Office and Division of Behavioral Health
Colorado Department of Human Services

The Costs and Effectiveness of Substance Use Disorder Programs in the State of Colorado (C.R.S. 27-80-110) and Reporting Annual Accounting of Forfeited Property Dollars (C.R.S. 16-13-701)

Report to the General Assembly
House and Senate Health and Human Services Committees

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INTRODUCTION

The Colorado Department of Human Services, Office and Division of Behavioral Health (the unit in the Department of Human Services that administers public, community behavioral health programs and services) submits the report entitled, "The Costs and Effectiveness of Substance Use Disorder Programs in the State of Colorado" to the General Assembly House and Senate Committees on Health and Human Services in compliance with:

A) Colorado Revised Statute 27-80-110 as amended by House Bill 00-1297

"27-80-110. Reports. The unit shall submit a report not later than November 1 of each year to the health and human services committees of the senate and house of representatives, or any successor committees, on the costs and effectiveness of alcohol and drug abuse programs in this state and on recommended legislation in the field of alcohol and drug abuse."

B) Colorado Revised Statute 16-13-701 (4) as amended by Senate Bill 03-133

"16-13-701. Reporting of forfeited property. (4) The unit in the department of human services that administers behavioral health programs and services, including those related to mental health and substance abuse, shall prepare an annual accounting report of moneys received by the managed service organization pursuant to section 16-13-311 (3) (a) (VII) (B), including revenues, expenditures, beginning and ending balances, and services provided. The unit in the department of human services that administers behavioral health programs and services, shall provide this information in its annual report pursuant to section 27-80-110, C.R.S."

STATEMENT OF PROBLEM

National and Colorado Data

The federal Substance Abuse and Mental Health Services Administration (SAMHSA) [1] has declared four key points regarding behavioral health (defined as substance use and mental health disorder prevention and treatment): 1) behavioral health is essential to overall health; 2) prevention works; 3) treatment is effective; and 4) people recover. SAMHSA's key role is to reduce the impact of substance abuse and mental illness on America's communities. According to SAMHSA:

- By 2020, behavioral health disorders will surpass all physical diseases worldwide as a major cause of disability.
- Nearly 5,000 deaths are attributed to underage drinking each year.
- Each year, tobacco use results in more deaths (443,000) than AIDS, unintentional injuries, suicide, homicide, and alcohol and drug abuse combined.
- Among persons aged 12 years or older who used pain relievers non-medically in the past 12 months, 55.9 percent received the pain relievers from a friend or relative for free.
- The total economic costs of substance use and mental health disorders among youth are approximately $247 billion.

According to the 2010 National Survey on Drug Use and Health (NSDUH), 52% of Americans aged 12 years or older reported being current drinkers of alcohol. Of these self identified drinkers, 58.6 million (23%) were binge drinkers (defined as five or more drinks on one occasion) and 16.9 million (6.7%) were heavy drinkers as defined as binge drinking on five or more days in a month. In addition, an estimated 22.6 million Americans (8.9% of the total U.S. population aged 12 years or older) were classified as current illicit drug users. There were 7.0 million current users of prescription-type psychotherapeutic drugs taken non-medically.[2]

According to "State Estimates of Substance Use and Mental Disorders" from the 2008-2009 National Surveys on Drug Use and Health, there are an estimated 486,000 Coloradoans aged 12 years and above that used illicit drugs in the past month.[3] According the averaged findings across age groups, Colorado ranked in the top five, among all 50 states for the 12 or older age group as follows:

- 2nd for alcohol use in the past month.
- 2nd for first-time marijuana use.
- 3rd for marijuana use in the past year.
- 3rd for cocaine use in the past year.
- 5th for marijuana use in the past month.
- 5th for dependence on or abuse of illicit drugs or alcohol in the past year.
- 5th for persons needing but not receiving treatment for alcohol use in the past year.
- 5th for alcohol dependence or abuse in the past year.

In addition, substance use epidemiology has documented that the lower the perception that use involves risk, the higher the probability of use. Colorado was among five states with the lowest proportions who perceived smoking marijuana once a month as a great risk. Colorado was also among 14 states with the lowest proportion of those aged 12 to 17 years old that perceived having five or more drinks once or twice a week as having great risk.[3]

Youth and Substance Use Disorder Data

After a decade of consistent declines in teen drug abuse, the 2010 Partnership Attitude Tracking Study[4] reported marked upswings in use of drugs that teens are likely to encounter at parties and in other social situations, specifically marijuana and ecstasy. The same study also found alarming patterns in early adolescent alcohol use and found that teens view drinking alcohol – even heavy drinking – as less risky than using other substances. Monitoring the Future's 2010 study[5] found that, nationally, 71% of today's 12th graders have consumed (more than just a few sips) alcohol by the end of high school, and 36% have done so by 8th grade. On a positive note, the study found that, nationally, alcohol use, including binge drinking, continued its longer-term decline among teens, reaching historically low levels in 2010.

The 2010 National Survey on Drug Use and Health[2] found that the national rates of current illicit drug (excluding tobacco and alcohol) use among 12 to 17 year olds remained stable from 2009 (10.0 percent) to 2010 (10.1 percent). The 2010 Partnership Attitude Tracking Study[4] found that 48% of America's secondary school students have tried an illicit drug by the time they finish high school, and the Northeastern and Western regions of the country historically have reported the highest proportions of students using any illicit drug.

A growing area of concern for today's youth is the off-label use of prescription and over-the-counter drugs. The 22st annual National Study of Teen Drug Abuse by the Partnership at Drugfree.org reported[4] that teen abuse of prescription and over-the-counter medicines remains a serious concern. Major findings included:

- One in four teens (25%) reported taking a prescription drug not prescribed to them by a doctor.
- One in five teens (23%) used a prescription pain reliever not prescribed to them by a doctor.
- One in ten teen (11%) reported using cough medicine to get high.

A 2009 Colorado survey[6] of 1,511 public high-school students, found that Colorado's youth:

- 43% had ever used marijuana, and 8% had done so before the age of 13 years old.
- 25% had used marijuana more than once in the past 30 days.
- 8% had ever used cocaine and 4% had done so in the past month.
- 10% had ever used ecstasy.
- 72% had ever drank alcoholic beverages and 41% had done so in the past month.

- 25% reported having five or more drinks of alcohol in a row.
- 25% of students reported that in the past month, they rode with a drinking driver and 7% said that they drove after drinking in the past month.

In the State of Colorado, the total number of discharges under the age of 18 years for treatment, DUI, and detoxification in fiscal year 2010-11 was 2,504.[7] Of all discharged clients under the age of 18 years, 1,973 individual clients were discharged from treatment services, 197 individual clients were discharged from DUI programs and 83 individual clients were discharged from detoxification services. Of the 1,973 youth discharged from treatment, 35% were diagnosed as drug-dependent and 54% were diagnosed with a mental health issue in addition to their substance abuse.[7]

Treatment and Service Gaps

According to the 2008-2009 *National Surveys on Drug Use and Health* (NSDUH)[3], Colorado ranks fifth (fourth in the 2007-2008 report) among states nationwide in the proportion of persons aged 12 years and older needing but not getting treatment for alcohol use in the past year, and fifteenth (fourth in the 2007-2008 report) among all states in the proportion of persons 12 years and older needing but not getting treatment for illicit drug use in the past year.

The Colorado Division of Behavioral Health completed a comprehensive analysis of the statewide behavioral health service delivery system. The 2009 Colorado "Population in Need" study[8] examines the substance use disorders (and mental health) prevalence, service utilization, and unmet need for Coloradoans living at or below 300% of the Federal Poverty Level:

- There are 169,751 unduplicated count of adults in Colorado with serious behavioral health disorders (both mental health and substance use disorders) living at or below 300% of the federal poverty level.
    - Of these 65,990 adults have a substance use disorders only. Of these only 28,599 received treatment.

