

INTRAVENOUS DRUG USE AMONG THE SAN DIEGO COUNTY ARRESTEE POPULATION

JULY 2004

Criminal Justice Research Division

Cynthia Burke, Ph.D., Director



401 B Street, Suite 800 • San Diego, CA 92101-4231 • (619) 699-1900

This research was supported with funding from the National Institute of Justice (NIJ). Findings and conclusions of this study are those of the authors and do not necessarily reflect the official position or policies of NIJ, SANDAG, or its Board of Directors.

ABSTRACT

Research Goals and Objectives: Injection drug use (IDU) is one of the most common methods of transmission for a number of preventable life-threatening diseases. The current project sought to add to the body of knowledge regarding intravenous drug users (IDUs) in San Diego County by conducting secondary analysis of Arrestee Drug Abuse Monitoring (ADAM) data. Specific research questions included whether local IDUs differ from drug users who do not inject in terms of their demographic characteristics, history of substance abuse and psychiatric care, criminal histories, and drug use histories. In addition, IDUs in the ADAM sample were compared to individuals utilizing the services of a Pilot Clean Syringe Exchange Program (SEP).

Research Design and Methods: ADAM data from interviews with adult arrestees conducted between January 2000 and August 2003 were included in these analyses. During these 15 quarters, 3,580 interviews were conducted with individuals who reported using drugs in the last year, but had not injected them (60%), those who reported not using any illegal drugs (27%), and those who reported injecting drugs (13%). Analyses, including chi-square and analysis of variance, were used to test if there were significant differences in the outcome measures of interest between these three groups. In addition, the responses of the IDU group were compared to other IDUs who utilized the SEP.

Selected Findings: Consistent with previous research at the national level, IDUs significantly differed from the other two groups of ADAM participants on almost every dimension that was measured. In terms of demographic characteristics, they were more likely to be White, older, divorced or separated, homeless, and to not have a high school diploma or be employed. They also were more likely than the other two groups to have a criminal history and to have previously received substance abuse treatment and stayed overnight in a mental health facility. IDUs had a more extensive drug use history, which included using a greater number of drugs, as well as using these substances at an earlier age. The drug market dynamics for IDUs and those who did not inject also differed, with the latter group generally less likely to have a main source and to obtain the drug in their own neighborhood. The ADAM IDUs also differed on a number of dimensions from the SEP clients, suggesting generalizations from one group to another should be made with caution.

TABLE OF CONTENTS

Executive Summary	
Introduction and Project Background	3
Research Methodology	3
ADAM Comparisons	4
ADAM and SEP Comparisons	4
Recommendations.....	6
 Chapter 1: Introduction and Project Background	
Introduction.....	9
Project Background.....	9
Drug Use in San Diego County.....	9
IDU and the Spread of Infectious Disease.....	10
City of San Diego’s Response	11
The ADAM Project	11
Report Outline.....	12
 Chapter 2: Research Methodology	
Introduction.....	15
Research Questions	15
The ADAM Sample	15
The SEP Sample.....	18
Analyses	18
Potential Limitations.....	18
 Chapter 3: ADAM Comparisons	
Introduction.....	23
Demographics.....	23
Gender and Race.....	23
Age.....	25
Marital Status.....	26
Educational Level and Employment Status.....	27
Health Coverage Status	29
Type and Location of Residence	30
Substance Abuse Treatment and Psychiatric Care	32
Substance Abuse Treatment	32
Psychiatric Care	33
Criminal History	34
Current Offense	34
Prior Arrests and Incarcerations.....	35
Drug Use History.....	36
Ever Used	36
Use During the Past 30 Days	38
Urinalysis Results.....	39
Most Recent Mode of Use	40
Other Drug Use in the Past Two Days	41

Drug Market Information	42
Marijuana	42
Crack	42
Powder Cocaine	42
Methamphetamine	43
Summary	44
 Chapter 4: ADAM and SEP Comparisons	
Introduction	47
Demographics	47
Age, Gender, Race, and Marital Status	47
Education, Employment, Health Coverage Status, and Treatment	48
Type and Location of Residence	49
Drug Use History	51
Ever Used	51
Use During the Past 30 Days	53
Most Recent Mode of Use	54
Summary	55
 Chapter 5: Conclusions and Recommendations	
Conclusions	59
Recommendations	59
 References	63

LIST OF TABLES

Table 1	Secondary IDU Analysis Results.....	5
Table 3.1	Residence Location by Major Statistical Area (MSA).....	31
Table 3.2	Ever Used Alcohol or Other Drugs.....	36
Table 3.3	Average Age at First Substance Use.....	37
Table 3.4	Substance Use in the Past 30 Days.....	38
Table 3.5	Other Drug Use in the Past Two Days.....	41
Table 3.6	Methamphetamine Drug Market Dynamic Differences.....	43
Table 4.1	Education, Employment, and Health Coverage Status.....	48
Table 4.2	Residence Location.....	50
Table 4.3	Average Age at First Substance Use.....	52
Table 4.4	Substance Use in the Past 30 Days.....	53

LIST OF FIGURES

Figure 2.1	ADAM Sample by Drug Use History	16
Figure 2.2	ADAM IDU Group Drug Use in the Past 12 Months.....	16
Figure 2.3	Drug Use in the Past Year by Booking Facility	17
Figure 3.1	Ethnic Composition.....	23
Figure 3.2	IDU Group Drug Use by Ethnicity	24
Figure 3.3	Average Age	25
Figure 3.4	Marital Status.....	26
Figure 3.5	Highest Educational Level.....	27
Figure 3.6	Employment Status.....	28
Figure 3.7	Health Coverage Status.....	29
Figure 3.8	Residence Type.....	30
Figure 3.9	Ever Participated in a Drug Treatment Program.....	32
Figure 3.10	Ever Stayed Overnight in a Psychiatric Facility	33
Figure 3.11	Current Arrest Offense	34
Figure 3.12	Previously Arrested and Detained in Jail	35
Figure 3.13	Positive Urinalysis Results.....	39
Figure 3.14	Percent Reporting Injection Was Most Recent Mode of Use.....	40
Figure 4.1	Ethnic Composition.....	47
Figure 4.2	Residence Type.....	49
Figure 4.3	Ever Used Alcohol or Other Drugs.....	51
Figure 4.4	Percent Reporting Injection Was Most Recent Mode of Use.....	54

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

INTRODUCTION AND PROJECT BACKGROUND

Injection drug use (IDU) is one of the most common methods of transmission for a number of preventable life-threatening diseases, including the Human Immunodeficiency Virus (HIV) and Hepatitis C (HCV). According to the most recent national statistics, there are currently 886,575 individuals living in the U.S. who are diagnosed with AIDS and, over the years, IDU has been identified as a primary mode of transmission for approximately one-third of cases (Centers for Disease Control (CDC), 2003). It is estimated that approximately 3.9 million people nationwide are infected with HCV, most commonly through IDU (CDC, 2002).

In 2002, approximately 19.5 million people across the U.S. were current users of some type of illicit drug (Substance Abuse and Mental Health Services Administration (SAMHSA, 2003b). Of these, approximately 1.5 million were injection drug users (IDUs), many of whom have multiple needs including medical, housing, mental health, and socio-economic (Baciewicz, 2002). While the exact number of drug users in San Diego County is difficult to determine, the issue of drug use remains a primary area of concern in the region. Across San Diego, there were 20,485 adult arrests for drug law violations in 2002, representing 22 percent of arrests during that year and 4 percent more drug law arrests than in 2001 (Allnutt & Burke, 2004). In addition, there were 14,367 alcohol and other drug treatment admissions in San Diego County in Fiscal Year 2002-2003, with 17 percent reporting injection as their primary route of administration (Health and Human Services Administration (HHS), personal communication).

In May 2003, SANDAG responded to a National Institute of Justice (NIJ) solicitation for proposals for ADAM Research Projects. With support from their Local Coordinating Council (LCC), SANDAG expressed its interest in conducting secondary analysis of ADAM data by comparing those who reported injecting drugs in the past year to those who did not. The primary goal of this research was to create a greater understanding regarding the profiles of individuals in San Diego County whose drug use has escalated to include the most dangerous form of administration. Specifically, information about the arrestees' demographic characteristics, treatment history, criminal history, and drug use history was compared with the arrestees' reported injection use in the past year. In addition, the profile of ADAM arrestees who injected drugs was compared to another sample of injection drug users (IDUs) who received services from the City of San Diego Pilot Clean Syringe Exchange Program (SEP).

RESEARCH METHODOLOGY

Data for these analyses were gathered from interviews conducted with adult arrestees as part of the ADAM project between January 2000 and August 2003. Data from 3,580 interviews were available for analysis. Of these, 60 percent reported that they had used drugs in the last year, but had not injected drugs (Non-IDU group), 27 percent reported they had not used any illicit drugs in the past year (No Drug Use group), and 13 percent (or 464 individuals) reported injecting drugs in the past year (IDU group). As part of SANDAG's evaluation of the SEP, interviews were conducted with 132 individuals who registered as program clients and had visited the program at least twice.

ADAM COMPARISONS

Consistent with previous national research, secondary analyses of the ADAM data revealed that the IDU group significantly differed from the No Drug Use group, as well as the Non-IDU group on almost every dimension that was compared. As Table 1 shows, these differences related to demographic characteristics, as well as criminal history, drug use history, and receipt of treatment. Other differences not shown in Table 1 worth noting include the fact that the IDU group was significantly younger, on average, when they first tried these drugs, and that they used methamphetamine, cocaine, and heroin a significantly greater number of days in the past 30 compared to individuals who used the same drugs but did not inject. In addition, IDUs also differed from non-IDUs on a number of drug market dynamics, such that the former were significantly more likely to report obtaining drugs (i.e., marijuana, cocaine, and methamphetamine) in their own neighborhood and to having a regular source for obtaining the drug (i.e., methamphetamine).

ADAM AND SEP COMPARISONS

ADAM arrestees who injected drugs also differed from SEP clients who utilized syringe exchange and other program services. Overall, SEP clients were more likely to be male, less likely to be Hispanic, and were older on average. In addition, these clients were more likely to have an education, but were more likely to be homeless and unemployed. However, they were more likely to have insurance. In terms of drug use history, SEP clients were less likely to use alcohol and methamphetamine, but more likely to use powder cocaine and heroin. While the reason(s) for these differences cannot be definitely determined (i.e., individuals who are older are less likely to be arrested, methamphetamine users are more likely to be arrested), it is important to note that caution should be used when generalizing from one group of IDUs in the region to another.

**Table 1
SECONDARY IDU ANALYSIS RESULTS**

INTRAVENOUS DRUG USERS DIFFER IN TERMS OF:			
	No Drug Use	IDU	Non-IDU
Their Demographic Characteristics			
White	32%	68%	41%
Average age	33.63	34.3	30.69
Separated, divorced, or widowed	19%	30%	19%
No degree	26%	33%	28%
Employed	68%	40%	54%
Has health insurance	52%	27%	36%
Homeless	8%	24%	12%
Ever Receiving Treatment			
Previously received in-patient drug treatment	15%	61%	33%
Previously received out-patient drug treatment	10%	40%	22%
Stayed overnight in a psychiatric facility	10%	25%	13%
Their Criminal History			
Current arrest for a violent offense	36%	15%	20%
Previously arrested	59%	95%	82%
Previously detained in jail	48%	93%	80%
Their Drug Use History			
Ever used marijuana	38%	94%	93%
Ever used methamphetamine	15%	92%	67%
Ever used powder cocaine	15%	78%	45%
Ever used crack	10%	63%	37%
Ever used heroin	4%	73%	14%

SOURCE: SANDAG

RECOMMENDATIONS

- IDUs have multiple needs – in addition to their drug dependencies. As this and other research has shown, these include mental and physical health care, educational and employment, as well as housing. Effective drug treatment programs that address these multiple needs and allow for relapse as part of the recovery process should be made available to these individuals.
- Rigorous evaluations of treatment programs are needed to determine what works best with individuals of different ethnic backgrounds who enter treatment with different drug use backgrounds.
- Youth drug prevention programs and other efforts are essential to decreasing the number of adults who are IDUs. In addition, it is important that sufficient drug treatment programs are made available to juveniles at early stages of use, before injection drug use begins.

CHAPTER 1
INTRODUCTION AND
PROJECT BACKGROUND

CHAPTER 1: INTRODUCTION AND PROJECT BACKGROUND

INTRODUCTION

Injection drug use (IDU) is one of the most common methods of transmission for a number of preventable life-threatening diseases, including the Human Immunodeficiency Virus (HIV) and Hepatitis C (HCV). To further understand the background and needs of this drug-using population locally, the San Diego Association of Governments (SANDAG) received funding support from the National Institute of Justice (NIJ) to conduct secondary analysis of data collected through the Arrestee Drug Abuse Monitoring (ADAM) program. This final report presents the results of these analyses, as well as comparisons made to another sample of intravenous drug users (IDUs) in San Diego County.

PROJECT BACKGROUND

Drug Use in San Diego County

In 2002, approximately 19.5 million people across the U.S. were current users of some type of illicit drug (Substance Abuse and Mental Health Services Administration (SAMHSA), 2003b). Such drug use has a negative effect on society in terms of costs associated with health care and the individual's decreased level of productivity. For example, the Office of National Drug Control Policy (ONDCP, 2001) estimated that the cost to society for illicit drug use in 2000 was \$160.7 billion. In addition, between 1988 and 1995, Americans spent an estimated \$57.3 million on drugs that could have otherwise gone to more legitimate purposes (ONDCP, 1995).

Nationally, there are approximately 1.5 million drug users who inject (Baciewicz, 2002). According to drug treatment admission statistics, this number may be increasing over time. Specifically, between 1992 and 1999, the number of admissions for IDUs increased 14 percent, compared to 3 percent for individuals who did not inject drugs (Substance Abuse and Mental Health Services Administration (SAMHSA), 2002). Drug users may begin to inject drugs as their dependency increases and their desire to have an "instant" high increases. Previous research has shown that many IDUs have multiple needs, including medical problems, low socio-economic status, housing, and mental health. For example, Neaigus, Miller, Friedman, Hagen, Sifaneck, Ildefonso, and DesJarlais (2001) found that frequent former injectors were ten or more times more likely to be homeless, unemployed, long-time users, and to have begun using heroin at a younger age, compared to those who didn't inject.

