

California Drug Courts: Outcomes, Costs and Promising Practices: An Overview of Phase II in a Statewide Study†

Shannon M. Carey, Ph.D.*; Michael Finigan, Ph.D.**;
Dave Crumpton, M.P.P.*** & Mark Waller, B.S.****

Abstract—The rapid expansion of drug courts in California and the state’s uncertain fiscal climate highlighted the need for definitive cost information on drug court programs. This study focused on creating a research design that can be utilized for statewide and national cost-assessment of drug courts by conducting in-depth case studies of the costs and benefits in nine adult drug courts in California. A Transactional Institutional Costs Analysis (TICA) approach was used, allowing researchers to calculate costs based on every individual’s transactions within the drug court or the traditional criminal justice system. This methodology also allows the calculation of costs and benefits by agency (e.g., Public Defender’s office, court, District Attorney). Results in the nine sites showed that the majority of agencies save money in processing an offender through drug court. Overall, for these nine study sites, participation in drug court saved the state over \$9 million in criminal justice and treatment costs due to lower recidivism in drug court participants. Based on the lessons learned in Phases I and II, Phase III of this study focuses on the creation of a web-based drug court cost self-evaluation tool (DC-CSET) that drug courts can use to determine their own costs and benefits.

Keywords—cost-benefit, criminal justice, drug courts, evaluation

The economic consequences to society of alcohol and other drug abuse have long been detailed. There is a well-researched link between substance abuse and criminal behavior that results in a profound fiscal impact on the

†This article is intended as an overview, or summary, of the background, methods and results found in Phase II of an extensive statewide study of California’s adult drug courts. The full Phase II report can be found at www.npcresearch.com.

*Senior Research Associate, NPC Research, Portland, OR.

**President, NPC Research, Portland, OR.

***Senior Cost Analyst, NPC Research, Portland, OR.

****Cost Analyst, NPC Research, Portland, OR.

Please address correspondence and reprint requests to Shannon M. Carey, Ph.D., Senior Research Associate, NPC Research, 4380 SW Macadam, Suite 530, Portland, OR 97239; 503-243-2436 X104; email: carey@npcresearch.com

criminal justice system. As in many other states throughout the country, the costs of the rising tide of drug arrests have been financially burdensome for California’s trial courts (California Administrative Office of the Courts 2004).

One of the efforts to address this problem has been through drug court programs. Drug courts use the coercive authority of the criminal justice system to offer treatment to nonviolent addicts in lieu of incarceration. Drug courts have been shown to be effective in reducing recidivism (GAO 2005) and in reducing taxpayer costs due to positive outcomes for drug court participants (Carey et al. 2005; Carey & Finigan 2003). Some drug courts have even been shown to cost less to operate than processing offenders

through business-as-usual (Carey & Finigan 2003). The research literature overwhelmingly indicates that retention and completion of treatment programs have a positive effect in reducing drug use and criminal behavior (Belenko 2001, 1998).

While many studies have shown drug courts to be effective in reducing crime, relatively few have looked at the economic impact of these programs on either a local or statewide level (these few include Piper & Spohn 2004; Carey & Finigan 2003; Logan, Hoyt & Leukefeld 2001). In the typical drug court program, participants are closely supervised by a judge who is supported by a team of agency representatives including addiction treatment providers, district attorneys, public defenders, law enforcement officers and parole and probation officers who operate outside of their traditional adversarial roles and work together to provide needed services to drug court participants. This unique collaboration is commonly perceived to be expensive to implement, and data are needed to demonstrate whether such treatment reduces costs in the long run.

Since the first drug court began operation in Miami in 1989, several hundred thousand men, women and juveniles have participated in drug court programs that have involved federal, state and local taxpayer investments of billions of dollars. There are currently well over 1,000 adult drug courts operating in all 50 states. Over 12% of them are located in California (Cooper 2004). The rapid expansion of drug courts, coupled with an uncertain fiscal climate, highlights the need to collect definitive cost data on these programs.

The Judicial Council of California and its administrative unit, the Administrative Office of the Courts (AOC) were awarded a grant from the United States Department of Justice to explore the feasibility of a statewide cost/benefit evaluation of adult¹ drug courts. The AOC consulted with state and national drug court experts and Northwest Professional Consortium (NPC) Research was selected as the primary contractor for this project. The purposes of this statewide evaluation are:

1. To develop a methodology that can be used by drug courts throughout California for ongoing cost-benefit evaluation beyond the conclusion of this project.
2. To answer two critical drug court policy questions:
 - a. Are adult drug courts cost beneficial?
 - b. What adult drug court practices are found to be most promising and cost beneficial?

The study was designed to address these questions in three phases. Phase I was completed in May 2002. In the first phase, NPC Research conducted an in-depth case study of three adult drug courts. Phase I consisted of both an outcome evaluation and a cost-benefit analysis, the purpose of which was to develop the preliminary methodology and protocols for cost evaluation. All three courts that participated in Phase I of this study showed positive cost-benefits due to positive outcomes for drug court participants. Some of these results are included in this report. In Phase II (the focus of this

article), the researchers tested the methodology and protocols in six additional courts, combined the outcome, cost and promising practices results on all nine participating drug courts and compiled the information necessary to develop a preliminary tool for drug court cost self-evaluation. Finally, in the third phase, the Drug Court Cost Self-Evaluation Tool (DC-CSET) will be created, tested and then launched statewide.

