An Evaluation of the Impact of San Diego's Serial Inebriate Program

Report to the California Program on Access to Care
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EXECUTIVE SUMMARY

Individuals become chronic public inebriates due to many factors including personal failures as well as failures of public policies that do not address the root causes. Many chronic inebriates are homeless and disproportionately consume community resources. One of the principal types of services that are over utilized are emergency services such as emergency medical services and emergency departments. Although treatment is available and may repeatedly be offered, these individuals rarely voluntarily enroll and complete current programs. Unable to enter treatment under their own accord, their illness persists and they follow a consistent, revolving door cycle, which sends them in and out of local emergency rooms, jails and detoxification centers.

Methods

This study used a historical prospective design to evaluate the effectiveness of SIP and to provide an estimate of the potential cost savings to the community through this program. The study population for the proposed project was 529 individuals identified as "chronic inebriates" by the SDPD and the IRC from January 1, 2000 through December 31, 2003. The study used existing data from various sources including law enforcement records, EMS data, ED data, inpatient admission records and alcohol recovery program data.

Findings

The total charges accrued by the 450 (85%) individuals who used healthcare resources were $17.7 million with an overall reimbursement of 18.6%. Among those who used healthcare services, the median average monthly use and charges were about two times higher for those who accepted treatment compared to those who refused or who were not offered services. After enrolling in treatment, regardless of treatment outcomes, the median average monthly use for all services and associated charges decreased by at least fifty percent. However, for those who refused or were never offered treatment, the median average monthly use for all services and associated charges either stayed the same or increased.

The results suggest that older chronic inebriates, males, those with prior EMS transports and those with a higher sum of prior sentence days were more likely to accept treatment. The results also suggest that several factors contribute to better program outcomes including older age, a higher sum of prior days sentenced, no monthly income, having chronic mental illness and having a prior EMS transport.

Policy Implications

The responsibility for dealing with the chronic public inebriate population and for meeting their needs falls primarily on the local city and county level. This study demonstrates the importance and value of a community-wide intervention program to address the underlying causes of ED overcrowding currently threatening the stability of the emergency services system statewide. Police presence is the cornerstone of SIP's case management strategy and its success may provide a model for other law enforcement agencies to collaborate with County health and social services in an effort to improve outreach and engagement of chronic public inebriates. Additionally, alcohol recovery programs could be enhanced through similar collaborations with law enforcement and the judicial system as well as with other healthcare service providers.

Further Study

Additional research is needed to clarify these findings. First, a data collection system that incorporates data from all participating agencies should be developed to track, collect and monitor information from SIP clients regardless of their source of healthcare. Second, a randomized controlled trial with varying offerings and treatment tracks would be the most appropriate design to determine the success of SIP. If randomization is found to be difficult, prospective methodologies should at least be utilized to provide ongoing tracking and data collection to provide a more rigorous evaluation of the program. Lastly, the continued tracking of individuals within this population would be necessary for a successful prospective evaluation.

INTRODUCTION

Background

Individuals become chronic inebriates due to many factors including personal failures as well as failure of public policies that do not address the root causes. Many chronic inebriates are homeless and although treatment is available and may repeatedly be offered, these individuals rarely voluntarily enroll and complete current programs. Many chronic public inebriates suffer from mental illnesses that impede their ability to seek help. Unable to enter treatment under their own accord, their illness persists and they follow a consistent, revolving door cycle that sends them in and out of local emergency rooms, jails and detoxification centers. A proactive multi-disciplinary approach is needed for these individuals who can't or won't help themselves.

Homeless chronic inebriates disproportionately consume community resources. One of the principal types of services that are over utilized are emergency services such as emergency medical services (EMS) and emergency departments (ED).[1-3] It is important for communities to assure that these public safety net resources are not overburdened. EMS or ambulance agencies call them "frequent fliers," the police call them "chronics" and the courts call them "serial inebriates."

Police officers from the San Diego Police Department (SDPD) make daily contact with chronic inebriates. These individuals are routinely transported to the only County-funded "sobering center" in the region, the Inebriate Reception Center (IRC), managed by the staff of the Volunteers of America (VOA). Employing principles of "problem-based policing," in 1999 SDPD undertook a pilot program entitled the Homeless Outreach Team (HOT) to address a growing problem of homeless individuals. To assess the medical impact of this population, an audit was performed on 15 HOT clients for the period July 1, 1997 – December 31, 1998 at two regional hospitals and the city's ambulance provider.[4] During this period, these 15 individuals amassed 417 emergency department visits and generated total hospital and EMS charges of $1,476,113. This study demonstrated the huge impact of the homeless and the inadequacy of current systems for dealing with their needs. These compelling data were brought before the San Diego City Council and Mayor, and SDPD was subsequently authorized additional resources to address the problem.

To focus specifically on issues of chronic inebriates, HOT officers developed a pilot program entitled the Serial Inebriate Program (SIP) in partnership with key stakeholders in the community. The purpose of SIP is to provide patients who have exhausted traditional therapeutic options with a sober living alternative while reducing their adverse community impact. SIP aligns the judicial system with treatment to incentivize individuals' participation in an outpatient recovery program tailored to their needs.

Law enforcement is responsible for providing individuals determined to be publicly intoxicated with a safe sobering environment. Individuals who lack other means of safe shelter are transported to the VOA IRC where they receive supervision and monitoring by treatment staff until sober. Such individuals receive counseling and are encouraged to enter the VOA recovery program, but many decline this offer and resume drinking. California considers public intoxication disorderly conduct and under certain circumstances this misdemeanor can result in incarceration for periods of up to 180 days under California Penal Code 647 (f). The California

4th District Court of Appeals determined that the state may incarcerate intoxicated individuals because it has a legitimate need to control public drunkenness when such behavior creates a safety hazard.[5] The court concluded that state law does not punish the mere condition of being a homeless, chronic alcoholic but rather the associated conduct that poses a public safety risk.

California law also provides judges the option of offering such individuals an opportunity to complete an alcoholism treatment program in lieu of custody. Prior to the implementation of SIP, local treatment programs were unwilling to accept these clients due to their recidivist behavior, and jails rarely housed them beyond 72 hours.

In 1999 SDPD recruited a treatment provider (Mid-Coast Regional Recovery Center) to collaborate in the development of a novel pilot program tailored to this population. The SDPD also secured the support of the City Attorney to develop new booking and sentencing procedures. Importantly, the Public Defender lent critical support to program development after concluding its clients would be afforded valuable new support and care. VOA staff was asked to define the criteria that should constitute a "chronic inebriate" and therefore future SIP client. San Diego County Drug and Alcohol Services contributed financial support for transitional housing for outpatient treatment and the County Sheriff agreed to incarcerate clients who rejected treatment and received prolonged sentences. Ultimately, the Superior Court endorsed a trial program. SIP was then initiated as a pilot program in the Western SDPD Division in January 2000 and was expanded to the entire City in 2002.

VOA staff determined that any individual transported to the IRC five times within a 30-day period should be classified as a "chronic inebriate" and rejected from the facility. These individuals are then transported by police to jail where they are held until arraignment. Staggered, progressive sentences (based on prior convictions) to a maximum of 180 days are issued to individuals found guilty. Judges may elect to offer SIP in lieu of custody for chronic offenders. Convicted inebriates who decide to participate in SIP must complete a six-month, focused clinical intervention program and abstain from alcohol or face re-incarceration. SIP employs a consistent police presence as the cornerstone of its case management strategy.