By knowing how many Coloradoans presently need public behavioral health services and how many are currently accessing these services, the Division can estimate how many persons need public services, would benefit from them, and have not yet accessed them. Furthermore, an understanding of this population based on age, race, gender, marital status, education, poverty, and residence, enables the State and its behavioral health stakeholders to effect positive change in public policy, develop targeted plans for service, better advocate for the needs of special populations, improve access to services by underserved groups, evaluate the outcomes of services, and contract and finance services based on need, capacity, and performance. Overall the study provides an excellent foundation for achieving the mission of addressing the behavioral health needs within Colorado.

Pregnant Women in Substance Use Disorder Treatment in Colorado

The full extent of the effects of prenatal drug exposure on a child is not known; however studies show that various illicit drug use result in premature birth, miscarriage, low birth weight and a variety of behavioral and cognitive problems.[9] In 2006, the Colorado Prenatal Plus Program saved Medicaid an estimated $2.9 million in health care costs for the 2,137 women who participated in the program and their infants in the first year of life.[10]

Overall national prevalence data (2008) regarding substance use by pregnant women indicates that 11.6% used alcohol during their pregnancies, 17.3% used tobacco[11], 6% used prescription drugs non-medically[12], and 4.3% used illicit or illegal drugs.

Of 65,962 babies born in Colorado (to women age 15 to 44 years) in 2010, it is estimated:

- 7,652 were exposed to alcohol in utero,
- 11,411 were exposed to tobacco in utero,
- 3,958 were exposed to the non-medical use of prescription medications and
- 2,836 were exposed to an illicit substance (e.g. heroin, cocaine etc.)

Colorado's substance use disorder treatment providers delivered services to a total of 376 pregnant women in fiscal year 2010-11.[7] This constitutes less than 5% of the approximate number of pregnant women estimated to be using alcohol, prescription drugs or illicit drugs. In fiscal year 2010-11, there were 242 women who were served in the Special Connections Program, which is a Medicaid funded treatment program for pregnant women jointly managed by the Department of Health Care Policy and Financing and the Department of Human Services, Division of Behavioral Health.

SOCIETAL COSTS OF SUBSTANCE USE

The National Center on Addiction and Substance Abuse (CASA) at Columbia University calculated that in 2005 federal, state and local government spending as a result of substance use disorders and addiction was at least $467.7 billion: $238.2 billion, federal; $135.8 billion, state; and $93.8 billion, local.[13]
Nationwide, $27 per U.S. resident is spent on publicly funded substance use treatment compared to $7.50 spent per resident in Colorado.[14]

For every dollar federal and state governments spent on substance use disorders and addiction in 2005, 95.6 cents went to responding to the societal impact of substance use and only 1.9 cents on prevention and treatment, 0.4 cents on research, 1.4 cents on taxation or regulation and 0.7 cents on interdiction.[15] Substance use drives multiple indirect societal costs, including expenses related to criminal behavior, enforcement of drug laws, incarceration, unemployment and lost productivity, property loss from vehicular crashes, domestic violence, child welfare, illness and premature death, and health care.[15]

Coloradans are affected by the societal costs of substance use in many ways. The magnitude of public funds spent on the direct and indirect consequences of substance use and abuse is staggering, and dozens of Colorado public agencies play a part in controlling substance use or dealing with its consequences. [16] It is estimated that one-fourth of all people admitted to general hospitals have alcoholism and 30% of emergency room patients are problem drinkers or drug users. These individuals are seeking medical attention for alcohol or drug-related illness or injury, not for their addiction problem.[17]

- In 2010, there were 913 calls to the Rocky Mountain Poison Control Center related to alcohol, 107 related to marijuana, 72 related to amphetamines, and 64 related to cocaine.[18]
- Seventy-six percent of injecting drug users is infected with Hepatitis C, a chronic and sometimes fatal disease of the liver.[19]
- In 2010, 672 Colorado residents died of drug related causes and 730 died of alcohol related causes.[20]

In addition, in 2009 there were 6,212 emergency room visits related to alcohol in Denver and 1,678 alcohol-related visits by youth under the age of 21.[21] It is estimated that one emergency room visit costs $1265 minimum[22] and people with untreated alcoholism seek emergency room attention 60% more often than the rest of the population.[17] They are also nearly twice as likely to be hospitalized overnight, and stay in the hospital three days longer. Further, there were 6,578 hospitalized inpatients with a diagnosis of

"alcohol/drug use and alcohol/drug-induced organic mental problems," totaling to 42,473 patient days. The hospital charges for these patients added up to $140,684,487; a cost per case of $21,387.[23]

Criminal justice-related costs associated with substance use are equally compelling. According to the Colorado Bureau of Investigation (2010), there were 26,661 adult DUI arrests and 382 juvenile DUI arrests.[24] The alcohol-impaired fatalities in Colorado totaled 158 in 2009. This represents 34% of total fatalities in the state.[25] Based on 2010 daily prison costs of $88.59[26] for adult offenders ($191.19 for youth offenders[27]), the total cost per day for incarcerating adult offenders with substance use disorders can be estimated at $1,291,335. When compared to offenders without substance use disorders, offenders with substance use disorders demonstrated higher levels of treatment need in the areas of education, employment, and mental health, as well as this population was significantly more likely to have a clinical diagnosis of serious mental illness and/or developmental disability.

Another substance use related cost involves family violence. Among men with alcohol use disorders, 50-60% has been violent toward a female partner in the year before treatment and alcohol use is involved in 30% of child abuse cases.[28]

Fetal Alcohol Syndrome (FAS) is the leading preventable cause of birth defects and mental retardation in the nation. It is estimated that the total lifetime cost for a child born with FAS in 2000 is approximately $1.4 million[29]. Based on the 2010 number of live births in Colorado[30] (66,346) and a FAS prevalence rate of 0.5 to 2.0 per 1000 births[31], Colorado would realize between 33 and 133 FAS births per year at an estimated lifetime cost of $46 million to $186 million.

CLIENT DEMOGRAPHICS:

AN OVERVIEW OF TREATMENT, DETOXIFICATION AND DRIVING UNDER THE INFLUENCE (DUI) CLIENTS

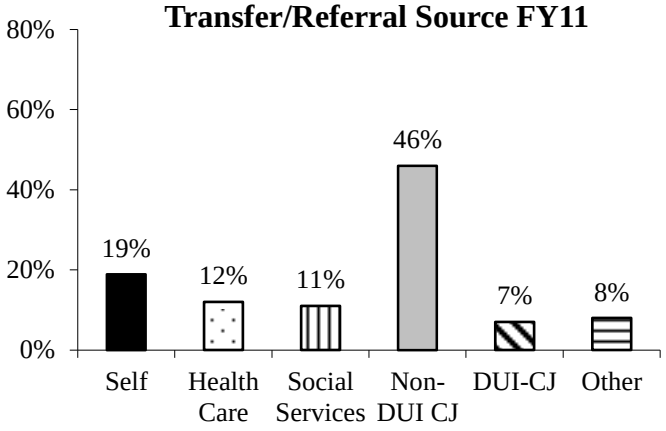
(Note: Numbers and percentages are rounded to the nearest whole number.)

While certain sections of this report are based on the number of Drug/Alcohol Coordinated Data System (DACODS)[7] discharges for fiscal year 11 (n=99,528), the following demographic data are based on the number of unduplicated clients in each service category.

Treatment Clients

Of 25,188 discharges from substance use disorder treatment in fiscal year 2010-11, 21,971 were unique clients. Over half (59%) were treated in Managed Service Organizations contracted outpatient services and 45% had been referred for treatment by the criminal justice system (not related to DUI). See Figure 1. The highest proportions of clients were in treatment for alcohol, followed by marijuana and had 0-1 prior treatment episodes. Clients had, on average, been using their primary drug for approximately 15 years, and 64% reported starting use of their primary drug before the age of 18 years. Clients tended to be daily users of tobacco. Approximately 27% worked full-time and 71% achieved a high

Figure 1: Treatment Clients By Transfer/Referral Source FY11



school education or higher. Thirty-seven percent had dependent children for a total of 14,078 children dependent on clients in treatment.

