# EVALUATION OF OHIO'S DRUG COURTS:
# A COST BENEFIT ANALYSIS

by

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## INTRODUCTION

Drug use and related crime remains as a consistent priority among policymakers; however, the treatment of drug abusing offenders has changed over the past few years. The shift toward rehabilitative efforts came in the late 1980s with the development of the drug court model. The typical drug court model provides community-based drug treatment and increased judicial involvement. Since 1989, with the inception of the first drug court in Miami, Florida, over 700 courts have emerged and approximately 400 more are in the planning process (National Association of Drug Court Professionals, 2001). Currently, drug courts exist in every state in the nation and have served over 14,000 individuals.

While drug courts have enjoyed tremendous growth and support, the research on drug court effectiveness if far from conclusive. While several studies (Godley, Dennis, Funk, Siekmann, & Weisheit, 1998; Vito & Tewksbury, 1998; Peters & Murrin, 2000; Brewster, 2001) have found drug courts are effective in reducing recidivism rates, others have found a null effect (Deschenes & Greenwood, 1994; Granfield, Eby, & Brewster, 1998; Harrison, Patrick, & English, 2001) and some have concluded that participation in drug courts was associated with increased rates of recidivism (Miethe, Lu, & Reese, 2000).

While it appears that drug courts can reduce recidivism rates, it is reasonable to question whether the reductions in recidivism are large enough to warrant the additional costs associated with drug courts. The techniques used to estimate the costs and benefits of drug courts have varied across the studies. However, the analyses generally suggest that drug courts are cost-effective. Studies examining the net cost and benefit of drug

courts have found a net savings ranging form $1560 to $4000 for participants (Crumpton et al., 2003a; Crumpton et al., 2003b) and $2600 for drug court graduates (Loman, 2004). When examining the dollars saved per dollar invested, the savings range from $1.74 (Aos, Phipps, Barnowski, & Lieb, 2003) to $9.43 (Fomby & Rangaprasad, 2002). While the majority of the studies have found drug courts to be cost effective, those courts not reducing recidivism are not considered to be cost-effective as no benefit is produced (Roman, Woodward, Harrell, & Riggs, 1998).

In 1995, researchers in the Center for Criminal Justice Research at the University of Cincinnati began an evaluation of Ohio's first drug court (Hamilton County). Since that time, numerous other drug courts have been implemented throughout the State of Ohio. The University of Cincinnati has completed outcome evaluations on juvenile, felony, and misdemeanor drug courts throughout the State. While these studies have suggested that Ohio's drug courts are reducing recidivism, none of them have included a cost-benefit analysis. In 2003, the Ohio Office of Criminal Justice Services contracted with the University of Cincinnati to extend the previous research. Specifically, this project seeks to assess whether drug courts save taxpayer dollars as either a less expensive sentencing option or through reductions in recidivism.

## METHODOLOGY

The issue of whether drug courts are cost-effective is a complex one. First, it must be determined whether drug courts are reducing recidivism. Second, the cost of drug court operations must be estimated. By estimating both a treatment effect and a marginal cost associated with drug court operations, it can be determined whether drug courts sufficiently reduce recidivism to offset the marginalized cost of drug courts. This

section of the report will detail the research methods used to assess whether drug courts are cost-effective.

**Research Design**

This project used a quasi-experimental matched comparison group design in order to estimate the impact of drug courts on future criminal involvement. The treatment group was selected from five felony level drug courts operating in the state of Ohio while the comparison group consisted of probationers and parolees in Ohio. Random assignment to groups was not feasible; however, in order to develop comparison groups, offenders were matched on a number of characteristics. Members of the comparison group were first matched on the basis of county of conviction, the presence of a substance abuse problem, and felony level charges. Next treatment participants and potential comparison group members were matched on gender, race, and age[1]. While not ideal, the quasi-experimental design is a common approach with program evaluations, since random assignment is rarely obtainable in court related programs[2]. This approach resulted in a sample size of 496 for the drug court/probation analyses, 386 for the drug court/parole analyses, 356 for the drug court/halfway house analyses, and 448 cases

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[1] Each case was assigned a value ranging from 1 to 8 indicating all of the possible permutations of race (white, not white), sex (male, female) and age (under age 30, 3o+ years). Members of the comparison group pools were then matched to members of the treatment group using this value.

[2] There are several problems with a quasi-experimental design, which should be noted. First, there are often important differences between those offenders who participate in a drug court and those who do not. When known, significant differences are controlled for; however, offender motivation to change and other important factors cannot be accounted for. Second, while all members of the comparison group received some type of treatment, details regarding the type of treatment are unclear. What we do know is that they while they did not receive the "drug court" model, it is likely that some members of the comparison group received treatment services similar to those offered through drug courts.

included in the drug court/CBCF analyses.[3]    (See Appendix, Tables A1-A5, for descriptives of the groups.)