Serial Inebriate Program

SIP is an innovative approach to a community public health problem and has evolved to become a model program that has generated significant interest both locally and nationally. San Diego is the first American city to incorporate such a process to assist this very difficult patient population. Numerous communities throughout the state and country have expressed interest in initiating programs patterned after SIP and the program has been presented to various organizations such as the National Association of Drug Court Providers and the U.S. Department of Housing and Urban Development. In 2004, SIP was recognized by Phillip Mangano, Executive Director of the White House Interagency Council on Homelessness as one of the most innovative programs for addressing the needs of homeless alcoholics in the nation.

The goal of SIP are to end the revolving door cycle of chronic inebriates going in and out of jail, EDs, and detoxification centers. The program strategy incorporates several important steps. First, individuals must be arrested for being "intoxicated in public". Second, individuals must meet the definition of a "chronic inebriate" as defined by the community's sole IRC. Third, a guilty

verdict with custody time must be imposed so that successful completion of a treatment program may be offered in lieu of custody time. The goal is to maintain the client in recovery and achieve a continuum of care (defined as more than 30 days of sobriety) through the provision of comprehensive recovery services.

After a chronic inebriate is convicted and accepts SIP in lieu of custody time, the SDPD liaison officer notifies the SIP Case Manager. The Case Manager then interviews the potential client while still in jail to determine the client's eligibility. Individuals with a criminal history of felony violence, arson, or sex offenses, those who refuse treatment and those who are determined to be recalcitrant are not eligible for the program. Non-eligible individuals are returned to jail to complete their sentence. Individuals may appeal an initial rejection into the program in writing and are reconsidered for SIP at a later date.

From the implementation of the program through July 2004, clients were immediately transported to UCSD Medical Center for treatment and medication if necessary once a client was accepted into treatment. Currently, when they are released from custody to the liaison officer, they are transported to St. Vincent De Paul Medical Village for a health screen. At that time the client may have jail prescriptions renewed, new medications prescribed, or prescriptions changed or altered as deemed necessary by the treating physician.

Once deemed medically stable, clients are transported to the designated treatment program identified by the Case Manager. Appropriate treatment programs are identified based on information from a simple screening instrument completed during the interview. Once in treatment, the Case Manager will note client program progress at least once a week. Clients who do not complete the program are reported to the San Diego Superior Court, and a warrant is issued for their arrest.

Each program has its own set of treatment guidelines, but they all follow a consistent case management component. The program is a minimum of six months and consists of three phases. The first phase of the program is designed to help establish abstinence from alcohol and begin the recovery process. The second phase is designed to further recovery, obtain employment or education and continue a program of on-going sobriety. The third phase is optional and consists of aftercare and transition from treatment to relapse prevention. Although only those persons who complete the required six-month rehabilitation are considered successful SIP graduates, individuals who complete at least 30 days or who continue to receive treatment after initially dropping out of the program are identified as making significant progress in their treatment.

Treatment does not always work on the first try. Initially, chronic inebriates often refuse treatment interviews and choose incarceration. Those that complete jail sentences and relapse are often rearrested on a new charge. When this occurs, individuals are often more open to treatment as an option because of higher jail sentences. Those who leave treatment, relapse, and are rearrested also begin to realize that drinking is no longer an option for them. As long as the process is continuous and adhered to, intervention and treatment will ultimately become the only viable alternative for the chronic inebriate.

RESEARCH OBJECTIVES

The purpose of this study was to evaluate an innovative, multidisciplinary program involving law enforcement and mental health service providers. Currently, it is a collaborative effort involving the City and County of San Diego, the SDPD and Sheriff's Departments, San Diego County Superior Courts, San Diego County Health and Human Services and Mental Health Systems, Inc. This study will provide initial direction for policy decisions regarding the health of chronic public inebriates.

This study's research questions are as follows:

1. What factors are associated with an individual accepting SIP services?

2. Was there a decrease in the number of subsequent arrests, paramedic transports, emergency department (ED) visits and inpatient admissions for individuals as a result of accepting SIP?

3. Was there a decrease in the number of subsequent arrests, paramedic transports, ED visits and inpatient admissions for those who accepted SIP compared to those that did not accept SIP?

4. If there was a change in paramedic transports, ED visits or inpatient admissions, how much was the change in the average monthly charges associated with these services among those who participated in SIP compared to the eligible inebriates who did not participate?

5. What are the factors that are associated with the successful completion of SIP?

METHODS

Overview

This study used a historical prospective design to evaluate the effectiveness of SIP and to provide an estimate of the potential cost savings to the community through this program. The study population was 529 individuals identified as chronic inebriates by the SDPD and the IRC from January 1, 2000 through December 31, 2003. The study used existing data from various sources including law enforcement records, EMS data, ED data, inpatient admission records and alcohol recovery program data. The study design and the use of existing data allowed for a cost effective and time sparing evaluation of SIP. This study was approved by San Diego State University's Institutional Review Board.

Merging Data

The data used for this study were abstracted from law enforcement, emergency service and hospital inpatient, and alcohol recovery program records. Prior to the acquisition of the databases used for this study, protected health information was removed and each individual was given a

randomly generated unique number. All databases included records from January 1, 2000 through December 31, 2003. Once each database was acquired, it was imported into a database management software program and merged using the unique identification code in each database. Quality assurance analyses were then performed to insure the consistency and validity of the data within each database and between each database. If quality issues were identified, individuals from the collaborating agencies were contacted for clarification and direction.

Databases

San Diego Police Department Data (SDPD): The SDPD data were entered and stored in an Excel spreadsheet. Data were entered by arrest incident and only included information for individuals identified as chronic inebriates. The data included demographic information, arrest and arraignment information and the sentence imposed by courts. The SDPD data also included whether SIP was offered and accepted or not accepted, program placement, and final outcome of client (warrant issued or SIP completion).

Emergency Medical Services Data (EMS): The EMS data were obtained from the billing records of the City of San Diego paramedic service provider. Data were stored in a SQL database and then exported into an Excel spreadsheet for this study. Data were entered by paramedic contact incident and contain only ambulance transports for individuals during the study period; all other paramedic contacts are excluded. The data included dates of transports and billing and payer information.

Emergency Department/Inpatient Admissions Data (ED/IP): The ED/IP data were from the two main tertiary care medical centers that provide care for the majority of individuals identified as chronic inebriates due to their regional locations and included ED and inpatient admission records. The data were stored in hospital information systems and exported into Excel spreadsheets for this study. ED and inpatient data were included in separate Excel spreadsheets as were the data from the two hospitals. The ED data included dates of visits, billing and payer information, and primary diagnoses. Inpatient data included admission and discharge dates, billing and payer information, and primary diagnoses.

Serial Inebriate Program Data (SIP): The SIP data were collected by Mental Health Systems, Inc. for all individuals who were assessed for an alcohol recovery program. The data were entered and maintained in an Access-based database. Data were entered by admission in the program and included demographics, family situation, history and specifics of mental illness and drug abuse, arrest information, disability, employment, public assistance, income, and program admission and discharge dates.

Data Analysis

The analysis of the data was approached in three distinct steps. First, descriptive and univariate analyses was performed on the entire study population to provide data on chronic inebriates in San Diego. Univariate analysis was used to provide information regarding the differences among comparison groups of interest. The impact of SIP was investigated by comparing healthcare utilization among chronic inebriates who accepted treatment with those who did not for any

reason using a pre/post analysis. For the final part of the analysis, logistic regression and a Cox Proportional Hazard analysis was utilized to identify the factors associated with various treatment outcomes.

Descriptive and Univariate Analyses: For the descriptive analysis, frequency distributions were used to describe law enforcement, healthcare utilization, and mental health program data for those who accepted and entered treatment and those who did not accept or enter treatment. They were also used to describe those who participated in treatment, stratified by the different potential outcomes of the program: program completion (six-months), completed at least 30 days, and completion of < 30 days. Univariate analysis was used to provide information regarding the differences among comparison groups of interest.

