for male students to 8.6 percent for female students.

For nonprescription medical and illegal drug use, Tijuana shows generally lower prevalence rates for male and female students than the other two States. The higher consumption rates in Tijuana are for nonprescription medical drugs use, particularly among male students.

Considering only illegal drugs, the consumption rate in Tijuana (6.2 percent average for males and females) is only 60 percent of what is consumed in Mexico City (10.7 percent); although for cocaine, crack, and heroin, the higher prevalence are presented in Tijuana.

As noted in other studies, drug use in Mexico has been increasing. It is important to emphasize that this increase varies throughout the regions of the country. While marijuana is the drug with the largest increase, prevalence of cocaine and heroin has increased greatly in the north, particularly in Tijuana. In fact, the use of heroin has increased in the State of Baja California. Prevalence there is now even higher than in Chihuahua, where once the highest consumption was reported.

An important point of consideration is that methamphetamine use among students was lower compared with marijuana and cocaine use.

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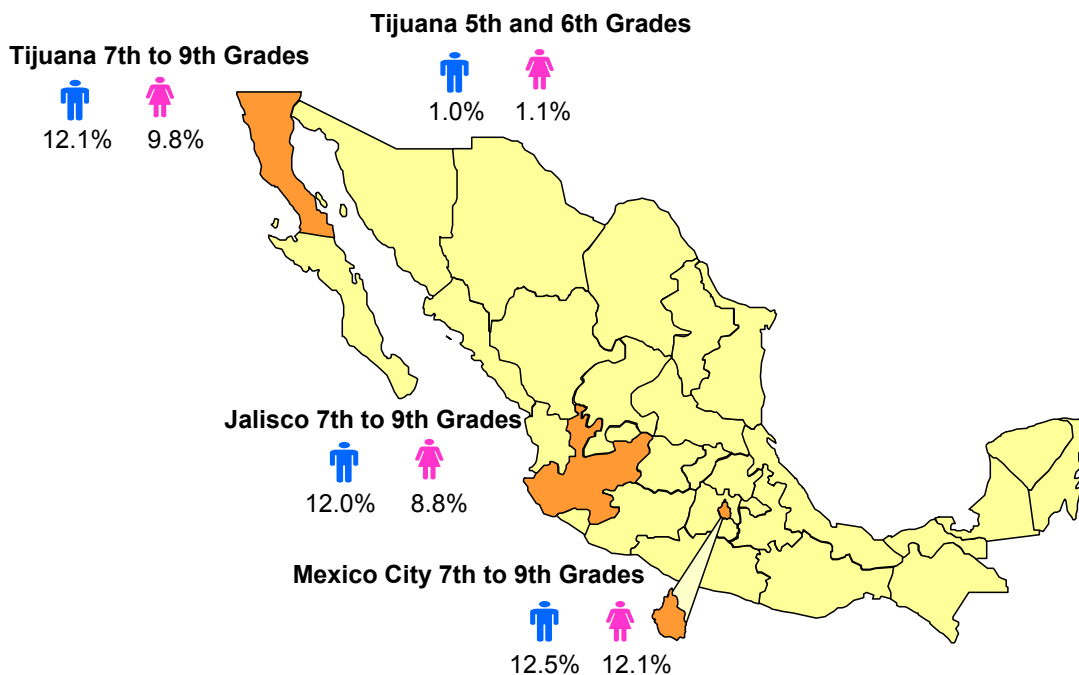
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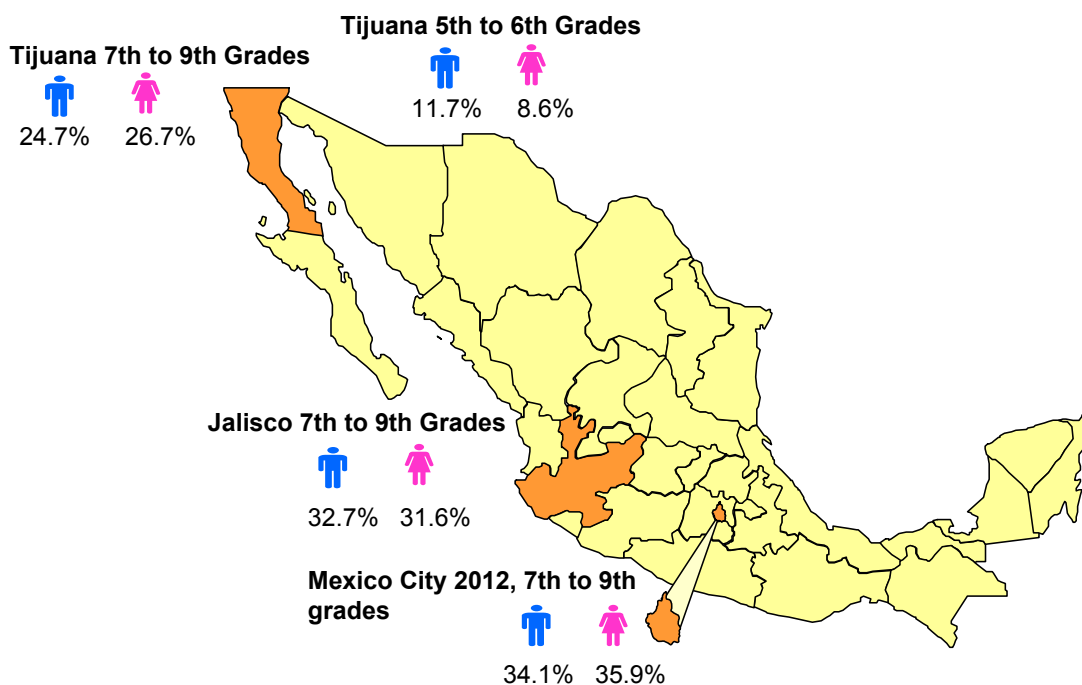
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Exhibit 1. Last-Year Prevalence of Tobacco Use Among Students in Grades 5–9, by Grade, Sex, and Area: 2011–2012 School Year