**Treatment Group**

As previously noted, participants from five drug courts were included in this study. The drug courts, located in Butler County, Hamilton County, Mahoning County, Richland County, and Stark County, were selected because they had been included in previous outcome evaluations conducted by the University of Cincinnati[4]. These courts, among the oldest drug courts in Ohio, all agreed to participate in the study when contacted by the University of Cincinnati.[5]

**Comparability of the Courts**

While each drug court operates independently of one another, they are similar to one another in terms of their basic services and operations. Like drug courts across the United States, the courts in this study provide community based treatment services, judicial monitoring, and frequent urinalysis. The eligibility criteria for each of the programs are based on current and past behavior of the defendant and a willingness to participate. The courts generally target offenders who have been arrested for a drug or drug-related offense or who have exhibited evidence of a drug problem. Screening of potential participants is conducted by members of the drug court team including the judge, prosecutor, drug court coordinator, and treatment staff. Once accepted into the drug court, participants are often given a suspended sentence of jail or prison time. The

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[3] Variation in the sample size across groups is a result of matching cases on the basis of race, age, and sex.
[4] It should be noted that an estimated 614 drug court cases were filed in 2002 in the five counties included in the studies. Cases included in the drug court sample were collected as part of evaluations completed prior to 2002 and do not include individuals entering the drug court in 2002.
[5] For a detailed description of the drug courts involved in this study, see Shaffer D. K., S. Johnson, and E. J. Latessa (2000). *Description of Ohio Drug Courts*, University of Cincinnati, Cincinnati, OH.

suspended sentence allows the courts the ability to impose the original sentence if the participant fails to comply with the conditions of the drug court. Traffickers, those with a history of violence, sex offenses, severe mental illness, or acute health conditions are typically ineligible for participation in the program.

**Comparison Groups**

Multiple comparison groups were used for this study. Drug court participants were compared to both probationers and parolees. Among probationers, two distinct groups were identified. First, members of the treatment group were compared to probationers that received outpatient treatment services. Next, they were compared to probationers who had been placed in a Community-Based Correctional Facility (CBCF)[6]. The final comparison group consisted of parolees who had been placed in a halfway house.

Parolees included in the comparison group were under supervision for a drug offense or were under supervision for a property offense, but had a history of substance abuse. Probationers included in the comparison group were either identified as having a substance abuse problem or were under supervision for a drug offense. Once the comparison groups were restricted to these characteristics, the groups were matched based on the county of conviction. The groups were next matched by treatment group members and by comparison group members on demographic characteristics. Specifically, the groups were matched in terms of race, sex, and age[7].

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[6] CBCFs are residential treatment centers for felony offenders. They are funded by the State of Ohio, but are operated by local Community Corrections Boards. Offenders are directly referred by the court to the facilities for up to six months.

[7] For the purposes of matching, age was collapsed into two categories: "under 30" and "30 and over." The two categories essentially represent "younger" offenders and "older" offenders. It was important to match on age given that younger offenders are more likely to recidivate. While the age 30 was selected somewhat

**Data Collection**

Data for this study were collected from a number of sources. Data regarding the characteristics of drug court participants were collected from the individual sites. In many cases, these data had previously been collected for prior evaluations of drug court effectiveness[8]. Similarly, data on all of the comparison group members had been collected during previous projects involving the CBCFs, Halfway Houses, and Community Corrections programs in Ohio. Two year follow-up data had also previously been collected for members of the comparison group. While the prior drug court studies had recidivism data, the follow-up period was generally less than two years. In an effort to be consistent, recidivism data were updated on all members of the treatment groups. These data were collected at the county level and were restricted to a two-year follow-up period.[9]

**Costs**

Data were collected from a number of agencies in an effort to calculate the costs associated with criminal behavior. First, Comprehensive Annual Financial Reports (CAFR) were requested from all of the counties in the State of Ohio. Data regarding annual expenditures for criminal justice expenditures were collected from the CAFRs. Similar data were collected from the Department of Rehabilitation and Correction (DRC) and from drug courts throughout the state. These data were used to calculate the costs for each stage of criminal justice processing. The total cost associated with processing a

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arbitrarily, it is consistent with research on the age-crime curve which generally suggests that offenders begin to desist from crime as they enter their late 20s (see Piquero et al., 2001).

[8] For all five courts, data were updated in regards to termination status. Previous data, however, were not available for Butler County for the time frame included in the study. Data for the current study were collected at the Butler County Drug Court by University of Cincinnati personnel in March 2005.

[9] Rearrest data for Hamilton, Stark, and Mahoning counties were collected via County databases by University of Cincinnati personnel. Rearrest data for Butler and Richland counties were run by local county personnel and interpreted by University of Cincinnati staff members.

criminal justice case was calculated by summing the individual costs. In an effort to standardize the costs, the Consumer Price Index (CPI) Inflation Index was used to adjust all dollars to 2003.[10 and 11]

*Law Enforcement.* Public law enforcement agencies are tasked with a number of duties including the investigation of criminal offenses. Costs for law enforcement were estimated from the annual sheriffs' budgets and municipal police budgets.[12] The budgets were summed to calculate county-level law enforcement expenditures. The total countywide law enforcement expenditures were then regressed on the number of countywide arrests and criminal cases disposed by the county court in an effort to estimate the costs related to investigation of a criminal case through its disposition. Using this calculation, the estimated law enforcement costs of processing a single criminal case were $3,360. It should be noted that this estimate is simply an average and does not distinguish between violent and non-violent crimes. Similar to Lowenkamp and Latessa's (2005) cost benefit analysis of programs operated by the Ohio Department of Youth Services, this estimated cost is somewhat lower than other estimated costs of law enforcement that differentiate between violent and non-violent crimes (see Aos et al., 2001).

*Court Costs.* The total court costs were estimated by summing together the budgets for the common pleas court, the municipal court, the prosecutor and public defenders' budgets, and the budget for the clerk of courts. As with the sheriff

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[10] See Appendix, Table A6, for a table of the CPI and formula used to calculate the inflation rate.

