



HEROIN IN COLORADO

PREVENTION
PUBLIC HEALTH
TREATMENT
RECOVERY
LAW ENFORCEMENT

PRELIMINARY ASSESSMENT

APRIL 2017

WORKING TOGETHER TOWARD A SOLUTION.

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Introduction

On December 29, 2015, Rocky Mountain High Intensity Drug Trafficking Area (RMHIDTA) sponsored a meeting with representatives from the Colorado Department of Public Health and Environment (CDPHE), the Colorado Department of Human Services (CDHS), the Colorado Attorney General's Office (COAG), the Colorado Drug Investigators Association (CDIA) and the Drug Enforcement Administration (DEA) to discuss assessing Colorado's heroin problem. This group of partners decided to form a Heroin Response Work Group, comprising a Steering Committee and an Advisory Committee. The Steering Committee, consisting of leaders from RMHIDTA, DEA, CDPHE, DHS, COAG, the Colorado Consortium for Prescription Drug Abuse Prevention coordinator, and a representative from the recovery community gathered a multi-disciplinary group of subject matter experts to advise on various aspects of heroin use in Colorado. The Heroin Response Work Group became one of the working groups under the Colorado Consortium for Prescription Drug Abuse Prevention, a large coalition that was formed in 2013 to oversee the implementation of the Colorado Plan to Reduce Prescription Drug Abuse. RMHIDTA, CDPHE, DEA, and the Colorado National Guard, Counter Drug Program all contributed staff to support the project.

The Heroin Response Work Group's first phase was to complete an assessment to determine the extent of the heroin problem in Colorado. If the assessment revealed significant heroin problems affecting Colorado, then the Work Group committed to developing and implementing strategies to address the heroin problems affecting Colorado.

The five initial objectives of Phase 1 included:

1. Collect and analyze data on the trends related to heroin availability and abuse in Colorado from various data sources.
2. Gain a better understanding of heroin abuse in Colorado with information collected from individuals who have experienced heroin addiction.
3. Identify various practices and approaches to prevention, intervention and treatment as reference material.
4. Determine a need for and appropriate platform for information exchange between law enforcement, treatment and prevention.
5. Enhance the working relationship between law enforcement, treatment providers, and public health practitioners, to develop a mutual partnership.

This document includes an assessment of the heroin problem in Colorado and information from individuals who experience heroin addiction. The Heroin Response Work Group compiled the data in this report from the following agencies: RMHIDTA, DEA, CDPHE, CDHS, the Rocky Mountain Poison and Drug Center, and the El Paso Intelligence Center. Each agency reviewed drafts of this assessment and provided edits to ensure the accuracy of the data presented. Each data source has limitations and there are information gaps which make it difficult to fully understand the issue. A gap analysis and recommendations to improve data collection and reporting will be addressed in Phases II and III of this project.

Executive Summary

In May 2016, the Heroin Response Work Group was officially established as part of the Colorado Consortium for Prescription Drug Abuse Prevention. The work group established a number of goals including completing a preliminary assessment to determine the extent of the heroin problem in Colorado.

Numerous data sources indicate that Colorado is experiencing an increasing problem with heroin. This is supported by data indicating increased rates of heroin seizures and arrests, heroin overdoses, administration of naloxone, new cases of hepatitis C, neonatal abstinence syndrome (NAS), heroin exposure and treatment for heroin use.

Findings:

Section 1: Heroin Seizures and Arrests

- Reported heroin seizures in Colorado by law enforcement have increased from 2011 - 2015.
 - The number of incidents of heroin seizures increased 2,035 percent from 20 to 427 incidents.
 - Pounds of heroin seized increased 1,562 percent from 16.1 to 268.7 pounds.
- Reported arrests for heroin offenses in Colorado have increased by 515 percent from 743 in 2011 to 4,575 in 2015.

Section 2: Fatal and Non-Fatal Overdoses

- Heroin-related deaths among Colorado residents have doubled in four years.
 - 2011 – 79 deaths
 - 2015 – 160 deaths
- The age-adjusted rate of heroin-related overdose deaths increased by 93 percent from 2011-2015.
 - 2011 – 1.5 deaths per 100,000 Colorado residents
 - 2015 – 2.9 deaths per 100,000 Colorado residents
- The age-adjusted heroin-related hospitalization rate increased by 41 percent from 2011-2014.
 - 2011 – 2.07 hospitalizations per 100,000 residents
 - 2015 – 2.92 hospitalizations per 100,000 residents
- The age-adjusted rate of heroin-related emergency department visits has doubled from 2011 to 2014.
 - 2011 – 4.45 per 100,000
 - 2014 – 9.28 per 100,000

Section 3: Naloxone

- The documented use of Naloxone by emergency medical services (EMS) in Colorado to treat suspected heroin overdoses has increased 240 percent from 2011 – 2015.
 - 2011 – 997 events
 - 2015 – 3,393 events

Executive Summary

Section 4: Disease Transmission and Heroin Use

- Reported cases of hepatitis C virus (HCV) have increased, and most people become infected with the HCV by sharing needles or other equipment for injection drug use (IDU).
 - Although HCV surveillance systems do not directly measure acute cases attributed to IDU, potentially related new cases of hepatitis C have increased 80 percent from 2011 – 2015.
 - 2011 – 379 cases (7.4 cases per 100,000 population)
 - 2015 – 729 cases (13.4 cases per 100,000 population)

Section 5: Neonatal Abstinence Syndrome (NAS)

- Cases of neonatal abstinence syndrome in Colorado newborns have increased, while state birth rates have remained relatively stable.
 - From 2010 – 2015, NAS rates have increased by 83 percent
 - 2010 – 132 cases
 - 2015 – 242 cases

Section 6: Heroin Exposure Calls

- Calls for heroin related exposures in Colorado have increased 60 percent from 2011 to 2015.
 - 2011 – 40 calls
 - 2015 – 64 calls

Section 7: Heroin Treatment Admissions and User Information

- The number of people in treatment for heroin addiction has increased 128 percent from 2,994 in 2011 to 6,815 in 2015.
- The majority of the clients in treatment for heroin use are white males between the ages of 18 and 42 who have never married and are unemployed.

Section 8: Denver Metro Treatment Client Survey

- The majority of survey clients were white, non-Hispanic between the ages of 25 and 34 with some college and who own or rent their own residence. The rates of male and female were fairly evenly distributed.
- The majority (70 percent) of survey respondents said that prescription painkillers played a role in their decision to use heroin.
- Of the 61 percent that said they had experienced a heroin overdose, the median number of overdose experiences was three.

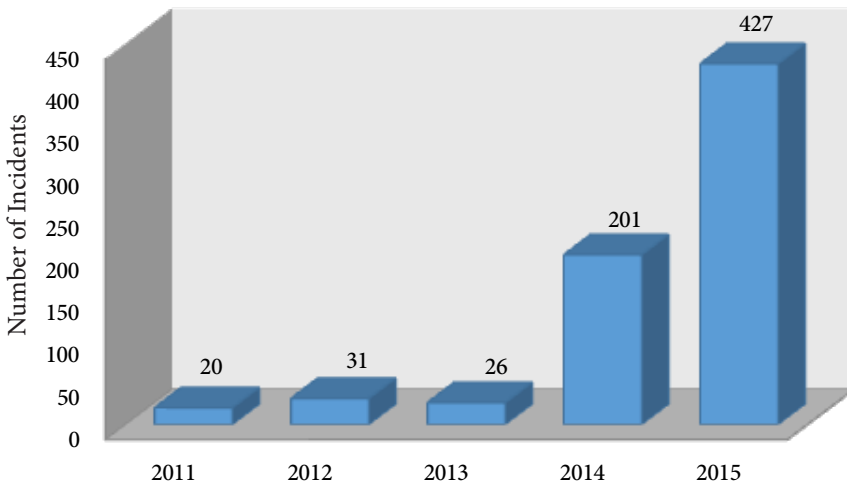
Section 1: Heroin Seizure and Arrest Data

Heroin Seizure and Arrest Data

In the law enforcement community, intelligence indicating an emerging threat is often compared with data to help assess the validity of the information. In the case of heroin in Colorado, the intelligence indicates an emerging trend which is supported by the increases in heroin seizures and arrests for heroin offenses.

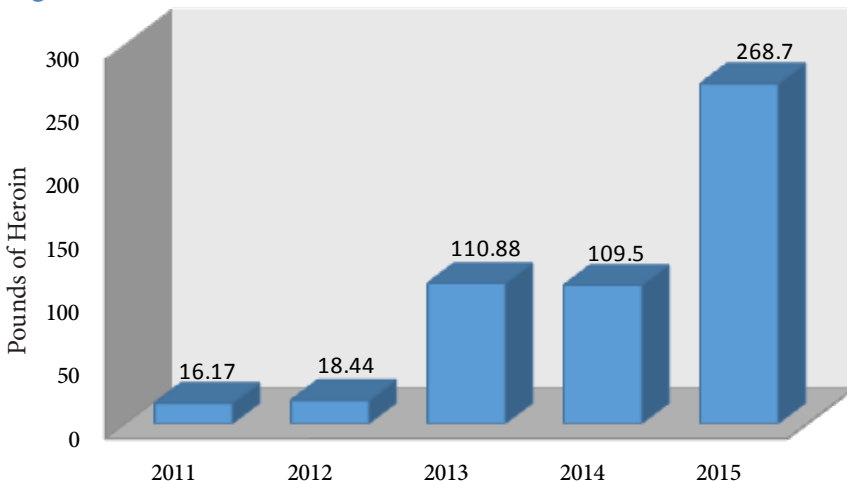
The El Paso Intelligence Center (EPIC) tracks data related to drug seizures as reported by law enforcement (local, state and federal). The database is known as the National Seizure System (NSS). This is not a mandatory reporting process for all law enforcement agencies and not all Colorado agencies report drugs seized to EPIC's NSS:

Figure 1.1 Number of Heroin Seizure Incidents Reported in Colorado



Source: El Paso Intelligence Center (EPIC)¹

Figure 1.2 Pounds of Heroin Seized in Colorado



Source: El Paso Intelligence Center (EPIC)¹

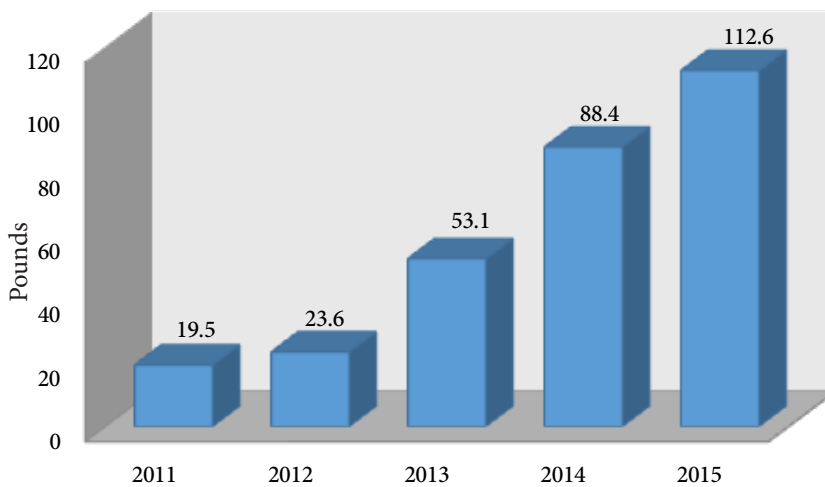
Findings

- Heroin Seizures – Reported heroin seizures in Colorado by law enforcement have increased from 2011–2015.
 - The number of incidents of heroin seizures increased 2,035 percent from 20 to 427 incidents.
 - Pounds of heroin seized increased 1,562 percent from 16.17 to 268.7 pounds.
 - RMHIDTA drug task forces in Colorado heroin seizures increased 477 percent from 19.5 to 112.6 pounds.
- Reported arrests for heroin offenses in Colorado have increased by 515 percent from 743 in 2011 to 4,575 in 2015.

Heroin Seizure and Arrest Data

In Colorado, RMHIDTA supports and funds eleven drug task forces in the more populated counties and the Colorado State Patrol criminal interdiction efforts. These initiatives are comprised of local, state and federal law enforcement personnel. The mission of the task forces is to identify significant drug trafficking organizations (DTOs) operating in the state, investigate them and subsequently disrupt or dismantle their ability to traffic drugs. The task force seizure data represents 100 percent reporting for each calendar year.

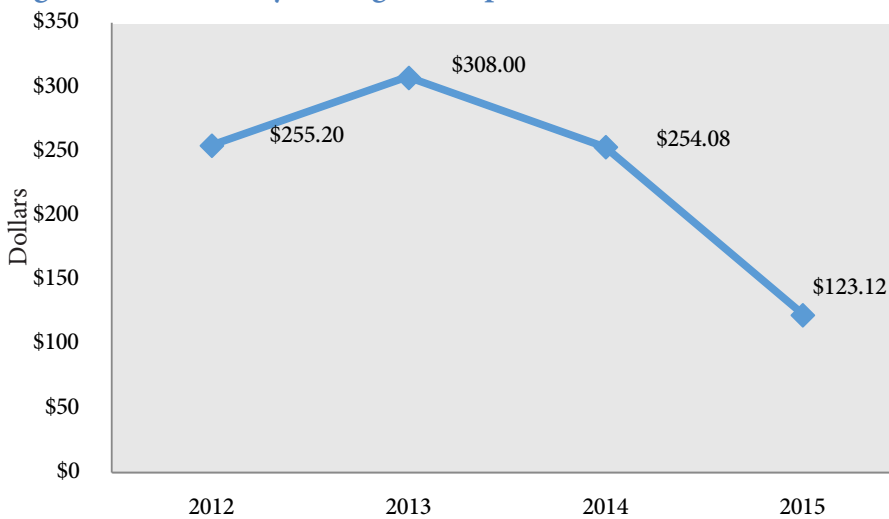
Figure 1.3 Pounds of Heroin Seized by RMHIDTA Initiatives in Colorado



Source: Rocky Mountain HIDTA²

There was a 477 percent increase in reported pounds of heroin seized from 2011 to 2015.

Figure 1.4 The Yearly Average Price per Gram of Heroin

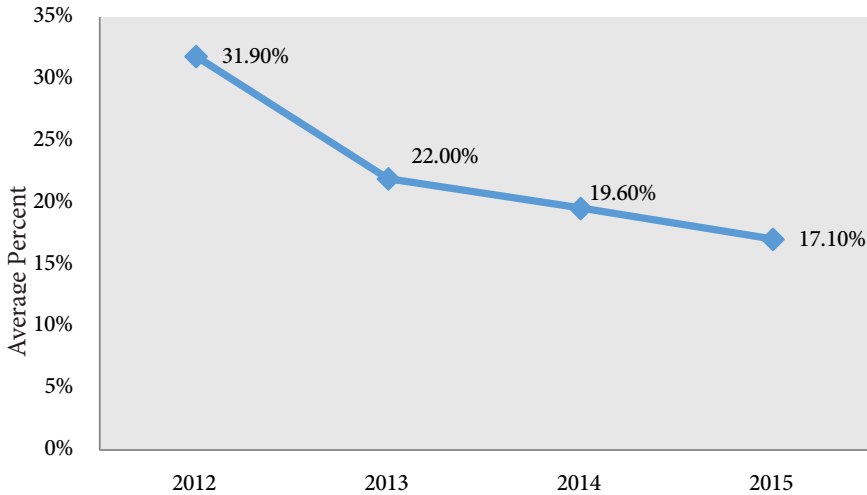


The yearly average price per gram for heroin in Denver decreased from 2012 to 2015. This is usually indicative of a greater supply in the market. It is important to note that these prices are based on a pure milligram of heroin purchased in Denver through the DEA Domestic Monitoring Program. Heroin street sales in Colorado cost less and usually under \$100 per gram.

Source: DEA/Heroin Domestic Monitoring Program (2011-2015)

Heroin Seizure and Arrest Data

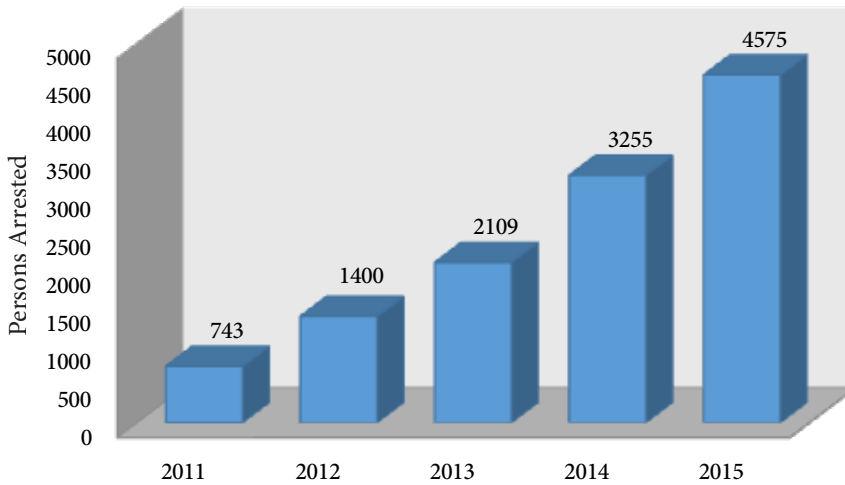
Figure 1.5 The Average Heroin Purity Levels in Denver



The average heroin purity levels in Denver decreased from 31.9 percent in 2012 to 17.1 percent in 2015. This may be attributed to dealers adding diluents to the heroin, thus increasing the volume and maximizing profits.

