The Impact of Substance Abuse In the Workplace – Employment Status, Earnings and Productivity
Drug and alcohol problems in the workplace cost American employers $197 billion each year. Understanding the impact of substance abuse on the workplace—and the benefits of facilitating workers’ access to treatment—can help employers build a healthier workforce—and a healthier bottom line.

The George Washington University Medical Center
Substance Abuse Treatment Enhances The Economy By Improving Employment Status, Earnings and Productivity

The overwhelming majority of research on the effects of substance abuse treatment programs on employment, earnings, and productivity has reported positive results in terms of improving employability and productivity. Research also confirms the intuitive conclusion that individuals with chronic untreated substance abuse represent a serious liability to employers. These individuals show increased absenteeism from illness and accident, have more health related problems, are more likely to be involved in workplace accidents, and exhibit more frequent job changes than individuals who do not suffer from chronic substance abuse problems. These issues result in higher workers compensation obligations, greater risk of civil liability to employers, increased recruitment and training expenses, and increased general health care expenses borne by employers and the public at large. Many states and private insurance companies recognize these hazards and offer reduced workers’ compensation premiums for employers that employ detection and treatment in drug free workplace policies. The economic benefits of substance abuse treatment on earnings and in the workplace itself are undeniable.

Overview of Key Findings

- Fifty three studies from 24 states were chosen from a pool of 66 state outcomes studies for a meta-analysis conducted by the National Association of State Alcohol and Drug Abuse Directors for the Center for Substance Abuse Treatment. All 33 of the studies that looked at employment related outcomes showed improvement in employment and earnings for individuals that participated in substance abuse treatment.¹

- Another meta-analysis limited to eleven peer reviewed articles published in scientific journals found average earnings increase of $1,520.²

- A team of researchers studying individuals who participated in drug treatment programs in Cuyahoga County, Ohio documented significant increases in employment and earnings among individuals who participated in treatment.³

- A research team that studied individuals in drug treatment programs in a rural mountain state found a 10% aggregate increase in earnings pre vs. post treatment.⁴
A 2001 article appearing in the Southern Economic Journal found reduced probability of employment among chronic drug users as well as reduced labor force participation among males.\(^5\)

A 2007 study conducted by economists at the Pennsylvania State University reports a modest decrease in the likelihood of employment for individuals with chronic substance abuse issues. These individuals, however, are much more likely to be in part-time and other less desirable employment situations.\(^6\)

A study by the University of Kentucky found that the number of days worked over the past 30 days and average wages earned increased significantly for individuals who had entered drug treatment programs.\(^7\)

A study prepared for the state of South Dakota tracked over 1,000 adults before and after treatment. It found that roughly 2/3 of the individuals followed were employed before treatment. Following treatment, approximately 91% of these individuals were employed. Similarly, the study reports that full time employment for 1,000 individuals with drug abuse problems tracked from 1998 to 2004 increased from 499 before treatment to 677 after treatment.\(^8\)

A 2006 study examining cost-benefit of drug treatment in California found increased average earnings of $3,352 per participant.\(^9\)

A cost-benefit analysis of residential substance abuse treatment in the State of Washington found increased earnings from employment of $2,384.\(^10\)

A cost-benefit analysis of both residential and outpatient substance abuse treatment in the State of Washington found increased earnings from employment of $2,299.\(^11\)

According to George Washington University, substance abuse costs businesses $197 billion per year and that 77% of substance abusers are employed.\(^12\)

The National Survey on Drug Use and Health conducted for the Substance Abuse and Mental Health Services Administration in 2007 found more unstable employment patterns among drug abusers as well as increased absenteeism (see the illustration on the next page):\(^13\)

The National Business Group on Health, composed primarily of Fortune 500 companies and other large employers, recognizes the high costs to business of untreated substance abuse. The report recognizes substance abuse as a chronic health condition and recommends that employers offer treatment services including appropriate follow up for employees that relapse.\(^14\)