Healthcare Utilization: The impact of SIP was investigated by comparing healthcare utilization among chronic inebriates who accepted treatment with those who did not for any reason using a pre/post analysis. Reasons for not entering a treatment program included not being offered treatment or refusing treatment in court or during assessment. Because the goal of the project was to assess the effect of the program on healthcare utilization on the overall chronic inebriate population, those who did not enter treatment were not stratified further into offered/not offered groups. If an individual accepted treatment on multiple occasions, calculations were based on the first acceptance. If an individual was never offered the program or never accepted, the first date of arrest or first refusal was used for comparisons. Acceptance and entrance into the program rather than completion of SIP was used for these analyses because of the various intermediate goals that could be met prior to completion of the program, such as completed > 30 days rather than six months. It was hypothesized that the mere acceptance of the program and getting into the system provided a positive outcome such as reduction of inappropriate healthcare utilization.

Treatment Acceptance and Completion (at least 30 days and entire six months): Factors related to treatment acceptance (enrollment or no enrollment) and treatment completion (30-day outcome and completion of entire six months) were investigated using logistic regression. Logistic regression was used to find factors that describe the relationships between an outcome (completing at least 30 days) and a set of independent variables (age, sex, employment, etc.). Factors associated with accepting and enrolling in treatment among those who were offered treatment in court were also investigated using analytical methodology. Factors associated with completing at least 30 days and then six months among those who were enrolled in treatment were assessed using arrest, healthcare utilization, and alcohol recovery program data. For those who enrolled multiple times, data collected from their longest stay was used for the analysis. Factors related to remaining in treatment longer were assessed using a Cox Proportional Hazard analysis. A Cox Proportional Hazard model was used to estimate the effects of different covariates that influence the time to dropping out of treatment or completion.

RESULTS

Overview

The results of this study are presented in three main sections. First, the overall population of chronic inebriates (N=529) is described and the effect of SIP on healthcare utilization among the entire population is presented. Next, characteristics of those who were offered treatment in court

(n=280) are described and factors associated with accepting treatment and enrolling in treatment are presented. Next, the characteristics of individuals who enroll in treatment (n=155) are described and factors associated with staying at least 30 days as well as completing treatment goals are presented. Finally, the factors associated with remaining in treatment longer are presented for those who entered treatment. Detailed tables describing the factors investigated are presented in the Appendix.

Figure 1 illustrates the flow of patients from arrest to program completion. Among the 529 identified chronic inebriates, 280 (53%) were offered treatment at least once while in court. Among those offered treatment, 155 (55%) of these individuals entered treatment at least one time and 125 (45%) did not. Among the 155 individuals who entered treatment at least once, 64 (41%) never completed 30 or more days, 52 (36%) completed at least 30 days, but did not complete the program, and 39 (25%) completed treatment goals.

Chronic Inebriates and Healthcare Utilization

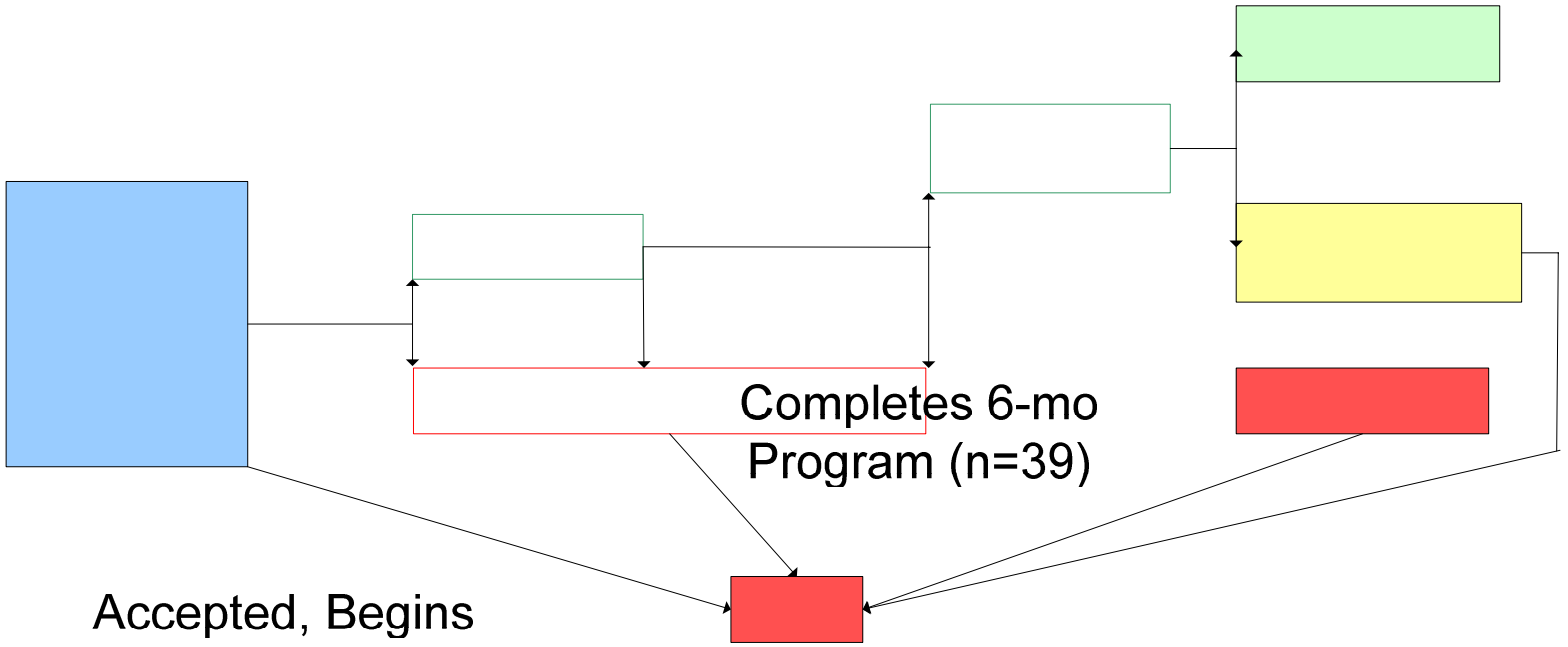
From January 2000 through December 2003, 529 chronic public inebriates were rejected by IRC staff and categorized as a "chronic inebriate" after being transported to their facility five times within 30 days for public intoxication. These individuals ranged from 22 to 73 years of age with an average age of 46 years. The majority of individuals were male (92%), Caucasian (75%) and had more than one arrest for 'drunk in public' with 33% having four or more arrests during the study period.

Among the 529 identified individuals, 79 (15%) had no record of using any healthcare service during the study period. The total charges accrued by the 450 (85%) individuals who used healthcare resources were $17.7 million with an overall reimbursement of 18.6%. The ED was the most common service utilized with 3,318 visits among 409 (77%) users. The next most common services utilized were EMS with 2,335 transports among 308 (58%) and IP with 652 admissions totaling 3,361 inpatient days among 217 (41%) patients. The service with the most charges were IP admissions ($13.9 million) followed by ED visits ($2.5 million) and EMS transports ($1.3 million). Among the 3 services, reimbursement rates were: IP (19.7%), ED (15.4%) and EMS (13.8%).

Figure 2 identifies the payer types for each EMS transport, ED visit and inpatient admission for the 529 chronic inebriates over the study period. "Medicare/Medicaid" (29%) and "County Medical Services" (29%) were listed as the primary payer for the most episodes of care while very few had "Private Insurance" (5%) as the primary source of payment. A high proportion of episodes had "No Insurance" as the primary payer (26%).