The issue of drug use remains a primary area of concern in San Diego County. Estimates regarding the prevalence of drug use in the region, and IDU in particular, are based upon a number of sources, including arrest statistics, data from ADAM, the number of treatment admissions, and emergency room and drug-related death statistics.

- **Arrests:** In 2002, there were 20,485 adult arrests for drug law violations in San Diego County, representing 22 percent of arrests during the year and 4 percent more drug law arrests than in 2001. More than one-third (39%) of these offenses were for illegal possession of drug paraphernalia, being under the influence, and other drug-related crimes; 26 percent were for dangerous drugs, which includes methamphetamine; 21 percent for marijuana; and 13 percent were for narcotics, which includes heroin and cocaine (Allnutt & Burke, 2004).
- **ADAM:** In San Diego, statistics from the ADAM program show that approximately two-thirds of adult arrestees (67% of males and 69% of females) tested positive for drugs in 2003. The most commonly used drug for males was marijuana (41% positive), followed closely by methamphetamine (36%). In comparison, females were most likely to test positive for methamphetamine (47%), and then marijuana (29%) (National Institute of Justice, 2003).
- **Treatment Admissions:** Between July 2002 and June 2003, there was a total of 14,367 alcohol and other drug treatment admissions in San Diego County, with one-half admitted to a residential program and one-half to an out-patient program. During these admissions, 46 percent of clients disclosed that their primary drug of choice was methamphetamine, 10 percent identified heroin, and 9 percent identified cocaine. Seventeen percent (17%) reported that injection was their usual route of administration (Health and Human Services Administration (HHS), personal communication).
- **Emergency Room and Drug-Related Death Statistics:** During 2002, there were 6,597 drug-related emergency department (ED) episodes in the City of San Diego. Alcohol-in-combination was most frequently noted in these statistics (1,704 incidents), followed by marijuana (1,174) and amphetamines (1,143) (SAMHSA, 2003a). In addition, there were 376 drug-related deaths reported to the Drug Abuse Warning Network (DAWN) by Medical Examiners in San Diego (SAMHSA, 2004).

IDU and the Spread of Infectious Disease

IDU is a public health issue because of its role in the spread of disease. HIV is the virus that causes AIDS, or Acquired Immunodeficiency Syndrome, a disease characterized by a weakening of the immune system. According to the most recent national statistics, there are currently 886,575 individuals living in the U.S. who are diagnosed with AIDS (Centers for Disease Control (CDC), 2003). Over the years, IDU has been identified as a primary mode of transmission for approximately one-third of these cases. Across the states, California has the second highest number of cumulative AIDS cases among residents, second only to New York. The estimated rate of adults and adolescents living with AIDS in 2002 was 187.2 per 100,000 for California, compared to 160.5 for the nation (CDC, 2003). With 12,079 cases diagnosed locally through 2003, San Diego County ranks third among other California metropolitan areas, exceeded only by Los Angeles and San Francisco (HHS, 2003). While the percentage of these San Diego cases related to IDU has been lower locally than nationally (somewhere around one-quarter), the County of San Diego Health and Human Services Agency (HHS) has noted that there has been a slow decrease over time in the percent of cases attributable to men who have sex with men (MSM) and a gradual increase in cases attributable to IDU.

With approximately 3.9 million people nationwide infected with HCV, it is the most common chronic blood-borne infection in the U.S. (CDC, 2002). Locally, there were over 3,000 new diagnoses in the region in 2002 and an estimated prevalence rate of 104.7 per 100,000 population (HHSA, 2003). While there was a slight decrease in the number of new diagnosed cases between 2002 and 2003 (11%), the 2003 figure of 2,725 cases was still 163 percent higher than in 1998 (1,036) (HHSA, personal communication). According to the CDC (2002), almost three-quarters of persons infected with HCV become chronically infected and, of these, around one-quarter to one-third progress to end-stage liver disease requiring liver transplantation. The number one cause of HCV transmission, according to recent studies, is IDU (CDC, 2002). Rates of HCV infection are four times higher in young IDUs than rates of HIV infection and, within five years of injecting, as many as 90 percent of IDUs are infected with HCV.

City of San Diego's Response

Acknowledging the extent of this public health issue in San Diego, the City Council declared a public health emergency in 2000, following the passage of Assembly Bill (AB) 136, which exempts organizations and employees distributing hypodermic needles or syringes from criminal prosecution when a local public health crisis exists. By declaring a local health emergency, the City Council also authorized the City Manager to convene a Task Force to develop the practices and procedures for a one-year clean needle and syringe exchange pilot project. The recommendations of this Task Force were accepted by the San Diego City Council in November 2001 and services for the City of San Diego Pilot Clean Syringe Exchange Program (SEP) were first offered at one mobile site in July 2002, with a second site operational in February 2003. Researchers from SANDAG were selected to document program implementation and measure outcome results related to program participation. A final report with evaluation results was released to the public in May 2004 (Burke, 2004).

The ADAM Project

Between 1987 and 2003, NIJ provided funding support for the ADAM program, formerly known as Drug Use Forecasting (DUF). The ADAM program provided an opportunity to assess the drug use experiences of a relatively high-risk population subgroup: adult arrestees. SANDAG was the site administrator for ADAM in San Diego County since the program's inception¹. With the cooperation of the San Diego County Sheriff's Department, SANDAG staff members conducted interviews with men at the downtown Central Detention Facility and women at the Las Colinas Detention Facility and, starting in 1999, also at the Vista Detention Facility in North County to provide a more comprehensive picture of drug use across the region.

Each quarter, ADAM staff members conducted interviews with randomly-selected individuals arrested and booked into local detention facilities. Interviews were conducted within 48 hours of arrest and were voluntary, confidential, and anonymous. After responding to a series of questions about their patterns of drug use, arrest and incarceration history, and access to drug treatment, arrestees were asked to provide a voluntary urine specimen for laboratory analysis. Compliance was high for both interview participation and the provision of a urine sample. Arrestees received a small incentive (e.g., lunch, candy, cash) for their participation.

¹ SANDAG has continued to conduct interviews with arrestees about their drug use history in 2004 through funding from the California Border Alliance Group (CBAG).

In May 2003, SANDAG, with the support of their Local Coordinating Council (LCC), responded to an NIJ solicitation for proposals for ADAM Research Projects. As part of this proposal, SANDAG expressed its interest in conducting secondary analysis of ADAM data by comparing those who reported injecting drugs in the past year to those who did not. The assumption was that these data would be useful to law enforcement and service providers in San Diego County, many of whom are working with these individuals as they re-enter the community. The primary goal of this research was to create a greater understanding among the community regarding the profiles of these individuals whose drug use has escalated to include the most dangerous form of administration by comparing information about their demographic profile, treatment history, criminal history, and drug use history.

REPORT OUTLINE

This final report continues with a description of the analyses in Chapter 2. Chapter 3 presents analyses comparing ADAM arrestees who injected drugs in the prior year to those who did not use drugs and those who used drugs, but did not inject. Chapter 4 follows, with descriptive comparisons of the ADAM sample who injected drugs and other IDUs who were interviewed as part of the City of San Diego Pilot Clean Syringe Exchange Program (SEP). Finally, Chapter 5 provides a summary and conclusions from this project.

CHAPTER 2

RESEARCH METHODOLOGY

CHAPTER 2: RESEARCH METHODOLOGY

INTRODUCTION

The current chapter provides an overview of how the secondary analysis of San Diego Arrestee Drug Abuse Monitoring (ADAM) data was conducted, including the research questions that were addressed and some of the limitations that should be considered when interpreting this information.

RESEARCH QUESTIONS

A number of research questions were addressed through this secondary analysis project. These included:

- Do intravenous drug users (IDUs) differ from non-IDUs in terms of their demographic characteristics?
- Do IDUs differ from non-IDUs in terms of their treatment histories?
- Do IDUs differ from non-IDUs in terms of their criminal histories?
- Do IDUs differ from non-IDUs in terms of their drug use histories?
- How are detained IDUs similar to and different from IDUs who utilize the services of the City of San Diego Pilot Clean Syringe Exchange Program (SEP)?

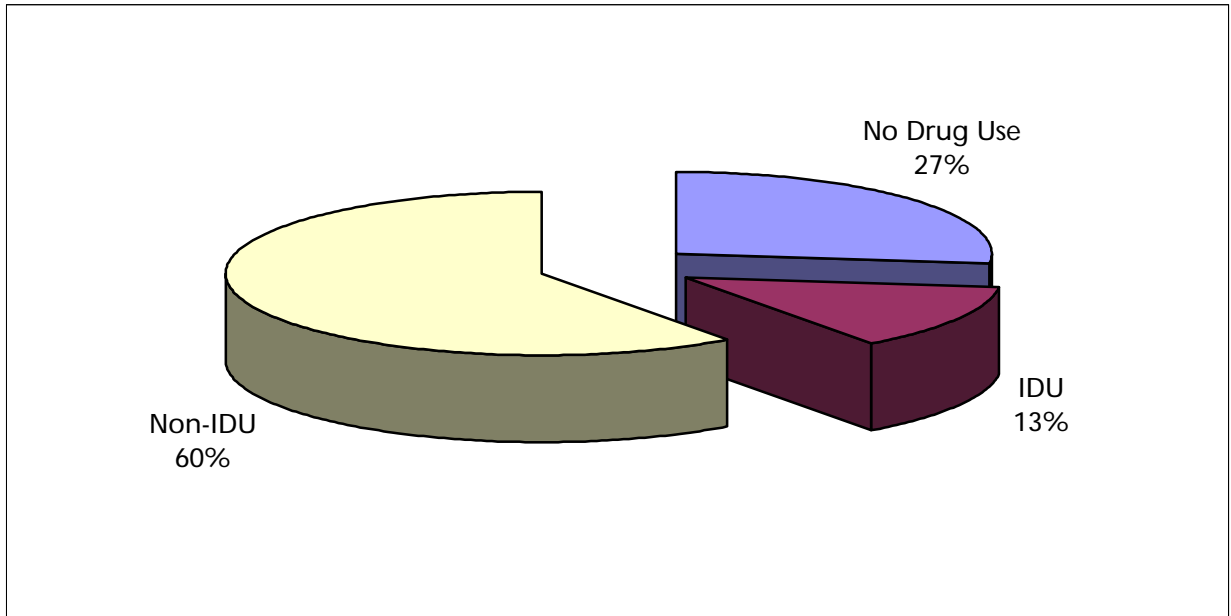
THE ADAM SAMPLE

Data for these analyses were gathered from interviews conducted with adult arrestees as part of the ADAM project between January 2000 and August 2003. During these 15 quarters, a total of 3,929 interviews were conducted with arrestees who also provided urine samples at the Central Jail (2,135 interviews), Las Colinas (1,161 interviews), and the Vista Jail (633 interviews) (not shown). Males are booked into Central Jail, women at Las Colinas, and both men and women at the Vista Jail (although interviews with females at this facility were not consistently conducted during this time period).

Information from 3,580 of the interviews was included in these analyses¹. Of these, 60 percent reported that they had used drugs in the last year, but had not injected drugs. For these analyses, this group is referred to as Non-IDU. In addition, 27 percent who reported that they had not used any drugs (other than alcohol) in the past year are referred to as the No Drug Use group. Finally, 13 percent (or 464 individuals) reported injecting drugs in the past year and are referred to as the IDU group (Figure 2.1).

¹ Three hundred forty-nine (349) interviews were excluded because the arrestees reported they had not used drugs in the previous 12 months, but tested positive for at least one drug. Due to the nature of these analyses, they were therefore excluded from all of the samples.

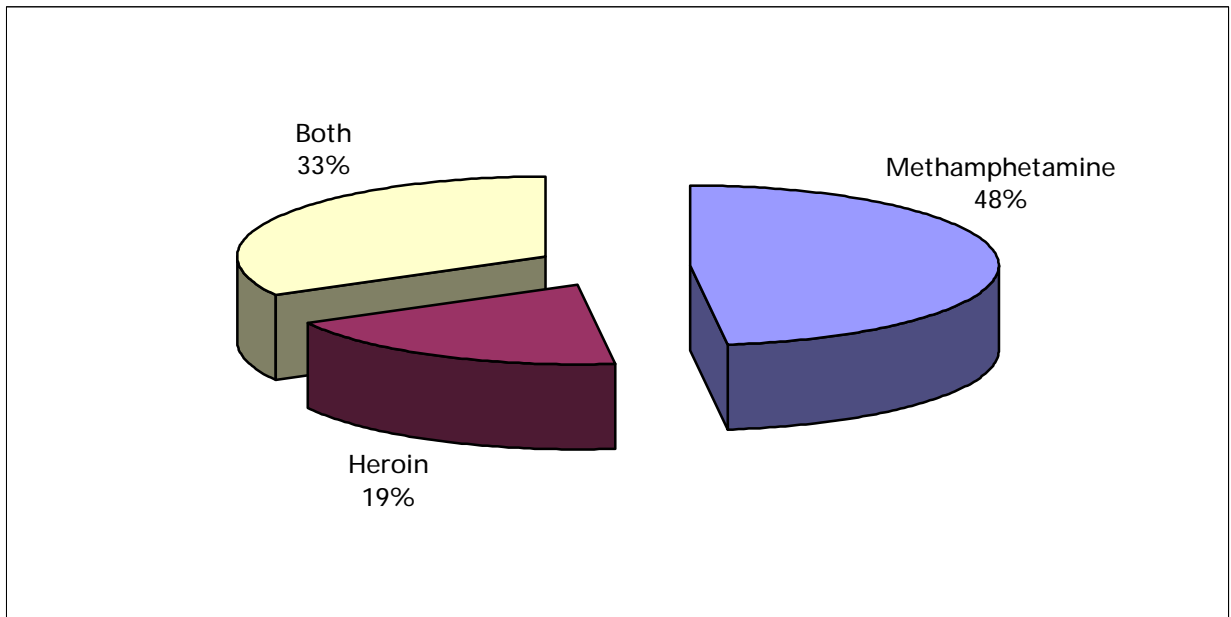
Figure 2.1
ADAM SAMPLE BY DRUG USE HISTORY



