

Trends of Nonmedical Prescription Drug Misuse in Miami-Dade, Broward, Palm Beach Counties, and the State of Florida: 2010

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ABSTRACT

The State of Florida and its three southeastern counties have been at the center of the nation's most critical emerging drug abuse issue of the 21st Century, namely the nonmedical misuse of certain pharmaceuticals. Broward and Palm Beach Counties have been most impacted along with Pinellas and Pasco Counties in the St. Petersburg area and the three counties near Jacksonville. In previous years Miami-Dade County has recorded some of the lowest per capita rates of prescription drug abuse in the Florida yet in 2010 saw a sharp increase of the problem although still at rates below most of the State. Deaths and other consequences of prescription drug abuse continued to rise across Florida in the most recent reporting periods with the exception of Palm Beach County that reported declining numbers of mortalities in 2010.

*More than 5,647 individuals died in Florida during 2010 with one or more prescription medications in their system of which almost half (or an average of 7.4 persons per day) had at least one prescription drug that was considered a "cause of death." Broward County, as the second most populated county in the State, had the highest number of deaths related to prescription drugs among the State's 67 counties. Oxycodone (e.g., OxyContin®, Roxicodone®, Percocet®), is the most frequently reported **opioid** involved with nonmedical use in the South Florida region and across the State, yet 93 percent of deaths attributed to it statewide are found in combination with other drugs including benzodiazepines, other opioids, and muscle relaxants. Rates of oxycodone emergency department (ED) reports in Broward and Palm Beach Counties among those 21-29 years of age are significantly higher than the national rates for the same age group. Most deaths linked to opioid misuse are among those over 34 years of age while clients coming into treatment for opioid addiction are increasingly below the age of 30. Oxymorphone (e.g., Opana®) is the fastest rising opioid in nonmedical use link to deaths. Injecting is increasingly reported among opioid treatment clients. **Benzodiazepine** consequences are found in high numbers similar to those for opioids and most often in combination with them; benzodiazepine deaths and emergency department reports have increased. Alprazolam (e.g., Xanax®) remains the most cited benzodiazepine linked to nonmedical misuse while others are also increasingly reported. **Muscle-relaxants** are frequently found in combination with other prescription medications dispensed from "pill mills" and in doctor shoppers' pharmaceutical cocktails as well as among deceased person in Florida.*

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INTRODUCTION

This report reviews data for the State of Florida and its southeastern counties from 2009 and 2010 about nonmedical use of prescription drug-related deaths, medical emergencies, addiction treatment admissions, law enforcement intelligence, crime laboratory analysis, and prevalence of use. Information is presented about nonmedical use of prescription opioids, benzodiazepines, and muscle relaxants. While the information is classified by a single drug or category, the reader should note an underlying problem of poly-substance abuse as mentioned throughout this report.

Area Description

The population of the State of Florida is 18,801,310 according to 2010 U.S. Census estimates. The population is 57.9 percent White non-Hispanic; 22.5 percent Hispanic; 16 percent Black (including both Hispanic and non-Hispanic); and 2.4 percent Asian. Foreign born residents comprise 18.7 percent of the State population.

Located in the extreme southern portion of the Florida peninsula, Miami-Dade County has the State's largest population, with 2,496,435 residents, according to 2010 U.S. Census estimates. Hispanics account for 65 percent of the population while Blacks (including both Hispanic and non-Hispanic) make up 18.9 percent; 15.4 percent are White non-Hispanic, and 1.5 percent are Asian. Miami is the County's largest city, with 404,048 residents. More than 100,000 immigrants arrive in Florida each year; one-half establish residency in Miami-Dade County. One-half of the county's population is foreign born.

Broward County, situated due north of Miami-Dade, is composed of Ft. Lauderdale, plus 28 other municipalities and an unincorporated area. The County covers 1,197 square miles, including 25 miles of coastline. According to 2010 U.S. Census estimates, the population is 1,748,066 including 43.5 percent White non-Hispanic; 26.7 percent Blacks (including both Hispanic and non-Hispanic); 25.1 percent Hispanics; and 3.2 percent Asians. Foreign born residents comprise 29.6 percent of the County's population. Broward County is the second most populated county in Florida after Miami-Dade, and accounts for 9.3 percent of Florida's population.

Palm Beach County (population 1,320,134) is located due north of Broward County and is the third most populated county in the State. The population is 60.1 percent White non-Hispanic; 19 percent Hispanic; 17.3 percent Black (including both Hispanic and non-Hispanic); and 2.4 percent Asian/Pacific Islanders. Foreign born residents comprise 21.2 percent of the County's population. Together, the 5.564,635 million people of these three counties constitute 29.6 percent of the State's population.

Starting in 2003, these three counties constitute 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.

Approximately 25 million tourists visit South Florida annually. The region is a hub of international transportation and the gateway to commerce between the Americas, accounting for sizable proportions of the Nation's trade. 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.

Several factors impact the potential for drug abuse problems in South Florida, including the lack of a prescription monitoring system in the State during the time periods covered by this report making Florida, and particularly Broward County, a source for diverted medications in the eastern United States. A prescription monitoring system was originally enacted in July 2009 and was modified by the 2011 Florida Legislature and became operational on September 1, 2011. South Florida and particularly Broward County had the most visible "pill mill" problem in the nation with an estimated 176 clinics in the three-county area in early 2010. However new public health regulations and law enforcement arrests starting in the second half of 2010 have reduced these illicit sources of prescription drug diversion particularly during the first eight months of 2011. These efforts reduced the availability of prescription drugs for nonmedical misuse in 2010 which is the period covered by most of the data tracked in this report. However that impact is anticipated to be even more significant in 2011.

Data Sources

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

- **Drug-related mortality data** were provided by the Florida Department of Law Enforcement (FDLE) Medical Examiners Commission's *2010 Report of Drugs Identified in Deceased Persons between January and December 2010*. The report provides information on the total number of various drugs detected in decedents mostly for whom an autopsy was performed but not all of the 175,000 deaths that occurred in Florida during 2010. 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 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 the "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. Thus, the number of drug occurrences exceeds the number of decedents because of multiple drugs including alcohol identified in the same person.