[11] Initially, the year 2002 was selected as the base year and all dollars were converted to 2002 dollars. However, it was brought to the authors' attention that while the CPI could be used to inflate dollars, it could not be used to deflate dollars. Given that the bulk of the cost data were from 2003, it was determined that the base year should be changed to 2003. The authors would like to thank Steve Aos for his helpful comments and advice on this issue.

[12] Municipal police budget data was obtained from the Justice Research and Statistics Association (1997). Sheriff budget data were collected from the county-level CAFRs.

departments' expenditures, these expenditures were based on the county-level CAFRs. The total court costs were then regressed on the number of criminal[13] and non-criminal cases.[14] The marginal court costs of disposing one criminal case were based on the parameter estimate for criminal cases. Using this calculation, the average court costs associated with disposing one criminal case was estimated to be $1,638.

*Probation.* The marginal costs of probation supervision were estimated by regressing the total probation budgets on the total number of probation eligible cases. Using this model, the estimated cost of probation supervision is $356 per case.[15]

*Alternative Sanctions.* While the marginal costs of probation supervision were able to be estimated from probation budgets, these types of data were unavailable for other sanctions such as commitment to a halfway house, a CBCF and prison. As a result, the marginal costs of these sanctions were calculated by multiplying the state per diem by the average length of sentence.[16] Using this method of estimation, the estimated cost of going to a CBCF was $10,052, and the cost of commitment to the Department of Rehabilitation and Corrections (DRC) was estimated to be $58,395. The cost of parole was estimated to be $2,724 and the cost of being placed in a halfway house was estimated to be $4,344. However, both of these sanctions are used in conjunction with the DRC.

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[13] Criminal cases includes common pleas criminal cases, delinquency cases, and unruly cases. While the focus of this study is on adult offenders, it was important to include juvenile cases in this estimate so as to not artificially inflate the court costs per case.

[14] Civil cases includes civil cases and dependence, neglect, and abuse cases. Juvenile cases were included in this estimate in an effort to gain a more precise estimate of court costs.

[15] As previously noted, only probationers who received some type of community-based treatment were included in the probation comparison group. However, details regarding the type of treatment and the costs associated with treatment were unavailable. The cost of probation, then, does not explicitly include the costs associated with treatment services. While this can be considered a limitation of the study, it is important to note that drug court costs do not include treatment costs over and above the drug court budgets. Thus, while the probation costs have been underestimated, it is likely that the drug court costs are similarly underestimated.

[16] See Lowenkamp and Latessa (2005).

Thus, the total estimated cost for DRC and parole is $61,119, and the total estimated cost for the DRC and halfway house is $62,739.

*Present (2003) Costs.* As previously indicated, all dollars were standardized to 2003 using the Consumer Price Index inflation index in an effort to control for inflation[17]. Estimating the present costs associated with drug court cases versus regular processing of a case required a number of steps. First, the total expenditures for both drug court and non-drug court cases were estimated (see Table 1). The total drug court expenditures were calculated by summing the expenditures reported in drug court budgets. Similarly, the total court costs were estimated by summing the expenditures for the common pleas court and the clerk of courts as reported in the CAFRs. Expenditures for the prosecutor and public defender were also estimated by summing the expenditures reported in the CAFR.

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**Table 1. Annual Expenditures 2003**

| Annual Expenditures | Common Pleas & County Clerk | Prosecutor & Public Defender | Drug Court |
|---|---|---|---|
| Butler | $3,372,373 | $5,672,963 | $349,750 |
| Hamilton | $22,857,000 | $22,848,000 | $2,886,941 |
| Mahoning | $4,400,445 | $855,573 | $205,000 |
| Richland | $669,465 | $2,328,041 | $109,821 |
| Stark | $2,968,510 | $4,390,895 | $237,483 |
| Total | $34,267,793 | $36,095,472 | $3,788,995 |

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[17] See Appendix for the index used for these calculations.

Once the total costs were estimated, it was important to estimate the number of cases processed through the criminal justice system in each county and the amount of time spent on task (criminal, drug court, or civil). The number of cases were calculated by summing the number of non-drug court criminal cases and the number of drug court cases in 2002 were summed.[18] Table 2 indicates the number of cases filed in each county in 2002.

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**Table 2.  Criminal and Drug Court Cases Filed**

| Cases Filed | Butler | Hamilton | Mahoning | Richland | Stark | Total |
|---|---|---|---|---|---|---|
| Criminal Cases Filed 2002 | 1989 | 7548 | 805 | 659 | 1441 | 12442 |
| Drug Court Cases Filed 2002 | 62 | 395 | 67 | 45 | 45 | 614 |

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Estimating the amount of judicial time spent of various courtroom functions (criminal non-drug court, drug court, and civil) was more complicated. The amount of time spent on courtroom function was estimated based on court dockets for March 2004[19]. Where possible the number of minutes spent on type of task was summed. Some

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[18] The number of non-drug court criminal cases was estimated from the Ohio Courts Summary 2002. The number of drug court cases for Mahoning, Richland, and Stark Counties were based on self-reported numbers by the courts. The number of drug court cases for Butler and Hamilton Counties were based on actual dockets for 2002. Ideally, the number of cases for 2003 would have been used. However, during the time the data were collected, the year 2002 was being used as the base year. It is reasonable to assume that the number of cases filed each year remains relatively stable.

