Patterns and Trends in Drug Abuse in Denver and Colorado: January–December 2008

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Introduction

Area Description

Denver, the capital of Colorado, is located slightly northeast of the State's geographic center. Covering only 154.6 square miles, Denver is bordered by several suburban counties: Arapahoe on the southeast, Adams on the northeast, Jefferson on the west, Broomfield on the northwest and Douglas on the south. These areas made up the Denver Population and Metropolitan Statistical Area (PMSA) through 2004, which accounted for 50 percent of the total population.

For this report, both statewide data, and data for the Denver/Boulder metropolitan area were analyzed; the latter includes the counties of Denver, Boulder, Adams, Arapahoe, Broomfield, Clear Creek, Douglas, Gilpin, and Jefferson, and accounts for 56 percent of the total population (2,850,631 out of 5,109,700; 2009 estimates).

Excluding Gilpin and Clear Creek Counties (which are usually left out of Denver metro area statistics), the median age of residents in the Denver area is 35.5. Males comprise 50.7 percent and females 49.3 of the population. Ethnic and racial characteristics of the area are Whites 71 percent, Black or African-American 11 percent, Native American Indian 1 percent, Asian 3 percent, and Native Hawaiian and Other Pacific Islanders less than 1 percent. Hispanics or Latinos of any race compose 35 percent of the area's population.

Two major Interstate highways, I-25 and I-70 intersect in Denver. I-25 runs north-south from Wyoming through New Mexico, and I-70 runs east-west from Maryland through Utah. The easy transit across multiple States via these highways, along with the following other factors, may influence drug use in Denver and Colorado:

- The area's major international airport is nearly at the Nation's midpoint
- A growing population and expanding economic opportunities
- A large tourism industry that draws millions of people to Colorado each year
- Remote, rural areas that are ideal for the undetected manufacture, cultivation, and transport of illicit drugs
- Several major universities and small colleges are in the area
- A young citizenry drawn to the recreational lifestyle available in Colorado

Data Sources

- **Treatment data** are provided by the Drug/Alcohol Coordinated Data System (DACODS), which is maintained by the Division of Behavioral Health (DBH) at the Colorado Department of Human Services. Data for this system are collected on clients at admission and discharge from all Colorado alcohol and drug treatment agencies licensed by DBH. Treatment admissions are reported by the primary drug of use (as reported by the client at admission) unless otherwise specified. Annual figures are given for calendar years (CY) 2001 through 2008.
- **Drug-related emergency department (ED) reports** for the Denver metropolitan area were provided by the Substance Abuse and Mental Health Services Administration (SAMHSA) Office of Applied Studies (OAS) through its Drug Abuse Warning Network (DAWN *Live!*). This includes both unweighted data (i.e., proportions only) for January through December 2008, and weighted data (i.e., rates per 100,000) for CY 2004 through CY 2007. The unweighted data were accessed on and reflect cases received by DAWN as of April 15, 2009 and are subject to

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change in future OAS quality reviews. Because these data were unweighted, they cannot be used as estimates of the reporting area. Only weighted DAWN data released by SAMHSA can be used for trend analysis. To that end, weighted ED trends for selected drugs from 2004 through 2007 were prepared by OAS and are included in this report. The total number of eligible DAWN hospitals for the time period measured was 15, and 9 to 11 hospitals reported monthly during 2008. A "completeness" table appears in exhibit 1. Because a patient may report more than one drug, the number of drug reports may exceed the number of cases. A full description of the DAWN system can be found at <http://dawninfo.samhsa.gov>.

- **Drug-related mortality data** for the City and County of Denver for CY 2003 through CY 2008 are from the Denver Office of the Medical Examiner.

- **Hospital discharge data** for the Denver metro area for 2000–2008 were provided by the Colorado Hospital Association. Data included diagnoses (ICD-9-CM codes) for inpatient clients at discharge from all acute care hospitals and some rehabilitation and psychiatric hospitals. These data exclude ED care.

- **Rocky Mountain Poison and Drug Center (RMPDC) data** are presented for Colorado. The data represent the number of calls (human exposure only) to the center regarding "street drugs" from 2004 through 2008.

- **National Forensic Lab Information System (NFLIS) data** are presented for Denver, Jefferson and Arapahoe Counties for CY 2008. The NFLIS is a Drug Enforcement Administration program through their Office of Diversion Control that systematically collects drug identification results and associated information from drug cases analyzed by federal, state and local forensic laboratories.

- **Additional drug specific crime lab statistics** for 2001 through 2008 were obtained from the Denver Crime Lab, Denver Police Department.

- **Statistics on seized drug items** were obtained from *Colorado Fact Sheet Reports* published by the Drug Enforcement Administration (DEA).

- **Statistics on prescriptions filled** for Denver residents by drug type from the 3rd quarter 2007 through the 4th quarter 2008 were obtained from the Colorado Prescription Drug Monitoring Program (PDMP), Colorado Department of Regulatory Agencies, Division of Registrations, Board of Pharmacy.

- **Availability, price data** were obtained from the March 2009 National Drug Intelligence Center's report, *National Illicit Drug Prices, December 2008.*

- **Intelligence data** were obtained from the Denver Epidemiology Work Group including clinicians, outreach workers, researchers, medical examiner's office staff, public health and regional and local law enforcement officials (see exhibit 20).

- **HIV/AIDS data** were obtained from the CDPHE and are presented from 2001 through September 2008.

- **Population statistics** were obtained from the Metro Denver Economic Development Corporation, Colorado Demography Office, Census 2000, including estimates and projections, and <factfinder.census.gov>.

DRUG ABUSE PATTERNS AND TRENDS

Cocaine

Of the five major drugs of cocaine, heroin, marijuana, methamphetamine, and other opioids; cocaine ranked third in statewide and second in Denver metro area treatment admissions, first in statewide calls to the RMPDC, first in the proportion of Denver metro area ED visits, first in Denver County mortality and hospital discharges, and first in drug samples analyzed in Denver metro area crime labs. However, despite the high ranking in virtually all the indicators, cocaine trends were either stable or slightly downward.

During 2008, cocaine was reported as a primary drug in 19.7 percent of treatment admissions (excluding alcohol) statewide (exhibit 2). Since 2000, cocaine comprised 18.3 to 21.1 percent of statewide admissions each year, and through 2002, was second to marijuana in volume of treatment admissions. Since 2003, methamphetamine admissions have exceeded cocaine admissions.

In the Denver metropolitan area, cocaine was reported in 22.0 percent of treatment admissions (excluding alcohol) during 2008 (exhibit 3). While cocaine surpassed heroin in treatment admissions in 2003, methamphetamine admissions slightly exceeded cocaine admissions in 2005, but cocaine

surpassed methamphetamine again in 2006, 2007 and 2008 admissions.

Statewide, the proportion of male cocaine admissions rose from 55.4 percent in 2000 to 61.5 percent in 2004 and declined to 57.1 percent in 2008 (see exhibit 4). Likewise, in the Denver metropolitan area, the proportion of male cocaine admissions increased from 50.8 percent in 2000 to 62.9 percent in 2004, and declined to 60.3 percent in 2007. In 2008, males comprised 56.0 percent of Denver area cocaine admissions (exhibit 5).

Historically, Whites have accounted for the largest proportion of cocaine admissions statewide (44.0 percent overall, 2000 through 2008). However, the proportion of Hispanics/Latinos, which is 32.0 percent of admissions overall, has been mostly on an upward trend from 27.4 percent in 2001 to 34.6 percent in 2008. Likewise, in Denver, the proportion of Hispanics/Latinos increased almost steadily from 23.0 percent in 2000 to 32.2 percent in 2007 (28.4 percent overall). In 2008, Hispanic/Latinos comprised 30.6 percent of Denver area cocaine admissions. From 2000 to 2008, the proportion of Black treatment admissions declined from 21.9 to 18.4 percent statewide and from 30.7 to 22.9 percent in the Denver metropolitan area.

Statewide, 1.5 percent of all primary cocaine admissions in 2008 were for persons younger than 18 and 13.4 percent were for persons 18 to 24 (exhibit 4). Roughly 70 percent of cocaine admissions from 2000 through 2005 were for persons age 25 to 44. However, that age group's proportion declined steadily from 76.0 percent in 2000 to 61.7 percent in 2008, while the proportion of those older than 44 increased from 8.1 to 23.4 percent during that time, which may be indicative of a cohort that is aging.

The Denver metropolitan area showed similar trends with a decline in total cocaine admissions of those 25 to 44 (80.0 to 62.8 percent from 2000 to 2008) and a rise in persons older than 44 (7.5 to 24.2 percent from 2000 to 2008). The Denver area also reported a small increase from 9.2 to 11.7 percent in admissions for persons age 18 to 24 from 2000 through 2008.

Statewide, in 2008, the proportions of all admitted clients who smoked, inhaled, or injected cocaine were 61.5, 31.2, and 5.3 percent, respectively (exhibit 4). The proportion that smoked has been on the rise from 2000 (57.9 percent) to 2007 (58.3 percent) to 2008 (61.5 percent). From 2002 through 2007, the proportion inhaling cocaine increased from 25.7 to 33.0 percent. In 2008, the proportion inhaling cocaine decreased slightly to 31.2 percent. The proportion injecting fell from 12.0 in 2002 to 5.3 percent in 2008.

The Denver area proportions in 2008 were 57.6, 36.4, and 3.9 percent respectively of cocaine users who smoked, inhaled, or injected the drug (exhibit 5). However, while smoking has been fairly stable statewide, in the Denver area, the proportion of cocaine smokers declined steadily from 68.8 percent in 2000 to 55.9 percent in 2007. In 2008, there was a slight increase to 57.6 percent for cocaine smokers in the Denver area. Compared with Colorado overall, the Denver area had a more dramatic rise in inhaling cocaine (from 21.8 percent in 2002 to 36.4 percent in 2008) and a larger decline in injecting (11.9 to 3.9 percent from 2002 to 2008).

Treatment data show that cocaine users most often use alcohol as a secondary drug (exhibits 4 and 5), and treatment providers have indicated that marijuana is commonly used with cocaine to enhance its effects or lessen the effects of withdrawal.

In addition to traditional demographics, the proportion of users entering treatment for the first time (persons with no prior treatment episodes) as well as those first time users who had been using less than 3 years (new users) were examined.

Statewide, the proportion of first-time treatment admissions (those having no prior treatment episodes; first-timers) declined from 36.0 percent in 2000 to 33.4 percent in 2008. In the Denver area, first-timers increased from 29.4 percent of 2000 cocaine-related admissions to 34.4 percent in 2008.

Statewide, around 18.9 to 20.9 percent of first-time cocaine admissions had been using less than 3 years from 2000 through 2004. This proportion increased to 24.2 percent in 2005 and again to 25.8 percent in 2006, but declined to 20.0 percent in 2007. In 2008, the decline continued to 17.1 percent (exhibit 6). In the Denver area, the proportion of new users in treatment increased from 16.0 percent in 2003 to 23.8 percent in 2006, but declined sharply to 17.3 percent in 2007 and even further to 14.9 percent in 2008.

In 2008, first-time cocaine admissions statewide and for Denver only reported average onset ages of 22.8 and 22.9, respectively (both had a median age of 21.0, exhibit 6). From 2000 onward, the mean age of onset for first-time admissions was between 21.7 and 23.8 statewide and between 22.2 and 23.8 in the Denver metropolitan area.

In 2008, the mean number of years from reported onset of cocaine use to the first treatment episode was

12.1 years for statewide admissions and 13.1 years for Denver area admissions (exhibit 6), an increase from 10.6 years (for both State and Denver area admissions) in 2004. Before 2004, the mean time to enter treatment remained between 10.0 and 10.2 years statewide and 10.0 and 10.8 years in the Denver metropolitan area.

Excluding alcohol, cocaine accounted for the most illicit drug-related ED reports in the unweighted DAWN *Live!* data for the Denver area in 2008. There were 2,996 ED reports for cocaine, which comprised 37.5 percent of illicit drug ED reports (exhibit 7). Also, the Denver metro area rate for cocaine ED visits is compared to that of the entire US. The Denver rate more than doubled from 92.9 to 204 visits per 100,000 from 2004 to 2007. The US rate increased by only 12.3 percent during the same time period (from 161.9 to 181.8 per 100,000) and was substantially behind the Denver rate in 2006 and 2007 (exhibit 7a).

Excluding alcohol, cocaine was the most common drug found in Denver drug related decedents from 2003 to 2008 (exhibit 8). However, as a proportion of total decedents, cocaine increased from 38.1 percent in 2003 to 50.3 percent in 2006, but declined to only 28.3 percent in 2008. Likewise, cocaine in combination with other drugs (i.e., morphine, codeine, alcohol, and heroin) was among the most common combinations found in Denver drug related decedents in the 2003 to 2008 time period (exhibit 8a).

Cocaine has been second only to alcohol in Denver drug-related hospital discharges since 2000, and cocaine-related hospital discharges rose relatively steadily from 2000 (241 per 100,000) through 2006 (324 per 100,000), but declined to 282 per 100,000 in 2007 and to 258 per 100,000 in 2008 (exhibit 9).

During the 2004 to 2008 time period, cocaine was second only to alcohol in four of the five reporting years in the number of "street drug" calls to the Rocky Mountain Poison and Drug Center. Only in 2005, did cocaine drop to number three after methamphetamine. During the five-year time period, the number of cocaine calls remained relatively stable (exhibit 10).

Federal drug seizures for cocaine across Colorado (exhibit 11), after decreasing from 65.5 kilograms (kgs) to 36 kgs from 2003 to 2004, increased substantially in 2005 (131.5 kgs) and 2006 (135.1 kgs), declined sharply in 2007 (44.0 kgs), but rebounded somewhat to 52.6 kgs in 2008.

Drug samples analyzed in federal, state and local forensics labs and reported to the Drug Enforcement Administration's (DEA) National Forensic Lab Information System (NFLIS) are shown for 2008 for the Denver area (in this case consisting of Denver, Arapahoe, and Jefferson counties) compared to all of the US (exhibit 13). As indicated, cocaine samples were the most common among the top 25 drugs analyzed in the Denver area comprising nearly 2 in 5 (39.6 percent) of total as compared to 30.6 percent for the US (ranking second).