Source: DEA/Heroin Domestic Monitoring Program (2011-2015)

Figure 1.6 Arrests for Heroin - Colorado



Source: Colorado Bureau of Investigation³

There was a 515 percent increase in arrests for heroin from 2011 to 2015.

Section 2: Heroin Fatal & Non-Fatal Overdoses

Heroin Fatal & Non-Fatal Overdoses

Opioid use disorders have become a significant public health concern nationally and in Colorado. Drug-related deaths, often called drug overdoses, are a leading cause of injury death in Colorado. The Colorado Department of Public Health and Environment (CDPHE) monitors the severity of Colorado's drug overdose epidemic using a variety of available data, including mortality data from death certificates and non-fatal data from hospital discharges and emergency department discharges. While each of these data sources provides valuable information to help understand the burden of overdose data in Colorado, they also have limitations. For example, reporting bias limits the analysis of death certificate data. CDPHE does not have access to the toxicology reports on deaths and cannot determine whether the drugs that were not indicated on the certificate represent negative test results or whether the drug was not part of the testing. However, compared to earlier years, a smaller proportion of drug overdose death certificates for 2011-2015 have not mentioned the specific drug results, which suggests that the data quality is improving. Similarly, hospitalization and emergency department data comes from medical billing codes, which vary in their completeness and can limit CDPHE's availability to specify the specific drug or drugs that are associated with a non-fatal overdose. The required billing codes for hospitalization and emergency department visits changed in 2015, so the non-fatal heroin overdoses from these sources are limited to 2011 through 2014 and represent health care encounters, not individuals.

This section of the report includes rates of fatal and non-fatal overdoses. Rates are calculated by dividing the number of overdoses that occur in specified period of time by the average population (e.g., the population of Colorado residents or the population of nation as a whole). After a rate is calculated it is often multiplied by 100,000, so that it is easy to determine how many events happen per 100,000 people in the population. The rates reported in this section are age-adjusted, which means that they allow communities with different age distributions to be compared. For example, if Colorado has a slightly younger population than the nation as a whole, it is important to statistically adjust for the age difference to accurately compare Colorado's rates to national rates.

Findings

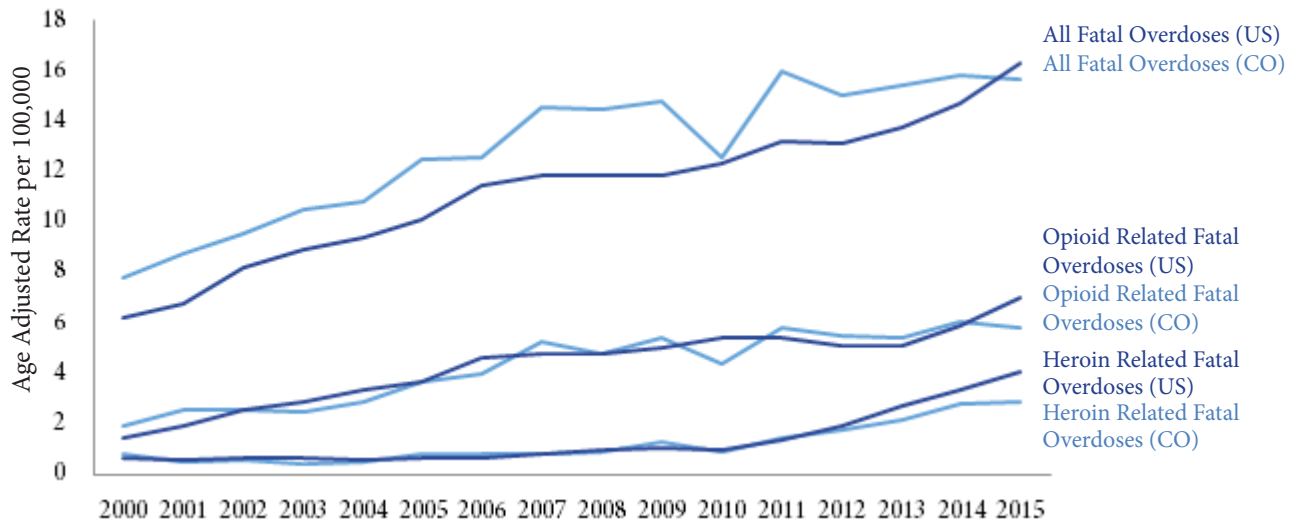
- Heroin-related deaths among Colorado residents have doubled in four years.
 - 2011 – 79 deaths
 - 2015 – 160 deaths
- The age-adjusted rate of heroin-related overdose deaths has doubled in four years.
 - 2011 – 1.5 deaths per 100,000 Colorado residents
 - 2015 – 2.9 deaths per 100,000 Colorado residents
- The age-adjusted heroin-related hospitalization rate increased by 41 percent.
 - 2011 – 2.07 hospitalizations per 100,000 residents
 - 2015 – 2.92 hospitalizations per 100,000 residents.
- The rate of heroin-related emergency department visits has doubled from 2011 to 2014.
 - 2011 – 4.45 per 100,000
 - 2014 – 9.28 per 100,000
- Colorado's heroin death rates are slightly lower than national rates.
 - National – Age-adjusted rate in 2014: 3.4 per 100,000
 - Colorado – Age-adjusted rate in 2014: 2.8 per 100,000

Heroin Fatal & Non-Fatal Overdoses

Heroin Overdose Deaths in Colorado

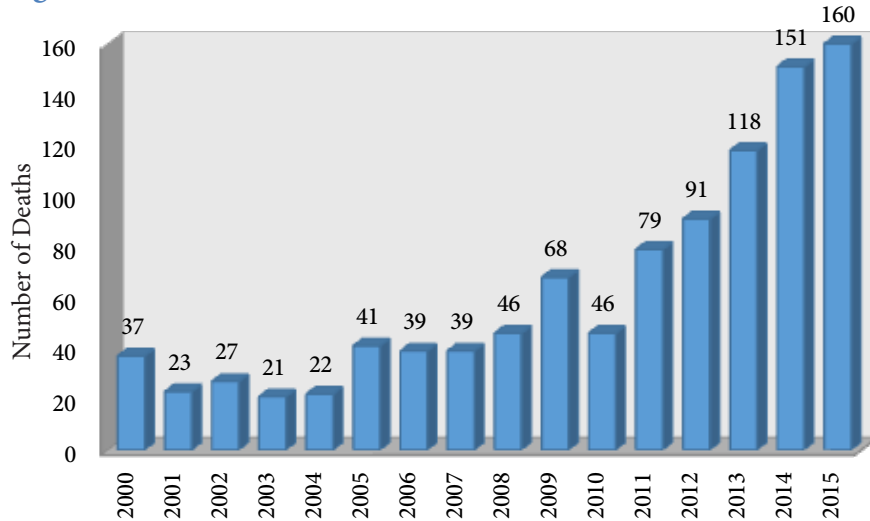
From 2000-2015, there were 10,552 drug overdose deaths among Colorado residents with age-adjusted rates rising almost every year. In nearly every year, Colorado's rate of drug overdose was significantly higher than the national rate. Opioid-related overdoses, which comprise a significant proportion of total drug overdose deaths, tripled over the 15-year time period in Colorado. Heroin-related overdose deaths are a subset of total drug poisoning deaths; although these rates in Colorado have tripled from 2010-2015, there are signs to suggest that heroin overdose death rates have since stabilized. The 2014 and 2015 rates were not significantly different from one another.

Figure 2.1 Age-adjusted Rates for Drug Overdose Deaths in Colorado and in the US, 2000-2015



Source: Colorado Department of Public Health and Environment (CDPHE)⁴

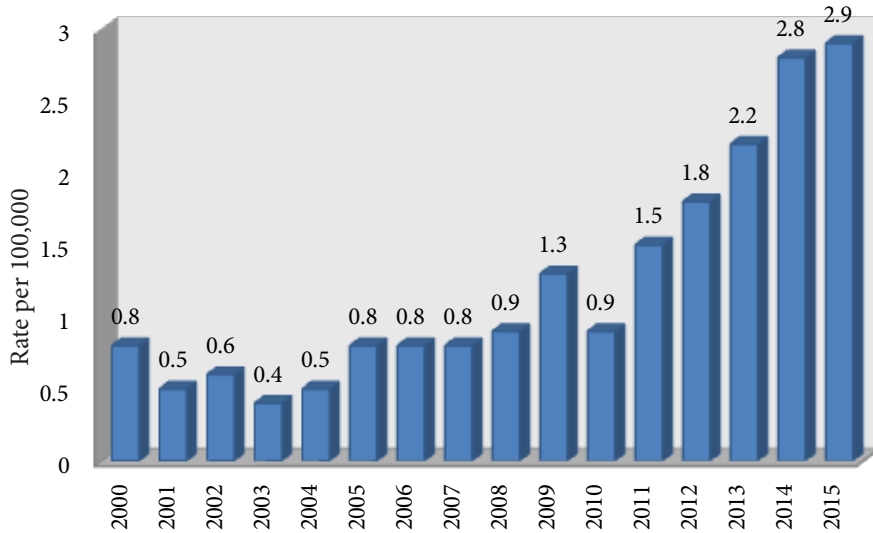
Figure 2.2 Number of Heroin Overdose Deaths in Colorado, 2000-2015



Source: Colorado Department of Public Health and Environment (CDPHE)⁴

Heroin Fatal & Non-Fatal Overdoses

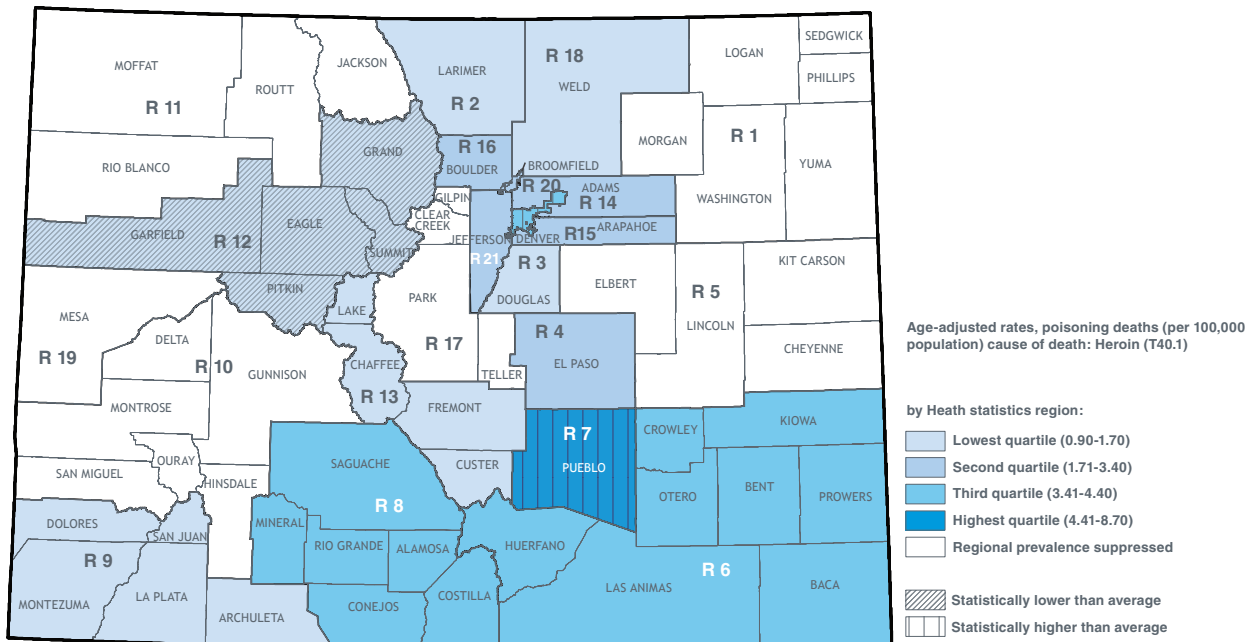
Figure 2.3 Age-Adjusted Heroin-Related Overdose Death Rates in Colorado, 2000-2015



Source: Colorado Department of Public Health and Environment (CDPHE)⁴

The highest rates of heroin-related death occurred in urban regions of the state, as defined by the Colorado Health Statistics Regions. Pueblo County had the highest age-adjusted rate of heroin-related overdose in 2013-2015 (8.7 deaths per 100,000 residents), which was over three times the state rate. Denver County and the southeast corner of the state had a rate that was higher compared to the rest of state rate.

Figure 2.4 Colorado Heroin Use by County



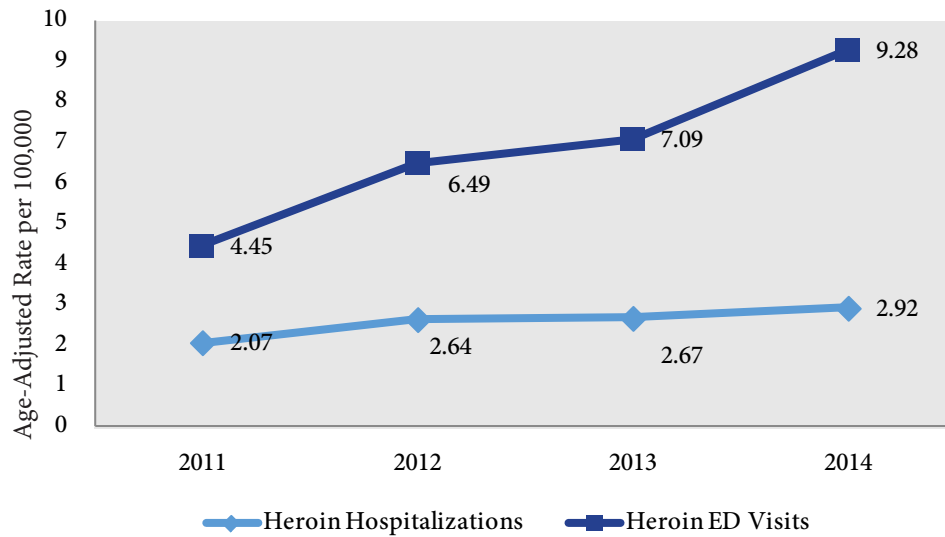
Source: Colorado Department of Public Health and Environment (CDPHE)⁴

Heroin Fatal & Non-Fatal Overdoses

Non-Fatal Heroin-Related Overdoses in Colorado

Not all heroin overdoses result in death. During four years from 2011-2014, there were 1,430 emergency department visits related to heroin overdose in Colorado where the Colorado resident was treated and discharged and an additional 541 hospitalizations related to heroin overdose. The rate of emergency visits and hospitalizations related to heroin overdose increased almost every year during this period. Specifically, the age-adjusted rate of heroin-related hospitalizations rate increased by 41 percent from 2011-2014, going from 2.07 hospitalizations per 100,000 residents in 2011 to 2.92 hospitalizations per 100,000 residents in 2014. Emergency department visits doubled in this same timeframe. In 2014, there were 494 emergency department visits statewide among Colorado residents, or 9.28 visits per 100,000 residents.

Figure 2.5 Heroin-Related Hospitalizations & Emergency Department Visits in Colorado



Source: Colorado Department of Public Health and Environment (CDPHE)

Section 3: Naloxone Use

Naloxone Use

Naloxone, commonly known under its trade name “Narcan,” is a medication called an “opioid antagonist” used to rapidly counter the effects of opioid overdose, including a heroin overdose. Specifically, naloxone is used in opioid overdoses to counteract life-threatening depression of the central nervous system and respiratory system, allowing an overdose victim to breathe normally. Naloxone is a nonscheduled (i.e., non-addictive), prescription medication that only works if a person has opioids in their system and does no harm if a person is not on opioids. Although traditionally administered by emergency response personnel, naloxone can be administered by minimally trained laypeople, which makes it ideal for treating overdose in people who have been prescribed opioid pain medication and in people who use heroin and other opioids. Naloxone has no potential for abuse. Naloxone may be injected in the muscle, vein or under the skin or sprayed into the nose. It is a temporary drug that wears off in 30-90 minutes.⁵

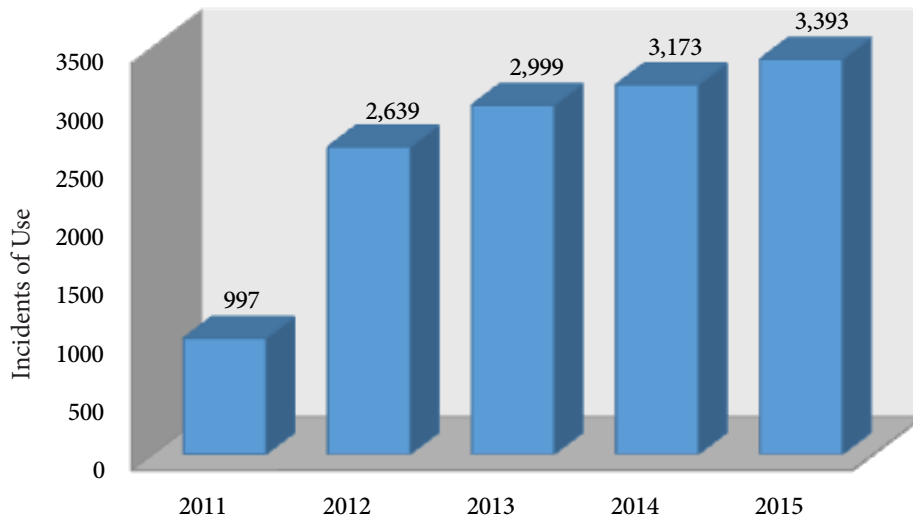
Since most overdoses are witnessed and happen over hours, it is essential that drug users have access to this lifesaving medication. In Colorado, drug users have had access to Naloxone since 2012. In 2013, Colorado SB 13-014 was passed to allow for 3rd party access to Naloxone such as mothers, homeless service providers, roommates, and law enforcement. In 2015, SB 15-053 passed, allowing pharmacies and harm reduction organizations were allowed to dispense Naloxone without a physician present, allowing for Naloxone access for opioid users and 3rd parties. As a result of the new law, the chief medical officer of the Colorado Department of Public Health and Environment (CDPHE) may issue standing orders for Naloxone to be dispensed by pharmacies and harm reduction organization employees and volunteers to help expand statewide Naloxone access to those who need it most. As of November 2016, over 250 pharmacies, 93 law enforcement agencies, and four county jails are carrying Naloxone.