[19] The month of March 2004 was selected randomly from every month in 2004. The year 2004 was selected primarily for logistical reasons; there was a general sense that "older" dockets would be more difficult to gain access to. We used an entire month, rather than randomly selected weeks, because some courts indicated that the dockets have a monthly schedule. That is, it was reported that some courts schedule certain types of hearings during specific parts of the month. By using dockets from a single month, it was hoped that the estimate of time spent on task would be more valid than if we used weeks. It should be noted that two dockets from Mahoning County were from October 2004.

court dockets, however, failed to include start and stop times.  As a result, it was not always possible to calculate time spent on task by the dockets.  These courts were contacted and asked to estimate the average amount of time spent on specific types of hearings (i.e. arraignment versus plea).   The dockets were then reviewed and the number of tasks was calculated.  The total number of tasks (by type) was then calculated by the estimated time spent on task to arrive at the total amount of time spent on each task for the month of March 2004.  These tasks were then separated into criminal non-drug court, drug court, and civil cases.  The amount of time per category was then summed and converted into hours.  Table 3 illustrates the breakdown of time by task.

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**Table 3.  Weekly Courtroom Hours by Function**

|  | **Butler** | **Hamilton** | **Mahoning** | **Richland** | **Stark** | **Total** |
|---|---|---|---|---|---|---|
| **Hours** |  |  |  |  |  |  |
| Criminal (non drug court) cases | 70.42 | 987.25 | 34.07 | 13.00 | 33.75 | 1138.48 |
| Civil cases | 167.58 | 761.33 | 51.92 | 9.42 | 108.00 | 1098.25 |
| Drug court cases | 0.83 | 30.00 | 7.50 | 6.00 | 6.00 | 50.33 |
| TOTAL HOURS | 238.83 | 1778.58 | 93.48 | 28.42 | 147.75 | 2287.07 |
| **Percent Distribution of Hours** |  |  |  |  |  |  |
| Criminal (non drug court) cases | 29.48% | 55.51% | 36.44% | 45.75% | 22.84% | 49.78% |
| Civil cases | 70.17% | 42.81% | 55.54% | 33.14% | 73.10% | 48.02% |
| Drug court cases | 0.35% | 1.69% | 8.02% | 21.11% | 4.06% | 2.20% |

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Once the total expenditures, time spent on task, and number of cases filed was estimated, it was possible to estimate the cost per drug court case versus the cost per a criminal case.  As indicated in Table 4, a number of steps were taken to estimate the costs.  First, it must be assumed that some portion of the costs included in the summed

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expenditures were unrelated to the actual number of cases filed (Barnoski and Aos, 2003). That is, there are some fixed costs that are assumed to remain stable regardless of the number of cases filed in a given year. In an effort to control for this, the total expenditures were regressed on the number of cases filed in 2000, 2001, and 2002[20]. The parameter estimate for the constant was then used to estimate the percentage (6.85%) of the total court costs that are thought to remain fixed. The total court expenditures were then reduced by this percentage in an effort to control for fixed costs. Once the expenditures were reduced, they were then pro-rated across drug court cases, non-drug court criminal cases, and civil cases using the estimated amount of time spent on task as indicated by the court dockets. Similar procedures were then used to estimate the prosecutor and public defender expenditures by type of task.[21] The total expenditures for the prosecutor and public defender were regressed on the number of criminal cases filed in 2000, 2001, and 2002. The parameter estimate for the constant was then used to estimate the percentage (5.28%) of total costs that are thought to remain fixed. Once the total expenditures for the prosecutor and public defender were reduced by 5.28 percent, the remaining expenditures were distributed across drug court and criminal cases.[22]

The total expenditures for the court and the prosecutor/public defender were then added together to estimate the total expenditures for processing criminal cases excluding drug court specific functions. These total non-drug court expenditures were then divided by the number of cases filed in 2002 to estimate the cost per case, excluding drug court specific expenditures, for both non-drug court criminal cases and criminal cases. Next,

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[20] Also included in the equation was the square of the filings for each year.
[21] When regressing costs on the number of court cases, we added filings cubed to the equation.
[22] Civil functions were removed from the analysis at this point as we were interested in the costs associated with processing criminal and drug court cases rather than civil cases. The percentage of time spent on task was calculated by applying the same proportion of time on task to a 100% scale.

the total drug court expenditures were divided by the number of drug court cases filed in 2002 to estimate the drug court specific expenditures per case.

We next summed the non-drug court costs per case and the drug court specific costs per case to calculate the total expenditures per drug court case. However, simply using this total as an estimate of the drug court costs per case would artificially inflate the costs. Whether an offender enters the drug court or not, there will be some set costs in processing the criminal case. Thus, it is necessary to estimate the cost of drug court over and beyond the typical costs of processing a single case. This estimate was calculated by subtracting the cost of a regular criminal case from the cost of a drug court case. This calculation provides the marginal costs of a drug court case. The marginal costs per drug court case were estimated to be $5,777 and the cost of processing a regular criminal case was estimated to be $3,757.[23]

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[23] The cost of processing a regular criminal case was calculated by dividing the total expenditures by the number of cases filed.

