
DRUG ABUSE IN MIAMI AND SOUTH FLORIDA

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The most dramatic lesson of the current reporting period is, "Pills that may thrill can also kill." The impact of (1) rising prescription drug abuse and (2) the proliferation of MDMA pills is observed in drug deaths and other medical problems. Measures of heroin consequences continue their decade-long increase reaching record levels in Miami-Dade County. In Broward, heroin deaths declined sharply in 2000. In both Counties, oxycodone abuse appears to be skyrocketing based on deaths, media coverage, discussions with addicts, and emergency department data. Cocaine mentions continue to decline while still dominating drug-related consequences. Cocaine is more frequently cited as a secondary rather than primary drug of abuse. Marijuana patterns remain stable with some increases among patients 18-25 years old and declines among those under 18 years. Abuse of Gamma hydroxybutyrate (GHB) and its analogs resulted in increased medical emergencies in 2000 compared to 1999. GHB was detected in 23 decedents Statewide in 2000 and identified as the cause of death in 6 cases. Indicators of increases in MDMA abuse are described in emergency department visits, deaths, and huge local drug confiscations

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INTRODUCTION

1. Area Description

Located in the extreme southern portion of the Florida peninsula, Miami-Dade County has a population of nearly 2.6 million that is 56 percent Hispanic, 21 percent white, 21 percent African-American, and 2 percent Asian

/Pacific Islander. Miami is its largest city, with 360,000 residents. More than 100,000 immigrants arrive in Florida each year, half of establish residence in Miami-Dade County.

Broward County is the second most populated county in Florida, with a 1999 estimated

population of nearly 1.5 million that has increased by 20 percent since 1990. It is situated just north of Miami-Dade County and just south of Palm Beach County. The population is roughly 75 percent white, 15 percent African-American, and 9 percent Hispanic.

Approximately 25 million tourists visit the area annually. The region is a hub of international transportation and the gateway to commerce between the Americas, accounting for sizable proportions of U.S. trade: 40 percent with Central America, 35 percent with the Caribbean region, and 17 percent with South America.

Several factors impact the potential for drug abuse problems in South Florida:

- Proximity to the Caribbean and Latin America exposes South Florida to the entry and distribution of illicit foreign drugs destined for all regions of the United States. Haiti has emerged as a major link with Colombian traffickers.
- South Florida is a designated High Intensity Drug Trafficking Area (HIDTA) and a leading U.S. cocaine importation center. It has also become a gateway for Colombian heroin in the 1990s. Millions of methylenedioxymethamphetamine (MDMA) (“ecstasy” or “XTC”) tablets originating in the Benelux countries enter the United States here.
- Extensive coastline and numerous private air and sea vessels make it difficult to pinpoint drug importation routes into Florida and throughout the Caribbean region.

2. Data Sources and Time Periods

An overview of drug abuse trends in South Florida is presented by drug category for both counties, including separate indicator data for each gathered from these sources:

- **Florida Medical Examiner (ME) Commission**—Florida drug deaths (1989–2000)
- **Florida Poison Information Center/ Miami** — Drug-Related Medical Emergencies in South Florida(1999-2001)
- **DEA Drug Intelligence Group**— Availability, price, and purity data for South Florida

Miami-Dade County

- **Miami-Dade County ME Department**— Drug-induced deaths (1990–2000)
- **Substance Abuse and Mental Health Services Administration (SAMHSA)’s Drug Abuse Warning Network (DAWN)**—Emergency department (ED) drug mentions Mid-Year 2000 preliminary data
- **Drug Enforcement Administration (DEA)’s Domestic Monitor Program (DMP)**—Heroin price and purity (through First Quarter 2000)

Broward County

- **Broward County ME Department**— Drug deaths (1995–2000)
- **Spectrum Programs Inc.** – Broward County addiction treatment data (July 1998 –December 2000)
- **Broward General Medical Center (BGMC), ED Toxicology Screens**

Compilation—A daily review of all ED charts at BGMC conducted to gauge drug-abuse-related ED cases. In addition, from July 1999 to December 2000, The Broward County Commission on Substance Abuse's Drug Epidemiology Network (DEN) collected and combined BGMC toxicology screens, diagnoses, and patient demographics. This was done to further identify the nature and extent of hospital drug abuse data and to allow for comparisons from the previous 6 months when chart reviews were not performed. Important limitations must be kept in mind when interpreting this data. First, unlike most Broward County hospitals, BGMC receives a disproportionate share of suicidal and psychiatric patients.

