



## Drug Abuse Trends in Miami-Dade County Florida:

June 2014



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## ABSTRACT

*The key finding for this reporting period is that there has been significant progress in reducing prescription drug diversion across Florida along with moderate declines in consequences related to the **nonmedical use of pharmaceuticals**. Deaths and treatment admissions for prescription opioids still remain at high levels while declining throughout Florida are still increasing in Miami-Dade County. The level of “doctor shopping” for medications declined 51-percent statewide between the first quarter of 2012 and the last quarter of 2013. However the availability of **hydromorphone** (e.g. Dilaudid®) and deaths related to its misuse are rapidly rising.*

*The second key finding is that the former “bath salt” and synthetic cathinone, **Methylone**, along with other **hallucinogens** are the fastest rising drugs analyzed by South Florida crime labs. There were 1,194 methylone crime lab items, mostly sold as “Mollys,” compared to only 54 **MDMA** reports in 2013. In all there, were 36 different **emerging synthetic drugs** analyzed in South Florida crime labs in 2013 for a total of 1,540 such items seized in drug arrests.*

*Deaths in which **cocaine** was found to be present increased in Miami-Dade County in the most recent reporting period, yet deaths caused by the drug declined. Cocaine treatment admissions also continued to decline in Miami-Dade in 2013. Cocaine crime lab cases continue to outnumber all other substances while declining 11-percent between 2012 and 2013. **Heroin** indicators while at relative low levels are escalating in Miami-Dade which leads the State in heroin problems. Crime labs cases increased 33-percent for heroin between 2012 and 2013. Consequences of **marijuana** use and addiction continued at high levels particularly among adolescents and young adults. Primary marijuana treatment admissions in 2013 declined 14-percent compared with the previous year in Miami-Dade County. Eleven different **synthetic cannabinoids** were detected in South Florida crime labs during 2013 for a total of 145 items including 68 for XLR-11, yet there were sharp decreases in the number of poison information center exposure calls for these substances in 2013 compare with 2011 and 2012 across the State and locally. Production of marijuana, “Wax” or “Budder” is increasingly found in seized local grow house operations. While **methamphetamine** consequences are at low levels compared to other substances, crime lab cases increased 24-percent in 2013 compared to 2012 as deaths statewide increased 11-percent from 146 in 2012 to an estimated 162 for 2013 based on cases in the first half of the year.*

## INTRODUCTION

This report reviews data from 2012 and 2013 for drug-related deaths, addiction treatment admissions, poison information center exposure calls (through April 2014), 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.

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## Area Description

The population of the State of Florida was 19,552,860, according to the 2013 U.S. Census estimates, of whom 23.2 percent are Latino/Hispanics. White persons of all ethnicities constitute 78.3 percent, including 57 percent who are White non-Hispanic; 16.6 percent are Black; and 2.7 percent are Asian. Foreign-born persons account for 19.3 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 2,617,176 residents, according to the 2013 U.S. Census estimates. Latinos/Hispanics account for 64.3 percent of the population; White persons of all ethnicities represent 77.6 percent, including 16.3 percent who are White non-Hispanic; 19.2 percent are Black; and 1.7 percent are Asian. Miami is the county's largest city, with 413,892 residents. Foreign-born persons account for 51.2 percent of the county's population. More than 100,000 immigrants arrive in Florida each year; one-half establish residency in Miami-Dade County.

## 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 *2013 Interim Report of Drugs Identified in Deceased Persons between January and June 2013*. The report provides information on the total number of various drugs detected in 4,159 decedents, mostly for whom an autopsy was performed but not for all of the more than 94,000 deaths that occurred in Florida during the first six months of 2013. 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.
- **Drug treatment data on primary admissions to all addiction treatment programs** receiving any public funding in Miami-Dade calendar years 2010 through 2013 were provided by the Florida Department of Children and Families as of May 21, 2014.
- **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 9, 2014, for Miami-Dade, Broward, and Palm Beach Counties for the timeframe January through December 2013. The NFLIS methodology allows for the accounting of up to three drugs per item submitted for analysis. The numbers of NFLIS 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. It is now appropriate to compare the 2013 NFLIS data with those from 2011 and 2011 as reported in the June 2013 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/>

- **Data related to Level 5 doctor shopping** is from the Florida Department of Health 2012-2013 Prescription Drug Monitoring Program Annual Report.
- **Reports on poison exposure calls for synthetic cannabinoids and synthetic or substitute cathinones** are from the Florida Poison Information Center–Miami for all of Florida and Miami-Dade County for calendar years 2012 and 2013 and January–April 2014.
- **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 the Substance Abuse and Mental Health Services Administration’s (SAMHSA) Center for Behavioral Health Statistics and Quality (CBHSQ), released in 2012.

## **DRUG ABUSE PATTERNS AND TRENDS**

### **Cocaine/Crack**

Cocaine problems in South Florida continued to be at the highest rates in the Nation, yet the relatively steady decline in cocaine consequences that began in 2007 has stabilized over the past three years. The numbers of deaths in which cocaine was detected increased in Miami-Dade County in the first half of 2013, yet deaths caused by the drug stabilized in 2013 as they rose statewide (exhibit 10). The number of cocaine deaths have been rising since 2011 locally. Treatment admissions for cocaine declined sharply across the State between 2007 and 2011 then stabilized in 2012. The proportion of cocaine treatment admissions in Miami-Dade County declined from 2009 to 2013. The majority of cocaine-related deaths 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 2013 cocaine-related deaths locally.

Throughout Florida, the number of cocaine-related deaths increased by 4.4-percent in the first half of 2013 ( $n=668$ ) compared with the second half of 2012 ( $n=640$ ) (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 2012, there were 1,318 cocaine-related deaths in Florida, compared with 1,144 in 2011, 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 2013, 89 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 medical examiner (ME). Among the 668 cocaine-related deaths statewide in the first half of 2013, the drug was considered to be a cause of deaths in 291 (or 44 percent) of the cases. Among the decedents accounting for the cocaine-related deaths in the first half of 2013, 0.4 percent ( $n=3$ ) were younger than 18; 10 percent were age 18–25; 20 percent were 26–34; 42 percent were 35–50; and 27 percent were older than 50.

There were 119 deaths related to cocaine use in Miami-Dade County during the first half of 2013, for an annualized rate of 238 occurrences, compared with 198 in 2012 (exhibit 1). Cocaine was found in combination with another drug in 100 percent of the cases. Cocaine was detected at a lethal level in 31 percent of the cases in the first half of 2013. While the number of cocaine occurrences (related–deaths) increased 20-percent between 2012 and 2013, the number of deaths caused by the drug remained stable with a 1-percent decline. None of the cocaine-related decedents in the first half of 2013 was younger than 18; 12.6 percent were age 18–25; 23.5 percent were 26–34; 34.5 percent were 35–50; and 29.4 percent were older than 50. Miami-Dade County had the highest number of cocaine-related deaths in the first half of 2013 among the State’s 24 ME Districts.