Cocaine is supplied primarily by the Mexican polydrug trafficking organizations (DTOs). Large cocaine loads are transported to Colorado from the southwest border and Mexico. From Colorado, much of the cocaine is re-distributed to markets through the US. In late summer 2008, investigative activity began to reveal that the DTOs were experiencing difficulty in consistently obtaining cocaine. Prices began to rise. As cocaine became more difficult to obtain, local distributors began cutting it more (exhibit 12a). This trend has continued into early 2009, with some ounce quantities as low as 20 percent. Traffickers have been repackaging cocaine to make it appear like it was just "broken directly off" a kilogram, and then using a press to repackage after it has been "stepped on". Intercepted conversations indicate that customers are complaining about poor quality.

Events in Mexico, such as increased Mexican law enforcement, and increased military activity and trafficker infighting, have impacted cross border flow of cocaine. Some DTOs wait consistently for weeks at a time to get "loads" across the border. Some Mexican DTOs rent a "stash house" for only one month and then move to a new location.

In the third quarter of 2008, the Denver Police Department Vice and Drug Control Bureau reported increased shootings and three execution style homicides related to the tight cocaine supply specifically and other drugs in general.

Some street outreach workers also report that cocaine street trafficking has increased significantly, along with violence among traffickers.

For several years, the Denver Crime Lab (DCL) has received many cocaine submissions in which levamisole is used as a cutting agent. In fact, the DCL currently estimates that 50% of their cocaine exhibits are cut with levamisole. Levamisole is primarily a veterinary medication used to control worms in livestock. It had been used in the US for treatment of rheumatoid arthritis, and colorectal cancer; but is no longer available for human consumption in North

America. In February 2009, a healthy adult Denver man, who had been using cocaine cut with levamisole, developed mouth pain over 5 days along with fever, chills, and night sweats. Upon further examination, his neutrophil (also called granulocytes which are a type of white blood cell that fights infections) count was found to be zero. His diagnosis was agranulocytosis, an auto-immune disorder, which has recently been linked to levamisole.

Based on conversations with their clients, a few Denver area clinicians report that powder cocaine is easy to obtain and the price remains about the same. However, the predominant views have been that crack cocaine is more available and that powder cocaine is harder to find. They also report that the quality of the powder cocaine has decreased.

Despite the ready availability of crack, clinicians say their clients still see crack as a "poor person's drug with ties to prostitution". In fact, crack is viewed as a "street drug" while powder cocaine is more for the "upscale scene". Some are still concerned about the marketing of powder cocaine to adolescent and young adult inhalers who may fuel an overall increase in cocaine use (see prior discussion of cocaine route of administration among treatment admissions).

One clinician heard that some powder cocaine users addressed the low quality situation by combining powder cocaine and crystal methamphetamine, calling the compound a "high ball". This is usually injected.

Current Denver cocaine price and purity information are presented in exhibits 12 and 12a.

Heroin

Of the five major drugs of cocaine, heroin, marijuana, methamphetamine and other opioids; heroin ranked fourth in both statewide and Denver metro area treatment admissions, fifth in statewide calls to RMPDC, fourth in the proportion of Denver metro area ED visits, third in Denver County mortality, and fourth in drug samples analyzed in Denver metro area crime labs. Overall, heroin trends were mixed with some up, some down, and some stable.

During 2008, heroin was reported as a primary drug in 7.1 percent of treatment admissions (excluding alcohol) statewide and 10.1 percent in the Denver metropolitan area (exhibits 2 and 3). Since 2001, treatment admissions fell from 14.7 to 7.1 percent statewide and from 23.6 to 10.1 percent in the Denver area. Since 2001, the volume of heroin admissions has been behind marijuana, methamphetamine, and cocaine admissions statewide.

In Denver, the volume of heroin admissions exceeded admissions for cocaine and methamphetamine until 2002; however, in 2003, it dropped below cocaine admissions; in 2004, it dropped even further, below both cocaine and methamphetamine admissions.

Heroin admissions have been predominately male, and from 2000 to 2008, the proportion of male admissions out of all heroin admissions declined from 67.0 percent in 2007 to 63.8 percent in 2008 statewide and from 67.0 to 63.9 percent in the Denver area (exhibits 4 and 5).

Historically, Whites have accounted for the largest proportion of heroin admissions, and in 2008 that proportion was the highest it had been since 1997. Statewide the 2008 proportions for Whites, Hispanics, and Blacks, respectively, comprised 70.6, 20.5, and 5.1 percent of total admissions. In Denver in 2008, the proportions of White, Hispanic, and Black admissions were 67.9, 22.6 and 6.2 percent.

Statewide in 2008, the average age of heroin users admitted to treatment was 37.0 (median=35.0). Since 2000, less than 1 percent of heroin users entering treatment were younger than 18 and in 2008, the proportion under 18 was 0.4 percent. Changes in two age ranges over time are indicative of an aging cohort. From 2000 to 2008, the proportions of persons 35 to 44 declined from 34.2 to 22.1 percent while those 45 and older increased from 24.7 percent in 2000 to 32.5 percent in 2006. In 2008, 30.2 percent of statewide heroin admissions were for persons older than 44.

In Denver in 2008, the average age of heroin users entering treatment was 38.9 (median=38.0). The Denver metropolitan area showed a decline in heroin admissions of persons 35 to 44 (32.9 percent in 2000 to 21.3 percent in 2008) and rises in persons 45 and older from 2000 to 2006 (26.7 to 36.0 percent). In 2007, the 45 and older group comprised 32.9 percent of heroin admissions and rose to 35.6 percent in 2008.

Heroin is a drug that is predominantly injected. Statewide, the proportion of heroin injectors remained between 85.9 and 88.2 percent between 2000 and 2004; and declined to 79.4 in 2008 (as shown in exhibit 4). The proportion smoking heroin more than doubled from 5.8 percent in 2000 to 11.7 percent in 2008. The proportion inhaling heroin ranged from 4.1 to 7.6 percent from 2000 through 2008. In 2008, 7.2 percent inhaled heroin statewide.

Denver's proportions were similar to statewide figures. The proportion injecting declined from 88.2 percent in 2001 to 78.8 percent in 2008 (exhibit 5). The proportion that smoked heroin remained between 5.5 and 6.9 percent from 2000 to 2004, and rose to 9.5 percent in both 2006 and 2007. Denver's proportion smoking heroin has also more than doubled from 5.5 percent in 2000 to 12.6 percent in 2008. The proportion inhaling remained between 4.3 and 7.9 percent from 2000 to 2008. In 2008, 7.1 percent inhaled heroin in the Denver area.

Treatment data, overall, show that heroin users most often used cocaine as a secondary drug (exhibits 4 and 5), followed by marijuana.

In 2008, the proportion of heroin treatment admissions in treatment for the first time was 20.7 percent statewide and 20.1 percent in the Denver metropolitan area (exhibit 6). Statewide, from 2000 through 2008, the proportion of first-timers remained between a low of 17.9 percent in 2007 and a high of 23.7 in 2002. During that time period in Denver, the proportion of first-timers stayed between a low of 17.0 percent in 2007 and a high of 22.5 in 2002.

Statewide in 2008, 37.8 percent of heroin users in treatment for the first-time had been using less than 3 years (exhibit 6), rising from 19.4 percent in 2004. In Denver, the proportion of new users in treatment decreased from 37.1 to 18.9 percent from 2000 to 2004 and rose to 35.8 percent in 2008.

Heroin users tend to be the oldest drug-using group (second to Other Opiate drug users) and start using at the oldest age. Among 2008 first-time heroin admissions, the mean and median ages of onset statewide were 24.6 and 21.5, respectively (exhibit 6). The mean and median onset ages decreased slightly from 2000 to 2003 (mean, 24.1 to 21.6 and median, 23.0 to 18.5), but have increased since.

In Denver, the mean and median age of onset for 2008 was 25.4 and 22.0, respectively. Similar to the statewide trend, there was a decrease in onset age from 2000 to 2003 (mean, 25.2 to 21.9; median 24.0 to 18.0), with a subsequent increase.

Among 2008 first-time heroin admissions, the mean time to enter treatment was 8.5 years for the state and 8.8 for the Denver metropolitan area (exhibit 6). Statewide, the mean time to enter treatment rose from 8.9 to 14.0 years from 2000 to 2004. During that same period, Denver showed a similar trend with an increase from 7.8 to 14.8 years.

DAWN *Live!* unweighted data showed 930 heroin-related ED reports in 2008, accounting for 11.6 percent of illicit drug reports, excluding alcohol (exhibit 7). Also, the Denver metro area rate for heroin ED visits is compared to that of the entire US. The Denver rate increased from 32.9 to 53.1 per 100,000 population from 2004 to 2008 (or by 61.4 percent). The US rate decreased by 15.3 percent during the same time period, even though it was higher than the Denver rate for each year shown (exhibit 7a).

Heroin was found in 4.0 percent (2004) to 12.7 percent (2008) of Denver drug related decedents from 2003 to 2008 (exhibit 8). However, it is likely that this percentage is much greater. Heroin is metabolized into 6-monoacetylmorphine (6-MAM) then into morphine. Also, heroin typically contains codeine because codeine naturally occurs in the opium poppy plant (from which heroin is produced). The 6-MAM needs to be present to confirm that heroin was related to the cause of death. However, this metabolite has a very short half-life and may be undetectable by the time blood work is done as part of an autopsy; whereas morphine and codeine will very likely be present in the blood toxicology. Thus, it is sometimes difficult to determine whether heroin was the specific cause of a drug related death. Often, an autopsy report will describe the circumstances surrounding a drug related death including information such as drug use history (e.g., decedent had history of heroin abuse). While such information cannot be used to specify heroin as a cause of death in the absence of 6-monoacetylmorphine, it does indicate that heroin is the likely "culprit".

The combination of heroin and cocaine (typically called a "speedball") was found among 1.3 to 5.3 percent of Denver drug related decedents from 2003 to 2008 (exhibit. 8a). Again, it is likely that the combination of heroin with other drugs among Denver drug decedents is a much higher percentage than indicated for the same reason as described above

Denver metro hospital discharge data from 2000–2007 combined all narcotic analgesics and other opioids, including heroin. While trends in this indicator for heroin alone cannot be assessed, the hospital discharge rate per 100,000 for all opioids increased overall from 133 per 100,000 in 2000 to 178 per 100,000 in 2008. This is a 34 percent increase. (exhibit 9).

During the 2004 to 2008 time period, statewide heroin/morphine drug-related calls to the Rocky Mountain Poison and Drug Center were far behind those of alcohol, cocaine, marijuana and metham-

phetamine. Heroin calls were relatively stable from 2004 through 2008 (exhibit. 10).

As shown in Exhibit 11, only small quantities of heroin were seized in Colorado ranging from 2.5 to 4.6 kgs from 2003 to 2008.

As shown in Exhibit 13, heroin samples analyzed and reported to NFLIS were the fifth most common drug among the top 25 drugs analyzed in 2008 in the Denver area comprising only 3.5 percent of total as compared to 6.4 percent for the US (ranking fourth).

According to local law enforcement, the Colorado and Denver metro area heroin is supplied by the Mexican Drug Trafficking Organizations (DTOs), with Mexican black tar and brown powder the predominant heroin types both statewide and in Denver. Much of the heroin is transported from source locations in Mexico, through Arizona and California into Colorado and the Denver metro area. From Denver, heroin is further distributed to markets in the Midwest and East Coast. Heroin DTOs within the jurisdiction of the Denver DEA are generally tied directly to sources of supply in Mexico. Command and control elements based there dispatch cells to operate in various locations throughout the US, rotating them frequently to evade law enforcement.

Local clinicians and outreach workers point to a variety of reasons for the marked decline in heroin treatment populations. Some say that heroin users won't enter treatment because of the stigma of methadone maintenance. Others assert that the cost of treatment is a deterrent. Still others believe that younger users haven't felt the "stressors of addiction" necessary to push them into treatment. Some younger users, many who are inhaling or smoking heroin, may not be fully aware of the variety of treatment options available. For example, there is some indication that younger users may be more open to the suboxone medication (i.e., buprenorphine) option, which they view as less stigmatizing than methadone. In fact, some street outreach workers report that users are finding suboxone on the street and are attempting to treat themselves to stay out of formal treatment.

As previously discussed, older heroin users are coming into treatment more frequently. Some of the older clients say they've decided on the treatment alternative because they have a "harder time hustling" than they used to and that treatment is an easy way to not be "dope sick". One older client was quoted as saying "I'm too old and tired to shoot heroin anymore" and I have "no veins left".

While there is an increase in young prescription opioid users (see next section), there does not seem to be a trend in heroin users switching to prescription opioids. In fact, some local clinicians and outreach workers say it is more likely that prescription opioid users will switch to heroin because it is cheaper. In many cases, those who make this switch become the young heroin inhalers and smokers. More typically, heroin users will use short-acting prescription opioids (e.g., Vicodin or Percocet) only to avoid withdrawal when they aren't able to get their usual heroin supply. Once the supply is available, they will stop using the prescription opioids.

As to the increase in heroin smoking and inhaling, local clinical and outreach workers report that some younger heroin users feel that injection is something "old people do", and that there is less stigma in using a route of administration other than injection. Also, many new heroin users thought that they would not become addicted if they smoked or inhaled. Some ED's report patients having administered heroin using eye drops.

Some clinician and outreach workers describe a decrease in speedball use (i.e., injecting a combination of cocaine and heroin) while others see no decrease. Some local clinicians report an increase in clients who smoke crack and inject heroin.

Current Denver heroin price and purity information are presented in exhibits 12 and 12a.

Other Opioids

This category excludes heroin and includes all other opioids such as methadone, morphine, hydrocodone, hydromorphone, codeine and oxycodone. Of the five major drugs of cocaine, heroin, marijuana, methamphetamine, and other opioids; other opioids ranked fifth in both statewide and Denver metro area treatment admissions, second in proportion of Denver metro area ED visits, and second in Denver County mortality. Other opioid trends were mostly upward.