Client Age
Treatment clients were more likely to be single adults between the ages of 18 and 45 years old with a median age of 31years.

Client Race/Ethnicity
The largest proportions of clients discharged from treatment in fiscal year 2010-11 were White. Compared with the 2010 census figures for Colorado, Hispanics and American Indians were over-represented. Hispanics represented 21% and American Indians comprised 1% of Colorado's general population. In treatment, Hispanics made up 25%, and American Indians comprised 3% of the clientele. See Figure 2.

Primary Drug Type
Alcohol abuse is Colorado's number one substance use problem, followed by marijuana and methamphetamine. See Figure 3.

Modality
Outpatient services comprised the most highly utilized modality for treatment clients, with 65% in traditional and 8% in intensive outpatient modalities. Twenty-two percent of treatment clients were in some form of residential modality, including Therapeutic Community (TC), intensive, short-term intensive and transitional residential settings. See Figure 4. Of the fiscal year 2010-11 discharges, 58% of treatment clients had at least one prior treatment episode and 3% had more than five.

Co-occurring Disorder
Of the 25,188 discharges from substance use disorder treatment in fiscal year 2010-11 14,004 (56%) had a co-occurring mental health and substance use disorder at admission.

Detoxification Clients:
There were 49,871 discharges from detoxification services (excluding treatment and DUI services), 29,383 of which were unique clients. Detox clients were typically served

Figure 2: Treatment Clients By Race/Ethnicity, FY11

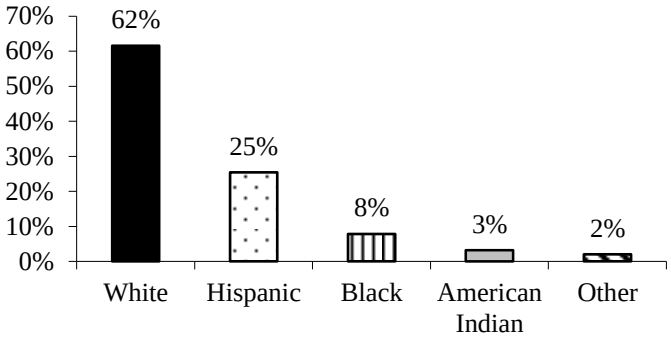


Figure 3: Treatment Clients By Primary Drug, FY11

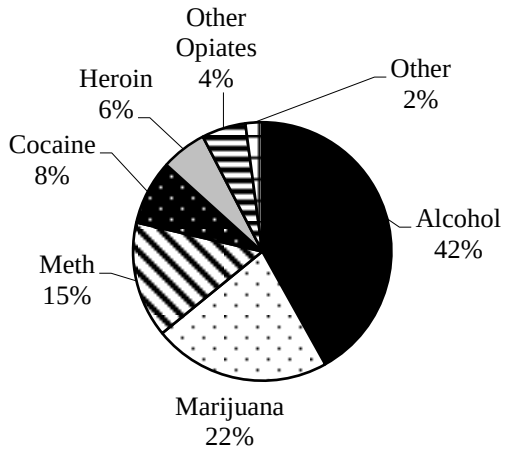
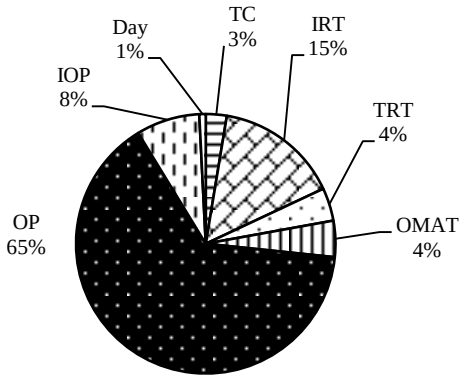


Figure 4: Percent of Discharged Clients by Treatment Modality, FY11



(97%) in MSO-contracted residential non-medical detoxification units. Similar to those in treatment, clients in detox were also typically single, White male adults with no dependent children. The proportion of males discharged from detox comprised 73%. Clients were slightly older than treatment clients with a median age of 34 years. Eighty three percent achieved a 12th grade education or higher and 33% worked full-time. Nearly all (89%) were in detox for alcohol abuse, which they typically started using before the age of 18 (57%). Detox clients had been using their primary substance for an average of 18.7 years and more than half (55%) used tobacco daily. Unlike treatment clients, they generally (68%) had no prior treatment episodes, 32% had one or more prior encounters and 6% had 3 or more. Twenty-seven percent had dependent children for a total of 13,071 children dependent on clients in detox.

Client Age

While 23% of clients in detox were within the 18-24 year old age category, less than 1% was under the age of 18 years. The low numbers of minors in detox may be due to the limited capacity of detox centers to comply with agency requirements that would permit them to accept younger clients. Moreover, police often transport intoxicated youth to their homes, emergency rooms, detention centers, etc., so these episodes are not captured in the data. See Figure 5.

Client Race/Ethnicity

The largest proportions of clients discharged from detox in fiscal year 2010-11 were White. Using the 2010 census figures for Colorado, American Indians comprised 1% of Colorado's general population. In detox, American Indians were over-represented and comprised 4% of the clientele. See Figure 6.

Driving Under the Influence (DUI) Clients:

There were 24,469 discharges from DUI services (excluding other treatment and detox services), of which 22,851 were unique clients, who also tended to be single, White male adults with no dependent children. The proportion of males discharged from DUI was 75%. Their median age

Figure 5: Detox Clients By Admission Age Category, FY11

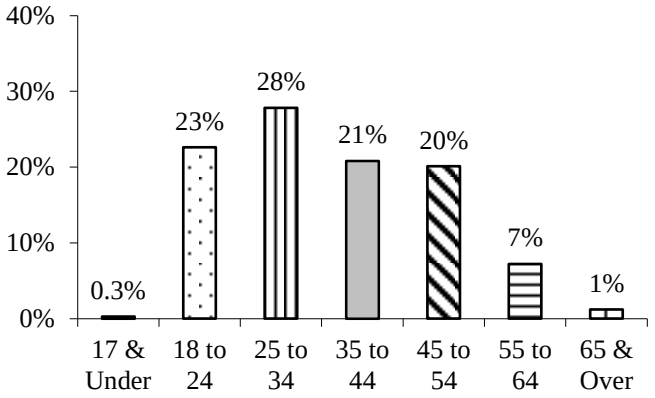


Figure 6: Detox Clients By Race/Ethnicity FY11

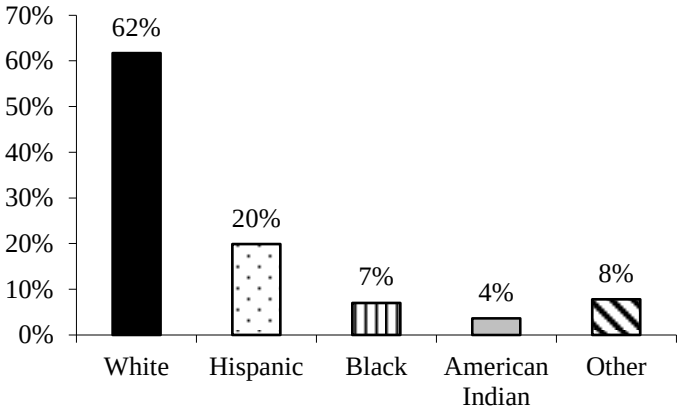
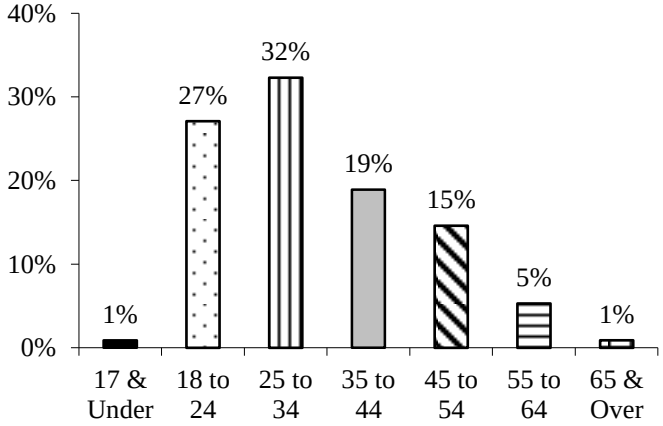


