



**THE IOWA
CONSORTIUM**
FOR SUBSTANCE ABUSE RESEARCH AND EVALUATION

**— JAIL-BASED SUBSTANCE ABUSE —
TREATMENT PROGRAM**

COST ANALYSIS STUDY

PREPARED BY:

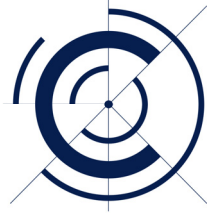
IOWA CONSORTIUM FOR SUBSTANCE ABUSE RESEARCH AND EVALUATION
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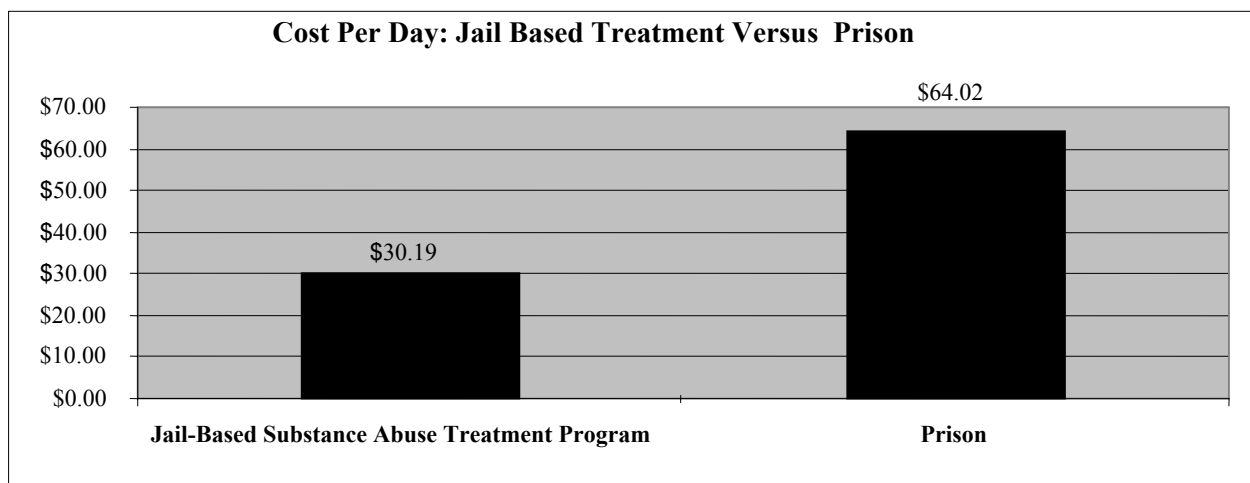
COST ANALYSIS STUDY

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Overview

The cost analysis study of the Iowa Jail-Based Substance Abuse Treatment Program provides an economic perspective on the cost of treatment provision compared to the cost of a prison sentence. The sample for this project includes the 408 clients admitted to the Jail-Based Substance Abuse Treatment Program between July 1, 2004 and June 30, 2005 at the 3 treatment agencies in Iowa involved in this program: United Community Services, Inc., Center for Alcohol and Drug Services, Inc., and Jackson Recovery Centers.

The Jail Treatment Program is less than half of the cost of prison. The average daily cost for a client in the Jail-Based Substance Abuse Treatment Program was \$30.19 compared to \$64.02, which is the daily rate to house an inmate in a state prison facility in Iowa.



The majority of the jail based treatment clients who were interviewed tend to maintain abstinence, do not get arrested, and obtain full-time employment. Client abstinence increased by 82.4 percentage points from admission and maintained a 75.5% rate at the 12 month follow-up. A large percentage of clients were arrest free at Interview 1 lowering somewhat at Interview 2, but remained high at 80.2%. More clients were employed full-time at the 12 month interview.