During 2008, opioids other than heroin were reported as primary drugs in 6.6 percent of statewide treatment admissions (excluding alcohol; exhibit 2), and this proportion rose from a low of 3.9 percent in 2001. In Denver, other opioids had comprised between 4.8 and 6.3 percent of treatment admissions (excluding alcohol) since 2001. Other opioids have since reached a high of 6.3 percent of admissions in 2008 (exhibit 3).

Treatment admissions related to non-heroin opioids have always had higher proportions of females than the other four major illicit drugs. Statewide, females

comprised 55.4 percent of other opioid treatment admissions in 2001, but this proportion dropped to 49.8 percent in 2008 (exhibit 4).

In Denver, females comprised 55.5 percent of non-heroin opioid treatment admissions in 2001; however, this proportion declined to 51.1 percent in 2008 (exhibit 5).

Statewide and in Denver, Whites account for the largest proportion of treatment admissions related to other opioids. Since 2000, the proportion of Whites fluctuated between 81.3 and 87.8 percent statewide, and reached a low of 78.0 percent in 2008 (exhibit 4). Black treatment admissions for other opioids declined from 3.4 percent in 2002 to 1.6 percent in 2007. In 2008, Black other opioid admissions were at 2.2 percent. The proportion of Hispanic other opioid admissions in Colorado rose from 6.5 percent in 2003 to 13.9 percent in 2006, but declined slightly to 12.7 percent in 2007. The proportion of Hispanic other opioid admissions in Colorado reached a high of 17.0 percent in 2008.

In the Denver metropolitan area, the proportion of White admissions for other opioids declined from 86.3 to 80.3 percent between 2000 and 2002, jumped up to 89.0 percent in 2003, and down to 83.8 percent in 2004. In 2008, the proportion of White other opioid admissions was 78.4 percent down from 85.0 percent in 2007 (exhibit 5). In 2008, Blacks comprised 4.2 percent of admissions, down from a high of 5.3 percent in 2002. However, the moderate change in proportion is influenced by the small numbers of Black other opioid admissions (between 8 and 20 from 2000 through 2008). Hispanics reached a high of 13.8 percent of Denver area opioid admissions in 2008. However, the Hispanic proportions vacillated between 5 percent and 13.8 percent during the entire 2001 to 2008 time period which may also be based on the small numbers of admissions (between 15 and 44 over the eight year period).

Like heroin users, users of other opioids tend to be older than other drug-using groups. Statewide, the average age of other opioid users entering treatment in 2008 was 35.0 (median=33); slightly less than one percent were younger than 18 and 23.1 percent were older than 44. Two age ranges demonstrate a possible trend toward younger users. From 2000 to 2008, the proportion of those aged 18 to 34 increased from 33.6 to 53.9 percent, while those 35 and over declined from 64.5 percent in 2000 to 45.3 percent in 2008.

Likewise, in Denver, there was an overall increase in admissions of users of other opioids in persons 18 to 34 years old (31.5 to 53.1 percent from 2000 through 2008).

Non-heroin opioids are most often taken orally. Statewide, between 2000 and 2008, the proportion of admissions ingesting other opioids orally ranged from 83.5 to 86.7 percent. In 2008, 8.2 and 7.3 percent, respectively, inhaled and injected other opioids (exhibit 4). From 2000 to 2005, the proportions injecting declined from 12.3 to 8.3 percent, increased some in 2006 to 9.4 percent, but declined again in 2007 and 2008 to 7.6 and 7.3 percent, respectively. The proportion inhaling increased from 0.6 to 7.9 percent from 2000 through 2006, but declined slightly to 4.7 percent in 2007. The proportion inhaling increased to 8.2 percent in 2008. Perhaps the overall increase in other opioid inhalation reflects the practice of crushing and inhaling OxyContin.

Denver's proportions were similar to statewide figures. The proportion of other opioid admissions ingesting orally ranged from 89.0 percent in 2000 to 79.1 percent in 2008 (exhibit 5). The 2008 proportions that inhaled and injected were 9.7 and 8.3 percent, respectively. The Denver area had not shown the same decline as seen statewide in the numbers injecting between 2000 (7.7 percent) and 2006 (10.2 percent), but did realize a decline in 2007 (7.8 percent). There was a slight increase in 2008, 8.3 percent injected other opioids in the Denver area. Inhalation increased from 2000 to 2005, 0.6 to 7.4 percent, but decreased to 4.0 percent in 2007. Since last year, inhalation in the Denver area more than doubled to 9.7 percent in 2008.

Treatment data, overall, show that other opioid users most often used alcohol as a secondary drug (exhibits 4 and 5), followed by marijuana.

In 2008, first-time other opioid admissions comprised 39.6 percent of treatment admissions statewide and 34.6 percent in the Denver metropolitan area (exhibit 6). Statewide, the proportion of first-timers increased from 32.5 to 37.6 percent from 2002 to 2005. In 2008, it has dropped to 26.8 percent. In Denver, from 2000 to 2008, the proportion of first-timers fluctuated widely between 25.0 and 38.4 percent with no clear trend.

In 2008 first-time opioid treatment admissions, the mean and median ages of onset statewide were 26.0 and 23.0, respectively (exhibit 6), decreasing since 2001 from a mean onset age of 28.8 (median 28).

Denver showed a similar trend, with a decrease from 2001 to 2007 in the mean age of onset from 29.4 to 26.2 and in the median age from 30.0 to 24.0. In

2008, the mean and median onset age of Denver area first time opioid admissions continued the downward trend to 25.6 and 23.0.

In 2008, the mean time to enter treatment for first-time other opioid admissions was 7.2 years statewide and 7.4 years for the Denver metropolitan area (exhibit 6). Statewide, the mean time to enter treatment declined from 12.1 years in 2003. Denver showed a similar decline from 13.4 years in 2003.

In 2008, 26.8 percent of users of other opioids entering their first treatment in Colorado and 25.0 percent in Denver had been using less than 3 years (exhibit 6). Statewide, this proportion was at its lowest (19.5 percent) in 2002 and jumped to 26.3 percent in 2004. In Denver, the proportion of new users in treatment increased from 17.5 to 27.9 percent from 2002 through 2006.

Though not shown as a separate drug category in Exhibit 7, narcotic analgesics (i.e., prescription opioids) constituted 25 percent of Denver metro area ED visits in 2008 (n=2601). In Exhibit 7b, 2008 narcotic analgesic ED visits are broken out by specific drug. As indicated, in 2008, hydrocodone (e.g., Vicodin) and oxycodone (e.g., Percodan) accounted for almost two-thirds of all narcotic analgesic ED visits. In Exhibit 7a, the Denver metro area rate for narcotic analgesic ED visits is compared to that of the entire US. The Denver rate nearly tripled from 35 to 102.8 visits per 100,000 from 2004 to 2007. The Denver narcotic analgesic rate was higher than the US rate from 2006 to 2007.

Other opioids were among the most common drugs found in Denver drug related decedents from 2003 to 2008 (exhibit 8). Morphine was involved in 23.1 to 37.9 percent of Denver drug related deaths during the 2003 to 2008 time period; and codeine was involved in 9.0 to 21.3 percent of Denver drug related deaths during the same time period. However, based on the prior discussion of the short half-life of the marker for heroin deaths (i.e., 6-monoacetylmorphine) and that codeine and morphine are usually present in blood toxicology related to a heroin death, it is likely that a substantial proportion of morphine and codeine deaths are really heroin related deaths. Oxycodone accounted for only 8.6 percent of Denver drug related deaths in 2003, but increased to 20.1 percent by 2007, declining slightly to 15.6 percent in 2008. Likewise, oxycodone in combination with any other drug accounted for only 7.9 percent of Denver drug mortality in 2003 (11 deaths), but increased to 10.1 percent in 2007 (19 deaths) and to 13.7 percent (29 deaths) in 2008 (exhibit 8a).

As noted earlier, Denver metro hospital discharge data from 2000–2008 combined all opioids, including heroin, and increased 34 percent from 133 per 100,000 in 2000 to 178 per 100,000 in 2008 (exhibit 9).

Recent data from the Colorado Prescription Drug Monitoring Program (PDMP) show substantial increases in the number and rate of hydrocodone and oxycodone prescriptions filled for Denver residents. Exhibit 14 details hydrocodone prescriptions filled for Denver residents from the 3rd quarter of 2007 through the 4th quarter of 2008. Although hydrocodone prescriptions peaked at 90,367, or 155.5 per 1000 population, in the 2nd quarter of 2008, there was an overall rate increase from 130.6 to 150.4 per 1000, or 15.2 percent, from the 3rd quarter of 2007 through the 4th quarter of 2008. Oxycodone increased steadily from 85.8 to 110.5 prescriptions per 1000 population, or by 28.8 percent, from the 3rd quarter of 2007 to the 4th quarter of 2008 (exhibit 15).

There were no poison control center calls reported for opiates other than heroin and morphine.

The DEA Denver (i.e., Tactical Diversion Squad-TDS) is encountering organized traffickers of prescription opioid controlled substances. These trafficking groups are not limited by gender, age, race/ethnicity or nationality. There are also many individuals who illicitly obtain prescription opioids, most often for personal use (i.e., abusers). The traffickers and abusers use similar methods to obtain their prescription opioids. Most commonly they identify "lollypop doctors" who are considered "easy marks" for readily obtaining prescriptions. The TDS has also determined that some medical professionals (e.g., doctors, nurses, pharmacists, physician assistants, etc.) are "acting outside the scope of their ethical practices by providing controlled substance prescriptions for profit". The TDS says that the internet does not seem to be the main source of supply for prescription drug traffickers, although there are many individuals who use the internet to fraudulently obtain prescriptions, typically for their own use.

The TDS reports that the prescription opioids most commonly sold illegally are oxycodone, hydrocodone, and fentanyl. They state that the sales take place in the usual spots where illicit drug transactions transpire such as parking lots, street corners, private residences, and night clubs. According to the TDS, common prices for prescription opioids are as follows: $1 per milligram (mg) for Oxycontin (e.g. $40 for a 40 mg pill and $80 for an 80 mg pill); $5-8 for Percocet; $3-5 for Vicodin; $15 per 40 mg disk for

methadone; $10-30 per pill for morphine depending on the mg/pill; and $70-100 for a 3-day fentanyl patch.

Some local clinicians and outreach workers report that a portion of heroin users are switching to prescription narcotics. However, this does not seem to be widespread and other outreach workers claim that it doesn't happen at all, or that those who do switch eventually return to the "street drugs" (i.e., heroin). Conversely, clinicians in a local treatment program heard that some users who are addicted to prescription opioids will start to use heroin if they can't get opiates on the street. Also, in many cases, heroin is cheaper than most of the prescription opioids available on the street. One outreach worker said that heroin users may use prescription narcotics to "stay well" if they periodically are unable to obtain heroin.

Most local clinicians and outreach workers report that methadone on the street is not diverted from treatment programs (i.e., liquid form), but rather is in the diskette and tablet form prescribed as pain medication. Also, most agree that it is unlikely that clients want to divert "takeout" methadone, as they will feel "sick" without their methadone, and are unsure of the ability of prescription drugs to prevent withdrawal.

Some clinicians and outreach workers claim that there are many inexperienced illicit prescription opioid users who place themselves in danger by not understanding the potency of such drugs that can easily lead to an overdose. This is especially true if prescription opioids are mixed with alcohol or benzodiazepines.

Methamphetamine

Of the five major drugs of cocaine, heroin, marijuana, methamphetamine, and other opioids; methamphetamine ranked second in statewide and third in Denver metro area treatment admissions, third in statewide calls to RMPDC, fifth in proportion of Denver metro area ED visits, fourth in Denver County mortality, and third in drug samples analyzed in Denver metro area crime labs. Most methamphetamine indicators show downward trends.

In 2008, methamphetamine was the primary drug reported for 27.0 percent of all treatment admissions (excluding alcohol) statewide (exhibit 2), down from 30.4 percent in 2006. Prior to 2006, methamphetamine admissions rose steadily from 16.5 percent in 2001 to a high of 31.7 percent in 2005. In 2003, methamphetamine exceeded cocaine in illicit drug admissions and has been second to marijuana admissions ever since.

In the Denver metropolitan area, methamphetamine comprised proportionately fewer treatment admissions (20.4 percent in 2008) than statewide. While the proportion of methamphetamine admissions (excluding alcohol) in Denver rose each year from 11.3 to 21.6 percent from 2000 through 2006, there was only a slight increase to 21.7 percent in 2007. This was followed by a slight decrease to 20.4 percent in 2008. Moreover, while Denver-area methamphetamine admissions exceeded heroin admissions in 2004 and surpassed heroin and cocaine admissions in 2005, the volume of Denver area meth admissions dropped below cocaine admissions again in 2006, 2007 and 2008.

After admissions for non-heroin opioids and sedatives, methamphetamine admissions have the highest proportion of females statewide (44.5) in 2008 (exhibit 4). Statewide, the proportion of female admissions stayed between 45.1 and 50.4 percent from 2000 through 2003, decreased to 44.0 percent in 2004, and rose to 46.0 and 46.7 percent in 2005 and 2006, respectively. However, the proportion of females declined slightly to 46.2 in 2007 and then to 44.5 in 2008.

In the Denver area, the proportion of female methamphetamine admissions was at 50.0 and 50.4 percent in 2000 and 2001, decreased to 45.9 percent in 2002, jumped to a high of 52.7 percent in 2003, and has since declined to a low of 40.1 percent in 2008.

Methamphetamine admissions in Colorado and Denver are predominately White (78.0 and 78.3 percent respectively in 2008; exhibits 4 and 5). From 2000 to 2008, the proportion of White treatment admissions declined from 87.8 to 78.0 percent statewide and from 90.1 to 78.3 percent in the Denver area. At the same time, the proportion of Hispanic/Latino methamphetamine admissions rose from 8.5 to 16.8 percent statewide and 7.0 to 15.5 percent in Denver.

Compared with cocaine, methamphetamine admissions tend to be younger. In 2008, the average age of persons entering treatment was 32.6 (median=31.0) statewide and 32.4 (median=31.0) for Denver admissions. Also, 19.6 percent of statewide admissions and 19.9 percent of Denver admissions were younger than 25. Statewide, 69.0 percent of admissions were persons age 25 to 44 compared to 68.9 percent for the Denver area.