Findings

- From 2012 – 2016, the Harm Reduction Action Center, Colorado’s largest public health agency that works specifically with people who inject drugs, trained over 1100 drug users with 461 lives saved.
- The documented use of Naloxone by emergency medical services (EMS) personnel in Colorado to treat suspected heroin overdoses has increased 240 percent from 997 events in 2011 to 3,393 events in 2015.

Naloxone Use

Figure 3.1 Naloxone Use by EMS in Colorado



Source: Colorado Department of Public Health and Environment (CDPHE)⁶

There has been a 240 percent increase in the use of Naloxone from 2011-2015. Some of this increase reflects the increased availability of Naloxone, in addition to the increase in incidence of overdose cases.

Section 4: Disease Transmission and Heroin

Disease Transmission and Heroin Use

Injection drug use (IDU) is associated with high risk of bloodborne infections, including human immunodeficiency virus (HIV), hepatitis B virus (HBV), and hepatitis C virus (HCV). Each of these viruses can be transmitted by sharing needles, syringes, or other drug injection equipment (such as cookers, rinse water, cotton) that were used by a person who is currently infected. Although curative treatment is available for HCV and effective suppressive therapy is available for HBV and HIV, each can cause fatal disease.

Based on a study of people who inject drugs (PWID) in the Denver metro area, the majority reported using nonsterile injection materials although the proportion of PWID who reported sharing a needle or syringe declined to 35.5 percent in 2012, from 40.9 percent in 2009; syringe exchange programs appear to be having a positive impact on the availability of sterile needles.⁷ Onward transmission of bloodborne infections to others is common through shared IDU equipment, especially for HCV which is highly infectious and can sometimes persist for weeks in a syringe.⁸ Currently, most new HCV infections are caused by sharing needles or other equipment for injection drug use (IDU).⁹ Among drugs used in Colorado, heroin is the drug most predominantly injected.¹⁰

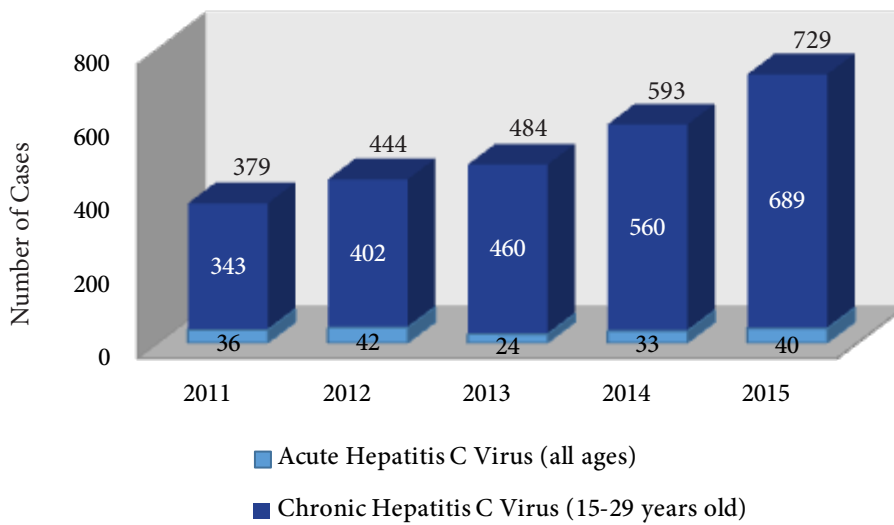
In this context, Colorado is vulnerable to outbreaks of bloodborne disease driven by IDU. Such outbreaks have been previously documented in other states, most dramatically in Indiana where an explosive co-outbreak of HIV and HCV driven by IDU occurred in 2015.¹¹ In June of 2016 the Centers for Disease Control and Prevention (CDC) concurred that “Colorado is at risk for an increase in viral hepatitis or HIV infections due to injection drug use,” based on a CDPHE assessment of nine variables related to substance abuse and IDU.¹² This type of analysis, using variables in lieu of direct measurement of IDU-driven transmission of disease, is necessary because public health surveillance systems are not fully funded to monitor new HCV infections related to unsafe injection practices. Eight counties have established a legal basis for syringe access based on Colorado state law (CRS 25-1-520). Currently seven counties have operational points of service, with ten total access points. However, with very limited resources available, none of these sites fully met the criteria for comprehensive syringe services programs as defined by CDC.³

Findings

- HCV: In the absence of direct measurement of new HCV infections related to unsafe injection practices, proxy measures can be used, such as acute HCV cases and newly diagnosed chronic HCV cases among persons 15-29 years of age. The rate of reported cases of HCV in these categories have increased 80 percent in Colorado from 2011 – 2015:
 - 2011: 379 cases (7.4 cases per 100,000 population)
 - 2015: 729 cases (13.4 cases per 100,000 population)

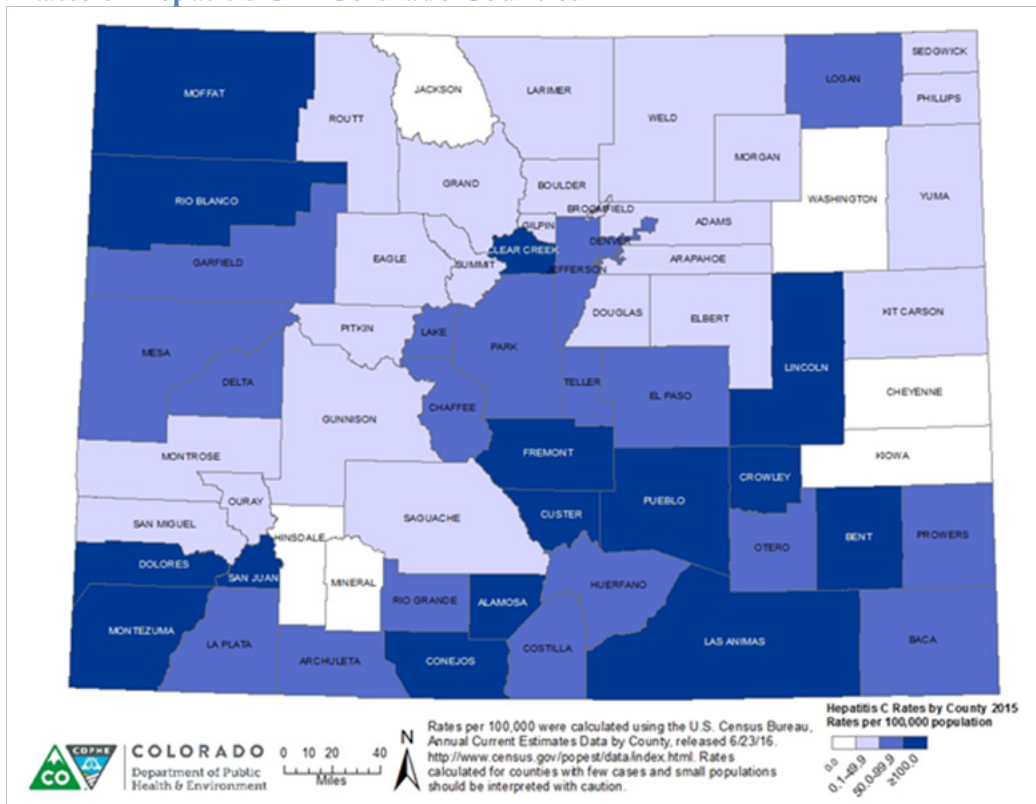
Disease Transmission and Heroin Use

Figure 4.1 HCV Cases in Colorado: Acute and Newly Reported Chronic Cases Among Persons 15-29 Years of Age



Source: Colorado Department of Public Health and Environment (CDPHE)

Figure 4.2 Rates of Hepatitis C in Colorado Counties

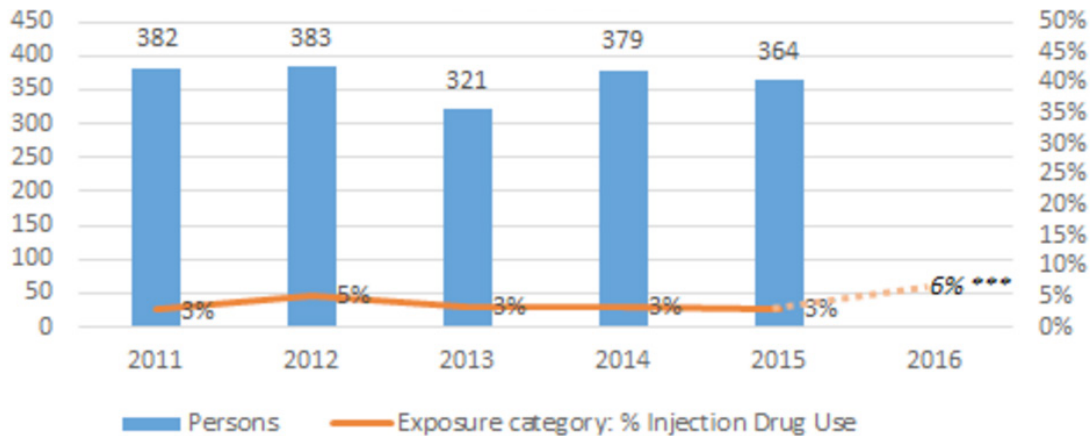


Source: Colorado Department of Public Health and Environment (CDPHE)⁴

Disease Transmission and Heroin Use

Rates of newly diagnosed cases of HIV in Colorado have remained fairly stable from 2011 – 2015. The average yearly rate for new cases is 365 persons per year. In approximately 60 percent of all new cases, male-to-male sexual contact was the leading cause of new exposures. IDU has historically accounted for a small percentage of new diagnoses, averaging 3.5 percent between 2011 and 2015.

Figure 4.3 Newly Diagnosed Cases of HIV in Colorado



***Preliminary data November, 2016; projected changes between 2015 and 2016 are not statistically significant.

Source: Colorado Department of Public Health and Environment (CDPHE)

Section 5: Neonatal Abstinence Syndrome

Neonatal Abstinence Syndrome

The U.S. National Library of Medicine defines Neonatal Abstinence Syndrome (NAS) as, "...a group of problems that occur in a newborn who was exposed to addictive opiate drugs while in the mother's womb."¹⁴ This includes drugs from both the opiate and opioid families. NAS is often caused by a woman taking prescription opioids in pregnancy, but using heroin, methadone or buprenorphine during pregnancy can also cause NAS. As the mother continues to use these drugs during pregnancy, the unborn child is at risk of developing a drug dependency. Among infants exposed to opiate or opioids in utero, 55-94 percent will exhibit signs of withdrawal, according to a literature review by the American Academy of Pediatrics.¹⁵ Withdrawal symptoms often include central nervous system irritability (such as tremors, high-pitched crying), temperature instability, and gastrointestinal tract dysfunction exhibited by poor feeding, loose stools, vomiting, dehydration, or poor weight gain. Symptoms commonly occur within 2-3 days after birth. Withdrawal symptoms also may occur in babies exposed to alcohol, benzodiazepines, barbiturates, and certain antidepressants. Data on long-term developmental outcomes related to NAS are limited.

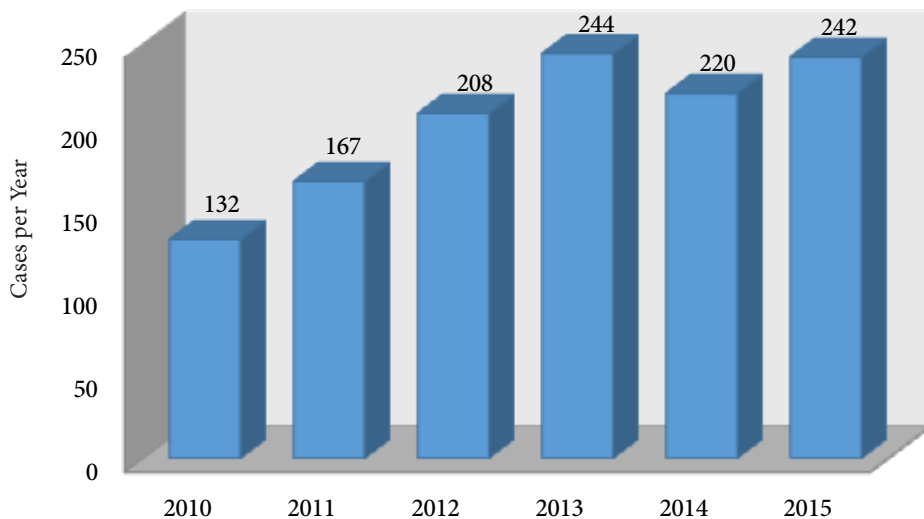
The NAS data presented in this section is based on hospital discharge coding based on the International Classification of Diseases-9. It is not possible to determine from these codes what caused the NAS for these infants. Therefore, the cases of NAS reported here likely were caused by a variety of different drugs, including, but not limited to heroin.

Findings

- Identified cases of infants born with neonatal abstinence syndrome (NAS) in Colorado have increased, while Colorado birth rates have remained relatively stable.¹⁶
- From 2010 – 2015, cases of NAS births have increased by 83 percent.
 - 2010 – 132 cases
 - 2015 – 242 cases
- From 2010 – 2015, NAS rates in newborns addicted to opiate drugs have increased 80 percent.
 - 2010 – 2.0 per 1,000 births
 - 2015 – 3.6 per 1,000 births

Neonatal Abstinence Syndrome (NAS)

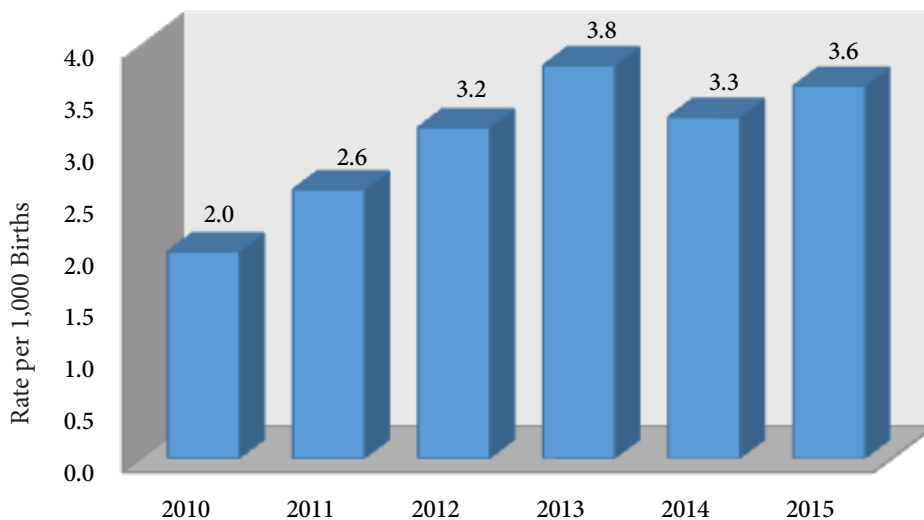
Figure 5.1 Colorado NAS Cases



Data from the Colorado Department of Public Health and Environment indicates that there was an 83 percent increase in NAS cases among Colorado infants from 2010 – 2015.

Source: Colorado Department of Public Health and Environment (CDPHE)¹⁶

Figure 5.2 Colorado NAS Rates



Similarly, although Colorado recorded birth rates remained relatively stable from 2011–2015, the rates of NAS, which take into account changes in birth rates, increased 80 percent during this time period. This indicates that the increase in NAS in Colorado is not due to more infants being born in Colorado.

Source: Colorado Department of Public Health and Environment (CDPHE)¹⁶

Section 6: Heroin Exposure Calls

Heroin Exposure Calls

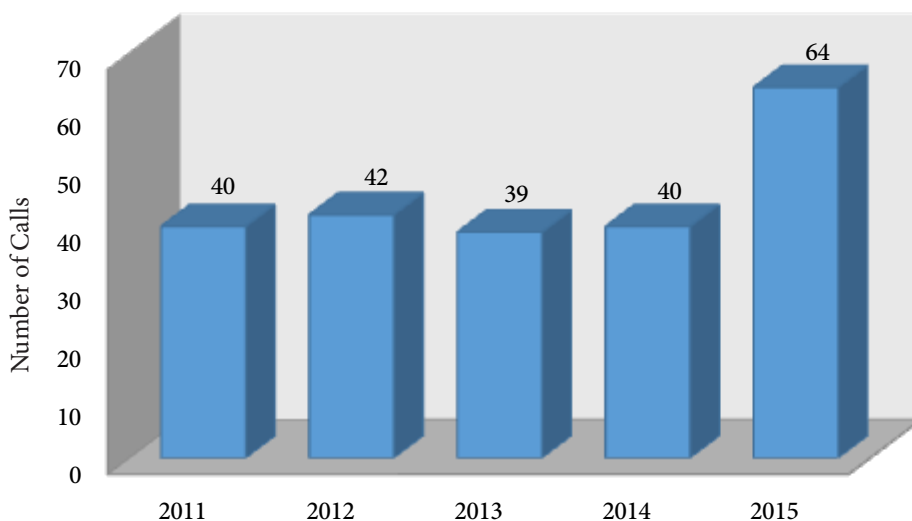
The Rocky Mountain Poison and Drug Center (RMPDC) is part of the national network for the American Association of Poison Control Centers (AAPCC). They are responsible for a wide variety of public health projects and services aimed at reducing the incidence of toxicity, disease and injury. The RMPDC collects data on callers reporting incidents of “exposures” or requests for information on various drugs, to include illicit drugs such as heroin.