The Jacksonville ME district reported the second highest number of cocaine-related deaths in the State during the first half of 2013, with 68 cases, followed by the Orlando ME district with 59 reports, Palm Beach County with 50, and the St. Petersburg ME district with 47. Broward County ranked sixth with 41 cocaine-related deaths.

There were 424 primary treatment admissions for cocaine smoking (crack), and an additional 259 for powder cocaine in Miami-Dade County during 2013 (exhibit 2). These cases accounted for a total of 683 (or 17 percent) of the 4,061 primary treatment admissions in publicly funded programs in which a primary drug was cited (including 1,141 for alcohol) in Miami-Dade County during 2013, as reported by the Florida Department of Children and Families. These totals represent a decrease in the proportion of cocaine primary admissions from 2012 ( $n=941$ ), when cocaine accounted for 24 percent of all admissions. Males accounted for 52 percent of the 2013 clients, and 56 percent ( $n=380$ ) were age 35 or older; only 3 were 17 or younger. Exhibit 3 compares the percent of treatment admissions by primary substances from 2009 to 2013.

Cocaine continued to be the most commonly analyzed substance by local crime laboratories. It accounted for 10,147 NFLIS reports, or 44 percent of the 23,069 total primary, secondary, and tertiary crime laboratory reports for Miami-Dade, Broward, and Palm Beach Counties combined in 2013 (exhibit 4). This represents an 11-percent decline compared to the 11,411 cocaine crime laboratory reports in 2012. There were also 154 reports for phenylimidothiazole isomer assumed to be levamisole found along with cocaine in 2013, a 37-percent decline compared with 2012 suggesting less adulteration at the time of production in the source country.

Projections from the National Survey on Drug Use and Health (NSDUH) Substate Data estimate that there were 36,899 users of cocaine in the past year aged 12 and above living in Miami-Dade and Monroe (The Florida Keys) Counties. The estimate for Broward County was 22,710 and an additional 16,445 in Palm Beach County for a total of 76,054 for these four southeastern Florida counties or 27 percent of the 283,287 past year cocaine users Statewide. These same four counties also comprise 27 percent of the State’s population aged 12 and above.

## Heroin

Heroin consequences remain at low levels across Florida with deaths increasing sharply between 2011 and 2012 then declining in the first half of 2013 compared to the last half of 2012 statewide and in Miami-Dade. 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. The proportion of primary treatment admissions for heroin increased in the two South Florida counties between 2012 and 2013. The number of crime lab reports for heroin increased 33-percent in the region between 2012 and 2013. Many heroin consequences also involved the nonmedical use of prescription opioids.

Throughout Florida, the number of heroin-related deaths increased 89-percent in the first half of 2013 ( $n=70$ ) compared with the first half of 2012 ( $n=37$ ) (exhibit 5). However, the number of these deaths in the first six months of 2013 decreased by 12.5-percent compared with the second half of 2012 ( $n=80$ ). Heroin continued to be the most lethal drug, with 97percent ( $n=68$ ) of heroin-related deaths in the first half of 2013 caused by the drug. Polysubstance abuse was noted in all of the 2013 heroin-related deaths. 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 18 heroin deaths in Miami-Dade County during the first half of 2012 for an annualized rate of 36 occurrences, compared with 33 in 2012 (exhibit 5). Yet, these 18 deaths in the first half of 2013 were fewer than the 23 in the second half of 2012. Lethal heroin deaths peaked in Miami-Dade County in 2000, with 61 fatalities. In the first half of 2013, heroin was found at a lethal dose level in all but one of the 18 deaths in which the drug was detected in the county. Other drugs were found in combination with heroin in all of the cases. None of the heroin-related decedents was below the age of 18, 17 percent were aged 18–25, and 28 percent were age 26–34, while 33 percent of the heroin-related decedents were age 35–50, and 22 percent were older than 50. The age of Miami-Dade heroin decedents during the first six months of 2013 identifies a younger population using the drug in contrast to the first half of 2012 when 20 percent of the heroin deaths occurred among those below the age of 35 compared to 45 percent in same time period in 2013.

There were 294 primary treatment admissions for heroin in Miami-Dade County during 2013 (exhibits 2 and 3). These cases accounted for 7 percent of the 4,061 primary treatment admissions in publicly funded programs for which a primary drug was cited (including 1,141 for alcohol), as reported by the Florida Department of Children and Families. This proportion is an increase compared to the proportion of primary heroin admissions in 2012 ( $n=161$ ), when the drug also accounted for 4 percent of all admissions. Males accounted for 69 percent of the 2013 clients; none was 17 or younger, 13 percent were age 18–25; 39 percent were 26–34; and 48 percent ( $n=140$ ) were age 35 or older. Injecting drug use was the primary route of administration for 74 percent of the 2013 heroin treatment clients.

Heroin accounted for 925 crime laboratory reports, or 4 percent of the 23,069 total primary, secondary, and tertiary NFLIS reports for Miami-Dade, Broward, and Palm Beach Counties combined in 2013 (exhibit 4), as reported by NFLIS. The number of heroin crime laboratory reports increased by 33-percent between 2012 and 2013 following a 13-percent increase between 2011 and 2012.

## Nonmedical Use of Prescription Opioids

The nonmedical use of prescription opioids continued as Florida's most deadly and addictive drug problem. However, numerous new laws and regulations took effect beginning in 2010 along with the tamper-resistant reformulation of OxyContin® the impacts of which are reflected in declining deaths beginning in 2011. Injection drug use is reported by 21 percent of Miami-Dade County prescription opioid treatment clients as their primary route of administration.

In July 2010 a new Florida law provided the legal authority to close "pill mills" involved in direct sales of large quantities of opioid medications and benzodiazepines. The same law limited to a 3-day supply the amount of controlled scheduled II medication that any practitioner could directly dispense to patients. One month later the tamper-resistant reformulated OxyContin® extended release pills were shipped by the manufacturer replacing those which could be crushed by abusers to release the full dosage all at once. In March of 2011 a law enforcement Strike Force was created to raid and shut down "pill mills." After much debate, the Florida Legislature passed House Bill 7095, a comprehensive law which took effect in July 2011 that provided stricter medical and pharmacy regulations, banned any dispensing by practitioners of controlled II medications, funded the State Strike Force, and finally permitted a Prescription Drug Monitoring Program to begin operations in the autumn of 2011. Timeline markers of these interventions are displayed on exhibits 6 and 7 of this report tracking deaths related to non-medical prescription drug misuse. The Florida Prescription Drug Monitoring Program reported a 51-percent decrease in the level of "doctor shopping" as measured by the number of patients seeing 5 or more different prescribers and using 5 or more different pharmacies in the past 90 days between the first three months of 2012 and the last three months of 2013. The number of Level 5 "doctor shopping" patients declined from 2,864 in the first quarter of 2012 to 1,415 in the last quarter of 2013.