Statewide, in 2008, the proportions of clients who smoked, injected, or inhaled methamphetamine were 64.8, 22.7, and 10.1 percent, respectively (exhibit 4).

The proportion who smoked increased dramatically from 2000 (38.7 percent) to 2008 (64.8 percent), while the proportions who inhaled decreased substantially during that time, from 21.5 to 10.1 percent. Injectors decreased from 33.9 percent in 2000 to 20.2 percent in 2007. In 2008, the proportions who injected methamphetamine statewide increased to 22.7 percent.

During 2008 in the Denver area, the proportions that smoked, injected, or inhaled methamphetamine were 59.4, 25.4, and 12.2 percent, respectively (exhibit 5). As with the State overall, the proportion that smoked increased substantially from 35.6 to 65.7 percent from 2000 to 2006. However, this proportion dropped to 61.4 percent in 2007 and to 59.4 percent in 2008. Similarly, those who injected declined from 38.5 to 18.2 percent from 2000 to 2006, but this percentage also been on the rise to 20.1 percent in 2007 and 25.4 percent in 2008. While there appears to be an overall downward trend, the proportion of inhalers declined from 19.8 to 9.4 percent from 2000 to 2003, but during 2004 through 2008, the proportions were 12.7, 15.1, 12.3, 15.1 and 12.2 percent, respectively.

Treatment data, overall, show that methamphetamine users most often use marijuana as a secondary drug, followed by alcohol (exhibits 4 and 5).

Statewide and in Denver, 33.1 and 33.4 percent, respectively, of 2008 methamphetamine admissions were first-timers (exhibit 6). Statewide, the proportion of first-time admissions declined from 44.9 in 2000 to 33.1 in 2008. In Denver, the proportion of first-time methamphetamine admissions remained between 33.0 and 35.8 percent between 2000 and 2008.

Statewide, the proportion of new users in first-time admissions rose from 19.5 to 27.8 percent from 2000 to 2003. In 2004, the proportion of new users declined to 24.9 percent, and in 2005 increased to 26.0 percent. Since 2006, the proportion of new users in first-time admissions has been on a steady decline from 21.5, to 17.8 in 2007, to a low of 13.4 percent in 2008 (exhibit 6). In Denver, the proportion of new users in treatment increased from 14.3 percent in 2000 to 28.2 percent in 2003, declined to 23.4 percent in 2004 and was at 26.1 and 20.8 percent, respectively, in 2005 and 2006. However, like the state, the Denver metro methamphetamine new user proportion also reached a new low in 2008 (10.8 percent).

Statewide, the average age of onset for methamphetamine use reported in 2008 first-time admissions was 21.7 (median=19.0), and for Denver, 21.2 (median=19.0) (exhibit 6). Since 2000, the mean age of onset for methamphetamine admissions statewide and Denver stayed between 20 and 23. The median age remained between 18 and 19 statewide and between 18 and 20 in the Denver area (exhibit 6).

From 2000 to 2005, the average time for methamphetamine abusers to enter treatment decreased from 8.7 to 7.5 years statewide and from 9.1 to 7.6 years in Denver. In 2006, the average time to enter treatment rose to 8.5 and 8.4 years, respectively, for statewide and Denver area admissions, and remained at about these durations in 2007 for both statewide (8.6 years) and Denver (8.5 years). In 2008, the average time for methamphetamine abusers to enter treatment increased to 10.1 years statewide and 10.3 years in the Denver area (exhibit 6).

Excluding alcohol, methamphetamine accounted for 7.6 percent (n=607) of drug-related ED visits in the unweighted DAWN *Live!* data for the Denver area in 2008 (exhibit 7). Also, the Denver metro area rate for methamphetamine ED visits is compared to that of the entire US. The Denver rate more than doubled from 32.4 to 76 visits per 100,000 from 2004 to 2005, but then declined to 57.3 and 49.4 visits per 100,000 in 2006 and 2007, respectively. From 2005 through 2007, the Denver methamphetamine rate per 100,000 was substantially higher than the US rate (exhibit 7a).

While methamphetamine was not among the most common drugs found in Denver drug related decedents, it still accounted for 4.6 to 8.6 percent of Denver drug related mortality from 2003 to 2008 (exhibit 8).

Methamphetamine could not be identified separately, but rather was included in the stimulants category in hospital discharge data. Overall, Denver metro stimulant-related hospital discharges nearly tripled from 2000 to 2005 from 44 per 100,000 to 129 per 100,000, but then dropped steadily to only 60 per 100,000 by 2008 (exhibit 9).

Methamphetamine was fourth after alcohol, cocaine and marijuana in the number of statewide drug-related calls to the Rocky Mountain Poison and Drug Center in 2008 (exhibit 10). Interestingly, methamphetamine had been second only to alcohol in RMPDC calls in 2005.

Federal drug seizures for methamphetamine across Colorado (exhibit 11) increased each year from 2003 (14.8 kgs) to 2006 (50.3 kgs) but then declined to only 8 kgs in 2007. However, in 2008 methamphetamine seizures increased to 26.4 kgs. Despite the increase in methamphetamine seizures from 2007 to

2008, methamphetamine lab seizures continued to decline in Colorado from 345 in 2003 to only 33 in 2008.

The proportion of methamphetamine samples analyzed in NFLIS reporting labs accounted for 13.3 percent, and ranked third among the top 25 analyzed in 2008 in the Denver area compared to 10.5 percent (also ranking third) across the US (exhibit 13).

Despite the precursor crackdown in Mexico, local law enforcement officials report that most methamphetamine is produced and supplied by Mexican DTOs. DEA Denver states that methamphetamine remains among the highest investigative priorities. Large loads are transported from Mexico, Texas, Arizona and California to Colorado. From Colorado, much of the methamphetamine is redistributed throughout the US. Active investigations point to price increases and purity decreases (exhibit 12a). At times, high quality methamphetamine in Colorado is being cut significantly with methylsulfonylmethane (MSM) and benzylamine.

Many local clinicians and outreach workers say that methamphetamine users are still out there. However, considerable prevention efforts and media attention have led to a growth in the methamphetamine stigma, which in combination with reduced supply, has some methamphetamine users switching to other drugs.

Many Denver metro area clinicians and outreach workers report that many stimulant users prefer methamphetamine over cocaine because of its cheaper price, ready availability, and longer lasting high. Because of this longer lasting high, it continues to be described as a drug that gives users the energy to work multiple jobs.

Clinicians say that the increase in Latino methamphetamine treatment admissions is largely due to several things 1) the association with trafficking by Mexican cartels and the drug's increased presence in neighborhoods with substantial percentages of Latinos, 2) cultural delays which took longer to break strong Latino family bonds, and 3) the acculturation process itself in which Latinos engage in activities that other parts of American society are involved such as drug use.

Some clinicians and outreach workers spoke of continuing acceptability of "meth" use among gay men, including use in "bathhouses" and "sex parties".

Some methamphetamine users describe different recipes of "meth" being available for men vs. women and smokers vs. injectors. Also, users report that some methamphetamine "snorters" employ the "hotrailing" inhalation method in which the tip of a short glass stem, or the middle of a longer stem, is heated until it's red-hot. The end of the stem is placed over a bump or line. The heat vaporizes the "speed" and the vapor is inhaled through the nose.

Current Denver methamphetamine price and purity information are presented in exhibits 12 and 12a.

Marijuana

Of the five major drugs of cocaine, heroin, marijuana, methamphetamine, and other opioids; marijuana ranked first in both statewide and Denver metro area treatment admissions, second in statewide calls to RMPDC, third in proportion of Denver metro area ED visits, second in Denver County hospital discharges, and second in drug samples analyzed by Denver metro area crime labs. All marijuana indicators were either stable or increasing.

Statewide, the percentage of marijuana treatment admissions decreased from 42.3 percent in 2001 to 36.6 percent in 2008. In Denver, the proportion of marijuana admissions also declined from 37.3 percent in 2001 to 32.3 percent in 2003, but jumped up to 38.5 percent in 2004, was at 37.0 percent in 2006, and declined to 36.6 percent in 2007. In 2008, marijuana admissions in Denver increased to 38.2 percent (exhibit 3).

Historically, marijuana admissions have represented the highest proportion of males among drug groups. In 2008, 76.4 percent of marijuana admissions statewide and 77.4 percent in Denver were male (exhibits 4 and 5). In prior years, the proportion of males comprised anywhere from 72.3 to 76.9 percent of admissions statewide; however, in Denver, the proportion of males increased substantially from 69.3 percent in 2003 to 78.5 percent in 2007.

In 2008, Whites, Hispanics, and Blacks comprised 50.9, 31.0, and 13.5 percent of marijuana admissions, respectively, statewide (exhibit 4). From 2000 to 2008, the proportion of White admissions decreased from 58.3 to 50.9 percent. However, the proportion of Black marijuana admissions has risen since 2000 (7.4 percent) to 2006 (14.6 percent). The proportion of Hispanics decreased from 30.7 to 26.2 percent from 2000 to 2003, increased to 30.0 percent in 2005, decreased to 28.4 percent in 2006, but increased again in 2007 and 2008 to 30.2 and 31.0 percent respectively.

In Denver, there was a clear downward trend in the proportion of White marijuana admissions from 2000

to 2005 (58.2 to 41.6 percent), with an increase in 2006 to 44.4 percent, followed by another decline to 43.2 percent in 2007 and 42.9 percent in 2008 (exhibit 5). There was a consistent rise in Black admissions from 11.5 percent in 2000 to 21.4 percent in 2005, but this proportion declined to 21.1 and 20.1 percent in 2006 and 2007, respectively. In 2008, Black admissions in the Denver area increased to 22.9 percent. As with the statewide trend, Hispanics declined from 2001 to 2003 (27.1 to 24.6 percent), but increased to 32.1 percent in 2005. This was followed by a decline to 29.9 percent in 2006, an increase to 32.3 percent in 2007 and a slight decrease to 30.7 percent in 2008.

In Colorado and Denver, marijuana users are typically the youngest of the treatment admissions groups. In 2008, the average age of marijuana users entering treatment was 25.0 (median=23) statewide and 24.4 (median=22) in Denver. For both the State and Denver, there appeared to be slight upward trends in the age of treatment admissions. From 2000 to 2008, the median age increased from 18 to 23 statewide and from 17 to 22 in Denver.

Treatment data, overall, show that marijuana users most often use alcohol as a secondary drug (exhibits 4 and 5).

Statewide in 2008, 52.9 percent of admissions were in treatment for the first-time (exhibit 6), declining from 59.7 percent in 2001. Of 2008 Denver-area admissions, 52.5 percent entered their first treatment episode, a decline from 60.2 percent in 2001.

Marijuana users not only tend to be the youngest of drug-using groups but also to start using at the youngest age. In 2008, the mean and median ages of onset for first-time admissions statewide were 14.3 and 14.0 (exhibit 6). For the Denver area, the mean and median ages of onset for those in treatment the first-time were 14.2 and 14.0, respectively. Since 2000, age of onset has remained stable statewide and for Denver area admissions.

Statewide in 2008, 20.4 percent of marijuana users had been using less than 3 years (exhibit 6) before entering treatment for the first-time, decreasing from 33.4 percent in 2003. In Denver, the proportion of new users entering their first treatment decreased from 37.8 to 20.6 percent from 2003 to 2008.

In 2008, the mean time to enter treatment for the first time was 9.6 years statewide and 9.3 years for Denver area admissions (exhibit 6). For the State as a whole and the Denver area, both the mean and median times to enter treatment increased since 2000 (by more than two years, statewide, and more than three years in Denver).

In 2008, there were 2,581 ED marijuana visits in the Denver metro area; these accounted for 32.3 percent of the illicit drug reports, excluding alcohol (exhibit 7). In Exhibit 7a, the Denver metro area rate for marijuana ED visits is compared to that of the entire US. The Denver rate nearly tripled from 50.3 to 146.2 visits per 100,000 from 2004 to 2007. The US rate increased by only 5.6 percent during the same time period and was substantially behind the Denver rate in 2006 and 2007.

Denver metro marijuana-related hospital discharges increased steadily from 2000 (140 per 100,000) to 2006 (207 per 100,000), decreased to 181 per 100,000 in 2007, but then increased to 209 per 100,000 in 2008, the highest level in the nine-year time period (exhibit 9).

Marijuana was fourth behind alcohol, cocaine and methamphetamine in the number of state drug-related calls to the Rocky Mountain Poison and Drug Center from 2004 to 2005; and third behind alcohol and cocaine from 2006 through 2008 (exhibit 10).

Federal drug seizures for marijuana across Colorado (Ex. 11), after being relatively stable from 2003 (444.1 kgs) to 2006 (656.8 kgs), nearly doubled to 1,149.5 kgs in 2007 and increased nearly 24-fold to 24,089.2 kgs in 2008.

In the Denver area samples, cannabis ranked second at 28.4 percent of the top 25 drugs analyzed in 2008 in the NFLIS lab system compared to 37.3 percent for the US (ranking first—exhibit 13).

Local law enforcement reports marijuana from both Mexico and Canada is encountered in Colorado. Mexican sources of supply send it across the southwest border in passenger vehicles, commercial busses, and tractor trailers. High-grade Canadian marijuana is transported across the border in Montana and from the Pacific Northwest. A significant amount of high-grade, indoor grown marijuana is produced in Colorado. In sum, users claim that there is no shortage of marijuana (e.g., increased marijuana trafficking in downtown Denver); and what is available is more potent. Reports are that even the "schwag" (cheap, typically low quality marijuana) has gotten better.

Local clinicians report that "pro-marijuana" campaigns are normalizing marijuana use. With changes in marijuana laws, people are less fearful of carrying small amounts on then, and feel police won't do any-

thing to them if they are caught. Paradoxically, both adult and juvenile marijuana arrests for both sales and possession have been increasing in Denver since 2004. In fact, increased marijuana arrests have led to marijuana being one of the few drugs that has actually increased in the number and proportion of treatment admissions statewide and in the Denver metro area.

Clinicians say their clients report that the increase in African-American treatment admissions for marijuana relate to the "normalization" of marijuana among African-American families and communities; and within the hip-hop and rap culture. However, it is also more acceptable for African-Americans to ask for help which has boosted the treatment numbers and proportions.