Chronic inebriates who were offered and enrolled in treatment were significantly more likely to be older, male and of Caucasian race/ethnicity compared with those who refused or were not offered treatment. As expected because SIP is usually only offered after a person's first arrest, those who were offered and entered treatment were significantly more likely to have more arrests compared to those who refused or were not offered treatment. Among arrests, the largest difference between the two groups was the proportion of individuals who had 4 or more arrests over the study period. Among individuals who entered treatment, 72% had four or more arrests over the study period compared to only 17% of those who refused or were not offered treatment.

Figure 1. Chronic inebriate[a] pathway from identification to completion[b], San Diego, California, January 1, 2000 to December 31, 2003.



[a]Identified as visiting the IRC 5 or more times within 30 days.
[b]Diagram illustrates the furthest a person went during the study period. For example, if a person completed treatment once, but also refused treatment once and was not offered once, they would only be included in the 'Completed 6-mo Program' box.

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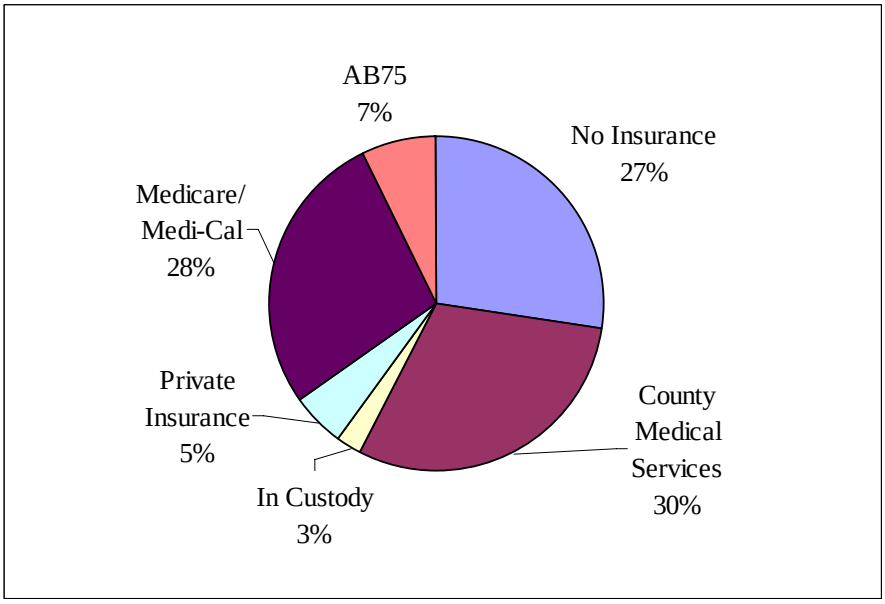
eatment
der (n=160)

Dropped out After 30 Days, Continuum of Care Achieved (n=52)

=125)

Dropped Out In < 30 Days (n=64)

Figure 2. Payment types for healthcare service[a] charges accrued by 529 chronic inebriates[b], San Diego, California, January 1, 2000 to December 31, 2003.



[a]Includes emergency department visits, emergency medical services transports and inpatient admissions.
[b]Identified as visiting the IRC 5 or more times within 30 days.

Table 1 illustrates healthcare contacts and associated charges by treatment enrollment for the pre and post study periods. There was a higher proportion of individuals who utilized healthcare services among those who accepted treatment, and they used services more often. Among those who did use services, the median average monthly use and charges were about two times higher for those who accepted treatment compared to those who refused or who were not offered services. After enrolling in treatment, regardless of treatment outcomes, the median average monthly use for all services and associated charges decreased by at least fifty percent. However, for those who refused or were never offered treatment, the median average monthly use for all services and associated charges either stayed the same or increased for all services and associated charges.

Alcohol Recovery Treatment

Chronic Inebriates Offered Treatment

From January 2000 through December 2003, 280 chronic inebriates were offered alcohol recovery treatment in court in lieu of incarceration at some point during the study period. Those who were offered treatment were similar to the overall population; the majority were over 50 years of age (69%), male (93%), Caucasian (79%) and had more than one arrest for “drunk in public” with 30% having four or more arrests during the study period. Additionally, 77% of chronic inebriates who were offered treatment utilized hospital services prior to being offered the program. The service with the highest number of users among this group was the ED (69%) followed by EMS (51%) and IP services (35%).

Table 1. Per person monthly median for healthcare utilization and associated charges for 529[a] chronic inebriates[b] who used healthcare services by SIP acceptance status, San Diego, California, January 1, 2000 to December 31, 2003.

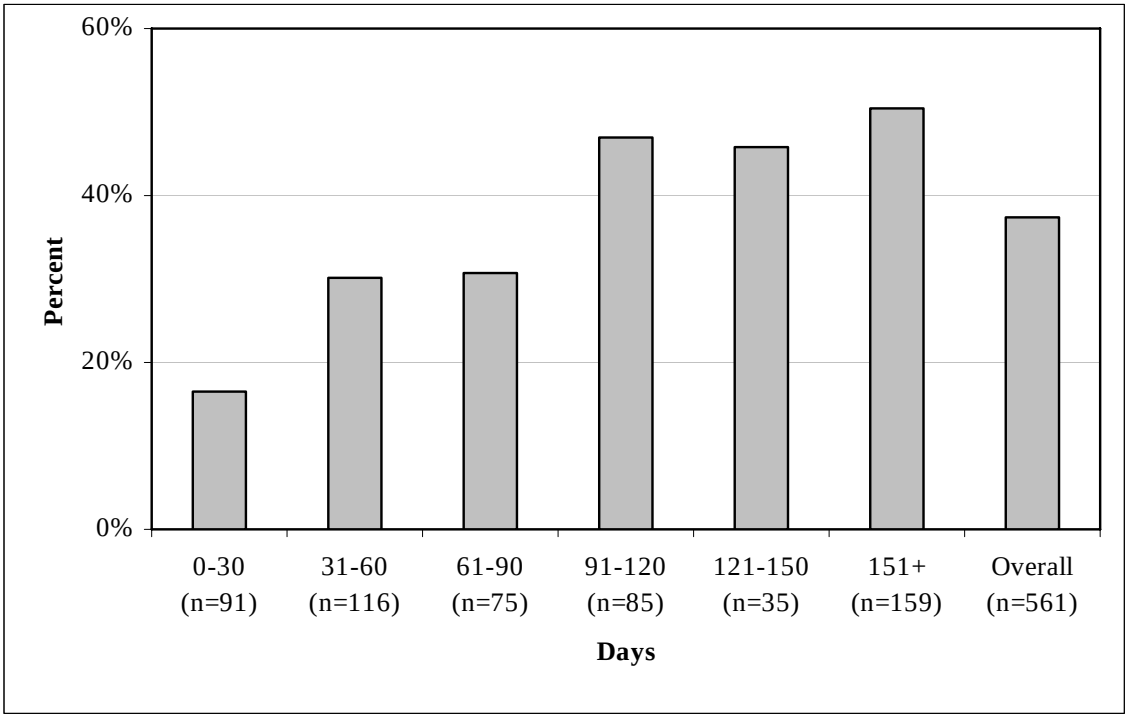
	Accepted Treatment (n=155)		Refused Treatment or Treatment Not Offered (n=374)	
Type of Resource	Pre Median (IQR[c])	Post Median (IQR)	Pre Median (IQR)	Post Median (IQR)
EMS[d]	n=110 (71.0%)		n=198 (52.9%)	
Transports	0.11 (0.04,0.33)	0.04 (0.00,0.15)	0.06 (0.00,0.14)	0.07 (0.02,0.21)
Charges ($)	57.82 (20.52,165.47)	20.17 (0.00,92.21)	25.65 (0.00,72.97)	37.71 (11.08,128.58)
ED[e]	n=132 (85.2%)		n=277 (74.1%)	
Visits	0.15 (0.05,0.38)	0.04 (0.00,0.16)	0.06 (0.00,0.21)	0.06 (0.00,0.17)
Charges ($)	87.75 (26.29,302.50)	18.28 (0.00,152.08)	39.66 (0.00,149.90)	40.66 (0.00,142.52)
Inpatient	n=81 (52.3%)		n=136 (36.4%)	
Admits	0.05 (0.02,0.11)	0.00 (0.00,0.04)	0.01 (0.00,0.05)	0.04 (0.00,0.09)
Charges ($)	647.01 (124.88,1347.75)	0.00 (0.00,966.66)	48.11 (0.00,737.42)	506.76 (0.00,2679.14)