During the first half of 2013, 2,363 individuals died in Florida with 1 or more prescription drugs in their system, of which 41 percent ( $n=975$ ) had at least 1 prescription medication that was considered a cause of death. That means that an average of 37.5 persons died per week in Florida from a lethal prescription drug overdose in the first half of 2013; that average, however, represents a decrease of 2.6 deaths per week from the 2012 average of 40.1 deaths per week and a decrease of 11.3 deaths per week from 48.8 in 2011. Prescription drugs accounted for 78 percent of all drug occurrences among deceased person when alcohol is excluded during the first half of 2013.

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®) meperidine (Demerol HCl®), tramadol (Ultram®), buprenorphine (Buprenex® and Sub-oxone®), 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.

In total, there were 2,645 prescription opioids detected in decedents during the first half of 2013 (exhibit 6) of which 2,575 were identified as a specific drug with 47.5 percent ( $n=1,225$ ) of those considered at a lethal dose and a cause of death. 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. Among the opioid occurrences in the first half of 2013, 541 or 21 percent were for oxycodone, 457 or 17 percent were for morphine, 431 or 16 percent were for hydrocodone, 324 or 12 percent were for methadone, 228 or 9 percent were for

tramadol, 220 or 8 percent were for hydromorphone, 137 or 5 percent were for fentanyl, 124 or 5 percent were for oxymorphone, 113 or 4 percent were for other identified opioids, and 70 or 3 percent were for opioids not identified as a specific drug.

There was a 6.7-percent decline in the category of prescription opioids detected among deceased persons in Florida during the first half of 2013 compared the first half of 2012. This followed a 13-percent decrease between all of 2011 and 2012, a 4-percent decrease between 2010 and 2011 reversing a 10-percent increase between 2009 and 2010 and another 10-percent rise between 2008 and 2009.

Across Florida, the 431 hydrocodone reports detected among deceased persons in the first half of 2013 represented a 9-percent increase over the 396 reports in the previous 6 months. The 457 medical examiner reports for morphine in the first half of 2013 represent a modest 1-percent increase over the previous semiannual period. These were the only two prescription opioids with increasing reports in the first 6 months of 2013; eight others had declining occurrences. However the 220 hydromorphone reports in the first half of 2013 represented a 19-percent increase over the 185 occurrences in the first half of 2012 and the 228 tramadol reports in the first half of 2013 were a 8-percent increase compared to the first six months of 2012 ( $n=211$ ).

The most lethal prescription opioids statewide in the first half of 2013 were methadone, which was considered a cause of death for 68 percent ( $n=221$ ) of the decedents in which it was detected; fentanyl, which was a cause of death for 62 percent ( $n=85$ ) of the deaths related to it; morphine, which was a cause of death for 59 percent ( $n= 268$ ) of its related deaths; and oxycodone, which was a cause of death for 52 percent ( $n=279$ ) of its occurrences (exhibit 7). Most of the statewide ME prescription opioid cases were polydrug episodes, including 94 percent of the oxycodone reports, 92 percent of the methadone cases, 91 percent of morphine cases, and 86 percent of the hydrocodone reports.

Occurrences of four prescription opioids (oxycodone, morphine, hydrocodone, and methadone) detected among deceased persons during the first half of 2013 totaled 101 in Broward County, 82 in Palm Beach County, and 79 in Miami-Dade County.

Miami-Dade County recorded 36 morphine occurrences among deceased persons in the first half of 2013, along with 23 oxycodone reports, 16 for hydrocodone, and 4 for methadone. These 79 opioid occurrences during the first 6 months of 2013 were 9-percent fewer than the 87 reports in the first half of 2012 for the same four narcotic analgesics. Among reports for these four opioids in the first half of 2013, 47 percent ( $n= 37$ ) were considered lethal doses, and in 100 percent of the cases they were found in combination with at least one other substance. While there were fewer occurrences of these four opioids among decedents in the first half of 2013, 32-percent more were found to be the cause of death compared to the lethal rate for all of 2012. One of the opioid occurrences in the first half of 2013 was reported for a decedent under the age of 18, 8 percent were for those aged 18-25, 11 percent for ages 26-34, 26 percent for ages 35-50, and 53 percent for those over 50 years of age.

There were 181 primary treatment admissions for “opiates other than heroin” (prescription opioids) in Miami-Dade County during 2013 (exhibits 2 and 3). These cases accounted for a total of 4.5 percent of the 4,061 treatment admissions in programs receiving any public funding for which a primary drug was cited (including 1,141 for alcohol). This total is stable with the proportion of primary prescription opioid admissions in 2012 ( $n=139$ ), when the drug accounted for 3.5 percent of all admissions. Males accounted for 55 percent of the 2013 opioid clients. One of these was younger than 18; 24 percent were age 18–25; 40 percent were 26–34; and 35 percent were age 35 or older. Among these clients

21 percent (n=38) reported injecting prescription opioids, while smoking was reported by 4 percent, sniffing by 10 percent, and oral administration by 65 percent as their primary method of use.

Hospitals reported 35 cases of neonatal abstinence syndrome in Miami-Dade County during 2012. The number of cases increased locally by 40-percent between 2011 and 2012. While these cases could be for maternal use of any addictive drug except alcohol, most are considered to be related to the mothers' nonmedical misuse of prescription opioids. Statewide the number of cases increased by 192-percent between 2007 and 2011, rising from 536 to 1,563, and then rose 4-percent from 2011 to 1,630 cases in 2012.

Prescription opioids accounted for 933 crime laboratory reports or 4 percent of the 23,069 total primary, secondary, and tertiary NFLIS reports for Miami-Dade, Broward, and Palm Beach Counties combined in 2013 (exhibit 4). Prescription opioids ranked fifth among other substances analyzed in the three counties. The number of prescription opioid crime laboratory reports decreased by 4-percent between 2012 and 2013. Oxycodone accounted for 408 (or 44 percent) of the opioid reports down from 70 percent of all up opioids in 2012. Additionally, there were 252 reports for hydromorphone in 2013 (up from 151 in 2012 and 24 in 2011), 104 for hydrocodone, 57 for morphine, 36 for buprenorphine, 25 for methadone, 18 for codeine, 12 for oxymorphone, 10 for fentanyl, 7 for tramadol, and 4 dihydronormorphinone (Paramorphone®). There were also 655 "unspecified controlled substance" crime laboratory reports in 2013 that may have included additional prescription opioids.