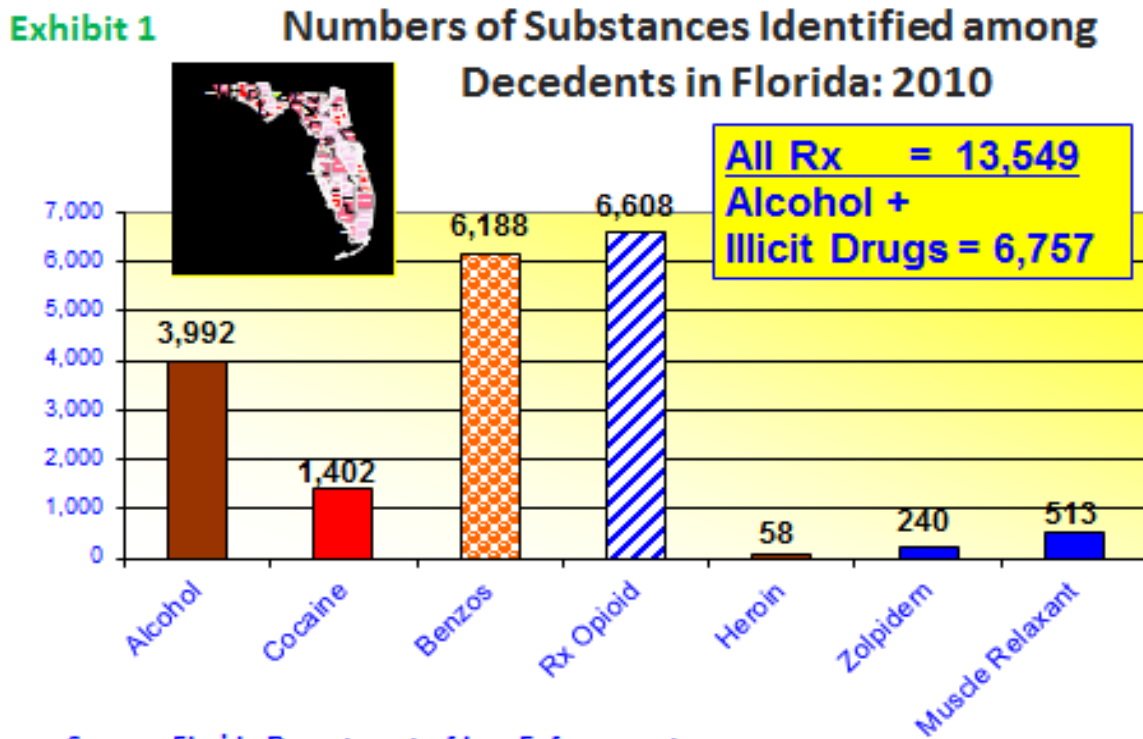
- **Emergency Department (ED) data** were derived for Miami-Dade as well as Broward and Palm Beach Counties from the Drug Abuse Warning Network (DAWN) for the Substance Abuse and Mental Health Services Administration (SAMHSA). The data represent drug reports involved in drug-related visits for the nonmedical use of selected prescription drugs (derived from the category of substances other than alcohol or illicit drugs). 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 2004-2009 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 five years and the DAWN Ft. Lauderdale Division (Broward and Palm Beach Counties combined) for 2008 and 2009. Eligible hospitals in only the Miami-Dade County Division totaled 21; hospital EDs in the DAWN sample numbered 19. Eligible hospitals in the Ft. Lauderdale Division only (that includes Broward and Palm Beach Counties) totaled 27; there were 21 hospital EDs in the DAWN sample. Only weighted DAWN data for 2004-2009 released by SAMHSA may be used for trend analysis as provided. A full description of the system can be found on the DAWN Web site <<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 year 2010 were provided by the Florida Department of Children and Families. Treatment data for the entire State of Florida are from the SAMHSA's Treatment Episode Data Sets (TEDS) as also provided by the Florida Department of Children and Families
- **Crime lab drug analyses data** were derived from the Drug Enforcement Administration's (DEA's) National Forensic Laboratory Information System (NFLIS) Report for Miami-Dade, Broward, and Palm Beach Counties from January through December 2010. However, the NFLIS data combines some, but not all, pharmaceutical items into the category of "controlled substance." This factor makes it difficult to track the role of illegally diverted medications, particularly in Broward County where other indicators of nonmedical prescription drug misuse are elevated.
- **Information on distribution of Oxycodone** in Florida is from the US Drug Enforcement Administration (DEA) Automation of Reports and Consolidated Orders System (ARCOS) 2009-2010.
- **Data on the prevalence of substance use by high school students** in Miami-Dade, Broward, and Palm Beach Counties as well as the State of Florida are from the 2010 Florida Youth Substance Abuse Survey conducted by the Florida Department of Children and Families.
- **Data on the prevalence of nonmedical use of pain relievers by people aged 12 and above** are from the SAMHSA National Survey on Drug Use Health Sub-State Data 2006-2008.

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PATTERNS OF NONMEDICAL PRESCRIPTION DRUG MISUSE

Nonmedical Use of Prescription Opioids

During 2010, 5,647 individuals died in Florida with one or more prescription drugs in their system representing an increase of 7.1-percent compared to 2009. Nearly half of the 2010 occurrences, or 48 percent, ($n=2,710$ representing 8.9-percent more than in 2009) had at least one prescription medication that was considered a cause of death for an average of 7.4 lethal prescription drug deaths per day. In total there were 13,549 prescription drugs detected (including 6,608 opioids - exhibit 1) and 5,129 or 38 percent of the total medication occurrences were considered at a lethal dose and a cause of death including 49 percent ($n=3,248$) of the opioids. The number of drug occurrences exceeded the number of deaths because many decedents had more than one substance detected including another prescription medication, illicit drug, or alcohol.

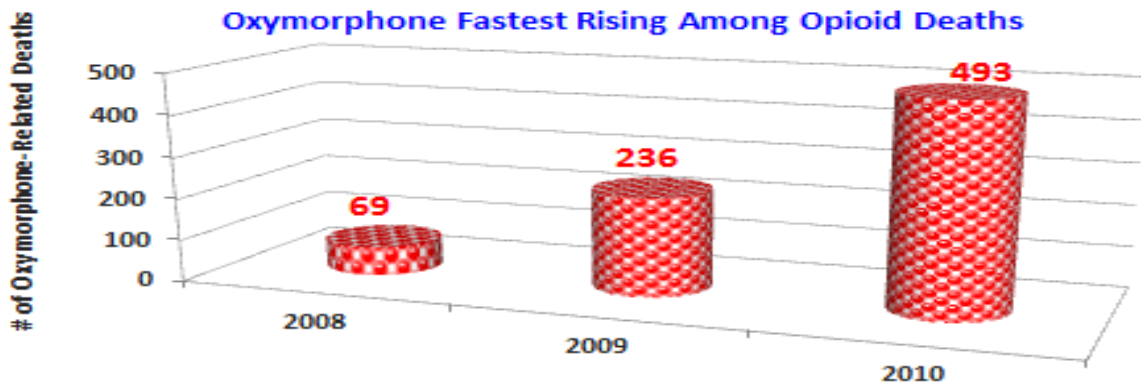


Source: Florida Department of Law Enforcement: Florida Medical Examiners Commission Report 2010

Between 2009 and 2010, reports in all of Florida related to the category of prescription opioids detected among deceased persons increased 10-percent, from 6,006 to 6,608, following a 10-percent rise between 2008 and 2009. Reports of hydrocodone (*Vicodin®*, *Lortab®*), oxycodone (*OxyContin®*, *Roxicodone®*, *Percocet®*), and methadone (*Dolophine®*) identified among decedents have been tracked in Florida since 2000. Beginning in 2003, morphine (*MS Contin®*, *Roxanol®*), propoxyphene (*Darvon®*), fentanyl (*Fentora®*), hydromorphone (*Dilaudid®*, *Palladone®*), meperidine (*Demerol HCl®*), tramadol (*Ultram®*), Buprenorphine (*Buprenex®*, *Suboxone®*) oxymorphone (*Opana®*, *Numophan®*) and other opioids were included in the Florida Medical Examiners Commission’s surveillance monitoring program. Occurrences of 5 prescription opioids (oxycodone, hydrocodone, methadone, morphine, and propoxyphene) detected among deceased persons during 2010 totaled 395 in Broward County, 219 in Miami-Dade County, and 301 in Palm Beach County.

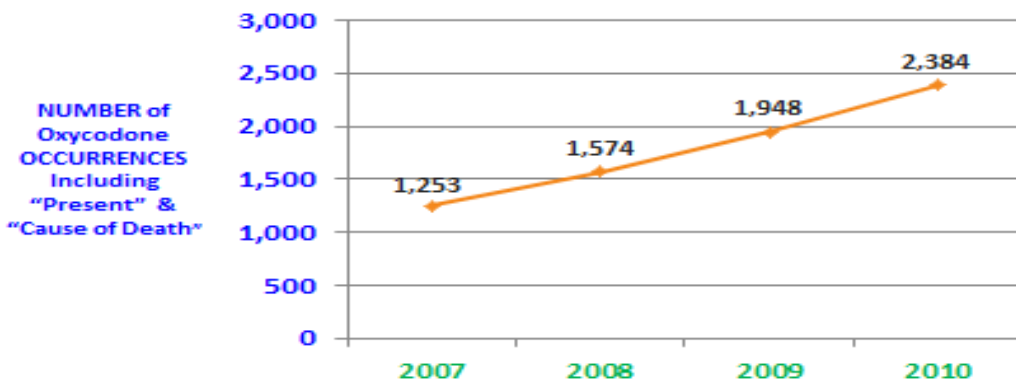
Across Florida, the number of oxymorphone reports detected among deceased persons ($n=493$) increased 109-percent between 2009 and 2010 (exhibit 2) and those for oxycodone ($n=2,384$) increased 22-percent (exhibit 3) while the number of occurrences for hydrocodone ($n=958$) increased 11-percent and fentanyl reports ($n=227$) were up 6-percent.

