Cost-Benefit Analyses:
Substance Abuse Treatment
Is A Sound Investment
Cost-benefit analyses consistently find that substance abuse treatment is a sound investment. Literature reviews show that every published cost-benefit analysis of drug treatment has found that investing one dollar yields more than one dollar in economic benefits. The economic benefits commonly include reduced criminal activity, reduced criminal justice and healthcare costs, and increased employment earnings. More specifically, studies of outpatient treatment find that every dollar invested yields between $1.33 and $23.33 in economic benefits. Studies of residential treatment find that every dollar invested yields between $1.68 and $9.70 in economic benefits.

### Overview of Key Findings

- **Treatment produces a positive net monetary value as long as it reduces robberies by 5%.** A nationwide study finds that all treatment modalities reduce robberies by more than 65%. Thus, even when looking only at the benefits of reduced robberies, and ignoring all the other benefits of treatment, the benefits still far exceed the associated costs.

- **Every dollar invested in treatment in California yields an average of over $7 in benefits in societal costs.** About 65% of the total benefit is attributable to reductions in crime costs (including incarceration), 29% is attributable to increased employment earnings, and 6% is attributable to reduced medical and behavioral health care costs. Broken out by treatment modality, every dollar invested in outpatient treatment yields $11 in benefits and every dollar invested in inpatient treatment yields $6 in benefits.

- **Every dollar invested in intensive outpatient treatment in Ohio yields $6.80 in benefits and every dollar invested in long-term residential treatment yields $4.30 in benefits (mostly from reduced crime and increased earnings from employment).**

- **Every dollar invested in outpatient drug-free treatment in Pennsylvania yields $18 in average economic benefits.** The total benefit is in the form of reduced crime, reduced money spent on drugs, and reduced inpatient medical care.

- **Every dollar invested in standard programs for pregnant and parenting women in Arkansas yields $6.50 in economic benefits.** With regard to specialty programs, every dollar invested yields $3.10 in economic benefits. Economic benefits are in the form of reduced criminal activity, reduced use of healthcare services, and increased income from employment.

- **Every dollar invested in a modified therapeutic community for mentally ill chemical abusers in New York yields over $5 in economic benefits (mostly from reduced criminal activity, lower use of expensive healthcare services, and increased employment).**

- **Every dollar invested in residential treatment in the State of Washington yields between $4 and nearly $10 (for residential treatment followed by outpatient).**
With regard to outpatient treatment, every dollar invested yields $23.33 in benefits. Most benefits are in the form of decreased criminal activity and increased income from employment.\textsuperscript{11}

- Every dollar invested in outpatient treatment for pregnant and parenting women in Massachusetts yields $1.72 in economic benefits in the form of reduced crime and criminal justice costs. With regard to residential treatment, every dollar invested yields $2.11 in benefits from reduced crime and criminal justice costs.\textsuperscript{12}

- Every dollar invested in long-term residential treatment yields between $1.68 and $2.73 in economic benefits (based on findings from 10 U.S. cities). With regard to outpatient treatment, every dollar invested yields between $1.33 and $3.26 in economic benefits. The only benefits studied were the tangible costs of crime to society.\textsuperscript{13}

## A Summary of Related Research Findings

### Social Costs of Robbery and the Cost-Effectiveness of Substance Abuse Treatment

Reduced crime provides a key benefit associated with substance abuse treatment. Many studies employ valuation methods that understate the true costs of robbery, and thus the true social benefits of substance abuse treatment related robbery reduction. Using 1992-1997 data from the National Treatment Improvement Evaluation Study, pre-post differences in self-reported robbery among clients in 5 residential and outpatient substance abuse treatment modalities were examined. All substance abuse treatment modalities were associated with large and statistically significant reductions in robbery. It is estimated that treatment produces a positive net monetary value as long as it reduces robberies by 5% and results indicate that all treatment modalities reduce robberies by more than 65%. Thus, even when looking only at the benefits of reduced robberies, and ignoring all the other benefits of treatment, the benefits still far exceed the associated costs. Substance abuse treatment is even more beneficial than is commonly assumed.