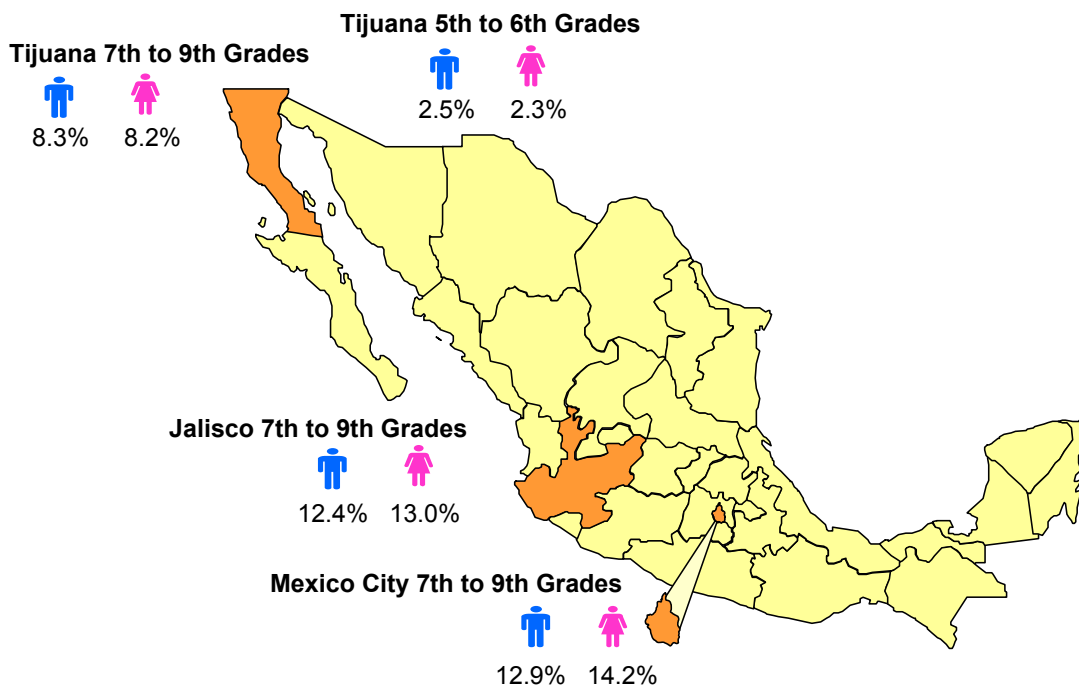
SOURCES: Villatoro, et al, 2013; Chávez et al, 2013; Medina Mora et al, 2013

Exhibit 2. Last-Year Prevalence of Alcohol Use Among Students in Grades 5–9, by Grade, Sex, and Area: 2011–2012 School Year



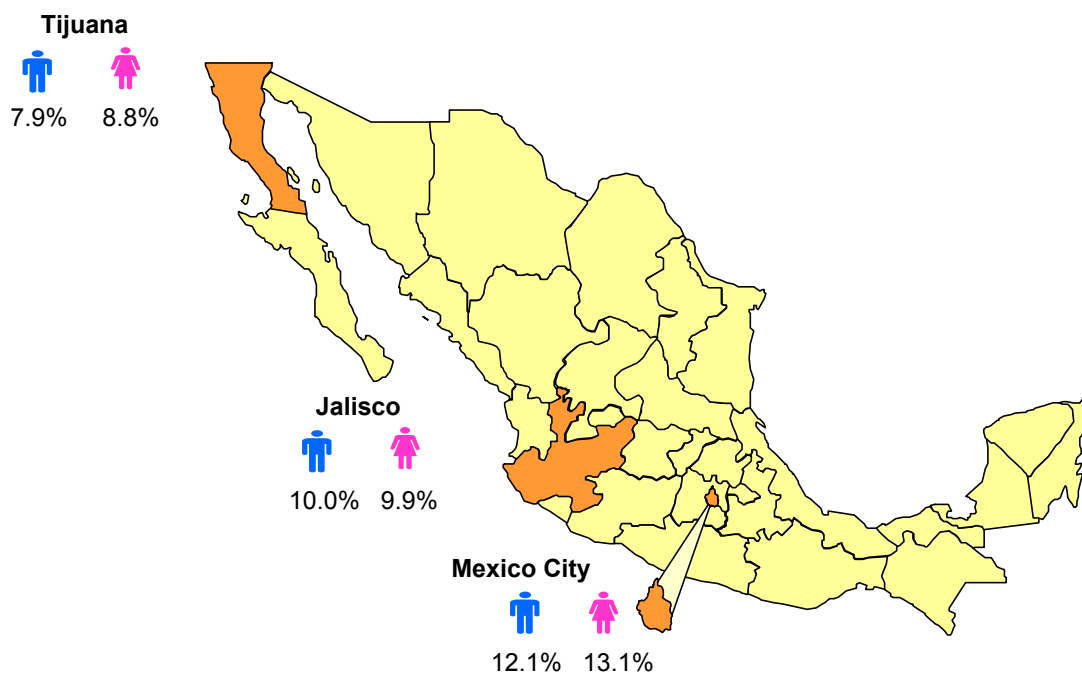
SOURCES: Villatoro, et al, 2013; Chávez et al, 2013; Medina Mora et al, 2013

Exhibit 3. Binge Drinking Among Students in Grades 5–9, by Grade, Sex, and Area: 2011–2012 School Year