"Blunts" (i.e., pot rolled in up in an outer layer of a cigar) are still common among Black and Latino males and have provided a way for young people to smoke more openly in public. Outreach workers describe the use of "candy blunts", or blunts dipped in cough syrup.

Also, there are still reports of marijuana soaked with embalming fluid (i.e., smoking "wet").

Marijuana price information is show in exhibit 12.

Benzodiazepines

Benzodiazepines are a class of psychoactive drugs with varying sedative, hypnotic, and anti-anxiety (i.e., anxiolytic) properties. Most common are the benzodiazepine tranquilizers (e.g., diazepam, alprazolam, lorazepam, etc.). Benzodiazepines present a "mixed picture" in the Denver metro area drug scene. This drug category is not shown as a separate breakout on Exhibit 2 or 3. However, from 2001 to 2008 benzodiazepines were somewhat infrequent among Colorado treatment admissions accounting for a high of 106 admissions in 2002 (1 percent of total drug admissions excluding alcohol) to a low of 39 in 2001 (or .4 percent of non-alcohol admissions). There were 87 statewide benzodiazepine admissions in 2008 constituting .5 percent of all drug admissions (excluding alcohol)

Denver metro benzodiazepine admissions from 2001 to 2008 were also somewhat infrequent, accounting for a high of 56 admissions in 2002 (1.3 percent of total drug admissions excluding alcohol) to a low of 18 in 2001 (or .4 percent of non-alcohol admissions). There were 43 Denver metro benzodiazepine admissions in 2008 constituting .5 percent of all drug admissions (excluding alcohol)

Denver metro area benzodiazepine ED visits for 2008 are shown in exhibit 7c. Alprazolam (at 24.6 percent of total benzodiazepines) was the most common benzodiazepine last year followed by clonazepam (at 19.5 percent), lorazepam (at 16.4 percent) and diazepam (at 12.1 percent). In exhibit 7a, the Denver metro area rate for benzodiazepine ED visits is compared to that of the entire US. The Denver rate nearly tripled from 29.3 to 87.9 visits per 100,000 from 2004 to 2007. The Denver benzodiazepine rate surpassed the US rate in 2007.

While benzodiazepines were not among the most common drugs found in Denver drug related decedents, diazepam accounted for 5.9 to 10.1 percent of Denver drug related mortality from 2003 to 2008; and alprazolam constituted 1.4 to 7.1 percent of Denver drug related mortality during the same time period (exhibit 8).

Taken together, alprazolam, clonazepam, and diazepam accounted for 1.1 percent of the top 25 drugs submitted for testing to the NFLIS in 2008 in the Denver area compared to 3.3 percent in the entire US.

In exhibit 16, PDMP data show similar steady increases in the rate of diazepam, lorazepam, and alprazolam prescriptions filled for Denver residents. As indicated, among the three benzodiazepines, diazepam had the highest rate of prescriptions filled for Denver residents for the entire time period shown, followed by lorazepam, with alprazolam third.

As is the case with prescription narcotics (see discussion on trafficking in Other Opioid section), local clinicians and outreach workers describe the easy availability of prescription benzodiazepines (e.g., Valium, Xanax, Ativan) and related drugs. The drugs are easy to get on the street, in college dorms, on the internet, at parties and Raves, through doctor shopping, or at home in the medicine cabinet. One outreach worker said that almost all those who abuse opioids are also using benzodiazepines.

Xanax, which sells for $3-5 a pill on the street, is reported to be the most popular illicitly used benzodiazepine followed by Ativan.

Methylenedioxymethamphetamine (MDMA)

MDMA, or ecstasy, morbidity and mortality remain relatively low in Denver. Of the 67 statewide "club drug" treatment admissions shown in 2008 (exhibit 2), which was .4 percent of total non-alcohol admissions, 58 were for MDMA. In the Denver metro area, club drugs accounted for 42 treatment admissions in

2008 (.6 percent of total non-alcohol admissions). Of these, 39 were for MDMA.

There were 247 ED visits for MDMA in Denver in 2008, accounting for 3.1 percent of the total visits (excluding alcohol) shown in exhibit 7. In exhibit 7a, the Denver metro area rate for MDMA ED visits is compared to that of the entire US. The Denver rate more than doubled from 4.5 to 11 visits per 100,000 from 2004 to 2007, while the US rate increased slightly from 3.5 to 4.2 visits per 100,000 from 2004 to 2007. The Denver MDMA rate was higher than the US rate from for the entire 2004 to 2007 time period.

MDMA accounted for 2.3 percent of the top 25 drugs submitted for testing to the NFLIS in 2008 in the Denver area compared to 1.6 percent across the US (exhibit 13).

In analyzing MDMA exhibits from 2001 through 2008, the Denver Police Dept. crime lab found that 110 of the 112 MDMA exhibits (i.e., 98.2%) in 2001 were pure MDMA. However, while total MDMA exhibits increased to 192 and 173 in 2007 and 2008, respectively; the percentage that were pure MDMA dropped to 52.6 percent in 2007 and 61.3 percent in 2008. Those that were not pure MDMA were made up of a variety of single and combination of substances including cocaine, methamphetamine, ketamine, BZP, dextromethorphan (DXM), prescription opioids, vitamins, etc.

According to law enforcement/intelligence, over the last five or six years, the supply of MDMA has shifted from Europe to Canada. The MDMA found in Colorado is almost exclusively produced in Canada, and is often transported and distributed by Asian DTOs. In general, law enforcement/intelligence reports that there has been an overall increase in MDMA supply in Colorado over the past two years. In Colorado, MDMA sells for $5-6 per tablet wholesale, $6-13 retail, and $20-25 a tab on the street (exhibit 12).

As previously described, clinicians say that they do not see many MDMA abusers in treatment; and that clients usually come into treatment for some other primary drug (e.g., alcohol or marijuana) with MDMA being a secondary drug. In some cases, clients come into treatment for MDMA because they are court-ordered.

Benzylpiperazine (BZP)

In 2008, there were 14 BZP exhibits analyzed in the Denver Crime Lab. Through April 2009, the Denver Crime Lab has analyzed 17 BZP and 2 TFMPP (1-3-trifluoromethylphenylpiperazine) exhibits. This is compared to "zero" BZP exhibits from 2001 through 2007. Unfortunately, BZP is not reported (at least currently) in treatment, emergency room, mortality, or hospital discharge data. It seems only the crime labs are isolating this drug. Thus, it is difficult to determine actual BZP usage levels.

According to a recent DEA review, BZP was first synthesized in 1944 as a potential anti-parasitic agent; and was subsequently shown to have amphetamine-like effects. Though much less potent than amphetamine, BZP acts like a stimulant in humans producing euphoria, and increased heart rate and blood pressure. It appears that 1996 was the first year BZP use was initiated by drug abusers in the US, as measured mostly by encounters with law enforcement. BZP is usually taken orally as a powder, tablet or capsule. BZP street names include A2, Legal E, or Legal X. BZP is often taken in combination with TFMPP which is touted as a substitute for MDMA.

Though probably not a significant problem in Denver in terms of user numbers, recent research[4] points out that BZP and TFMPP, when taken together, have a synergistic effect on certain neurotransmitters (i.e., dopamine and serotonin) which may lead to seizures.

The Drug Enforcement Administration (DEA) reports an investigation on a vehicle bound from California to Denver which was alleged to be transporting MDMA. The vehicle was stopped and 4,000 pills were discovered. However, once analyzed, the pills actually turned out to be BZP and TFMPP.

INFECTIOUS DISEASES RELATED TO DRUG ABUSE: ACQUIRED IMMUNODEFICIENCY SYNDROME (AIDS) AMONG INJECTION DRUG USERS

Of the 9,247 cumulative AIDS cases reported in Colorado through September 30, 2008, 9.1 percent were classified as injection drug users (IDUs), and another 10.6 percent were classified as homosexual or bisexual males and IDU (exhibit 17). The proportion of newly diagnosed HIV and AIDS cases (not cumulative cases as shown in exhibit 17) attributed to injection drug use has stayed fairly stable since 2001 (exhibits 18 and 19).

For inquiries concerning this report, please contact Bruce Mendelson, Senior Data Consultant, Denver Department of Human Services, Office of Drug Strategy 1200 Federal Boulevard, Den-

[4] Bauman, et al. N-Substituted Piperazines Abuse by Humans Mimic the Molecular Mechanism of 3,4 Methylenedioxymethamphetamine. *Neuropsychopharmacology*, 2005, 30: 550-560

ver, CO 80204, Phone: 720-944-2158, Fax:720/944-3083, E-mail:bruce.mendelson@denvergov.org.

Exhibit 1. Data Completeness for the Denver Metropolitan Area DAWN *Live!* Emergency Departments (*n*=15),[1] by Month: January–December 2008

Data Completeness	Number of EDs by Month											
	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08
Basically Complete (90% or greater)	9	9	9	9	9	8	8	9	10	10	11	11
Partially Complete (< 90%)	0	0	0	0	0	1	0	0	1	0	0	0
No Data Reported	6	6	6	6	6	6	6	6	6	6	6	6
Total EDs in Sample[4]	15	15	15	15	15	15	15	15	15	15	15	15

[1]Total eligible hospitals in area = 15; hospitals in DAWN sample = 15; emergency departments in DAWN Sample = 15. Tables reflect cases received by DAWN as of 5/14/07. All DAWN cases are reviewed for quality control. Based on this review, cases may be corrected or deleted. Therefore, these data are subject to change.
SOURCE: DAWN *Live!*, OAS, SAMHSA, updated 4/15/09

Exhibit 2. Numbers and Percentages of Treatment Admissions by Primary Drug Type in Colorado: CY 2001–2008

Drug		2001	2002	2003	2004	2005	2006	2007	2008
Alcohol	*n*	6,325	6,890	7,263	9,873	10,189	11,481	10,977	11,755
	%	38.6	38.8	37.8	40.7	38.8	40.9	39.7	41.1
Marijuana	*n*	4,255	4,367	4,236	5,305	5,568	5,653	5,783	6,156
	%	26.0	24.6	22.0	21.9	21.2	20.1	20.9	21.5
(excluding alcohol)	%	42.3	40.2	35.4	36.8	34.7	34.0	34.7	36.6
Methamphetamine	*n*	1,664	2,078	2,794	3,846	5,084	5,053	4,914	4,543
	%	10.2	11.7	14.5	15.8	19.4	18.0	17.8	15.9
(excluding alcohol)	%	16.5	19.1	23.3	26.7	31.7	30.4	29.5	27.0
Cocaine	*n*	1,889	2,215	2,368	3,034	2,929	3,476	3,374	3,319
	%	11.5	12.5	12.3	12.5	11.2	12.4	12.2	11.6
(excluding alcohol)	%	18.8	20.4	19.8	21.1	18.3	20.9	20.3	19.7
Heroin	*n*	1,483	1,425	1,676	1,273	1,421	1,271	1,223	1,201
	%	9.0	8.0	8.7	5.2	5.4	4.5	4.4	4.2
(excluding alcohol)	%	14.7	13.1	14.0	8.8	8.9	7.6	7.3	7.1
Other Opioids[1]	*n*	395	412	541	614	713	824	961	1,113
	%	2.4	2.3	2.8	2.5	2.7	2.9	3.5	3.9
(excluding alcohol)	%	3.9	3.8	4.5	4.3	4.4	5.0	5.8	6.6
Depressants[2]	*n*	64	159	131	101	97	121	127	141
	%	0.4	0.9	0.7	0.4	0.4	0.4	0.5	0.5
(excluding alcohol)	%	0.6	1.5	1.1	0.7	0.6	0.7	0.8	0.8
Other Amphetamines/Stimulants	*n*	91	105	78	56	57	52	36	55
	%	0.6	0.6	0.4	0.2	0.2	0.2	0.1	0.2
(excluding alcohol)	%	0.9	1.0	0.7	0.4	0.4	0.3	0.2	0.3
Hallucinogens[3]	*n*	73	43	31	27	33	35	31	38
	%	0.4	0.2	0.2	0.1	0.1	0.1	0.1	0.1
(excluding alcohol)	%	0.7	0.4	0.3	0.2	0.2	0.2	0.2	0.2
Club Drugs[4]	*n*	NA	12	37	56	50	47	59	67
	%	NA	0.1	0.2	0.2	0.2	0.2	0.2	0.2
(excluding alcohol)	%	NA	0.1	0.3	0.4	0.3	0.3	0.4	0.4
Other[5]	*n*	151	59	77	90	92	88	142	181
	%	0.9	0.3	0.4	0.4	0.4	0.3	0.5	0.4
(excluding alcohol)	%	1.5	0.5	0.6	0.6	0.6	0.5	0.9	1.1
Total	***N***	**16,390**	**17,765**	**19,232**	**24,275**	**26,233**	**28,101**	**27,627**	**28,569**
(excluding alcohol)	***N***	**10,065**	**10,875**	**11,969**	**14,402**	**16,044**	**16,620**	**16,650**	**16,814**

[1] Includes non-prescription methadone and other opiates and synthetic opiates.
[2] Includes barbiturates, benzodiazepine tranquilizers, clonazepam, and other sedatives.
[3] Includes LSD, PCP and other hallucinogens.
[4] Includes Rohypnol, ketamine (Special K), GHB, and MDMA (ecstasy).