Projections from the National Survey on Drug Use and Health 2008-2010 Substate Data estimate that there were 54,109 people aged 12 and above living in Miami-Dade and Monroe (The Florida Keys) Counties who reported the nonmedical use of pain relievers in the past year. The estimate for Broward County was 43,091 and an additional 38,661 in Palm Beach County for a total of 145,862 for these four southeastern Florida counties or 22 percent of the 653,263 past year nonmedical users of pain relievers Statewide. These same four counties comprise 27 percent of the State's population aged 12 and above.

## **Nonmedical Use of Prescription Benzodiazepines**

Benzodiazepines in general and specifically alprazolam (Xanax®) continued as a substantial problem in South Florida, particularly when used non-medically in combination with other pharmaceuticals, alcohol, and illicit drugs. There were 2,287 reports of a benzodiazepine present in deceased persons across Florida in the first half of 2013, representing a 15-percent decrease in the total number (n=2,622) of benzodiazepine occurrences compared with the first half of 2012 but a 3-percent increase over the second half of 2012 (n=2,209) (exhibit 6). Of the benzodiazepine occurrences in the first half of 2013, 25 percent (n=568) were considered "a cause of death." Among the benzodiazepine ME reports statewide, 673 were attributed to alprazolam, 379 to nordiazepam (Nordaz®), 370 were for diazepam (Valium®); 259 for temazepam (Restoril®, and Normison®), and 608 were attributed to 6 other benzodiazepines.

In Miami-Dade County, there were 55 reports of alprazolam detected in deceased persons during the first half of 2013, of which 38 percent were considered lethal. At least one other drug was involved in 100 percent of the reports. There were also 15 reports of diazepam detected in deceased persons in Miami-Dade County; none 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 2013 compare with 80 such reports for alprazolam and diazepam in the first half of 2012. None of the benzodiazepine mentions in the first half of 2013

involved a person younger than 18; 4 percent of the decedents were age 18–25; 12 percent were 26–34; 34 percent were 35–50; and 50 percent were older than 50.

There were 72 admissions for benzodiazepines reported as primary treatment admissions in Miami-Dade County during 2013, or 1.8 percent of the 4,061 total treatment admissions in which a primary drug was cited in Miami-Dade County (exhibits 2 and 3). This proportion is stable with such admissions in 2011, when 58 cases also represented 1.5 percent of the total. Females accounted for 50 percent of the 2013 benzodiazepine clients.

Prescription benzodiazepines accounted for 849 crime laboratory reports, or 3.6 percent of the 23,069 total primary, secondary, and tertiary NFLIS reports for Miami-Dade, Broward, and Palm Beach Counties combined in 2013 (exhibit 4). This category of drugs ranked seventh among all substances analyzed in the three counties in 2013. The number of prescription benzodiazepine crime laboratory reports decreased by 4-percent between 2012 and 2013. Alprazolam accounted for 744 (or 89 percent) of the benzodiazepine reports in 2013. Additionally, there were 52 clonazepam (Klonopin®) reports, 31 for diazepam, 13 for lorazepam (Ativan®), 7 for temazepam (Restoril®), and 1 each for medazepam (Nobrium®, Rudotel®) and nitrazepam (Alodorm®, Arem®). There were also 669 “unspecified controlled substance” crime laboratory reports in 2013 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, yet remained at low levels relative to other substances. Methamphetamine was cited as the primary drug for addiction treatment among less than one half of one percent of addiction treatment clients in South Florida during 2013. Numerous anecdotal reports from private treatment counselors suggest a resurgence in methamphetamine abuse among men who have sex with men beginning in 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 in the north and central parts of the State 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 81 deceased persons during the first half of 2013 statewide in Florida, compared with 73 in the first half of 2012 and 146 for the full year of 2012. 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 36 (44 percent) of the 81 cases during the first half of 2013. There were also 111 reports of amphetamine detected among decedents across Florida in the first 6 months of 2013, stable with the 110 such occurrences in the previous semiannual period. Amphetamine was considered the cause of death in 19 percent of the 111 cases in the first half of 2013.

There were 15 primary treatment admissions for methamphetamine in Miami-Dade County during 2013 (exhibit 2). These cases accounted for 0.4 percent of the 4,061 primary treatment admissions in which a primary drug was cited (including 1,141 for alcohol). This proportion is stable with 2012, when the drug accounted for 0.3 percent ( $n=11$ ) of all admissions. Among 2013 methamphetamine clients 73 percent were male; none was younger than 18; 20 percent ( $n=3$ ) were age 18–25; 40

percent ( $n=6$ ) were 26–34; and 47 percent ( $n=5$ ) were 35 or older. The age of one female client who cited “ice” as her primary drug is not known. There were also 6 primary admissions for other amphetamines; three were male, and two were age 18–25, one was aged 26–34, and three were aged 35 or older. Among the 15 methamphetamine clients, 9 cited smoking as their primary method of use, 3 reported sniffing, 3 reported oral ingestion, and none injected.

Methamphetamine accounted for 211 crime laboratory reports, or 0.9 percent of the 23,069 total primary, secondary, and tertiary NFLIS reports for Miami-Dade, Broward, and Palm Beach Counties combined in 2013 (exhibit 4) representing a 24-percent increase compared to the 170 reports in 2012. There were also 60 amphetamine crime laboratory reports in 2013.

## **Marijuana/Cannabis and Synthetic Cannabinoids**

Marijuana remains the number one primary substance for addiction treatment in Miami-Dade County in 2013. Treatment admissions for marijuana declined 2012 and 2013, a trend observed nationally. Consequences of marijuana use and addiction continued at high levels, particularly among adolescents and young adults.

Cannabinoids were detected in 401 deaths statewide in Florida during the first half of 2013, a 7-percent increase from the 376 occurrences during the previous 6 months. One of the occurrences was considered to be a cause of death. There were also 16 Synthetic Cannabinoid occurrences in the first half of 2013 across Florida with 38 percent being considered a cause of death.