Figure 7: DUI Clients By Admission Age Category, FY11



was 30 years old and this group was more likely to have a 12th grade education or higher (84%) and work full-time (57%). Ninety-four percent received their DUI's for being under the influence of alcohol. These clients started using their primary substance before the age of 18 years (59%) and had been using for an average of 17 years. Forty-six percent used tobacco daily and 63% had no prior treatment episodes. Of the fiscal year 2010-11 discharges, 37% of DUI clients had one or more prior encounters and 1% of DUI clients had more than four. Thirty-three percent of DUI clients were responsible for children for a total of 14,074 children dependent upon DUI clients.

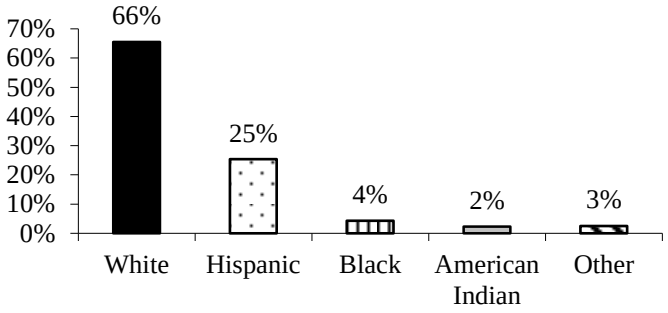
Client Age

Thirty-two percent of DUI clients were within the 25 to 34 years old age group and 27% were within the 18 to 24 year age group. See Figure 7.

Client Race/Ethnicity

The largest proportions of clients discharged from DUI in fiscal year 2010-11 were White. Compared with the 2010 census figures for Colorado, Hispanics represented 21% of Colorado's general population. For DUI clients, Hispanics made up 25%. See Figure 8.

Figure 8: DUI Clients By Race/Ethnicity, FY11



SUBSTANCE USE DISORDER PREVENTION AND TREATMENT RESOURCES FISCAL YEAR 2010-11

As a part of the legislative directive related to cost and effectiveness of alcohol and drug abuse programs, below you will find the resources dedicated to substance use disorder prevention, intervention, treatment and recovery services in Colorado contracted by the Division of Behavioral Health.

Staffing: The Division of Behavioral Health pays for 34 FTEs in the Colorado Department of Human Services.

Division Revenue and Expenses for Fiscal Year 2010-11

Figure 9: FY 2010-11 Revenue by Source $54,253,818 Total Revenue

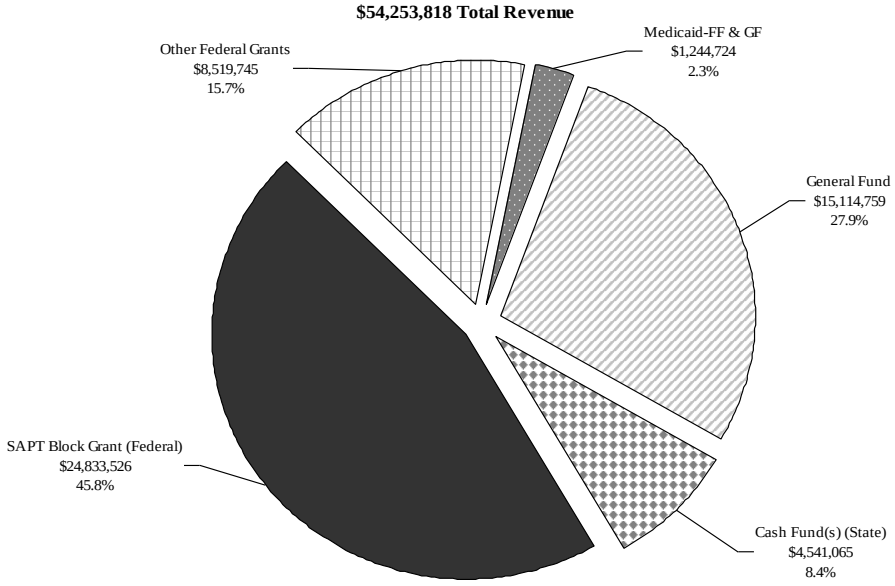
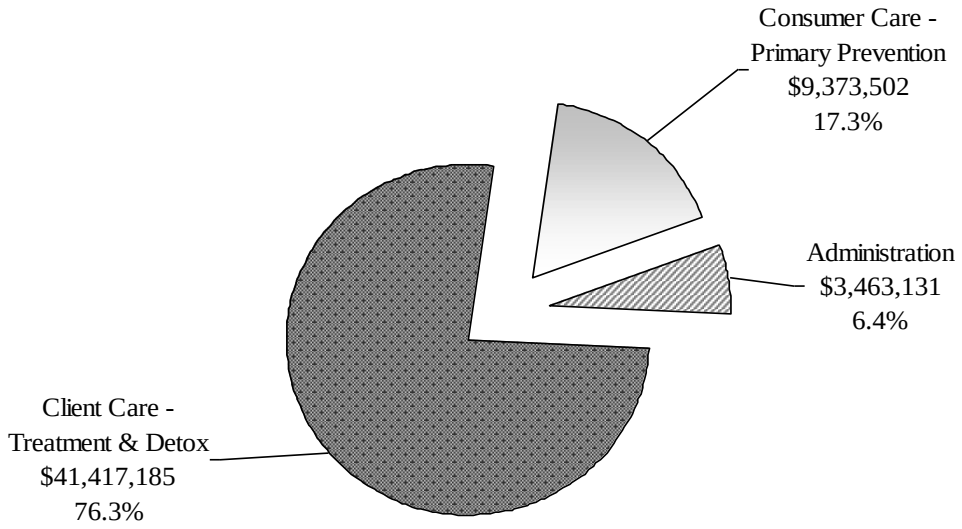


Figure 10: FY 2010-11 Expenditure by Program



The next three charts demonstrate:

- The Division's funding history - substance use disorder treatment, fiscal years 2007 through 2011;
- The proportion of different funding sources; and
- History of the Divisions' General Fund dollars.