[5] Includes inhalants, over-the-counter and other drugs not specified.
SOURCE: Drug/Alcohol Coordinated Data System, Alcohol and Drug Abuse Division, Colorado Department of Human Services

Exhibit 3. Numbers and Percentages of Treatment Admissions by Primary Drug Type in the Denver/Boulder Metropolitan Area: CY 2001–2008

Drug		2001	2002	2003	2004	2005	2006	2007	2008
Alcohol	*n*	2,496	2,009	2,360	3,551	3,575	4,408	4,321	4,586
	%	33.4	31.9	29.1	33.6	33.1	36.0	35.9	37.8
Marijuana	*n*	1,855	1,466	1,859	2,703	2,695	2,901	2,824	2,882
	%	24.8	23.3	22.9	25.6	24.9	23.7	23.5	23.7
(excluding alcohol)	%	37.3	34.2	32.3	38.5	37.2	37.0	36.6	38.2
Methamphetamine	*n*	564	516	946	1,271	1,494	1,696	1,672	1,540
	%	7.5	8.2	11.7	12.0	13.8	13.8	13.9	12.7
(excluding alcohol)	%	11.3	12.1	16.4	18.1	20.6	21.6	21.7	20.4
Cocaine	*n*	1,028	960	1,264	1,619	1,460	1,849	1,807	1,662
	%	13.8	15.3	15.6	15.3	13.5	15.1	15.0	13.7
(excluding alcohol)	%	20.7	22.4	21.9	23.1	20.2	23.6	23.4	22.0
Heroin	*n*	1,176	979	1,226	922	1007	810	807	761
	%	15.7	15.6	15.1	8.7	9.3	6.6	6.7	6.3
(excluding alcohol)	%	23.6	22.9	21.3	13.1	13.9	10.3	10.5	10.1
Other Opioids[1]	*n*	238	208	300	340	434	412	400	472
	%	3.2	3.3	3.7	3.2	4.0	3.4	3.3	3.9
(excluding alcohol)	%	4.8	4.9	5.2	4.8	6.0	5.3	5.2	6.3
Depressants[2]	*n*	32	79	55	47	45	57	48	62
	%	0.4	1.3	0.7	0.4	0.4	0.5	0.4	0.5
(excluding alcohol)	%	0.6	1.8	1.0	0.7	0.6	0.7	0.6	0.8
Other Amphetamines/Stimulants	*n*	25	34	31	24	21	34	17	28
	%	0.3	0.5	0.4	0.2	0.2	0.3	0.1	0.2
(excluding alcohol)	%	0.5	0.8	0.5	0.3	0.3	0.4	0.2	0.4
Hallucinogens[3]	*n*	31	15	18	16	17	25	17	16
	%	0.4	0.2	0.2	0.2	0.2	0.2	0.1	0.1
(excluding alcohol)	%	0.6	0.4	0.3	0.2	0.2	0.3	0.2	0.2
Club Drugs[4]	*n*	NA	5	22	29	24	24	39	42
	%	NA	0.1	0.3	0.3	0.2	0.2	0.3	0.3
(excluding alcohol)	%	NA	0.1	0.4	0.4	0.3	0.3	0.5	0.6
Other[5]	*n*	29	19	39	41	40	37	75	87
	%	0.4	0.3	0.5	0.4	0.4	0.3	0.6	0.7
(excluding alcohol)	%	0.6	0.4	0.7	0.6	0.6	0.5	1.0	1.2
Total	***N***	**7,474**	**6,290**	**8,120**	**10,563**	**10,812**	**12,253**	**12,027**	**12,138**
(excluding alcohol)	***N***	**4,978**	**4,281**	**5,760**	**7,012**	**7,237**	**7,845**	**7,706**	**7,552**

[1] Includes non-prescription methadone and other opiates and synthetic opiates.
[2] Includes barbiturates, benzodiazepine tranquilizers, clonazepam, and other sedatives.
[3] Includes LSD, PCP and other hallucinogens.
[4] Includes Rohypnol, ketamine (Special K), GHB, and MDMA (ecstasy).
[5] Includes inhalants, over-the-counter and other drugs not specified.
SOURCE: Drug/Alcohol Coordinated Data System, Alcohol and Drug Abuse Division, Colorado Department of Human Services

Exhibit 4. Demographic Characteristics of Clients Admitted to Treatment in the State of Colorado, Percents: January–December 2008

Characteristics	Alcohol[1] Only or inCombo	Mari-juana	Cocaine	Meth-Amphet amine	Heroin	Other Opioids	Seda-tives	Other Stimu-lants[2]	Hallu-cino-gins	Club Drugs	All Other[3]
Total (*N*=28,569)	(11,754)	(6,156)	(3,319)	(4,543)	(1,201)	(1,113)	(141)	(55)	(38)	(67)	(181)
Gender											
Male	68.7	76.4	57.1	55.5	63.8	50.2	39.7	60.0	86.8	68.7	70.7
Female	31.3	23.6	42.9	44.5	36.2	49.8	60.3	40.0	13.2	31.3	29.3
Race/Ethnicity											
White	66.4	50.9	43.4	78.0	70.6	78.0	77.3	78.2	76.3	64.2	53.6
African-American	5.3	13.5	18.4	1.7	5.1	2.2	5.7	3.6	2.6	11.9	9.4
Hispanic	23.7	31.0	34.6	16.8	20.5	17.0	15.6	18.2	21.1	17.9	30.9
Other	4.6	4.5	3.7	3.6	3.8	2.8	1.4	0.0	0.0	6.0	6.1
Age at Admis-sion											
Under 18	3.6	28.6	1.5	1.3	0.4	0.9	4.3	12.7	21.1	26.9	11.6
18 to 24	17.3	28.7	13.4	18.3	17.8	19.0	10.6	16.4	39.5	28.4	21.0
25 to 34	27.1	26.2	30.0	41.7	30.4	34.9	30.5	40.0	21.1	28.4	29.8
35-44	25.8	11.1	31.7	27.3	21.1	22.2	22.7	18.2	15.8	10.4	18.8
45-54	19.8	4.6	20.5	10.5	20.0	16.8	22.0	12.7	2.6	4.5	12.2
55 and older	6.4	0.9	2.9	0.9	10.2	6.3	9.9	0.0	0.0	1.5	6.6
Route of In-gestion											
Smoking	0.3	93.8	61.5	64.8	11.7	2.1	13.5	20.0	15.8	17.9	13.8
Inhaling	3.0	4.0	31.2	10.1	7.2	8.2	5.7	9.1	10.5	10.4	14.9
Injecting	0.1	0.1	5.3	22.7	79.4	7.3	5.0	21.8	5.3	9.0	1.1
Oral/Other	96.7	2.1	1.9	2.4	1.8	82.5	75.9	49.1	68.4	62.7	70.1
Secondary Drug	Marijuana 23.9	Alcohol 42.3	Alcohol 33.7	Mari-juana 31.0	Cocaine 26.3	Alcohol 15.7	Alco-hol 25.5	Alco-hol 21.8	Mari-juana 28.9	Mari-juana 32.8	Mari-juana 14.9
Tertiary Drug	Cocaine 4.9	Alcohol 7.8	Alcohol 12.4	Alcohol 14.4	Mari-Juana 10.6	Mari-Juana 7.4	Alco-hol 10.6	Cocain & Mari-juana 10.9	Mari-Juana 23.7	Alco-hol 20.9	Alco-hol 6.6

[1] Includes alcohol only or in combination with other drugs
[2] Includes other simulants (e.g., Ritalin, etc.) and amphetamines (Benzedrine, Dexadrine, Desoxyn, etc.)
[3] Includes over the counter drugs, inhalants, anabolic steroids, and other non-classified substances.
SOURCE: Drug/Alcohol Coordinated Data System, Alcohol and Drug Abuse Division, Colorado Department of Human Services

Exhibit 5. Demographic Characteristics of Clients Admitted to Treatment in Denver/Boulder Metropolitan Area, Percents: January–December 2008

Characteristics	Alcohol[1] Only or inCombo	Mari-juana	Cocaine	Meth-am-phetamine	Heroin	Other Opioids	Seda-tives	Other Stimu-lants[2]	Hallu-cino-gins	Club Drugs	All Other[3]
Total (*N*=12,138)	(4,586)	(2,882)	(1,662)	(1,540)	(761)	(472)	(62)	(28)	(16)	(42)	(87)
Gender											
Male	66.4	77.4	56.0	59.9	63.9	48.9	35.5	46.4	93.8	66.7	77.0
Female	33.6	22.6	44.0	40.1	36.1	51.1	64.5	53.6	6.3	33.3	23.0
Race/Ethnicity											
White	66.2	42.9	42.7	78.3	67.9	78.4	71.0	78.6	62.5	61.9	41.4
African-American	8.2	22.1	22.9	2.0	6.2	4.2	9.7	3.6	6.3	11.9	14.9
Hispanic	21.2	30.7	30.6	15.5	22.6	13.8	17.7	17.9	31.3	16.7	39.1
Other	4.4	4.3	3.8	4.2	3.3	3.6	1.6	0.0	0.0	9.5	4.6
Age at Admis-sion											
Under 18	2.9	32.6	1.3	1.8	0.1	0.4	1.6	21.4	25.0	33.3	9.2
18 to 24	16.9	27.3	11.7	18.1	14.5	18.9	12.9	14.3	43.8	31.0	18.4
25 to 34	28.2	24.9	29.5	42.0	28.5	34.1	29.0	35.7	18.8	19.0	32.2
35-44	26.3	10.7	33.3	26.9	21.3	21.4	22.6	14.3	12.5	9.5	20.7
45-54	19.6	3.8	21.4	10.1	21.9	18.0	19.4	14.3	0.0	4.8	13.8
55 and older	6.0	0.6	2.8	1.2	13.7	7.2	14.5	0.0	0.0	2.4	5.7
Route of In-gestion											
Smoking	0.2	91.4	57.6	59.4	12.6	3.0	17.7	17.9	12.5	14.3	3.4
Inhaling	6.2	6.2	36.4	12.2	7.1	9.7	9.7	10.7	6.3	9.5	11.5
Injecting	0.1	0.0	3.9	25.4	78.8	8.3	3.2	14.3	6.3	9.5	1.1
Oral/Other	93.5	2.4	2.1	3.0	1.5	79.1	69.3	57.1	75.0	66.7	83.9
Secondary Drug	Marijuana 23.7	Alcohol 41.1	Alcohol 35.0	Mari-juana 29.5	Co-caine 26.1	Alcohol & Mari-juana 14.6	Alco-hol 25.8	Alcohol, Mari-juana & Cocaine 17.9	Mari-juana 25.0	Alco-hol 31.0	Alco-hol 8.0
Tertiary Drug	Cocaine 5.4	Alcohol 8.2	Alcohol 11.3	Alcohol 13.1	Mari-juana 9.5	Alcohol & Mari-juana 6.8	Alco-hol 6.8	Mari-juana 14.3	Mari-juana 25.0	Mari-juana 19.0	Mari-juana 3.4

[1] Includes alcohol only or in combination with other drugs
[2] Includes other simulants (e.g., Ritalin, etc.) and amphetamines (Benzedrine, Dexadrine, Desoxyn, etc.)
[3] Includes over the counter drugs, inhalants, anabolic steroids, and other non-classified substances.
SOURCE: Drug/Alcohol Coordinated Data System, Alcohol and Drug Abuse Division, Colorado Department of Human Services

Exhibit 6: Age of Onset, Years to Treatment, and Proportions of New Users (< 3 Years) and New to Treatment (Tx) Admissions for Colorado and the Denver Area: January–December 2008

Area		Cocaine	Heroin	Other Opioids	Metham-phetamine	Marijuana
Statewide		(*n*=3,319)	(*n*=1,201)	(*n*=1,113)	(*n*=4,543)	(*n*=6,156)
Age at Onset[1]	Mean	22.8	24.6	26.0	21.7	14.3
	Median	21.0	21.5	23.0	19.0	14.0
Years to 1st Tx[1]	Mean	12.1	8.5	7.2	10.1	9.6
	Median	10.0	4.5	5.0	8.0	7.0
% New Users[1]		17.1	37.8	26.8	13.4	20.4
% New to Tx.[2]		33.4	20.7	39.6	33.1	52.9
Denver Area		(*n*=1,662)	(*n*=761)	(*n*=472)	(*n*=1,540)	(*n*=2,882)
Age at Onset [1]	Mean	22.9	25.4	25.6	21.2	14.2
	Median	21.0	22.0	23.0	19.0	14.0
Years to 1st Tx[1]	Mean	13.1	8.8	7.4	10.3	9.3
	Median	12.0	5.0	5.0	8.0	7.0
% New Users[1]		14.9	35.8	25.0	10.8	20.6
% New to Tx[2]		34.4	20.1	34.6	33.4	52.5

SOURCE: Drug/Alcohol Coordinated Data System, Alcohol and Drug Abuse Division, Colorado Department of Human Services
[1] Computed for first-time treatment admissions/no prior treatment admissions only.
[2] Proportion of those with no prior treatment admissions out of all treatment admissions.