TOTAL = 3,580

SOURCE: SANDAG

Figure 2.2
ADAM IDU GROUP DRUG USE IN THE PAST 12 MONTHS



TOTAL = 455

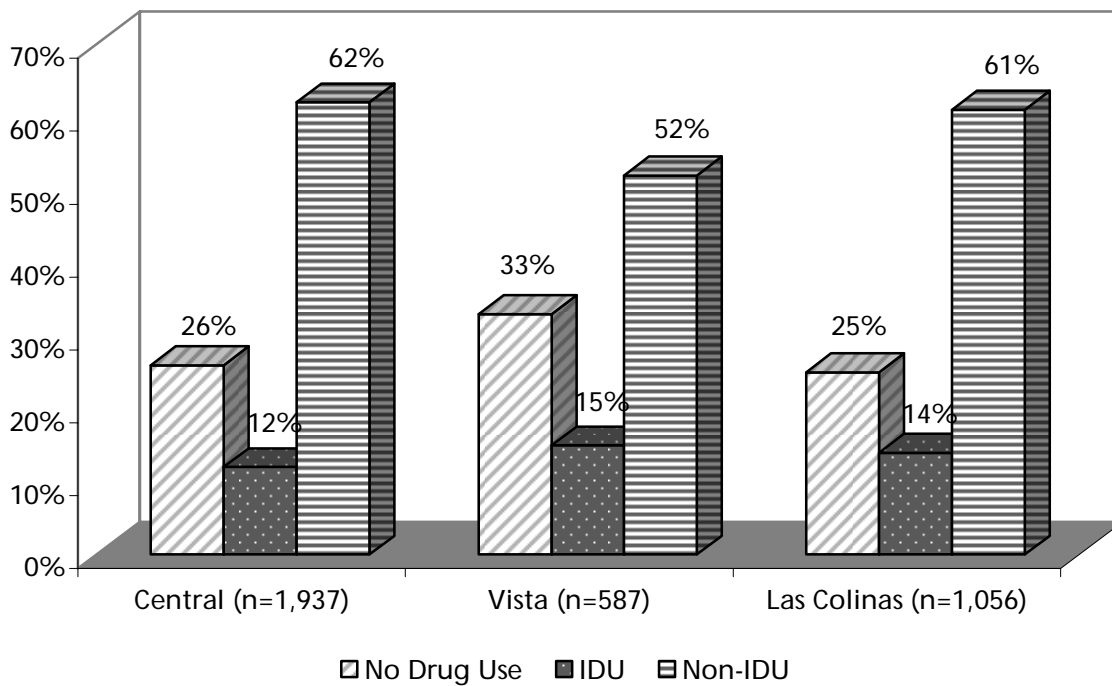
NOTE: Cases with missing information are not included.

SOURCE: SANDAG

For 455 of the individuals who reported injecting drugs in the past year, 48 percent reported using methamphetamine, but not heroin, in the past 12 months; 33 percent used both drugs; and 19 percent used heroin, but not methamphetamine (Figure 2.2).

As Figure 2.3 shows, more than one-half of the arrestees who were interviewed at each of the three facilities admitted to non-intravenous drug use in the past year (62% at Central, 52% at Vista, and 61% at Las Colinas). However, there was a significant difference across the three jails, with arrestees at the Vista jail more likely to report no drug use in the last year (33%, compared to 26% at Central and 25% at Las Colinas) ($\chi^2 (4) = 23.93$). This difference between the Central and Vista samples cannot be attributed to gender differences since only one percent of the Vista sample was female (not shown). Between 12 percent and 15 percent of the samples at each of the three facilities reported injecting drugs.

Figure 2.3
DRUG USE IN THE PAST YEAR BY BOOKING FACILITY*



*Significant at $p < .05$

SOURCE: SANDAG

THE SEP SAMPLE

As part of SANDAG's evaluation of the SEP, interviews were conducted with 132 individuals who registered as program clients and had visited the program at least twice. Some of the data included in this report were collected by program staff and other questions were asked by research staff that also were trained as ADAM interviewers. During the program staff intake interview, which was conducted during a client's first visit to the program, information regarding client demographics was recorded. During the initial research interviews, which were conducted between August 2002 and November 2003, 49 questions that were more detailed than those asked by program staff were asked. These questions explored areas related to the clients' well-being, drug use history, sexual practices, and health care history. In exchange for completing this initial research interview, clients received \$10.

ANALYSES

Data sets provided by the National Institute of Justice (NIJ) containing the ADAM data were available for analyses. Comparisons between the three ADAM groups and the ADAM IDU group to the SEP sample were completed using chi-square for variables with nominal measurement and between-subjects Analysis of Variance for variables with ratio measurement. The significance level for all tests was $p < .05$.

POTENTIAL LIMITATIONS

A number of potential limitations regarding these analyses should be noted. First, because the only question on the ADAM instrument that asked about injecting drugs pertained to the last 12 months, individuals who injected at an earlier point in time may be included in either the No Drug Use group or the Non-IDU group². Another limitation is that individuals in the Non-IDU group may eventually inject drugs, but have not yet.

While the inclusion of data from SANDAG's evaluation of the SEP yields useful comparisons, interpretation of these should be guided by the fact that, while the interviews in this later study also were conducted by ADAM interviewers, the methodology was different and could affect the pattern of responses. For example, while ADAM interviews were conducted in detention facilities, interviews with SEP clients took place outside a mobile unit used by the program. In addition, while the ADAM sample included individuals arrested in North County, who presumably were more likely to reside in this area of the region, the SEP clients were more likely to reside in central areas, given their utilization of the program located in the Downtown and North Park areas of the City of San Diego.

² Four percent of the No Drug Use group reported ever using heroin and 15 percent reported ever using methamphetamine. However, we do not know if any of these individuals had ever injected either drug. Eleven percent of the Non-IDU group reported using heroin in the past, but not in the last year, and three percent used heroin in the last year, but reported not injecting it. Seventeen percent (17%) of this Non-IDU group had used methamphetamine prior to the most recent year, but not in the past 12 months, and 51 percent reported using this drug in the past year, but not injecting it.

Because this project pertains to secondary data analysis, we also were limited to the information that was collected as part of the ADAM interview. For instance, while it would have been interesting to have more variables related to the arrestees' history of IDU, these questions were not asked as part of the standard interview. In addition, it is important to note that the categorization into the three ADAM groups was based upon self-report and it is possible that someone was included in the No Drug Use group even though they did use drugs or injected drugs in this time period.

Finally, it is possible that an individual could be represented in the ADAM sample more than once if s/he was booked into jail more than once between 2000 and 2003 and was selected to be interviewed. In addition, it also is possible that someone could be in the ADAM sample and the SEP sample. Because a number of safeguards were taken to protect client confidentiality, identification of duplicate representation is not possible and is assumed to be a minor issue that does not contaminate these analyses or affect the pattern of results.

CHAPTER 3

ADAM COMPARISONS

CHAPTER 3: ADAM COMPARISONS

INTRODUCTION

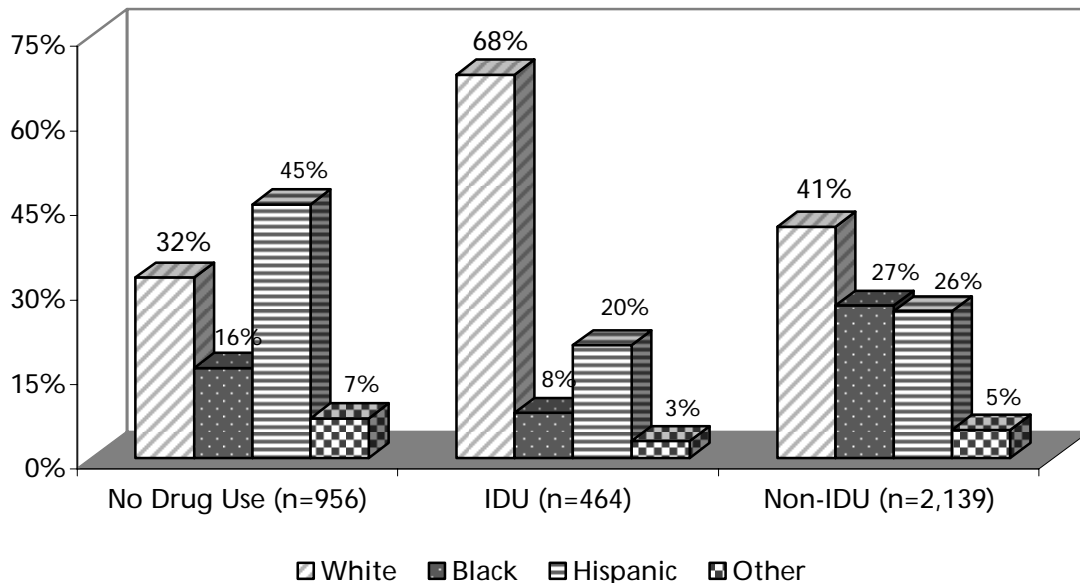
The current chapter presents analyses conducted using 15 quarters of ADAM data to determine how arrestees who injected drugs in the past year differed from those who did not in terms of demographic factors, as well as drug use, criminal, and treatment history. As described in Chapter 2, comparisons were made to those who reported not using drugs in the past 12 months (and who did not test positive for any substances) and those who reported using drugs, but said they did not inject them.

DEMOGRAPHICS

Gender and Race

While the three ADAM groups did not differ in terms of their gender composition (72% of the No Drug Use, 67% of the IDU, and 70% of the Non-IDU groups were male) (not shown), they did differ in terms of their ethnic breakdown. As Figure 3.1 shows, Whites were significantly more likely and Blacks were significantly less likely to be in the IDU group ($\chi^2(6) = 284.14$). In addition, Hispanic individuals were more likely to be in the No Drug Use group, compared to the other racial groups.

Figure 3.1
ETHNIC COMPOSITION*



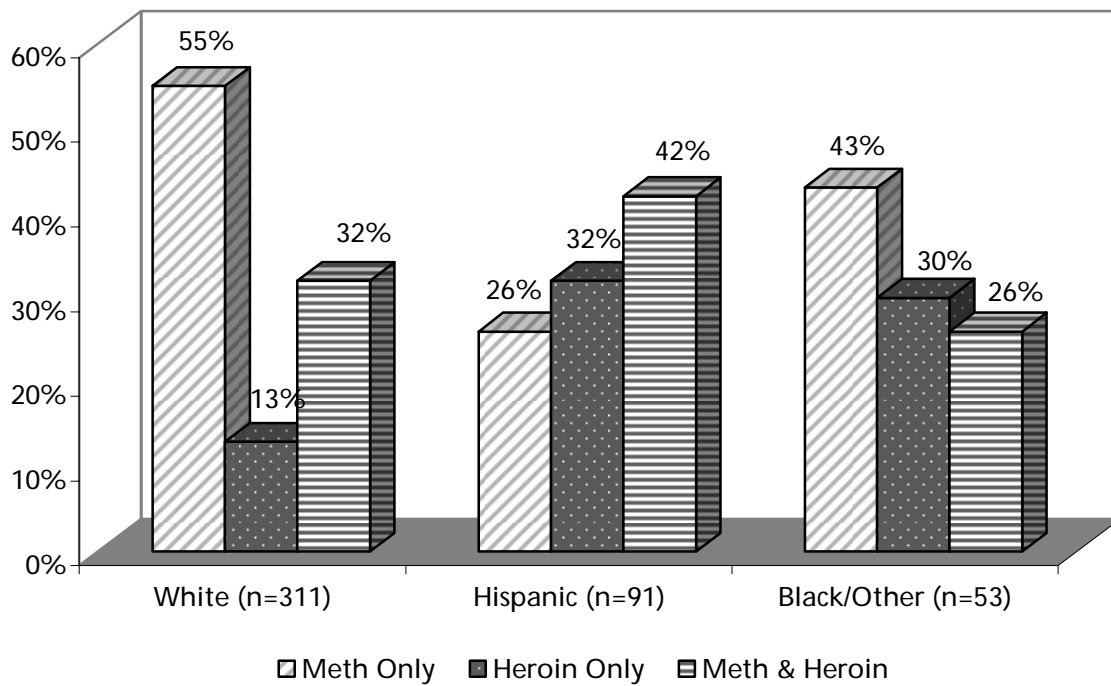
*Significant at $p < .05$

NOTE: Cases with missing information are not included. Percentages may not equal 100 due to rounding.

SOURCE: SANDAG

Further analysis of the IDU group by the past year's drug use also revealed a significant difference. Specifically, Whites who injected were more likely to use methamphetamine, while Hispanics who injected were more likely to use heroin ($\chi^2 (6) = 34.75$) (Figure 3.2). This ethnic difference is consistent with data from national treatment admission statistics (e.g., Substance Abuse and Mental Health Services Administration (SAMHSA), 2002). Blacks and individuals of other ethnicities were combined into one group because of their small proportion in the sample.

Figure 3.2
IDU GROUP DRUG USE BY ETHNICITY*



*Significant at $p < .05$

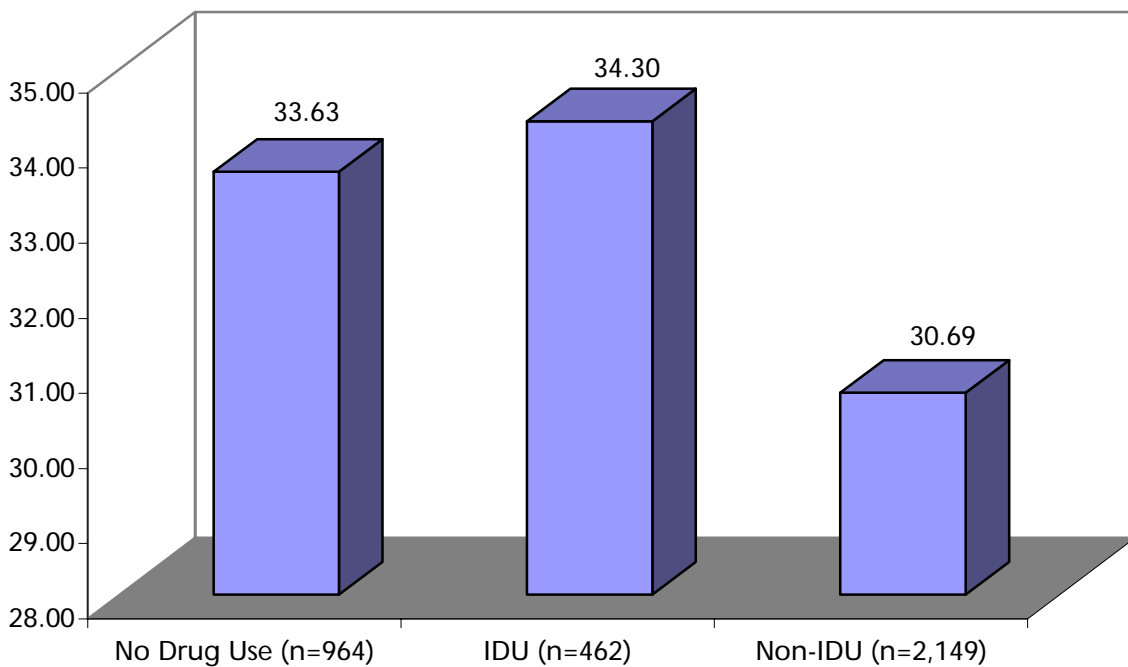
NOTE: Cases with missing information are not included.