- Because many of these patients also abuse drugs and because urine toxicology screens are performed on virtually all of them, it is very likely that BGMC's numbers are higher than what might be seen in other hospitals in the county. In addition, all patients (not just ED patients) on whom urine toxicology screens were performed were evaluated, although most patients were admitted through the emergency department. These data may not accurately extrapolate to the entire county.
- **Broward Sheriff's Office Crime Lab:** reports of illicit substances analyzed 1998/- 2000.
- **The Monitoring the Future Survey Results on Adolescent Drug Use:** Overview of Key Findings, 1999.
- **The Florida Youth Substance Abuse Survey 2000**

DRUG ABUSE TRENDS

This report combines data from the Broward and Miami Drug Epidemiology Networks to provide a regional report for South Florida. The most dramatic change in the last half of 2000 was the identification of wide-scale abuse of pharmaceutical narcotics specifically, oxycodone and/or hydrocodone. This was a pattern first-observed in communities along Interstate 95 from Jacksonville to Miami. Deaths from these two drugs top all others in Florida in the second half of 2000. Other prescription abuse along with MDMA deaths, make "pills" the deadliest drugs in Florida (except for cigarettes). The problem of prescription abuse is particularly intense in Brevard (Melbourne and Cape Kennedy) and Palm Beach Counties on Florida's east coast.

Heroin consequences accelerated in 2000 reaching the highest local levels in history. South Florida's heroin problem is among the fastest growing of any community in the world. Key sources of new heroin users are those already using MDMA, cocaine, and other club drugs.

More than a million MDMA tablets were seized in the first months of 2001 in the two counties. They have been flooding into South Florida for the past two years as the region has emerged as a major transshipment point between Europe and the rest of the United States and South America. There were 59 deaths in Florida during just the last six-months of 2000 in which a methylated amphetamine was detected. That drug group was the cause of death for 25 of those decedents. The per capita rate for MDMA hospital emergency department (ED) mentions in Miami is the second highest in the nation and more than two and a half times the national rate.

Cocaine continues its high rate of drug abuse consequences throughout the region. However, its rate of decline appears to be accelerating as other drugs compete for its customers. They have not stopped using cocaine, but may be using less as they combine it with more and more drugs.

Miami's cocaine epidemic dates back 25 years to 1976. That was the same year of the first Community Epidemiology Work Group meeting. At that time much of society and the media viewed cocaine as an exotic, exciting, new drug, considered chic and hip. Its was considered non-addicting and very safe as long as one could purchase the "real thing." Over the years, the CEWG process would track the severe consequences of cocaine abuse. The first deaths and addiction cases would be reported from Miami. Its popularity grew as the drug flooded into Florida from Colombia and younger people abuse it. Early reports of something called "crack" were identified at the 1985 CEWG meeting. The Work Group also attended a nighttime filming of "Miami Vice" at that same meeting.

Today, the style is South Beach chic, and the new, "safe" drug is "ecstasy" which is starting to kill users who often combined it with many drugs over a single evening and morning.

Again, Miami is the gateway for drugs flooding in, *i.e.*, MDMA from Europe and heroin from Colombia. The region is also at the forefront of identifying serious physical consequences of MDMA's abuse

Hopefully, the rise and fall of MDMA will be faster than the 25-year cocaine epidemic still lingering in a slow decline across South Florida. However the possibility clearly exists for MDMA to set the stage for expanding new heroin and prescription drug abuse epidemics.

Cocaine and Crack

Although local cocaine abuse still outranks most other illicit drug problems in Miami-Dade County, its decline appears to be speeding up. Cocaine was detected in 144 deaths related to its abuse in 2000, representing a 36-percent decline from the 1999 total. Statewide, cocaine-related deaths totaled 1,034 and declined 3 percent. Two-thirds of the Miami-Dade County cocaine-related deaths in 2000 were over 34 years of age. Included in the 144 cases were 30 cocaine-induced deaths in Miami-Dade reported during 2000, compared to 43 deaths in 1999 and 39 in 1998.

Cocaine was the cause of nearly three deaths per month in Broward and close to one hundred Broward General Emergency Department visits per month in the last six months of 2000. Cocaine is still by far the most common cause of illicit substance abuse emergency department visits in Broward and remains the most commonly detected illicit substance at the Broward Sheriffs Office Crime Lab. While most indicators still show a high rate of cocaine use, most of these seem to be declining. There have been fewer deaths, emergency department visits are down slightly, and survey data reveal less young people are using cocaine. The patients seeking addiction treatment and those being treated for cocaine in the emergency department continue to grow older.

In Broward County there were 40 cocaine-induced fatalities in 2000. Cocaine was also detected in 74 additional cocaine-related deaths, representing a 29-percent decline from the 1999 total. Most of the 17 cocaine decedents in the second half of 2000 were white 15/17 (88%) and 12/17 (71%) were male. There were 2/17 (12%) cocaine deaths where the decedents were in their twenties, 5/17 (29%) were in their thirties, 9/17 (53%) were in their forties, and one decedent was in his fifties.

The Greater Miami area had 2,126 DAWN cocaine ED mentions during the first half of 2000 (or a rate of 110 mentions per 100,000 population, triple the national rate of 33 per 100,000). Cocaine ED mentions in Miami decreased just 1 percent between the peak in the last half of 1999 and the first half of 2000. Nationally, there was a 9-percent decrease over the same period.