[a]79 chronic inebriates had no record of use of healthcare resources
[b]Identified as visiting the IRC 5 or more times within 30 days.
[c]Interquartile Range
[d]EMS=Emergency Medical Services
[e]ED=Emergency Department

Of the 280 who were offered treatment, 155 (55%) accepted at least once while 125 (45%) never accepted. Figure 3 illustrates treatment acceptance by length of sentence. Judges issued a total of 561 SIP offers over the study period. There was an increase in the proportion who accepted treatment among those who received a higher jail sentence. For sentences of greater than 150 days, treatment acceptance rose to 50%. There were no significant age, gender or race/ethnicity differences between those who accepted treatment at least once and those who never accepted treatment. However, those who accepted treatment had significantly more arrests, a higher number of days sentenced to jail, and were more likely to use ED, EMS, and inpatient services prior to accepting treatment compared with those who never accepted treatment.

Logistic regression analysis identified four factors that were significantly associated with accepting treatment services among those investigated. The results suggest that older chronic inebriates, males, those with prior EMS transports and those with a higher sum of prior sentence days were more likely to accept treatment. The odds of accepting treatment increased with an increased sum of prior sentence days. Those with a sum of previous sentence days of 61-90 were 1.69 times more likely to accept treatment compared with those with a sum of 0-60 days. However, chronic inebriates with a sum of previous sentence days of 200 or more were 16 times more likely to accept treatment compared to those with a sum of 0-60 days.

Figure 3. Percent of entry into treatment[a] by duration of imposed court sentence, San Diego, California, January 1, 2000 to December 31, 2003.



[a]Graph includes offers where individual either entered or refused treatment (n=561): all other incidents excluded (denied, failed, or offering unknown/not stated)

Description of Treatment Group

From January 2000 through December 2003, 155 chronic inebriates entered treatment as part of the SIP program. Those who entered treatment were similar to the overall population and those who were offered treatment but declined. The majority were over 50 years of age (65%), male (96%) and Caucasian (83%). As expected, many of the individuals who accepted treatment had a sum of previous jail sentence days of over 180 days and the majority (65%) of people had current sentences of 90 or more days. However, there was a higher percentage of individuals who utilized healthcare services prior to accepting treatment compared with those who were only offered treatment but declined. Specifically, 86% of chronic inebriates who enrolled in treatment accessed at least one of the healthcare services studied. Every individual service was also accessed more frequently with the ED (77%) being used by more people followed by EMS (62%) and IP services (43%).

Additional demographic and behavioral information was available from alcohol recovery program data, including residence, income, education and health information. Slightly more than half (51%) of those who accepted treatment had never been married and very few (8%) had a permanent residence upon enrollment. Over three quarters (76%) of those who entered treatment had 12 years of education or less and the majority of individuals had no form of income (69%). The majority of individuals who accepted treatment also used alcohol daily (56%), did not take

prescription drugs for any reason (67%), did not or were not sure if they had chronic mental illness (76%) and the average years of previous alcohol use was 34.

At Least 30-Day Treatment Completion

Of the 155 who entered alcohol recovery treatment, 59% completed at least 30 days of treatment. Those who completed at least 30 days of treatment were significantly more likely to be Caucasian, have a higher current jail sentence, a higher number of days sentenced to jail prior to treatment enrollment, to not have or not be sure if they had a chronic mental illness and were more likely to use EMS services prior to entering treatment compared with those who did not complete at least 30 days of treatment. Similar to the comparison between those who entered treatment and those who refused, there were no significant age or gender differences between those who completed at least 30 days of treatment compared with those who did not complete at least 30 days of treatment. Additionally, there were no other significant differences identified among the groups for the additional demographic and behavioral characteristics investigated.

Logistic regression analysis identified three factors that were significantly associated with completing at least 30 days among those who entered treatment. The results suggest that chronic inebriates without a monthly income, with chronic mental illness and with prior EMS transports were more likely to complete at least 30 days of treatment. Additional factors approaching significance that were kept in the logistic regression model were age and marital status. Although these factors were not statistically significant, those who were older and those who were never married were more likely to complete at least 30 days of treatment.

Treatment Completion

Of the 155 who entered alcohol recovery treatment, 25% completed treatment goals. Those who completed treatment were significantly more likely to be Caucasian, to not have or not be sure if they had a chronic mental illness and were more likely to use EMS services prior to entering treatment compared with those who never completed. Similar to the comparison between those who entered treatment and those who refused, there were no significant age or gender differences between those who completed treatment compared with those who never did. There were no other statistically significant differences identified among the groups for the additional demographic and behavioral characteristics investigated.

Logistic regression analysis identified two factors that were significantly associated with completing treatment goals among those who entered treatment. The results suggest that older chronic inebriates and those with prior EMS transports are more likely to complete treatment goals. Additional factors approaching significance that were kept in the logistic regression model were monthly income and the sum of prior days sentenced. Although not statistically significant, those without a monthly income and having a higher sum of prior days sentenced were more likely to complete treatment.

Survival Analysis

A Cox Proportional Hazards survival analysis was performed to identify factors associated with staying in treatment longer while controlling for other factors in the model. This analysis was based on the time in the program and not just whether a person completed an objective or goal

such as 30 days or program completion. Four factors were identified as being significantly associated with longer treatment among those who entered treatment: age, monthly income, sum of prior sentenced days and previous EMS transports. The results suggest that older age, not having a monthly income, having higher sum of prior days sentenced and having a previous EMS transport contribute to staying in treatment longer.

DISCUSSION

Ten percent of the nation's homeless are considered chronic (more than one year without permanent shelter)[8] and in San Diego that figure may be as high as 19%.[9] The U.S. Interagency Council on Homelessness estimates that 10% of the nation's homeless consume 50% of public resources including EMS, detoxification, shelter, law enforcement, psychiatric and correctional care.[10] California law states that a person can be charged with a misdemeanor punishable by up to 180 days in custody for public intoxication. In lieu of custody, convicted individuals may be paroled in order to complete a six-month treatment program. Until the creation of SIP, there were simply no programs willing to treat this recidivist population in San Diego. With the development of SIP, there is now an option that appears to benefit the community as well as these individuals so severely affected by alcoholism.

The findings of this study document the excessive resources that a small number of chronic inebriates consume in the community. Not only are revenues inefficiently expended during repeated visits for emergency episodic care, but the cumulative effect of these individuals significantly impacts a community's safety net system. This is significant because of rising problems of emergency department overcrowding and ambulance diversion due to the lack of available beds. However, this study demonstrated that a program such as SIP can provide a method to reduce the inappropriate consumption of such resources while benefiting the at-risk population through a novel alcohol treatment program.