There were two main products from Phase II of this study. One product was the combined outcome, cost and promising practices results for the nine sites that took part in Phases I and II of the study. The second product was the compilation of information that would allow the development of a Drug Court Cost Self-Evaluation Tool (DC-CSET), to be used by drug courts statewide in Phase III for self-evaluation of drug court costs and benefits. This task included the determination of the minimum amount of data collection necessary to conduct a drug court cost-benefit evaluation as well as the development of reasonable proxies for drug courts to use in place of direct measurement, when direct measurement is too difficult to accomplish or is not available. The tool is currently under development.

This article is intended to provide an overview of the outcomes, costs and promising practices resulting from this study. More detailed description of the study methodology and results as well as further interpretation of these results can be found in the Phase II final report "California Drug Courts: A Methodology for Determining Costs and Benefits, Phase II: Refining the Methodology" at www.npresearch.com.

METHODOLOGY

Site Selection

The courts considered for participation in Phase II of this study included diversionary, post-plea and pre-plea programs. Before being considered as sites for this study, the minimum requirements for candidate drug courts were that at least 100 participants enter the program on a yearly basis (to allow for adequate amounts of data and statistical power). They were established before 1997 (so that there would be at least four years of outcome data), and have electronic drug court databases (for greater ease in gathering data). In addition, an effort was made to select courts representing diverse demographic and geographic jurisdictions.

The California drug court programs that participated in this study were:

- Butte County
- Los Angeles (Downtown)
- Los Angeles (El Monte)
- Monterey County
- Orange County (Santa Ana)
- Orange County (Laguna Niguel)
- San Diego County (East)

- San Joaquin County
- Stanislaus County

Sample Selection

Drug court participant selection. A cohort approach was used in selecting samples for this study. All participants who entered the drug court programs during a specified time period and were active in the drug court programs for at least two weeks were included in the study. It was necessary for drug court participant samples to be selected from years that had a reasonable amount of administrative data, while at the same time giving the individuals in the samples enough time for outcomes to occur. The drug court cohorts were selected from participants who entered the drug court programs between January 1998 and December 1999, which provided at least four years of outcome data. The participant cohorts from each site were selected from either the drug court database or from databases (such as electronic court records) that flagged drug court participants.

Comparison group selection. The selection of a comparison group is a step that is crucial to a solid research design. Because it is not possible to randomly assign individuals to drug court or non-drug court conditions in a study involving the collection of retrospective data (such a study could only collect outcome data after random selection), it is necessary to use a quasi-experimental design. In a quasi-experimental design it is important to avoid, wherever possible, any selection biases. This means the researcher must attempt to choose comparison samples that resemble the drug court samples as closely as possible. Otherwise, the researcher cannot be certain that any differences seen in outcomes for the two groups are due to participation in drug court and not to some other pre-existing difference between the two groups.

The selection of the comparison group at each site was performed with the help of drug court team members normally involved in the drug court eligibility process. Following is a general description of the selection process. (The specific selection process for each site is given in the site-specific reports in Appendices A1-A6 of the full Phase II final report.)²

In most cases, the district attorney made the first selection of individuals who were eligible to participate in the drug court program. With the aid of these drug court team members, evaluation staff examined individual case files (either district attorney files or court files) for offenders who were arrested on drug court eligible charges in 1998 or 1999 to select those who were eligible for drug court but who did not participate. Eligibility was based on current charges (generally drug possession charges or charges considered to be “related” such as forgery or prostitution, while drug sales are usually excluded) and on criminal history (past charges for violence are generally excluded). There are also other eligibility criteria that may be specific to each site, such as citizenship and demonstration of substance use issues. Some

drug courts also have “suitability” criteria that include the client admitting to a drug problem or an assessment that determines the presence or absence of mental health issues. Unfortunately, in a retrospective design, it is not possible to include these suitability requirements in selecting the comparison group.

However, once the potential comparison group members were selected based on each drug courts’ eligibility criteria, the comparison offenders at each site were matched as closely as possible to the drug court participants using a propensity score matching technique based on demographics (gender, age, ethnicity), previous criminal justice involvement (in the two years prior to the drug court arrest: number of all arrests, number of drug related arrests, number of days in jail), and previous use of treatment services (number of treatment episodes in the two years prior to the drug court arrest). Analyses at all study sites showed no significant differences between the drug court and comparison groups on these variables. (This matching process is described in more detail and for every site in the full Phase II final report.)

A notable concern regarding the use of this type of comparison group is the potential for selection bias due to differences in motivation between the drug court participants and the comparison group. This is the bane of most quasi-experimental designs used in outcome studies of drug courts, particularly those that include the collection of retrospective data (e.g., Carey & Finigan 2003; Rempel et al. 2003; Finigan 1996). In the case of retrospective data collection, it is not possible to determine whether those who actually participated in the drug court program were more motivated to change their drug habits than those who received traditional court processing. It is also not possible to determine the myriad reasons offenders may have for choosing either drug court or traditional court processing. However, interviews with key informants, such as public defenders, as well as information gathered from interviews and focus groups with participants in other drug court research by the authors suggest that the reasons offenders choose for or against participating in drug court are not often related to motivational issues. Harrell and colleagues (2003) examined the coercive elements in drug courts and suggests that they are not unlike the coercive elements that operate from family and friends to entice individuals to enter treatment in non-drug court settings. Further, a recent study (Cissner & Farole 2006) involving focus groups with multiple participants and staff in multiple drug courts found that the consensus among both participants and staff was that participants were “forced” or coerced into drug court and mainly chose drug court to avoid incarceration. In the end, motivation to change may not be as important a factor in choosing a drug court option as other legal and personal factors.