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 for some but not all of these ever changing substances. Also, the five synthetic cannabinoids that were federally scheduled in 2011 were made illegal by the 2011 Florida Legislature, which also banned other cannabinoids in 2012. There were 194 exposure calls statewide to Florida Poison Information Centers in 2013 for various synthetic cannabinoids (e.g., “K2” or “Spice”), down from 537 in 2012 and 517 calls in 2011. Among the calls in 2013, 9 were from Miami-Dade County, 7 were from Broward County, and 6 were from Palm Beach County. In the first 4 months of 2014, there were only 34 poison exposure calls for synthetic cannabinoids in all of Florida as compared to 78 in the first four months of 2013 and 271 in the same time period during 2012. Exposure calls involve cases usually from a hospital ED where someone is experiencing adverse consequences after smoking or ingesting a substance.

There were 1,351 primary treatment admissions for marijuana in Miami-Dade County during 2013 (exhibits 2 and 3). These cases accounted for 33 percent of the 4,061 primary treatment admissions for which a primary drug was cited (including 1,141 for alcohol) among all clients to any program receiving some public funding. This total was higher than for any other substance. The 2013 proportion of marijuana admissions was below that from 2012, when the drug accounted for 40 percent ( $n=1,576$ ) of all admissions. Among the 2013 marijuana clients, 72 percent were male; 62 percent were younger than 18; 20 percent were age 18–25; 10 percent were 26–34; and 8 percent were age 35 or older.

Cannabis/THC (tetrahydrocannabinol) accounted for 5,276 crime laboratory reports, or 22.8 percent of the 23,069 total primary, secondary, and tertiary NFLIS reports for Miami-Dade, Broward, and Palm Beach Counties combined in 2013 (exhibit 4). This total decreased by 2-percent from the

number of marijuana crime laboratory cases in 2012. As in previous years, marijuana ranked second among all substances analyzed in the three counties.

The total number of South Florida crime laboratory Synthetic Cannabinoid reports increased from 19 reports in 2011 to 190 in 2012 to 145 in 2013. Among the 11 different synthetic cannabinoids reported in 2013 were 68 items for XLR-11, 27 for PB-22, 15 for 5F-PB-22, 13 for UR-144, and 10 for AM-2201 (down from 114 reports in 2012). Additionally in 2013 there 7 crime lab reports for JWH-018, as well as one each for AKB48, AM2233, JWH-122, JWH-203, and JWH-250.

In the spring of 2014 South Florida law enforcement departments report finding paraphernalia for manufacturing marijuana wax in seized grow house operations. Marijuana wax also called “Budder,” or butane hash oil, or even “ear wax hash” is produced by soaking left over marijuana leaves and stems of plants in a solvent such as butane which extracts various components of the plant including any number of cannabinoids which are the active drugs in the marijuana. The gooey residue is then allowed to dry-out as the butane vaporizes into the air resulting in a sticky paste ranging in color from brown to dark green or yellow. The wax can be smeared onto a marijuana joint or tobacco cigarette, placed in a water pipe, or most often melted in a vaporizer or electronic cigarette devise. The inhaled wax vapors have a much higher dose level of not only THC but other cannabis ingredients causing unwanted adverse effects. Consequences of use may range from severe hallucinations, anxiety, paranoia, and heart problems. Wax is not only more potent than pot itself; it is also more toxic. Products called marijuana wax could also be made from synthetic marijuana chemicals bought online from China.

Projections from the NSDUH estimate that there were 185,938 marijuana users in the past year aged 12 and above living in Miami-Dade and Monroe (The Florida Keys) Counties. The estimate for Broward County was 148,199 and an additional 100,302 in Palm Beach County for a total of 434,439 for these four Southeastern Florida counties or 27 percent of the 1,634,705 past year marijuana users Statewide. These same four counties also comprise 27 percent of the State’s population aged 12 and above. Past month users of marijuana total 251,439 in these same four counties or 26.5 percent of the 947,386 past month users Statewide. The average annual number of first time marijuana users totaled 59,955 in the four southeastern Florida counties and 219,818 Statewide based on the NSDUH Substate Data. Among Miami-Dade residents aged 12 and above, 55 percent reported that use of marijuana once a month or more presented a great risk as did 43 percent of those in Broward County and 39 percent in Palm Beach County.

## **Emerging Psychoactive Substances and other Hallucinogens**

The Florida Medical Examiner Commission reported for the first time on deaths related to emerging synthetic drugs during the first half of 2013 across the State of Florida. During that time 64 such drug occurrences were noted including the 16 Synthetic Cannabinoids mentioned in the marijuana section of this report. There were also 28 deaths in the first half of 2013 related to Synthetic Cathinones (e.g., methyline, “Molly,” or “bath salts”) half of which were considered to be a cause of death. There were also 5 deaths related to the category of Phenethylamines and Piperazines with two of them considered a cause of death. This category would include both MDMA and MDA although neither was specifically identified in the 2013 reports. Additionally there was one Tryptamine death considered to be caused by the drug. There were 14 deaths related to Sympathomimetic Amines of which half were considered a cause of death.

In all of Florida, there were only 10 Florida Poison Information Center exposure calls for “bath salts” (synthetic cathinones) in the first 4 months of 2014; these included 2 calls from Miami-Dade County, 1 from Palm Beach County, and none from Broward County. In all of 2013 there were 43 exposure calls for “bath salts;” these included 1 call from Miami-Dade County, 1 from Broward County, and 2 from Palm Beach County. In 2012 the total number of “bath salt” calls was 72 for all of Florida with 11 from the three Southeast Florida counties.

In 2013 there were 844 items for “unspecified Hallucinogens” reported by South Florida crime laboratories ranking fourth among all substances and representing an increase of 88-percent compared to 2012(exhibit 4). There were also 1,242 crime lab reports for Synthetic (Substituted) Cathinones in 2013, up from 496 in 2012 and 74 in 2011. Methylone was detected in 1,194 of these samples(exhibit 4), most of which were alleged to be “Molly” capsules. There were also 16 items analyzed as MDPV and 15 as 4-MEC along with 7 additional synthetic cathinones.

Other crime lab reports included 39 piperazines in 2013 with 21 BZP (1-benzylpiperazine) items and 18 TFMPP (1-3[3-trifluoromethylphenyl] piperazine) reports. These cases are fewer than in 2012 when there were 113 BZP items and 86 reports for TFMPP. BZP in combination with TFMPP is often sold as “ecstasy.”

Among the category of 2C-Phenethylamines were 19 crime lab items for 2C-I-NBOME and 8 for LSD as well as one each for 2CB, 2CE, and 2C-C-NBOME. There were also 23 Tryptamines including 5 for 5-MeO-DIPT (5-Methoxy-N,N-Diisopropyltryptamine) or “foxy methoxy”, and 5 reports each for DET, DMT, and psilocybin/psilocyn in addition to 3 items for 5-MEO-DALT. In 2012 there were 89 reports for 5-MeO-DIPT.