For the last six months of 2000, a daily review of all emergency department charts at Broward General Medical Center (BGMC) was conducted to gauge illicit substance abuse related emergency department cases. 34,651 charts were reviewed over the 6 month period from July 1-December 31, 2000, and 3.2% or 1107 cases of drug abuse were found. This was an average of approximately 6 per day. Cocaine was clearly the most commonly involved illicit drug, accounting for 581/1107 (52%) of the drug abuse cases. Most of these patients were male 436/581 (75%), 145/581 (25%) were female. Fifty-three percent (309/581) were white, 236/581 (40%) were black, 11/581 (2%) were Hispanic, and 25/581 (4%) were other/unknown. Cocaine using patients seeking emergency department treatment at BGMC were 30yrs of age or older in 77% of these cases. The patient ages were as follows; 15/581 (3%) were less than 20 years old, 115/581 (20%) were in their twenties, 247/581 (43%) were in their thirties, 174/581 (30%) were in their forties, and 30/581 (5%) were fifty years old or older. These ages were very similar to the previous six months. The most common reasons for coming to the ED were as follows; 1., depression/suicidal- 176/581 (30%), 2., psychosis/schizophrenia/hallucinations- 75/581(13%) 3., chest pain/cardiac problems- 60/581 (10%), 4, Dependence/seeking detox 38/581(7%) and 5., gastrointestinal complaints 30/581(5%), and 6. trauma/accidents 19/581 (3%). These reasons for

coming to the ED were very similar to the previous six months. Crack cocaine was specifically mentioned in 232/581 (40%) of the cases. Cocaine was taken in combination with alcohol in 309/581 (53%) of the cases. This dangerous combination forms a co-metabolite cocaethylene, which can dramatically increase toxicity. Another favorite combination involved cocaine and marijuana. A total of 112 cases involved the combination of cocaine and marijuana, which was 19% of all cocaine cases.

Addiction treatment profiles for this report were compiled using data from only one major treatment provider in Broward County, Spectrum (Broward data only). The total # of substance abuse treatment admissions over these time periods were as follows; Jul-Dec '98=3119, Jan-Jun '99=2788, July-Dec '99= 2693, Jan-Jun '00=3443, Jul-Dec '00=2979.

The percent of treatment clients from the Spectrum Program sample citing cocaine at their primary drug of abuse rose from 40 percent of all cases in the second half of 1998 to 26 percent of cases in the last six months of 2000. It had peaked in the second half of 1999 to 47 percent of all cases. Whites accounted for 49 percent of cocaine clients in the second half of 2000, 42 percent were African Americans, and 8 percent were Hispanics. The age of cocaine treatment patients has risen steadily since the second half of 1998. Clients under 18 years of age decline from 6 percent to 1 percent of all cocaine clients from 1998 to 2000, those aged 18-25 declined from 16 percent to 9 percent, patients 26-34 declined from 35 % to 29 %, and the percentage of treatment clients aged 35 and over rose from 44 % to 61 % over the past five semi-annual reporting periods. Cocaine is increasing seen as a secondary drug in treatment and other drug abuse indicators. The implication is that many people are still using and even trying cocaine for the first time. Yet, there is an intentional pattern to use it in combination with other drugs such as MDMA. The concept is that users known cocaine is dangerous and have selected not to use too much of it, while they have ignored the risks of concomitant drug abuse.

Cocaine Availability, Price & Purity

Cocaine is still described as “highly available” in South Florida by DEA Drug Intelligence Division. The cocaine kilogram price range has increased slightly to \$17,000-\$20,000 and rarely as high as \$29,000. This compares to roughly \$14,000-\$20,000 per kilogram in the first six months of 2000. Wholesale kilogram purity is approximately 80-90%, while street level purity is much less. Retail prices for cocaine hydrochloride (powder) remain approximately \$600-\$700 per ounce, and \$40-\$60 per gram. Crack is sold in \$10- \$20 “rocks”.

Also according to the DEA and the South Florida Investigative Support Center (SFISC), distributors continue to defer converting cocaine HCl to crack; instead this is being done at the destination point, perhaps due to concerns over more severe penalties with crack.

Internal body packers of cocaine (individuals who swallow packets of drugs for purposes of smuggling into this country) continue to frequent South Florida International Airports. Virtually all of these cases coming into Hollywood/Ft.Lauderdale International Airport are coming from Jamaica and carrying cocaine. According to US Customs, from October 1999 to September of 2000, sixteen (16) of these individuals were apprehended. From October of 2000 to December 31, 2000 there were an additional 5 cases. Most body packers are usually carrying approximately 100 packets or a

total of approximately 2 lbs. of drugs.

2. Heroin

South Florida's expanding heroin epidemic is linked to the active marketing of South American heroin from Colombia that has been moving into the area since the beginning of this decade. Heroin abuse and its consequences have dramatically and steadily increased since 1992.

New users frequently administer heroin intranasally and are often seen among victims of its consequences including addiction.

In 2000 there were 61 heroin-induced deaths in Miami-Dade County. There were 58 heroin deaths in 1999 following the peak year of 1998 with 68 deaths reported. Heroin was also detected in 11 additional cocaine-related deaths (total of 72 heroin-related deaths) in 2000, representing an 18-percent increase over the 61 heroin-related deaths in 1999. Three-fourths of the 72 heroin deaths in 2000 were over 34 years of age. Statewide, heroin-related deaths totaled 276, a 5-percent increase from 1999.