SOURCE: SANDAG

Age

The IDU group was significantly older than the other ADAM arrestees, with an average age of 34.30 years ($SD = 9.16$) (Figure 3.3). In comparison, those who reported no drug use were 33.63 ($SD = 11.52$) and the Non-IDU group was 30.69 ($SD = 9.53$) ($F(2, 3,572) = 42.89$). Further analysis of the IDU group revealed that individuals who reported using heroin but not methamphetamine in the past year were significantly older (36.90 , $SD = 10.03$) than those who used only methamphetamine (33.87 , $SD = 8.57$) or both heroin and methamphetamine (33.52 , $SD = 9.23$) ($F(2, 450) = 4.30$) (not shown).

Figure 3.3
AVERAGE AGE*



*Significant at $p < .05$

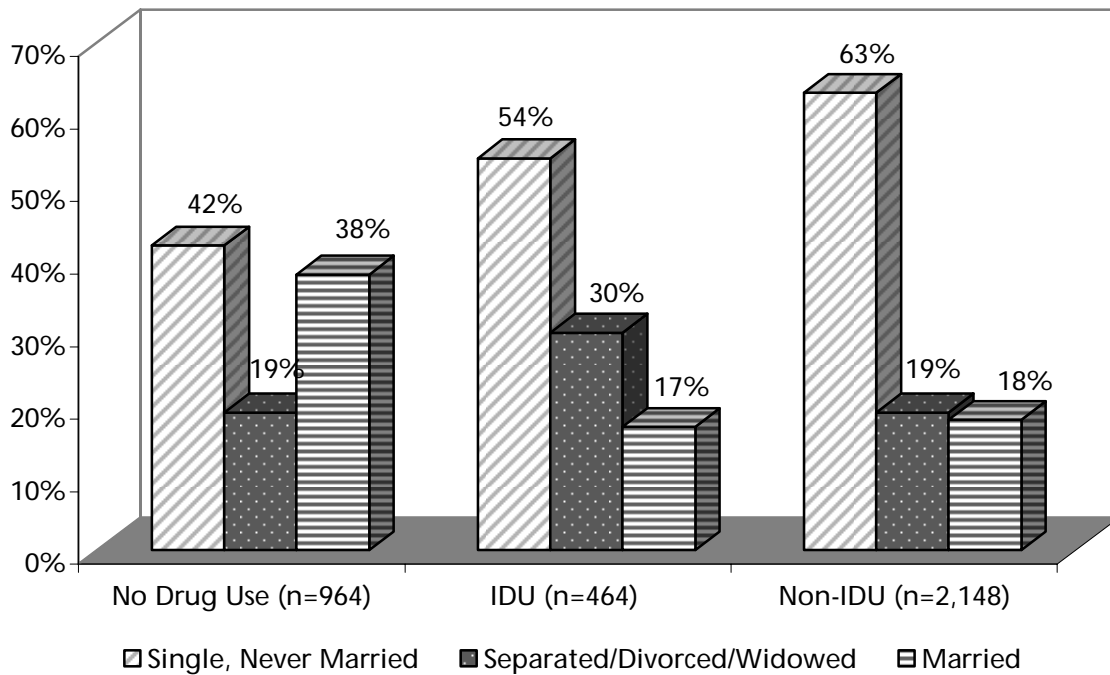
NOTE: Cases with missing information are not included.

SOURCE: SANDAG

Marital Status

As Figure 3.4 shows, Non-IDU arrestees were more likely than the other groups to report being single, never married (63% versus 42% of the No Drug Use group and 54% of the IDU group) ($\chi^2(4) = 197.89$). In comparison, the IDU group was most likely to say they were separated, divorced, or widowed, and the No Drug Use group was most likely to be currently married. This difference could be related to the fact that the IDU group was older, on average, than the other two groups.

Figure 3.4
MARITAL STATUS*



*Significant at $p < .05$

NOTE: Cases with missing information are not included. Percentages may not equal 100 due to rounding.

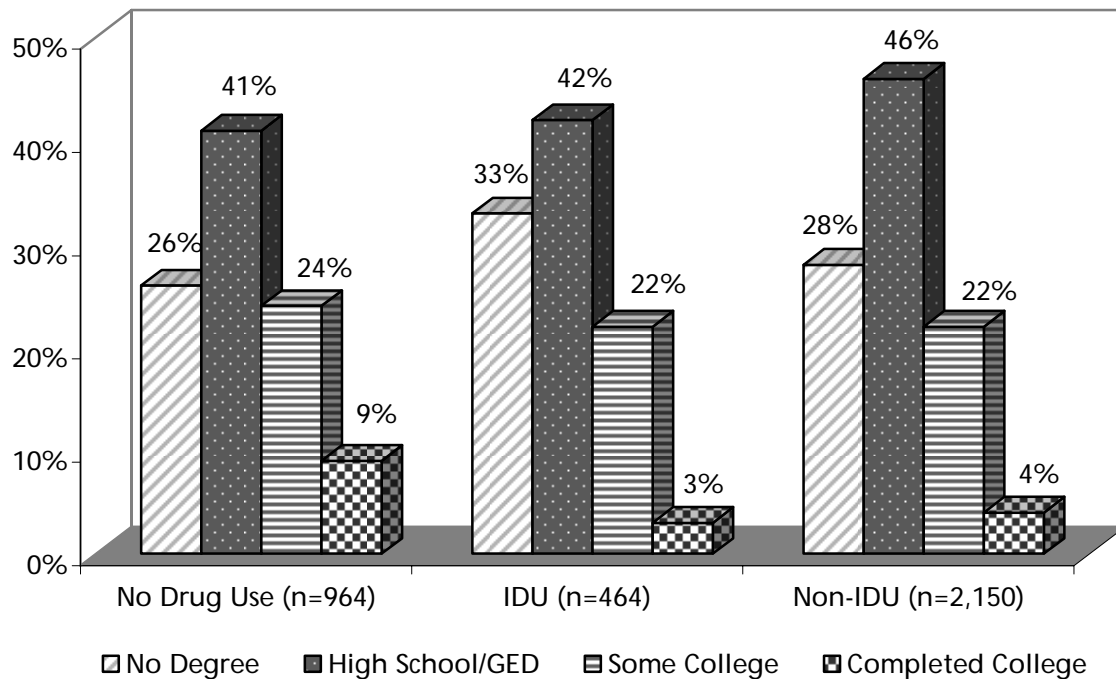
SOURCE: SANDAG

Educational Level and Employment Status

Education

The differences between the three groups in terms of their highest educational level also was significant, with a greater percentage of the IDU group reporting they had dropped out of school before receiving a high school diploma or GED (33%), compared to the No Drug Use (26%) and the Non-IDU groups (28%) ($\chi^2 (6) = 58.21$) (Figure 3.5).

Figure 3.5
HIGHEST EDUCATIONAL LEVEL *



*Significant at $p < .05$

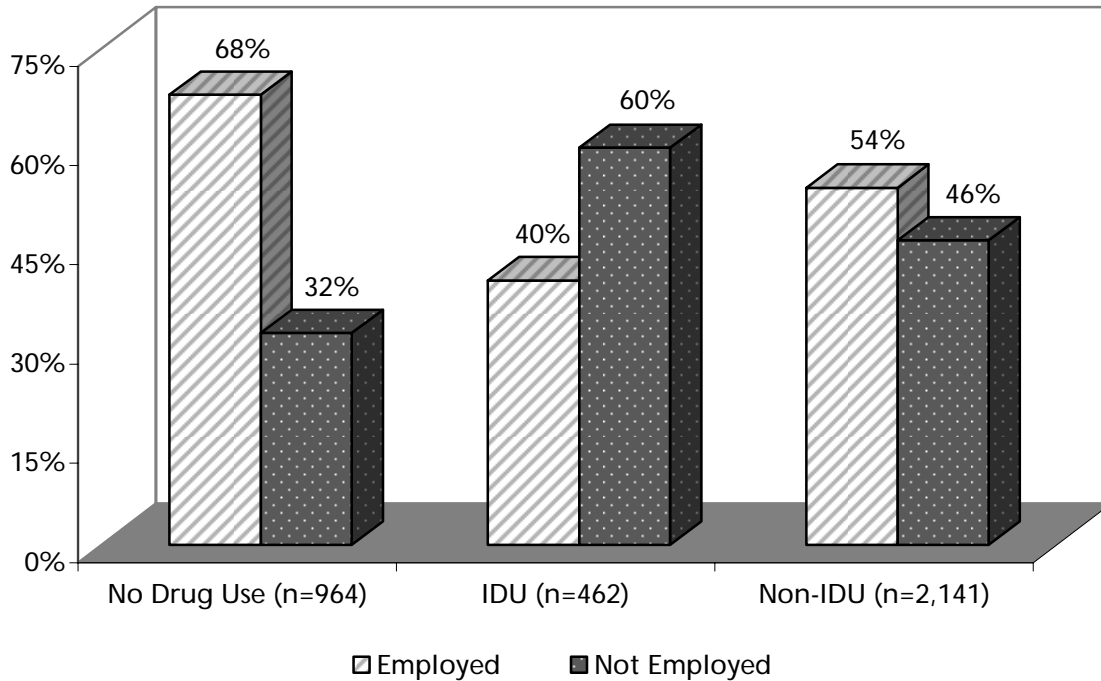
NOTE: Cases with missing information are not included.

SOURCE: SANDAG

Employment

Consistent with the pattern of educational achievements, the IDU group also was the least likely to report being employed (either full-time or part-time) at the time of arrest (40%), while the No Drug Use group was most likely to report having a job (68%) ($\chi^2 (2) = 104.83$) (Figure 3.6).

Figure 3.6
EMPLOYMENT STATUS*



*Significant at $p < .05$

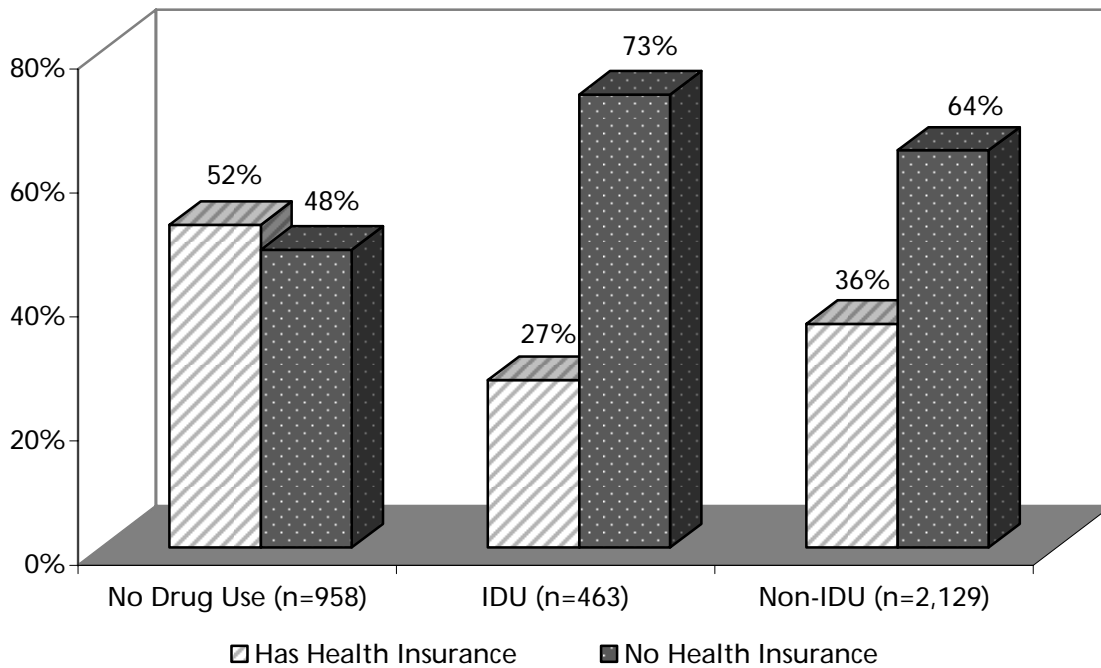
NOTE: Cases with missing information are not included.

SOURCE: SANDAG

Health Coverage Status

Consistent with the fact that fewer individuals in the IDU group were employed, these arrestees also were significantly less likely to report having any type of health coverage. As Figure 3.7 shows, while about one-half (52%) of the No Drug Use group and over one-third (36%) of the Non-IDU group had health insurance, this was the case for only around one in four (27%) of the IDU group ($\chi^2 (2) = 100.07$).

Figure 3.7
HEALTH COVERAGE STATUS*



*Significant at $p < .05$

NOTE: Cases with missing information are not included.