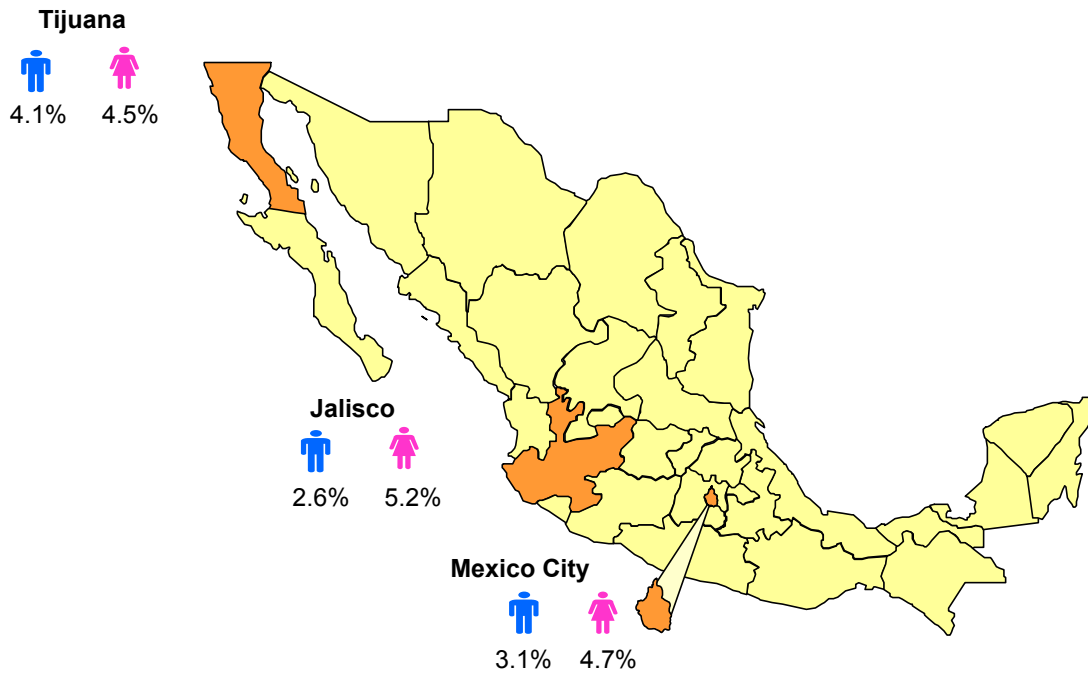
SOURCES: Villatoro, et al, 2013; Chávez et al, 2013; Medina Mora et al, 2013

Exhibit 4. Last-Year Prevalence of Any Drug Use Among Students in Grades 5–9, by Grade, Sex, and Area: 2011–2012 School Year



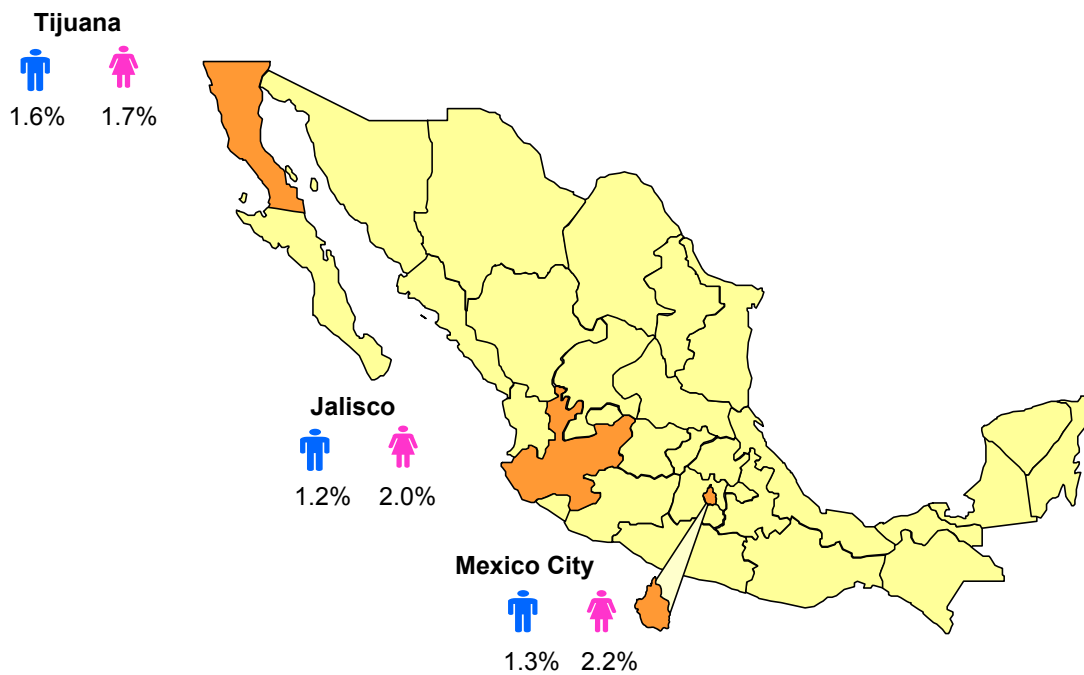
SOURCES: Villatoro, et al, 2013; Chávez et al, 2013; Medina Mora et al, 2013

Exhibit 5. Last-Year Prevalence of Prescription Drug Use Among Students in Grades 5–9, by Grade, Sex, and Area: 2011–2012 School Year



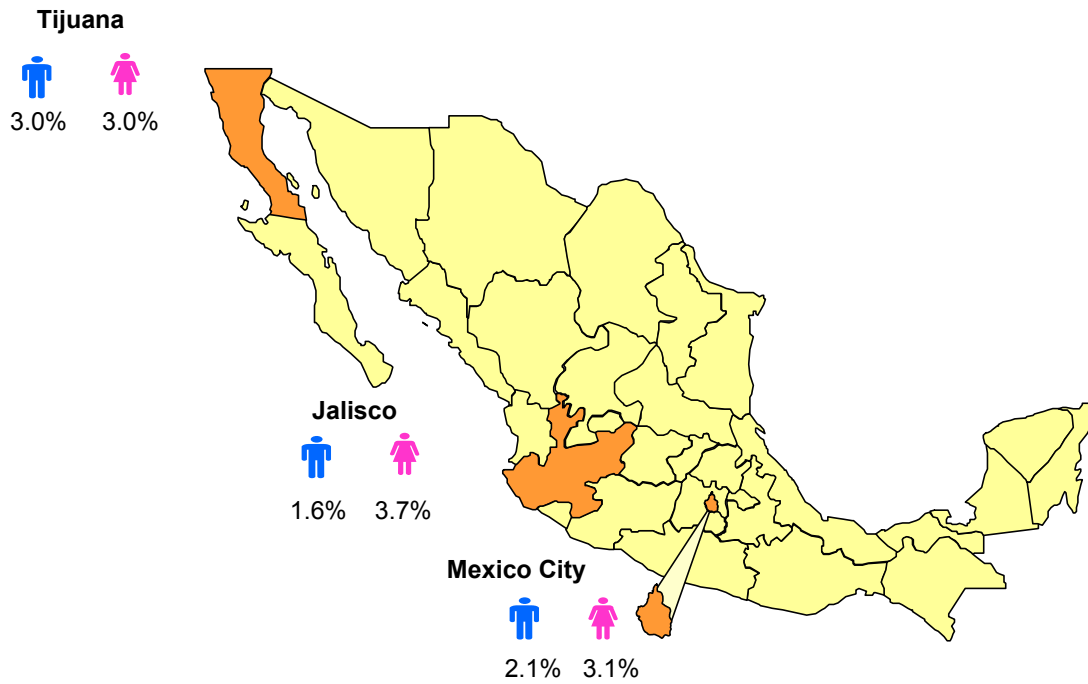
SOURCES: Villatoro, et al, 2013; Chávez et al, 2013; Medina Mora et al, 2013