Exhibit 2 Number of Oxymorphone-Related Deaths in Florida: 2008 – 2010



SOURCE: Florida Medical Examiners Commission Report 2010

Exhibit 3 Number of Oxycodone Reports Detected among Decedents in Florida: Jan 2007 – Dec 2010



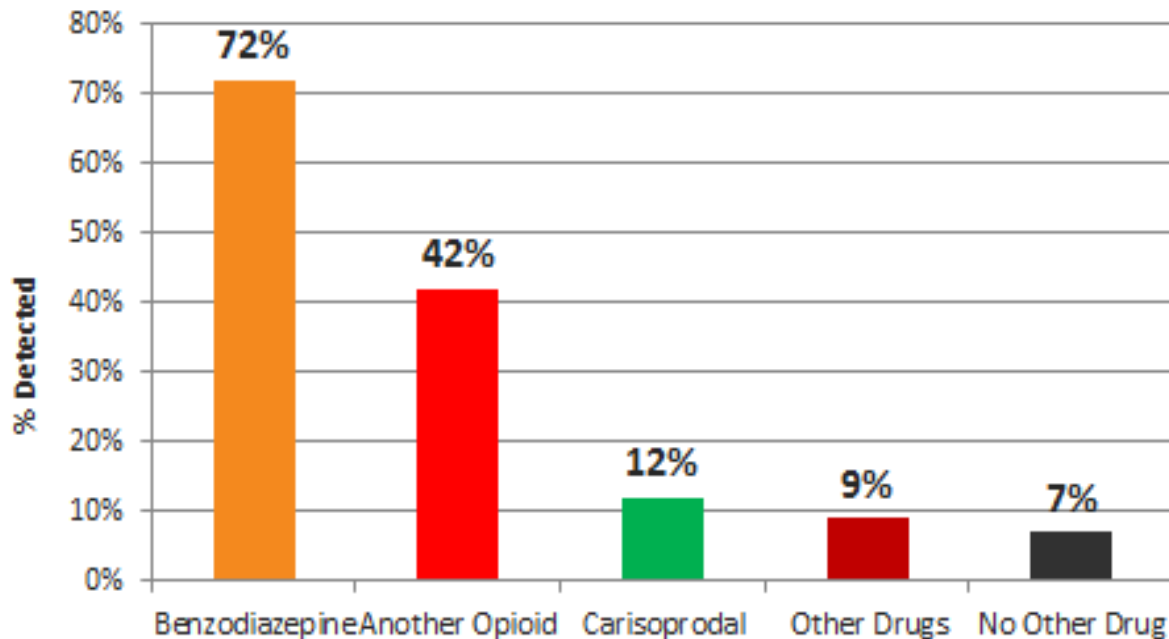
SOURCE: Florida Medical Examiners Commission Report 2010

The most lethal prescription opioids statewide were (1) methadone which was considered a cause of death for 74 percent ($n=694$) of the decedents in which it was detected, (2) oxycodone was a cause of death for 64 percent ($n=1,516$) of the deaths related to it, (3) fentanyl was a cause of death for 50 percent ($n=114$) of its occurrences, and (4) morphine had a 41 percent lethal rate ($n=262$). Most of the statewide prescription medical examiner opioid cases were polydrug episodes, including 92 percent of the oxycodone reports, 90 percent of the methadone

cases, 87 percent of the hydrocodone reports, 83 percent of morphine cases, and 80 percent of propoxyphene-related deaths.

A special study of the 1,185 deaths considered to be caused by oxycodone in Florida during 2009 revealed that 93 percent of the cases were detected in combination with another drug. One or more benzodiazepines were detected in 72 percent of the lethal oxycodone deaths, one or more other opioids in addition to oxycodone were detected in 42 percent of the cases, carisoprodal was found in 12 percent, and alcohol or another drug was detected in 9 percent of the reports (exhibit 4). The most frequent combination found in the 1,185 lethal oxycodone deaths was with one or more benzodiazepines in 416 cases, followed by a benzodiazepine and another opioid in 322 cases, and one or more other opioids in 119 cases (exhibit 5).

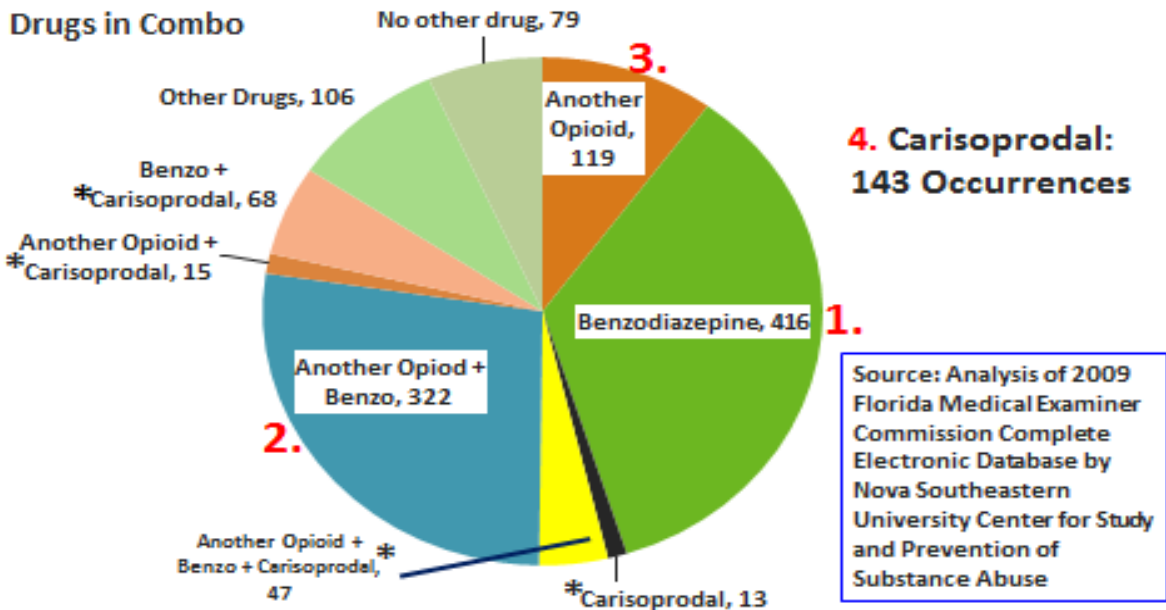
Exhibit 4 Percent of Other Drugs Detected in the 1,185 Lethal Oxycodone Deaths in Florida: 2009



Source: Analysis of 2009 Florida Medical Examiner Commission Complete Electronic Database by Nova Southeastern University Center for Study & Prevention of Substance Abuse

Exhibit 5

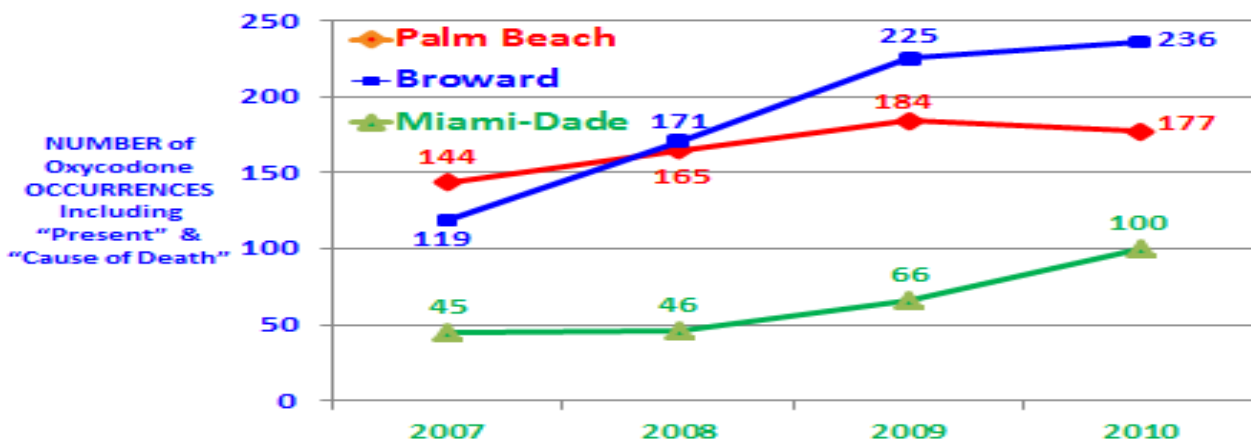
Drug Combinations in 1,185 Deaths Caused by Oxycodone in Florida: 2009



Miami-Dade County recorded 100 oxycodone occurrences among deceased persons in 2010 (exhibit 6), 51 morphine reports, 37 for hydrocodone, 16 for propoxyphene, and 15 for methadone. These 219 combined mentions represented a 39-percent increase from the 158 opioid occurrences in 2009. Among the total opioid reports in 2010, 42 percent were considered lethal doses and 85 percent were found in combination with at least one other substance. Most of the deaths occurred among those over age 35 as illustrated with 32 percent of Miami-Dade oxycodone deaths in 2010 being 35-50 and 44 percent over 50 years.