**Table 4.  Court Costs by Case**

| Court-Related Costs per Case | Drug Court | Criminal Court | Civil Court | Total |
|---|---|---|---|---|
| Common Pleas and County Clerk | 2.20% | 49.78% | 48.02% | 100% |
| Total Non-Drug Court Expenditures | | | | $34,267,793 |
| Estimated Percent of Costs Not Related to Filing Volume | | | | 6.85% |
| Total Non-Drug Expenditures Allocated by Function | $618,892 | $14,003,838 | $13,508,724 | $28,131,454 |
| Annual Drug Court Expenditures | $3,788,995 | | | |
| **Prosecutor and Public Defender (excluding civil functions)** | | | | |
| Percent of Courtroom Time on Each Function | 4.23% | 95.77% | | 100% |
| Total Prosecutor and Public Defender Expenditures | | | | $36,095,472 |
| Estimated Percent of Costs Not Related to Filing Volume | | | | 5.28% |
| Expenditures Allocated by Function | $1,446,221 | $32,743,410 | | $34,189,631 |
| **Total Court Costs Per Filing** | | | | |
| Annual Filings | 614 | 12,442 | | |
| Total Court Expenditures excluding Drug Court Specific Expenditures | $2,065,113 | $46,747,248 | | |
| Total Expenditures excluding Drug Court Specific Expenditures per Filing | $3,363 | $3,757 | | |
| Drug Court Specific Expenditures per Filing | $6,171 | | | |
| Total Court-Related Costs per Filing | $9,534 | $3,757 | | |
| **Drug Court Costs Less Costs of Regular Criminal Case** | $5,777 | | | |

**Future Costs**

The current study defined recidivism as re-arrest within two years of being terminated (successfully or unsuccessfully) from the drug court or comparison sanction (probation, CBCF, halfway house, or parole). Although we did not have data relating to conviction and subsequent sanction, it is likely that a sizable number of re-arrests resulted in conviction and some type of sanction. Therefore, we calculated the costs of a number of possible outcomes. First, we calculated the total cost of simply processing a single case through disposition. Next, we calculated the costs of processing a criminal case that results in probation or placement in a CBCF or halfway house. These costs were estimated by adding the cost of processing a criminal case to the costs associated with the specific sanction (Table 5).

Finally, it is important to include the costs of victimization when assessing the costs of future crime. Data regarding the specific types of offenses committed by those recidivating were not collected. Instead, we used estimates calculated as part of another study conducted by Lowenkamp and Latessa (2005). Essentially, they averaged tangible victimization costs and quality of life costs estimated by other researchers in the area. These estimates are reported in Table 6.

**Table 5. Costs of Processing a Case through Disposition**

| Sanction | Cost |
| --- | --- |
| Drug Court | $9,534 |
| Probation | $4,113 |
| CBCF[24] | $14,165 |
| DRC | $62,152 |
| DRC & Parole | $64,876 |
| Halfway House[25] | $69,349 |

Once the victimization costs were estimated, they were added to the costs of processing a single case through a specific sanction. These costs were then adjusted to 2004 and 2005 dollars and provide the total cost of committing a new crime which results in probation, placement in a CBCF, or placement in a halfway house.

**Recidivism**

The current study used a two-year follow-up period and used re-arrest as an indicator of recidivism. The length of follow-up can have an impact on recidivism rates. While it is possible to use statistical controls for differences in follow-up periods, we limited our follow-up period to two years for all cases. Specifically, record checks were limited to a two year period following termination from the program.

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[24] Includes costs associated with probation.
[25] Includes costs associated with prison and parole.

**Table 6. Costs Associated with New Crime**

|  | 2003 | 2004 | 2005 |
|---|---|---|---|
| **Costs of Processing Single Case** | | | |
| Cost to Disposition | $4,998 | $5,118 | $5,261 |
| Probation | $5,354 | $5,482 | $5,636 |
| Halfway House | $70,590 | $72,284 | $74,308 |
| CBCF | $15,406 | $15,776 | $16,217 |
| DRC | $63,393 | $64,914 | $66,732 |
| DRC+PRC | $66,117 | $67,704 | $69,600 |
| | | | |
| **Average Cost of Victimization** | | | |
| Average Tangible Cost | $2,197 | $2,257 | $2,311 |
| Average Quality of Life | $18,753 | $19,259 | $19,798 |
| Total Victim Costs | $20,950 | $21,516 | $22,109 |
| | | | |
| **Cost of New Crime excluding Sanction** | $25,948 | $26,634 | $27,371 |
| | | | |
| **Total Costs of New Crime by Sanction** | | | |
| Probation | $26,304 | $26,998 | $27,745 |
| Halfway House | $91,540 | $93,800 | $96,418 |
| CBCF | $36,356 | $37,292 | $38,327 |
| DRC | $84,343 | $86,430 | $88,841 |
| DRC+Parole | $87,067 | $89,220 | $91,709 |

**Effect Size**

Finally, a cost-benefit analysis is essentially asking whether the increased cost of processing a case is justified by increased reductions in recidivism. The final point of analysis, then, is to determine the reduction in recidivism necessary for justifying the increased costs. The necessary effect size was estimated using the following formula: (drug court costs - traditional costs)/(costs of a new crime). The result from this formula was then multiplied by -1 to estimate the effect size needed to justify the expense of drug

courts. Determining whether drug courts can be justified then, simply requires a comparison of the calculated effect size to the required effect size.

## RESULTS

In order to assess whether the costs of a given program are justified, it must be determined what effect the program has had. The effect size for each group was estimated by running partial correlations between group membership and re-arrest.[26] The obtained effect size was then compared to the necessary effect size[27] to determine whether the drug court was cost-effective. These comparisons were made for the probation group, CBCF, group, halfway house group, and parole group. Finally, all of the comparison groups were merged to assess the general cost-effectiveness of drug courts in the state of Ohio.