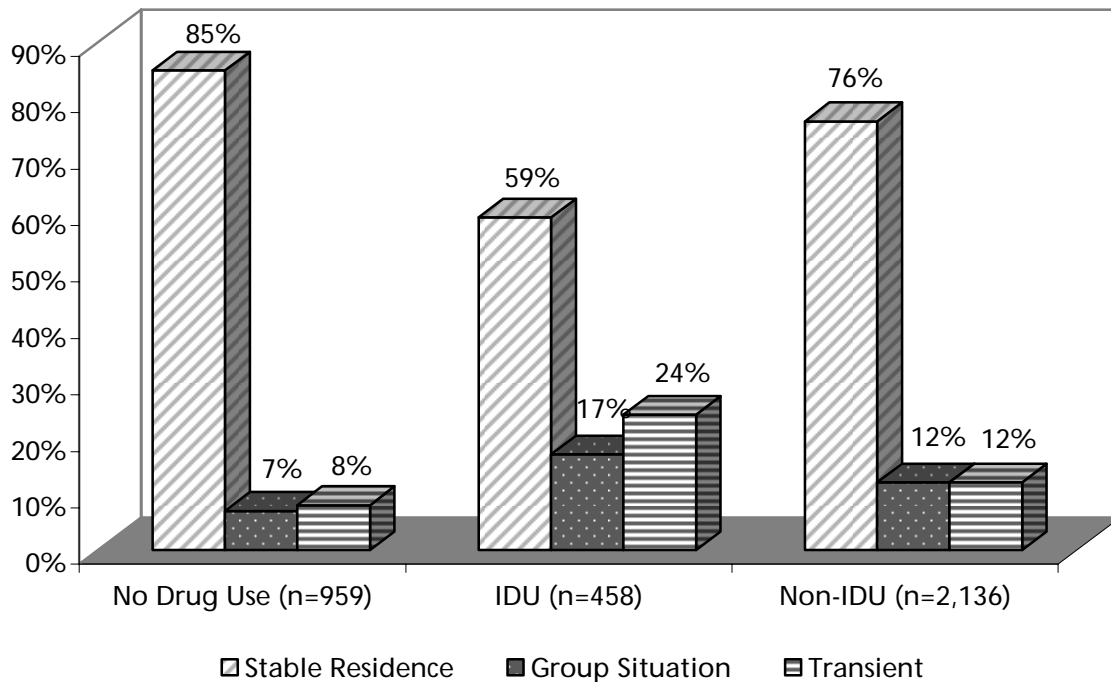
SOURCE: SANDAG

Type and Location of Residence

Residence Type

Members of the IDU group were significantly more likely than the other ADAM arrestees to report being homeless at the time they were booked into jail. This finding is consistent with previous research (e.g., Baciewicz, 2002). As Figure 3.8 shows, while only around one in ten of the No Drug Use and the Non-IDU groups reported being transient, almost one-quarter (24%) of the IDU group did ($\chi^2(4) = 123.89$). In addition, the IDU group also was the most likely to report living in some type of group situation, which could include residential hotels, jails, shelters, or treatment facilities.

Figure 3.8
RESIDENCE TYPE*



*Significant at $p < .05$

NOTE: Cases with missing information are not included.

SOURCE: SANDAG

Residence Location

Additional analyses were conducted to determine in what areas of the County individuals who reported having some type of residence lived. To address this question, ZIP code information obtained during the booking process was used and recoded into major statistical area (MSA). As Table 3.1 shows, IDU arrestees with a stable residence were significantly less likely to live in the Central MSA (which includes Downtown, North Park, National City, Ocean Beach, and Southeastern San Diego) and more likely to live in the East Suburban MSA (which includes Alpine, El Cajon, Jamul, Lakeside, La Mesa, Lemon Grove, Ramona, Santee, and Spring Valley) ($\chi^2 (12) = 38.08$). However, when interpreting these data, it is important to note that homeless individuals were not included because ZIP code information was not available and their inclusion might change the pattern of these results. That is, it is possible that as many of the IDU group who were homeless and omitted in this analysis reside most of the time in the Central MSA (where a number of services for homeless individuals are located).

Table 3.1
RESIDENCE LOCATION BY MAJOR STATISTICAL AREA (MSA)*

	IDU	Non-IDU
Central	33%	43%
East Suburban	23%	16%
South Suburban	12%	13%
North County East	12%	9%
North City	11%	11%
North County West	10%	6%
East County	1%	1%
TOTAL	313	1,602

**Significant at $p < .05$*

NOTE: Cases with missing information are not included. Percentages may not equal 100 due to rounding.

SOURCE: SANDAG

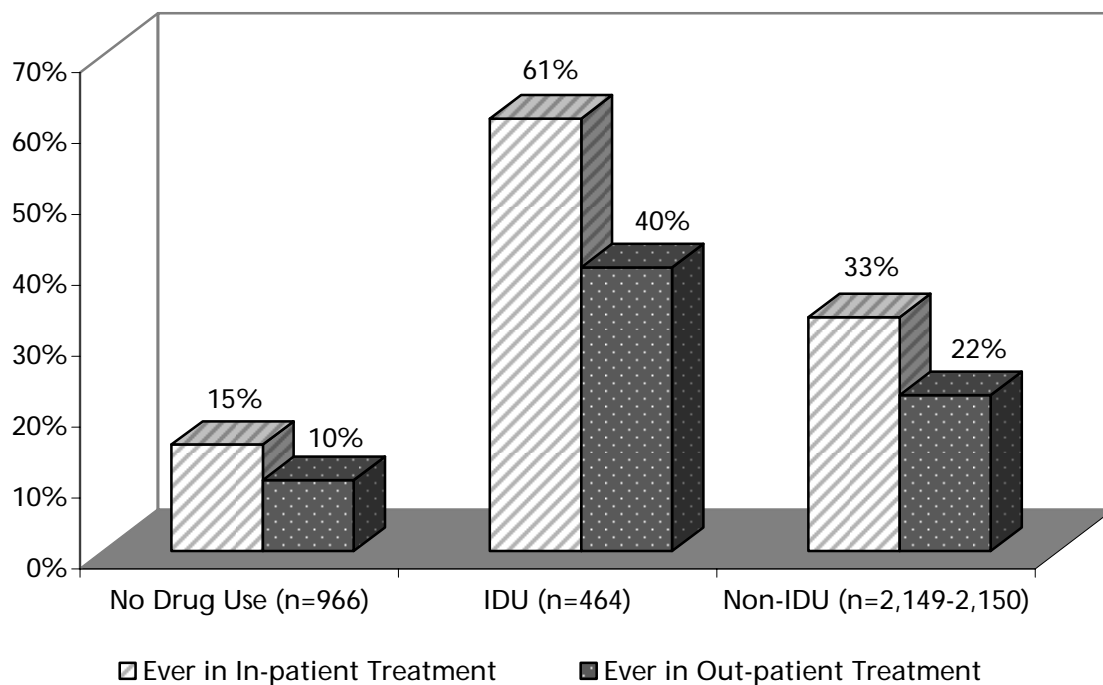
SUBSTANCE ABUSE TREATMENT AND PSYCHIATRIC CARE

As part of the ADAM interview, arrestees were asked if they have ever received drug treatment services (in-patient or out-patient), as well as if they have ever stayed overnight in a psychiatric treatment facility. This information is important in tracking how many users who may need treatment have received it, as well as how many may be dual-diagnosis individuals (those with a history of substance use and mental health issues).

Substance Abuse Treatment

As Figure 3.9 shows, the IDU group was significantly more likely to report ever receiving both in-patient (61%) and out-patient (40%) drug treatment services, compared to the No Drug Use group (15% and 10%, respectively) and the Non-IDU group (33% and 22%, respectively) ($\chi^2(2) = 299.62$; $\chi^2(2) = 174.79$). This high proportion of IDUs previously receiving treatment is consistent with national research (SAMHSA, 2003a) and demonstrates the multitude of issues these individuals face in overcoming their disease. Unfortunately, no questions were asked as part of the standard ADAM interview about when the individual received treatment, the reason for enrolling, or the completion status.

Figure 3.9
EVER PARTICIPATED IN A DRUG TREATMENT PROGRAM*



*Significant at $p < .05$

NOTE: Cases with missing information are not included.

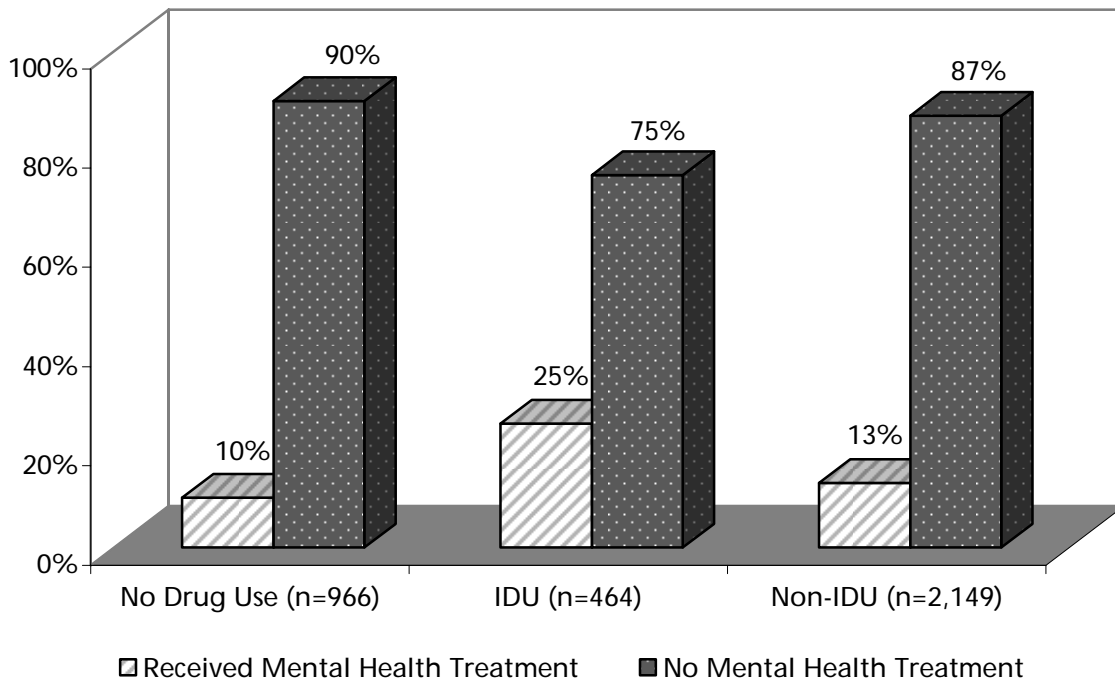
SOURCE: SANDAG

Further analysis of the IDU group revealed that, while there was no difference in the percentages that received in-patient treatment, there was a difference for out-patient treatment, with individuals who reported using both methamphetamine and heroin in the past year more likely to report ever getting treatment (52%), compared to those who used only methamphetamine (33%) or only heroin (36%) ($\chi^2 (2) = 13.51$) (not shown).

Psychiatric Care

Individuals in the IDU group also were significantly more likely to report ever receiving mental health services in their lifetime. For the purpose of this question, mental health service was defined as staying at least overnight at a psychiatric unit of a hospital or other facility. As Figure 3.10 shows, while one in four (25%) IDU individuals reported meeting these criteria, only 10 percent of the No Drug Use group and 13 percent of the Non-IDU group did ($\chi^2 (2) = 61.83$). The reason for this stay was not documented and, therefore, there is a possibility that it was drug-related.

Figure 3.10
EVER STAYED OVERNIGHT IN A PSYCHIATRIC FACILITY*



*Significant at $p < .05$

NOTE: Cases with missing information are not included.

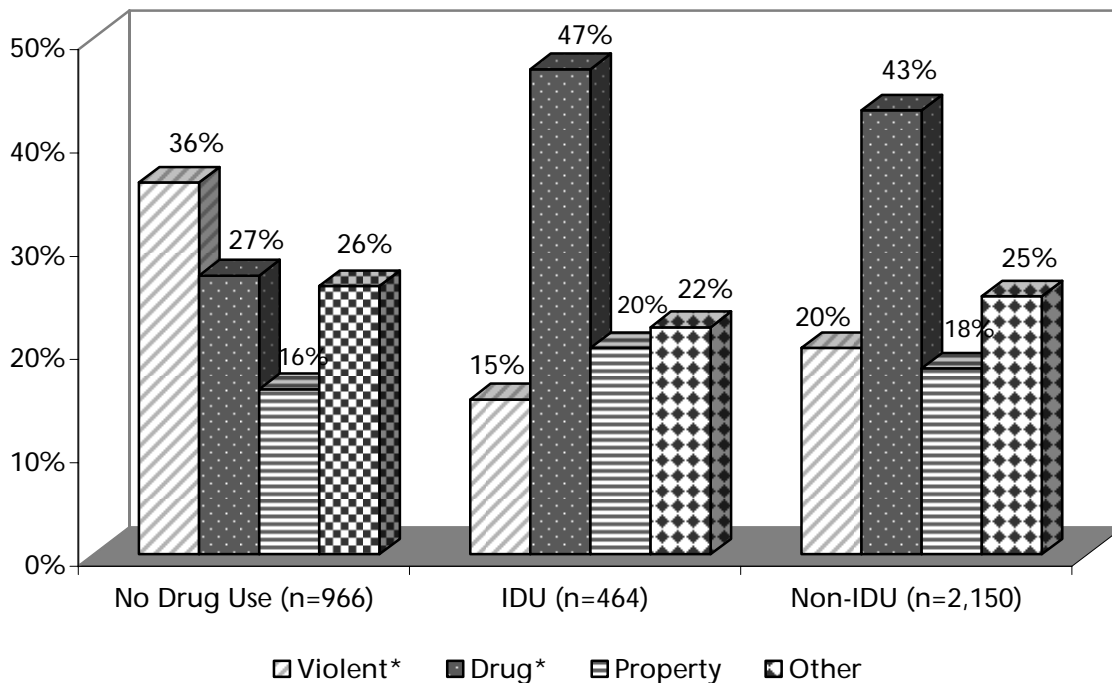
SOURCE: SANDAG

CRIMINAL HISTORY

Current Offense

Prior to the ADAM interview, information regarding the three highest arrest charges was noted by the interviewer. As Figure 3.11 shows, there were significant differences in being arrested for a violent or drug offense, but not for a property or other offense, between the three groups. Specifically, the No Drug Use group was significantly more likely to be arrested for a violent offense (36% versus 15% for the IDU group and 20% of the Non-IDU group) and less likely to be arrested for a drug offense (27% versus 47% and 43%, respectively) ($\chi^2 (2) = 125.32$; $\chi^2 (2) = 88.21$). The majority of individuals in the No Drug Use group who were arrested for drug- or alcohol-related offenses were most often booked for driving under the influence, with others arrested for offenses possibly related to the sale of drugs (e.g., possessing, transporting, or selling illegal substances). Approximately 1 in 20 was arrested for being under the influence, but this could have been under the influence of alcohol or drugs (not shown). Other offenses include probation or parole violations, traffic violations, public peace disturbances, obstruction of justice, flight/escape, and prostitution.

Figure 3.11
CURRENT ARREST OFFENSE



*Significant at $p < .05$

NOTE: Percentages based on the three highest offenses per arrestee.