In the second half of 2000, there were a total of 9 deaths in Broward where heroin was considered a proximate cause of death. This compares with 15 such deaths in the first 6 months of 2000 (8 heroin with cocaine and 7 heroin w/out cocaine). In 5 of the last half of 2000 cases, the combination of cocaine and heroin was determined to have caused these deaths. In the other 4, heroin without cocaine was determined to have caused the decedents demise. Thus in 2000, there were a total of 26 heroin deaths a 40-percent decrease from 1999. There were 40 such deaths in Broward County in 1999, up slightly (8%) from 37 in 1998.

The nine Broward heroin decedents during the last six months of 2000 were all white, a pattern very similar to 1999 (95% white) and 1998 (97% white). They continued to be predominantly male 7/9 (78%) which was also similar to 1998 and 1999. The decedents were in their forties in 5/9 (56%), one decedent was 50, and 3/9 (33%) were in their thirties. In the last half of 2000, there were no heroin deaths involving a teen or a decedent in their twenties

Between 1996 and 2000 local heroin ED mentions dramatically outpaced national increases. According to DAWN data, heroin ED mentions for Miami-Dade increased significantly by 24 percent between the first halves of 1998 and 1999 (from 365 to 453 mentions) and then up 51 percent in the first half of 2000 to 682 mentions. The rate of heroin ED mentions per 100,000 population reached 35 compared with the national rate of 19. The rate of increase for the first half of 2000 over the previous six-months was 47 percent in Miami and 3 percent nationally.

In Broward, heroin emergency department visits are still predominantly older white males experiencing withdrawal or seeking detoxification. Based on a daily review of all emergency department charts at Broward General Medical Center for the time period January-June 30, 2000, there were a total of 63 heroin cases and 2 methadone overdoses. This was up slightly from the previous six months where there were 49 heroin and 5 methadone cases. Forty-nine of the 65 cases (75%) were male, and 53/65 (82%) were white. There was only one teenager, 9/65(14%) patients

were in their twenties, 35/65 (54%) in their thirties, 16/65(25%) in their forties, and 4/65 (6%) were fifty years old or older.

Addiction treatment profiles for this report were compiled using data from only one major treatment provider in Broward County, Spectrum (Broward data only). The total # of substance abuse treatment admissions over these time periods were as follows; Jan-Jun '99= 2788, July-Dec '99= 2693, Jan-Jun '00=3443, Jul-Dec '00 n=2979)

From Jan-Jun 1999, a total of 34 patients sought addiction treatment and listed heroin as the primary drug of abuse; this represents 1% of all patients seeking addiction treatment for any drug during this time period.

From Jul-Dec 1999, a total of 30 patients sought addiction treatment and listed heroin as the primary drug of abuse; this represents 1% of all patients seeking addiction treatment for any drug during this time period.

From Jan-Jun 2000, a total of 65 patients sought addiction treatment and listed heroin as the primary drug of abuse; this represents 2% of all patients seeking addiction treatment for any drug during this time period.

From Jul-Dec 2000, a total of 55 patients sought addiction treatment and listed heroin as the primary drug of abuse; this represents 2% of all patients seeking addiction treatment for any drug during this time period. The distribution of races/ethnicity among those reporting heroin as primary drug of abuse during these four time periods were white 63-83%, black 3-12%, and Hispanic/others 11-27%.

According to the DEA, 99% of Florida's heroin is from South America, and the Miami International Airport is now the number one importation site for heroin into the United States. Throughout the rest of the country, it is estimated that 65% of the heroin is Colombian.

Street level purity in South Florida is usually around 18%, however, in the Orlando area the purity is reportedly much higher at 40-70%. The price of 1kg of heroin (wholesale, approx. 90% purity), has decreased to about \$55-65,000 down from \$65,000-\$85,000 in 1999; the previous year it cost \$120,000 per kg.

3. Prescription Narcotics

Oxycodone is a semisynthetic opioid oral analgesic. It is a prescription pain medication and schedule II controlled substance that has gotten a lot of media attention recently. Oxycodone (usually 5-10mgs) is found in a variety of brand and generic medications alone or in combination with acetaminophen or aspirin such as Tylox, Percocet, Percodan, Roxicet, Roxicodone, Endocet, Endocodone, Endodan etc. In addition, there is a sustained release product, which comes in 10, 20, 40, 80, and 160 mgs tablets under the brand name OxyContin.

OxyContin, which was approved by the FDA in this country in 1995, is designed to deliver oxycodone in a controlled release manner over a twelve-hour period. However, if the OxyContin pill is crushed up and snorted or injected the full effect of the potentially lethal dose is immediate. If

the pill is chewed up and swallowed, the effects are also immediate. Apparently, these are the ways the drug is being abused. OxyContin tablets are selling for about \$1 per milligram.

Nationally, oxycodone emergency department drug mentions increased 89% from 3,395 in 1993 to 6,429 in 1999. In the first half of 2000 these mentions leaped to 5,261, representing a 72-percent increase since the first half of 1999.