### *Probation*

As previously noted, the costs of drug court were compared with the costs of probation in an effort to determine the reduction in recidivism that must be achieved to render drug courts cost-effective. Simply put, the difference in the costs between probation and drug courts were divided by the costs associated with processing a new crime. The following table indicated the reduction in recidivism that drug courts must achieve to be able to be viewed as cost-effective. The different effect sizes are a reflection of the fact that various dispositions have differential costs. That is, the costs

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[26] It should be noted that partial correlations are rarely used when assessing the relationship between two dichotomous variables. However, given that we were unable to control for risk level, we felt it was important to control for any differences between the groups. Using partial correlations allowed us to control for marital status, education, criminal history, employment, termination status, and county of conviction. Logistic regression is a more appropriate method for controlling for differences in groups; however, the results of logistic regression do not provide an easily interpreted effect size. Given that our goal was to make comparisons between the estimated necessary effect sizes and the obtained effect sizes, we felt that partial correlations were an appropriate decision. The results of the logistic regression analyses can be found in the appendix.

[27] Independent effect sizes were calculated for 2003, 2004, and 2005. For clarity, an average effect size is presented in the text. All of the individual effect sizes are reported in the appendix in Table A7.

associated with arresting offenders, processing them through court, and placing them on probation are less than the costs associated with arresting offenders, processing them through court and placing them in a CBCF.

The different effect sizes in Table 7 can be interpreted as reflecting the reduction in recidivism needed to justify the difference on costs between drug courts and probation. Specifically, comparisons are made between probation and drug court controlling for alternative sanctions to future crimes. Table 7, then, reports four distinct effect sizes to reflect the differential costs of future crime. Each effect size represents the average reduction in recidivism that must be achieved for drug courts to be considered cost-effective.

As indicated in Table 7, drug courts must generally achieve between a 15 and 20 percent reduction in recidivism to justify the costs of drug courts when compared to probation. Specifically, when future crimes do not result in a sanction or when they result in probation, a 20 percent reduction in recidivism is needed. When future crimes result in halfway house placement, a 15 percent reduction is needed, and when future crimes result in placement in a CBCF, a 6 percent reduction in recidivism is needed.

**Table 7. Necessary Effect Sizes**

| Sanction | Average |
|---|---|
| No sanction[28] | -.20 |
| Probation | -.20 |
| CBCF | -.06 |
| Halfway House | -.15 |

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[28] No sanction represents the costs associated with arresting offenders and processing them through the court system but does not include any sanction costs.

In order to determine if drug courts are indeed cost-effective, the necessary effect sizes must be compared to the achieved effect sizes. Table 8 illustrates rearrest rates of drug court participants and matched probationers. Thirty-two percent of drug court participants were re-arrested compared to 37 percent of the probationers. While fewer drug court participants were rearrested, this difference was not found to be statistically significant.

**Table 8. Rearrest Rates of Drug Court Participants and Matched Probationers**

| Characteristic | Treatment | | Comparison | |
|---|---|---|---|---|
| | N | % | N | % |
| Rearrested | | | | |
| Yes | 80 | 32.3 | 91 | 36.7 |
| No | 168 | 67.7 | 157 | 63.3 |

$ES^{29}$ = -.077    p= .129

Despite the lack of a significant difference, it is still instructive to compare the achieved effect size to the needed effect size. That is, even though drug courts did not significantly reduce recidivism when compared to a group of probationers that received treatment, it is still helpful to compare the achieved effect size to the necessary effect size. Table 8 indicates that the effect size was -.077 which translates to an eight percent reduction in recidivism. As previously noted, drug courts must achieve between a 6 and 20 percent reduction in recidivism when compared to different alternatives to be found cost-effective. Therefore, the effect sizes suggest that drug courts are generally not cost-effective when compared to probation, although in achieving an 8 percent reduction in

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[29] Group membership is predicting rearrest controlling for marital status, education, criminal history, employment, termination status, and county of conviction. The ES was estimated in this manner for predicting rearrest for the probation, parole, HH, and CBCF comparison groups.

recidivism, they can be construed as cost-effective if future offenses result in placement in a CBCF.

*CBCF*

While drug courts did not significantly reduce recidivism when compared to probationers, they did significantly reduce re-arrests when compared to CBCF participants. As indicated in Table 9, 33 percent of drug court participants were rearrested compared to 63 percent of CBCF participants. This difference was statistically significant and is equivalent to a 28 percent reduction in recidivism.

**Table 9. Rearrest Rates of Drug Court Participants and Matched CBCF Participants**

| Characteristic | Treatment | | Comparison | |
|---|---|---|---|---|
| | N | % | N | % |
| Rearrested | | | | |
| Yes | 74 | 33.0 | 140 | 62.5 |
| No | 150 | 67.0 | 84 | 37.5 |

$\chi^2$=38.971, p=.000

ES = -.280    p= .000

While drug court participants are significantly less likely to be re-arrested than CBCF participants, the difference in recidivism must be great enough to off-set any differences in the costs associated with each program. When comparing the cost-effectiveness of drug courts with other programs, it is important to compare effect sizes that represent the appropriate costs. As with probation, the effect sizes are calculated by dividing the difference in program costs (drug court costs – CBCF costs) by the cost of a new crime. Table 10 reports the effect sizes calculated for new crimes resulting in no sanction, probation, and placement in a CBCF or halfway house. It should be noted that these effect sizes differ from those reported in Table 7 because of the differences in costs

associated with probation versus CBCFs. These effect sizes reflect the necessary difference in recidivism that must be achieved for drug courts to be considered cost-effective when compared to CBCFs.