Exhibit 7. Number and Percentage of Reports in Drug-Related ED Visits in Denver, by Drug Category (Unweighted[1]): January–December 2008

Category/Drug	Number	% Incl. Alcohol	% Excl. Alcohol
Alcohol	5888	42.4	NA
Cocaine	2996	21.6	37.5
Heroin	930	6.7	11.6
Marijuana	2581	18.6	32.3
Methamphetamine	607	4.4	7.6
Amphetamines	283	2.0	3.5
MDMA	247	1.8	3.1
GHB	24	0.2	0.3
Flunitrazepam (Rohypnol)	2	0.014	0.03
Ketamine	9	0.06	0.1
LSD	83	0.6	1.0
PCP	30	0.2	0.4
Miscellaneous Hallucinogens	99	0.7	1.2
Other[3]	94	0.7	1.2
Total Illicit Drugs[4] (Excl. Alcohol)	7985		100.0
Total Illicit Drugs & Alcohol	13873	100.0	

[1]Unweighted data from 7 Denver area hospital EDs reporting to DAWN. All DAWN cases are reviewed for quality control. Based on this review, cases may be corrected or deleted. Therefore, these data are subject to change.
[2]Misuse cases only, which exclude adverse reaction and accidental ingestion cases
[3]Includes inhalants and other combinations not tabulated above.
[4]Inlcudes cocaine, heroin, marijuana, methamphetamine, other amphetamines, MDMA, and Other.
SOURCE: DAWN *Live!*, OAS, SAMHSA, updated 4/16/09

Exhibit 7a: Denver Metro vs. US Rate per 100,000 Population for Selected Drug-Related ED Visits in Involving Misuse/Abuse: 2004-2007

ED Visit Rates per 100,000	2004	2005	2006	2007
Cocaine:				
Denver Metro Rate	92.9	172.7	205.2	204
US Rate	161.9	163.2	181.5	181.8
Heroin:				
Denver Metro Rate	32.9	44.6	52.8	53.1
US Rate	73	63.3	62.8	61.8
Marijuana:				
Denver Metro Rate	50.3	90	136.5	146.2
US Rate	95.9	94.4	96.1	101.3
Methamphetamine:				
Denver Metro Rate	32.4	76	57.3	49.4
US Rate	45.1	37	26.4	22.3
Narcotic Analgesics:				
Denver Metro Rate	35	58.1	76.4	102.8
US Rate	56.6	64.5	75.8	90.3
MDMA				
Denver Metro Rate	4.5	6.8	10	11
US Rate	3.5	3.8	5.5	4.2
Benzodiazepines				
Denver Metro Rate	29.3	51.9	69.6	87.9
US Rate	58.1	74.7	77.1	85.2

Exhibit 7b: Number and Percentage of 2008 Narcotic Analgesic Reports in Drug-Related ED Visits in Denver, by Specific Drug (Unweighted)

	2008	
	N	**%**
Codeine	68	2.6%
Fentanyl	153	5.9%
Hydrocodone	581	22.3%
Hydromorphone	132	5.1%
Methadone	239	9.2%
Morphine	241	9.3%
Oxycodone	1104	42.4%
Propoxyphene	38	1.5%
Other	45	1.7%
Total	2601	100.0%

SOURCE: DAWN *Live!*, OAS, SAMHSA, updated 2/23/2009

Exhibit 7c: Number and Percentage of Benzodiazepine Reports in Drug-Related ED Visits in Denver, by Specific Drug (Unweighted): 2008

	2008	
	N	%
Alprazolam (Xanax)	436	24.6%
Clonazepam	346	19.5%
Benzo-NOS	367	20.7%
Lorazepam (Ativan)	291	16.4%
Diazepam	214	12.1%
Temazepam (Restoril)	63	3.6%
Clorazepate (Tranxene)	34	1.9%
Chlordiazepoxide (Librium)	9	0.5%
All Others	11	0.6%
Total	1771	100.0%

Exhibit 8: Most Common Drugs in Denver Drug Related Decedents: Percent of All Cases 2003-2008

	2003		2004		2005		2006		2007		2008	
Drug Contributing to Cause of Death	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**
Cocaine	53	38.1%	58	38.4%	82	48.2%	85	50.3%	75	39.7%	60	28.3%
Morphine	42	30.2%	57	37.7%	60	35.3%	64	37.9%	43	22.8%	48	22.6%
Alcohol	41	29.5%	60	39.7%	44	25.9%	65	38.5%	66	34.9%	75	35.4%
Codeine	29	20.9%	25	16.6%	36	21.2%	36	21.3%	18	9.5%	19	9.0%
Heroin	17	12.2%	6	4.0%	18	10.6%	17	10.1%	18	9.5%	27	12.7%
Methadone	11	7.9%	13	8.6%	17	10.0%	16	9.5%	14	7.4%	15	7.1%
Oxycodone	12	8.6%	6	4.0%	12	7.1%	7	4.1%	38	20.1%	33	15.6%
Methamphetamine	12	8.6%	7	4.6%	12	7.1%	9	5.3%	12	6.3%	15	7.1%
Acetaminophen	10	7.2%	9	6.0%	11	6.5%	2	1.2%	14	7.4%	13	6.1%
Diazepam	11	7.9%	11	7.3%	10	5.9%	11	6.5%	19	10.1%	16	7.5%
Alprazolam	2	1.4%	3	2.0%	10	5.9%	5	3.0%	13	6.9%	15	7.1%
Hydrocodone	7	5.0%	4	2.6%	7	4.1%	10	5.9%	8	4.2%	22	10.4%
Dihpenhydramine	5	3.6%	2	1.3%	7	4.1%	1	0.6%	11	5.8%	11	5.2%
Decedents	139		151		170		169		189		212	

Source: Denver Medical Examiner's Office Autopsy Reports

Exhibit 8a: Most Common Combinations of Drugs in Decedents by Percent of All Cases: 2003 to 2008

	2003		2004		2005		2006		2007		2008	
Combinations												
	n	%	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**
Morphine and Codeine	27	19.4%	24	15.9%	33	19.4%	35	20.7%	13	6.9%	16	7.5%
Cocaine and Morphine	19	13.7%	23	15.2%	28	16.5%	31	18.3%	18	9.5%	15	7.1%
Cocaine and Codeine	15	10.8%	12	7.9%	18	10.6%	18	10.7%	8	4.2%	7	3.3%
Morphine and Alcohol	16	11.5%	25	16.6%	17	10.0%	30	17.8%	9	4.8%	11	5.2%
Cocaine and Alcohol	12	8.6%	16	10.6%	16	9.4%	26	15.4%	22	11.6%	15	7.1%
Cocaine and Heroin	7	5.0%	2	1.3%	8	4.7%	9	5.3%	5	2.6%	8	3.8%
Oxycodone & any other drug	11	7.9%	4	2.6%	0	0.0%	1	0.6%	19	10.1%	29	13.7%
Total Decedents	139		151		170		169		189		212	

Source: Denver Medical Examiner's Office Autopsy Reports

Exhibit 9. Number and Rates of Denver Drug-Related Hospital Discharge Reports per 100,000 Population for Selected Drugs: 2000–2008

Drug		2000	2001	2002	2003	2004	2005	2006	2007	2008
Alcohol	(n)	10,013	10,606	10,429	9,812	10,560	10,060	10,288	10,116	11,361
Rate		1802	1893	1859	1733	1856	1759	1788	1747	1948
Stimulants	(n)	244	261	323	407	549	738	489	438	350
Rate		44	47	58	72	97	129	85	76	60
Cocaine	(n)	1338	1298	1369	1423	1753	1843	1862	1634	1502
Rate		241	232	244	251	308	322	324	282	258
Marijuana	(n)	778	846	837	842	1100	1163	1188	1050	1218
Rate		140	151	149	149	193	203	207	181	209
Opioid	(n)	741	744	720	818	804	987	916	1038	1040
Rate		133	133	128	145	141	173	159	179	178
Population		555,781	560,366	560,884	566,174	568,913	571,847	575,294	579,177	583,238

[1]NA=Not available.
SOURCE: Colorado Department of Public Health and Environment, Colorado Hospital Association

Exhibit 10. Number of Statewide Drug-Related Calls to the Rocky Mountain Poison & Drug Center: 2004–2008 (human exposure calls only)

Drug	2004	2005	2006	2007	2008
Alcohol	**762**	**884**	**868**	**858**	**916**
Cocaine/Crack	**120**	**107**	**129**	**91**	**104**
Heroin/Morphine	**20**	**24**	**25**	**21**	**23**
Marijuana	**68**	**78**	**45**	**70**	**61**
Methamphetamine	**95**	**127**	**29**	**31**	**51**
Other Stimulants/ Amphetamines (see below)	**321**	**308**	**318**	**257**	**373**
Club Drugs	**43**	**49**	**47**	**49**	**55**

Note: Other stimulants/amphetamines includes amphetamines, methylphenidate, caffeine and other unknown stimulants

Source: Rocky Mountain Poison and Drug Center

Exhibit 11. Federal Drug Seizures in Colorado: 2003–2008

	Quantity Seized					
Drug	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**
Cocaine	65.5 kgs1	36.0 kgs	131.5 kgs	135.1 kgs	44.0 kgs	52.6 kgs
Heroin	3.9 kgs	4.6 kgs	3.0 kgs	4.0 kgs	2.5 kgs	3.2 kgs
Methamphetamine	14.8 kgs	28.8 kgs	34.4 kgs	50.3 kgs	8 kgs	26.4 kgs
(Meth labs)	345	228	145	85	44	33
Marijuana	444.1 kgs	774.6 kgs	765.6 kgs	656.8 kgs	1,149.5 kgs	24,089.2 kgs
Ecstasy	1,128 tablets	0 tablets	0.6 kgs/2,104du[2]	0.0kgs/1,103du	0.0 kgs	0.0 kgs

[1]kgs=kilograms
[3]du=dosage units
SOURCE: U.S. Drug Enforcement Administration State Factsheets for Colorado 2003-2008

Exhibit 12. Prices of Selected Drugs in Denver: December 2008

Drug	Wholesale Price	Retail Price	Street Price
Powder Cocaine	$17,500–$24,000 kg	$600–$1000 oz	$70–$150 gm
Crack Cocaine	$15,000-$20,000 kg	$650–$900 oz	$20 rock $70-120 gm
Heroin	$24,000–$35,000 kg (MBT) $30,000--$35,000 kg (MBP)	$800-$1,600 oz (MBT)	$130-250 gm (MBT)
Methamphetamine	$12,000-$20,000 lb (PM, MX) $16,000-$25,000 lb (Ice, MX)	$1000–$1500 oz (Ice, MX) $500-$1000 oz (PM,LP,STL) $500-$800 oz (PM, MX)	$100-$150 gm (Ice, DO or LP MX)
Marijuana	$2,600-$5,000 lb BC $2000 lb (DO, LP IG) $300–$500 lb (MX)	$80–$100 oz (MX) $300–$400 oz (BC)	$30-$60 ¼ oz (MX)
Ecstasy	$5 - $6 tablet	$6-$13 tablet $7 - $17 tablet United States (DO or LP)	$20-$25 tablet United States (DO or LP)

Note: kg=kilogram; gm=gram; MBT=Mexican Black Tar; PM=Powder Methamphetamine; MX=Mexican Produced, LP=Locally Produced; STL=small toxic lab
DO=Domestic, HY=Hydroponic, IG=Indoor Grown, CG=Commercial Grade, BC=BC Bud from Canada
SOURCE: Denver Police Dept. DEA, Front Range Task Force

Exhibit 12a: Purity of Selected Drugs in Denver as of April 2009

Drug Type	CY 2004	CY 2005	CY 2006	CY 2007	CY 2008	CY 2009
Cocaine	88% (kilogram quantity)	79% (kilogram quantity)	77% (kilogram quantity)	65% (kilogram quantity)	67% (kilogram) 37.3% (ounce)	None available
Heroin	24% (ounce quantity)	64% (ounce quantity)	70% (ounce quantity)	56% (ounce quantity)	69.3% (kilogram quantity)	None available
Methamphetamine	54% (kilogram quantity)	94% (kilogram quantity)	94% (kilogram quantity)	84% (kilogram quantity)	82.9% (kilogram) 51.13% (ounce)	36% (ounce quantity)

Source: Unofficial statistics from the DEA Denver

Exhibit 13. Denver and US NFLIS Samples Analyzed by Drug Type based on Top 25 Drugs: 2008

	Denver Area		US	
Drug	**N**	**%**	**N**	**%**
COCAINE	3069	39.6%	392305	30.6%
CANNABIS	2202	28.4%	478129	37.3%
METHAMPHETAMINE	1034	13.3%	134853	10.5%
NON-CONTROLLED NON-NARCOTIC DRUG	454	5.9%	6429	0.5%
HEROIN	270	3.5%	81595	6.4%
3,4-METHYLENEDIOXYMETHAMPHETAMINE	177	2.3%	19966	1.6%
OXYCODONE	113	1.5%	30055	2.3%
HYDROCODONE	83	1.1%	32790	2.6%
All Other Drugs in Top 25	348	4.5%	107421	8.4%
Total Top 25	7750	100.0%	1283543	100.0%

Source: National Forensic Lab Information System
Note: Denver Area in this comparison includes Denver, Jefferson and Arapahoe Counties