This community-supported treatment strategy incorporating a law enforcement component reduced the consumption of emergency healthcare resources and increased enrollment in alcohol recovery programs. Important to SIP's success is that the program impacted some of the highest users of healthcare resources. Those who accepted treatment utilized healthcare services approximately twice as often as those who did not. Additionally, once enrolled, healthcare utilization and associated charges decreased by at least 50% for individuals who accepted treatment while they remained the same or increased for those who did not accept treatment.

As this is a new, innovative program that reached a historically difficult to treat population, there are no similar programs with which to compare these results. According to treatment providers familiar with this population, it is remarkable that any, much less 55% of these individuals, accepted treatment at all. It is interesting to speculate why these individuals, who have commonly been on the streets for more than ten years, would choose to enter a recovery program. Given the progressive sentencing structure of SIP, individuals may consider treatment as the "lesser of two evils." If this is true, it may be reasonable to conclude that a more rapid initiation of therapy and significant cost savings could be achieved if the sentence progression was accelerated. However, the motivations for treatment acceptance and potential for negative consequences of lengthy sentences should be considered prior to a permanent program change.

SIP has not been developed to punish people suffering from alcoholism. Rather, it is an effort to help many desperate individuals who have not had the ability to help themselves. In San Diego, chronic public alcoholics are not identified as a chronic inebriate until their fifth visit to the IRC within 30 days. At each of these previous visits, efforts are made to link them with community alcohol recovery programs such as the ones employed by SIP. Unfortunately, these programs are often rejected and many individuals just reenter the revolving door between the police, emergency department and the IRC. It is only when the efforts by the IRC staff fail that law enforcement and the judicial system become involved. It is important to note that this study demonstrates that incarceration alone does not benefit individuals; those who choose custody over treatment maintained high rates of emergency medical care upon return to the streets unlike those who accept treatment.

San Diego is the first American city to incorporate such a process to assist this very difficult population of individuals. SIP has evolved to become a model program that has generated significant interest both locally and nationally. Numerous communities throughout the state and country have expressed interest in initiating programs patterned after SIP and the program has been presented to various organizations such as the National Association of Drug Court Providers and the U.S. Department of Housing and Urban Development. Additionally, SIP has also hosted visits by the White House "Homeless Czar," Phillip Mangano, Director of the Interagency Council on Homelessness and Mark Johnston, Director of HUD's Special Needs Assistance Programs. Communities should embrace novel approaches such as SIP to improve the care of traditionally difficult-to-serve populations.

Program Changes

SIP has evolved since its inception in 2000. Informing and training key individuals from the various collaborating agencies is essential to the continued success of the program. Program modifications have been and continue to be implemented when issues and opportunities have arisen. Useful enhancements have included the assignment of a SDPD officer as a liaison between the recovery programs and courts, refined logistical procedures, expanded funding to provide more services and the implementation of Saint Vincent de Paul Village Medical Clinic as the new outpatient medical home for SIP clients. These program refinements are expected to increase the program's effectiveness in helping chronic inebriates in the community. In addition, SIP programs are now being implemented in several other municipalities of San Diego County.

Limitations

There are several limitations of this study. The first limitation is attributed to the study design. Because this was a retrospective study, there was no opportunity to randomize individuals into study groups based on treatment offering. Observational study designs such as this one can potentially introduce bias in that comparison groups may be different in some way. In this study, comparison groups appeared to be similar in respect to the demographic variables investigated. However, those who chose treatment utilized healthcare resources more often prior to beginning treatment. Although these are the people SIP targets, the reason for this population's willingness to accept treatment could not be investigated.

In addition, SIP only becomes an option when individuals are repeatedly delivered to the IRC by police. However, the IRC is not staffed with nurses or physicians and clients must be medically stable and ambulatory (without assistance) to be accepted for observation. Publicly intoxicated individuals judged by paramedics or law enforcement to be nonambulatory are therefore transported by paramedics to area hospitals. Thus, some egregious EMS and ED over users are so intoxicated that they only occasionally qualify for IRC transport. These individuals take much longer (if ever) to accrue the requisite five IRC visits to enter the program. Hospital personnel are reluctant to notify police for fear of violating patient privacy rights and therefore SIP can sometimes still fail to reach ultra-high end users of ED resources.

Another limitation of this study is the use of existing data. The data were not collected specifically for evaluation purposes. To validate the data, quality assurance analyses were performed to identify limiting factors within the data. One important aspect of the data that helped improve reliability was the repeated data elements within the different datasets.

Only information from two tertiary care medical centers and one EMS agency was available for this study. Although these three agencies serve the majority of SIP clients, this limitation is expected to result in an underestimation of actual healthcare utilization because some chronic inebriates may seek healthcare at other facilities. Additionally, migration within the community as well as death could not be tracked and data collected from different police departments, hospitals, EMS agencies and jail clinics while incarcerated could not be evaluated.

The method of program implementation and the study population could contribute sources of bias. SIP was slowly introduced throughout the judicial system and it took time before all police officers, judges and prosecutors had full knowledge and confidence in the program. Therefore, individuals who were eligible for the program in its earlier stages may not have been as consistently provided an opportunity to participate. Additionally, since the inception of SIP resulted in individuals being arrested and detained in jail rather than just being allowed to become sober at the IRC, some may have tried harder to avoid arrest.

Policy Implications

Chronic inebriates create a huge drain on public resources. Unfortunately, they rarely seek treatment on their own and continue revolving between emergency department, jail and detoxification centers until serious consequences arise. Many have been abusing alcohol for years and access to treatment programs is often not enough motivation to change their behavior. As community resources become scarcer, it is important to optimize healthcare utilization so valuable services can continue to be provided to the community. SIP is a unique collaboration that targets historically hard to reach individuals to help maintain community resources as well as provide services to people who cannot help themselves. These efforts would be impossible without the successful collaboration of all of the agencies involved.

State policymakers are interested in this issue as illustrated by the recently released report titled California Senate Bipartisan Task Force on Homelessness “A Home for Every Californian: The Recommendations of the Senate Bipartisan Task Force on Homelessness for 2001.”[11] This report outlines a number of recommendations for state policymakers to address, including increased access to alcohol treatment services. Additionally, treatment needs for homeless with substance

abuse disorders, mental illness, or co-occurring disorders are consistent with the priorities of the State of California's current Recommended Actions as stated in "A Summary Report on California's Programs to Address Homelessness."[12] However, the responsibility for dealing with the chronic public inebriate population and for meeting their needs falls primarily on the local city and county services. Many of these individuals do not have access to health care and represent a significant public health burden. Those who do access care often do so ineffectively in an episodic and delayed manner, cycling in and out of local hospital EDs and other acute care facilities. Time and again healthcare workers find themselves spending great effort and expense to barely stabilize chronic alcoholics with no hope of meaningful recovery. Communities that to do little more than allow chronic public inebriates to become sober and sent to the bus stop will always find it difficult to address this and other similar populations.

This study illustrates the extensive use of emergency services in this population. It would be advantageous for healthcare workers to become involved in programs such as SIP and to provide an overall community approach to the problem so meaningful communication occurs between law enforcement and alcohol recovery service providers. On a broad scale, this study demonstrates the importance and value of a community-wide intervention program to address the underlying causes of ED overcrowding threatening the stability of the emergency services system statewide.

Law enforcement personnel have the most consistent and frequent contact with chronic inebriates in local areas and must collaborate with healthcare and social service agencies. This study documents the impact of a critical change in the approach to treating these individuals by employing a consistent police presence as the cornerstone of its case management strategy. SIP provides a model for other law enforcement agencies to collaborate with County health and social services in an effort to improve outreach and engagement of chronic public inebriates. In doing so, these programs may break the recurrent cycle these individuals live through and reduce the substantial burden this population places on law enforcement, courts, jails and social services.