| Table 10.  Necessary Effect Sizes | |
|---|---|
| Sanction | Average |
| No Sanction | .17 |
| Probation | .17 |
| CBCF | .05 |
| Halfway House | .12 |

In contrast to Table 7 which reports negative effect sizes, Table 10 reports positive effect sizes. While negative effect sizes can be interpreted as an average reduction in recidivism, a positive effect size can be interpreted as an average increase in recidivism. Table 10 can therefore be construed as meaning it is not necessary for drug courts to reduce recidivism in order to be viewed as more cost-effective. In fact, as long as drug courts are not *increasing* recidivism, they can be claimed as more cost-effective than CBCFs. Specifically, drug courts would have to increase recidivism between 5 and 17 percent before they could be viewed as inefficient. Given that they are reducing recidivism nearly 30 percent, it is clear that drug courts have a clear cost advantage when compared to CBCFs. This finding is not surprising given that drug courts clearly cost less than CBCFs.

*Parole*

Just as drug courts significantly reduced recidivism when compared to CBCFs, they also reduce recidivism when compared to parole. As indicated in Table 11, 34 percent of drug court participants were re-arrested compared to just over half (51.8%) of

matched parolees.  When controlling for differences in the groups, drug courts reduced

recidivism by approximately 12 percent.

**Table 11.  Rearrest Rates of Drug Court Participants and Matched Parolees**

| Characteristic | Treatment | | Comparison | |
|---|---|---|---|---|
| | N | % | N | % |
| Rearrested | | | | |
| Yes | 66 | 34.2 | 100 | 51.8 |
| No | 127 | 65.8 | 93 | 48.2 |

$\chi^2$=12.218, p=.000

ES = -.116        p= .039

As with CBCFs, drug courts cost less than parole.  The difference in the costs is

largely attributed to the fact that parole costs include the cost associated with placement

in prison.  As a result then, drug courts can be considered cost-effective when compared

to parole as long as they do not increase re-arrests.  Table 12 reports the effect sizes that

must be used to compare drug courts to parole.  As with probation and CBCFs, the

reported effect sizes were calculated by dividing the difference in cost between programs

by the costs of a new crime.  Specifically, Table 12 demonstrates the difference in the

costs of drug courts and parole was divided by the costs associated with a new crime.

**Table 12.  Necessary Effect Sizes**

| Sanction | Average |
|---|---|
| No Sanction | 2.08 |
| Probation | 2.05 |
| CBCF | 0.59 |
| Halfway House | 1.48 |

As indicated in Table 12, drug courts would need to increase recidivism up to 200

percent to be declared less cost-effective when compared to parolees.  Specifically, drug

courts would have to more than double recidivism rates for new offenses that do not result in a sanction and for those that result in probation. Similarly, recidivism rates would need to increase nearly one and a half times when looking at offenses that result in placement in a halfway house. Finally, drug courts would need to increase recidivism nearly 60 percent among those offenders committing new crimes and being placed into CBCFs. Given that drug court participants are significantly less likely to be rearrested when compared to parolees, it is clear that drug court participation is more cost-effective than placing offenders into DRC and onto parole.

*Halfway House*

As indicated in Table 13, drug court participants are significantly less likely to be rearrested when compared to halfway house participants. Specifically, 48 percent of halfway house participants were rearrested compared to 33 percent of drug court participants. When controlling for differences between the groups, drug court participation results in approximately a 15 percent reduction in recidivism.

**Table 13.  Rearrest Rates of Drug Court Participants and Matched HH Participants**

| Characteristic | Treatment N | % | Comparison N | % |
|---|---|---|---|---|
| Rearrested | | | | |
| Yes | 58 | 32.6 | 86 | 48.3 |
| No | 120 | 67.4 | 92 | 51.7 |

$\chi^2$=9.143, p=.002

ES = -.153      p= .008

When comparing the achieved effect size to the necessary effect sizes, it again becomes clear that drug courts are cost-effective when compared to placement into DRC and halfway houses. Table 14 reports the effect sizes calculated by dividing the

difference in costs between probation and halfway houses with the costs associated with a new crime. As when drug courts are compared to CBCFs and parole, the fact that halfway houses cost more than drug courts means that drug courts would need to increase recidivism before it could be claimed that drug courts are not cost-effective. Similar to the findings for parole, drug courts would have to reduce rearrest rates up to two times before parole becomes more cost-effective (Table 14).

**Table 14. Necessary Effect Sizes**

| Sanction | Average |
| --- | --- |
| No Sanction | 2.24 |
| Probation | 2.21 |
| CBCF | 0.64 |
| Halfway House | 1.60 |

*Overall*

Finally, the comparison group members were combined to assess the general effectiveness of drug courts. As indicated in Table 15, drug court participants are significantly less likely to be re-arrested when compared to other offenders in the state of Ohio. Specifically, while 32 percent of drug court participants were rearrested, nearly half of the comparison group members were rearrested.