Exhibit 6

Number of Oxycodone Reports Detected among Decedents in South Florida: 2007- 2010



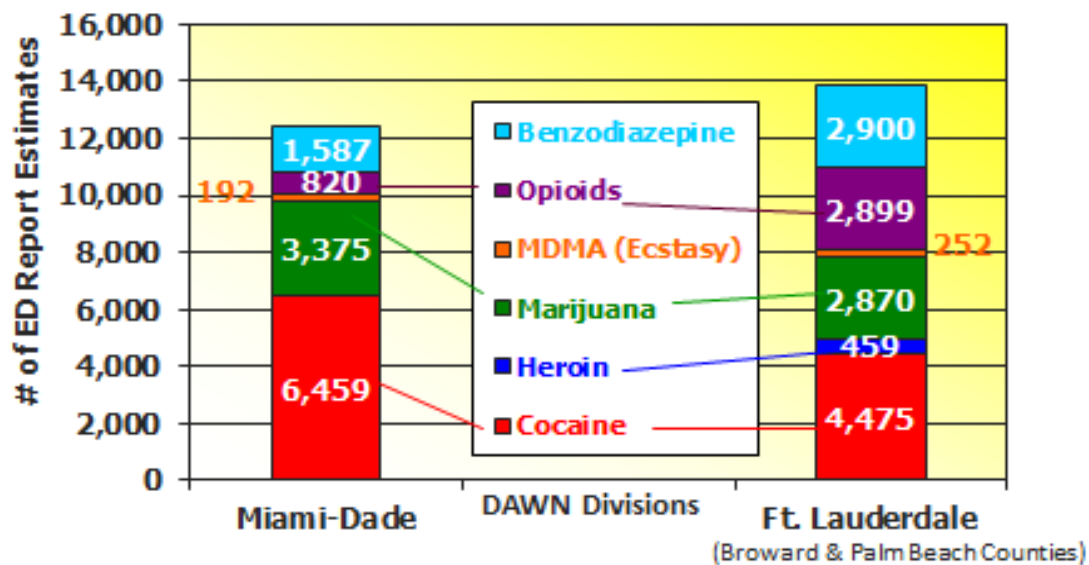
SOURCE: Florida Medical Examiners Commission Report 2010

Broward County recorded 236 oxycodone occurrences among deceased persons in 2010 (exhibit 6), 54 morphine reports, 45 methadone reports, 45 for hydrocodone, and 15 for propoxyphene. These 395 combined mentions represented a 5-percent decrease from the 415 opioid occurrences in 2009. Among the total opioid reports in 2010, 63 percent were considered lethal doses and 88 percent were found in combination with at least one other substance. Most of the deaths occurred among those aged 35-50 years as illustrated with 44 percent of Broward County oxycodone deaths in 2010 being in that age group.

Palm Beach County recorded 177 oxycodone occurrences among deceased persons in 2010 (exhibit 6), 47 reports for methadone, 34 for morphine, 33 for hydrocodone, and 10 for propoxyphene. These 301 combined mentions represented a 12-percent decrease from the 342 opioid occurrences in 2009. Among the total opioid reports in 2010, 73 percent were considered lethal doses and 88 percent were found in combination with at least one other substance. Most of the deaths occurred among those aged 35-50 years as illustrated with 35 percent of Palm Beach County oxycodone deaths in 2010 being in that age group.

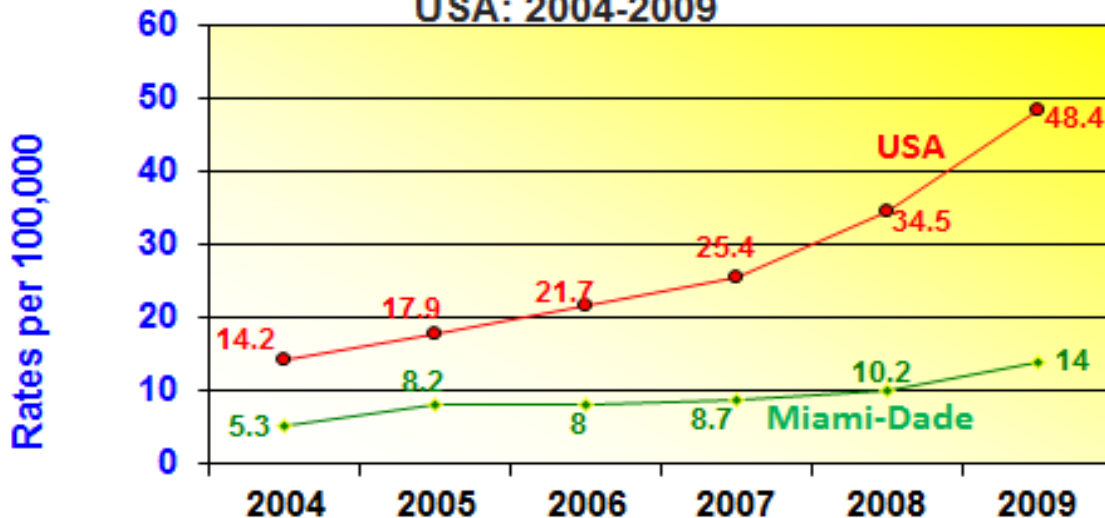
The DAWN weighted estimate of 820 emergency department (ED) visits for nonmedical use of prescription opioids in Miami-Dade County during 2009 (exhibit 7) accounted for 7 percent of all ED reports among 6 substances (4 illicit drugs—cocaine, marijuana, MDMA, and methamphetamine as well as nonmedical use of prescription opioids and benzodiazepines). Between 2004 and 2009 the number of prescription opioid-involved ED visits increased 77-percent in Miami-Dade County (exhibit 8). The Miami-Dade per capita rate of 32.8 nonmedical opioid ED visits per 100,000 population compared to the national rate of 135.7 in 2009. Oxycodone was the most frequently cited opioid in nonmedical cases totaling 351 ED visits in 2009 representing a 176-percent increase in such cases since 2004. The Miami-Dade per capita rate 14.0 nonmedical oxycodone ED visits per 100,000 population compared to the national rate of 48.4 in 2009.

Exhibit 7 **Number of Estimate Emergency Department Reports by Drug in Miami-Dade and Ft. Lauderdale (Broward & Palm Beach Counties) DAWN Divisions: 2009**



SOURCE: SAMHSA-CBHSQ Dawn Emergency Department Estimates 2009 October 5, 2010

Exhibit 8 Rates per 100,000 of Nonmedical Use Oxycodone Emergency Dept. Reports Miami-Dade County, FL and USA: 2004-2009

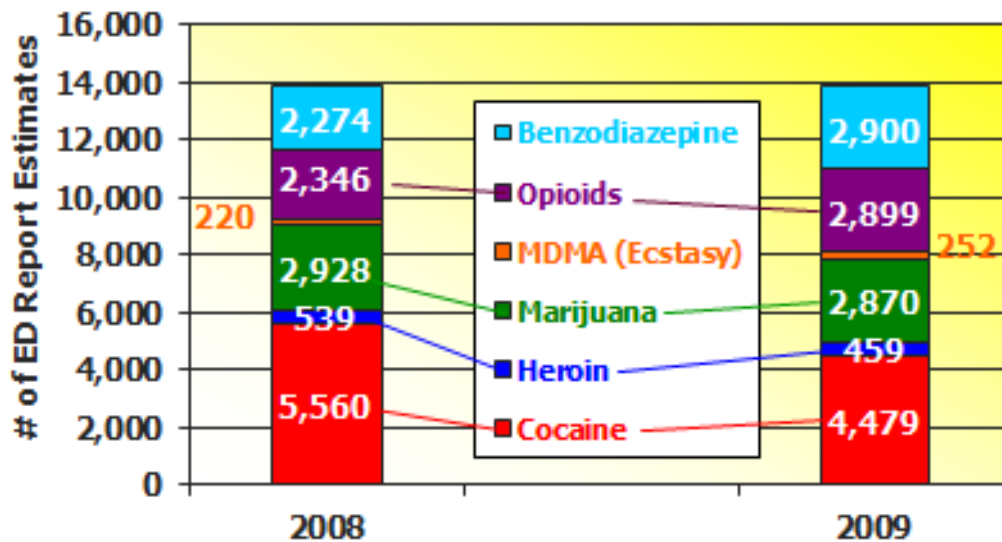


Note: For Miami, there was a statistically significant 176%-increase from 2004 to 2009 and a 64%-increase from 2007 to 2009. For the USA, there was a statistically significant 256 %-increase from 2004 to 2009 and 94%-increase from 2007 to 2009 and a 41%-increase from 2008 to 2009. No significant testing of data for 2005 and 2006 versus 2009 was available.