### Benefit-Cost in the California Treatment Outcome Project: Does Substance Abuse Treatment Pay for Itself?

This study examined the costs and monetary benefits associated with substance abuse treatment. Primary and administrative data on client outcomes and agency costs from 43 substance abuse treatment providers in 13 counties in California during 2000–2001 were used. This study is superior to prior estimates using California data, which were flawed due in part to lack of a baseline survey, reliance on a discharge sample, a 50% response rate, and self-reported measures of crime. The estimated direct cost of treatment was compared...
with the associated monetary benefits, including the client’s costs of medical care, mental health services, criminal activity, earnings, and transfer program payments. Monetary benefits associated with treatment were estimated using a pre–post treatment admission study design. For the main sample of 2,567 clients, information on medical hospitalizations, emergency room visits, earnings, and transfer payments was obtained from baseline and 9-month follow-up interviews, and linked to information from administrative databases. On average, substance abuse treatment costs $1,583 and is associated with a monetary benefit to society of $11,487. This means that every dollar invested in treatment yields an average of over $7 in benefits. About 65% of the total benefit is attributable to reductions in crime costs (including incarceration), 29% is attributable to increased employment earnings, and 6% is attributable to reduced medical and behavioral health care costs. Broken out by treatment modality, every dollar invested in outpatient treatment yields $11 in benefits and every dollar invested in inpatient treatment yields $6 in benefits. Even without considering the direct value to clients of improved health and quality of life, allocating taxpayer dollars to substance abuse treatment is cost-beneficial.


**Economic Benefits of Substance Abuse Treatment: Findings from Cuyahoga County, OH**

The long-term economic benefits and treatment costs for a sample of substance abuse clients who received treatment in Cuyahoga County, Ohio, were estimated using health, criminal activity, and earnings data. Clients were interviewed at baseline and up to 30 months following baseline. Positive benefits from substance abuse treatment were found, almost of all of which were derived from reduced criminal activity and increased real earnings. Every dollar invested in substance abuse treatment yields between $2.80 and $4.10 in economic benefits. More specifically, every dollar invested in intensive outpatient treatment yields $6.80 in benefits and every dollar invested in long-term residential treatment yields $4.30 in benefits. The reductions in costs to society were found to be persistent over the long-term, 30-month follow-up period. On average, treatment was found to be cost beneficial regardless of the number of times a client entered treatment in the baseline or follow-up periods. Clients who entered residential treatment and then step down to less intensive care showed greater treatment benefits than clients who only received residential treatment.

Benefit-Cost Analysis of Addiction Treatment: Methodological Guidelines and Empirical Applications Using the DATCAP and ASI

The objective of this study was to provide detailed methodological guidelines for using the Drug Abuse Treatment Cost Analysis Program (DATCAP) and Addiction Severity Index (ASI) in a benefit-cost analysis of addiction treatment. A representative benefit-cost analysis was conducted to demonstrate the feasibility and value of the methodological guidelines. The DATCAP was administered at three outpatient drug-free programs in Philadelphia, Pennsylvania, for 2 consecutive fiscal years (1996 and 1997). The ASI was administered to a sample of 178 treatment clients at treatment entry and at 7-months post-admission. The benefit-cost analysis and subsequent sensitivity analysis all showed that total economic benefit was greater than total economic cost at the three outpatient programs. Every dollar invested in outpatient treatment yields an average of $18 in economic benefits. The total benefit mostly comes in the form of reduced criminal activity, reduced money spent on drugs, and reduced inpatient medical care.


Benefit-Cost Analysis of Addiction Treatment in Arkansas: Specialty and Standard Residential Programs for Pregnant and Parenting Women

A benefit-cost analysis of specialty residential treatment and standard residential treatment was conducted on a sample of pregnant and parenting substance abusers in Arkansas. Economic benefits were derived from client self-reported information at treatment entry and at 6-month post discharge. The average cost of treatment in the specialty program was $8,035 versus $1,467 for standard residential treatment. Average net benefits were estimated to be $17,144 for specialty treatment and $8,090 for standard treatment. This means that each dollar invested yields $3.10 in benefits for specialty treatment and $6.50 in benefits for standard treatment. Economic benefits largely come in the form of reduced criminal activity, reduced use of healthcare services, and increased income from employment. Investment in residential treatment for pregnant and parenting substance-abusing women appears to be economically justified.