Figure 11: DBH Substance Use Disorder Treatment & Detox Funding by Source FY 2007- FY 2011

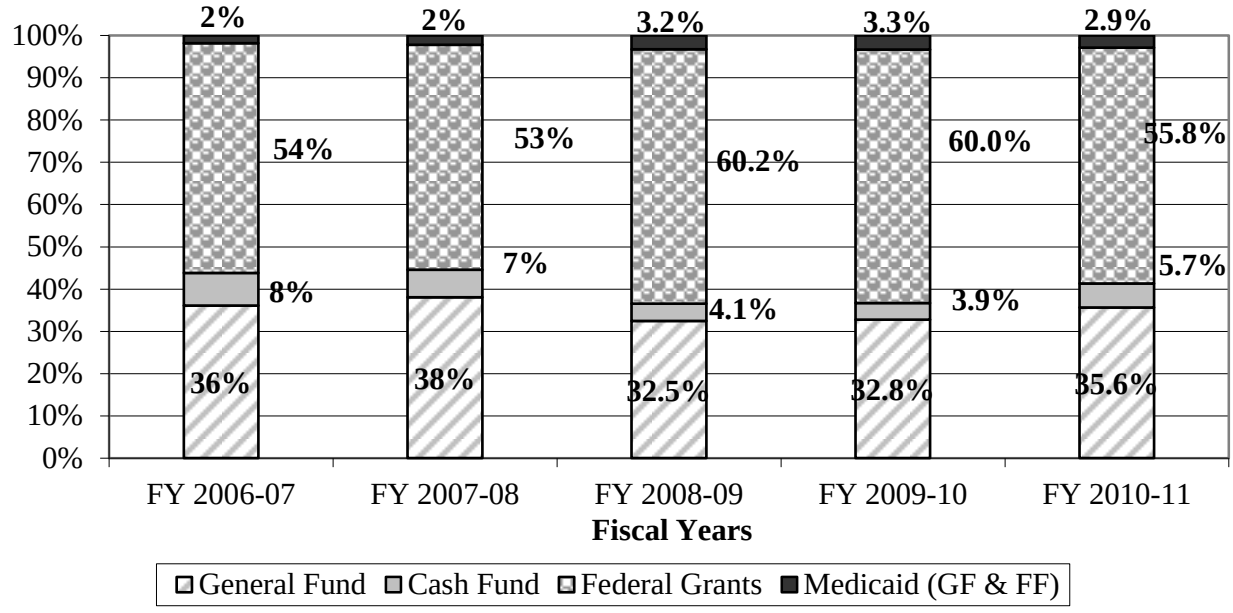


Figure 12: DBH Substance Use Disorder Treatment & Detox Funding History
FY 2007 - FY 2011

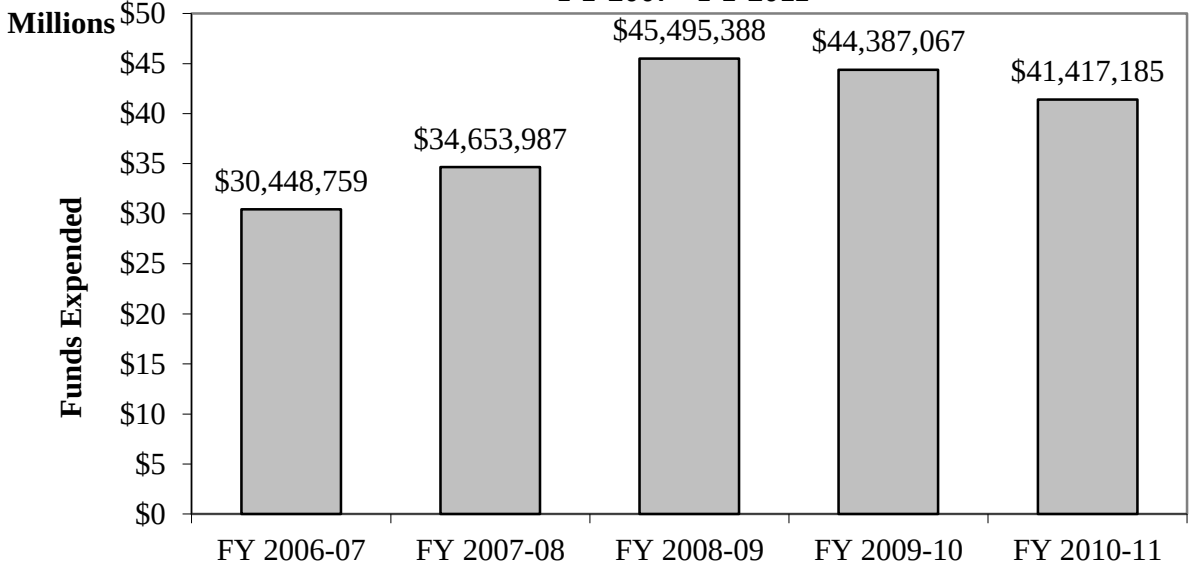
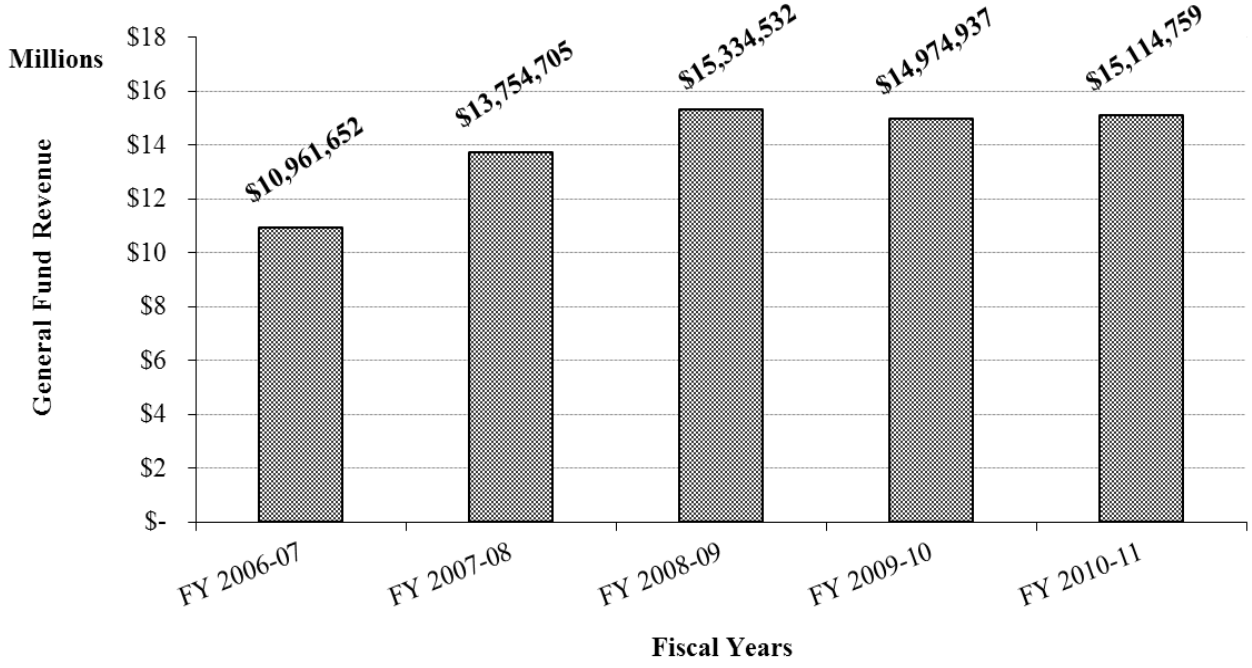


Figure 13: DBH Substance Use Program's General Fund History
FY 2007-FY 2011



SUBSTANCE USE DISORDER PREVENTION AND TREATMENT SERVICE COSTS

As a part of the legislative directive related to cost and effectiveness of alcohol and drug abuse programs, below you will find the service cost related to substance use disorder prevention, intervention, treatment and recovery services in Colorado contracted by the Division of Behavioral Health.

The Division pays approximately 54 % of service costs rendered by the designated Managed Service Organizations and their subcontractors.

Table 2: Average Cost Per Client By Year for Treatment Services funded by The Division

Year	Division's* Average Cost/Client	Total** Average Cost/Client
2011	$775	$1729
2010	$936	$1732
2009	$893	$1,661
2008	$809	$1,543
2007	$774	$1,509
2006	$759	$1,497
2005	$721	$1,948

Note: Detoxification services and costs are excluded; *Data were generated from the Division's funding database, using number of clients treated with the Division monies; **Data reflects all clients funded by the Division and by self-pay or insurance.