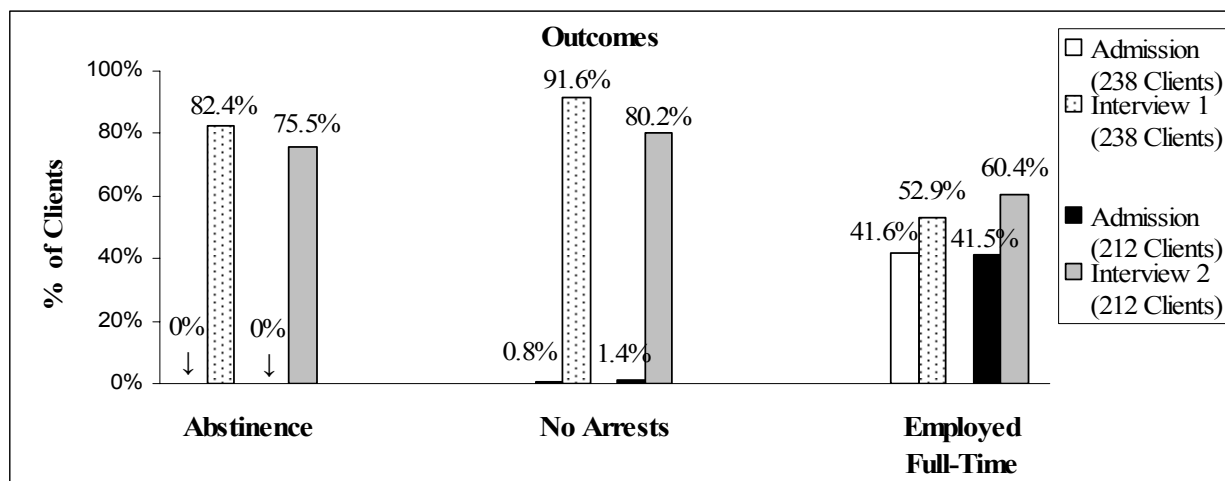


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The Iowa Jail-Based Substance Abuse Treatment Program: Cost Analysis Study

An enhancement of the Jail-Based Substance Abuse Treatment Program Follow-up Evaluation

1. Introduction

The following cost analysis study of the Iowa Jail-Based Substance Abuse Treatment Program provides an economic perspective of the provision of substance abuse treatment and aftercare to incarcerated individuals in Polk, Woodbury, and Scott Counties. The analysis involved examining the costs of providing substance abuse treatment to incarcerated clients in county jails and continuing that treatment after release from jail followed by aftercare. The program, designed as a diversion to long prison sentences for drug-involved offenders, was initiated as a pilot in Polk County. The program was expanded to the other two counties and has proven a success through a follow-up evaluation that measures client abstinence, arrests and employment and several other outcomes. This analysis provides cost information on the aspects of treatment provision of the program compared to prison.

The Iowa Consortium for Substance Abuse Research and Evaluation (Consortium) conducted a cost analysis of the clients admitted to the Jail-Based Substance Abuse Treatment Program. The costs of the Jail Treatment Program were compared to the costs related to incarceration in prison, if the program did not exist as a diversion opportunity to prison, and clients served prison terms versus the program. The Consortium examined the costs of treatment, jail time, and recidivism compared to the costs of time in prison. The purpose of this project was to determine differences in the cost of the program, which involves treatment, support, and aftercare services, versus the cost of a prison sentence.

2. Method

Study Questions

Three questions are addressed as a result of this analysis: 1) What was the total cost associated with in-jail and post-release community treatment?; 2) Was participation in the Jail-Based Substance Abuse Treatment Program more cost effective than not participating?; 3) What conclusions can policy makers draw from the cost information presented in this study?

Program

The Jail-Based Substance Abuse Treatment program was established to deliver substance abuse treatment services to clients during incarceration and after release from jail. To determine effectiveness of treatment services, clients are tracked for two follow-up interviews that occur approximately 6 and 12 months after admission to the treatment program.

Three treatment agencies in Iowa are involved in this program: United Community Services, Inc. (UCS), a Des Moines-based agency delivering treatment to clients at the Polk County Jail; Center for Alcohol and Drug Services, Inc. (CADS), an agency located in Davenport, Iowa delivering treatment to clients at the Scott County Jail; and Jackson Recovery Centers based in Sioux City, Iowa delivering treatment to clients in Woodbury County Jail.

Sample Description

The sample for this project includes all clients admitted to the Jail-Based Substance Abuse Treatment Program between July 1, 2004 and June 30, 2005. During this period, 408 clients were admitted to the program: 181 in Polk County, 132 in Scott County, and 95 in Woodbury County. Two hundred ninety-seven (72.8%) of the clients were male and 111 (27.2%) were female. The clients ranged in age from 18 to 61 with a median age of 32 years. This group of clients spent an average of 77 days in the in-jail portion of treatment and 212 days in the treatment program from admission to discharge.