The AAPCC defines an “exposure” as an incident where there is actual or suspected contact (e.g., ingestion, inhalation, absorption, etc.) reported with a particular substance. By contrast, an “information” case is when a caller contacts the poison center with questions about a particular substance; however, there is no identifiable exposure involved. The AAPCC database tracks both exposure and information calls. Once information is entered into the database, it is automatically updated in near real-time.

Findings

- Exposure to heroin calls increased 60 percent in Colorado from 2011 to 2015.

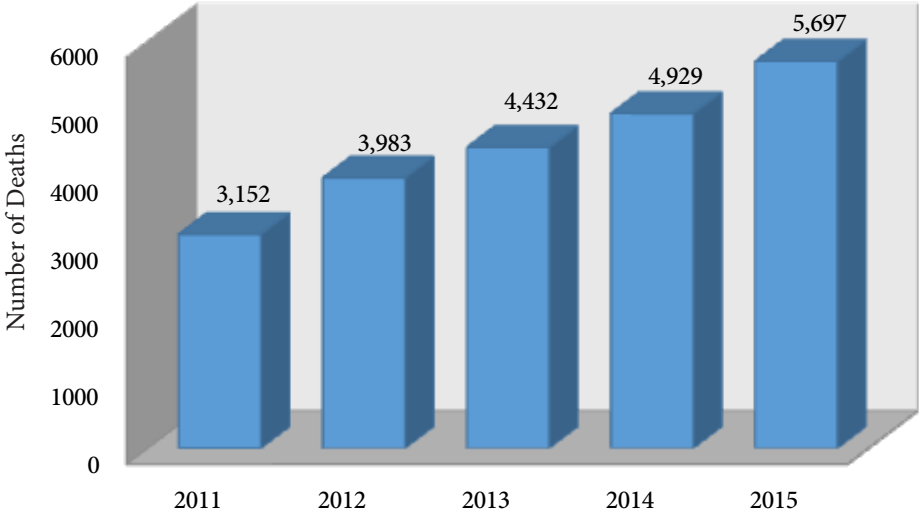
Figure 6.1 Heroin Exposure Calls - Colorado



Source: Rocky Mountain Poison and Drug Center (RMPDC)

Heroin Exposure Calls

Figure 6.2 Heroin Exposure Calls - National



Source: American Association of Poison Control Centers (AAPCC)¹⁶

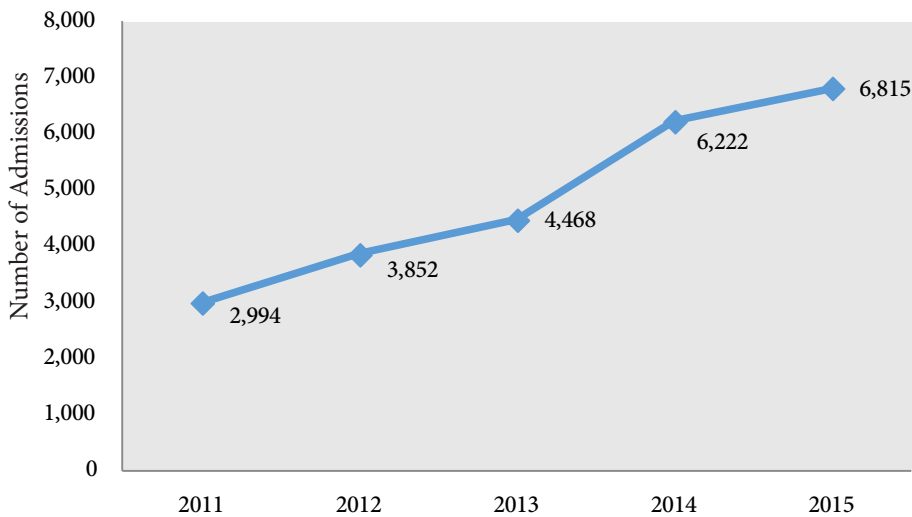
The number of calls related to heroin exposures in Colorado has increased 60 percent. Nationally for the same period calls increased 81 percent.

Section 7: Heroin Treatment Admissions and User Information

Heroin Treatment Admissions and User Information

The data in this section comes from the Colorado Department of Human Services, Office of Behavioral Health. The Drug and Alcohol Coordinated Data System (DACODS) provides information on substance abuse treatment admissions in Colorado.

Figure 7.1 Heroin Treatment Admissions*



*Clients who identified heroin as their primary, secondary, or tertiary drug of use on their admissions DACODS.

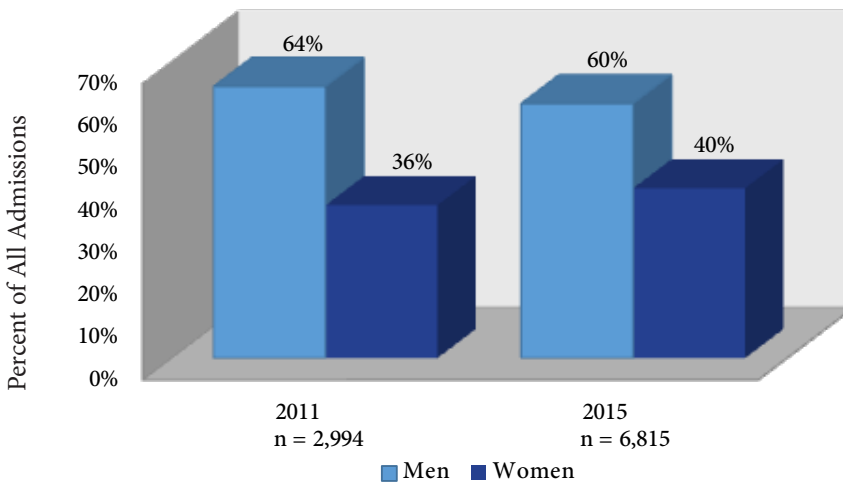
SOURCE: Colorado Department of Human Services, Office of Behavioral Health, DACODS

Findings

- There was a 127 percent increase in treatment admissions for heroin use from 2011 (2,994 admissions) to 2015 (6,815 admissions).
- The majority of the clients in treatment for heroin use are white males between the ages of 18 through 44 who have never married and are unemployed.

Characteristics of Heroin Treatment Admission Clients: 2011 and 2015

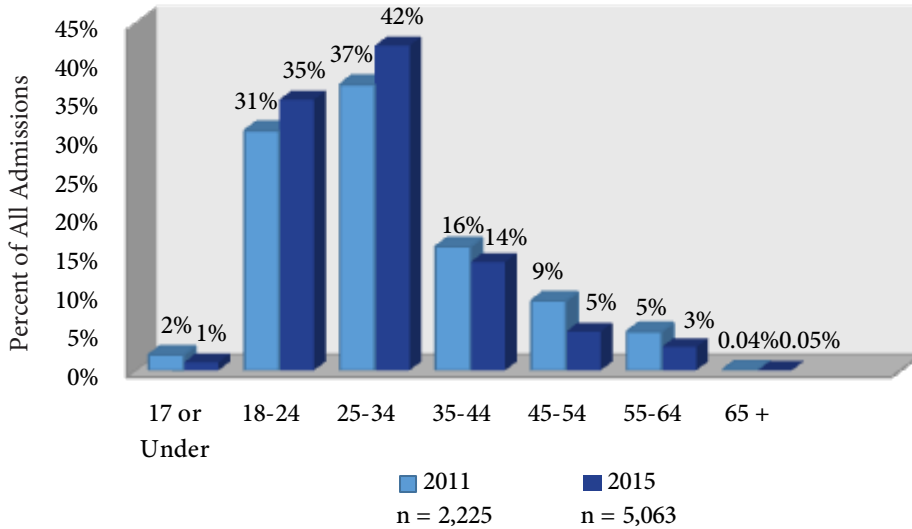
Figure 7.2 Gender



SOURCE: Colorado Department of Human Services, Office of Behavioral Health, DACODS

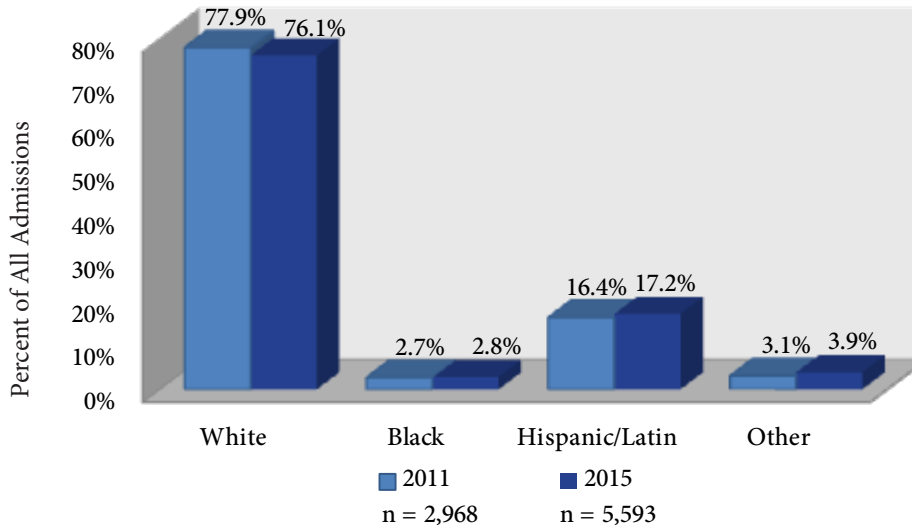
Heroin Treatment Admissions and User Information

Figure 7.3 Age



SOURCE: Colorado Department of Human Services, Office of Behavioral Health, DACODS

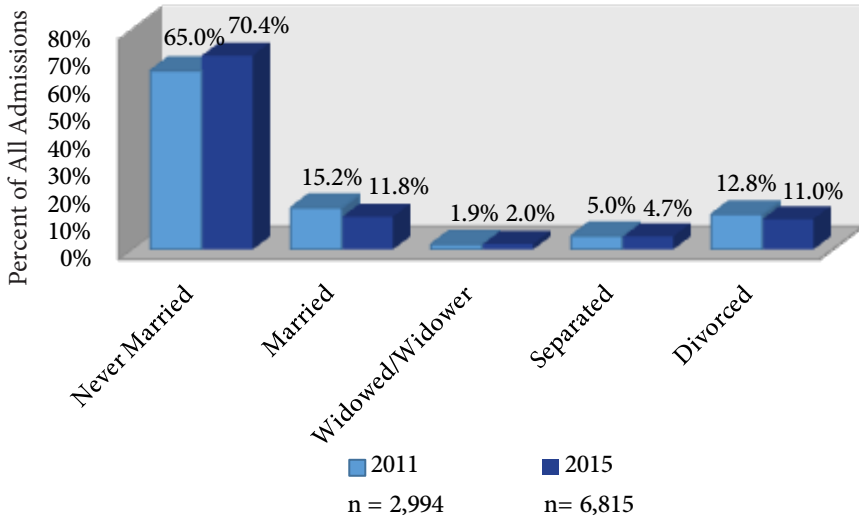
Figure 7.4 Race



SOURCE: Colorado Department of Human Services, Office of Behavioral Health, DACODS

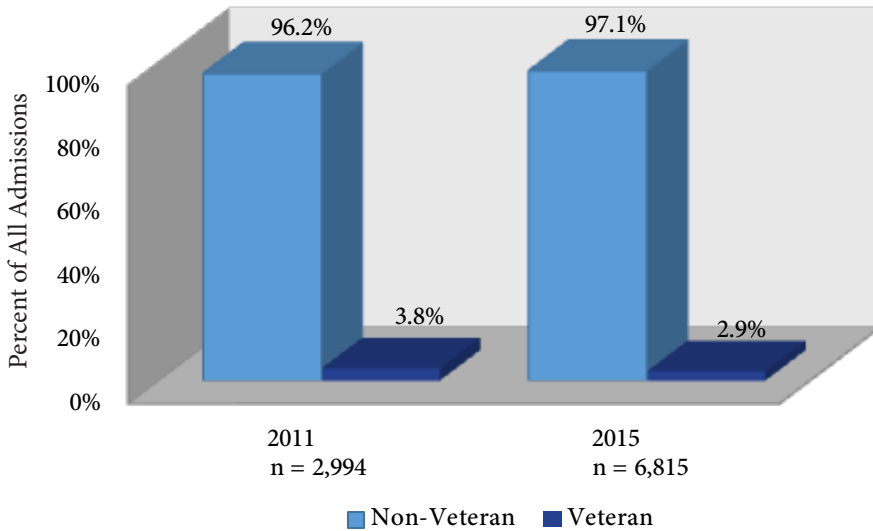
Heroin Treatment Admissions and User Information

Figure 7.5 Marital Status



SOURCE: Colorado Department of Human Services, Office of Behavioral Health, DACODS

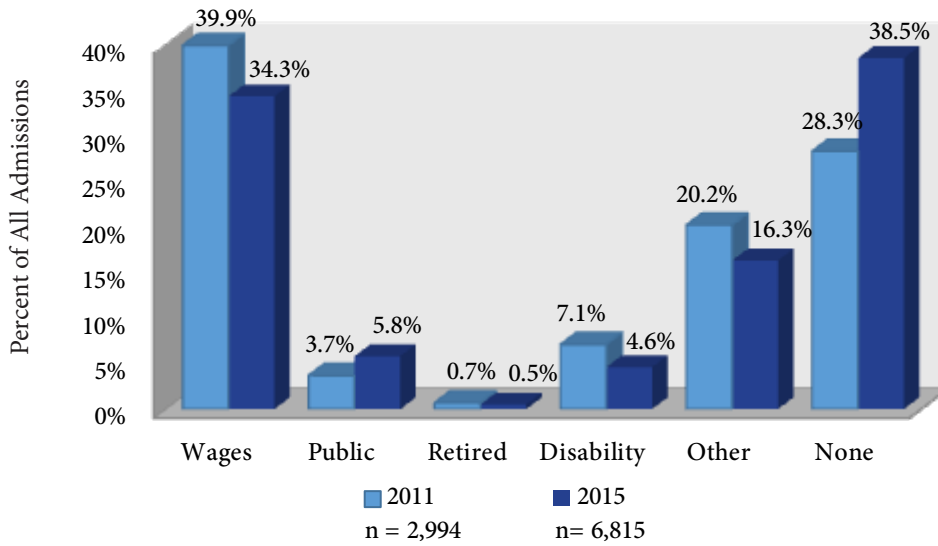
Figure 7.6 Military Status



SOURCE: Colorado Department of Human Services, Office of Behavioral Health, DACODS

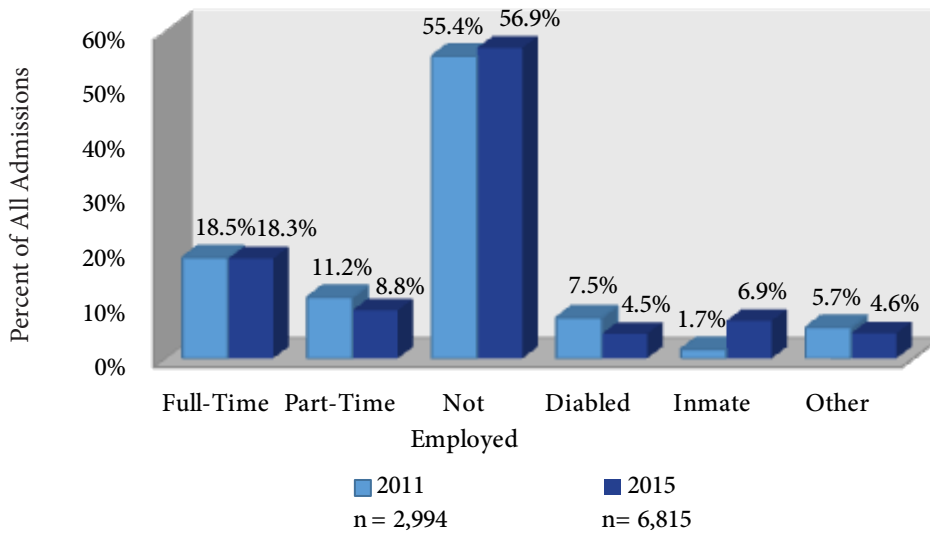
Heroin Treatment Admissions and User Information

Figure 7.7 Primary Source of Income



SOURCE: Colorado Department of Human Services, Office of Behavioral Health, DACODS