THE BENEFITS AND OUTCOMES OF SUBSTANCE USE DISORDER PREVENTION AND TREATMENT SERVICES

The Office of National Drug Control Policy (ONDCP) has documented a direct correlation between increases in drug prevention investments and decreases in the prevalence of use/abuse. Prevention programs show cost-benefit ratios in the range of 8:1 to 15:1 in reduced costs in crime, school and work absenteeism, as well as reduced need for and costs of substance abuse treatment.[15]

According to the National Institute on Drug Abuse, the return on investing in substance use disorder treatment alone may exceed 12:1; that is, every dollar spent on treatment can reduce future burden costs by $12 or more in reduced drug-related crime and criminal justice and health care costs.[13] The Economic Benefits of Drug Treatment: A Critical Review of the Evidence for Policy Makers (2005)[32] cites nearly two decades of research finding that:

- Substance use disorder treatment achieves clinically significant reductions in substance use and crime, and improvements in personal health and social function for many clients.
- Treatment effects include significant gains to both the client and to society.
- Available cost-benefit studies consistently found that economic benefits exceed treatment costs.
- Treatment benefits include reduced criminal behavior and health care costs and increased employment.
- Residential prison treatment is cost-effective only in conjunction with post-release aftercare services.
- In addition, national studies have examined the impact of substance use disorder treatment relative to tax dollar savings, hospital readmission rates, and prevention activities. For example:
    - In California, every $1 spent on school-based drug prevention programs results in a cost savings of $5.50[33] and $7 is saved for every $1 spent on substance use disorder treatment programs.[34]

- California invested approximately $200 million in substance use disorder treatment programs and realized savings at approximately $1.5 billion. Additionally, treatment reduced hospital admissions by 1/3 and improved many primary health areas.[34]
- Iowa State University researchers have conservatively estimated that the prevention of a single case of adult alcohol abuse produces an average savings of $119,633 in avoided costs to society.[35]

COLORADO: SUBSTANCE USE DISORDER PREVENTION AND TREATMENT BENEFITS AND OUTCOMES

As a part of the legislative directive related to cost and effectiveness of alcohol and drug abuse programs, highlighted below are the benefits and outcomes related to substance use disorder prevention, intervention, treatment and recovery services in Colorado contracted by the Division of Behavioral Health.

Prevention Services for Fiscal Year 2010-11

Services are delivered to multiple populations. *Direct Services* target an identifiable group of participants (e.g., school curricula), while *Indirect Services* support population-based prevention programs and environmental strategies (e.g., media campaigns).

- Total People Served: 2,914,918*
- Total People Served by Gender: Male 1,246,187 *(43%)*; Female 1,243,392 *(43%)*;
- Transgender 496 *(<1%)*; Missing 424,844 *(14%)*
- Total People Served by DIRECT Services: 319,542**
- Total People Served by INDIRECT Services: 2,595,376
- Total DIRECT Services: 52,695
- Total INDIRECT Services: 1,679

* Duplicated count. Number of total people served is larger this year than in years past, reflecting the difference in the types of prevention services funded by the Division

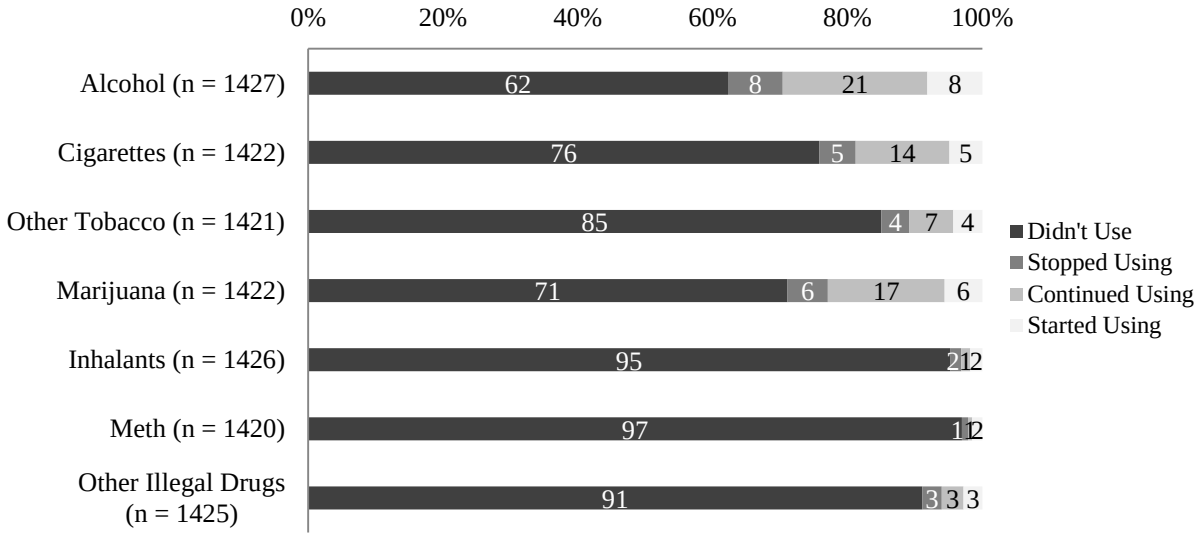
**This count reflects a new SAMHSA-promoted measurement strategy that is inclusive of all participants in programming that receives any Division funding.

Prevention Outcomes Fiscal Year 2010-11

1. Perceived Risk of Harm
   - There was a statistically significant increase ($p < .05$) in participants' perceived risk of harm associated with alcohol use.
   - There were slight increases in perceived risk of harm associated with cigarette and marijuana use and the average perceived risk of harm across all three substances (alcohol, cigarettes and marijuana). These increases did not reach statistical significance, but this may be explained in part by perceptions of moderate to great risk reported at pre-test leaving little room for increased perceived risk at post-test.
2. Attitudes toward substance use
   - There was a statistically significant ($p < .01$) decrease in participants' disapproval of cigarette use. However, at both pre- and post-test participants' attitudes toward cigarette use were disapproving; on average, participants reported attitudes between slight and strong disapproval.
   - While there were no other statistically significant changes in attitudes toward substance use from pre- to post-test, at pre-test participants reported high levels of disapproval of all substances (alcohol, cigarettes and marijuana) which were maintained at post-test.

The following data reflect change in participants' substance use in the 30 days prior to pre-test versus the 30 days prior to post-test. Participants who did not use the substance in the 30 days prior to pre- or post-test were categorized as *didn't use*. Those who used one or more days prior to pre-test but did not use prior to post-test *stopped using.* Those who used one or more days prior to pre-test and 1or more days prior to post-test *continued using*. Those who did not use prior to pre-test but used 1or more days prior to post-test *started using*. Prevention is reflected by the *stopped using* category, indicating abstinence from substance use at post-test. "True prevention" is defined as abstinence prior to pre- and post-test; that is, respondents who fall in the "*didn't use"* category. The desired outcome is high values in the *stopped using* and *didn't use* categories compared to the *continued using* and *started using* categories.

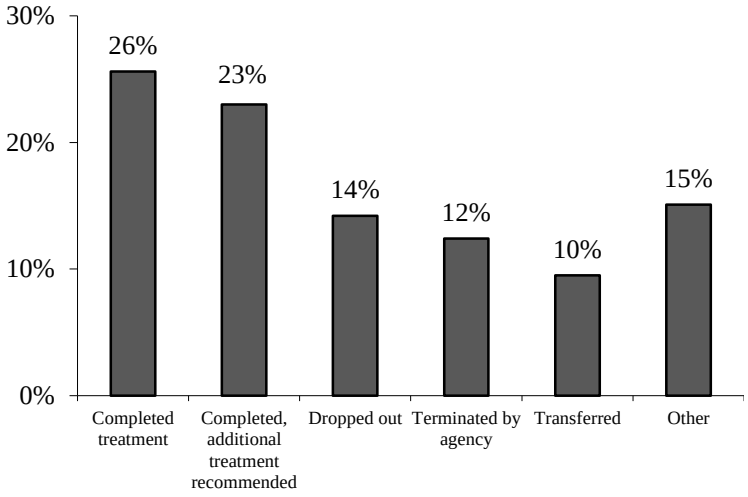
Figure 14: Fiscal Year 2010-11 Change in participants' substance use in the 30 days prior to pre-test versus the 30 days prior to post-test