Measures

The data gathered related to costs of treatment and costs related to incarceration were based on documented actual costs of the Jail Treatment Program and from costs reported by the County Jails and the Iowa Department of Corrections that are based on actual costs. The costs related to the Jail Treatment Program involve time and resources for substance abuse treatment and time and costs of incarceration in the county jails. When clients are released from jail, treatment continues and evolves into aftercare programming. If clients recidivate during this time, costs related to the controlled environment in which they are placed were added program costs. To calculate the alternate consequences to the Jail Treatment Program, a total state cost related to incarceration in prison was obtained from the Iowa Department of Corrections.

Cost Effectiveness Calculations

Treatment Costs:

Treatment costs were directly related to the actual costs of the Jail Treatment Program. Each treatment agency was awarded a contract by the State of Iowa to provide in-jail substance abuse treatment to eligible clients. Agencies were reimbursed monthly on actual expenses related to the program by the Iowa Department of Public Health. The costs of treatment include both administration support and direct treatment services. The reimbursement payments to each agency were examined for the period of July 2004 through June 2005.

The daily cost of treatment was calculated by dividing the total reimbursed amount for the year examined by the total number of treatment days for all clients served under the Jail Treatment Program in the same time frame. The total program cost for the three agencies was \$785,852.62. Five hundred ninety-five clients from the three counties spent 79,949 days in treatment (based on admission and discharge dates) from July 1, 2004 to June 30, 2005. The average cost of treatment per day was \$9.83.

Diagram 1: Treatment Costs

Program Cost	Number of Treatment Days	Treatment Cost Per Day
\$785,852.62	79,949	\$9.83

Jail Costs:

All clients in the Jail Treatment Program begin treatment in county jail facilities: the average length of stay in jail varies by site. The daily rate of jail incarceration was obtained from officials at each county jail. The rates varied by county: \$85.52; \$65.00; and \$53.00. The 408 clients spent a total of 27,230 days in the in-jail portion of the treatment program. The total cost

for the 27,230 days based on the daily rates provided by each county was \$2,054,342.32. To determine the average cost per day of the in-jail treatment time, this figure was divided by the number of clients (408) yielding an average cost of \$5,035.15 per person per year. The average daily cost was determined by dividing the average cost for one year by the number of days in a year (365). The average cost per day of jail for each of the 408 clients from July 1, 2004 to June 30, 2005 was \$13.79.

Diagram 2: Cost of Incarceration in Jail

Program Cost	Average Cost per Person per Year	Average Daily Cost of Jail
\$2,054,342.32	\$5,035.15	\$13.79

Total Treatment and Jail Costs:

To determine the average cost per day for a client receiving treatment in the in-jail phase of treatment, the average cost per day of treatment was added to the average cost per day of incarceration in jail.

Diagram 3: Cost of Treatment in Jail

Cost Per Day of Treatment	Average Daily Cost of Jail	Average Cost of Treatment During In-Jail Phase of Treatment
\$9.83	\$13.79	\$23.62

Additional time in controlled environments:

Upon jail release, many clients spend additional time in controlled environments. Controlled environments include additional time in: jail; prison; halfway houses; residential correctional facilities; residential treatment facilities; OWI facilities; and shelters. These data were obtained from the following sources: client follow-up interviews (question related to additional time in a controlled environment); The Iowa Department of Corrections client management database (ICON), Iowa Courts On-Line, and the Offender Information link on the Iowa Department of Corrections website.

Approximately 27% of the clients spent an additional 4,636 days in county jails for a total cost of \$321,326.84, based on the average daily rate provided by each county. This additional time in jail was over and above the number of days spent in the in-jail portion of treatment. The average daily cost per client for this additional jail time across all clients was calculated by dividing the total cost by the number of clients (408) by the number of days in a year (365) yielding a rate of \$2.16.

Diagram 4: Cost of Additional Time in Jail

Cost of Additional Time in County Jails	Average Cost per Client for Additional Jail Time	Average Daily Cost of Additional Jail Time
\$321,326.84	\$787.57	\$2.16

Approximately 17% of the clients spent an additional 6,562 days in state prison facilities. Prison costs were obtained from the Iowa Department of Corrections. The cost to house an inmate in Iowa for one year is \$23,367. The daily rate is \$64.02. The total cost for the 6,562 days of prison time was \$420,099.24.