SOURCE: US Dept. HHS-SAMHSA, CBHSQ; DAWN Emergency Dept. Estimates

The DAWN weighted estimate of 2,899 ED visits for nonmedical use of prescription opioids in the Ft. Lauderdale Division of DAWN comprised of Broward and Palm Beach Counties during 2009 (exhibits 7 above) accounted for 21 percent of all ED reports among 7 substances (5 illicit drugs—cocaine, heroin, marijuana, MDMA, and methamphetamine as well as nonmedical use of prescription opioids and benzodiazepines). Between 2008 and 2009 the number of prescription opioid-involved ED visits increased 24-percent in the Ft. Lauderdale Division (exhibit 9). The Broward and Palm Beach Counties per capita rate of 95.2 nonmedical opioid ED visits per 100,000 population compared to the national rate of 135.7 in 2009. Oxycodone was the most frequently cited opioid in nonmedical cases totaling 1,608 ED visits in 2009 representing a 41-percent increase in such cases since 2008. The Broward and Palm Beach Counties per capita rate of 52.8 nonmedical oxycodone ED visits per 100,000 population was above the national rate of 48.4 in 2009. The highest per capita rates in the two Counties for nonmedical oxycodone ED visits was among those aged 25-29 at 158.1 and those aged 21-24 at 153.0 (exhibit 10). These rates were above the national per capita rates of 117.3 for those aged 25-29 and 88.6 for 21-24.

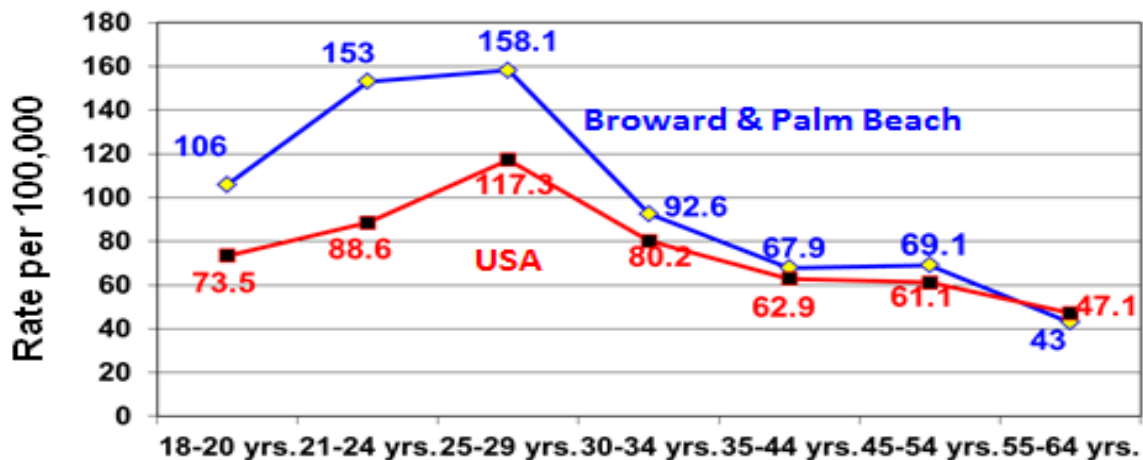
Exhibit 9 Number of Emergency Departments Reports by Drug in Broward & Palm Beach Counties, FL: 2008 vs. 2009



Note: Cocaine and Heroin visits had statistically significant decreases from 2008 to 2009. Prescription Opioid and Benzodiazepine nonmedical use visits had statistically significant increases from 2008 to 2009. No statistically significant changes were noted for 2008 compared with 2009 for the other drugs shown.

SOURCE: US Dept. HHS-SAMHSA, CBHSQ: DAWN Emergency Dept. Estimates 2008-2009.

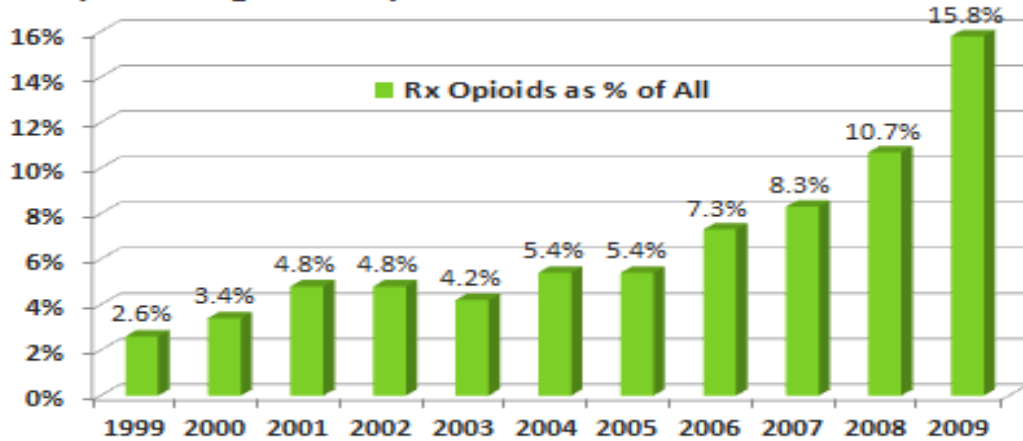
Exhibit 10 Rates per 100,000 of Oxycodone Nonmedical Use Emergency Department Reports by Age Groups DAWN Ft. Lauderdale Division vs. USA: 2009



SOURCE: US Dept HHS-SAMHSA, CBHSQ: DAWN Emergency Dept. Estimates.

A comparison of primary opioid addiction treatment admissions over the past decade reveals that across Florida there was an increase from 2.6 percent of all admissions in 1999 to 15.8 percent in 2009 (exhibit 11) according to SAMHSA's Treatment Episode Data Sets as submitted by the Florida Department of Children and Families as of January 6, 2011.

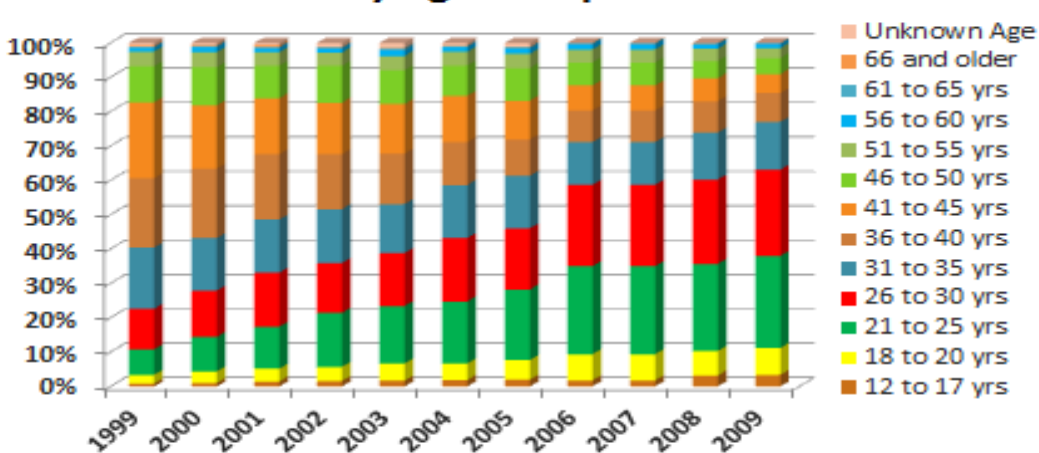
Exhibit 11 Percent of Primary Addiction Treatment Admissions for Rx Opioids among all substances (including alcohol) in Florida: 1999 to 2009



Source: SAMHSA - Treatment Episode Data Sets Submitted by the Florida Dept. of Children and Families as of January 6, 2011

The increasingly younger population observed in emergency department reports of nonmedical opioid misuse is also seen in the trend of those admitted to a Florida publicly-funded addiction treatment program over the past decade. In 1999 a total of 20 percent of all admissions for “opiates other than heroin” (i.e., prescription opioids) were below the age of 30 years. By 2009 the percent of those under 30 increased to 62 percent of all opioid treatment admissions (exhibit 12).

Exhibit 12 Percent of Primary Rx Opioid Addiction Treatment Admissions By Age Groups in Florida: 1999 to 2009



Source: SAMHSA - Treatment Episode Data Sets Submitted by the Florida Dept. of Children and Families as of January 6, 2011

There were 246 primary admissions for opiates other than heroin (*i.e.*, prescription opioids), or 5 percent of the 4,548 publicly funded primary treatment admissions in Miami-Dade County, as reported by the Florida Department of Children and Families in 2010 (exhibit 13). These totals represent a 118-percent increase in the number of opioid primary admissions compared to 2009 when opioids accounted for 2 percent of all admissions. Males accounted for 55 percent of the other opiate clients. Twenty-eight percent (n=69) of the admissions were age 18-25 years, 37 percent (n=91) were 26–34, 34 percent (n=84) were 35 or older, and none were below the age of 18.