Exhibit 6. Last-Year Prevalence of Amphetamine Use Among Students in Grades 5–9, by Grade, Sex, and Area: 2011–2012 School Year



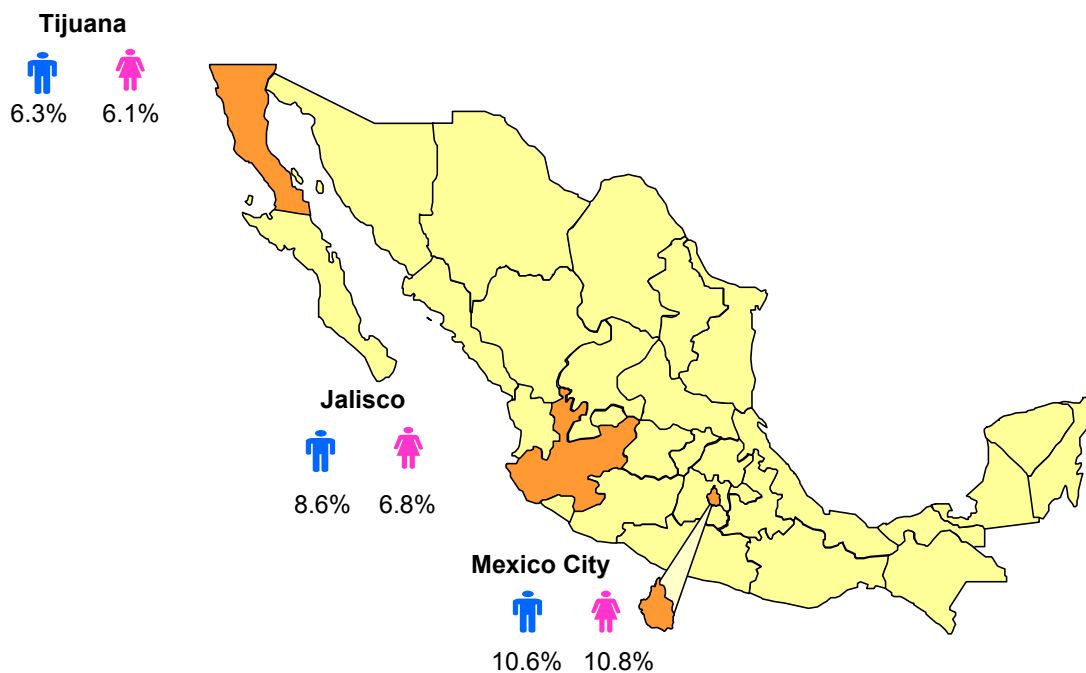
SOURCES: Villatoro, et al, 2013; Chávez et al, 2013; Medina Mora et al, 2013

Exhibit 7. Last-Year Prevalence of Tranquilizer Use Among Students in Grades 5–9, by Grade, Sex, and Area: 2011–2012 School Year



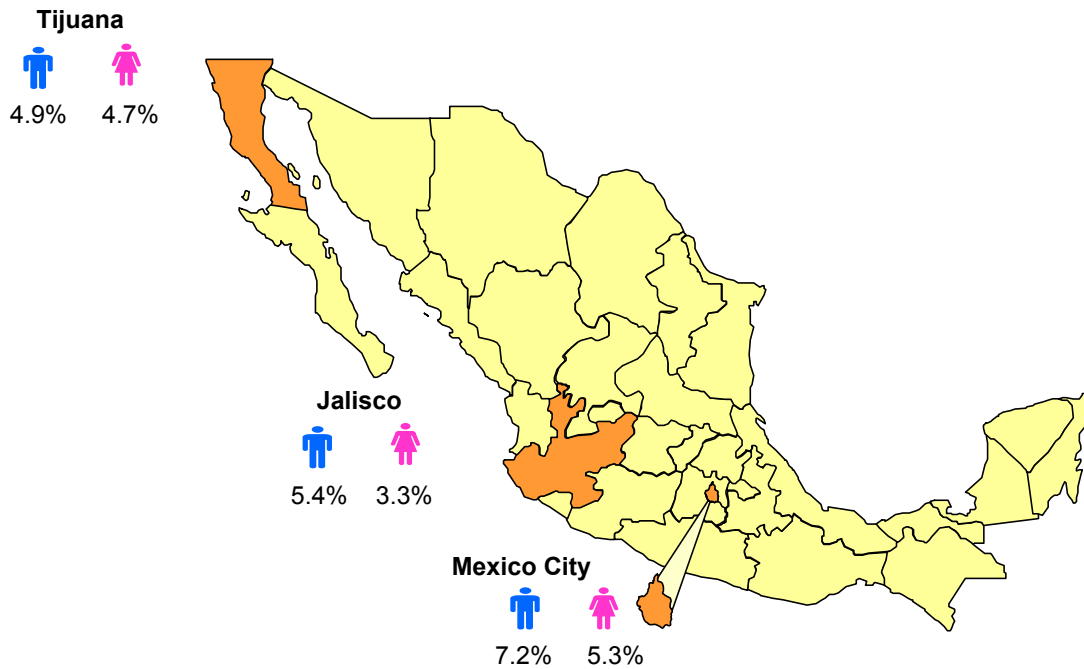
SOURCES: Villatoro, et al, 2013; Chávez et al, 2013; Medina Mora et al, 2013