Cost Analysis Approach

In order to maximize the study’s benefit to policy makers, a “cost-to-taxpayer” approach was used for the

evaluation. This focus helps define which cost data should be collected (costs and benefits involving public funds) and which cost data should be omitted from the analyses (e.g., costs to the individual participating in the program). In this approach, any criminal justice related cost incurred by the drug court or comparison group participant that directly impacts a taxpayer/citizen (either through tax-related expenditures or the results of being a victim of a crime perpetrated by a substance abuser) is used in the calculations.

In addition, NPC's TICA cost approach (described below) looks at publicly-funded costs as opportunity resources. The concept of opportunity cost from the economic literature (e.g., Russell et al. 1996) suggests that these system resources are available to be used in other contexts if they are not spent on a particular transaction. The term opportunity resource more fully describes these as resources that are now available for different use. For example, if substance abuse treatment reduces the number of times that a client is subsequently incarcerated, the local sheriff may see no change in his or her budget, but an opportunity resource will be available to the sheriff in the form of a jail bed that can now be filled by another offender.

Cost Protocols—Transactional and Institutional Cost Analysis

This study relied upon a Transactional and Institutional Cost Analysis (TICA) approach developed by NPC Research primarily during Phase I of this study (NPC Research and the California Administrative office of the Courts 2003) and in a concurrent study of the Multnomah County Drug Court in Portland Oregon (Carey & Finigan 2003). This methodological approach combines process and outcome evaluations with organizational, institutional and cost analyses (see Crumpton, Carey & Finigan 2004 for a full description of the theoretical and practical basis for this approach).

The TICA approach views an individual's interaction with publicly-funded agencies as a set of transactions in which the individual utilizes resources contributed from multiple agencies. Transactions are those points within a system where resources are consumed and/or change hands. In the case of drug courts, when a drug court participant appears in court or has a drug test, resources such as judge time, public defender time, court facilities, and urine cups are used. Court appearances and drug tests are transactions.

In addition, the TICA approach recognizes that these transactions take place within multiple organizations and institutions that work together to create the program of interest. These organizations and institutions contribute to the cost of each transaction that occurs for program participants. TICA is an intuitively appropriate approach to conducting costs assessment in an environment such as a drug court, which involves complex interactions among multiple taxpayer-funded organizations.

The six key steps in TICA are as follows:

Step 1: Determine drug court and non-drug court flow/

process (how clients move through the system)

Step 2: Identify the transactions that occur within this flow (where clients interact with the system)

Step 3: Identify the agencies involved in each transaction (e.g., court, treatment, police)

Step 4: Determine the amount of resources used by each agency for each transaction (e.g., judge time, attorney time, number of court sessions)

Step 5: Determine the cost of the resources used by each agency for each transaction (e.g., cost of judge's time per hour or per drug court session, overhead, etc.)

Step 6: Calculate cost results (e.g., cost per transaction, cost per agency, total cost of the program per participant)

The cost per transaction (e.g., the cost of a drug court session) is calculated by determining the amount of resources (e.g., staff time) each agency contributes to each transaction, the cost of that time (including indirect costs such as benefit rates and overhead rates) and then summing the cost for each agency for each transaction. The total costs are simply the sum of the transactional costs. For example, the total cost of the program would be the cost for each program transaction (e.g., court sessions, treatment sessions, drug tests, other services) added together. The same approach is used in the calculation of "business-as-usual" case costs and outcome costs.

All costs for this study were calculated in 2005 dollars. This served the purpose of providing the program and the criminal justice system with information on what it would cost "now" to provide the services (or other transactions) offenders received in 1998-1999. This also allowed a comparable base to examine costs across transactions and agencies.

Data Collection

Administrative data. The study design incorporated a longitudinal data collection approach that enabled researchers to track study participants over a four-year time period.³ Although a longer time period for outcomes may have been preferred (to determine the long-term effects of drug court participation including the long-term costs or benefits) the choice of time period was mainly constrained by the availability of reliable data. Administrative data were a key source of information used for this study. Administrative data sets are the best source of data on an individual's use of taxpayer-funded resources because these data sets generally contain individual level information collected on a regular basis. Further, these data sets are often used for billing purposes, which means there is a fairly strong incentive for thoroughness in the collection and entry of data. Although these databases are themselves subject to error (missing data, data entry error, etc.), they are extremely important to cost research because they represent the agencies' best information on the resources that have been used and are often the basis upon which future budgets are created. However, these

TABLE 1
Main Transactions—Data Collected and Common Sources

Transactions/Data	Most Common Data Source
Drug court eligible case related transactions	
Arrest date and charges	CLETS (statewide) and local criminal justice databases
Booking dates	Local sheriff databases
Drug court sessions/court case dates	Drug court databases
Admission and discharge dates and status at discharge	Drug court databases
Treatment dates	Drug court database and statewide treatment database (CADDs)
Ancillary services (e.g., anger management, parenting classes) dates	Drug court databases
Urinalyses dates	Drug court database
Jail time related to the drug court eligible case (including jail as a drug court sanction) start and end dates	Local sheriff/jail databases
Probation time related to the drug court eligible case	Local probation databases
Outcome Transactions	
Criminal Justice System Transactions	
Arrests and bookings	CLETS and local criminal justice databases
Court cases (trial/no-trial)	Court databases
Jail time	Local sheriff/jail databases
Probation time	Local probation databases
Prison time	CLETS
Victimizations	CLETS and local criminal justice databases
Treatment	
Treatment episodes	CADDs

Note: CADDs = California Alcohol and Drug Data System; CLETS = California Law Enforcement Telecommunication System

data sets are not always easily accessible to researchers and present the challenge of extracting needed data from a variety of diverse data systems. In spite of these challenges, persistent search for existing data and following appropriate protocols for gaining access were rewarded with working datasets from a variety of sources at every site.