Exhibit 13 Number of Primary Treatment Admissions by Substance in Miami-Dade County, FL: 2009-2010

2009	Primary Treatment Substance	2010
1,289	Alcohol	1,242
867	Crack Cocaine	549
690	Powder Cocaine	369
150	Heroin	183
113	Rx Opioids	246
2,118	Marijuana	1,741
55	Methamphetamine	22
2	Amphetamine	5
3	MDMA	6
29	PCP	0
1	Benzodiazepine	71
108	All Other Drugs	30
117	Substance Unknown	84
5,542	TOTAL ADMISSIONS	4,548

SOURCE: Florida Department of Children and Families

In Broward County there were 1,118 primary admissions for opiates other than heroin (*i.e.*, prescription opioids) in 2010, accounting for 22 percent of the 5,069 publicly funded primary treatment admissions. Males accounted for 55 percent of the other opiate clients. These totals represent a 257-percent increase in the number of opioid primary admissions compared to 2009 (exhibit 14) when opioids accounted for 6 percent of all admissions (n=336).

Four of the 2010 Broward opioid treatment clients were age 17 years or younger, 28 percent (n=314) were age 18–25, 27 percent (n=304) percent were age 26–34, and 28 percent (n=314) percent were 35 or older. The ages of 182 of the primary opioid treatment clients are unknown. Among the 51 percent of the other opiates clients (n=573) for whom the primary route of administration is recorded, 36 percent (n=208) reported injecting prescription opioids.

Exhibit 14 Number of Primary Treatment Admissions
by Substance in Broward County, FL: 2009-2010

2009	Primary Treatment Substance	2010
1,254	Alcohol	1,142
610	Crack Cocaine	424
159	Powder Cocaine	57
105	Heroin	156
336	Rx Opioids	1,118
2,030	Marijuana	1,689
20	Methamphetamine	34
6	Amphetamine	2
0	MDMA	5
0	PCP	0
47	Benzodiazepine	101
689	All Other Drugs	37
422	Substance Unknown	304
5,678	TOTAL ADMISSIONS	5,069

SOURCE: Florida Department of Children and Families

The NFLIS reported 1,256 oxycodone crime laboratory cases and 145 hydrocodone items ranking third and eighth respectively among all substances analyzed during 2010 in the three-county South Florida MSA (exhibit 15). There were also 52 methadone cases, 16 morphine items, 6 propoxyphene cases, 13 hydromorphone items, 12 codeine cases, 6 tramadol items, and 1 oxymorphone case. Totaled together there were 1,515 prescription opioid crime lab cases accounting for 6 percent of all substances in 2010 as compared to 424 such reports representing 1.7 percent of all drug items analyzed in 2009. There were also 910 “unspecified controlled substance” cases in the 2010 NFLIS report which may include additional prescription opioids items.

There were approximately 440,000,000 dose units (*i.e.*, pills) of oxycodone dispensed in Florida from pharmacies and hospitals in 2009 according to the DEA’s ARCOS data (exhibit 16). There were 41,285,772 dose units of Oxycodone dispensed by practitioners in Florida during the first half of 2010 and that represented 89.6 percent of the national total of oxycodone dose units dispensed by practitioners. However when all sources are totaled, Florida, with 5.9 percent of the nation's population, dispensed 523,424,109 dose units of oxycodone in 2009 or 12.1 percent of the national total. In terms of dosage strength, Florida dispensed 16.9 percent of the total grams of Oxycodone distributed in the United States in 2009. The average dose unit dispensed in Florida was 18 mg compared to 13 mg nationally

Exhibit 15 Number and Percent of Top 10 Most Frequently Identified Drugs in South Florida Crime Labs: 2010

DRUG	Number	Percent
Cocaine	13,601	54.2%
Marijuana/Cannabis	5,342	21.3%
Oxycodone	1,256	5.0%
Alprazolam	916	3.7%
Heroin	634	2.5%
3,4-Methylenedioxy-methamphetamine (MDMA)	555	2.2%
Hallucinogen	409	1.6%
Hydrocodone	145	0.6%
1-Benzylpiperazine (BZP)	114	0.5%
Methamphetamine	102	0.4%
Other ¹	2,017	8.0%
Total	25,091	100.0%

NOTES:

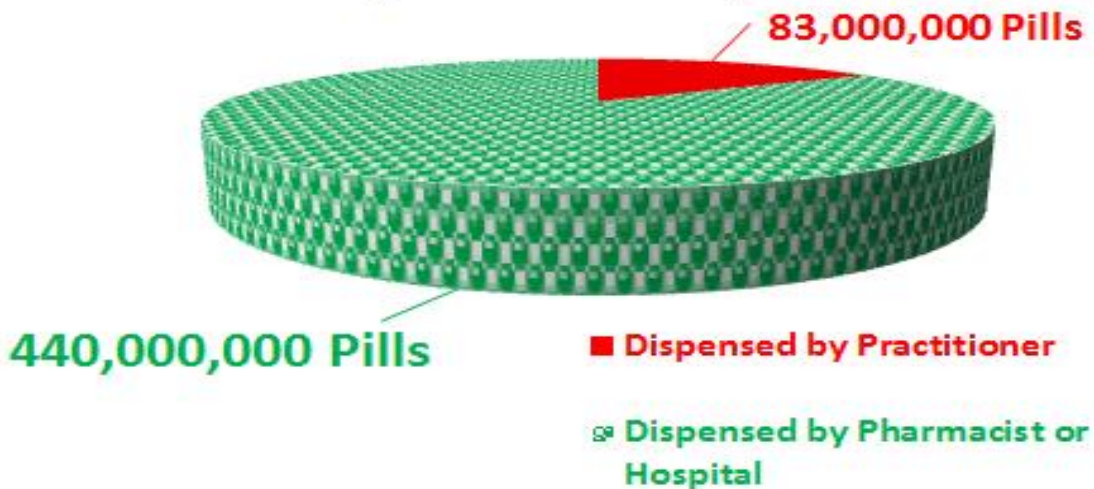
Data are for January-December 2010 from the Miami/Ft. Lauderdale/Pompano Beach MSA and include Miami-Dade, Broward, and Palm Beach Counties.

¹ - Unspecified Controlled Substance represents 910 cases and are included in "Other."

Percentage may not sum to the total due to rounding.

Source: US Drug Enforcement Administration - National Laboratory Information System (NFLIS) May 2, 2011

Exhibit 16 Sources of Oxycodone Dose Units Dispensed Annually in Florida



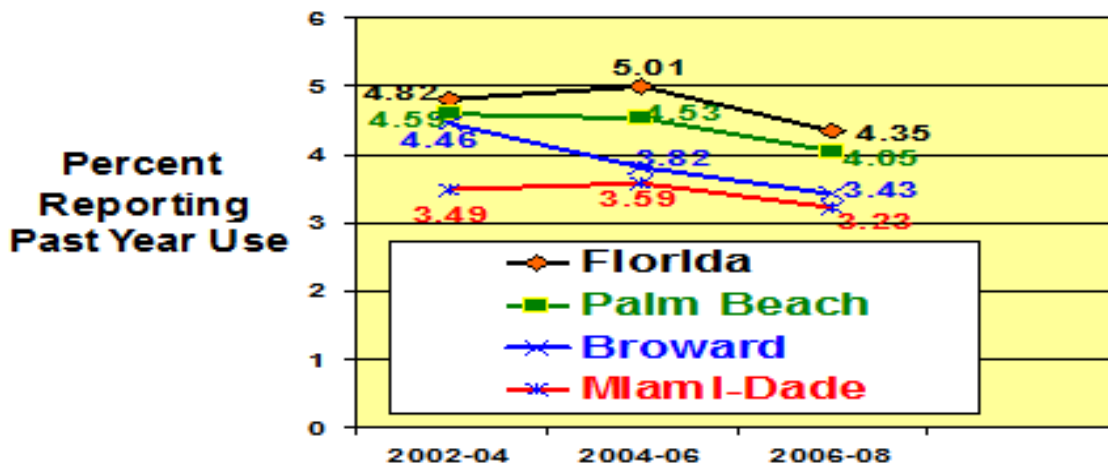
Source: Analysis of US Department of Justice DEA ARCOS 2009 and 2010 data by NSU Center for Study And Prevention of Substance Abuse

Among the states in 2009, Florida ranked #1 in the total grams of oxycodone distributed nationally; Florida's rankings for other opioids include # 2 for methadone, #2 for morphine, # 3 for fentanyl base, #4 for hydrocodone, and # 6 for codeine.