Diagram 5: Cost of Time in Prison

Cost of Additional Prison Time	Number of Days Spent in a State Prison Facility	Cost Per Day of Prison
\$420,099.24	6,562	\$64.02

The average daily rate of \$2.82 for additional prison time across all clients was calculated by dividing the total cost of additional time in prison (\$420,099.24) by the total number of clients (408) and dividing by the number of days in a year (365).

Diagram 6: Average Cost of Additional Time in Prison

Cost of Time in State Prison Facilities	Average Cost per Client for Prison Time	Average Daily Cost of Additional Prison Time
\$420,099.24	\$1,029.66	\$2.82

Approximately 22% of the clients spent an additional 7,963 days in controlled environments including halfway houses, treatment facilities, residential correctional facilities, work release facilities, OWI facilities, and shelters. Clients spent an additional 2,900 days in a variety of different county or state facilities. Each of these types of facilities had varying daily costs, usually well below the daily cost for prison. The figure used to estimate the cost per day for these facilities was the daily rate to house an inmate in prison, \$64.02, very likely an overestimate of the actual cost. Clients spent an additional 5,063 days in treatment facilities, halfway houses and shelters. The average daily cost for treatment was \$9.83. The majority of the other facilities, such as halfway houses and shelters are mostly private not-for-profit organizations that are supported by the community through local donations. For the purpose of the study, an average daily rate of \$10.00 was assigned to these additional controlled environments. The total cost for time spent in additional controlled environments was the sum of the costs in any kind of facility, \$236,288.00, as shown in Diagram 7 on the following page.

Diagram 7: Cost of Controlled Environments

Type of Facility	Assigned Cost	Number of Days	Total Cost
Residential Correctional Facility, State-Run Residential Treatment Facility, Work Release Program, OWI Facility	\$64.02	2,900	\$185,658.00
Halfway Houses, shelters, etc.	\$10.00	5,063	\$50,630.00
TOTAL		7,963	\$236,288.00

To calculate the estimated cost per day of the additional time spent in the various types of controlled environments, the total cost (\$236,288.00) was divided by the number of clients (408) to obtain an average cost of \$579.14 per client per year. The average daily cost of \$1.59 was calculated by dividing \$579.14 by the number of days in a year (365).

Diagram 8: Cost of Time in Additional Controlled Environments

Cost of Time in Additional Controlled Environments	Average Cost per Client per Year for Additional Controlled Environments	Average Daily Cost of Additional Time in Controlled Environments
\$236,288.00	\$579.14	\$1.59

3. Results

The average daily cost for a client in the Jail-Based Substance Abuse Treatment Program was \$30.19. This was obtained by adding the average daily cost of jail, the cost per day of treatment, and the average cost for time spent in additional controlled environments. Diagram 9 on the following page delineates the average daily costs of the Jail Treatment Program for the annual time period of July 1, 2004 through June 30, 2005.

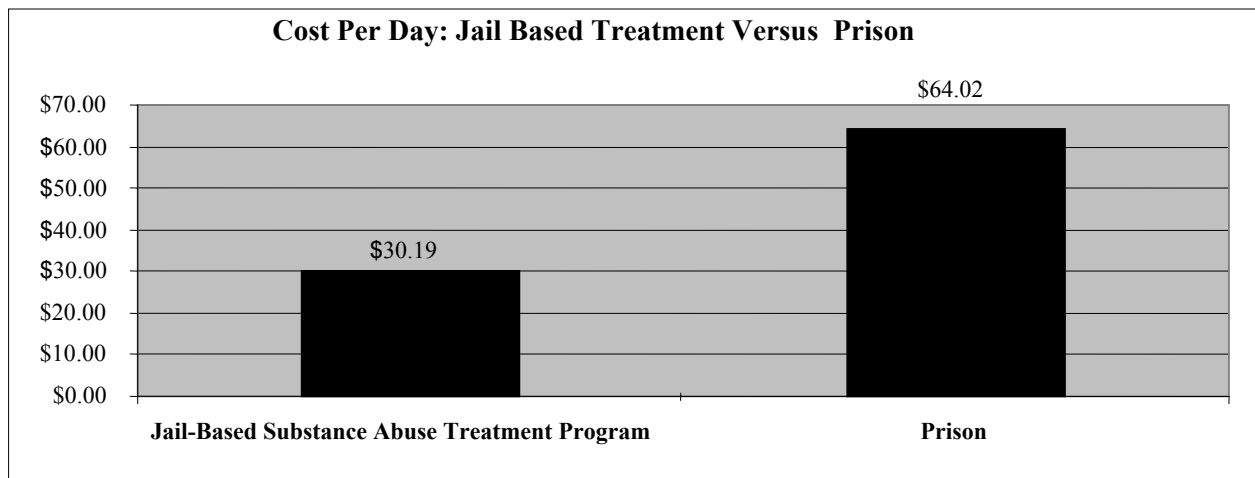
Diagram 9: Average Daily Cost Per Client in Jail Treatment Program