## **MDMA**

Measures of MDMA abuse have declined in the South Florida area to low numbers in recent years, while reports of other hallucinogenic amphetamines often sold as “ecstasy” or “Mollys” have increased. Medical examiner and crime laboratory reports with toxicological testing of the actual substance, reflect dramatically declining numbers of MDMA but increasing cases of methylone and other emerging psychoactive drugs as cited above.

There were 9 MDMA-related deaths statewide in Florida in 2012, with the drug being cited as the cause of death in three of these cases. There were also 6 reports of MDA-related deaths statewide in Florida during 2012, one of which was considered the cause of death. During the previous year, there were 19 MDMA-related deaths and 7 for MDA.

There were 9 primary treatment admissions for MDMA in Miami-Dade County in 2013 (exhibits 2) in 2012, there were 10 primary treatment admissions for MDMA .

MDMA accounted for 54 crime laboratory reports, or 0.2 percent, of the 23,069 total primary, secondary, and tertiary NFLIS reports for Miami-Dade, Broward, and Palm Beach Counties combined in 2013. This number is down from the 107 items in 2012 and the 299 reports in 2011. MDMA ranked 21st among all substances analyzed in the three counties during 2013, down from 17<sup>th</sup> in 2012 and 8th in 2011.

## **GHB**

Abuse of the anesthetic GHB declined substantially over the past decade. 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 appeared in 2012 and for GBL in 2012 and 2013. 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 no GHB-related deaths statewide during the first half of 2013 compared to 7 in the first half of 2012. There were nine GHB-related deaths statewide each year in both 2012 and 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 4 crime laboratory reports for 1,4-BD and 4 for GBL among the 23,069 total primary, secondary, and tertiary NFLIS reports for Miami-Dade, Broward, and Palm Beach Counties combined in 2013. In 2012 there were 5 crime laboratory reports for 1,4-BD and 3 each for GHB and GBL. In 2011, there were 9 crime laboratory reports for 1,4-BD and none for either GHB or GBL.

Seven medical examiner occurrences were reported for ketamine during the first half of 2013 in Florida but none was considered a cause of death.

### **Nonmedical Use of Prescription Muscle Relaxants and Sedatives**

Muscle relaxants may be abused in combination other drugs, particularly with prescription opioids and benzodiazepines. There were 129 reports of carisoprodol (Soma®) or meprobamate among deceased persons across Florida in the first half of 2013 compared with 175 such reports during the first half of 2012. There were 151 carisoprodol/meprobamate occurrences during the second half of 2012 for a total of 326 in all of 2012, 478 in 2011, 513 in 2010, 455 in 2009, and 415 deaths in 2008. Among the occurrences during the first half of 2013, 28 percent ( $n=36$ ) were considered to be a cause of death. The 15-percent decrease in muscle relaxant deaths between the second half of 2012 and the first half of 2013 reflects a similar decline as seen for other prescription medications over the same two reporting periods.

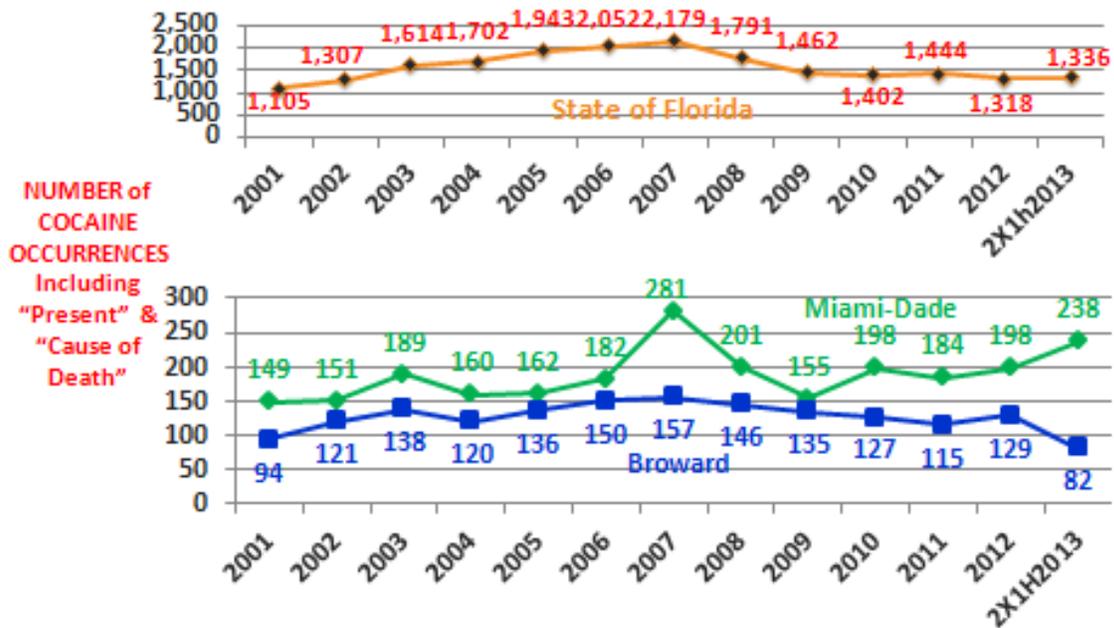
There was one primary treatment admission for carisoprodol in Miami-Dade County in 2013. NFLIS laboratories analyzed 13 carisoprodol items in the South Florida MSA in 2013, a steady decrease from the 33 in 2012; 42 reports in 2011; and 55 in 2010.

There were 155 medical examiner occurrences for the sedative-hypnotic, zolpidem (e.g., Ambien®) in the first half of 2013 representing a 7-percent decline compared to the 167 reports in the previous six months. Among the occurrences in the first half of 2013, 21 percent ( $n=32$ ) were considered a cause of death.

There were 5 primary treatment admissions for sedative/hypnotics in Miami-Dade County in 2013. NFLIS laboratories analyzed 9 zolpidem items in the South Florida MSA in 2013, compared to the 11 reports in 2012 and 6 in 2011.