Testimony provided to U. S. House of Representatives indicates that 75% of employee’s with alcohol problems that went through Chevron Texaco’s employee assistance program were able to retain employment. This saved the company the cost of hiring and training replacement personnel.\(^15\)
A Summary of Related Research Findings

Illicit Drug Use, Employment and Labor Force Participation

This study estimates the probability of employment and labor force participation for different types of drug users using nationally representative data from the 1997 National Household Survey on Drug Abuse. The results indicate a significant, negative relationship to employment for both males and females who are chronic drug users and a significant, negative relationship with labor force participation for males who are chronic drug users. There was little relationship to employment or labor force participation with non-chronic drug use.


The Effect of Substance Abuse on Employment Status

This paper examines the economic cost of substance abuse as measured by consequent decreases in the likelihood of favorable employment outcomes. The analysis extends the literature in a number of important ways. First, previous studies focus either on effect of alcohol or a particular individual illicit drug. This paper expands the analysis to include both

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alcohol and illicit drugs. Secondly, the paper addresses the possibility that there are important qualitative effects on employment status that are not revealed by previous analyses that focused on whether an individual was employed, not employed or had dropped out of the workforce altogether. This paper considers a more detailed classification (out of the labor force, unemployed, employed part-time, employed full-time blue collar, employed full-time service sector, or employed full-time white collar) to determine whether chronic substance abuse is related to other factors such as underemployment in lower paying and part time jobs. The authors use data from the 1992 National Longitudinal Alcohol Epidemiological Survey. In the words of the authors: “We find that substance abuse is endogenous and obtain results consistent with the findings of Kenkel and Wang (1999) – that substance abusers typically land ‘bad jobs.’”


**Treatment Outcomes Study 2011 — Follow Up**

This study was conducted by the University of Kentucky for the Kentucky Department of Behavioral Health, Developmental and Intellectual Disabilities. Data were obtained from follow-up with 1,188 individuals who had been treated in publically funded programs for substance abuse. It looks at a comprehensive set of outcomes such as abstinence, avoidance of criminal behavior, and employment status. Among key findings related to employment status were that the percentage of clients employed full time at follow up increased slightly from 35.4% to 36.8%. All of the difference was due to females as male full time employment actually decreased slightly. Numbers of individuals employed part time increased among both men and women rising from 12.0% to 16.1%. Overall employment, including full time, part time and irregular or day work rose from 54.5% to 57.2%. More significantly, both hours worked in the past 30 days and average monthly income increased substantially between intake and follow up. Average hours worked over the previous 30 days increased 42.9% and average monthly earnings increased 15.1%. Also, the proportion of individuals who earned income from controlled environments such as jail or hospital declined by 41.7%.


**Substance Abuse Treatment Produces Savings**

This research was conducted for the South Dakota Division of Alcohol and Drug Abuse. As with many of the other outcome studies prepared for state substance abuse agencies, it tracks outcomes across several different domains including child welfare, criminal activity, health status and employment and earnings. The study finds an overall economic benefit of $8.43 for every dollar spent on treatment. As noted in the body of the report, the percentage of individuals who were employed and the percentage of individuals employed full
time increased substantially 12 months after treatment compared to their status before
treatment. The author uses a fairly conservative methodology to estimate the increase in to-
tal income ($4.8 million) and tax revenue generated ($370,240) due to increased earnings.


Alcohol and Other Drug Treatment Effectiveness Study: A Review of Individual State Outcome Studies

This is a qualitative meta-analysis reviewing the findings of 53 studies conducted in 24 states that met certain criteria such as relevance, methodological soundness and complete-
ness. Effectiveness criteria reported in the studies covered a comprehensive range of indices
including criminal activity, employment status, health status and whether participants
reduced their use of drugs and alcohol at various follow-up points following treatment.
The studies overwhelmingly showed positive results. All of the 33 studies that measured
employment related outcomes showed increases in employment.