SOURCE: SANDAG

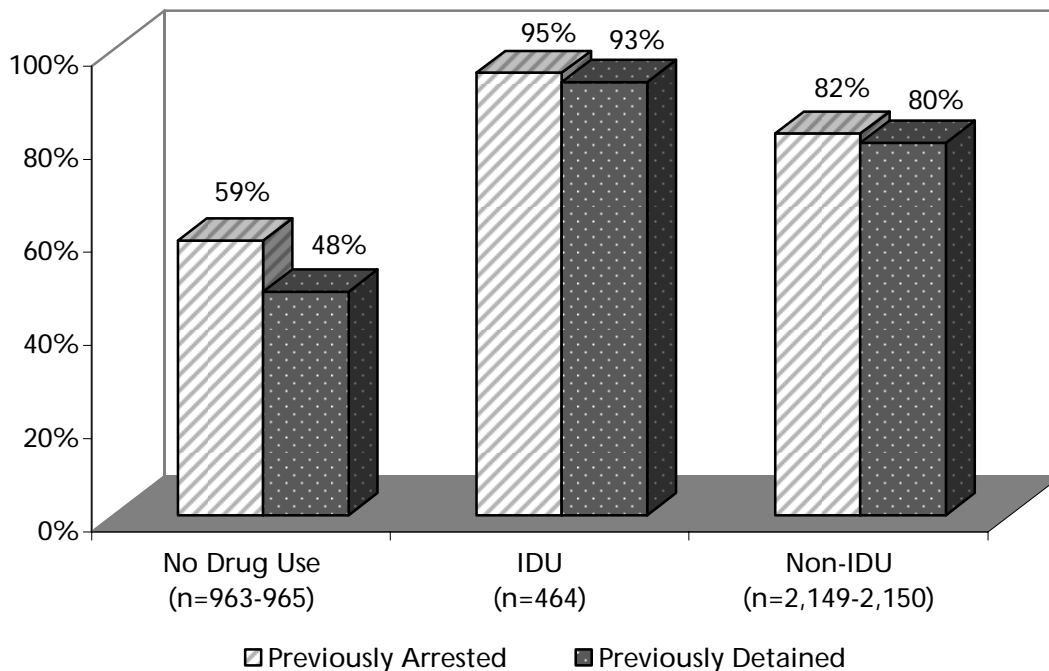
In addition to these differences by charge type, there also were differences in the highest charge level, with the No Drug Use group less likely to be arrested for a felony (56% compared to 69% of the IDU group and 62% of the Non-IDU group) and more likely to be arrested for a misdemeanor (44% versus 31% and 37%, respectively) ($\chi^2 (4) = 24.94$). The rest of the individuals (less than 1% in each group) had a highest charge related to a traffic violation (not shown).

Further analysis of the IDU group by charge type revealed that individuals who used heroin were significantly less likely to be arrested for a violent offense (7%), compared to those who used methamphetamine (17%) or methamphetamine and heroin (15%) ($\chi^2 (2) = 6.08$) (not shown).

Prior Arrests and Incarcerations

Individuals who reported drug use in the last year also were significantly more likely to report having been arrested previously as an adult, as well as spending more than 24 hours in jail. As Figure 3.12 shows, more than nine out of every ten individuals in the IDU group reported that they had previously been arrested (95%) and that they had been detained in jail (93%). These percentages were greater than those reported by the Non-IDU group (82% and 80%, respectively) and the No Drug Use group (59% and 48%, respectively) ($\chi^2 (2) = 303.05$; $\chi^2 (2) = 456.05$).

Figure 3.12
PREVIOUSLY ARRESTED AND DETAINED IN JAIL *



*Significant at $p < .05$

NOTE: Cases with missing information are not included.

SOURCE: SANDAG

Further analysis of the IDU group revealed that IDUs who reported using heroin in the past year were significantly less likely to report being detained in jail in the past (85%), compared to those who only used methamphetamine (95%) or those who used both (95%) ($\chi^2 (2) = 8.83$) (not shown).

DRUG USE HISTORY

Ever Used

As Table 3.2 shows, there were significant differences between the groups in the drug use history of individuals. While alcohol and marijuana were the substances most commonly used by individuals in all three groups, the IDU and Non-IDU groups were more likely to have used both, compared to the No Drug Use group (92% and 83% for alcohol, compared to 69% and 94%, and 93% for marijuana, compared to 38%) ($\chi^2 (2) = 131.82$; $\chi^2 (2) = 11,236.93$). Fifteen percent or fewer of the No Drug Use group had ever used the other four substances (methamphetamine, powder cocaine, crack, and heroin) and there were significant differences between the IDU and the Non-IDU group as well ($\chi^2 (2) = 1,002.45$; $\chi^2 (2) = 561.54$; $\chi^2 (2) = 435.88$; $\chi^2 (2) = 1,061.59$). For example, while more than nine out of ten individuals (92%) in the IDU group had ever used methamphetamine and over three-quarters (78%) had used powder cocaine, these were only 67 percent and 45 percent in the Non-IDU group.

Table 3.2
EVER USED ALCOHOL OR OTHER DRUGS

	No Drug Use	IDU	Non-IDU
Alcohol* ¹	69%	92%	83%
Marijuana*	38%	94%	93%
Methamphetamine*	15%	92%	67%
Powder cocaine*	15%	78%	45%
Crack*	10%	63%	37%
Heroin*	4%	73%	14%
TOTAL	966	464	2,148 - 2,150

*Significant at $p < .05$.

¹ For the purposes of the interview, alcohol use was defined as having 5 or more drinks on one occasion.

NOTE: Percentages are based upon multiple responses.

SOURCE: SANDAG

In addition, with one exception (crack cocaine), there also were significant differences in how early these arrestees began using these different substances. As Table 3.3 shows, the IDU group, on average, began using marijuana at about 13 ½, which was significantly younger than those in the Non-IDU group (who were almost 15) and those in the No Drug Use group (who were over 16) ($F(2, 2,768) = 51.35$). The IDU group also was significantly younger when they began using alcohol (14.85), compared to the other two groups, who began when they were about 16 ½ and 19 ($F(2, 2,836) = 96.28$). Use of methamphetamine and powder cocaine began when the IDU individuals were about 19 years old, followed by heroin, when they were about 21 ½. The average age of first use for these three drugs also was significantly younger than for the other two groups ($F(2, 2,007) = 6.32$; $F(2, 1,464) = 5.27$; $F(2, 668) = 5.60$). This pattern of earlier drug use among IDUs has previously been identified as a risk factor.

Table 3.3
AVERAGE AGE AT FIRST SUBSTANCE USE

	No Drug Use	IDU	Non-IDU
Alcohol* ¹	18.79 (5.52)	14.85 (4.06)	16.56 (4.55)
Marijuana*	16.28 (4.42)	13.45 (3.17)	14.97 (4.02)
Methamphetamine*	21.24 (7.39)	19.86 (7.62)	21.37 (7.78)
Powder Cocaine*	20.93 (6.36)	19.20 (5.95)	20.03 (5.50)
Crack	24.69 (8.71)	24.18 (8.49)	24.06 (8.00)
Heroin*	23.75 (7.95)	21.49 (7.06)	23.24 (7.01)
TOTAL	40 - 658	289 - 431	293 - 1,974

*Significant at $p < .05$

¹ For the purposes of the interview, alcohol use was defined as having 5 or more drinks on one occasion.

NOTE: Means based upon the number of individuals who ever tried that substance. Standard deviations are shown in the parentheses.

SOURCE: SANDAG

Use During the Past 30 Days

As Table 3.4 shows, there were differences in drug use in the past 30 days for those who injected drugs and those who did not. That is, individuals in the IDU group who used methamphetamine ($F(1, 1,207) = 29.76$), powder cocaine ($F(1, 202) = 17.73$), and heroin ($F(1, 212) = 4.97$), used these drugs significantly more frequently than those who used the drugs in the Non-IDU group. For example, while the IDU group used methamphetamine for more than one-half of the previous month (16.14 days, on average), the Non-IDU group used it only 12.28 days, on average. This higher frequency of use in the 30 previous days also has been noted at the national level for individuals entering treatment programs (SAMHSA, 2002). In contrast, the Non-IDU crack users were more likely to consume this drug a greater number of days (13.07, compared to 8.43 for the IDU group ($F(1, 393) = 9.94$)). There also were significant differences in alcohol consumption during the same time period, with the Non-IDU group and the IDU group more likely to report consuming five or more beverages on one day (51% and 49%), compared to the other No Drug Use group (41%) ($\chi^2(2) = 27.69$) (not shown).

Table 3.4
SUBSTANCE USE IN THE PAST 30 DAYS

	IDU		Non-IDU	
	Percent Who Used	Average Days Used	Percent Who Used	Average Days Used
Marijuana	61%	12.39 (10.73)	64%	12.34 (11.22)
Methamphetamine	71%	16.14 (11.19)	42%	12.28 (10.81)
Powder Cocaine*	18%	8.46 (10.48)	6%	3.71 (5.54)
Crack*	16%	8.43 (10.55)	16%	13.07 (11.44)
Heroin	40%	18.05 (12.48)	2%	12.69 (12.92)
TOTAL	458 – 461	72 - 325	2,128 – 2,145	32 – 1,361

*Significant at $p < .05$

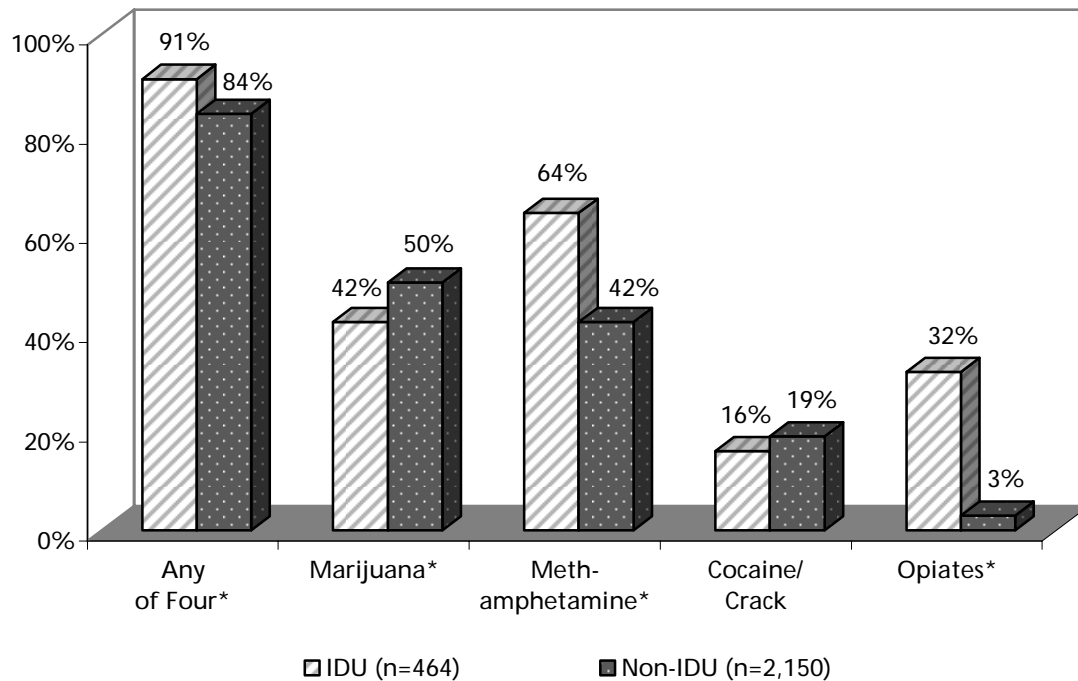
NOTE: Cases with missing information are not included. Standard deviations are shown in the parentheses.

SOURCE: SANDAG

Urinalysis Results

Consistent with previously described results, the IDU group was significantly more likely to test positive for methamphetamine ($\chi^2 (1) = 77.46$) and opiates ($\chi^2 (1) = 392.48$) at the time of their arrest, while the Non-IDU group was more likely to test positive for marijuana ($\chi^2 (1) = 8.85$) (Figure 3.13). The IDU group also was more likely to test positive for any drug ($\chi^2 (1) = 16.17$). There was no difference in terms of recent cocaine/crack use.

Figure 3.13
POSITIVE URINALYSIS RESULTS



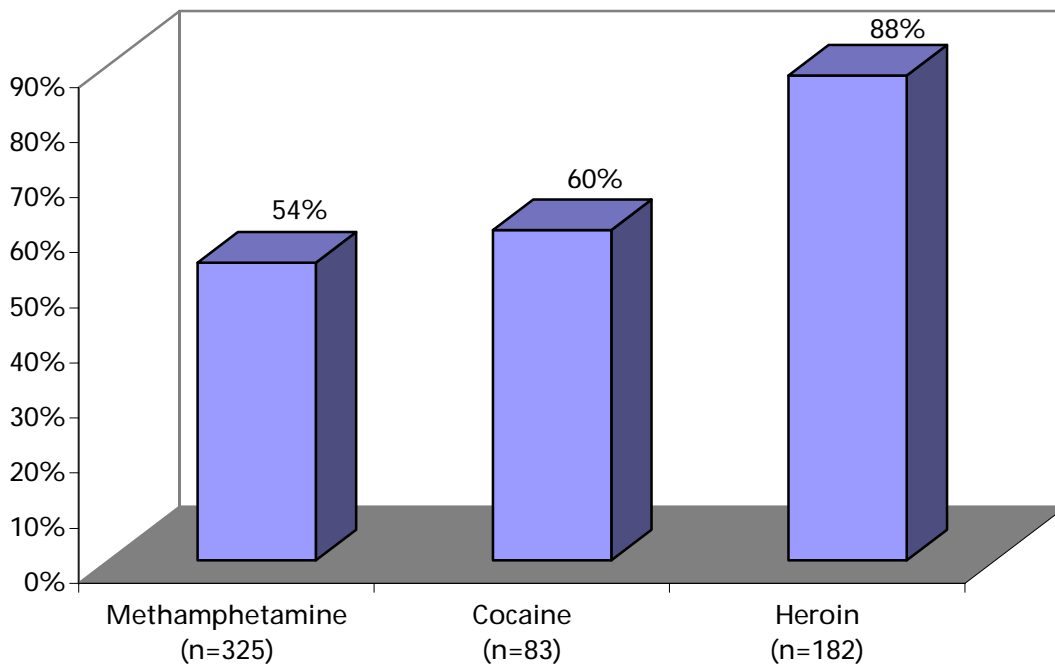
*Significant at $p < .05$

SOURCE: SANDAG

Most Recent Mode of Use

Individuals who reported using a particular drug in the past 30 days also were asked to describe how they ingested it the last time they used it. As Figure 3.14 shows, individuals in the IDU group who had used heroin in the past 30 days were most likely to report they injected it most recently (88%). In comparison, just over one-half (54%) of the methamphetamine users in this group injected most recently, as had 60 percent of those who used cocaine. When the Non-IDU group was asked to describe how they used these same drugs, methamphetamine users were most likely to report they smoked it (74%) and cocaine users that they snorted it through their nose (92%). Non-IDU heroin users were about equally likely to report they smoked it (53%) or that they snorted this drug (47%) (not shown).