Exhibit 8. Last-Year Prevalence of Any Illicit Drug Use Among Students in Grades 5–9, by Grade, Sex, and Area: 2011–2012 School Year



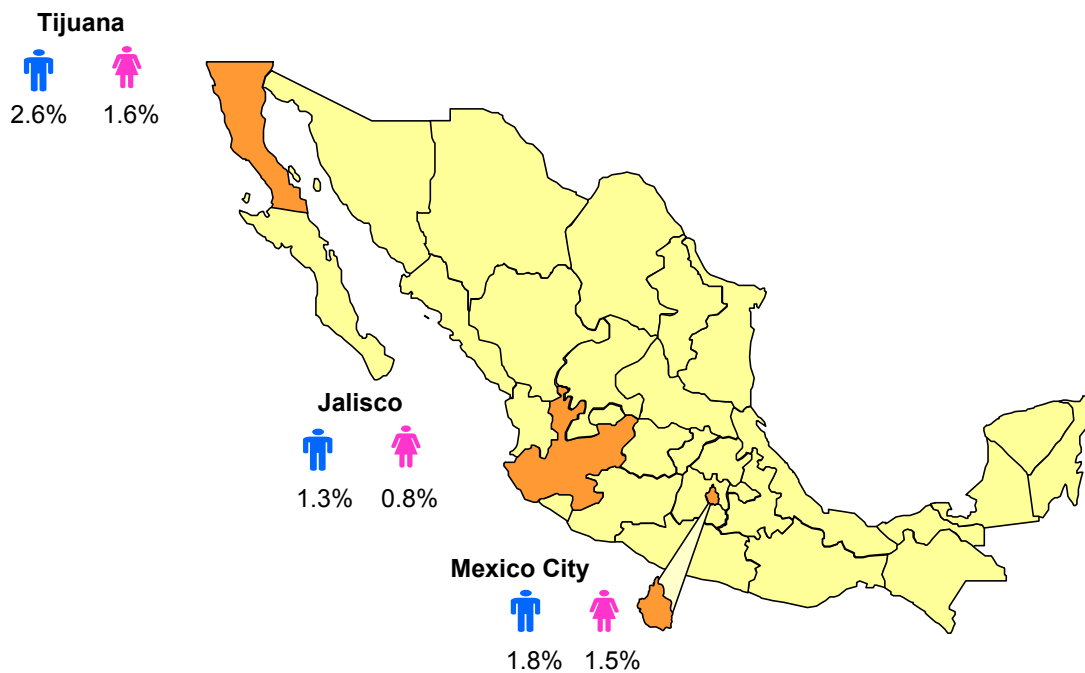
SOURCES: Villatoro, et al, 2013; Chávez et al, 2013; Medina Mora et al, 2013

Exhibit 9. Last-Year Prevalence of Marijuana Use Among Students in Grades 5–9, by Grade, Sex, and Area: 2011–2012 School Year



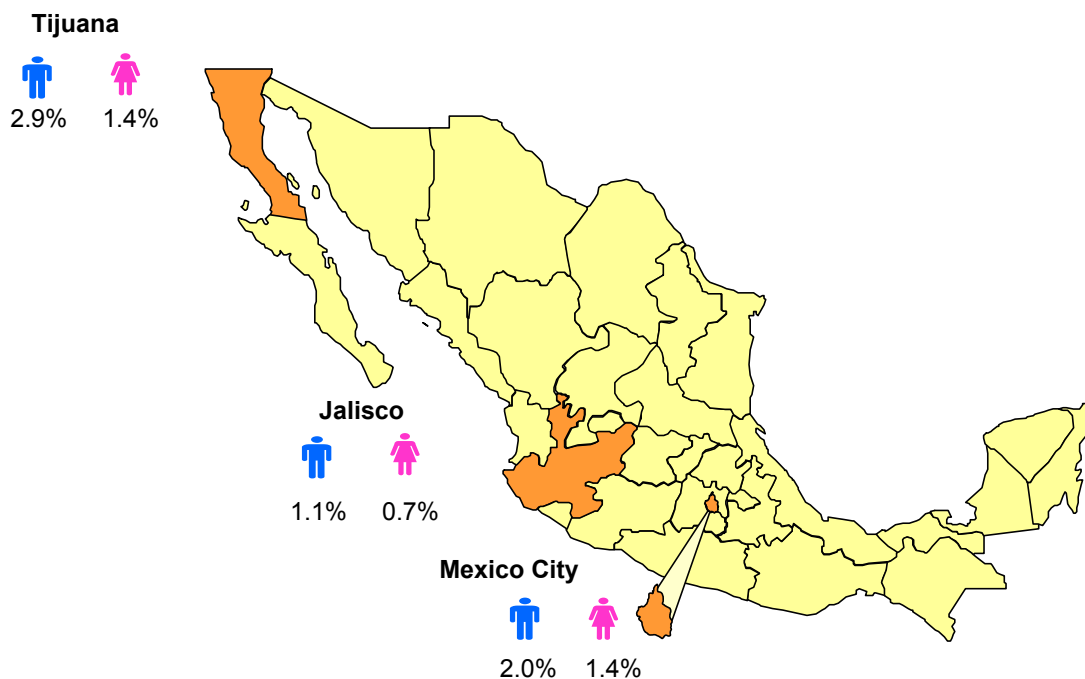
SOURCES: Villatoro, et al, 2013; Chávez et al, 2013; Medina Mora et al, 2013

Exhibit 10. Last-Year Prevalence of Cocaine Use Among Students in Grades 5–9, by Grade, Sex, and Area: 2011–2012 School Year