Table 1 includes a list of the type of data gained at each site and the most common sources for that data. Other than demographic data, the majority of data gathered was related to the types of transactions that occur in the drug court program and traditional court processing (business as usual). The case that led (or could have led) to drug court was considered the “drug court eligible case” and any transactions that occurred as a result of that case were considered resources that were invested in that case. Transactions that occurred after the filing date of the drug court eligible case, except those related to the eligible case, were considered outcome transactions, even if they occurred while an offender was actively participating in the drug court program. The same types of outcome transactions were measured for both the drug court participant group and the comparison group.

Observation, interviews, and document review. In order to collect accurate information on drug court process and cost it is necessary to work closely with drug court staff. Observation of drug court team meetings and drug court sessions, intensive individual interviews⁴ with drug court team members, and examination of key documents such as drug court policy manuals and agency budgets (and other financial documents) for all agencies involved in drug court are necessary for a thorough understanding of drug court structure, organization, and process. Without this detailed look at the drug court and its context, valuable information that informs data collection methods, data analysis, cost calculations, and the interpretation of results is lost. For example, a drug court may have a policy that participants must pay for their treatment. However, closer examination of the drug court reveals that in 90% of the cases these fees are waived due to lack of ability to pay. In this case, if policy were followed in the determination of costs, the cost of treatment would not be included in the cost to the taxpayer, since participants are supposed to pay themselves, while in reality, 90% of this cost actually

should be included in the cost to the taxpayer calculations.

RESULTS

Drug Court Participants Had Good Retention/Graduation Rates

Measures of drug court success generally include program retention rates. The retention rate is the number of drug court participants who have successfully completed the program (graduated) plus the number that are currently active divided by the total number of participants who have entered the program. The cohort approach along with the retrospective data collection used in this study allowed the calculation of the program completion rate rather than the retention rate. The program completion rate is the rate of graduation from the program after all active participants in a cohort have graduated or terminated from the program. For example, at the time of data collection for the cohort who entered the program in 1998-1999, all individuals in the cohort had either successfully completed the program (completed treatment and satisfied all other program requirements) or had been terminated unsuccessfully. There were no active participants. Therefore, the program completion, or graduation, rate is the number of participants who graduated from the program divided by the total number of offenders who entered during the 1998-1999 time period.

The average participant completion rate across the nine sites was 52%. The majority of sites had graduation rates higher than 50% and four of the nine sites had graduation rates greater than 65%.

These are extremely high completion rates compared to completion rates for non-drug court related (non-offender based) treatment. The drug courts in this study provided participants with intensive outpatient treatment. The Office of Applied Studies, Substance Abuse and Mental Health Services Administration (SAMHSA), coordinates and manages the collection of national treatment admission and discharge data. This "Treatment Episode Data Set (TEDS)" contains national data on completion rates for various types of treatment in the general population including intensive outpatient treatment. The most recent TEDS publication (SAMHSA 2002) reports that the average completion rate for intensive outpatient treatment was 35%.

The nine drug courts programs that participated in this study had an average completion rate 17% higher than non-drug court related intensive outpatient treatment. Four of these drug court programs had completion rates nearly twice the national average for non-offenders. Given that the drug court population may have more difficulties completing treatment (due to lifestyle, drug abuse history and many other factors), this supplies strong evidence that the components of drug court programs that are additional to the treatment itself (such as court supervision, rewards and sanctions, and regular drug testing) are an effective

combination for keeping addicted individuals in treatment and for supporting these individuals to complete treatment.

Drug Court Participants Had Lower Recidivism Rates

One of the key goals of drug courts in general, as well as of the nine California drug court programs in this study specifically, is to reduce recidivism into the criminal justice system by treating the drug addiction that leads offenders to commit crimes. If the drug court programs are succeeding in this endeavor, the recidivism for offenders who participate in these programs should be lower than that for similar offenders who were eligible but did not participate.

One measure of recidivism is the percentage of those who were arrested subsequent to entering the drug court program (or an equivalent date for the comparison group). Arrests for this study included any police or sheriff contact that resulted in a new arrest (not conviction). This included arrests for both misdemeanor and felony charges but did not include citations such as those for traffic incidents. The average percentage of those rearrested in the nine drug court sites in this study over the four years from drug court entry were as follows.

Drug court graduates	17%
All drug court participants	29%
Comparison group	41%

On average, drug court participants had a recidivism rate 12% lower than similar offenders who did not participate in the drug court program. The comparison groups of those who did not participate in drug court programs were more than twice as likely as drug court graduates to be re-arrested. This provides evidence that drug courts are successfully reaching their goal of reducing recidivism in drug-addicted offenders.

Investment Costs

One common method of assessing investment cost for drug court programs is to simply add up the program related costs. Program related transactions include drug court hearings, drug court treatment, drug tests, and case management. An examination of where a drug court is concentrating its resources can provide clues as to which transactions are important for successful outcomes. For example, the majority of sites spent more money on treatment than on court supervision time (such as drug court sessions). On average, across the nine sites, the programs spent roughly twice as much on treatment as on court supervision. However, the few sites that spent more on court supervision than treatment had some of the highest outcome benefits. This is an interesting, and somewhat unexpected, result that should be researched further to gain a better understanding of what is happening in the court sessions and treatment sessions at these sites that may influence participant outcomes in this way.