Figure 3.14
PERCENT REPORTING INJECTION WAS MOST RECENT MODE OF USE



NOTE: Percentages based upon the number of individuals who had used that substance in the past 30 days.

SOURCE: SANDAG

Other Drug Use in the Past Two Days

Members of the IDU group also were significantly more likely to report using "other" types of drugs in the 48 hours prior to their arrest. As Table 3.5 shows, the IDU group was significantly more likely to use painkillers ($\chi^2 (1) = 13.82$), tranquilizers ($\chi^2 (1) = 69.53$), methadone ($\chi^2 (1) = 96.05$), barbiturates ($\chi^2 (1) = 10.57$), inhalants ($\chi^2 (1) = 11.57$), and amphetamines ($\chi^2 (1) = 4.56$).

Table 3.5
OTHER DRUG USE IN THE PAST TWO DAYS*

	IDU	Non-IDU
Painkillers	17%	10%
Tranquilizers	15%	4%
Methadone	7%	1%
Barbiturates	3%	1%
Inhalants	3%	1%
Amphetamines	2%	1%
TOTAL	462	2,145

**Significant at $p < .05$*

SOURCE: SANDAG

DRUG MARKET INFORMATION

All individuals who admitted obtaining a drug in the past 30 days during the ADAM interview were asked a series of follow-up questions regarding from whom, how, and where they obtained the drug. As part of this report, analyses were conducted to determine if there were differences in these behaviors between those who injected drugs in the past year and those who did not. Significant differences are presented by drug type.

Marijuana

Individuals in the IDU group were significantly more likely to report that they obtained marijuana in the past week without paying cash for it (1.93 times, $\underline{SD} = 2.17$), compared to those in the Non-IDU group (1.63, $\underline{SD} = 1.98$) ($\underline{F} (1, 1483) = 4.90$). In addition, the IDU group was more likely to report that they obtained the marijuana in their own neighborhood (61% versus 48% of the Non-IDU group) ($\chi^2 (1) = 4.82$) (not shown).

Crack

The Non-IDU group was significantly more likely to report they obtained crack by buying it with cash in the past 30 days (78% versus 60% of the IDU group) ($\chi^2 (1) = 9.82$). The Non-IDU group also reported obtaining it a greater number of times in the past week, on average, without paying cash for it (2.27, $\underline{SD} = 2.18$ versus 1.56, $\underline{SD} = 2.05$) ($\underline{F} (1, 252) = 4.35$) (not shown).

Powder Cocaine

Members of the IDU group obtained powder cocaine more frequently in the past week than the Non-IDU group. This was true when they paid cash for the drug (3.16, $\underline{SD} = 2.97$ and 1.16, $\underline{SD} = 1.64$) ($\underline{F} (1, 102) = 18.60$), as well as when they obtained it in other ways (1.43, $\underline{SD} = 2.06$ and .71, $\underline{SD} = .93$) ($\underline{F} (1, 162) = 9.43$). The IDU group also was more likely to report that they retained a greater proportion of the drug for their own consumption (83%, $\underline{SD} = 29\%$, compared to 65%, $\underline{SD} = 37\%$) ($\underline{F} (1, 103) = 7.71$) and that they obtained the drug in their own neighborhood (53% versus 27%) ($\chi^2 (1) = 6.06$) (not shown).

Methamphetamine

The greatest differences between the two groups were in regard to methamphetamine. As Table 3.6 shows, the IDU group was more likely to obtain methamphetamine in the past week, both when paying cash for it ($F(1, 742) = 19.53$) and when they did not ($F(1, 1002) = 53.53$). The IDU group also was more likely to buy it directly from the source ($\chi^2(1) = 4.87$), maintain a greater percentage for his/her own use ($F(1, 748) = 5.53$), have a regular source ($\chi^2(2) = 9.76$), but still have knowledge of more dealers, and to obtain the drug in his/her own neighborhood ($\chi^2(1) = 13.27$).

Table 3.6
METHAMPHETAMINE DRUG MARKET DYNAMIC DIFFERENCES*

	IDU	Non-IDU
Paid cash in past week	2.95 (2.35)	2.16 (2.13)
Obtained without cash in past week	2.93 (2.17)	1.85 (1.93)
Bought it from source directly	86%	79%
Amount retained for own use	76% (30%)	70% (34%)
Number of dealers used in 30 days	2.54 (2.17)	2.01 (1.82)
Use a regular source	64%	50%
Obtained in own neighborhood	60%	44%
TOTAL	195 - 274	466 - 730

*Significant at $p < .05$

NOTE: Cases with missing information are not included. Standard deviations are shown in the parentheses.

SOURCE: SANDAG

SUMMARY

Consistent with previous research, secondary analyses of the San Diego ADAM data revealed that individuals who had injected drugs in the past year significantly differed from those who had not on almost every dimension that was compared. Specifically, injection drug users (IDUs) were more likely to be White, older, separated or divorced, to have dropped out of school, to not have a job or health insurance, and to be homeless. In addition, this group was more likely to have a criminal history and to have utilized substance abuse treatment and received psychiatric care in the past. In terms of drug use history, IDUs had used more drugs, both in the past and more recently, and started using drugs at an earlier age. These drug use differences also were reflected in drug market dynamic questions. Analyses of the IDU group by drug use in the past year revealed that Whites were more likely to use methamphetamine and Hispanics were more likely to use heroin. In addition, injectors who used heroin but not methamphetamine were less likely to be arrested for a violent charge or to report having a prior criminal record.

CHAPTER 4

ADAM AND SEP COMPARISONS

CHAPTER 4: ADAM AND SEP COMPARISONS

INTRODUCTION

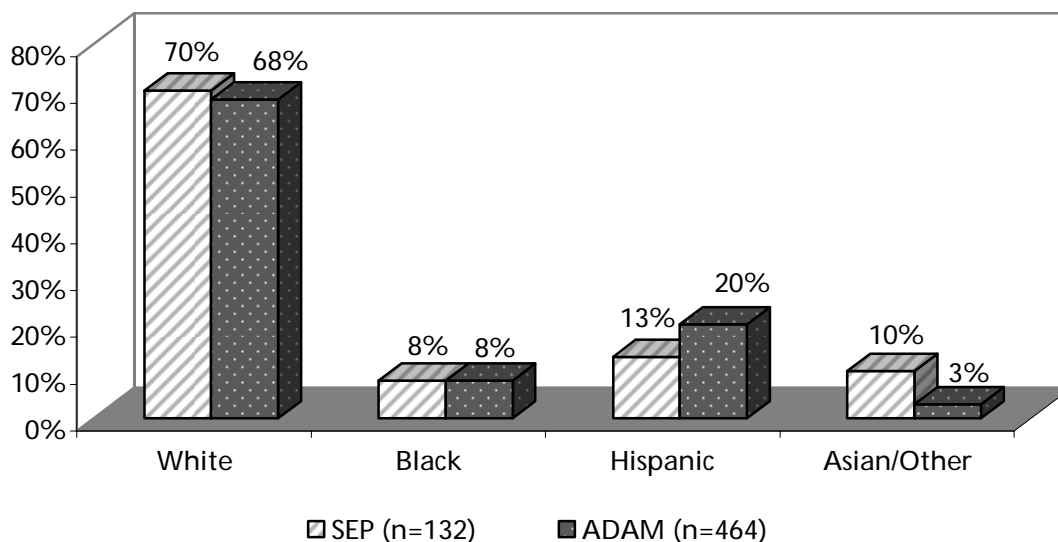
As described in Chapter 2, data from another San Diego Association of Governments (SANDAG) project that involved interviews with syringe exchange program (SEP) clients were available for comparison with the ADAM Intravenous Drug User (IDU) sample. This chapter includes the results of these analyses. However, it should be reiterated that it is possible that an individual was in both samples and that the particular reason(s) for these differences cannot be determined. Rather, this descriptive information is provided to paint a more complete picture of the background and needs of intravenous drug users (IDUs) in the San Diego region.

DEMOGRAPHICS

Age, Gender, Race, and Marital Status

Both the SEP and the ADAM clients were predominantly male. However, this gender difference was even greater for the SEP group who were 79 percent male, compared to 67 percent of the ADAM group ($\chi^2 (1) = 7.40$) (not shown). In addition, while the majority of both groups was described as being White, a significantly greater proportion of the remaining individuals in the ADAM group were Hispanic, while more individuals in the SEP sample identified themselves as Asian or another ethnicity (Figure 4.1) ($\chi^2 (3) = 12.70$). This difference could be related to the fact that SEP clients were asked to self-identify their race, while these data were collected from official records for the ADAM sample. Clients who used the SEP also were older (41.69, $SD = 9.94$) than the ADAM sample (34.30, $SD = 9.16$), on average. This pattern could be related to the fact that arrest rates decline as age increases. There was no difference between the two groups in their marital status (not shown).

Figure 4.1
ETHNIC COMPOSITION*



*Significant at $p < .05$

NOTE: Percentages do not equal 100 due to rounding.

SOURCE: SANDAG

Education, Employment, Health Coverage Status, and Treatment

In a somewhat contradictory twist, IDUs interviewed as part of the SEP interview were significantly more likely to have an educational degree and have some type of medical insurance, but were significantly less likely to report being employed ($\chi^2 (3) = 18.09$; $\chi^2 (1) = 25.44$; $\chi^2 (1) = 23.44$). There was no difference between the two groups in terms of receiving substance abuse or psychiatric care in the past (not shown).

Table 4.1
EDUCATION, EMPLOYMENT, AND HEALTH COVERAGE STATUS

	SEP	ADAM
Educational Status*		
No degree	18%	33%
High school graduate/GED	43%	42%
Some college	30%	22%
College graduate	8%	3%
Employed*	18%	40%
Has Health Coverage*	51%	27%
TOTAL	128 - 131	462 - 464

*Significant at $p < .05$

NOTE: Cases with missing information are not included. Percentages may not equal 100 due to rounding.

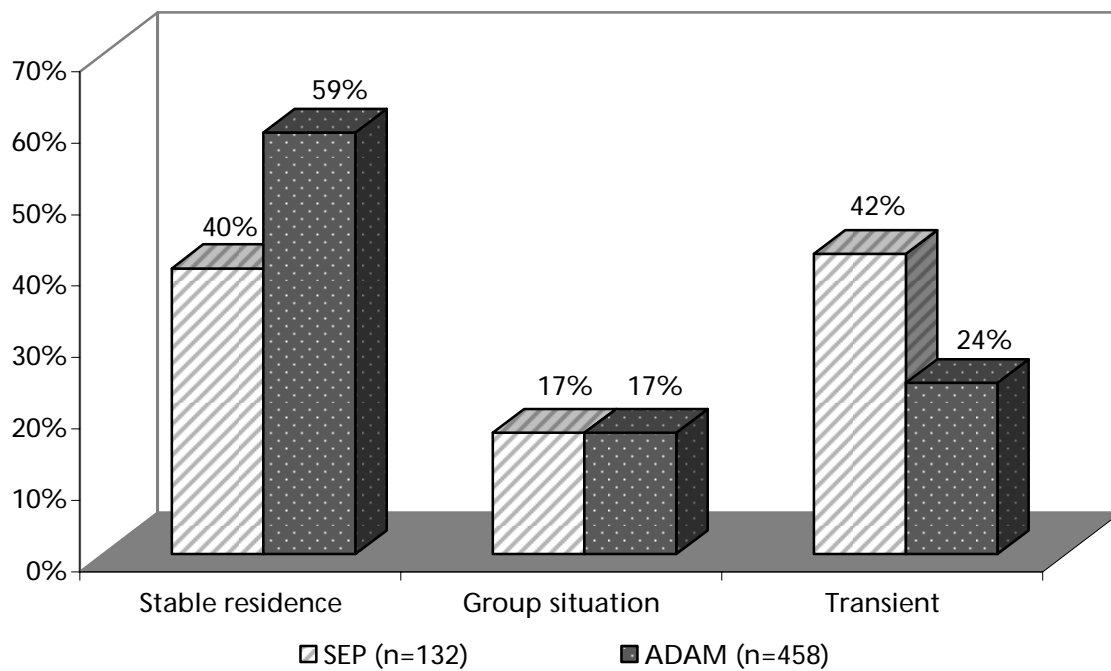
SOURCE: SANDAG

Type and Location of Residence

Residence Type

As Figure 4.2 shows, IDUs who were interviewed as part of the SEP program were more likely to be homeless, with about two in every five (42%) reporting they did not have a stable place to live. In comparison, only one-quarter (24%) of the ADAM arrestees who injected drugs reported being transient ($\chi^2 (2) = 19.71$). This finding could be related to the fact that one of the SEP sites was Downtown in the vicinity of where a number of services are offered to homeless individuals. An equal proportion reported living in a group situation.

Figure 4.2
RESIDENCE TYPE



NOTE: Percentages may not equal 100 due to rounding.

SOURCE: SANDAG

Residence Location

In the final SEP report (Burke, 2004), data were presented regarding where program clients lived at program intake – around the Downtown site, around the North Park site, in an adjacent community, in another City of San Diego community, or in some other part of San Diego County. As Table 4.2 shows, when this same coding scheme was used, the geographic location of where the ADAM and SEP samples lived differed significantly. When homeless individuals were excluded from the SEP sample (to allow for comparability with the ADAM sample), about one-third (35%) lived in Downtown, 13 percent in North Park, 31 percent in an adjacent community, and only 21 percent in some other community in the City or County of San Diego. In comparison, only 7 percent of the ADAM IDU group lived in Downtown or North Park and over one-half (55%) lived in a community not in the City of San Diego. Part of this difference can be attributed in part to the fact that the ADAM data includes interviews conducted in North County at the Vista Detention Facility ($\chi^2 (5) = 92.43$).

Table 4.2
RESIDENCE LOCATION*

	SEP	ADAM
Downtown (92101)	35%	6%
North Park (92104)	13%	1%
Other central San Diego ¹	31%	15%
Other City of San Diego	12%	22%
Other County of San Diego city	9%	55%
Other county or state	0%	1%
TOTAL	75	225

*Significant at $p < .05$

¹ Other central includes the ZIP codes that are adjacent to 92101 and 92104, including 92102, 92103, 92105, 92113, 92116, and 92134.