**Exhibit 14: Denver Hydrocodone Rx Filled and Rate per 1000:
3rd quarter 2007 through 4th quarter 2008**

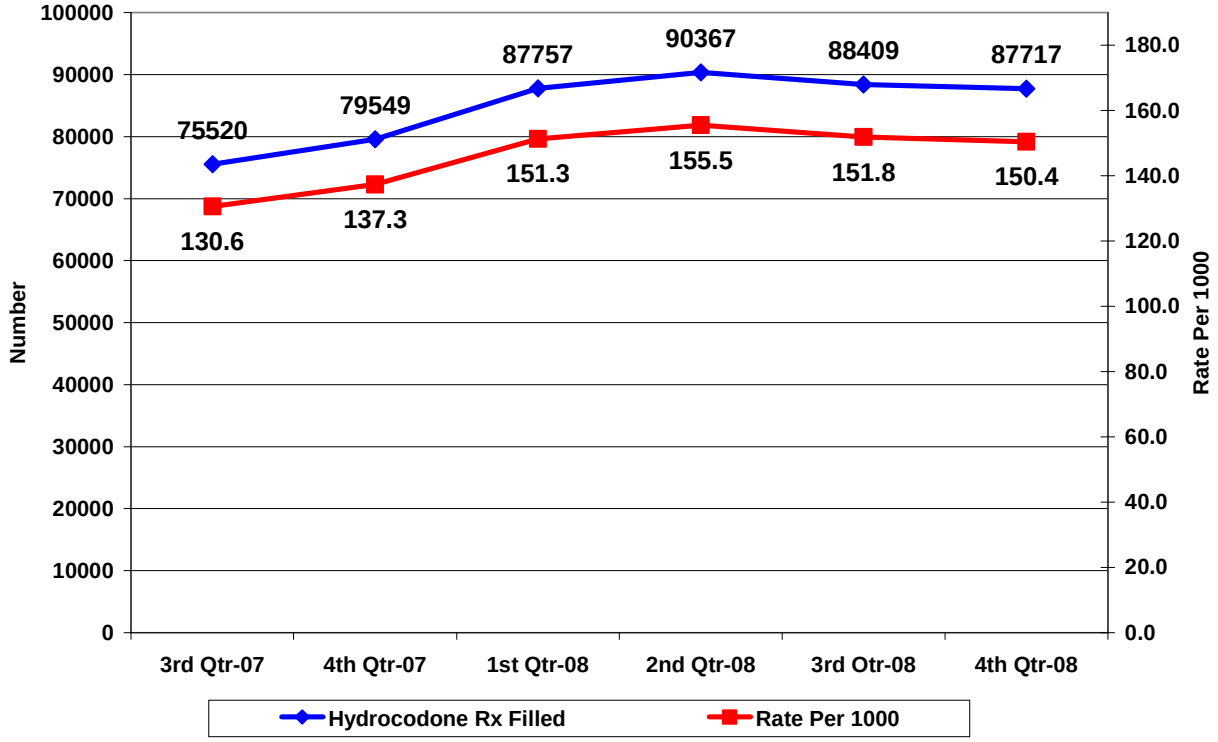


**Exhibit 15: Denver Oxycodone Rx Filled and Rate Per 1000:
3rd Qtr 2007-4th Qtr 2008**

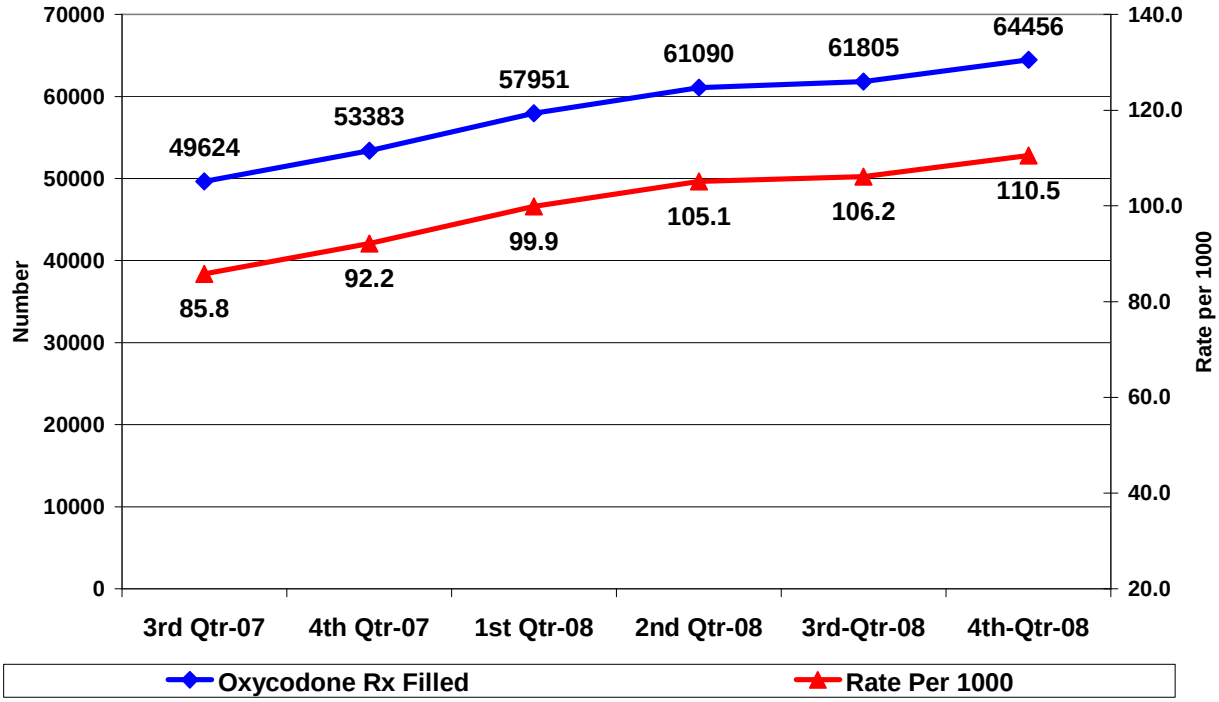


Exhibit 16: Selected Denver Benzodiazepine Rx Filled Rate per 1000: 3rd Qtr 2007-4th Qtr 2008

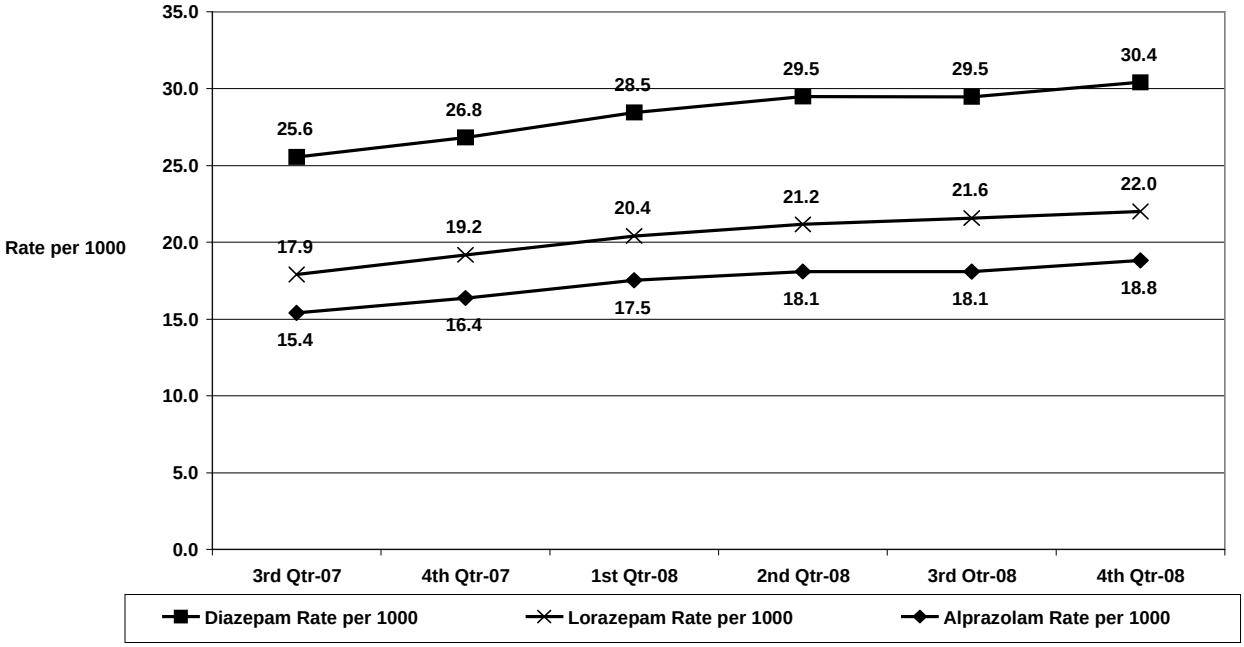
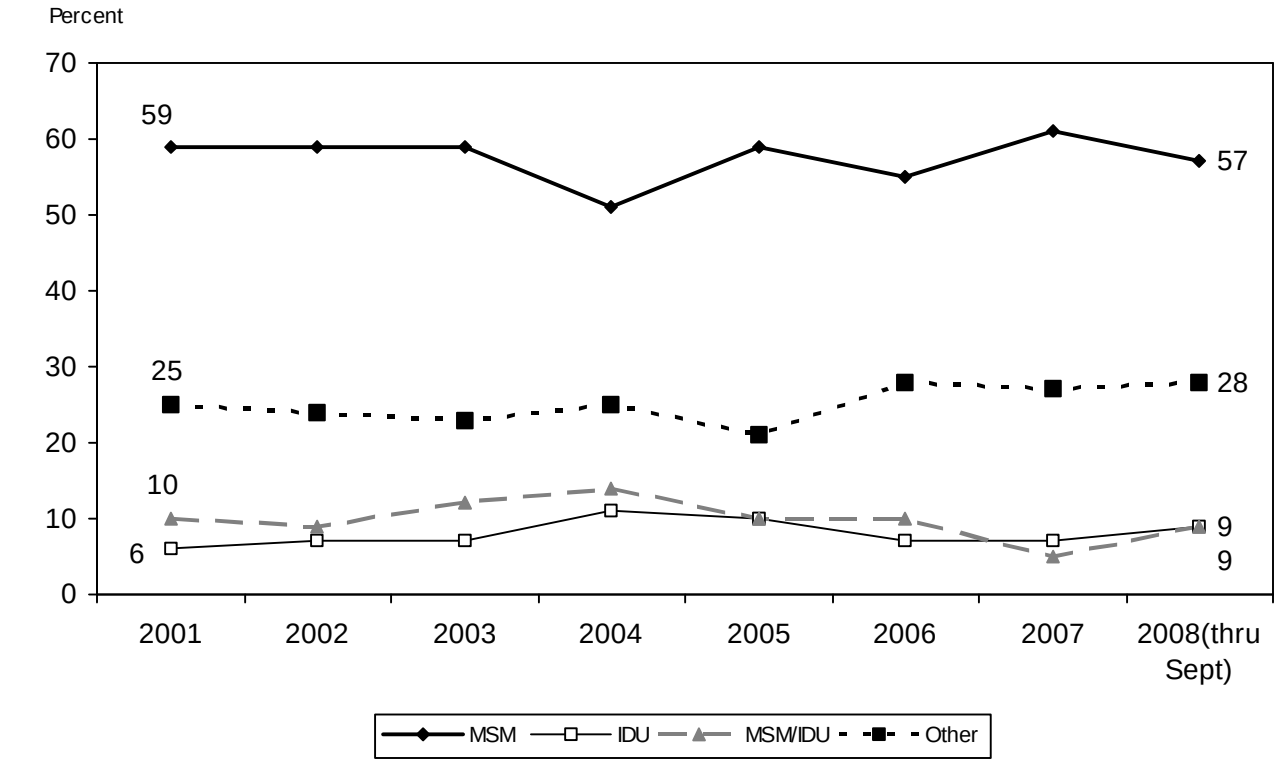


Exhibit 17. Colorado AIDS Cases by Exposure Category: Cumulative Through September 30, 2008

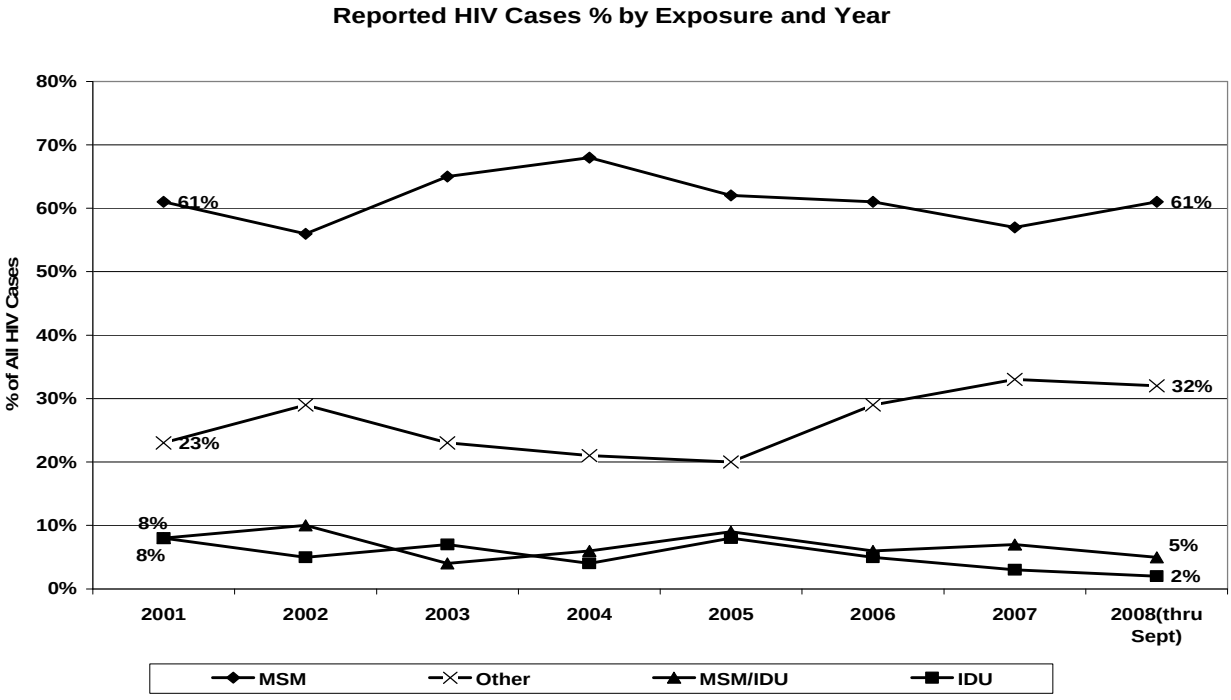
	Number of AIDS Cases[1]	Percent of AIDS Cases
Gender		
Male	8442	91.3
Female	805	8.7
Total	9,247	100.0
Exposure Category		
Men who have sex with men (MSM)	6,129	66.3
Injection drug user (IDU)	838	9.1
MSM and IDU	984	10.6
Heterosexual contact	663	7.2
Other	633	6.8

Exhibit 18. Percent of New AIDS Cases in Colorado, by Exposure and Year: 2001–2008 (thru Sept)



SOURCE: Colorado Department of Public Health and Environment

Exhibit 19. Percent of New HIV Cases in Colorado, by Exposure and Year: 2001–2008 (thru Sept)



SOURCE: Colorado Department of Public Health and Environment

Exhibit 20: Denver Epidemiology Work Group membership

Name	Agency	Field
Jim Adams-Berger	Omni Institute	Research and evaluation
Kendra Bernard	WESTAT	Drug Abuse Warning Network
Kerry Broderick	Denver Health and Hospitals	Emergency medicine
Kristen Dixion	State Division of Behavioral Health	Data analysis and evaluation
Eric Ennis	Addiction Research and Treatment Services	Substance abuse treatment
Vanessa Fenley	Denver Office of Drug Strategy	Substance abuse prevention
Mark Fleecs	Denver Police and HIDTA	Drug control and intelligence
Jonathan Gray	Arapahoe House	Substance abuse treatment
Ron Hollingshead	National Drug Intelligence Center and HIDTA	Drug control and intelligence
Eric Lavonas	Rocky Mountain Poison and Drug Center	Drug toxicology
John Lundin-Martinez	Denver Behavioral Health Services	Substance abuse treatment
Karla Maraccini	Denver Office of Drug Strategy	Substance abuse planning and administration
Amy Martin	Denver Office of the Medical Examiner	Chief Medical Examiner
Andrew McClure	Urban Peak	Outreach counselor
Bruce Mendelson	Denver Office of Drug Strategy	Substance abuse epidemiology
Wendi Roewer	Drug Enforcement Administration	Drug control and intelligence
Mark Royer	Project Safe	Injection drug use outreach and research
Allison Sabel-Soteres	Denver Health and Hospitals	Medical biostatistics
Sarah Schmiege	Omni Institute	Research
Donald Shriver	Denver Police Department Crime Laboratory	Forensic chemistry
Dale Wallis	Denver Police Department	Narcotics
Jamie Van Leeuwen	Denver Drug Strategy Commission	Substance abuse planning and administration