Treatment Outcomes Fiscal Year 2010-11

Based on DACODS, client discharges from treatment modalities (e.g., residential, intensive outpatient, outpatient treatment modalities) were used to calculate change from admission to discharge. Detoxification (detox) was an excluded treatment modality because its primary goal is to provide a safe, short-term environment in which the client may detoxify and then be referred to treatment. Driving Under the Influence (DUI) programs were excluded as a treatment modality because DUI focuses primarily on reducing the practice of driving while intoxicated, rather than reducing substance use behavior exclusively. Based on these exclusions, the total number of discharges was 25,188.[7]

Figure 15: Reason for Discharge, FY11

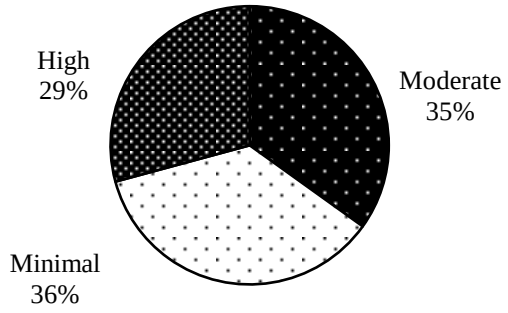


Reason for Discharge
Twenty-six percent of discharges completed their treatment with no further treatment recommended; 23% completed treatment at that agency with additional treatment recommended; 14% left against professional advice; 12% were terminated by the agency and 10% did not complete their treatment at the agency. Five percent of clients were incarcerated. See Figure 15.

The following outcome measures exclude clinical assessments from the analysis (n=23,437).

Progress towards Treatment Goals
During the treatment process, addiction counselors partner with their clients to develop individualized treatment plans. These plans identify goals clients wish to attain from their treatment. At time of discharge, counselors and clients assess progress made toward these goals. In fiscal year 2010-11, 64% of all treatment clients had made moderate to high progress toward their goals. See Figure 16.

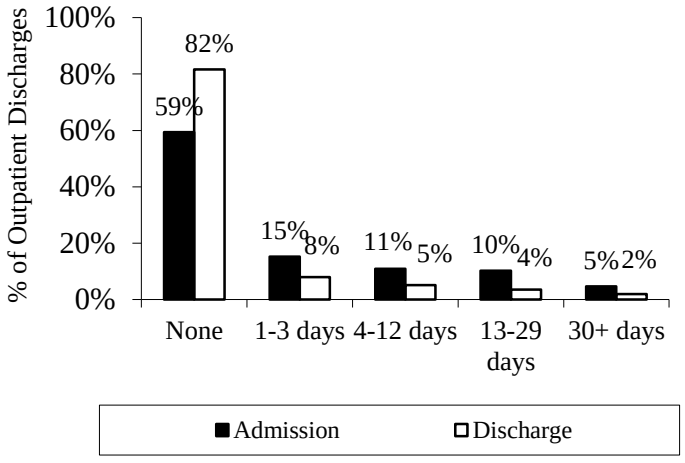
Figure 16: Progress Toward Treatment Goals FY11



Use of Primary Drug at Admission and Discharge
Perhaps the most critical measure of substance use disorder treatment success is the change in frequency of drug use from admission to discharge. In fiscal year 2010-11, there was a decline from 49% to 20% (admission to discharge) in the proportion of all treatment clients reporting any substance use in the previous 30 days. These results were similar to those from fiscal year 2009-10.

Since outpatient treatment clients have more opportunity to engage in substance use than residential treatment clients, an additional analysis of drug use frequency was restricted to outpatient treatment clients (n=16,342). Figure 17 shows that in fiscal year 2010-11, the proportion of outpatient clients who reported any use of their primary substance decreased from 41% at admission to 18% at discharge.

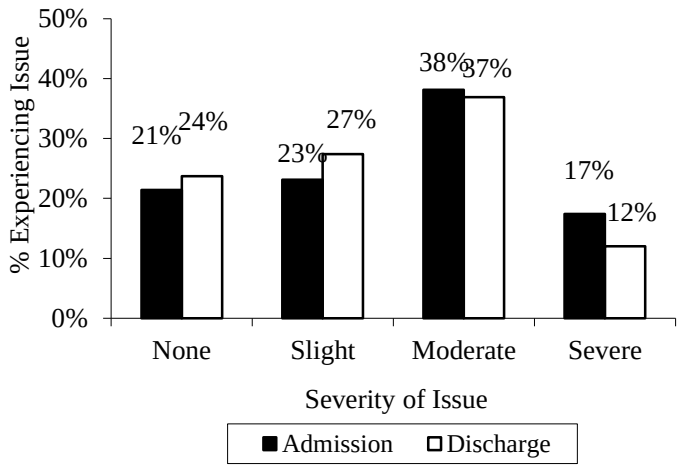
Figure 17: Frequency of Primary Drug Use, FY11, for Outpatient Treatment



Family Issues/Problems

Counselors assess the severity of several of the client's issues or problems at both admission and discharge, using terms defined in the DACODS User Manual. The percentage of clients with no family issues slightly improved, those with slight family issues at admission increased at discharge, and those with moderate and severe family issues decreased at discharge. See Figure 18.

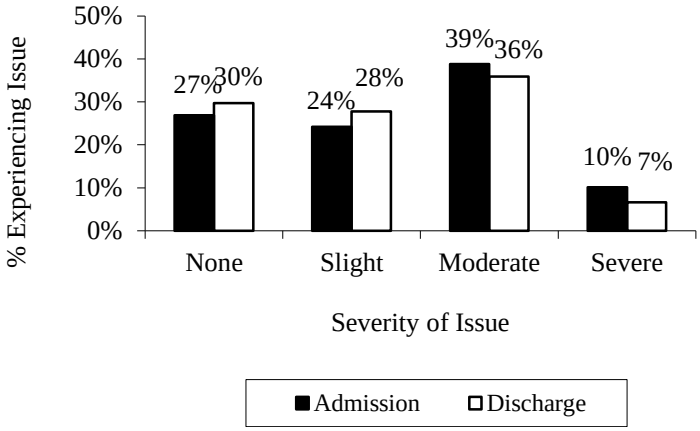
Figure 18: Family Issues/Problems from Admission to Discharge, FY11



Socialization Issues

Socialization is defined as the ability and social skills to form relationships with others. The percentage of clients reporting no or slight socialization issues or problems at admission increased at discharge, and those with moderate to severe problems at admission decreased at discharge. See Figure 19.

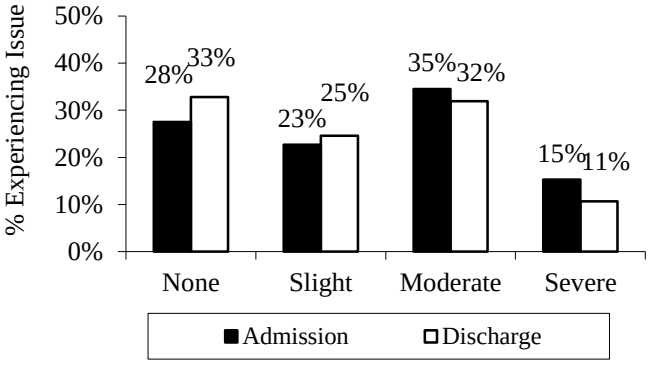
Figure 19: Socialization Issues/Problems from Admission to Discharge, FY11



Education/Employment Issues

The proportion of clients without education or employment problems at discharge increased, as did those with slight problems. The number with moderate or severe problems decreased at discharge. See Figure 20.