The results of this study will also be of interest to those who provide services to chronic inebriates. One aspect that often frustrates providers is the difficulty in recruiting individuals into treatment. SIP graduates participate in the recruitment and retention of individuals and provide peer evidence of its success. In doing so, this program and its graduates serve as models for others. As illustrated by the evolution of this program, success is achieved through novel collaborations among law enforcement, the judicial system, community stakeholders and healthcare service providers.

The policy implications from the results of this study can have a broad effect on how communities approach hard-to-reach and difficult to treat chronic public inebriates. However, the key to success is collaboration among several types of organizations such as demonstrated by SIP. Chronic public inebriates rotate among many service providers and a coordinated effort needs to occur for success.

Future Research

Additional research is needed to clarify these findings. First, a Healthcare Insurance Portability and Accountability Act (HIPPA)-compliant data collection system that incorporates data from all participating agencies should be developed to track, collect and monitor information from SIP clients regardless of their source of healthcare. If this is not possible, participating agencies should at least coordinate data collection efforts that would allow for regular data merging to monitor the effects of the program. Currently, data is mainly collected for tracking and record keeping within each agency and not necessarily for evaluation purposes. Web-based systems may provide an easy and convenient way to collect and monitor these types of data and would allow for data collection and reporting from various sites as needed.

Second, a randomized controlled trial with varying offerings and treatment tracks would be the most appropriate design to determine the success of SIP. However, this may be difficult due to the lack of alternative methods for helping chronic inebriates and may not be accepted in the community. If randomization is found to be difficult, prospective methodologies should at least be utilized to provide ongoing tracking and data collection to provide a more rigorous evaluation of the program. Even if randomization is found to be not possible for offering the program, it still could be used to provide a more rigorous evaluation of program changes. One program change that could be implemented and evaluated using this methodology related to the current method of determining sequential lengths of incarceration of repeated offenders. Clients could be randomized to a new sentence structure and be compared to those receiving the current step-wise sentencing method.

Lastly, while a major difficulty for any study would be the continued tracking of individuals within this population, it would be necessary for a successful prospective evaluation. To improve compliance, methodologies that might be explored include incentives to the individuals for continuous tracking and monitoring. These incentives could potentially include food vouchers and other similar items.

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APPENDIX

Table A-1. Demographic characteristics for 529 chronic inebriates[a] by treatment admission, San Diego, California, January 1, 2000 to December 31, 2003.

	Overall Population (N=529)		Accepted Treatment (n=155)		Treatment Not Offered or Refused (n=374)		
Characteristic	Mean	SD[b]	Mean	SD	Mean	SD	P-Value
Age (Yrs)	45.7	8.4	47.2	7.4	45.1	8.7	0.007
Characteristic	Number	%	Number	%	Number	%	P-Value
Age Group							0.011
≤ 50	385	72.8	101	65.2	284	75.9	
51 +	144	27.2	54	34.8	90	24.1	
Gender							0.050
Male	486	91.9	148	95.5	338	90.4	
Female	43	8.1	7	4.5	36	9.6	
Race/Ethnicity							0.010
White	397	75	128	82.6	269	71.9	
Other	132	24.9	27	17.4	105	28.1	
Arrests							
0-1	190	35.9	9	5.8	181	48.4	<0.001
2	93	17.6	15	9.7	78	20.9	
3	70	13.2	19	12.3	51	13.6	
4 or More	176	33.3	112	72.3	64	17.1	

[a]Identified as visiting the IRC 5 or more times within 30 days.
[b]Standard Deviation

Table A-2. Demographic characteristics for 280 chronic inebriates[a] by treatment admission, San Diego, California, January 1, 2000 to December 31, 2003.

	Offered Treatment (n=280)		Accepted Treatment (n=155)		Refused/Not Admitted (n=125)		
Characteristic	Mean	SD[b]	Mean	SD[b]	Mean	SD	P-Value
Age (yrs)	46.2	7.8	47.22	7.38	45.0	8.3	0.044
Characteristic	Number	%	Number	%	Number	%	P-Value
Age Group (yrs)							0.222
≤ 50	193	68.9	101	65.2	90	72.0	
51+	87	31.1	54	34.8	35	28.0	
Gender							0.093
Male	261	93.2	148	95.5	113	90.4	
Female	19	6.8	7	4.5	12	9.6	
Race/Ethnicity							0.069
White	220	78.6	128	82.6	92	73.6	
Other	60	21.4	27	17.4	33	26.4	

[a]Identified as visiting the IRC 5 or more times within 30 days.
[b]Standard Deviation

Table A-3. Arrest and healthcare utilization information for 280 chronic inebriates[a] by treatment admission, San Diego, California, January 1, 2000 to December 31, 2003.

Characteristic	Offered Treatment (n=280) Number	%	Accepted Treatment (n=155) Number	%	Refused/Not Admitted (n=125) Number	%	P-Value
Prior Arrests							<0.001
0-1	49	17.5	21	13.5	28	22.4	
2	82	29.3	29	18.7	53	42.4	
3	65	23.2	42	27.1	23	18.4	
4 or More	84	30.0	63	40.6	21	16.8	
Sum of Sentence Days for Prior Arrests (days)							<0.001
0-60	109	38.9	38	24.5	71	56.8	
61-90	43	15.4	20	12.9	23	18.4	
99-199	59	31.1	36	23.2	23	18.4	
200 or More	69	24.6	61	39.4	8	6.4	
Any Prior Medical Service Used							0.007
Yes	216	77.1	129	83.2	87	69.6	
No	64	22.9	26	16.8	38	30.4	
Prior ED[b] Visit							0.046
Yes	192	68.6	114	73.5	78	62.4	
No	88	31.4	41	26.5	47	37.6	
Prior EMS[c] Transport							0.007
Yes	144	51.4	91	58.7	53	42.4	
No	136	48.6	64	41.3	72	57.6	
Prior Inpatient Admit							0.036
Yes	97	34.6	62	40.0	35	28.0	
No	183	65.4	93	60.0	90	72.0	

[a]Identified as visiting the IRC 5 or more times within 30 days.
[b]EMS=Emergency Medical Services
[c]ED=Emergency Department

Table A-4. Demographic information for 155 chronic inebriates[a] who were offered and admitted into treatment by 30 day completion, San Diego, California, January 1, 2000 to December 31, 2003.

	Entered Treatment (n=155)		Did Not Complete 30 Days (n=64)		Completed 30 Days (n=91)		
Characteristic	Mean	SD[b]	Mean	SD	Mean	SD	P-Value
Age (yrs)	47.1	7.5	46.4	7.9	47.6	7.1	0.320
Characteristic	Number	%	Number	%	Number	%	P-Value
Age (yrs)							0.657
≤ 50	101	65.2	43	67.2	58	63.7	
51 +	54	34.8	21	32.8	33	36.3	
Gender							1.000
Male	148	95.5	61	95.3	87	95.6	
Female	7	4.5	3	4.7	4	4.4	
Race/Ethnicity							0.037
White	128	82.6	48	75.0	80	87.9	
Other	27	17.4	16	25.0	11	12.1	
Marital Status							0.132
Never Married	79	51.0	28	43.8	51	56.0	
Other	76	49.0	36	56.3	40	44.0	

[a]Identified as visiting the IRC 5 or more times within 30 days.
[b]Standard Deviation

Table A-5. Select demographic and arrest information for 155 chronic inebriates[a] who were offered and admitted into treatment by 30 day completion, San Diego, California, January 1, 2000 to December 31, 2003.