Total program costs in the nine study sites varied from about \$3,000 to almost \$13,000 per participant. Those courts

with the highest program costs tended to spend the bulk of their money on treatment while those courts with the lowest investment cost spread their money relatively evenly between the court sessions and treatment.

However, looking at program costs alone is misleading in two ways: (1) It fails to add in the additional system costs associated with the drug court case that are not directly related to the program; (2) It fails to account for the amount of similar resources that are spent by the system on standard processing of cases. It is the net investment, the amount of additional resources above and beyond those allocated for standard processing of cases that is the relevant investment in drug court.

The total cost to the system of the case that led to drug court includes transactions that occurred outside the actual program, but were related to that same case—for example, the cost of the arrest and original booking and jail time that occurred before the offender was referred to the drug court program. It also includes jail time that occurred if a participant terminated from the program. For the comparison group, this case is one that may have led to participation in the drug court program, but did not. The total cost for the comparison group of the drug court eligible case includes transactions that occur in the business-as-usual case processing system that are related to that specific case such as the original arrest, jail time, probation time, court processing and prison time.

Total system investment in the drug court case for program participants ranged from about \$5,000 to over \$18,000 per participant. Interestingly, the range in traditional court processing was similar, from about \$5,000 to over \$15,000 per offender. There are some economists who feel that business-as-usual costs need not be calculated based on the belief that by merely counting those unique costs for a drug court program the researcher will have captured the real costs of that program. But what these numbers demonstrate is that often drug court participants have fewer business-as-usual costs (e.g. court hearings, bench warrant costs) than the drug court eligible clients who do not participate in drug court and are processed outside of drug court. This typically means that the savings in the business-as-usual processing for drug court clients can offset the unique costs of drug court to the point that the net investment for the system is small, or even results in a net savings.

Net investment. The net investment indicates the resources put into a drug court program over and above the resources that would have been spent had there been no drug court program. In the majority of the nine drug court sites, the net investment was less than \$3000 per participant, with most of the cost incurred by Probation and Treatment. One drug court program, San Joaquin County, cost nearly \$500 less per participant than traditional court processing.

Some courts had net investment costs that were only a few hundred dollars per case. This can be due to less expensive treatment, less Probation involvement or less use

of jail as a sanction. How the drug court uses its resources (e.g., having treatment in-house or contracted out, using jail as a sanction frequently or as a last resort) can have a large influence on investment costs.

The use of the TICA approach provides the somewhat novel ability to calculate the costs per agency. Figure 1 shows the average net investment per participant for each agency involved in the nine drug court programs. For most agencies, the cost invested in the drug court program was less than the cost invested in traditional court processing. (For example, the Superior Court spent an average of \$464 less to process an offender through drug court than to process an offender through the traditional court system.) However, this does not imply that these agencies do not need funds for the drug court program. At the time of this study most drug court programs were not yet institutionalized and did not have a consistent funding stream. The fact that most agencies spend less on drug court could mean that some of the funding normally directed to the traditional court process at these agencies may be more efficiently spent if redirected to fund activities for the drug court program.

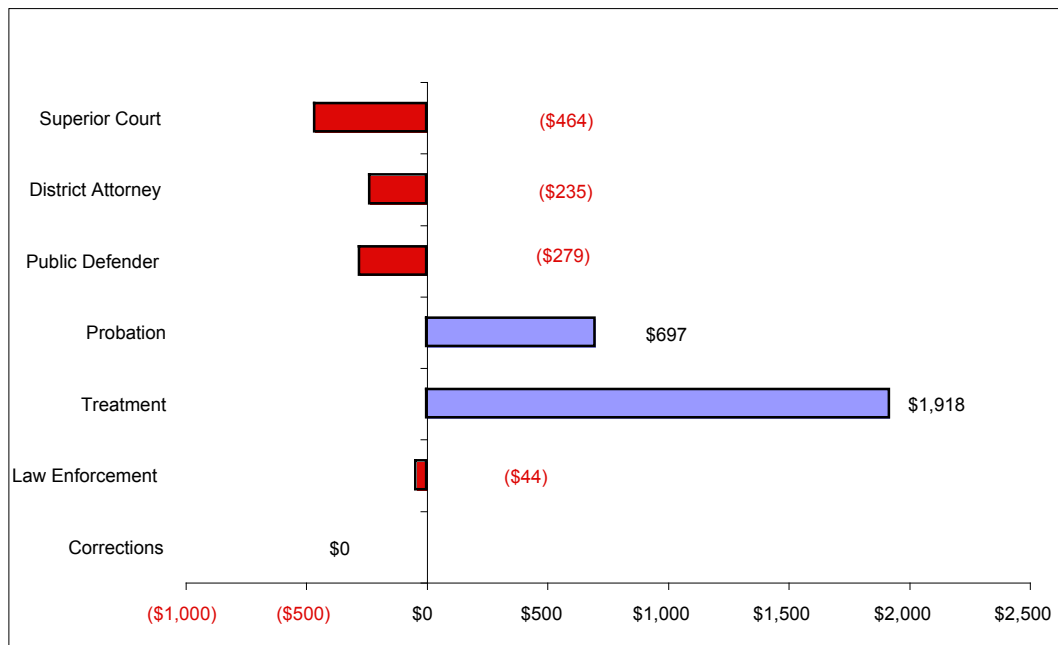
Figure 1 (and Figure 2 later in this document) show that there is a large variation in costs between agencies. One implication of this variability in cost is that a system-wide funding perspective is needed to allocate resources adequately to most efficiently address substance use problems and reduce recidivism.