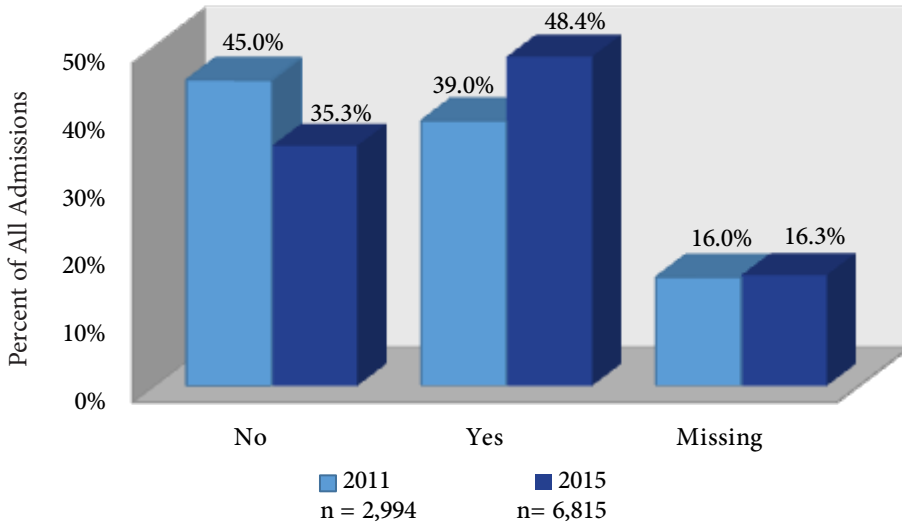
Figure 7.8 Employment Status



SOURCE: Colorado Department of Human Services, Office of Behavioral Health, DACODS

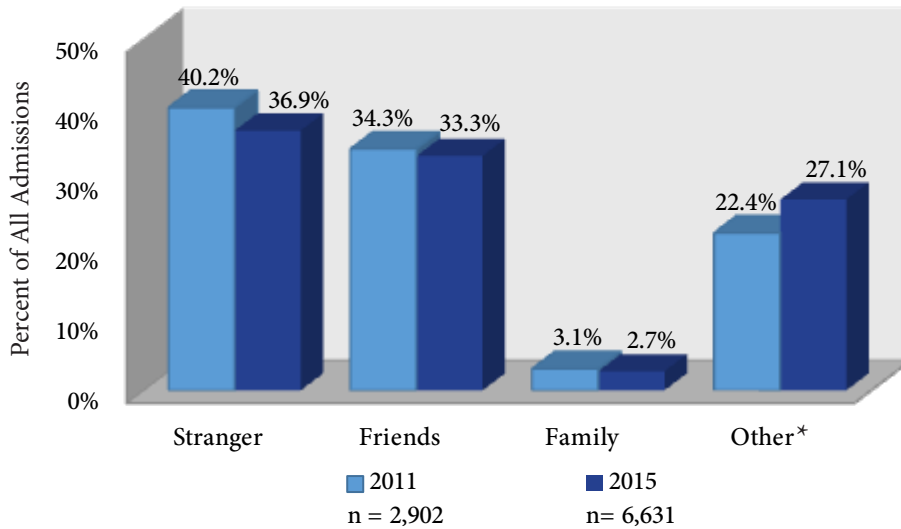
Heroin Treatment Admissions and User Information

Figure 7.9 History of Mental Health Problems



SOURCE: Colorado Department of Human Services, Office of Behavioral Health, DACODS

Figure 7.10 Source of Illicit Drugs



*Includes school, internet, refused and unknown

SOURCE: Colorado Department of Human Services, Office of Behavioral Health, DACODS

Heroin Treatment Admissions and User Information

Figure 7.11 Referrals to Treatment



SOURCE: Colorado Department of Human Services, Office of Behavioral Health, DACODS

Table 7.1 User Characteristics for Clients in Treatment in 2015 n=6,815

	Heroin User	Prescription Opioid User	All Treatment Admissions
Male	60%	53.9%	73.1%
Ages			
18 – 24	35%	19.3%	16.1%
25 – 34	42%	42.9%	33%
35 – 44	14%	21.8%	22.5%
White	76.1%	77.8%	67.3%
Marital Status			
Married	11.8%	21.2%	15.1%
Never Married	70.4%	53.9%	59.9%
Employment Status			
Fulltime Employee	18.3%	23.8%	33.4%
Unemployed	56.9%	47.5%	41.9%
History of Mental Health Problems	48.4%	51.3%	26.5%
Source of Drugs			
From Friend	33.3%	28%	37%
From Strangers	36.9%	24.8%	15.4%
Criminal Justice Referral	34%	31%	62.9%

Section 8: Denver Metro Treatment Client Survey

Denver Metro Treatment Client Survey

Learning more about heroin abuse from individuals who have experienced heroin addiction.

In an effort to learn more about heroin abuse in Colorado, an anonymous and voluntary survey was conducted in all nine of the Denver-Metro methadone clinics from October 3rd to November 11th, 2016. Five survey assistants were trained in survey ethics and equipped with laptops to administer the survey. Surveying occurred weekdays between the hours of 5am and 1pm. A total of 698 survey responses were collected within 25 days of surveying.

In addition to the nine methadone clinics, one treatment clinic with both inpatient/outpatient and transitional living services, participated. For these sites, clinic staff was trained on survey content, informed consent, and voluntary participation. A total of 14 responses were collected during the survey period.

Purpose of the Survey

- Gather demographic information on respondents
- Learn about heroin use behaviors
- Understand the introduction and transition to heroin use
- Learn about the transition to injection drug use
- Identify perceived gaps and ways to improve prevention and treatment
- Gauge awareness of Colorado's Good Samaritan Law
- Gather information on overdose experiences

Survey Categories

The survey was organized into 11 content areas:

1. Demographic Information
2. Current/Former Heroin Use
3. Role of Prescription Pain Killers in Heroin Use
4. Heroin: First Time
5. Heroin: Injection
6. Drug Use Behaviors
7. Overdose Behaviors
8. Abstinence
9. Preventing Heroin Use
10. Suggestions to Improve Treatment Effectiveness
11. How to Help Those Already Addicted

Denver Metro Treatment Client Survey

The following subsections are organized by these categories and further organized by survey question. Not all 713 survey respondents answered each question. The total number of respondents for each question (N) will be included with each corresponding figure and table. Percentages were calculated by total responses per question, unless otherwise specified. A full copy of the survey may be found in Appendix A.

Demographic Information

Although there were 713 survey respondents in total. The table below (Table 8.1) shows the demographic characteristics of survey respondents along with the missing number of responses per question.

Findings

The age range for respondents was 19 – 75 years, with a median age of 35 years. Survey respondents were predominantly White/Non-Hispanic, and evenly distributed between males and females (55.1 percent and 44.3 percent respectively). Almost half of the respondents (46.5 percent) had one to three years of college experience, and over half (62.3 percent) rented or owned their own residence. Of those who responded, 38.7 percent never married; 37 percent were employed for wages, and 48 percent had a household income of less than \$25,000.

Denver Metro Treatment Client Survey

Table 8.1 Demographic characteristics of survey respondents, Heroin Strategies Survey – Denver-Metro Methadone Clinics, 2016 (N = 713)

	Frequency n (%)
Age	Missing = 85 (11.9%)
Median Age	35
Mean Age	39
<hr/>	
Age Groups	
18 – 25	8.0%
25 – 34	33.9%
35 – 44	21.6%
45 – 54	10.0%
55+	14.9%
<hr/>	
Ethnicity	Missing = 49 (6.9%)
Hispanic/Latino	146 (22.0%)
Non – Hispanic/Latino	518 (78.0%)
<hr/>	
Race	Missing = 68 (9.5%)
White	513 (79.4%)
Black/African-American	28 (4.3%)
American Indian/Alaska Native	17 (2.6%)
Asian	1 (0.15%)
Native Hawaiian or Pacific Islander	2 (0.31%)
Other	85 (13.2%)
<hr/>	
Marital Status	Missing = 48 (6.7%)
Never married	258 (38.7%)
Married	144 (21.6%)
Divorced	103 (15.5%)
A member of an unmarried couple	86 (12.9%)
Separated	41 (6.2%)
Widowed	34 (5.1%)
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Denver Metro Treatment Client Survey

Table 8.1 Continued

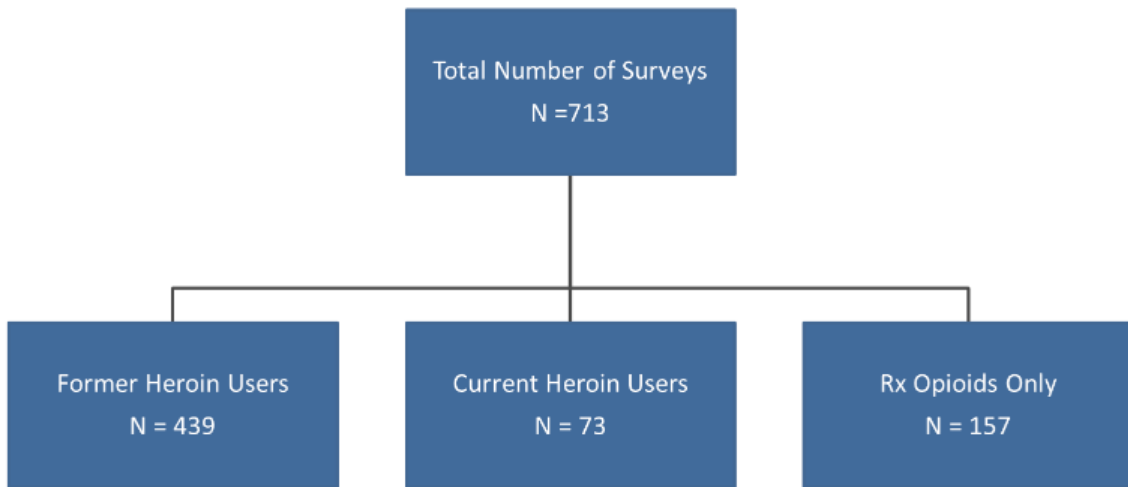
	Frequency n (%)
Highest Education	Missing = 44 (6.2%)
College 1 to 3 years	311 (46.5%)
12 th Grade/GED	205 (30.6%)
College 4 years or more	83 (12.4%)
<12 th grade	70 (10.5%)
Current Living Situation	Missing = 44 (6.2%)
Rent/own residence	417 (62.3%)
Parent's house	109 (16.3%)
Homeless, no permanent residence	49 (7.3%)
Living with friends	42 (6.3%)
Other	52 (7.8%)
Current Employment Situation	Missing = 46 (6.5%)
Employed for wages	247 (37.0%)
Unable to work	103 (15.4%)
Self-employed	92 (13.8%)
Out of work for less than 1 year	85 (12.7%)
Out of work for more than 1 year	51 (7.7%)
Retired	40 (6.0%)
A homemaker	31 (4.6%)
A student	18 (2.7%)
Gender	Missing = 50 (7.0%)
Male	365 (55.1%)
Female	294 (44.3%)
Non-conforming	4 (0.6%)
Transgender	0 (0.0%)
Household Income	Missing = 48 (6.7%)
< \$10,000	131 (19.7%)
\$10,000 to < \$15,000	93 (14.0%)
\$15,000 to < \$25,000	95 (14.3)
\$25,000 to < \$50,000	161 (24.2%)
\$50,000 +	118 (17.7%)
Don't know/Unsure	67 (10.1%)

Denver Metro Treatment Client Survey

Current/Former Heroin Use

Among respondents, 512 (76.5 percent) were current or former heroin users, and 157 (23.4 percent) reported never using heroin (Figure 8.1).

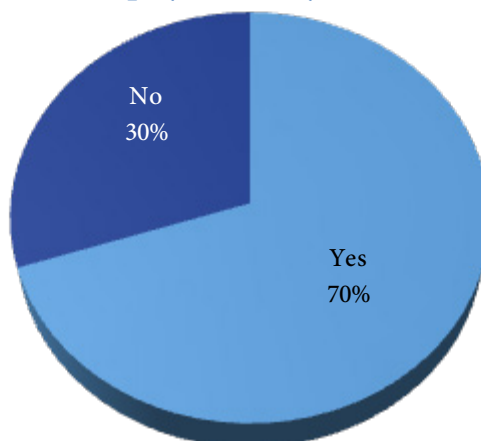
Figure 8.1 Are you a current or former heroin user? (N = 669)



Role of Prescription Pain Killers in Heroin Use

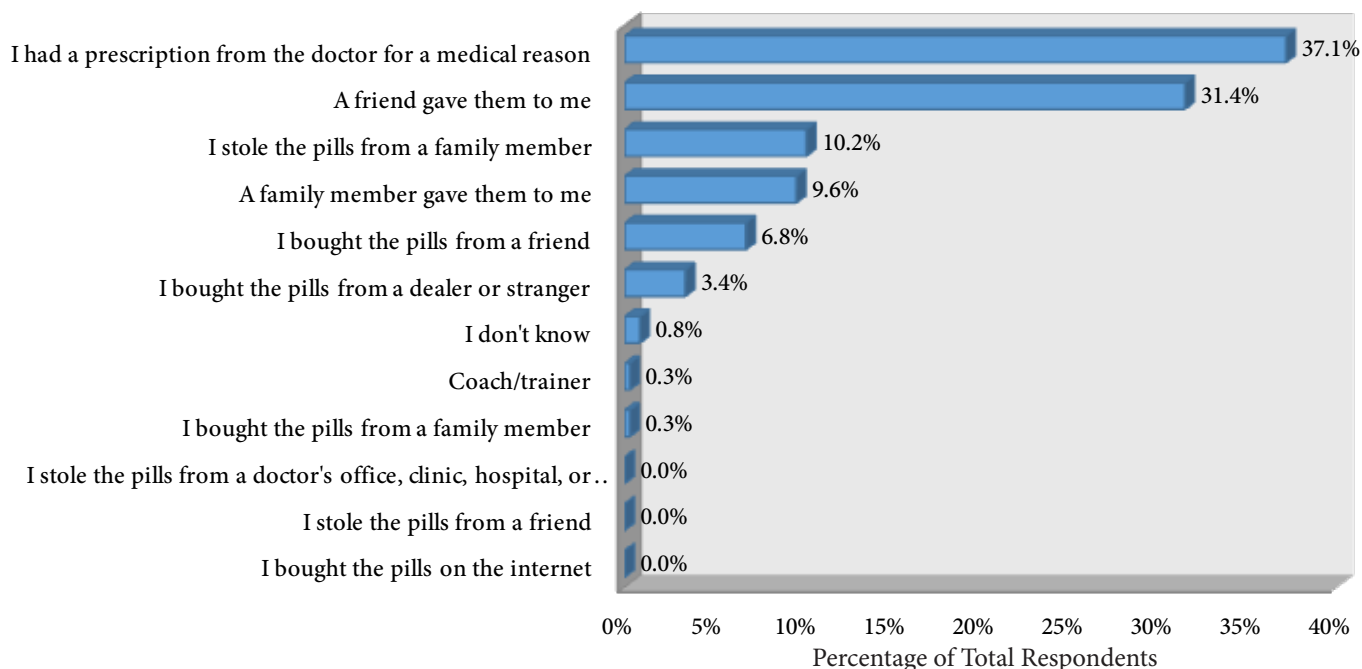
Findings: The majority (70 percent) of respondents said that, yes – prescription pain killers played a role in their decision to use heroin (Figure 8.2). Of those who responded yes, the median age of first time prescription drug abuse was 18 years, ranging from 9 – 60 years. Out of those who indicated prescription pain killer misuse as a reason for trying heroin, 131 (37 percent) said they got their first pain killer with a legal prescription from their doctor (Figure 8.3).

Figure 8.2 Did prescription pain killers play a role in your decision to use heroin? (N = 506)



Denver Metro Treatment Client Survey

Figure 8.3 How individuals obtained prescription opioids for non-medical use. (N = 352)



Heroin – First Time

Individuals who reported ever using heroin (N = 512) were given a series of questions on their first-time experiences.

The age range for first time heroin use was 9 – 62 years, with a median age of 22 years. When asked where they got their heroin the first time, 64 percent responded that they had received the drugs, for free, from a friend (Figure 8.4). The most common type (68.8 percent) of heroin used the first time was black tar (Figure 5) and the two most common ways for first time use were by smoking or injecting (Figures 6); for those who injected their first time, 89 percent reported using a sterile syringe.

The most common reason (39.5 percent) for trying heroin was *curiosity/experimentation* (Figure 8.7). There were 62 respondents who chose to provide text responses under 'other', the qualitative analysis of these answers resulted in additional themes including reasons such as: *I was in withdrawal from prescription pills* and *I took it to help with pain*.