	Entered Treatment (n=155)		Did Not Complete 30 Days (n=64)		Completed 30 Days (n=91)		
Characteristic	Mean	SD[b]	Mean	SD	Mean	SD	P-Value
Residence in County (yrs)	17.0	15.2	17.8	16.7	16.5	14.2	0.622
Characteristic	Number	%	Number	%	Number	%	P-Value
Years of Education							0.450
12 Yrs or Less	108	76.1	46	79.3	62	73.8	
13 Yrs or More	34	23.9	12	20.7	22	26.2	
Permanent Residence							0.560
Yes	12	7.7	4	6.3	8	8.8	
No	143	92.3	60	93.8	83	91.2	
Monthly Income							0.157
Some Income	44	30.8	22	37.3	22	26.2	
None	99	69.2	37	62.7	62	73.8	
Current Sentence							0.002
0-90	55	35.5	33	51.6	22	24.2	
91-169	38	24.5	11	17.2	27	29.7	
170+	62	40.0	20	31.3	42	46.2	
Sum of Days Sentenced Prior							0.008
0-90	49	31.6	29	45.3	20	22.0	
91-180	28	18.1	10	15.6	18	19.8	
181+	78	50.3	25	39.1	53	58.2	

[a]Identified as visiting the IRC 5 or more times within 30 days.
[b]Standard Deviation

Table A-6. Health and healthcare utilization information for 155 chronic inebriates[a] who were offered and admitted into treatment by 30 day completion, San Diego, California, January 1, 2000 to December 31, 2003.

	Entered Treatment (n=155)		Did Not Complete 30 Days (n=64)		Completed 30 Days (n=91)		
Characteristic	Mean	SD[b]	Mean	SD	Mean	SD	P-Value
Years of Previous Use	33.7	8.4	33.8	8.1	33.6	8.7	0.893
Characteristic	Number	%	Number	%	Number	%	P-Value
Any Prior Medical Service Used							0.022
Yes	133	85.8	50	78.1	83	91.2	
No	22	14.2	14	21.9	8	8.8	
Prior ED[c] Visits							0.166
Yes	120	77.4	46	71.9	74	81.3	
No	35	22.6	18	28.1	17	18.7	
Prior EMS[d] Transport							0.001
Yes	96	61.9	30	46.9	66	72.5	
No	59	38.1	34	53.1	25	27.5	
Prior Inpatient Admit							0.125
Yes	67	43.2	23	35.9	44	48.4	
No	88	56.8	41	64.1	47	51.6	
Needle Use Ever							0.082
Yes	56	36.1	18	28.1	38	41.8	
No	99	63.9	46	71.9	53	58.2	
Chronic Mental Illness							0.029
Yes	34	23.6	13	21.3	21	25.3	
No	45	31.3	13	21.3	32	38.6	
Not Sure	65	45.1	35	57.4	30	36.1	
Medication Prescribed (Any Reason)							0.288
Yes	51	32.9	18	28.1	33	36.3	
No	104	67.1	46	71.9	58	63.7	
Frequency of Alcohol Use							0.867
Daily	86	55.5	35	54.7	51	56.0	
Less Than Daily	69	44.5	29	45.3	40	44.0	

[a]Identified as visiting the IRC 5 or more times within 30 days.
[b]Standard Deviation
[c]ED=Emergency Department
[d]EMS=Emergency Medical Services

Table A-7. Demographic information for 155 chronic inebriates[a] who were offered and admitted into treatment by treatment completion, San Diego, California, January 1, 2000 to December 31, 2003.

	Entered Treatment (n=155)		Did Not Complete Treatment (n=116)		Completed Treatment (n=39)		
Characteristic	Mean	SD[b]	Mean	SD[b]	Mean	SD	P-Value
Age (yrs)	47.1	7.5	46.5	7.6	48.8	6.7	0.102
Characteristic	Number	%	Number	Percent	Number	Percent	P-Value
Age (yrs)							0.583
≤ 50	101	65.2	77	66.4	24	61.5	
51 +	54	34.8	39	33.6	15	38.5	
Gender							1.000
Male	148	95.5	111	95.7	37	94.9	
Female	7	4.5	5	4.3	2	5.1	
Race/Ethnicity							0.026
White	128	82.6	91	78.4	37	94.9	
Other	27	17.4	25	21.6	2	5.1	
Marital Status							0.745
Never Married	79	51.0	60	51.7	19	48.7	
Other	76	49.0	56	48.3	20	51.3	

[a]Identified as visiting the IRC 5 or more times within 30 days.
[b]Standard Deviation

Table A-8. Select demographic and arrest information for 155 chronic inebriates[a] who were offered and admitted into treatment by treatment completion, San Diego, California, January 1, 2000 to December 31, 2003.

	Entered Treatment (n=155)		Did Not Complete Treatment (n=116)		Completed Treatment (n=39)		
Characteristic	Mean	SD[b]	Mean	SD[b]	Mean	SD	P-Value
Residence in County (yrs)	17.0	15.2	17.0	15.6	17.1	14.0	0.247
Characteristic	Number	%	Number	Percent	Number	Percent	P-Value
Years of Education							0.950
12 Yrs or Less	108	76.1	80	76.2	28	75.7	
13 Yrs or More	34	23.9	25	23.8	9	24.3	
Permanent Residence							1.000
Yes	12	7.7	9	7.8	3	7.7	
No	143	92.3	107	92.2	36	92.3	
Monthly Income							0.161
Some Income	44	30.8	36	34.0	8	21.6	
None	99	69.2	70	66.0	29	78.4	
Current Sentence							0.298
0-90	55	35.5	45	38.8	10	25.6	
91-169	38	24.5	26	22.4	12	30.8	
170+	62	40.0	45	38.8	17	43.6	
Sum of Days Sentenced Prior							
0-90	49	31.6	35.3	35.3	8	20.5	0.148
91-180	28	18.1	15.5	15.5	10	25.6	
181+	78	50.3	49.1	49.1	21	53.8	

[a]Identified as visiting the IRC 5 or more times within 30 days.
[b]Standard Deviation

Table A-9. Health and healthcare utilization information for 155 chronic inebriates[a] who were offered and admitted into treatment by treatment completion, San Diego, California, January 1, 2000 to December 31, 2003.

Characteristic	Entered Treatment (n=155) Mean	Did Not Complete Treatment (n=116) Mean	SD[b]	Completed Treatment (n=39) Mean	SD[b]	P-Value
Years of Previous Use	33.7	33.3	8.7	35.1	33.3	8.7	0.893
Characteristic	Number	Number	Percent	Number	Number	Percent	P-Value
Any Prior Medical Service Used							0.022
Yes	133	98	84.5	35	98	84.5	
No	22	18	15.5	4	18	15.5	
Prior ED[c] Visits							0.166
Yes	120	88	75.9	32	88	75.9	
No	35	28	24.1	7	28	24.1	
Prior EMS[d] Transport							0.001
Yes	96	67	57.8	29	67	57.8	
No	59	49	42.2	10	49	42.2	
Prior Inpatient Admit							0.125
Yes	67	48	41.4	19.0	48	41.4	
No	88	68	58.6	20.0	68	58.6	
Needle Use Ever							0.082
Yes	56	37	31.9	19	37	31.9	
No	99	79	68.1	20	79	68.1	
Chronic Mental Illness							0.029
Yes	34	28	26.2	6	28	26.2	
No	45	26	24.3	19	26	24.3	
Not Sure	65	53	49.5	12	53	49.5	
Medication Prescribed (Any Reason)							0.288
Yes	51	38	32.8	13	38	32.8	
No	104	78	67.2	26	78	67.2	
Frequency of Alcohol Use							0.867
Daily	86	65	56.0	21	65	56.0	
Less Than Daily	69	51	44.0	18	51	44.0	

[a]Identified as visiting the IRC 5 or more times within 30 days.
[b]Standard Deviation
[c]ED=Emergency Department
[d]EMS=Emergency Medical Services