Outcome/Impact Costs

Outcome, or impact, costs were defined as those related to transactions that occurred after drug court entry but were not related to the drug court eligible case. Outcomes were tracked over a four-year period after drug court entry. The same types of outcome transactions were measured for both the drug court participant group and the comparison group at all nine sites. The outcomes in this study focused mostly on criminal justice recidivism including rearrests, new court cases, jail/prison/probation time served, and victimization costs due to person or property crimes. Outcomes also included treatment episodes occurring after drug court program exit.

Overall, the drug courts experienced substantial benefits due to positive outcomes for drug court participants. On average, those who participated in the drug court regardless of whether they completed the programs were rearrested less often, spent less time on probation and less time in jail and prison. Outcome benefits were calculated by subtracting the average outcome cost for drug court participants from the average cost of those who were processed through business-as-usual. Benefits varied widely among sites ranging from about \$3,200 to over \$15,000 saved per participant. The average net benefit due to positive outcomes (including savings due to fewer victimizations) was \$11,000 per participant. Although positive outcomes were fairly consistent across the sites, the one site that did not follow practices consistent

FIGURE 1
Net Investment Costs per Participant per Agency



with the Ten Key Components of Drug Court (e.g., consistent judicial supervision, frequent drug tests and court appearances; NADCP 1997) had much poorer outcomes than the other sites. This assisted in the determination of promising practices discussed later in this article.

Another way to look at the costs for each drug court site, which is a special advantage of the TICA methodology, is the costs per agency. Figure 2 presents the benefit (or savings) per participant due to the difference in outcomes between drug court participants and the comparison group for each of the agencies involved in the program.⁵ Every agency except for treatment experiences some degree of benefit/savings due to positive outcomes for drug court participants. The higher outcome costs for treatment likely are a result of the fact that drug court participants continue to engage in treatment after program exit more than those who did not participate in drug court programs, which many would consider to be a positive outcome. Some agencies see a very large benefit compared to others. This is particularly true for the Department of Corrections (DOC). Interestingly, as Figure 1 demonstrates, the DOC has no investment costs at any site (as Corrections does not spend staff time on drug court activities) but experiences the largest benefit of any agency (over \$3,000 per drug court participant). This is also an example of “opportunity resources” as was described earlier in the section on the TICA approach. In this case, the California DOC does not necessarily see a drop in spending in their budget; their prison beds are still full. However, the

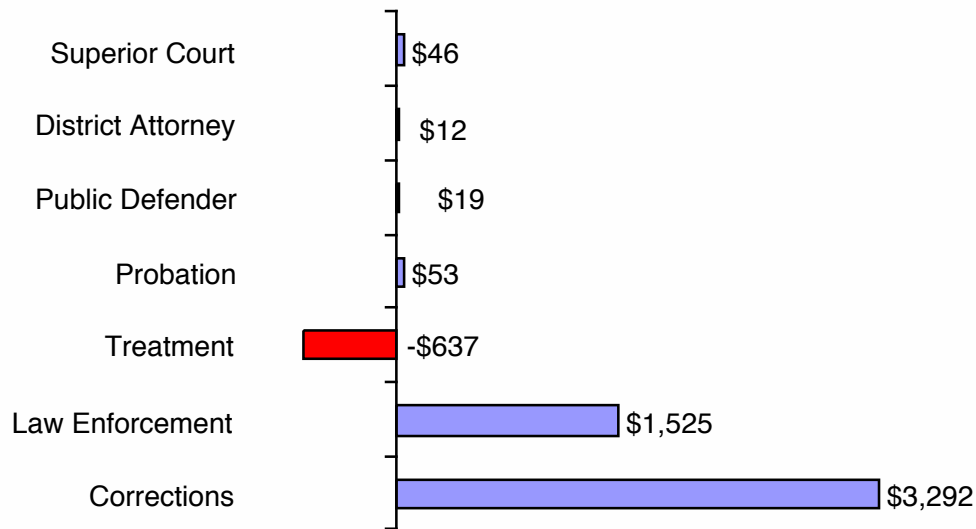
DOC may now have the opportunity to fill those beds with other offenders.

Cost-Benefit Ratio

The bottom line for any program is whether its investment costs are recovered in savings accrued from positive outcomes. This is the cost-benefit ratio, assessing whether there is a return on each dollar spent. The cost-benefit ratio identifies the number of dollars saved for every dollar spent on the program over the cost of business-as-usual. A positive ratio indicates that taxpayers would have spent more on incarceration, law enforcement and victimization for offenders processed in a traditional setting than they did in the drug court model.

On average, for every \$1.00 the taxpayers invested on the drug courts in this study there was a return of \$3.50. In some sites, Stanislaus County and El Monte in L.A. County, the cost benefit ratio was very high (1:16 and 1:27 respectively). In other words, for every dollar spent on the El Monte drug court, 27 dollars were saved due to positive impacts on the criminal justice system. Both these sites had very low net investment costs (a few hundred dollars per participant) and relatively high outcome benefits (over \$8,000 per participant). What these ratios indicate is that, while drug courts generally cost a little more, they produce outcomes that cost less—in many cases significantly less. The benefits in terms of reduced crime, reduced use of prison beds, and reduced use of law enforcement

FIGURE 2
Outcome Benefits per Participant by Agency



and court resources more than outweigh the investment costs.