Throughout Florida there were 152 overdose deaths directed caused by oxycodone or a related opioid analgesic, hydrocodone, during the last six months of 2000. There was a total of 378 medical examiner deaths during the second half of 2000 in the State where oxycodone/hydrocodone was identified. There were 54 of these cases in Miami-Dade and 61 in Broward County from January to December 2000. There have been 11 such deaths in Miami-Dade and at least 8 in Broward during just the first Quarter of 2001.

In the second half of 2000, there were 40 Broward County deaths where oxycodone was detected, 29/40 of these were drug overdoses (7 of the 40 cases were still pending, with the manner and cause not finalized). In 24 of the 29 overdose cases, oxycodone is specifically mentioned as a cause of death. OxyContin was specifically mentioned in 7 of the 24 cases. Crushing of tablets was not discussed any of the medical examiners files on these cases. There was one teenager (4%), four decedents were in their twenties (17%), six decedents were in their thirties (25%), twelve decedents (50%) in their forties, and one decedent (4%) was in his fifties. Twenty-one of the twenty-four Broward oxycodone overdose decedents were white (88%), the three others were black (13%). Interestingly, in 8/24 (33%) cases, carisoprodol (Soma) was also involved so this appears to be a common co-ingestant.

Since 1999, South Florida hospitals in both Counties have reported at least 221 oxycodone overdoses, of which 150 occurred in 2000 and 40 in the first Quarter of 2001. During the last six months of 2000, there were 33 patients and 34 oxycodone overdose cases treated at BGMC (one patient was treated twice). There were 21 men and 12 women, 27/33(82%) were white, and the ages of these patients ranged from 18-61 years old. There were two teenagers, eight patients in their twenties, nine in their thirties, nine in their forties, and five were fifty years old or older. OxyContin was specifically mentioned in 21/34(62%) of these cases. The route of administration was usually oral. However, there was one case where the OxyContin had been crushed up snorted and injected, another where it was injected, and one other where it may have been snorted. In many of these cases it is unclear if the drug was chewed up and swallowed or if taken appropriately—swallowed without chewing. In 20 of these cases the reason for using the oxycodone was dependence/withdrawal. In 5 cases it was clearly for recreational use, in six other cases the oxycodone was being used for other psychic effects (such as excessive amounts for pain etc.), and in 3 cases the oxycodone was taken in a suicidal gesture. Seven patients presented with central nervous system depression, but there was no one who had respiratory depression requiring intubation. Seven patients received naloxone. Six patients were admitted, two patients left against medical advice, and the remaining patients were treated and released from the emergency department. Co-ingestants in these cases include benzodiazepines in 15/34 (44%), other opiates including heroin in 10/34 (29%), cocaine in 9/34 (26%), hydrocodone in 4/34(12%), marijuana in 3/34 (9%), carisoprodol in 2/34 (6%), and one case of barbiturates.

4. Marijuana

Marijuana problems continue to rise as seen in the most recent DAWN ED data. There were 709 marijuana mentions in Miami-Dade County during the second half of 2000. This represents a 21-percent increase over the previous reporting period. Nationally, there was an 8 percent increase. The per capita rate in Miami-Dade was 45 mentions per 100,000 population, up from 37 the previous semi-annual period. The rate for the nation was 19 up from 18 in the prior 6 months. These mentions include the drug's use as the only drug taken and marijuana's use with other drugs. The recent increase in ED mentions may be driven by use of marijuana among users of cocaine and MDMA. Marijuana is increasingly cited as a club drug that may be used prior to going to raves or clubs and at after-event parties. The shift to club drug use at home and private parties may facilitate more use of marijuana in combination with other drugs.

For the last six months of 2000, a daily review of all emergency department charts at Broward General Medical Center (BGMC) was conducted to gauge illicit substance abuse related emergency department cases. 34,651 charts were reviewed over the 6 month period from July 1-December 31, 2000, and 3.2% or 1107 cases of drug abuse were found. This was an average of approximately 6 per day.

Of these, 190 (17.2%) involved marijuana as the only illicit drug involved. This was up slightly from 16.2% in the previous 6 months.

Seventy-four percent or 141/190 were male, 30/190 (16%) were teenagers, 51/190 (27%) were in their twenties, 56/190 (29%) were in their thirties, 41/190 (22%) were in their forties and 12/190 (6%) were fifty years old or older. The races of these patients were as follows; 115/190 (61%) white, 52/190 (27%) black, 3/190 (2%) Hispanic, and 20/190 (11%) other/unknown. The ages and sex distribution remained very similar to the previous six months, however, the percent of marijuana cases involving white patients increased from 44% in July-Dec 1999 to 56% in Jan-Jun 2000 to 61% in July-Dec 2000.