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## Exhibit 1 Number of Cocaine Reports Detected Among Decedents in Florida: 2000-2013



SOURCE: Florida Medical Examiners Commission Interim Report Jan-Jun 2013

## Exhibit 2. Number of Primary Treatment Admissions, by Substance, in Miami-Dade County, Florida: 2009–2013

Primary Treatment Substance	2010	2011	2012	2014
Alcohol	1,242	1,406	1,069	1,424
Crack Cocaine	549	615	551	424
Powder Cocaine	369	437	390	259
Heroin	183	227	161	294
Rx Opioids	246	302	139	181
Marijuana	1,741	2,008	1,576	1,351
Methamphetamine	22	17	11	15
Amphetamine	5	5	4	6
MDMA	6	4	10	9
PCP	0	1	1	0
Benzodiazepine	71	79	58	72
All Other Drugs	30	230	18	26
Substance Unknown	84	91	78	0
<b>Total Admissions</b>	<b>4,548</b>	<b>5,338</b>	<b>4,066</b>	<b>4,061</b>

SOURCE: Florida Department of Children and Families, data submitted May 21, 2014

### Exhibit 3

Percent of Treatment Admissions by Primary Drug: Miami-Dade County 2009-2013

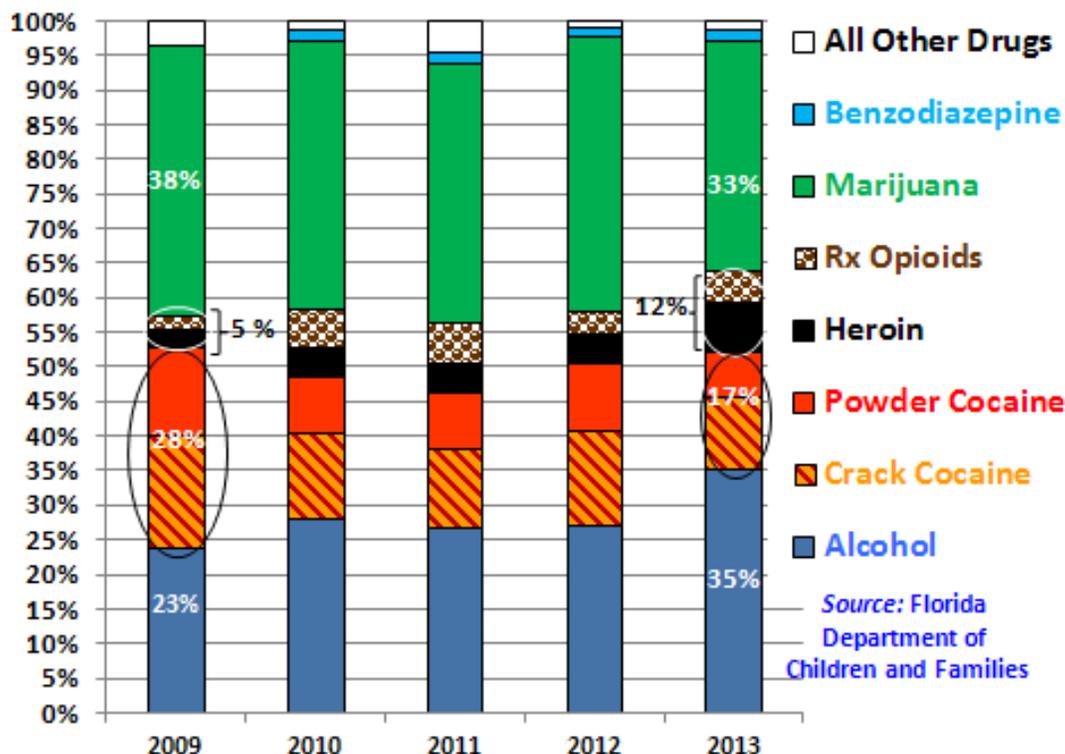
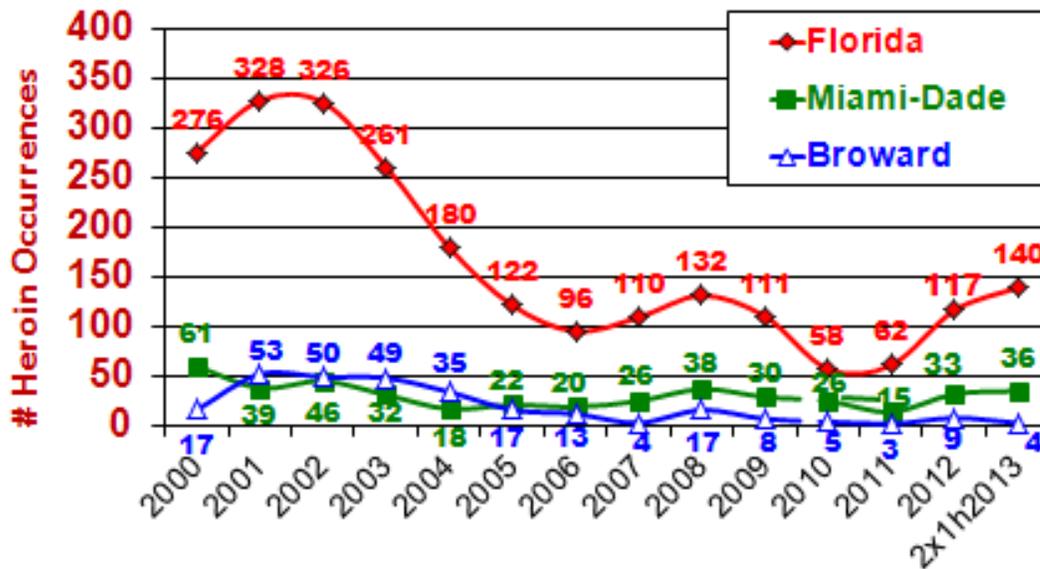


Exhibit 4 Top 10 Most Frequently Identified Drugs of Total Reports from South Florida Crime Labs Reports CY 2013<sup>1</sup>

Drug	2013	% Δ vs. 2012
Cocaine	10,147	Down 11 %
Marijuana/Cannabis/THC	5,276	Down 2 %
Methylone (N-Methyl-3,4-Methylenedioxycathinone)	1,194	Up 208 %
Hallucinogen	984	Up 88 %
Rx Opioids	933	Down 4 %
Heroin	925	Up 33 %
Rx Benzodiazepines	849	Down 4 %
Methamphetamine	211	Up 24 %
Phenylimidothiazole Isomer	154	Down 37 %
Caffeine	131	Down 45 %
All Other Analyzed Drugs	2,272	Down 18 %
<b>Total</b>	<b>23,069</b>	<b>Down 3 %</b>