Any lifetime nonmedical use of prescription pain relievers among high school students was reported on the 2010 Florida Youth Substance Abuse Survey (FYSAS) by 5.5 percent in Miami-Dade County, 5.7 percent in Broward County, 7.4 percent in Palm Beach County, and 9.7 percent in all of Florida. Results from the same survey for any current nonmedical use of prescription pain relievers among high school students in the past 30 days was 2.3 percent in Miami-Dade, 1.6 percent in Broward, 1.8 percent in Palm Beach County, and 3.4 percent Statewide.

According to the Sub-State Data of the National Survey on Drug Use and Health the percentage of Floridians and residents of the three southeastern counties reporting nonmedical use of prescription pain relievers declined between 2002 and 2008 (exhibit 17), however none of the changes are considered to be statistically significant.

Exhibit 17 Percent of Persons Aged 12 and Above Reporting Nonmedical Use of Rx Pain Relievers in the Past Year: 2002-2008



SOURCE: SAMHSA (2010): Substate Estimates from the 2002-2008 National Surveys on Drug Use and Health (Office of Applied Studies).

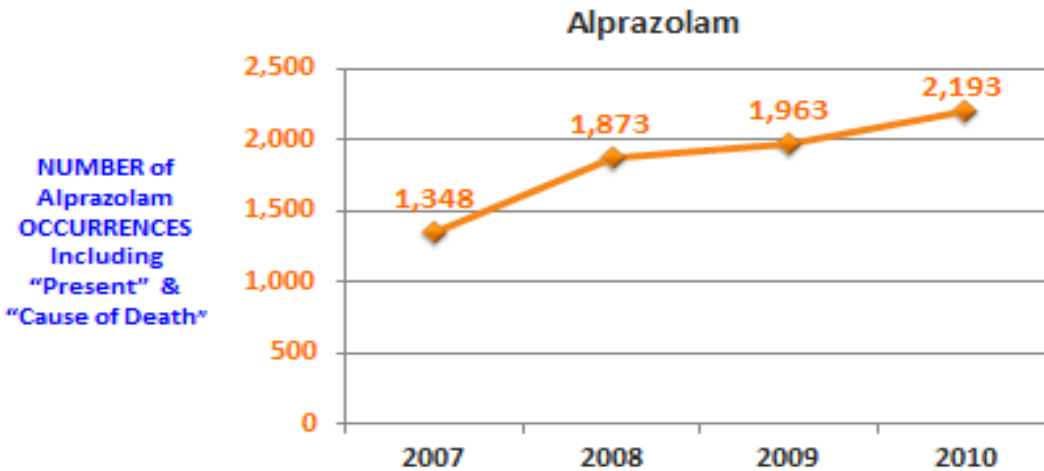
Nonmedical Use of Prescription Benzodiazepines

Benzodiazepines in general, and alprazolam (*i.e.*, Xanax®) in particular, were a substantial problem in South Florida in this reporting period. There were 6,188 reports of a benzodiazepine present in deceased persons across Florida in 2010, an increase over the 4,340 occurrences in the previous year. However the list of benzodiazepines tracked by the Florida Medical Examiners Commission expanded in 2010. Of the benzodiazepine occurrences in 2010, a benzodiazepine was identified as causing 1,304 deaths with a total of 1,726 lethal (or a cause of death) benzodiazepine occurrences. Among the benzodiazepine ME total occurrences (considered both a cause of death or merely present) statewide, 2,193 were attributed to alprazolam, and 906 were attributed to diazepam (*i.e.*, Valium®); 45 percent of the alprazolam occurrences, and 31 percent of the diazepam

reports were considered to be lethal doses. Most all of these occurrences were found in combination with another substance including 94 percent of the alprazolam reports and 96 percent of those for diazepam.

The benzodiazepines with the greatest increases in total drug-related death occurrences between 2009 and 2010 were nordiazepam (*i.e.*, Nordaz®) up 80-percent from 459 to 828, oxazepam (*i.e.*, Serax®) rising 36-percent from 346 to 472, and temazepam (*i.e.*, Restoril®) increasing 33-percent from 524 to 699. Over the same two-year period, alprazolam total occurrences increased 12-percent (exhibit 18) and those for diazepam rose 1.6-percent.

Exhibit 18 **Number of Alprazolam Reports Detected among Decedents in Florida: 2007 – 2010**

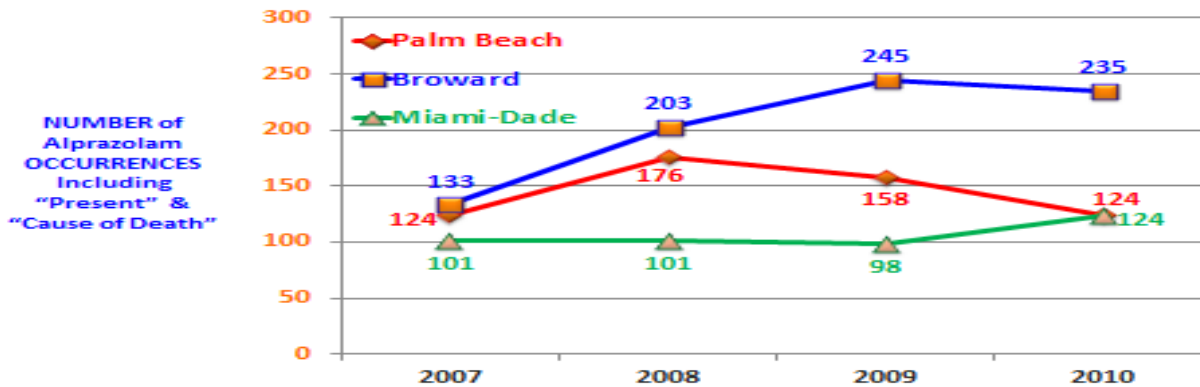


SOURCE: *Florida Medical Examiners Commission Report 2010*

In Miami-Dade County, there were 124 reports of alprazolam detected in deceased persons during 2010 (exhibit 19), of which 39 percent were considered a cause of death. Ninety-two percent of the reports involved at least one other drug. There were also 45 reports of diazepam detected in deceased persons in Miami-Dade County; and 9 percent were considered to be the cause of death; 98 percent of these deaths involved at least one other drug. These 169 combined mentions for alprazolam and diazepam represented a 36-percent increase over the 124 reports in 2009, and followed a 17-percent decrease from 2008 to 2009. Two of the combined mentions in 2010 involved a person younger than 18; 7 percent of the decedents were between the ages of 18 and 25; 11 percent were age 26–34; 31 percent were age 35–50; and 50 percent were older than 50.

Exhibit 19

Number of Alprazolam Reports Detected among Decedents in South Florida: 2007- 2010



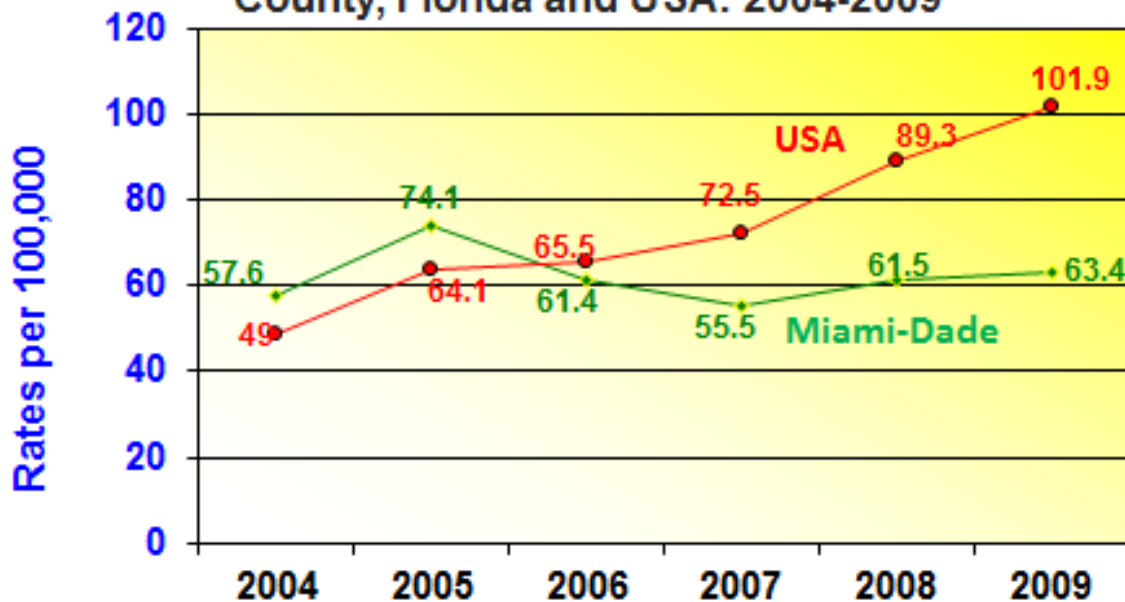
SOURCE: Florida Medical Examiners Commission Report 2010