There were also 112 additional cases of marijuana in combination with cocaine (7 of which also involved heroin) which was discussed briefly in the cocaine section of this report. These 112 cocaine/marijuana cases accounted for 112/581 (19%) of all the cocaine cases and 112/316 (35%) of all the marijuana cases. Marijuana was also found in combination with ecstasy/amphetamine in 6 additional cases, in combination with GHB in 6 additional cases, and in combination with heroin (without cocaine) in 2 additional cases. The total number of drug abuse cases that in some way involved marijuana was 316/1107 (29% of all illicit substance abuse cases). In 74/190 (39%) alcohol was the only documented co-ingestants with marijuana, and alcohol was involved in 60/112(54%) of the cocaine-marijuana combination cases.

Marijuana Treatment Profiles

There were 1,084 primary marijuana treatment admissions in the second half of 2000. This represents 36 percent of all admissions, down from 47 percent in the second half of 1999. Marijuana

treatment data for the past four semi-annual reporting periods, are summarized below:

From Jan-Jun 1999, a total of 1208 patients sought treatment and listed marijuana as the primary drug of abuse; this represents 43% of all Broward patients seeking addiction treatment for any drug during this time period.

From Jul-Dec 1999, a total of 1,259 patients sought treatment and listed marijuana as the primary drug of abuse; this represents 47% of all Broward patients seeking addiction treatment.

From Jan-Jun 2000, a total of 1,314 patients sought treatment and listed marijuana as the primary drug.

From Jul-Dec 2000, a total of 1,084 patients sought treatment and listed marijuana as the primary drug of abuse; this represents 36% of all Broward patients seeking addiction treatment.

Prices for Miami commercial grade marijuana, often called “regs,” have remained fairly stable in Florida at \$700–\$1,000 per pound and \$200 –\$400 per ounce. The purity rate is estimated between 4percent to 10 percent. Hydroponic pot, called “crippy,” sells for \$1,600–\$3,700 per pound and more than \$500 per ounce. Its purity is estimated to range from 8 percent to 26 percent. While imported marijuana continues to move into the region, the much of readily available marijuana in South Florida appears to have shifted from imports to domestic produce, approximately 30 percent of which is grown in sophisticated, fully automatic, indoor hydroponic operations. The availability of Jamaican hash oil continues to be reported

5. Other Depressants

The anesthetic gamma hydroxybutyrate (GHB) is commonly abused substance in South Florida. The drug is known by numerous street names including liquid X, G, scoop, Somatomax, Georgia Home Boy, etc., and there are several compounds, which are converted in the body to GHB. Two important precursors to GHB that are being abused with increasing frequency are gamma butyrolactone (GBL) and 1,4 Butanediol (BD).

Gamma butyrolactone containing products may have ingredients listed as *furanone*, *furanone dihydro*, *4-butyrolactone*, *dihydro-2 (3H)- furanone dihydro*, *tetrahydro-2-furanone*, and *butyrolactone gamma*. Brand name examples of gamma butyrolactone include Blue Nitro, Renewtrient, GH Revitalizer, Gamma G, Remforce, Firewater, ReActive, Rest-eze, Beta-Tech, Thunder, Jolt, and Verve.

Butanediol (BD) containing products may list active ingredients as *tetramethylene glycol*, *sucol B*, *1,4-butylene glycol*, *butane-1, 4diol*, *butylene glycol*, and *1,4-tetramethylene glycol*. Some brand names of BD containing products include, Zen, Serenity, Somatopro, InnerG, NRG3, Enliven, Growth Hormone Release Extract (GHRE), Thunder Nectar, Weight Belt Cleaner, Rest-Q, X-12, Dormir, and Amino Flex, Orange FX, Rush, Lemon fX Drop, Cherry fX, Bomb, Borametz, Pine Needle Extract, Promusol, and BVM. Artfully worded labels often say that this product does not contain GHB or 2(3) furanone dihydro. In addition, these labels may state that

this product is a cleaner and that it is harmful if swallowed. However, it is sold in health food stores with dietary supplements, and a 32oz bottle typically sells for \$40- \$70. This is similar to what GBL and GHB containing products were selling for and far out of proportion with what most reasonable people would pay for a “cleaner”. One local example of a BD containing product sold as an extremely expensive “cleaner” is White Magic produced by A.C.I. Inc. of Dania Beach Florida.

These products have become popular at the “rave” scene, are commonly mixed with alcohol, have been implicated in date rapes and other crimes, have a short duration of action, and are not easily detectable on routine hospital toxicology screens.

During the last six months of 2000, the Broward General Medical Center Emergency Department treated 34 people with GHB or GHB precursor overdose and one GHB withdrawal case. This compares with 43 cases in the previous 6 months and a total of 48 for the entire 1999 year. So that there was a 63-percent increase in GHB emergency department cases in 2000 compared with 1999. In addition, there were 3 case of GHB withdrawal in 1999 and there was one withdrawal case treated at BGMC Jul-Dec 2000 (Exhibit 10).

Alprazolam (Xanax) and (Clonopin) have replaced flunitrazepam (Rohypnol) among adolescents according to Poison Information Center calls. There were a total of 426 calls for all drugs among them nearly one-third (or 138) were for alprazolam and 68 were for Clonopin with 120 for other benzodiazepines in the five months from June to October 2000.