Summary of Overall Cost Savings in Nine Sites

Eight of the nine drug courts in this study produced substantial net benefits (savings) over the four-year period of this study. For each year a cohort of participants entered these nine drug courts, the state saw a combined net benefit of \$9,032,626.⁶ This number will continue to grow each year if the drug court participants in this cohort continue to experience positive outcomes. In addition, as long as these nine drug courts continue to operate, each new cohort of participants can be expected to generate similar net benefits.

Promising Practices

One of the advantages of the methodology used in this study is that it provides an in-depth look at drug court practices at every site. An examination of these practices at each site in relation to the cost results led to six suggested promising drug court practices.⁷ Promising practices are defined as practices associated with positive outcomes, greater savings and lower costs. The practices described here as promising require further research to determine whether these may be best practices for drug courts. Some caution should be taken in determining promising or best practices for drug courts, as practices that work for some populations of drug court participants may not be effective in other populations. The following practices are examples of those in this study that appear to be related to more positive outcomes and overall lower costs.

1. High Drug Court Team Attendance. Drug courts in which a representative from each participating agency

attended drug court meetings and courts sessions tended to have more positive outcomes and more positive cost benefits.

Although there was a relationship between the amount of time agencies spent on drug court activities and investment costs, with more time leading to higher investment costs, there appeared to be no relationship between the quantity of agency time and outcome costs. The connection between agency participation in drug court and outcome benefits showed itself, not in the quantity of the time that was spent on drug court, but in how the agencies spent that time. In drug courts where most agencies did not attend team meetings or drug court sessions (or would attend only when needed), the outcome benefits were lower (averaging \$5,500 per participant) while sites where agencies spent their time on drug court progress meetings and/or drug court sessions showed higher outcome benefits (averaging \$10,800 per participant). It appears that having agency representatives attend drug court progress meetings and drug court sessions could be the best way for them to invest the time they dedicate to drug court.

2. Court Sessions Every Two to Three Weeks. Treatment Two to Three Times per Week. Courts that had participants attend court sessions every two or three weeks, and group treatment sessions two to three times per week; (with individual treatment sessions “as needed”) at program start had the best outcomes and highest benefits.

The frequency of court appearances and treatment sessions can directly affect costs, with more frequent sessions increasing investment costs. Yet, more frequent sessions lead to closer supervision, which can be an effective deterrent to relapse (reducing outcome costs). However,

too frequent session requirements may be too difficult for clients to follow through. For example, many drug courts require participants to find employment before graduation, but frequent court and treatment requirements can make maintaining a job challenging. Finding the right balance for the drug court population seems to be important for positive outcomes. Most of the nine drug court programs start with more frequent sessions (while the participant is most in need of close supervision) and then decrease the number over time, as participants begin recovery. The courts that start participants at one court session every two or three weeks with one to three group treatment sessions per week and individual treatment sessions “as needed” appear to have outcome benefits just as positive as courts that have participants do these activities more frequently. However, greater frequency of group treatment sessions specifically did appear to increase benefits somewhat, as courts with more than three group treatment sessions per week had outcome benefits averaging greater than \$15,000 per participant while courts with three group treatment sessions had outcome benefits averaging just over \$11,000 per participant. Drug courts that have participants start group and individual treatment sessions at lower frequencies or that had no specific requirements had less positive outcome benefits (less than \$3,000 per participant).

3. Drug Tests Three Times per Week. Courts that required about three or more urinalyses per week in the first phase had the most positive benefits. A frequency greater than three per week did not appear to have any added benefit while lower frequencies were associated with less positive outcomes.

Most of the nine sites start with about three urinalyses per week, although some have as high as six per week. Drug test frequency greater than three per week did not appear to have any added outcome or cost benefit. Drug courts that tested five or six times per week had outcome benefits just over \$8,000 per participant, while drug courts that tested three times per week had outcome benefits averaging just under \$10,000 per participant. However, lower frequencies were associated with less positive outcomes. One site had participants start the program at one drug test per week and had the poorest outcomes (less than \$3,000 per participant). This frequency is low enough that participants could fairly easily use drugs in between tests. This is a reasonable indication that three UAs per week are sufficient to deter drug use.⁸

4. A Single Overseeing Treatment Provider. Sites with either a single treatment provider agency or with multiple referral options but a single overseeing provider had the most positive outcome benefits.

The benefit of multiple providers is that clients can (theoretically) be matched to the provider that best fits their needs. The drawback is generally found in the quality and amount of communication with the court. It can be difficult to induce all treatment providers to provide information to

the court in a timely manner, particularly at the level of detail needed for the judge and the team to make an informed decision on how a participant is doing in the program. The sites that had either a single provider or that had multiple referral options but with a single overseeing provider had the most positive outcome benefits (greater than \$7,000 per participant). A single supervising provider with multiple referral options appears to be the most practical way of ensuring provider responsibility to the court while still providing clients with appropriately personalized treatment.

5. Judges Voluntary with No Fixed Term. Judges on voluntary assignment to drug court, with either no fixed term or a term of at least two years, helped produce the most beneficial outcomes.

A fixed term length with judges that rotate often can make it difficult for judges to get to know the clients and also makes it difficult for judges to invest themselves in the program. In addition, rotating the judges more often either requires a regular investment in training new judges or results in judges with no training in the drug court model approach. Those sites that rotated their judges regularly and did so more frequently than every two years had lower outcome benefits (less than \$3,500 per participant) while those that had judges assigned indefinitely or rotated rarely (no more often than once every two years) had the highest benefits (\$7,000 to over \$15,000 per participant). The results of this study indicate that a judge who is invested in the program and who can maintain a relationship with participants throughout participants' time in the program helps produce the most beneficial outcomes.