NOTE: Cases with missing information are not included.

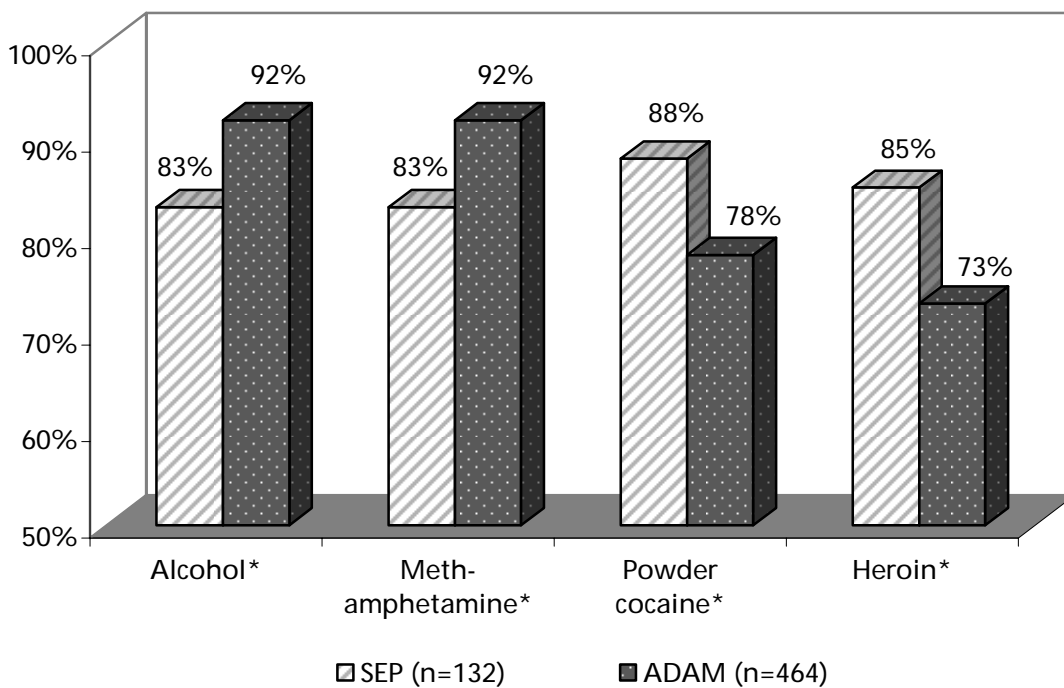
SOURCE: SANDAG

DRUG USE HISTORY

Ever Used

Compared to the ADAM sample, the SEP clients were less likely to have used alcohol (83% SEP versus 92% ADAM) ($\chi^2 (1) = 10.76$) and methamphetamine (83% versus 92%, respectively) ($\chi^2 (1) = 7.63$) in their lifetime, but more likely to have ever used powder cocaine (88% versus 78%, respectively) ($\chi^2 (1) = 5.83$) and heroin (85% versus 73%) ($\chi^2 (1) = 7.51$), as Figure 4.3 shows. There were no differences in self-reported lifetime use of marijuana or crack (not shown).

Figure 4.3
EVER USED ALCOHOL OR OTHER DRUGS



*Significant at $p < .05$

SOURCE: SANDAG

Interestingly, the average age of first use was lower for the ADAM sample than for the SEP for each of the substances, regardless of which group was more likely to have tried the drug. As Table 4.3 shows, this includes alcohol (15.43 versus 14.85), marijuana (14.26 versus 13.45), crack (30.12 versus 24.18), powder cocaine (22.02 versus 19.20), heroin (24.69 versus 21.49), and methamphetamine (24.01 versus 19.86).

**Table 4.3
AVERAGE AGE AT FIRST SUBSTANCE USE**

	SEP	ADAM
Alcohol ¹	15.43 (3.03)	14.85 (4.06)
Marijuana	14.26 (3.93)	13.45 (3.17)
Methamphetamine	24.01 (9.28)	19.86 (7.62)
Powder Cocaine	22.02 (7.05)	19.20 (5.95)
Crack	30.12 (9.43)	24.18 (8.49)
Heroin	24.69 (8.26)	21.49 (7.06)
TOTAL	85 - 125	289 - 431

¹ For the purposes of the interview, alcohol use was defined as having 5 or more drinks on one occasion.

NOTE: Means based upon the number of individuals who ever tried that substance. Standard deviations are shown in the parentheses.

SOURCE: SANDAG

Use During the Past 30 Days

As Table 4.4 shows, this same pattern of use was evident when ADAM and SEP individuals were asked about their use in the past 30 days. Specifically, the ADAM IDUs were more likely to have used alcohol ($\chi^2 (1) = 7.03$) and crack ($\chi^2 (1) = 4.48$) and the SEP clients were more likely to use heroin ($\chi^2 (1) = 13.63$) and cocaine ($\chi^2 (1) = 8.78$). The other differences were not statistically significant. For both groups, heroin users reported using this drug about three weeks out of the month, on average; alcohol and methamphetamine users about two weeks; and cocaine users about one week.

Table 4.4
SUBSTANCE USE IN THE PAST 30 DAYS

	SEP		ADAM	
	Percent Who Used	Average Days Used	Percent Who Used	Average Days Used
Alcohol* ¹	26%	12.03 (11.04)	49%	14.22 (11.56)
Marijuana	53%	10.59 (11.18)	61%	12.39 (10.73)
Methamphetamine	53%	13.86 (10.40)	71%	16.14 (11.19)
Powder Cocaine*	35%	7.13 (9.38)	18%	8.46 (10.48)
Crack*	13%	3.71 (4.81)	16%	8.43 (10.55)
Heroin*	67%	23.13 (10.17)	40%	18.05 (12.48)
TOTAL	132	17 - 89	458 - 462	72 - 325

*Significant at $p < .05$

¹ For the purposes of the interview, alcohol use was defined as having 5 or more drinks on one occasion.

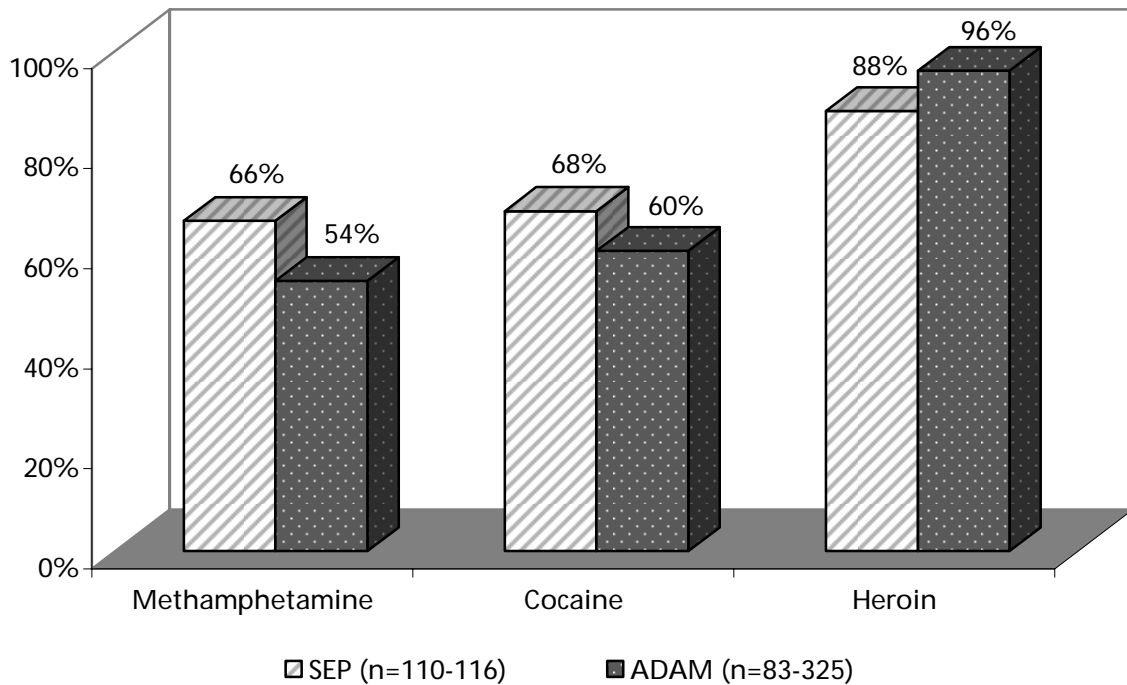
NOTE: Cases with missing information are not included. Standard deviations are shown in the parentheses.

SOURCE: SANDAG

Most Recent Mode of Use

As Figure 4.4 shows, individuals in both groups were most likely to report that they injected methamphetamine, cocaine, and heroin the last time they used it, as opposed to other methods of use, such as snorting or smoking. However, there were significant differences in this pattern of use, with SEP clients significantly more likely to report injecting methamphetamine ($\chi^2 (1) = 5.01$) and the ADAM sample significantly more likely to report injecting heroin ($\chi^2 (1) = 9.44$).

Figure 4.4
PERCENT REPORTING INJECTION WAS MOST RECENT MODE OF USE



SOURCE: SANDAG

SUMMARY

The current chapter compared self-reported information from a sample of injection drug users (IDUs) who were interviewed as part of the Arrestee Drug Abuse Monitoring (ADAM) program to other IDUs who were clients in the City of San Diego Pilot Clean Syringe Exchange Program (SEP). These data showed that caution should be used when generalizing from one group of IDUs in the region to another. Specifically, these analyses showed that SEP clients were significantly more likely to be male, less likely to be Hispanic, and were older, on average. In addition, these clients were more likely to have an education, but were more likely to be homeless and unemployed. However, they were more likely to have insurance. In terms of drug use history, SEP clients were less likely to use alcohol and methamphetamine, but more likely to use powder cocaine and heroin. These differences could be related to the fact that a greater proportion of the SEP clients lived in the City of San Diego, while the ADAM sample of IDUs with a stable residence were more dispersed throughout the region.

**CHAPTER 5
CONCLUSIONS AND
RECOMMENDATIONS**

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

Injection drug use (IDU) is one of the most common methods of transmission for a number of preventable life-threatening diseases, including the Human Immunodeficiency Virus (HIV) and Hepatitis C (HCV). As part of the current set of analyses, the self-reported histories of arrestees who reported injecting drugs in the past year were compared to information provided by arrestees who had not injected. Consistent with previous research at the national level, intravenous drug users (IDUs) differed significantly on almost every factor that was compared. Specifically, IDUs were more likely to be male, White, older, separated or divorced, homeless, and to not have finished school, be employed, or have health insurance. IDUs also were more likely to currently be arrested for a drug-related offense, have previously received some type of drug treatment, and have stayed at least overnight in a psychiatric care facility. In terms of their drug use histories, IDUs had a more extensive drug use history than those who had not injected in the past year, including using more drugs and trying these drugs at an earlier age.

Additional analyses comparing the ADAM IDU sample to other IDUs who participated in a pilot clean syringe exchange program (SEP) revealed that there were significant differences between these two groups. Specifically, the ADAM sample included more females and Hispanics, as well as individuals who did not have a degree, but were employed. Some of these differences could be related to the fact that the SEP was older, on average, more likely to report using heroin in the past year, rather than methamphetamine, and more likely to be homeless.

RECOMMENDATIONS

- IDUs have multiple needs – in addition to their drug dependencies. As this and other research has shown, these include mental and physical health care, educational and employment, as well as housing. Effective drug treatment programs that address these multiple needs and allow for relapse as part of the recovery process should be made available to these individuals.
- Rigorous evaluations of treatment programs are needed to determine what works best with individuals of different ethnic backgrounds who enter treatment with different drug use backgrounds.
- Youth drug prevention programs and other efforts are essential to decreasing the number of adults who are IDUs. In addition, it is important that sufficient drug treatment programs are made available to juveniles at early stages of use, before injection drug use begins.

REFERENCES

REFERENCES

- Allnutt, D. and Burke, C. (2004). *2002 Arrests in the San Diego Region*. San Diego, CA: San Diego Association of Governments.
- Baciewicz, G. (2002). *Injection Drug Use*. Available [on-line] at www.emedicine.com/MED/topic586.htm.
- Burke, C. (2004). *City of San Diego Pilot Clean Syringe Exchange Program: Final Evaluation Report*. San Diego, CA: San Diego Association of Governments.
- Centers for Disease Control and Prevention (CDC) (2003). *HIV/AIDS Surveillance Report 2002 (14)*. Atlanta, GA: Author.
- Centers for Disease Control and Prevention (CDC) (2002). *Viral Hepatitis and Injection Drug Users (14)*. Atlanta, GA: Author.
- Health and Human Services Agency (HHS) (2003). *Hepatitis Cases and Rates by Age, Gender, Race/Ethnicity and Region, San Diego County, 2002*. San Diego, CA: Author.
- National Institute of Justice (NIJ) (2003). *Annual Report 2000: Arrestee Drug Abuse Monitoring*. Washington, D.C.: Author.
- Neaigus, A., Miller, M., Friedman, S.R., Hagen, D.L., Sifaneck, S.J., Ildefonso, G., DesJarlais, D.C. (2001). Potential Risk Factors for the Transition to Injecting Among Non-Injecting Heroin Users: A Comparison of Former Injectors and Never Injectors. *Addiction*, 96, 847-860.
- Office of National Drug Control Policy (ONDCP) (2001). *The Economic Costs of Drug Abuse in the U.S. 1992-1998 (NCJ 190636)*. Washington, D.C.: Executive Office of the President.
- Office of National Drug Control Policy (ONDCP) (1995). *Drug Control Strategy*. Washington, D.C.: Executive Office of the President.
- Substance Abuse and Mental Health Services Administration (SAMHSA) (2004). ED Trends from DAWN: Final Estimates 1995-2002. Available [on-line] at www.dawninfo.samhsa.gov/.
- Substance Abuse and Mental Health Services Administration (SAMHSA) (2003a). *DASIS Report: Treatment Admissions for Injection of Multiple Drugs: 2000*. Rockville, MD: Author.
- Substance Abuse and Mental Health Services Administration (SAMHSA) (2003b). *Results from the 2002 National Survey on Drug Use and Health: National Findings (SMA 03-3836)*. Rockville, MD: Author.
- Substance Abuse and Mental Health Services Administration (SAMHSA) (2002). *DASIS Report: Treatment Admissions for Injection Drug Abuse*. Rockville, MD: Author.