Benefit-Cost Analysis of a Modified Therapeutic Community for Mentally Ill Chemical Abusers

This study estimates and compares the economic benefits and costs of modified therapeutic community treatment for homeless mentally ill chemical abusers relative to a treatment-as-
usual comparison group. Data from the period 12 months pre-admission to a modified therapeutic community in New York were compared to data from 12 months post-admission. Adjusting for extreme outlier observations, the benefit-cost ratio indicates that every dollar invested yields $5.20 in economic benefits (mostly from decreased crime, lower use of expensive health services, and increased employment). These results quantify the potential economic and social advantages of the modified therapeutic community approach for homeless mentally ill chemical abusers.


**Using the DATCAP and ASI to Estimate the Costs and Benefits of Residential Addiction Treatment in the State Of Washington**

The present study estimates the economic costs and benefits of residential addiction treatment at five programs that served publicly funded clients in the State of Washington. Program- and client-specific economic cost estimates were derived using data collected on-site along with opportunity cost estimates associated with treatment attendance. Economic benefits were calculated from client self-reported information at treatment entry and at 6 months post discharge. Outcome categories included inpatient services, employment, medical and psychiatric conditions, and criminal activity. The average (per client) economic cost of treatment was $4912 for all subjects that completed both a baseline and follow-up questionnaire. The average (per client) total economic benefit was $21,329, leading to estimates of $16,418 for average net benefit and 4.34 for the benefit–cost ratio. Most of the total benefit is accounted for by reductions in criminal activity, though other important benefits include income received from employment. This study provides conclusive evidence that, for this sample of programs in Washington State, the economic benefits of residential addiction treatment significantly exceed the economic costs.


**Benefit-Cost Analysis of Residential and Outpatient Addiction Treatment in the State Of Washington**

A benefit-cost analysis of full continuum (residential followed by outpatient) and partial continuum (outpatient only) care was conducted on a sample of substance abusers from the State of Washington. Economic benefits were derived from client self-reported information at treatment entry and at 9 months post admission. Average (per client) economic benefits of treatment from baseline to follow-up for both full continuum and partial continuum were statistically significant for most variables and in the aggregate. The average
cost of treatment amounted to $2,530 for full continuum and $1,138 for partial continuum. Average net benefits were estimated to be $17,833 for full continuum and $11,173 for partial continuum, with values showing statistical significance. Cost-benefit ratios indicate that every dollar invested in full continuum treatment yields $9.70 in benefits and every dollar invested in partial continuum treatment yields $23.33 in benefits (and $14.87 in benefits for full and partial combined). Most benefits are in the form of decreased criminal activity and increased income from employment. Results strongly indicate that both treatment options generated positive and significant net benefits to society.


**The Costs of Crime and the Benefits of Substance Abuse Treatment for Pregnant Women**

Differences in pre- and post-treatment criminal involvement were measured for a sample of 439 pregnant and parenting women who entered publicly funded treatment programs in Massachusetts between 1992 and 1997. The costs and benefits of five treatment modalities were estimated. Every dollar invested in outpatient treatment yields $1.72 in benefits and every dollar invested in residential treatment yields $2.11 in benefits (in the form of reduce crime and criminal justice costs). This study provides economic justification for the continuation and possible expansion of residential substance abuse treatment programs for criminally involved pregnant women.


**Costs and Benefits of Treatment for Cocaine Addiction in DATOS**

The objective of this study was to examine the cost of long-term residential and outpatient drug-free treatments for cocaine-dependent patients participating in the Drug Abuse Treatment Outcome Studies (DATOS), calculate the tangible cost of crime to society, and determine treatment benefits. Subjects were 502 cocaine-dependent patients. Financial data were available for programs from 10 U.S. cities where the subjects received treatment between 1991 and 1993. Treatment costs and tangible costs of crime were estimated. Results showed that every dollar invested in long-term residential treatment yields between $1.68 and $2.73 in economic benefits. Every dollar invested in outpatient treatment yields between $1.33 and $3.26 in economic benefits. The only benefits examined were reductions in the tangible costs of crime to society. Cost-benefit ratios for both treatment modalities provided evidence of significant returns on treatment investments for cocaine addiction.