Denver Metro Treatment Client Survey

Figure 8.4 The first time you used heroin, who introduced you? (N = 503)

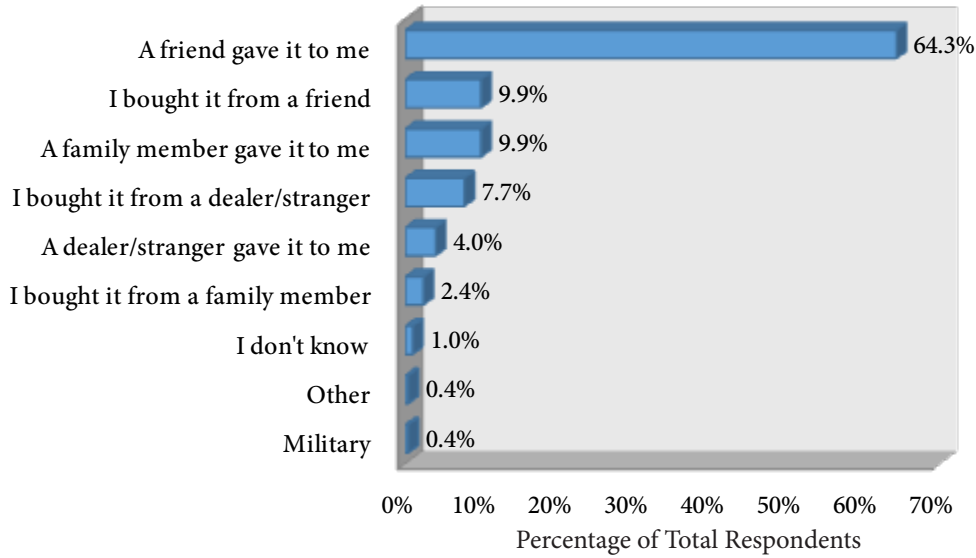
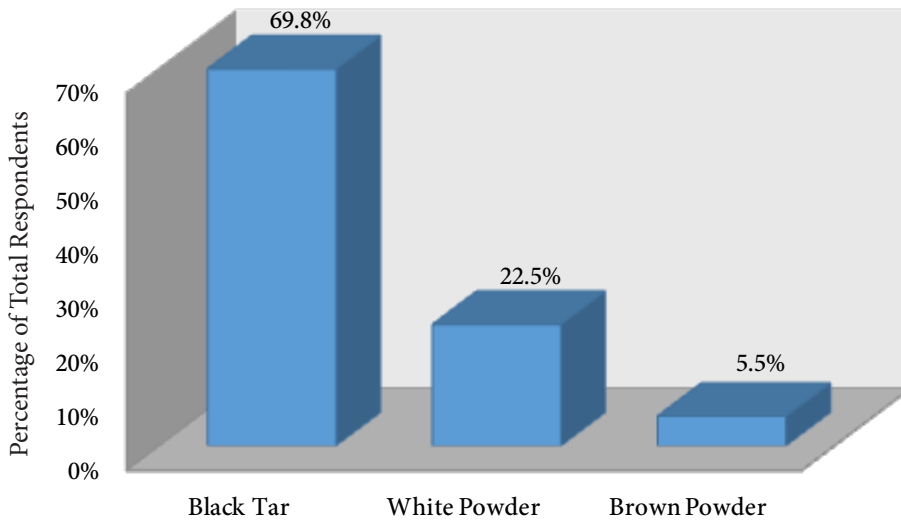


Figure 8.5 What type of heroin did you use the first time? (N = 506)



Denver Metro Treatment Client Survey

Figure 8.6 When you used heroin for the first time, how did you use it? (N = 508)

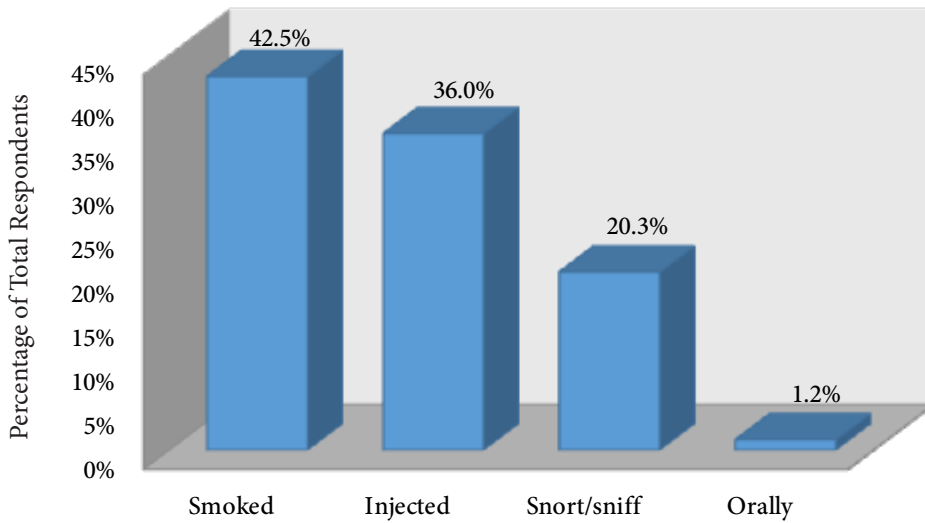
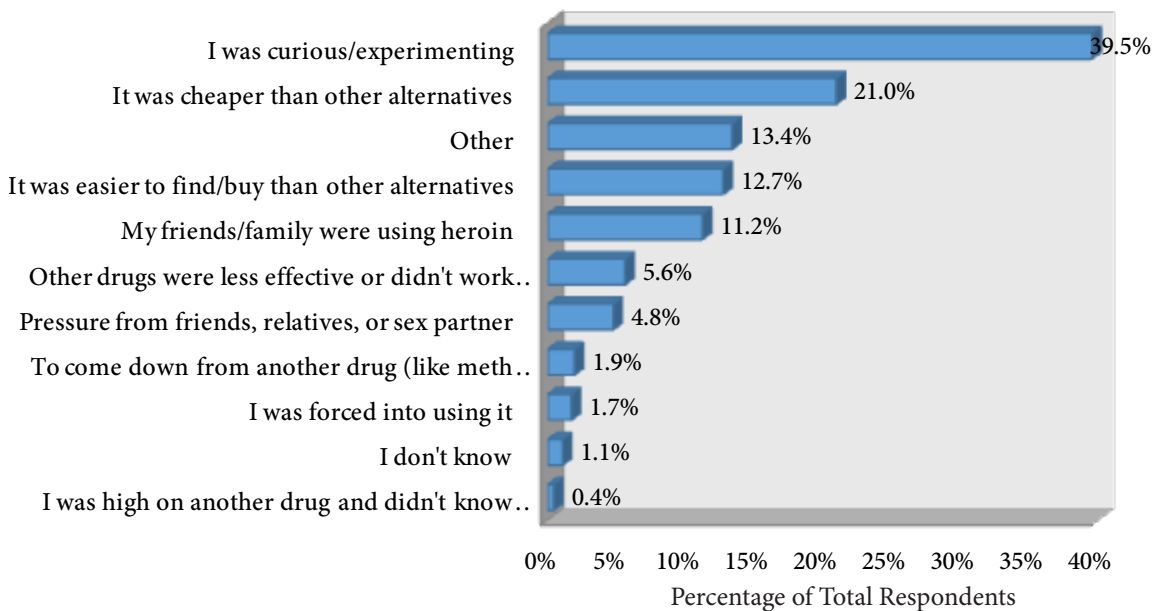


Figure 8.7 What is the primary reason that you used heroin for the first time? (N = 506)



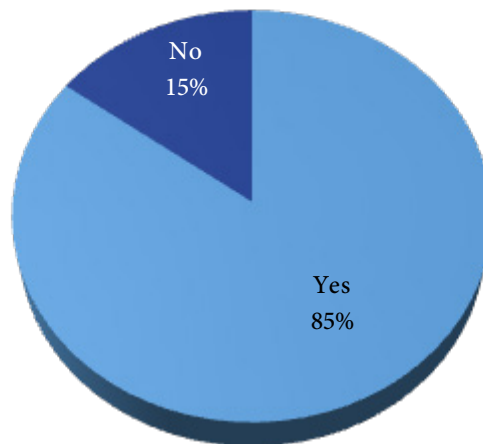
Denver Metro Treatment Client Survey

Heroin – Injection

The majority (85 percent) of respondents indicated they had ever injected heroin. When asked about the primary reason for transitioning to injection use, the two primary reasons cited were: *curiosity/experimentation*, and *to get a better/quicker high*, 32.1 percent and 24.7 percent respectively (Figure 8.9). Although a set of answers were provided, 80 individuals selected ‘other’ and provided text responses. The top two qualitative themes from the ‘other’ responses included: *I was already injecting other drugs*, and *it was more effective for pain*.

Those who said they had never injected heroin cited a *fear of needles* as the primary reason for abstaining from injection use. There were 15 individuals who selected ‘other’ and chose to provide text responses to this question, the most common qualitative theme from these responses was: *I knew it was too far*.

Figure 8.8 Have you ever injected heroin? (N = 505)



Denver Metro Treatment Client Survey

Figure 8.9 Why did you decide to try injecting heroin? (N = 428)

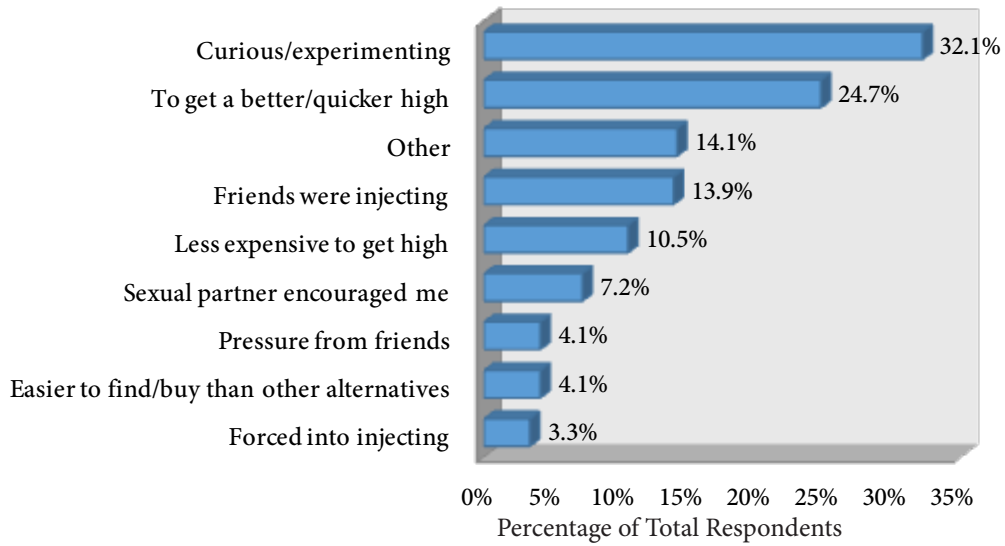
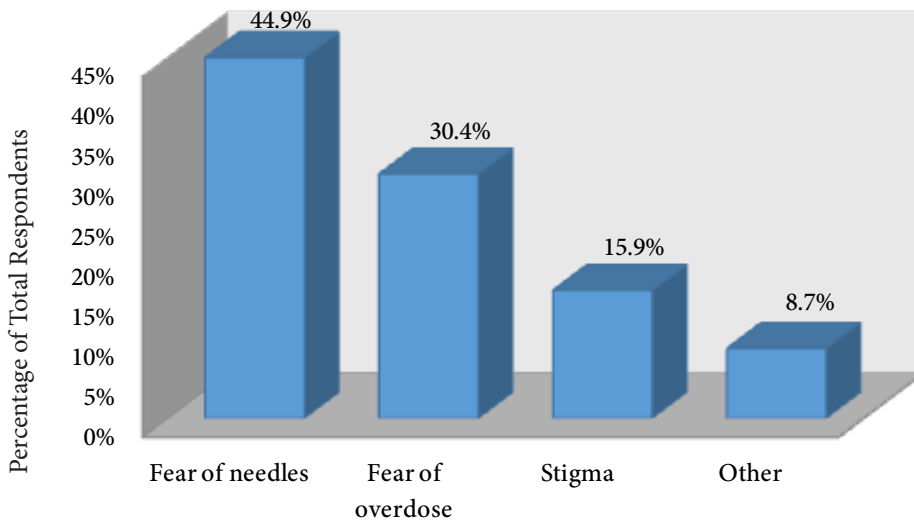


Figure 8.10 If you have never injected heroin, what has kept you from doing so? (N = 74)



Denver Metro Treatment Client Survey

Drug Use Behaviors

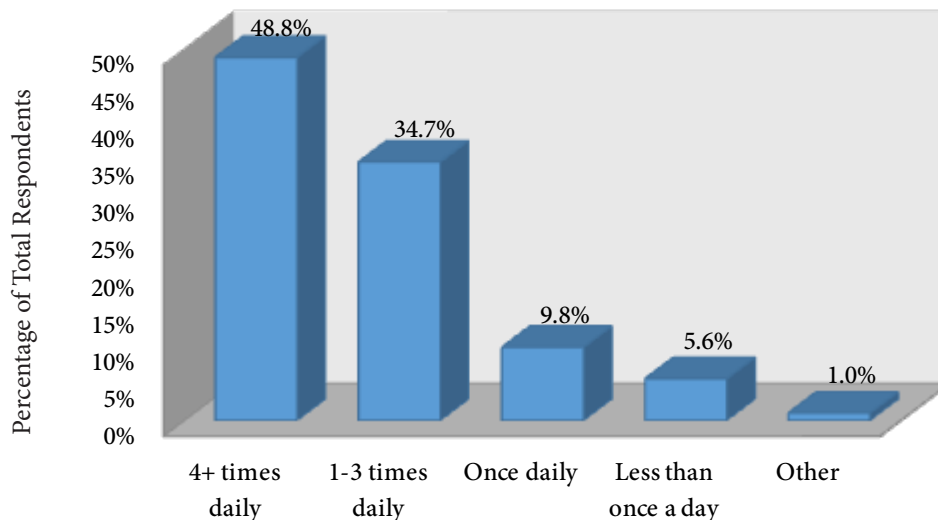
Nearly half of respondents (48.8 percent) who used heroin reported using four or more times daily (Figure 8.11); 46 percent reported paying for heroin using their legal income (Figure 8.12); and 70.9 percent responded that they had access to regular suppliers compared to other forms of supply (Figure 8.13). Much like heroin use the first time, black tar was the most common type (79.1 percent) of heroin used (N = 498).

Only 10 percent of ever-heroin users reported using social media to acquire heroin (Figure 8.14); those individuals were then asked about the type of social media used. Of the 40 individuals who responded to this question, 95 percent cited Facebook as the type of social media used.

The majority (71.9 percent) reported injection use as their method of choice (Figure 8.15) and of those, 92 percent reported having access to clean injection materials (Figure 8.16).

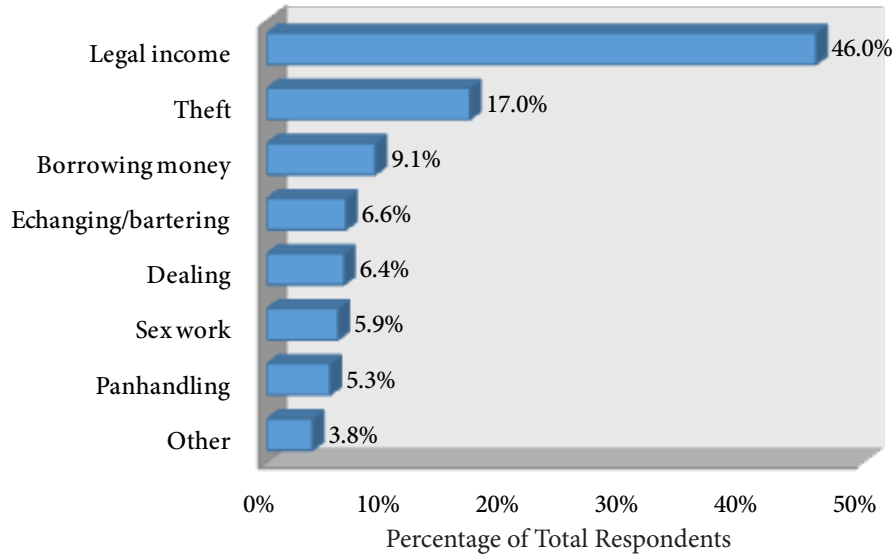
All survey respondents, including those who were never heroin users, were asked about their perception of crime, 30.5 percent said that property theft was, in their opinion, the biggest crime problem resulting from heroin use (Figure 8.17).

Figure 8.11 How often do/did you use heroin? (N = 498)



Denver Metro Treatment Client Survey

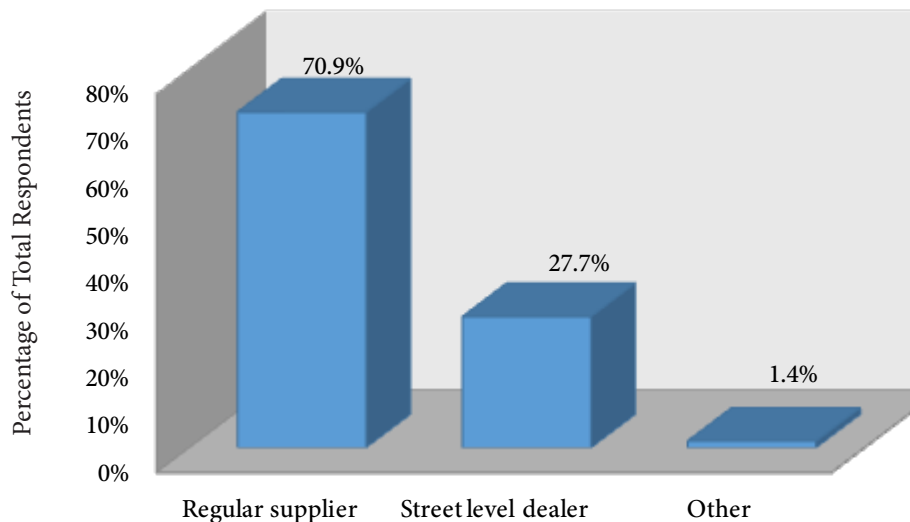
Figure 8.12 Most of the time, how do/did you support/pay for your drugs? (N = 494)



“When you are hurting for the drug, you are willing to do almost anything to not hurt anymore.”

A direct quote taken from a response on crime and heroin.