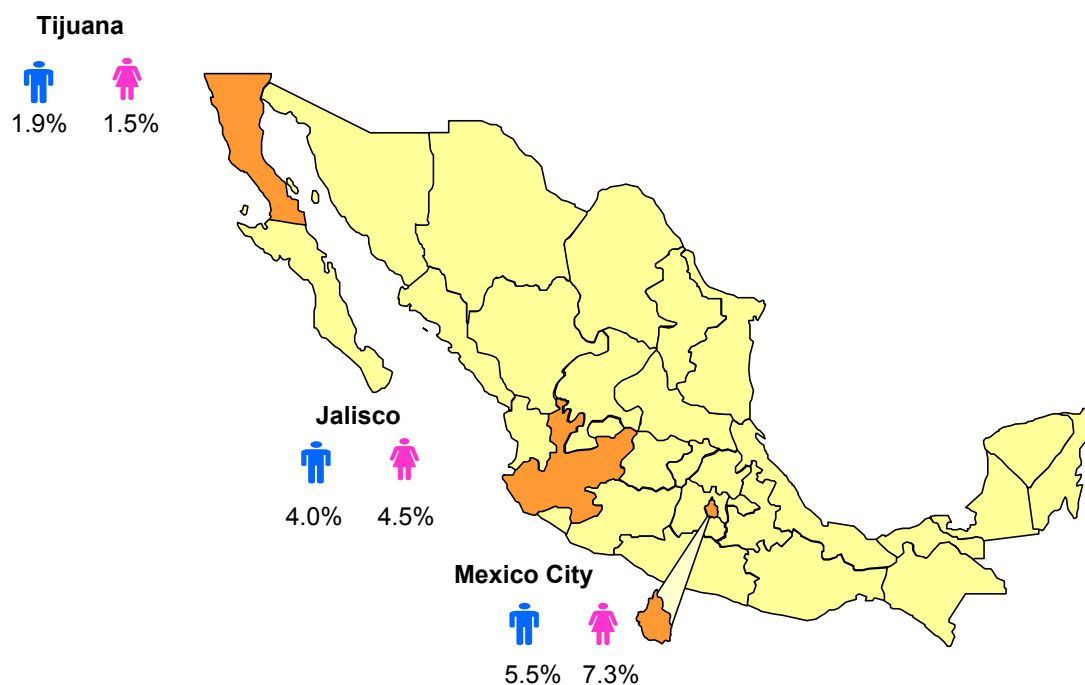
SOURCES: Villatoro, et al, 2013; Chávez et al, 2013; Medina Mora et al, 2013

Exhibit 11. Last-Year Prevalence of Crack Use Among Students in Grades 5–9, by Grade, Sex, and Area: 2011–2012 School Year



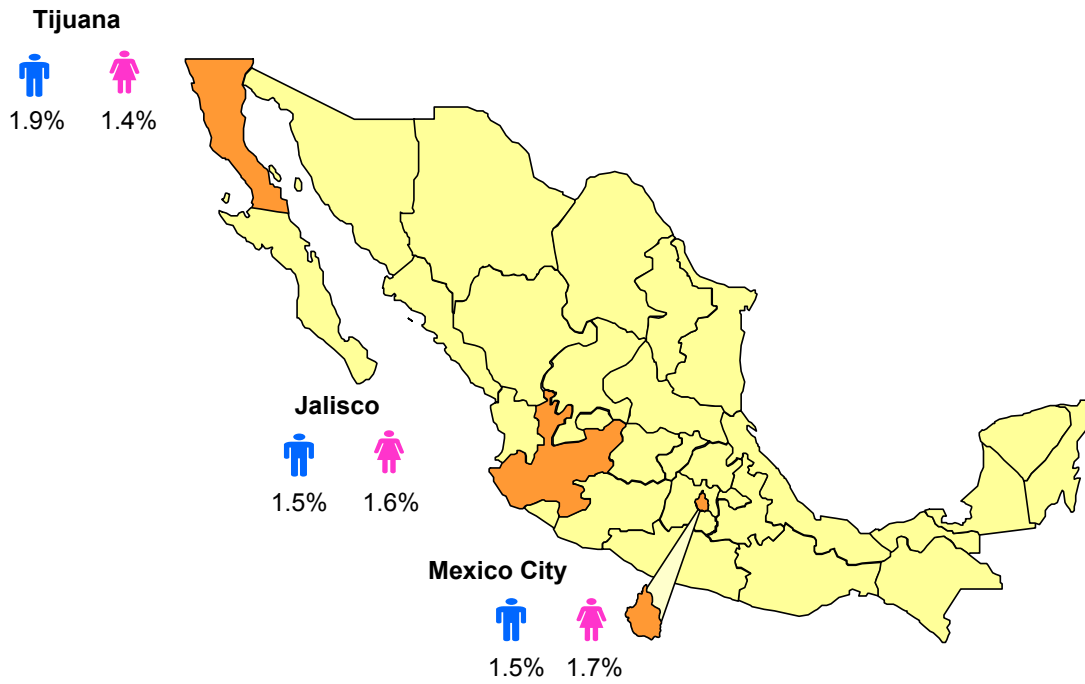
SOURCES: Villatoro, et al, 2013; Chávez et al, 2013; Medina Mora et al, 2013

Exhibit 12. Last-Year Prevalence of Inhalant Use Among Students in Grades 5–9, by Grade, Sex, and Area: 2011–2012 School Year