The Relative Contribution of Outcome Domains In the Total Economic Benefit of Addiction Interventions: A Review of First Findings

Like many of the studies reviewed, this paper provides a comprehensive summary of the relative contribution of addiction intervention outcomes to total economic benefit. It is
based upon a compilation of 11 published economic studies that are limited to those that
were peer reviewed and published in scientific journals. The studies estimated the econom-
ic benefits of an addiction intervention(s) in terms of one or more of the following outcome
domains: criminal activity, health services utilization, employment earnings, and expendi-
tures on illicit drugs and alcohol. While the authors attribute the greatest economic benefit
of addiction interventions in the areas criminal activity and health care services, positive
outcomes in employment status and earnings are also noted in all but one of the eight stud-
ies that estimated economic benefit from increased employment income. The lone excep-
tion was a study that dealt with a treatment alternatives to prison program in Wisconsin. In
looking at the original research, the researchers caution about the small sample size of 25
clients contacted for follow up out of 76 who initially agreed to be part of the study.16

Economic Benefit of Substance Abuse Treatment: Findings from Cuyahoga County Ohio

This study estimates long-term economic benefits and treatment costs for a sample of substance abuse treatment participants who received treatment in Cuyahoga County, Ohio. The study uses health, criminal activity, and earnings data from the Persistent Effects of Treatment Studies. Clients were interviewed at baseline and 6, 12, 24, and 30 months following baseline. The researchers found positive results from substance abuse treatment, almost all of which were derived from reduced criminal activity and increased real earnings. Benefit-to-cost ratios ranged from 2.8 to 4.1. 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.


The Cost of Substance Abuse: The Use of Administrative Data to Investigate Treatment Benefits in a Rural Mountain State

This research measures the economic impact of substance abuse treatment in a rural mountain state. Cost data were gathered from four disparate state administrative databases, which were selected and matched to form one complete data set. In this respect, the study is a bit unique from others which primarily rely on self-reported data. A cost-benefit analysis was used to examine the aggregate economic impact of substance abuse treatment. The conservative post treatment outcome of the combined costs revealed a range or $3.98 to $4.12 million dollar overall offset, a difference that resulted in 16 to 20 percent savings above the fixed treatment cost. As it relates to employment and earnings, the study finds that pre-treatment income trended downward while post-treatment earnings trended up. In the aggregate, post treatment earnings increased 10%.


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. As it relates to average increased earnings from employment, the benefit was $3,352 per participant. 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.


**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 $4,912 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. As it relates specifically to income, findings indicate increased earnings of $2,384. 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 which was reported at an average of $2,299 per participant. Results strongly indicate that both treatment options generated positive and significant net benefits to society.


The Substance Abuse Disorder Calculator

This is a brief report discussing the workplace problems and costs associated with alcohol and drug abuse and the benefit of having effective treatment services available to employees. These problems include increased absenteeism, safety risks, increased employee turnover and higher health care costs. According the report, substance abuse costs American employers $197 billion per year.


Worker Substance Use and Workplace Policies and Programs

This report is a summary of findings from the National Surveys on Drug Use and Health. It was conducted on behalf of the Substance Abuse and Mental Health Services Administration and is described by the authors as the primary source of statistical information on the use of illegal drugs by Americans. Key findings in addition to those listed in the body of the report include greater percentage drug use among unemployed compared to employed, lower educational attainment for drug users, and lower family incomes for drug users.

An Employer’s Guide to Workplace Substance Abuse: Strategies and Treatment Recommendations

This report was prepared by the National Business Group on Health which is composed of Fortune 500 companies and other large employers. It notes the well documented costs of substance abuse in the workplace such as increased absenteeism, loss of productivity, damaged morale, increased employee turnover, increased health care costs, and liability to employers for damage and injuries caused by workers who abuse drugs and alcohol. It suggests that businesses provide substance abuse treatment as part of an overall drug-free workplace strategy. The report specifically notes the potential for relapse among individuals who go into treatment recognizing that substance abuse is a chronic health condition.