Figure 8.13 Most of the time, how do/did you get heroin? (N = 495)



Denver Metro Treatment Client Survey

Figure 8.14 Have you ever used social media (such as Facebook, Twitter, etc.) to get heroin? (N = 496)

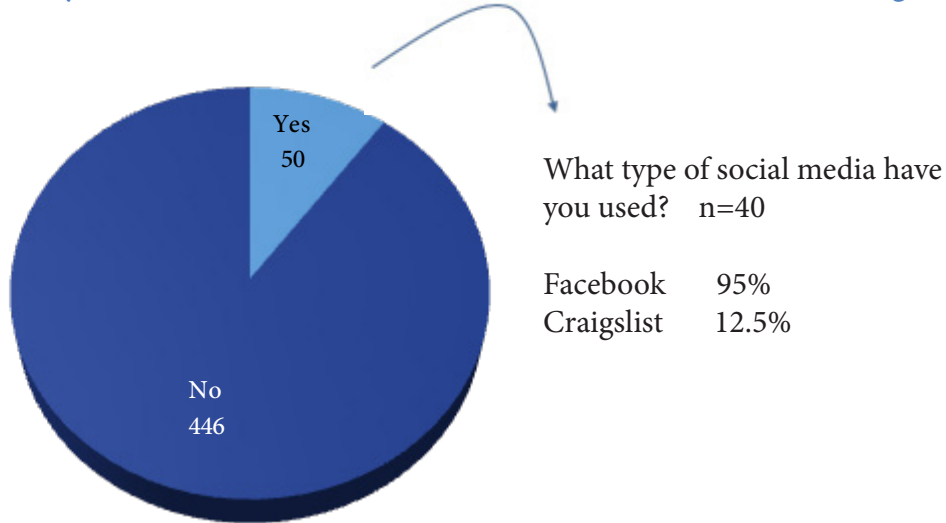
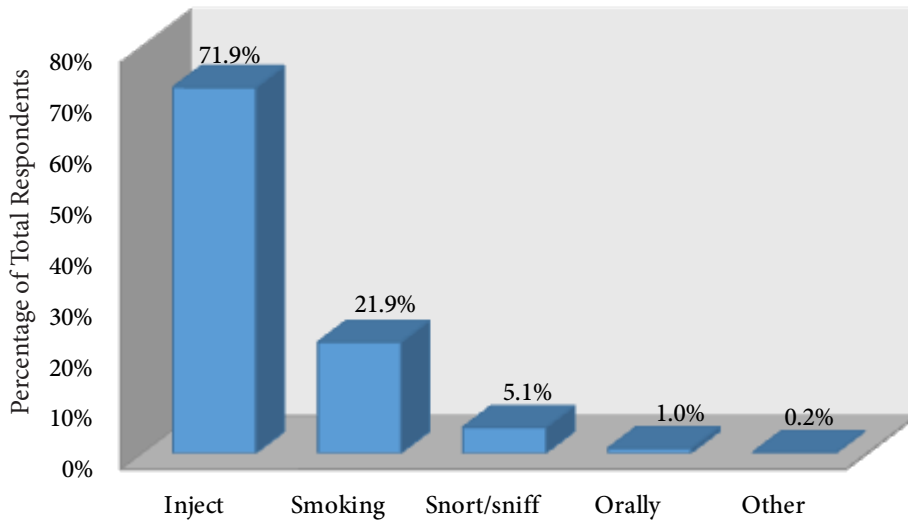


Figure 8.15 How do/did you typically use? (N = 498)



Denver Metro Treatment Client Survey

Figure 8.16 Do/did you have access to clean injection materials? (N = 354)

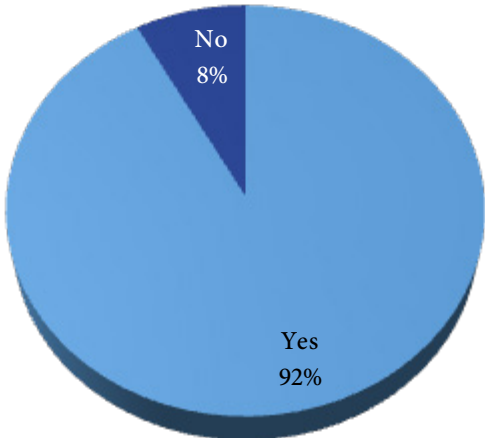
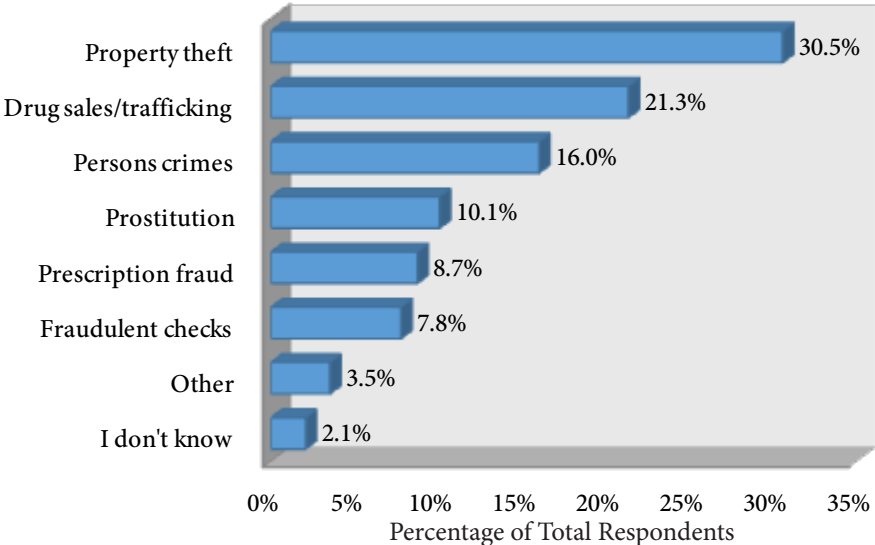


Figure 8.17 In your opinion, what is the biggest crime issue resulting from heroin use? (N = 624)



Denver Metro Treatment Client Survey

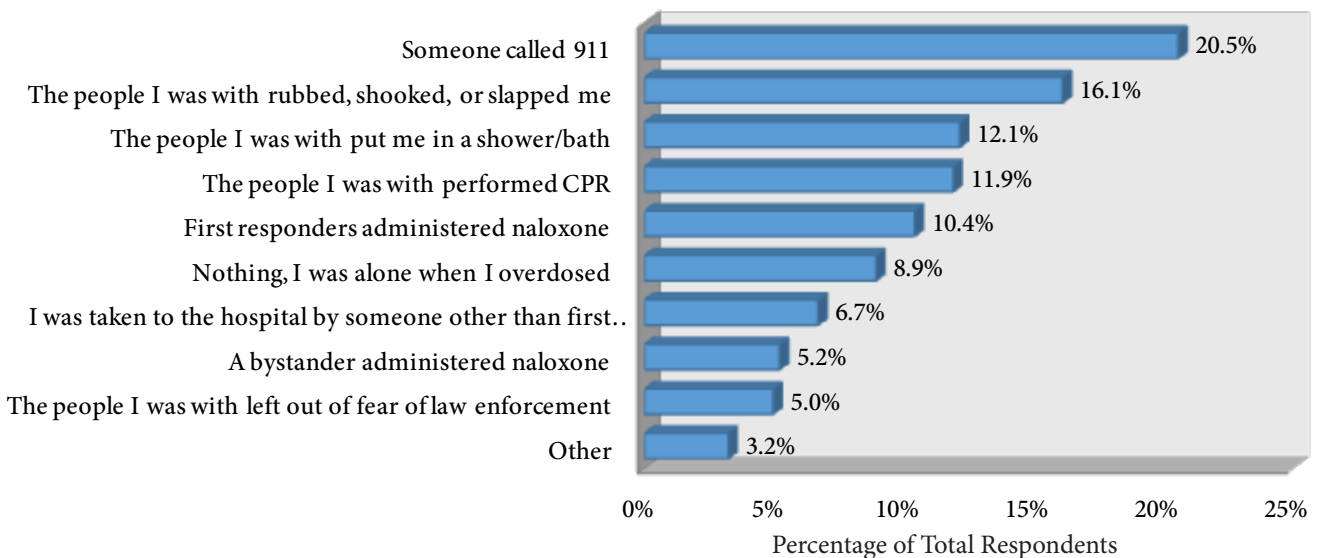
Overdose Behaviors

Those who reported using heroin (N = 512) were asked a series of questions regarding overdose behaviors. Of those who had ever used heroin, 61 percent reported never having had an overdose experience; and of those that reported having had an overdose experience (N = 193), the median number of overdoses per person was three. When asked about what happened following any overdose experiences, 20.5 percent reported that someone called 911 (Figure 8.18). It is important to note that with the increased access to the life-saving drug naloxone, 15.6 percent of respondents reported being revived by naloxone either by first responders or a bystander.

Each individual who participated in the survey was asked about situations where they had witnessed a heroin overdose. Of those who responded, 70 percent said they had been in a situation where someone else had overdosed on heroin. Among those who reported being a bystander in a heroin overdose (N = 342), the average number of overdoses witnessed per person was three; and when asked about their responses to overdose situations, 21.8 percent reported calling 911 enforcement (Figure 8.19). In the situations where respondents witnessed a heroin overdose, 8.6 percent reported administering naloxone.

In order to assess respondent's awareness of Colorado's law in place to protect those calling 911 in overdose situations, each individual who reported ever using heroin was asked if they aware of Colorado's Good Samaritan Law; of those who responded, 43 percent said they had no prior knowledge of the law (Figure 8.20).

Figure 8.18 In the situations where you have overdosed on heroin, what followed? (N = 185)



Denver Metro Treatment Client Survey

Figure 8.19 In situations where you were with someone else when they overdosed on heroin, what did you do? (N = 326)

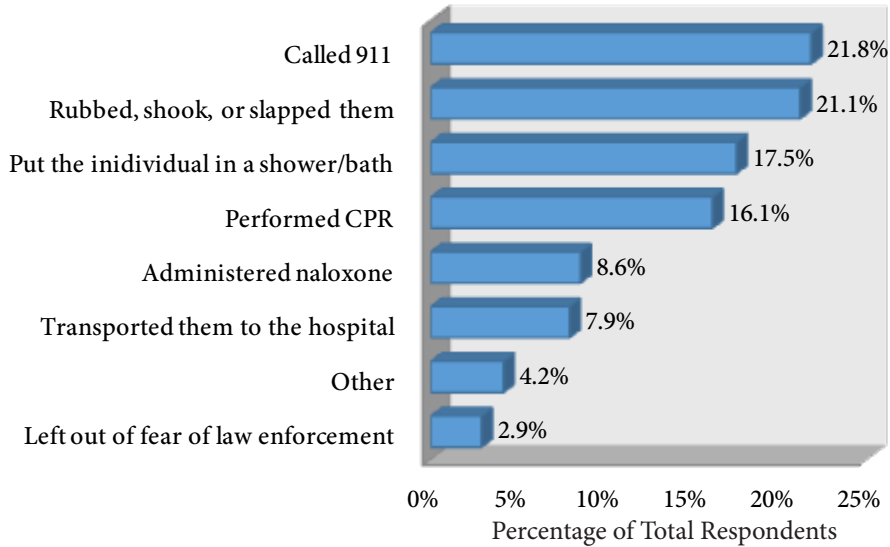
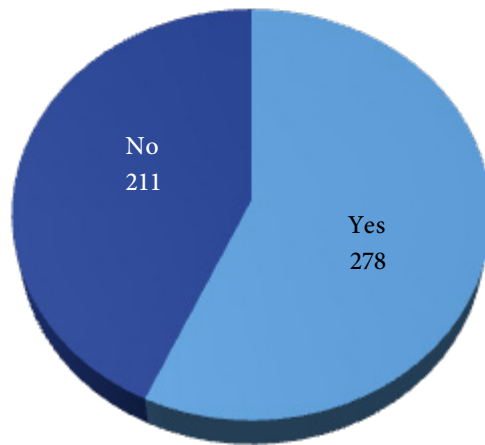


Figure 8.20 Are you aware of the laws in Colorado to protect those calling 911 in overdose situations? (N = 489)



Denver Metro Treatment Client Survey

Abstinence

Individuals who reported ever using heroin were asked questions regarding periods of abstinence. Participants were asked about the longest period of time away from heroin use, how they were able to support their abstinence, and to tell us about reasons for relapse. Results revealed that the longest length of abstinence varied drastically between person to person and that averages or general comparisons could not be easily made.

Of those who reported having a period of abstinence, 29.6 percent cited *medication assisted treatment* as a reason for their longest time heroin-free (Figure 8.21). When asking about reasons for relapse, an open text box was made available. There were 378 respondents that chose to provide text responses, the top two qualitative themes to come out of those responses were: *stress/anxiety* and a *stressful/traumatic life event* (Table 8.2).

Figure 8.21 During this time, how were you able to keep from using heroin? (N = 448)

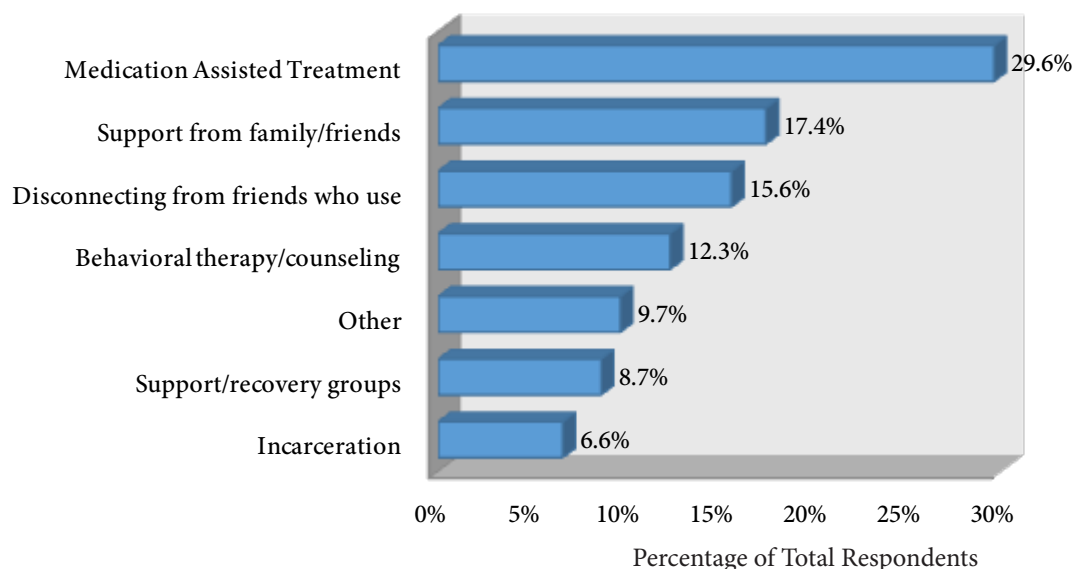


Table 8.2 Primary reason for relapse – list of top five qualitative themes from the text responses, including the percentage of total responses. (N = 378)

<u>Theme</u>	<u>% of Total Responses</u>
Stress/anxiety	11%
Stressful/traumatic life event	9.8%
Unstable medication assisted treatment	7.8%
Because of withdrawal	6.4%
Had never experienced a relapse	5.1%

Denver Metro Treatment Client Survey

Preventing Heroin Use

For each respondent that reported ever using heroin, a text box was provided to collect responses on what they believe could have prevented their own heroin use. There were 378 individuals who responded to this question. Of those, 96.5 percent mentioned ways their addiction could have been prevented. The top five themes from their responses are provided in the table below (Table 8.3). The full list of qualitative themes for this question is located in the report appendix (Appendix A).

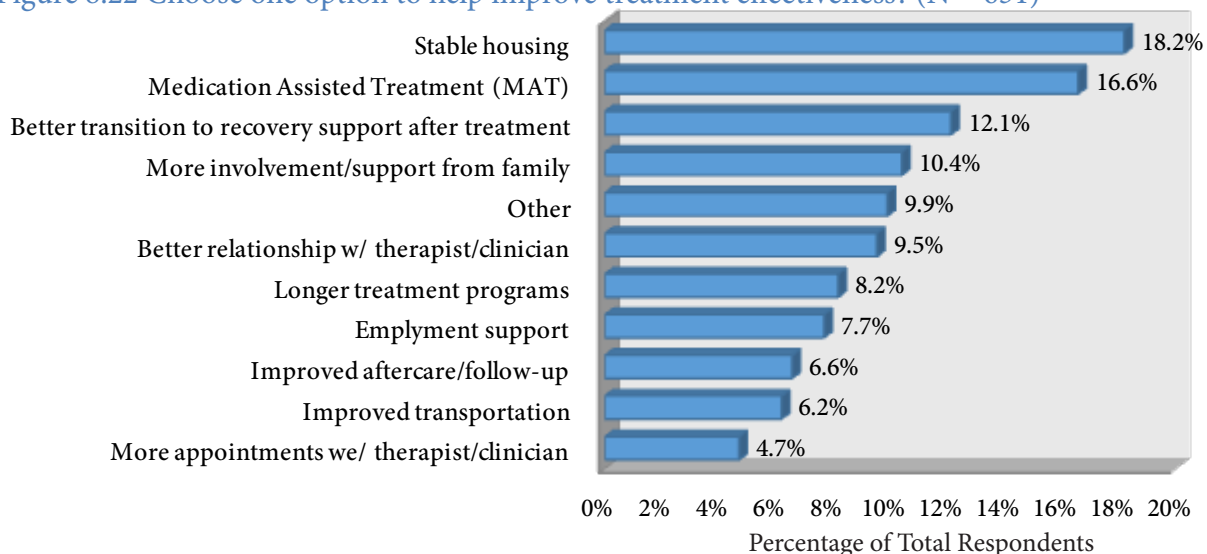
Table 8.3 How heroin use could be prevented – List of top five qualitative themes from the text responses, including percentage of total responses. (N = 378)

Theme	% of Total Responses
If I had never used pain pills	8.9%
If I had different friends	8.7%
If there had been better drug education	7.7%
If the doctors would have done something differently	7.5%
If I would have received proper pain management	5.5%

Suggestions to Improve Treatment Effectiveness

Each survey respondent was asked to choose their top suggestions to help improve treatment effectiveness. Although a set of answers were provided, 173 individuals selected ‘other’ and provided text responses. After the text was analyzed, answers that fit preexisting answer choices were calculated and are represented below (Figure 8.22). The ‘other’ top two qualitative themes from responses were stigma reduction and reduced cost of services.