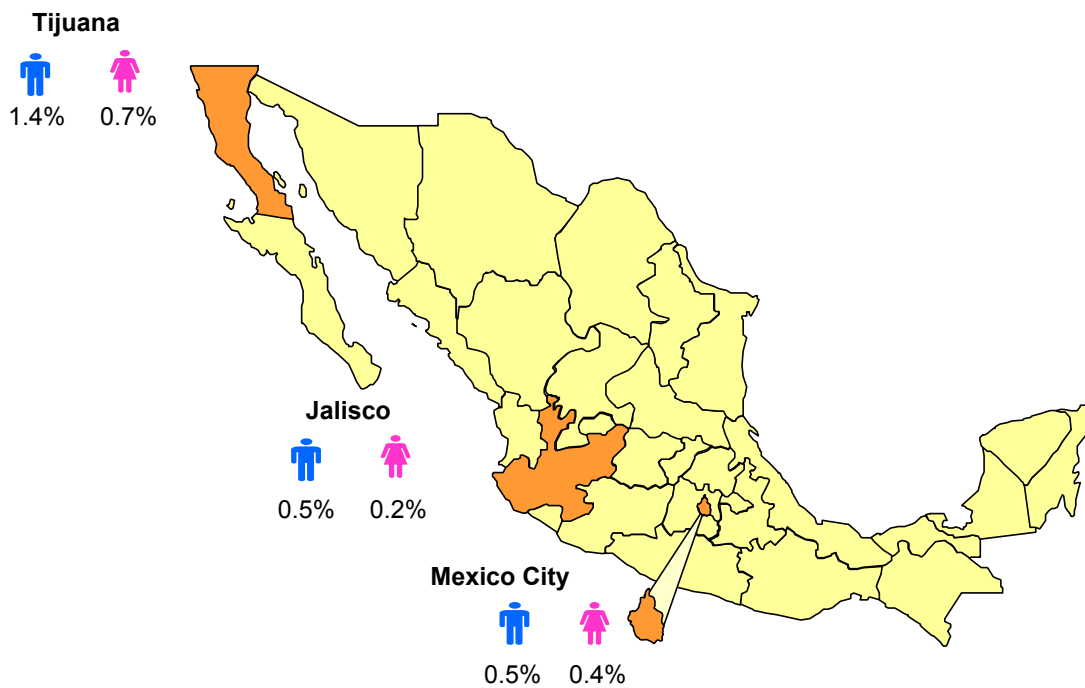
SOURCES: Villatoro, et al, 2013; Chávez et al, 2013; Medina Mora et al, 2013

Exhibit 13. Last-Year Prevalence of Methamphetamine Use Among Students in Grades 5–9, by Grade, Sex, and Area: 2011–2012 School Year



SOURCES: Villatoro, et al, 2013; Chávez et al, 2013; Medina Mora et al, 2013

Exhibit 14. Last-Year Prevalence of Heroin Use Among Students in Grades 5–9, by Grade, Sex, and Area: 2011–2012 School Year



SOURCES: Villatoro, et al, 2013; Chávez et al, 2013; Medina Mora et al, 2013

**ADDITIONAL
ABSTRACTS**

Medicine or Drugs? Detroit Area Adolescents' Misuse of Controlled Medications

Carol Boyd, Ph.D., M.S.N., F.A.A.N.¹

ABSTRACT

This presentation reviewed six studies that focus on several aspects of adolescents' medical misuse and nonmedical use of controlled medications. Although national studies use a variety of questions to define prescription drug abuse, in the studies reviewed here the following definitions are used: Medical use is defined as using a controlled medication as it is prescribed; Medical misuse is defined as using one's own controlled medication in a manner not intended by the prescriber; and nonmedical use is defined as using someone else's controlled medication. All six reviewed studies come from one large, NIDA-funded (R01 DA024678), prospective investigation that uses a sample drawn from five public schools in Southeastern Michigan. The largest investigation includes about 6,000 adolescents. The *Secondary Student Life Survey* (SSLS) was administered to all 7th through 12th grade students residing in five schools, after obtaining written parental permission. The SSLS is a Web-based survey administered to students on hooded computers during regular school hours. In order to compare the survey sample with national data, the SSLS incorporates measures from national studies, including Monitoring the Future and the National Study of Drug Use and Health. The four drug classes of interest include opioid analgesics, stimulants, sleep/sedatives and antianxiety medications.

The sample is ethnically diverse; 52 percent of the sample is female, 64 percent is White, and 30 percent is Black. The aims of larger, prospective study are to describe the phenomenon of prescription drug abuse—both medical misuse and nonmedical use of controlled medications—by focusing on motivations of users and the relationship between motivation and other problem behaviors (e.g., other substance use, gambling, etc.). During this presentation, the six studies reviewed were discussed in terms of relevance to medical misuse, nonmedical use, diversion, and motivation to engage in prescription drug abuse. Conclusions drawn from the six studies are: medical misuse is prevalent with sleep and antianxiety medications, although more adolescents medically misuse opioids; medical misuse is associated with higher rates of substance abuse; stimulant medications are the most likely drug class to be diverted; nonmedical users get their diverted pills from family and friends; motivation to engage in medical misuse and nonmedical use are associated with different outcomes; approximately one in five nonmedical users of opioids at Time 1 will also be using at Time 2; and there appear to be subtypes of nonmedical users (self-treaters) with somatic complaints, who are anxious and depressed, and who are sexual victims.

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St. Louis Trends: A DEA Perspective: June 2013

Karen Brickman, M.B.A.¹

Abstract

The Drug Enforcement Administration (DEA) St. Louis Division (SLD)'s area of responsibility includes Missouri, Kansas, Iowa, Nebraska, South Dakota, and the Southern Judicial District of Illinois. The Division's main office is located in St. Louis, Missouri.

In the St. Louis metropolitan area (SLMA), heroin is generally considered the primary drug of concern by law enforcement. Historically, cocaine had been the major drug of concern for the SLMA. During 2007 and 2008, the SLMA experienced a shortage in the availability of cocaine, accompanied by decreases in purity. During the same time, the SLMA experienced a substantial increase in white (off-white) powdered heroin availability and purity levels. Heroin shifted to become the number one drug of concern for most law enforcement agencies in the SLMA. Over the last 10 years, white powdered heroin has been replacing black tar heroin. Although black tar is still available in limited quantities, off-white powdered heroin is the most prevalent and is often referred to as "china white," regardless of origin or purity.

Cocaine continues to be a major drug of concern in the SLMA. Although its availability and purity levels have stabilized, they have not returned to the higher levels reported prior to the 2007 shortage. The majority of cocaine is brought into the SLMA as cocaine hydrochloride (HCl) from sources of supply on the southwestern border of the United States in quantities from ounces to kilograms and sold to local organizations who often convert the HCl to crack cocaine for retail sale.