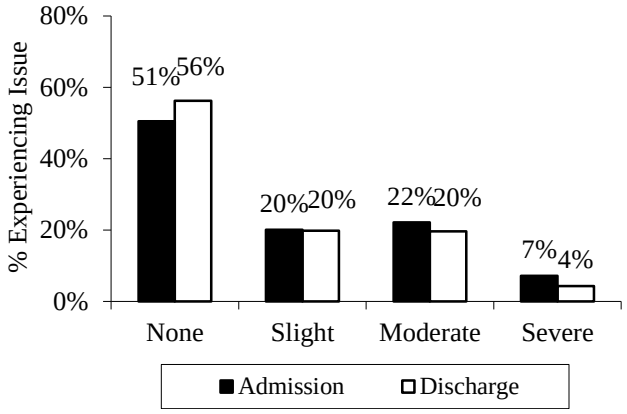
Figure 20: Work/School Issues/Problems from Admission to Discharge, FY11



Medical/Physical Issues

The proportion of clients without medical or physical problems at discharge increased from admission to discharge. The proportion of clients with moderate or severe problems slightly decreased at discharge. See Figure 21.

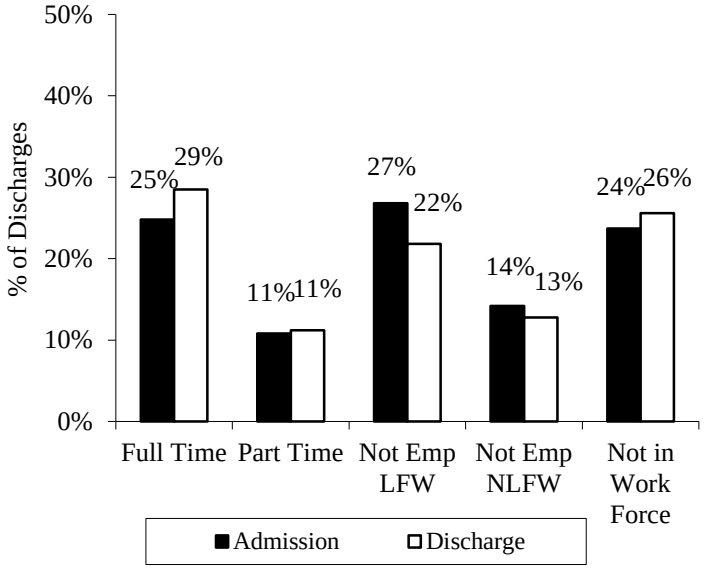
Figure 21: Medical/Physical Issues/Problems from Admission to Discharge, FY11



Employment Status and Living Situation

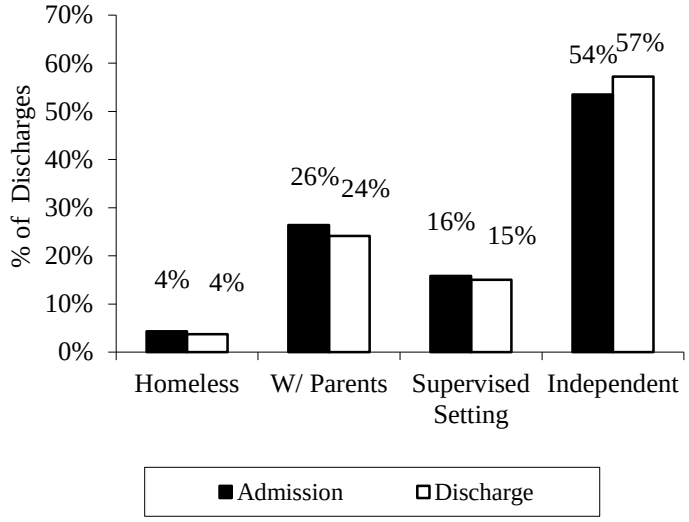
Slight increases occurred from admission to discharge in the proportions of clients working full-time and living independently. See Figure 22 and Figure 23.

Figure 22: Employment Status from Admission to Discharge, FY11



Not Emp LFW = Not Employed, Looking for Work; Not Emp NLFW = Not Employed, Not Looking for Work

Figure 23: Living Situation from Admission to Discharge, FY11



Arrests, Emergency Room and Hospital Admissions

From admission to discharge from treatment, decreases were noted in DUI/DWAI and Other arrests, medical hospital visits and medical emergency room visits. See Table 4.

Table 4: Proportions of Clients at Admission and Discharge with Arrests, Emergency Room (ER) Visits or Hospital Admissions, Fiscal Year 2010-11

Outcome Measure		Admission (%)	Discharge[1] (%)
DUI/DWAI Arrests in the last 30 days prior to . . .	None	98.2	99.4
	1-2	1.7	0.5
	3+	0.1	0.1
Other Arrests in the last 30 days prior to . . .	None	94.2	95.9
	1-2	5.6	3.9
	3+	0.2	0.2
Medical ER visits during 6 months prior to . . .	None	75.8	80.7
	1-2	18.2	11.1
	3+	4.3	2.5
Medical Hospital Admissions during 6 months prior to. .	None	88.9	88.4
	1-2	8.5	5.4
	3+	1.0	0.6
Psychiatric ER visits during 6 months prior to . . .	None	94.9	92.2
	1-2	3.4	2.2
	3+	0.4	0.2
Psychiatric Hospital Admission 6 months prior to . . .	None	95.1	92.4
	1-2	3.2	2.1
	3+	0.4	0.2

TRACKING CIVIL FORFEITURE (Senate Bill 03-133) FOR Fiscal Year 2010-11

As legislated by Senate Bill 03-133 [C.R.S. 16-13-311 (3)(a) (VII) (B) and 16-13-701 (4)], the designated Managed Service Organizations (MSOs) allocate monies to substance use disorder treatment and detoxification programs in the Judicial Districts in which forfeiture proceedings were prosecuted. These monies are in addition to the appropriated funds through the Department of Human Services, Division of Behavioral Health and the MSOs. The following table details the reporting of civil forfeiture funds for fiscal year 2010 by three Colorado MSOs, as required by Senate Bill 03-133. One of the four MSOs, Boulder County Public Health Department, did not receive any funds from civil forfeiture.

Table 1: Civil Forfeiture for Fiscal Year 210-11

MSO Provider / Description	Signal Behavioral Health	West Slope Casa	AspenPointe Health Network	Total All	Prior Year	Change $ (CFY to PFY)	Change % (CFY to PFY)
Beginning Balance	$79,880	$10,153	$453,416	**$543,449**	**$713,605**	**($170,156)**	**-23.8%**
Distribution	($252,803)	$0	($61,347)	**($314,151)**	**($477,526)**	**$163,375**	**-34.2%**
Forfeiture Funds Received	$191,848	$1,447	$11,457	**$204,752**	**$306,039**	**($101,287)**	**-33.1%**
Ending Balance	$18,925	$11,600	$403,526	**$434,051**	**$542,118**	**($108,067)**	**-19.9%**

[1] Discharge variable for arrest data=DUI/DWAI Arrests and Other Arrests during treatment or in the past 30 days of treatment

Summary

Signal Behavioral Health Network expended $252,803 of forfeiture funds during the year, with $220,091 on treatment and detox services and $32,712 for administrative cost (13% of total funds distributed). West Slope Casa (Judicial District #21) had no reported disbursements for services during the year from forfeiture funds. AspenPointe Health Network (Judicial District #4) reported disbursing $27,270 of forfeiture funds for provider treatment costs, $31,394 for TeleCare Recovery care Management Program and $2,683 for MSO administrative fee of 10%. For fiscal year 2010-11, $204,752 in forfeiture revenues were collected and a total of $314,151 was expended on treatment and detoxification services (including administrative charges). The revenue received represents a 33.1% decrease from the previous year.

RECOMMENDED LEGISLATION IN THE FIELD OF ALCOHOL AND DRUG ABUSE

The Office/Division of Behavioral Health is recommending the elimination of the cost effective report since it is a duplication of information reported to the General Assembly and the Governor in the Department Strategic plan and Budget Requests.

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