In Broward County, there were 235 reports of alprazolam detected in deceased persons during 2010 (exhibit 19) of which 57 percent were considered a lethal dose. Ninety-one percent of the reports involved at least one other drug. There were also 80 reports of diazepam detected in deceased persons in Broward County; 45 percent were considered to be the cause of death; 91 percent of these deaths involved at least one other drug. These 315 combined mentions for alprazolam and diazepam represented an 16-percent decrease over the 376 reports in 2009, and followed a 11-percent increase from 2008 to 2009. Broward County ranked first among all Florida counties or ME’s district in the number of the two benzodiazepines detected among deceased persons. One of the Broward County combined mentions in 2010 involved a person younger than 18; 9 percent of the decedents were between the ages of 18 and 25; 13 percent were age 26–34; 38 percent were age 35–50; and 39 percent were older than 50.

In Palm Beach County, there were 124 reports of alprazolam detected in deceased persons during 2010 (exhibit 19), of which 56 percent were considered a lethal dose. Ninety-six percent of the reports involved at least one other drug. There were also 62 reports of diazepam detected in deceased persons in Palm Beach County; 44 percent were considered to be the cause of death; 94 percent of these deaths involved at least one other drug. These 186 combined mentions for alprazolam and diazepam represented a 38-percent decrease over the 299 reports in 2009, and followed a 7-percent increase from 2008 to 2009. None of the combined mentions in 2010 involved a person younger than 18; 11 percent of the decedents were between the ages of 18 and 25; 26 percent were age 26–34; 32 percent were age 35–50; and 31 percent were older than 50.

The DAWN weighted estimate of 1,587 ED visits for nonmedical use of prescription benzodiazepines in Miami-Dade County during 2009 (exhibit 7 above) accounted for 13 percent of all ED reports among 6 substances (4 illicit drugs—cocaine, marijuana, MDMA, and methamphetamine as well as nonmedical use of prescription opioids and benzodiazepines). The number of prescription benzodiazepine-involved ED visits was stable with the 1,524 such visits in 2008. The Miami-Dade per capita rate of 63.4 nonmedical benzodiazepine ED visits per 100,000 population compared to the national rate of 101.9 in 2009 (exhibit 20). Alprazolam was the most frequently cited benzodiazepine in nonmedical cases totaling 741 ED visits in 2009 representing a 26-percent increase in such cases since 2007. The Miami-Dade per capita rate of 29.6 nonmedical alprazolam ED visits per 100,000 population was below the national rate of 36.7 in 2009.

**Exhibit 20 Rates per 100,000 of Nonmedical Benzodiazepines
Emergency Dept. Reports for Miami-Dade
County, Florida and USA: 2004-2009**



Note: For Miami, there were no statistically significant changes. For the USA, there was a statistically significant 116 %-increase from 2004 to 2009 and 47%-increase from 2007 to 2009. No significant testing of data for 2005 and 2006 versus 2009 was available.

SOURCE: US Dept HHS-SAMHSA, CBHSQ: DAWN Emergency Dept. Estimates..

The DAWN weighted estimate of 2,900 ED visits for nonmedical use of prescription benzodiazepines in the Ft. Lauderdale Division of DAWN comprised of Broward and Palm Beach Counties during 2009 accounted for 21 percent of all ED reports among 7 substances (5 illicit drugs—cocaine, heroin, marijuana, MDMA, and methamphetamine as well as nonmedical use of prescription opioids and benzodiazepines). Between 2008 and 2009 the number of prescription nonmedical benzodiazepine-involved ED visits increased 28-percent in the Ft. Lauderdale Division (exhibit 9 above). The Broward and Palm Beach Counties per capita rate of 95.2 nonmedical benzodiazepine ED visits per 100,000 population was less than the nation rate of 101.9 in 2009. Alprazolam was the most frequently cited benzodiazepine in nonmedical cases totaling 1,480 ED visits in 2009 representing a 35-percent increase in such cases since 2008. The Broward and Palm Beach Counties per capita rate of 48.6 nonmedical alprazolam ED visits per 100,000 population was above the nation rate of 36.7 in 2009. The highest per capita rates in the two Counties for nonmedical alprazolam ED visits were among those aged 25-29 at 151.6 and those aged 21-24 at 105.9.0. These rates were above the national per capita rates of 91.7 for those aged 25-29 and 71.2 for 21-24.

There were 71 admissions for benzodiazepines reported as primary treatment admissions in Miami-Dade County during 2010 or 1.5 percent of the 4,548 total treatment admissions in Miami-Dade County (exhibit 13 above). This total increased from only one admission in 2009. In Broward County, there were 101 primary admissions for benzodiazepines during 2010, or 2 percent of 5,258 primary admissions (including alcohol). This total represents a 115-percent increase over the 47 benzodiazepine admissions in 2009 (exhibit 14 above).

The NFLIS reported 916 alprazolam crime laboratory cases, 57 diazepam items, and 46 clonazepam (*i.e.*, *Klonopin*®) cases during 2010 in the three-county South Florida MSA. There were also 21 lorazepam (*i.e.*,

Ativan®), 9 temazepam (*i.e.*, *Restoril*), and 1 bromazepam (*i.e.*, *Lectopam*®) items. Combined these 1,050 benzodiazepine reports represented 4 percent of all drug items analyzed (exhibit 15 above). There were also 910 “unspecified controlled substance” cases in the 2010 NFLIS report which may include additional prescription benzodiazepine items. In 2009 there were 638 benzodiazepine crime lab samples.

Any lifetime nonmedical use of depressants (with “Xanax®” use as an example in the question) among high school students was reported on the 2010 Florida Youth Substance Abuse Survey by 5.7 percent in Miami-Dade County, 4.7 percent in Broward County, 7.5 percent in Palm Beach County, and 8.2 percent in all of Florida. Results from the same survey for any current nonmedical use of prescription depressants among high school students in the past 30 days was 2.3 percent in Miami-Dade, 1.4 percent in Broward, 2.4 percent in Palm Beach County, and 2.7 percent Statewide.

Nonmedical Use of Other Prescription Drugs: Muscle Relaxants and Zolpidem

Muscle relaxants may be abused in combination with MDMA and other drugs. There were 513 reports of carisoprodol or meprobamate among deceased persons in Florida during 2010, of which 111 (or 22 percent) were considered to be caused by the drug. There were 455 carisoprodol occurrences in 2009 and 415 in 2008.

Weighted DAWN visit estimates for muscle relaxants were not available for Miami-Dade County in 2008 and again in 2009 because the sample numbers were not adequate.

There were 322 DAWN weighted ED visits for nonmedical use of prescription muscle relaxants in the Ft. Lauderdale Division of DAWN comprised of Broward and Palm Beach Counties during 2009. Between 2008 and 2009 the number of prescription muscle relaxant-involved ED visits increased 42-percent in the Ft. Lauderdale Division. The Broward and Palm Beach Counties per capita rate of 10.6 nonmedical muscle relaxant ED visits per 100,000 population was less than the nation rate of 16.6 in 2009. Carisoprodol was the most frequently cited muscle relaxants in nonmedical cases totaling 268 ED visits in 2009 representing a 35-percent increase in such cases since 2008. The Broward and Palm Beach Counties per capita rate of 8.8 nonmedical carisoprodol ED visits per 100,000 population was below the nation rate of 9.8 in 2009.

The NFLIS reported 55 carisoprodol crime laboratory cases for the South Florida MSA in 2010, an increase from the 19 reports in 2009.

Zolpidem (*i.e.*, *Ambien*®) is a medication prescribed for the short-term treatment of insomnia. There were 240 reports of Zolpidem among deceased persons in Florida during 2010, of which 44 (or 18 percent) were considered to be caused by the drug.

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