Type of Service	Average Daily Cost
Jail Time	\$13.79
Treatment	\$9.83
Additional Jail Time	\$2.16
Prison Time	\$2.82
Additional Time in Controlled Environments	\$1.59
Approximate Cost per Day for Client in Jail Treatment Program	\$30.19

The alternate to clients in the program was a prison sentence without treatment services. The daily cost of prison is \$64.02 per client. The average client cost for the jail-based program per year was \$11,019.35 and the annual cost of housing a client in prison was \$23,367. Therefore, there is a cost savings of \$12,347.65 per client per year for involvement in the jail-based treatment program versus a prison sentence.

The average daily cost for a client in the Jail-Based Substance Abuse Treatment Program for the year July 1, 2004 to June 30, 2005 was \$30.19 compared to \$64.02, which is the daily rate for a client incarcerated in a state prison facility. Diagram 10 shows the cost of the Jail Treatment Program compared to the cost to house an inmate in a state prison facility.

Diagram 10. Cost Per Day Comparison



The State of Iowa uses the Substance Abuse Reporting System (SARS) to collect outcome data regarding substance abuse treatment services in the state. Clients in the Jail-Based Substance Abuse Treatment program are tracked for two follow-up SARS interviews that occur

approximately 6 and 12 months after admission. The interviews provide data to determine outcomes related to arrests, employment, and abstinence among other outcomes.

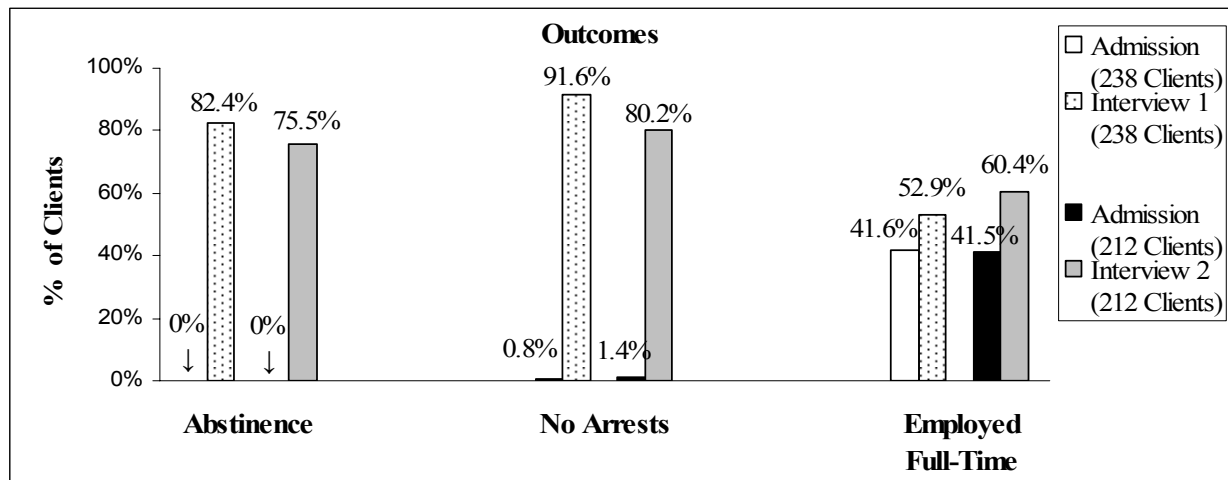
Of the 408 clients admitted from July 1, 2004 through June 30, 2005, 238 clients have completed Interview 1 (6 months after admission) and 212 clients have completed Interview 2 (12 months after admission). Diagram 11 shows client outcomes at admission, Interview 1 and Interview 2 related to abstinence, arrests and employment. Abstinence is defined as a response of “none” when asked to name a primary substance of use, and it refers to abstinence from all substances. The outcome “no arrests” is defined as not having been arrested during the previous six months. Full-time employment is defined as working at least 35 hours per week.