14 Issue Briefs for Employers

This is a series of issue briefs for employers published by the Center for Substance Abuse Treatment within the Substance Abuse and Mental Health Services Administration, U.S. Department of Health and Human Services. Each of the issue briefs offer an overview of the various issues and costs to businesses of untreated substance abuse. There are numerous references to actual employer experiences that consistently indicate the benefit to employers of effective substance abuse prevention and treatment programs.


Cost Effectiveness and Cost Benefit Analysis of Substance Abuse Treatment: A Literature Review

This literature review conducted for the U.S. Center for Substance Abuse Treatment, summarizes the major findings from 58 books, published articles, research and evaluation studies, and government documents (including “Web” publications) published since 1980. All of the publications focus on the cost effectiveness and cost benefits of substance abuse treatment. The authors find that most of the benefits of substance abuse treatment documented
in the studies are from reduced crime and improvements in employment status and earnings. The authors further suggest that these two variables are easier to express in monetary terms than other more abstract concepts such as improved family situation. Policymakers and researchers/evaluators can use this information to help inform decisions of whether an increase in effectiveness justifies an increase in cost of a particular treatment. The review also explores trends and areas where there are gaps in the literature. A companion annotated bibliography, Cost Effectiveness and Cost Benefit Analysis of Substance Abuse Treatment: An Annotated Bibliography, is also available on the internet at http://neds.calib.com.


Absenteeism and Business Costs: Does Substance Abuse Matter?

This study contradicts the prevailing wisdom that employee absenteeism is one of the major employer borne costs of substance abuse. The authors conducted an empirical test of the assertion that absenteeism related to substance abuse and dependence among workers is an important contributor to the cost of doing business among American companies, a cost sufficient to motivate firms to aggressively intervene to eliminate abuse and dependence among their employees. The results of this analysis, based on relevant national data sets, suggest that such abuse-based absenteeism is, at best, an incidental cost to business and is insufficient to justify significant prophylactic or therapeutic investments of scarce human resource dollars to achieve an abuse and dependence free workplace. It should be noted that the study is narrowly focused on absenteeism and does not account for other costs such as accidents, illness, costs of employee turnover and lost productivity that represent cost to businesses. The authors acknowledge this and cite the Exxon Valdez incident as a reason for employers to take steps to address workplace substance abuse issues.


Potential Cost Savings to the State of Louisiana from the Expansion of Substance Abuse Treatment Programs

This report was prepared for the Louisiana Department of Health and Hospitals, Office for Addictive Disorders. It offers a meta-analysis reviewing several studies that attempt to calculate the cost effectiveness and cost benefit of alcohol and drug abuse treatment. It also contains an extensive discussion of the inherent difficulty of conducting cost effectiveness research for substance abuse treatment and notes the weaknesses of the studies reviewed in the report.

As it relates specifically to employment, the studies showed increased employment and earnings although there was significant variability in magnitude. It should be noted that the
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author concludes that economic benefit from earnings is less significant than for criminal justice and health care cost avoidance. Nevertheless, the study identified by the author as the most methodologically sound reported that individuals completing substance abuse treatment had 65% higher wages and 67% less use of food stamps than a control group of individuals who did not complete treatment.17 The results of this study, $1.64 cost avoidance to state government due to lower criminal justice and public assistance costs, and another study that estimates a $2.19 cost avoidance for publically financed health care combine to support the author’s best estimate of a potential $3.83 reduction in future state government expenditures on criminal justice, medical care and public assistance for each dollar spent on substance abuse treatment.


Substance Use, Education, Employment, and Criminal Activity Outcomes of Adolescents in Outpatient Chemical Dependency Programs

This study published in 2009 examines the effects of treatment initiation on substance use, school attendance, employment, and involvement in criminal activity at 12-months post admission for 419 adolescents (aged 12 to 18) enrolled in chemical dependency (CD) recovery programs in a large managed care health plan. The findings were that treatment initiation significantly increased the likelihood of attending school and remaining abstinent while reducing adolescent employment and having little effect on criminal behavior at the 12 month follow-up.