6. Other Stimulants

MDMA, (3,4 –Methylenedioxymethamphetamine), also known as Ecstasy is a hallucinogenic amphetamine which has become popular as a club drug at Raves. The psychoactive, synthetic, DEA Schedule I drug has gained the reputation as a “hug drug” which can promote empathy, relaxation, and sexuality. Many indicators such as crime lab statistics, drug confiscations in the area, and national survey data point to an increased abuse of this drug. For the first time, in 2000, more teens abused ecstasy than cocaine!

Each pill generally contains 75-125mgs of MDMA in a 300mg pill. Wholesale prices in the United States are approximately \$8/tab but they retail in clubs and “raves” for \$20-\$30.

Law Enforcement

One of the largest ecstasy drug busts ever in this country happened in November of 2000 in Hollywood and Ft. Lauderdale where DEA agents seized 720,000 tablets worth an estimated \$14 million dollars. Agents said the shipment had been flown from Amsterdam in the Netherlands. Ecstasy seizures from October to December of 2000 at Miami Intl Airport (MIA) surpassed the nationwide total for all of 1997 and they exceeded the MIA totals for the past two years.

In addition, an adulterant to methylenedioxymethamphetamine is being sold as ecstasy in Florida and was responsible for at least 6 deaths in Florida. One 19-year-old woman died in Lake

County in August after ingesting PMA, which was sold as ecstasy to her probably in the Orlando area. Her body temperature was 104 degrees five hours after her death.

While this adulterant, paramethoxyamphetamine (PMA) has not been detected among Broward decedents, it has been found in pills sold in Broward as per the BSO Crime Lab. PMA appears to produce serious complications at a higher rate than other "ecstasy" formulations.

Convulsions, agitated delirium, cardiac arrhythmias, and extremely high body temperature are commonly seen with this.

BSO Crime Lab

As of January 1, 2000, the BSO Crime Lab began to report out MDMA separately. In the last six-months of 2000, MDMA accounted for 110 cases, which was down slightly from 144 in the previous 6 months. For comparison, in the last six months of 2000, heroin only accounted for 90 cases, LSD accounted for 15 cases, methamphetamine accounted for 8 cases, Ketamine accounted for 14 cases, and GHB/GBL accounted for 3 cases. So the BSO Crime lab worked more Ecstasy cases than heroin, LSD, and GHB combined.

In addition, the BSO Crime Lab worked 8 cases involving methamphetamine during the last six months of 2000 which compares to 15 cases in the first six months of 2000.

Hospital Cases

Hospital cases involving ecstasy can be divided into three major categories; 1. Those where ecstasy is specifically mentioned in the medical record and the patient tests positive for amphetamines (there were 7 of these cases July 1-Dec 31, 2000), 2. Those where ecstasy is mentioned but the tox screen is either not obtained or negative for amphetamines (there were 15 of these cases July 1-Dec 31, 2000), and 3. Those cases where ecstasy is not specifically mentioned but is suspected based on circumstances and the urine tox screen is positive for amphetamines (there were 8 of these cases July 1-Dec 31, 2000).

By totaling all three of these types of cases, there were a total of 30 cases where ecstasy was felt to be involved (over 1 per week) in the last 6 months of 2000. Most were young white kids, 25/30 (83%) were white, 4/30 (13%) were in their teens, 16/30(53%) were in their 20's, and 8/30 (27%) in their 30's, 1 patient was 41, and one patient was 54 years old. Many of the cases involved a combination of ecstasy and some other drug of abuse, including alcohol 11/30(37%), marijuana 12/30 (40%), benzodiazepines (especially alprazolam/Xanax) 4/30 (13%), GHB 9/30(30%), cocaine 8/30(27%). There was one LSD/XTC combination.

The reason for the emergency department visit was altered mental status/unresponsive in 11/30(37%), paranoia or bizarre behavior in 8/30(27%), seizures in 3/30(10%), 4/30 (13%) complained of depression, one patient was assaulted. Most of these patients were treated and discharged from the emergency department, but 7/30(23%) required hospital admission.

Survey data

The use of ecstasy has continued to rise sharply among teens in this country. So that now more American teens use ecstasy than cocaine. Among 8th graders, the percent using ecstasy within the past year rose from 1.7% in 1999 to 3.1% in 2000. Among 10th and 12th graders, the 4.4% and 5.6% in 1999 that had used ecstasy in the past year rose to 5.4% and 8.2% respectively.

Deaths

For the last six months of 2000, there were two deaths in Broward County involving young people using ecstasy. The first one involved a 34-year-old white male who died in August of 2000. He was driving a Honda Ninja motorcycle at about 45 mph in a 35-mph speed zone, when he collided with a vehicle pulling out onto the road. He was pronounced dead on the scene. A toxicology screen done at autopsy revealed a MDMA level of 0.67 milligram per liter of heart blood, and a positive urine screen for MDMA. No alcohol or other toxins were detected. In this case, the cause of death was "multiple blunt trauma" and the manner of death was ruled a traffic accident. It is difficult to say to what extent his ecstasy use contributed to his death, but it was not considered a proximate cause.