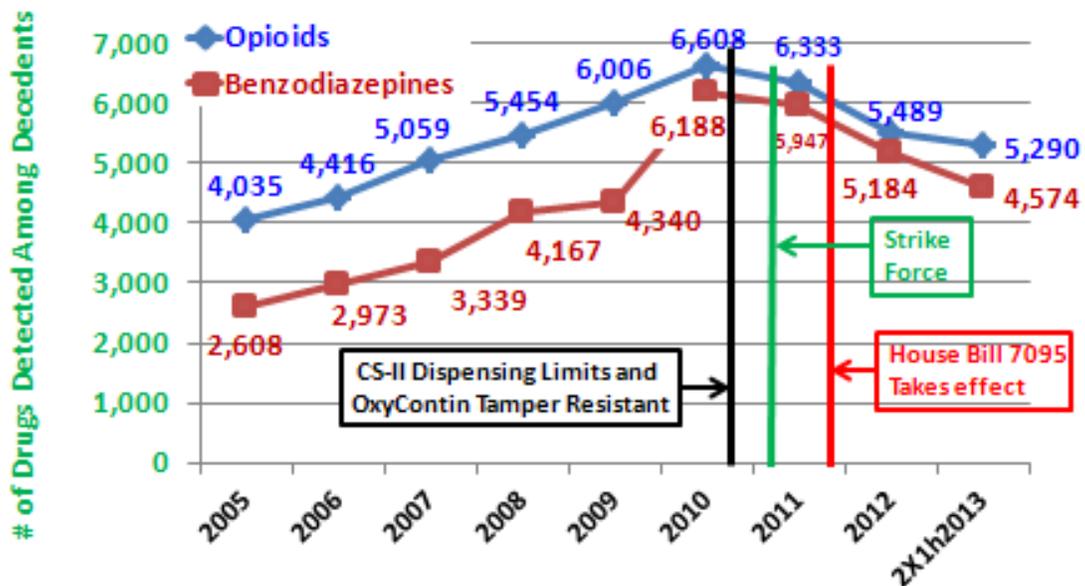
<sup>1</sup>Data are for January–December 2013 and include primary, secondary, and tertiary reports. SOURCE: NFLIS, DEA, data retrieved May 9, 2014

### Exhibit 5 Number of Heroin-related Deaths in Florida: 2000 – 2x1h2013



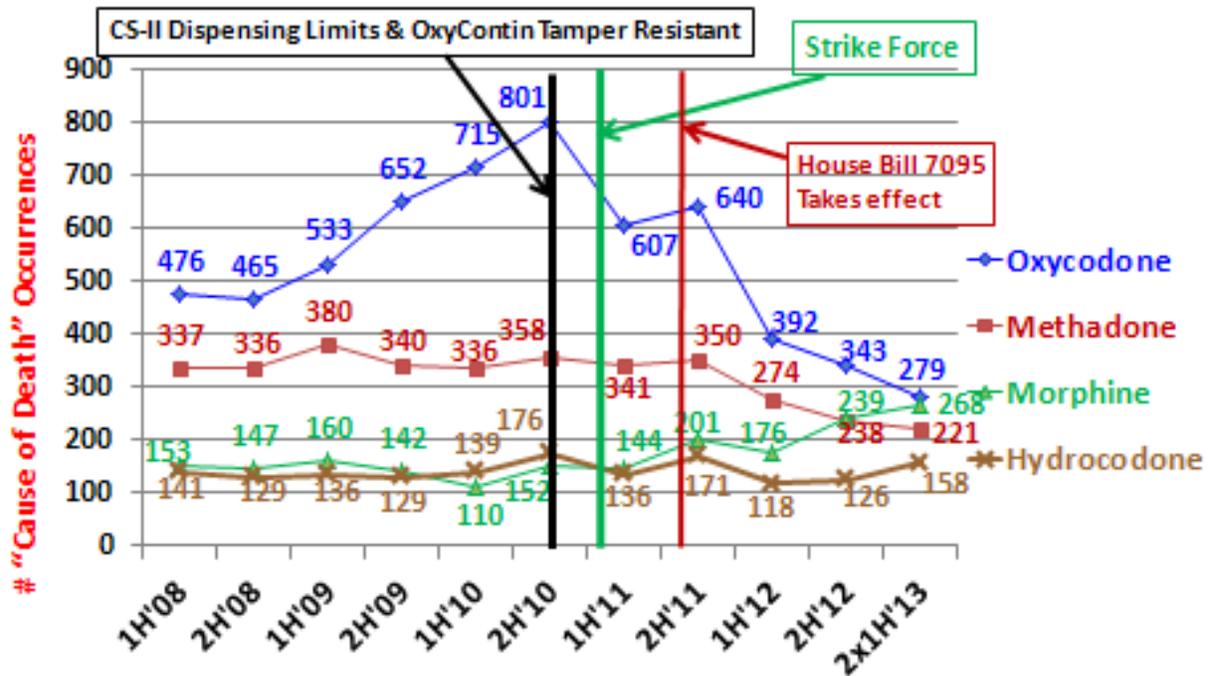
SOURCE: Florida Medical Examiners Commission Reports 2000-2013

### Exhibit 6 Number of Nonmedical Rx Opioids and Benzodiazepine Reports Detected among Decedents in Florida 2005 – 2x1h2013



Source: FDLE – Drugs Identified In Deceased Persons by Florida Medical Examiners Jan 2005 - Jun 2013 Reports

## Exhibit 7 Number of Selected **Lethal** Rx Opioid Occurrences Among Deceased Persons in Florida Jan 2008 to Jun 2013



Source: FDLE – Drugs Identified In Deceased Persons by Florida Medical Examiners  
Jan 2008 - Jun 2013 Reports

## Exhibit 8 Number of Hydromorphone-Related Deaths in Florida 2008 - 2013



Source: FDLE – Drugs Identified In Deceased Persons by Florida Medical Examiners  
Jan 2008 - Jun 2013 Reports

## Most Recent Changes in Southeast Florida Substance Abuse Indicators Miami-Dade and Broward Counties, Florida

June 2013 vs. January 2014 Reports

Substance	Cause of Deaths (2012 vs. 2 x 1H 2013)	Treatment Admissions (2012 vs. 2013)	Crime Lab (2012 vs. 2013)
Marijuana	N/A	Down Both Counties	High; Stable
Cocaine	Down 1-% Miami-Dade Down 24-% Broward	Down Both Counties	High; Down 11-%
Rx Opioids	Up 32-% Miami-Dade Down 20-% Broward	Up in Both Counties	Down 4-%
Benzodiazepines	Down 24-% Miami-Dade Down 16-% Broward	Stable in Both Counties	Down 4-%
Heroin	Up 6-% Miami-Dade Down 56-% Broward	Up 75-% in Miami-Dade Up 20-% in Broward	Up 33-%
Methamphetamine	Up 6-% Statewide*	Low & Stable Both Counties	Low; Up 24-%
bk-Methylone	N/A	N/A	Up 208-%
MDMA	Down 50-% Statewide*	Low & Stable Both Counties	Low; Down 50-%

\*County Breakout of MDMA and Methamphetamine Medical Examiner data not available