Diagram 11: Client Outcomes from Jail-Based Substance Abuse Treatment Program

	N	Abstained % (N)	No Arrests % (N)	Employed Full-Time % (N)
Admission	408	0.0 (0)	1.0 (4)	35.5 (145)
Interview 1	238	82.4 (196)	91.6 (218)	52.9 (126)
Interview 2	212	75.5 (160)	80.2 (170)	60.4 (128)

Diagram 12 compares the variables between status at admission and status at follow-up on those clients who had a response at *both* admission and follow-up. Client abstinence increased by 82.4 percentage points from admission and maintained a 75.5% rate at the 12 month follow-up. A large percentage of clients were arrest free at Interview 1 lowering somewhat at Interview 2, but remained high at 80.2%. More clients were employed full-time (35 or more hours a week) at the 12 month interview. Clients employed full or part time comprised 74.5% of the interviewed clients 12 months after admission. The majority of the clients interviewed remained abstinent, arrest free and had full-time employment. In contrast, at admission to the program, 100% of the clients reported substance use. Further, all were arrested one or more times or were incarcerated in the 12 months prior to admission into the program.

Diagram 12. Comparison of Admission and Interview Outcome Data



4. Discussion

According to the U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics Bulletin (November 2006, <http://www.ojp.usdoj.gov/bjs/pub/pdf/p05.pdf>), in 2005 the nation's prison population grew 1.9% and Iowa experienced a prison population increase of 2.5%. Iowa was one of the 23 states who reported operating at 100% or more of their highest capacity. Iowa prisons were operating at 21% above capacity at year end 2005, and only 4 states reported a custody population percentage higher than Iowa. When examining the 408 clients participating in the Jail Treatment Program from July 1, 2004 to June 30, 2005, 72.1% of the clients are *not* incarcerated 12 months post-admission. If participation in this program can keep approximately 72% of the clients out of the prison system by offering a substance abuse treatment program which includes education on criminal thinking in an attempt to reduce criminal behavior, the program helps reduce prison population in the State of Iowa.

The Iowa Department of Corrections (DOC) has seen the prison population grow by nearly 400% in the past 10 years to a total exceeding 8,000. At the same time, community correction programs have expanded, much of the increase due to legislative decisions in the early 1990s creating harsher penalties for drug offenses, and longer sentences for a variety of criminal offenders. Eighty to ninety percent of the prison population experience substance abuse disorders and twenty to forty percent have co-occurring disorders. It is widely recognized that individuals with co-occurring mental and addictive disorders are a large and significantly underserved population. Further, the Jail-Based Treatment Program helps alleviate prison management issues such as overpopulation by making more prison beds available for violent, dangerous offenders.

The results of the cost analysis support the potential of the provision of substance abuse treatment to incarcerated individuals to reduce reincarceration and criminal recidivism for drug offenders. Based on the results of this study, the State of Iowa benefits from the investment in jail-based substance abuse treatment programs. The Jail-Based Substance Abuse Treatment Program is less than half of the cost of prison. Had the 408 clients gone to a state prison facility on the day they were admitted to the Jail-Based Substance Abuse Treatment Program and remained in prison through June 30, 2005, the number of incarceration days would have been 76,856. At a cost of \$64.02 per day for prison, the cost to the state would have been \$4,920,321.12, which is 2.1 times higher than the cost for the same individuals to participate in the Jail Treatment Program at \$30.19 per day for a total of \$2,320,282.60.

The benefit of providing this treatment has a value added quality through direct contributions to society as a whole. The majority of the jail based treatment clients tend to maintain abstinence, do not get arrested, and obtain full-time employment. They become contributing members of society, which provides both economical and social benefits. The economy benefits from contributions such as rent/mortgage, purchased goods and services, and revenue from an array of taxes in addition to income. The social benefits involve relationships with family and transition into the community.

When considering the average daily cost of prison (\$64.02), these results suggest that offering treatment services to incarcerated individuals and moving them to continuing care services upon release is a cost effective policy tool.