The second death was also mentioned in the section on GHB. A 29-year-old white male died in July of 2000 from combined drug toxicity of oxycodone, ecstasy, and GHB. Both MDMA and its metabolite MDA were detected on autopsy along with GHB and oxycodone.

7. Hallucinogens

LSD or lysergic acid diethylamide is a synthetic hallucinogen, which was initially popularized in the 1960's in the United States. It had been usually abused orally in small tablets called microdots in thin squares of gelatin (windowpanes) and/or blotter paper, and is not easily detected on most hospital urine toxicology screens. . " The drug became re-popularized in the 90's at lower doses as a stimulant and "mild" hallucinogen.

Most recently the drug has appeared in gelatin capsule dose forms. These are often sold in sophisticated bubble packaging in bright colors at Rave events. Names related to the color of the gel capsules are used for LSD such as, "yellow jelly."

Hospital Cases

In the last six months of 2000, there were only 3 cases of LSD abuse seen at BGMC Emergency Department. There were two patients in their 20's and one patient who was 33 years old. Two LSD users were white and one was black, all were male. In one case ecstasy was co-ingested, in one case marijuana was also used, and in one case cocaine was also used. All three of the patients presented because of bizarre behavior and/or hallucinations.

BSO Crime Lab

There were 147 "hallucinogen" cases worked by the BSO Crime Lab from July 1- Dec 31, 2000, however, there were only 15 LSD cases worked.

Case Reports: Broward General Medical Center Jul-Dec 2000

During the last six months of 2000, there were several interesting cases that warrant further discussion below.

GHB Withdrawal

In the six-month period of July-December 31, 2000 there was one known GHB withdrawal case treated at BGMC. This was a 34-year-old white Hispanic woman with a history of a seizure disorder who came into BGMC with severe agitation in September of 2000. She had been brought over by Fire Rescue from Broward Addiction Recovery Center (BARC) with nausea & vomiting and withdrawal symptoms for several days. She had been taking GHB in large and frequent doses for 2 years and then had stopped suddenly 2 days prior. She denied using alcohol but did say she'd been taking alprazolam (Xanax), she required physical restraints, lorazepam, and phenobarbital and was admitted to critical care where she recovered over several days and was discharged.

“Hammerheading”

A disturbing and particularly hazardous use of pharmacology apparently is being employed by young people and resulting in emergency department visits at Coral Springs Medical Center. An emergency medicine physician at Coral Springs reported this anecdotal information. “Hammerheading” involves the combination of ecstasy with or without LSD and Viagra. Adolescent and young adult males are using the combination. The enhanced tactile stimulant properties of the hallucinogenic amphetamine MDMA or Ecstasy in combination with the sildenafil (Viagra) are being abused for their pro-sexual effects. The “hammerhead” term describes the severe headache that the combination can cause and the “hard as a hammer” prolonged erection.

Sustained Release Serotonin

Another disturbing display of street pharmacology is being employed in the Coral Springs area. This involves the combination of ecstasy with or without LSD, selegiline, and fluoxetine (Prozac). The idea here is to maximize the serotonin releasing properties of MDMA by inhibiting its metabolism with selegiline (a monoamine oxidase inhibitor), and then inhibiting the reuptake of serotonin with a selective serotonin reuptake inhibitor like fluoxetine (Prozac). This can produce a

longer lasting high as serotonin is the neurotransmitter thought to be responsible for the euphoric effects of MDMA. However, it would be difficult to imagine a more effective way of precipitating the life-threatening serotonin syndrome. Again much of this information is being disseminated via the Internet.

Carisoprodol (Soma)

Carisoprodol (Soma) is a non-scheduled muscle relaxant that is metabolized to meprobamate, which is a schedule IV abuseable substance. Carisoprodol and meprobamate are both central nervous system depressants.

Hospital Cases

There were nine emergency department visits for 8 patients (one patient came in twice) involving carisoprodol from July 1-Dec 31, 2000.

In general these cases involved slightly older patients, there were no teenagers, 1/9 in their twenties, 4/9 in their thirties, and one forty-one year old who presented twice, 1/9 was 55 years old, and 1/9 was 60. All but one of these patients was white; there were 6 males (one returned once) and two females. Three of the nine Soma cases presented after a suicidal overdose, 3/9 presented to the emergency department because of altered mental status after recreational use, and 3/9 were seeking detoxification. Common co-ingestants with Soma included opiates such as hydrocodone/acetaminophen (Vicodin/Lorcet), oxycodone/acetaminophen (Percocet), propoxyphene/acetaminophen (Darvocet), and oxycodone (Oxycontin). Benzodiazepines, especially alprazolam (Xanax) and diazepam (Valium) were detected in 4/9 and cocaine in 2/9 of these cases.

Deaths

Carisoprodol was mentioned in the medical examiners description of deaths in 9 cases from July 1-December 31, 2000. Many of these were in combination with oxycodone or heroin or both.

Graphs and tables of data discussed in this report as well as a Power Point program are available from the authors or at the Website www.miamicoalition.org