Figure 8.22 Choose one option to help improve treatment effectiveness? (N = 631)



Denver Metro Treatment Client Survey

How to Help Those Already Addicted

For each survey respondent, a text box was provided to collect insight on how we can better help those currently struggling with heroin addiction. There were 474 individuals who provided text responses, the top five qualitative themes from these responses are listed below, along with the percentage of total responses (Table 8.4).

Table 8.4 How to better help those addicted to heroin – list of top five qualitative themes from the test responses, including percentage of total responses. (N = 474)

<u>Theme</u>	<u>% of Total Responses</u>
More awareness of services	9.1%
More education on treatment	7.4%
Easier access to services	7.1%
Stigma reduction	6.9%
Reduced cost of services	5.8%

Conclusion

The data in this assessment indicates a recent increase in the presence and use of heroin in Colorado. To reduce the adverse impacts of heroin use and trafficking, greater effort needs to be placed on a coordinated response to the ongoing issue. This will require a joint effort by the law enforcement, prevention, treatment and recovery communities working together to curb the harmful impact heroin is having in Colorado. Members of the Heroin Response Work Group are committed to using the information presented in this assessment to identify strategies to address gaps in data collection and reporting related to heroin and to prevent adverse outcomes associated with heroin use in Colorado. The work group is in the process of identifying existing prevention, intervention, and treatment programs and a policy aimed at reducing heroin use in Colorado and is collecting best practices from around the country to develop ways to enhance those efforts. Using the compiled information, the work group will create and implement programmatic and policy recommendations to mitigate the impact of heroin abuse in Colorado.

References

- ¹El Paso Intelligence Center (EPIC), National Seizure System (NSS) data – Run date 08-18-16
- ²RMHIDTA Performance Management Process (PMP) Seizure Data – (Colorado, 2011 – 2015)
- ³Colorado Bureau of Investigation, Heroin Arrests in Colorado 2011 - 2015 - Data date: 08-18-16
- ⁴Age-adjusted rates by Colorado Department of Public Health and Environment (CDPHE) – Poisoning deaths, by selected categories: Colorado residents, 1999 – 2015.
- ⁵Harm Reduction Coalition, Understanding Naloxone, 2016
- ⁶Colorado Department of Public Health and Environment (CDPHE) / Emergency Medical and Trauma Services' Data Section – Naloxone Summary 2011 – 2015
- ⁷Denver Public Health. HIV Behavioral Surveillance in the Denver Metro Area: Understanding HIV Risk and Prevention Behaviors among Persons Who Inject Drugs. July 2014.
- ⁸Paintsil E et al. Survival of Hepatitis C Virus in Syringes: Implication for Transmission among Injection Drug Users. *J Infect Dis.* 2010 October 1; 202(7): 984-990.
- ⁹Centers for Disease Control and Prevention. Viral Hepatitis – Hepatitis C Information. <http://www.cdc.gov/hepatitis/hcv/index.htm>. Last accessed Nov 8, 2016.
- ¹⁰Mendelson B. Patterns and Trends in Drug Abuse in Denver and Colorado: 2013. Proceedings of the Community Epidemiology Work Group, June 2014. Available at: <https://www.drugabuse.gov/sites/default/files/denver2014.pdf>. Last accessed Nov 8, 2016.
- ¹¹Conrad C et al. Community Outbreak of HIV Infection Linked to Injection Drug Use of Oxycodone – Indiana, 2015. *MMWR Morb Mortal Wkly Rep* 2015;64:443-444.
- ¹²Centers for Disease Control and Prevention, Syringe Services Programs Determination Panel. Response from CDC re: SSP DON [Determination of Need]. Received by Daniel Shodell, CDPHE, June 25, 2016.
- ¹³CDC Program Guidance for Implementing Certain Components of Syringe Services Programs, 2016
- ¹⁴U.S. National Library of Medicine website (<https://medlineplus.gov/ency/article/007313.htm>) – July 2016
- ¹⁵Hudak ML, Tan RC; Committee on Drugs; Committee on Fetus and Newborn; American Academy of Pediatrics. Neonatal drug withdrawal. *Pediatrics* 2012;129:e540–60. <http://dx.doi.org/10.1542/peds.2011-3212>
- ¹⁶Colorado Department of Public Health and Environment - NAS Data Based on ICD-9 Code 779.5
- ¹⁷American Association of Poison Control Centers (AAPCC) database – (Data date: 08-24-16)

Appendix A

Heroin Strategies Survey

P1. CONSENT

What the survey is about: The purpose of this survey is to gain valuable insight to help us learn how and why Coloradans use drugs like heroin and how we can improve prevention and treatment services.

What we will ask you to do: If you agree to participate in this survey, you will be asked to answer questions about your history of drug use as well as your age, education, employment, current housing, etc.

Risks: You may find some of the questions about current and former drug usage to be very personal. You can choose not to answer any question, but some answers are required if you want to continue the survey. If you wish to talk to someone about your reactions to any issues you have during the survey, a list of resources will be provided at the end of the survey.

Benefits: Your information will help to guide and inform state and local policy and program creators on changes to the current system that could improve support and care for those dealing with substance use problems.

Compensation: You will not be paid for completing the survey.

Your answers will be confidential. Your survey answers will be kept in locked files or on a protected computer by the Colorado Department of Public Health and Environment (CDPHE). This survey does not collect information that can identify you. Our report will not include any information that would make it possible to identify individuals from the survey. Please do NOT include your name, the names of others, or any other personal identifiable information in the open field sections of the survey.

Taking part is voluntary: Taking part in this survey is completely voluntary. You may skip questions that you do not wish to answer. If you decide not to take part or decide to skip some of the questions, you will not lose any benefits from a treatment or recovery site or the Colorado Department of Public Health and Environment. You are free to stop answering questions at any time.

If you have questions about the survey, you may contact us at lindsey.kato@state.co.us.

Appendix A

Please select "agree" if you wish to participate and agree to the following:

- You have read the above information
- You voluntarily agree to participate in the survey
- You voluntarily agree to provide demographic information
- You are at least 18 years of age
- You will take this survey one-time only

Select "disagree" if you do not want to participate in the survey.

- Agree
- Disagree

P2. DEMOGRAPHICS

What is your age? (Please list age in years)
[Open Field]

Are you Hispanic or Latino?

- Yes
- No

Which one of the following would you say best represents your race? (Choose one)

- White
- Black or African American
- Asian
- Native Hawaiian or Other Pacific Islander
- American Indian or Alaska Native
- Other (please specify)

What is your marital status? (Choose one)

- Married
- Divorced
- Widowed
- Separate
- Never married
- A member of an unmarried coupled

Appendix A

What is the highest grade or year of school you completed? (Choose one)

- Never attended school or only attended kindergarten
- Grades 1 through 8 (Elementary)
- Grades 9 through 11 (Some high school)
- Grade 12 or GED (High school graduate)
- College 1 to 3 years (Some college or technical school)
- College 4 years or more (College graduate)

Where do you currently live? (Choose one)

- Parent's house
- Living with friends
- Rent/own my own residence
- Homeless, no permanent residence
- Other (please specify)

What is your current employment situation? (Choose one)

- Employed for wages
- Self-employed
- Out of work for less than 1 year
- Out of work for more than 1 year
- A homemaker
- A student
- Retired
- Unable to work

Please mark your annual household income from all sources: (Choose one)

- Less than \$10,000
- \$10,000 to less than \$15,000
- \$15,000 to less than \$20,000
- \$25,000 to less than \$35,000
- \$35,000 to less than \$50,000
- \$50,000 to less than \$75,000
- \$75,000 or more
- Don't know/Not sure

What is your gender?

- Male
- Female
- Transgender
- Non-conforming

Appendix A

P3. HEROIN: CURRENT/FORMER

Are you a current or former heroin user?

Current

Former --- (SKIP TO P13)

No --- (SKIP TO P32)

P4. CURRENT – PRESCRIPTION PILLS

Did prescription painkillers play a role in your transition to heroin use? (Ex. Oxycontin, Vicodin, Morphine, Percocet)

Yes

No --- (SKIP TO P6)

P5. CURRENT – PRESCRIPTION PILLS (YES) – FIRST TIME

How old were you the first time you used a prescription painkiller without a prescription or in ways other than what was prescribed for you? (Please list age in years)

[Open Field]

How did you get the prescription painkiller the first time you used it without a prescription or in ways other than what was prescribed for you? (Choose one)

I had a prescription from the doctor for a medical reason

A friend gave them to me

A family member gave them to me

I bought the pills from a friend

I bought the pills from a family member

I bought the pills from a dealer or stranger

I bought the pills on the internet

I stole the pills from a friend

I stole the pills from a family member

I stole the pills from a doctor's office, clinic, hospital, or pharmacy

I don't know

Other (please specify)

Appendix A

P6. CURRENT – HEROIN – FIRST TIME

How old were you when you first used heroin? (Please list age in years)
[Open Field]

The first time you used heroin, who introduced you? (Choose one)

- A friend gave it to me
- A family member gave it to me
- A dealer/stranger gave it to me
- I bought it from a friend
- I bought it from a family member
- I bought it from a dealer/stranger
- I bought it on the internet
- I stole it from a friend
- I stole it from a family member
- I don't know
- Other (please specify)

What is the primary reason you used heroin for the first time? (Choose one)

- I was curious/experimenting
- My friends/family were using heroin
- It was cheaper than other alternatives
- It was easier to find/buy than other alternatives
- Other drugs were less effective or didn't work anymore
- Pressure from friends, relatives, or sex partner
- I was high on another drug and didn't know what I was doing
- To come down from another drug like methamphetamine or cocaine
- I was forced into using it
- I don't know
- Other (please specify)

What type of heroin did you use the first time?

- White powder
- Black tar
- I don't know
- Other (please specify)

When you used heroin for the first time, how did you use it? (Choose one)

- Orally
- Smoked
- Injected --- (SKIP TO P9)
- Snort/sniff
- Other (please specify)

Appendix A

P16. FORMER – INJECTION

Have you ever injected heroin?

Yes

No --- (SKIP TO P19)

P17. FORMER – INJECTION – AGE

How old were you when you first injected heroin? (Please list age in years)
[Open Field]

P18. FORMER – INJECTION – WHY

Why did you decide to try injecting heroin? (Choose one)

I was curious/experimenting

My sexual partner encouraged me to do it

Pressure from friends

It was less expensive than other alternatives

It was easier to find/buy than other alternatives

To get a better high or rush

My friends were injecting

I was forced into injecting

Other (please specify)

When you injected heroin for the first time, did you inject with a new sterile syringe?

Yes

No

I don't know

(AFTER CURRENT PAGE IS COMPLETED --- SKIP TO P20)

P19. FORMER – INJECTION – NO

You have never injected heroin, what has kept you from doing so?

Fear of overdose

Stigma

Fear of needles

Other (please specify)

Appendix A

P20. FORMER – HEROIN – HOW OFTEN

When you used heroin, how often did you use?

- Once daily
- 1-3 times daily
- 4 or more times daily
- Other (please specify)

What type of heroin did you typically use?

- White powder
- Black tar
- Other (please specify)

Approximately how much did this cost per dose? (Please provide amount in dollars)

[Open Field]

How did you support/pay for your drugs? (Choose one)

- Legal income (Ex. Salary, savings)
- Borrow money
- Exchange/bartering
- Panhandling
- Sex work
- Theft
- Other (please specify)

How did you typically get heroin? (Choose one)

- Regular supplier
- Street level dealer
- Stranger
- Internet
- Other (please specify)

How did you usually use?

- Orally --- (SKIP TO P22)
- Smoked --- (SKIP TO P22)
- Injected
- Sniff/snorted --- (SKIP TO P22)
- Other (please specify) --- (SKIP TO P22)

Appendix A

P12. CURRENT – ACCESS CLEAN NEEDLES

Do you have access to clean injection materials?

Yes

No

(AFTER CURRENT PAGE IS COMPLETED --- SKIP TO P22)

P13. FORMER – PRESCRIPTION PILLS

Did prescription painkillers play a role in your transition to heroin use? (Ex. Oxycontin, Vicodin, Morphine, Percocet)

Yes

No --- (SKIP TO P15)

P14. FORMER – PRESCRIPTION PILLS (YES) – FIRST TIME

How old were you the first time you used a prescription painkiller without a prescription or in ways other than what was prescribed for you? (Please list age in years)

[Open Field]

How did you get the prescription painkiller the first time you used it without a prescription or in ways other than what was prescribed for you? (Choose one)

I had a prescription from the doctor for a medical reason

A friend gave them to me

A family member gave them to me

I bought the pills from a friend

I bought the pills from a family member

I bought the pills from a dealer or stranger

I bought the pills on the internet

I stole the pills from a friend

I stole the pills from a family member

I stole the pills from a doctor's office, clinic, hospital, or pharmacy

I don't know

Other (please specify)

Appendix A

P21. FORMER – ACCESS CLEAN NEEDLES

Did you have access to clean injection materials?

- Yes
- No

P22. SOCIAL MEDIA

Have you ever used social media (such as Facebook, Twitter, etc.) to get heroin?

- Yes
- No --- (SKIP TO P24)

P23. SOCIAL MEDIA (YES)

What type of social media have you used to get heroin? (Select all that apply)

- Twitter
- Facebook
- Instagram
- Kik
- Craigslist
- Other (please specify)

P24. ABSTINENCE

What is the longest time you have stopped using heroin for? (Please list time in months)

[Open Field]

During this time, how were you able to keep from using heroin?

- Support from family/friends
- Disconnecting from friends who use
- Medication Assisted Treatment --- (SKIP TO P25)
- Behavioral therapy/counseling
- Incarceration
- Support/recovery groups
- Other (please specify)

If you returned to using after this period of time, list the primary reason for returning to heroin use:

[Open Field]

(AFTER CURRENT PAGE IS COMPLETED --- SKIP TO P26, UNLESS MAT SELECTED)

Appendix A

P25. MAT (YES)

What type of medication assisted treatment helped to keep you from using heroin?

- Methadone
- Suboxone
- Vivitrol
- Naltrexone

P26. OVERDOSE – YOU

Have you ever overdosed on heroin?

- Yes
- No --- (SKIP TO P28)

P27. OVERDOSE – YOU (YES)

How many times have you overdosed on heroin?

[Open Field]

In the situations where you have overdosed on heroin, what followed? (If you have had multiple overdoses, please select all that apply)

- Nothing, I was alone when I overdosed
- Someone called 911
- A friend/family member or bystander administered naloxone
- First responders administered naloxone
- The people I was with left out of fear of law enforcement
- I was taken to the hospital by someone other than first responders
- The people I was with performed CPR
- The people I was with rubbed, shook, or slapped me
- The people I was with put me in a shower/bath
- Other (please specify)

P28. OVERDOSE – SOMEONE ELSE

Have you ever been with someone else when they have overdosed on heroin?

- Yes
- No --- (SKIP TO P30)

Appendix A

P29. OVERDOSE – SOMEONE ELSE (YES)

Approximately how many times have you been with someone else when they have overdosed on heroin?

[Open Field]

In the situation(s) where you were with someone else when they overdosed on heroin, what did you do? (If there have been multiple situations, please select all that apply)

Left out of fear of law enforcement

Called 911

Administered naloxone

Transported them to the hospital

Performed CPR

Rubbed, shook, or slapped them

Put the individual in a shower/bath

Other (please specify)

P30. GOOD SAMARITAN

Are you aware of the Good Samaritan Laws in Colorado?

Yes

No

P31. PREVENTION

What do you think could have prevented you from using heroin or prevented your addiction?

[Open Field]

(AFTER CURRENT PAGE IS COMPLETED --- SKIP TO P34)

P32. HEROIN: “NO” – OVERDOSE – SOMEONE ELSE

Have you ever been with someone else when they have overdosed on heroin?

Yes

No --- (SKIP TO P34)

Appendix A

P33. HEROIN: “NO” – OVERDOSE – SOMEONE ELSE (YES)

Approximately how many times have you been with someone else when they have overdosed on heroin?

[Open Field]

In the situation(s) where you were with someone else when they overdosed on heroin, what did you do? (If there have been multiple situations, please select all that apply)

Left out of fear of law enforcement

Called 911

Administered naloxone

Transported them to the hospital

Performed CPR

Rubbed, shook, or slapped them

Put the individual in a shower/bath

Other (please specify)

P34. CRIMINAL JUSTICE

In your opinion, what is the biggest crime issue resulting from heroin use?

Prostitution

Prescription fraud

Fraudulent checks

Property theft

Persons crimes (ex. robbery, assault)

Drug sales/trafficking (selling, not buying)

Other (please specify)

P35. TREATMENT

What would help to improve treatment effectiveness?

Longer treatment programs

More involvement/support from my family

Stable housing

Improved transportation

Medication Assisted Treatment

Improved aftercare/follow-up