Eastern Missouri remains a stronghold of locally-produced methamphetamine, usually produced in very small quantities in one-pot methamphetamine laboratories. During the 2004–2007 time period, methamphetamine laboratory seizures declined, reflecting the initial impact of legislation restricting the sale of products containing pseudoephedrine. The sharp increase in methamphetamine laboratory seizures since that time reflects how methamphetamine "cooks" have adapted to the new laws. The wide-spread use of "smurfing" has allowed the cooks to produce the methamphetamine needed by themselves and their small circle of family and friends. Smurfing is a term used to describe methamphetamine cooks recruiting friends, family, and even strangers in need of quick cash, to purchase the maximum allowed amount of pseudoephedrine at multiple locations. The emergence of the one-pot method has also made the manufacture of methamphetamine simpler and easier for local producers.

Marijuana is widely abused throughout the SLMA. Recent reporting suggests a shift in the origin, quality, and amounts of marijuana being transported. With increased marijuana legalization and decriminalized efforts in source States, seizures of domestic high-grade marijuana have become

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more common, although seized in smaller amounts. The domestic high-grade marijuana is preferred by many over Mexican-produced marijuana.

Controlled Prescription Drugs (CPDs) are widely available, and the diversion and abuse of CPDs continue to be a serious threat throughout the SLMA. Prescription drug abuse of opioids, such as oxycodone, hydrocodone, fentanyl, and methadone, is particularly widespread in the SLMA. “Doctor shopping” remains the most used CPD diversion method, and other methods include theft, prescription fraud, and pain pill clinics.

Synthetic cannabinoids and (synthetic marijuana) and substituted cathinones (“bath salts”) are rarely seized in significant quantities in the SLMA. However, many law enforcement agencies rank their availability as moderate or high. Prosecution relating to the trafficking and distribution of these drugs can be challenging, and laboratory analysis can be difficult and time consuming. Manufacturers are constantly changing chemical compounds in attempts to circumvent current laws.

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Findings From the 2012 Arrestee Drug Abuse Monitoring (ADAM) II Study

M. Fe Caces, Ph.D.¹

Abstract

In 2012, the sixth round of data collection for the ADAM II study was conducted with a reduced number of sentinel locations. There were 1,938 interviews conducted with booked arrestees from 5 sites. Of these interview respondents, 1,736 (90 percent) provided a urine specimen. The overall response rate was 60 percent, and the conditional response rate was 92 percent.

Data sources include a brief (20–25 minute) face-to-face interview, a voluntary urine specimen, and official records data. The interview covers demographics; drug, alcohol, and mental health treatment experience; arrest and incarceration history; self-reported drug use; a screener for drug abuse or dependence; and drug market activity. Arrestees are sampled to represent all adult male arrestees within 48 hours of arrest who are booked in each 24-hour period over a consecutive 21-day data collection period. Data were statistically annualized to represent the entire year, and each case is weighted using propensity scoring to account for factors that affect the probability of selection.

Key findings include:

- From 60 percent (Atlanta) to over 80 percent (Chicago and Sacramento) tested positive for some drug in their system at the time of arrest.
- Cocaine use has declined significantly in all ADAM II sites since 2000–2002. In Chicago and New York, where 50 percent or more tested positive in 2000, the percent testing positive dropped by one-half. However, Denver showed a significant increase since 2010.
- Age cohort analysis shows that the population of cocaine users is an aging one in most sites.
- Trend analysis shows opiate use has increased significantly in Denver and Sacramento and decreased significantly in New York and Chicago since 2000.
- Age cohort analysis for the 10 ADAM II sites shows that in Indianapolis, Minneapolis, and Portland, the proportion of younger users is increasing.

ADAM II is the only Federal survey that can validate estimates of drug use through verification of a self-report with a bioassay. It includes persons who are not captured in traditional surveys due to transiency, homelessness, or criminal involvement. It also collects information on local retail drug markets and allows trend comparisons within each site back to 2000. The full report is available at http://www.whitehouse.gov/sites/default/files/ondcp/policy-and-research/adam_ii_2012_annual_rpt_final_final.pdf.

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¹The author is affiliated with the Office of National Drug Control Policy, Executive Office of the President, Washington, DC.

Adolescent Substance Abuse in the Eastern Region of Missouri

Susan Depue, Ph.D.¹

Abstract

The Missouri Student Survey is a biannual online survey administered to middle and high school students across the State. This presentation, which focused on Missouri's Eastern Region, used data from the 2012 survey to discuss current adolescent substance use rates, risk and protective factors, and high-risk subpopulations.

Data showed that alcohol, cigarettes, and marijuana were the most commonly used substances in the region in 2012. While rates for tobacco products were lower than the State rate, students were more likely to report using marijuana in the eastern region when compared with the State. Of those students who reported consuming alcohol in the past 30 days, the majority had only done so on 1 or 2 days. However, more than one in four students said that when they do drink, they are binge drinking.

Examining the data on risk and protective factors, cigarettes were seen as considerably more harmful than either alcohol or marijuana. Students were equally likely to report having at least one peer who smokes cigarettes or marijuana. Alcohol was seen as less "wrong" when compared with marijuana, but older students actually rated alcohol as more harmful.

Students who did not endorse positive statements about their school and those who reported higher levels of depressive symptoms were more likely to use substances. As the mother's education level increased, the likelihood of a student using substances decreased. Females were more likely to report past-month use of alcohol, while males were more likely to report past-month use of marijuana. Caucasian students were more likely to report using alcohol when compared with African-Americans, while the reverse was true when looking at marijuana use.

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Molly, Are These Your Bath Salts? Challenges in Monitoring New Drugs with Poison Control Center Data

Peggy Kinamore, B.S.N.¹

Abstract

Drug abuse with synthetic substances is not a new phenomenon, but it is interesting and can be challenging to health care providers. Patterns of abuse and the types of drugs being abused change over time. There has been a dramatic increase in the use of synthetic drugs which has poison control centers and emergency departments around the country on alert. This presentation highlighted the resources of the Missouri Poison System. Information was shared about the call volume to the Poison Help Hotline and the scope of the exposures handled by the pharmacist and nurse poison information specialists. Data from January 2008 through April 2013 was discussed on nine substances. These substances included buprenorphine, cannabimimetics, substituted cathinones, heroin, amphetamines, methamphetamine, hallucinogenic amphetamines, opiates, and cocaine.

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