6. Minimum Six Months Clean Before Graduation. The sites that required participants to be “clean” for at least six months had lower outcome costs and higher net benefits.

The number of days that a client is expected to remain clean before graduation can affect participant outcomes. The longer participants are clean, the less likely it is that they will relapse and therefore the less likely they will re-engage with the criminal justice system. The sites that required less than six months of negative drug tests before a participant can graduate all had higher total (not net) outcome costs (between \$20,000 and \$36,000 per participant; these are costs, not savings). The sites that required six months or greater clean time had low outcome costs (between \$4,000 and \$16,000 per participant) and higher net benefits. Net benefits averaged \$10,000 per participant for courts that required six months or more of clean time and \$3,000 per participant for courts that required three months or less.

CONCLUSION

One of the main purposes of Phases I and II of this study was to build a cost-benefit methodology that would work effectively in the complex, multi-agency, collaborative setting of drug court programs. The NPC cost approach, TICA, is a

combination of transactional cost analysis and institutional cost analysis. This approach also includes the examination of many factors that can affect program costs such as the context or service area of the drug court, various agency involvement, program policies, and drug court participant characteristics. Without an examination of these factors, the cost results can be misinterpreted or can be of less use to the program in affecting program improvement.

The approach outlined in this study can be helpful to policy makers by assessing the true cost of a drug court approach compared to alternative approaches in processing substance abuse criminal cases. Previous cost analyses have sometimes assumed that the cost of a drug court is simply the sum of the costs of the added elements to a judicial system that are dedicated to drug court (e.g. the drug court coordinator). However, as this study has shown, the more informative approach is to compare the costs of alternatives to processing a case through drug court to the drug court costs; policy makers are given a truer picture of the real costs of the drug court model in the local judicial setting. In many cases the costs become minimal or in some cases their drug court model is revealed to be the cheaper approach.

Overall, the results of this study demonstrate that drug courts are an effective approach to treating nonviolent drug addicted offenders. The offenders who participated in drug court programs, regardless of whether they completed the programs, had lower recidivism and produced more outcome savings over four years than similar offenders who did not participate. The net benefit, including investment and outcome costs, for the nine drug court programs in this study was over nine million dollars.

Limitations of the Study

As with any study that involves the collection of data from administrative databases, the quality of the data gathered is only as good as the quality of the data entered. In some cases the data entered are incomplete, are entered inconsistently, and/or there can be data entry errors.⁹ However, it is likely that any errors in the data for any particular dataset are consistent between both the drug court and the comparison groups, so the relative difference between the two groups is therefore still valid.

Additionally, although this was controlled for as much as possible by matching the drug court and comparison groups on variables that were quantifiable, in studies that use a comparison group that is not randomly assigned, the possibility exists that there are preexisting differences between the program group and the comparison group that cannot be measured and might confound or distort the results. This is true of any studies of similar design in the literature. However, when similar studies using random assignment have been performed, they also find positive results for drug court participants (e.g., Gottfredsen, Najaka & Kearylly 2003). Further, there are many previous studies with a quasi-experimental design that produced similar (generally

positive) results (e.g., Carey & Marchand 2005; GAO 2005; Crumpton et al. 2004; Carey & Finigan 2003; Carey, Weller & Heiser 2003; Carey, Weller & Roth 2003; Belenko 2001). These studies provide support for the belief that the results found in this study are not due to preexisting differences between the drug court and comparison groups.

Next Steps: Phase III

Phase III of this study is now in progress. It involves the creation and launch of a web-based drug court cost self-evaluation tool that drug courts in California can use to determine the costs and benefits of their own program. The first draft of the DC-CSET has been reviewed and is now being readied for pilot tests in several drug court sites. After the pilot testing, the use of this tool in multiple sites (at least 25) will allow the verification of the promising practices described above and will also allow the determination of further promising practices. The final products of Phase III will be a validated drug court cost self-evaluation tool as well as final results on the statewide costs and benefits of drug court in California.

NOTES

1. This study focuses exclusively on *adult* drug courts, and any reference to drug courts included in this study is made exclusively to adult drug courts unless otherwise noted.
2. "California Drug Courts: A Methodology for Determining Costs and Benefits – Testing the Methodology" (2005), available at www.npresearch.com.
3. Although a past cohort of drug court participants may not be the same as a current cohort (e.g., changing demographics and/or changing drug court policies), it is not possible to determine the costs of outcomes, particularly long-term outcomes, without allowing time for outcomes to occur. Further, the interviews with drug court staff provided evidence that drug court policies and participant population had not changed substantially since the times of the study's cohorts.
4. Interviews were performed using NPC's Drug Court Typology Interview Guide. The Guide can be found at www.npresearch.com.
5. These numbers do not include victimization costs as it is difficult to determine which, if any, of these costs to assign to each agency.
6. This number is over and above the costs of investment. The costs are measured in 2005 dollars.
7. Important Note: There are currently only nine sites in this study. This sample size is too small to come to any definitive conclusions about promising practices. All possible promising practices described here should be tested and validated with further research. Some of this research will be conducted in Phase III when this study expands to drug courts statewide.

8. Interestingly, one site reported that they had participants give samples six days per week, but only performed the actual test randomly on a portion of the samples given. This had the effect of lowering drug-testing costs while giving the participants the impression of very close supervision, even though participants knew not all samples would be tested.

9. With between six and 10 data sources per site and nine drug court sites, the specific data issues within each data source are too numerous to detail in this overview. Additional information on the data sources used at each site can be found in the full Phase II report at www.npresearch.com.

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