**Table 15. Rearrest Rates of Drug Court Participants and Comparison Group Members**

| Characteristic | Treatment N | % | Comparison N | % |
| --- | --- | --- | --- | --- |
| Rearrested | | | | |
|   Yes | 89 | 31.9 | 408 | 49.7 |
|   No | 190 | 68.1 | 413 | 50.3 |
| $\chi^2$=26.626, p=.000 | | | | |

$ES^{30} = .126 \quad p = .000$

While it was not possible to estimate an overall effect size, it should be clear that a 13 percent reduction in recidivism generally renders drug courts cost effective. For instance, a re-examination of the necessary effect sizes indicates that a 13 percent reduction in recidivism exceeds the necessary effect size in all but two cases.[31]

## SUMMARY AND DISCUSSION

The results presented in this report assess the cost-effectiveness of drug courts. The findings suggest that felony level drug courts in Ohio are generally effective and, as expected, cost less than alternative sanctions than involve placing offenders into residential facilities. Specifically, drug court participants did significantly better when compared to CBCF participants, halfway house participants, and those placed on parole. Given the increased costs associated with these programs when compared to drug courts, it is possible to conclude that drug courts are most cost-effective than residential facilities. These findings should not be surprising as it seems logical that drug courts would be cost-effective when compared to their residential counterparts. However, the findings may be taken to suggest that some offenders may be better served through intensive monitoring and treatment provided by drug courts rather than placement into residential facilities.

More importantly, however, drug courts were not found to significantly reduce recidivism when compared to probation. This finding is somewhat surprising given the

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[30] The effect size (ES) was estimated using partial correlations. Group membership is predicting rearrest controlling for gender, marital status, education, criminal history, employment, termination status, and county of conviction.

[31] It does not exceed the effect size estimated for probationers committing a new crime not resulting in a sanction, and for probationers committing a new crime and being placed back on probation.

positive results found in previous drug court evaluations in Ohio (see Latessa, Shaffer, and Lowenkamp 2002; Latessa, Listwan, Shaffer, Lowenkamp, and Ratinsi, 2001; Listwan, Shaffer, and Latessa, 2001). However, this evaluation differed from the previous ones in terms of the comparison group. Specifically, in previous evaluations, it was not clear whether comparison group members received treatment services. In the current study, however, only probationers that received community-based treatment were eligible for inclusion in the comparison group.[32] It is likely that some members of comparison group in the previous studies did not receive treatment services. This finding, then, suggests that probation, when coupled with treatment, is just as effective as drug courts.

It must be noted that a limitation of the current study is the inability to control for differences in risk of recidivism.[33] Given that prior research has found correctional interventions have differential effects based on risk level, it is reasonable to expect that drug courts also have differential effects. Further research should be conducted to assess the effectiveness of drug courts for higher and lower risk offenders across these different comparison groups. While the current study suggests drug courts are cost-effective alternatives to CBCFs, halfway houses, and parole, the inclusion of a risk variable in future studies will help to better assess who is best served by Ohio's felony level drug courts.

Finally, it should be acknowledged that not all drug courts are presumed to be equal. Just as there is variation in the effectiveness of Ohio's halfway house programs

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[32] As previously noted, data relating to the costs of treatment for those on probation were unavailable. However, it is likely that any under-estimation of probation costs is similarly matched by an under-estimation in drug court costs.

[33] The use of existing data from previous studies limited our ability to devise a risk measure. While attempts to create a risk measure were made, none of the measures could be considered reliable.

(see Lowenkamp and Latessa, 2002), there is likely to be variation in the effectiveness of Ohio's individual drug courts. While it is unclear what factors are associated with drug court effectiveness, further research should be conducted. Thus, while the current study did not find a significant difference in rearrest rates between drug court participants and probationers, further research must be conducted to assess the relative influence of various components of the drug court.

Identifying factors associated with drug court effectiveness is particularly salient when considering the return on Ohio's investment in drug courts. As previously noted, the marginal costs associated with drug courts is $5,777 while the general costs associated with a single new crime is $27,371. By dividing the costs of a new crime by the marginal cost of drug court, it can be determined that every dollar invested in drug courts can yield a net savings of $4.73. While these savings can only be enjoyed when drug courts reduce crime, it is noteworthy that Ohio's drug courts have the potential to save crime and its associated costs. While drug courts are clearly cheaper than their residential counterparts, it is not clear that they are more or less expensive than probation when treatment is provided. It is important, then, that careful decision-making must guide the types of services and supervision provided to offenders in an effort to maximize the financial benefits associated with drug courts.

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APPENDIX

**Table A1.  Characteristics of Drug Court Participants and Matched  Probationers**

| | Treatment | | Probation | |
|---|---|---|---|---|
| Characteristic | N | % | N | % |
| **Race** | | | | |
| White | 133 | 53.6 | 133 | 53.6 |
| Not White | 115 | 46.4 | 115 | 46.4 |
| | | | | |
| **Gender** | | | | |
| Male | 169 | 68.1 | 169 | 68.1 |
| Female | 79 | 31.9 | 79 | 31.9 |
| | | | | |
| **Age** | | | | |
| 18-25 | 73 | 31.9 | 76 | 33.9 |
| 26-35 | 70 | 30.6 | 61 | 27.2 |
| 36-45 | 65 | 28.4 | 59 | 26.3 |
| 46+ | 21 | 9.2 | 28 | 12.5 |
| Mean | 32.35 | | 32.63 | |
| | | | | |
| **Marital Status** | | | | |
| Married | 46 | 19.1 | 52 | 23.4 |
| Not Married | 195 | 80.9 | 170 | 76.6 |
| | | | | |
| **Employment Status** | | | | |
| Employed | 115 | 48.3 | 105 | 42.3 |
| Unemployed | 123 | 51.7 | 143 | 57.7 |
| | | | | |
| **Education Level*** | | | | |
| Less than High School | 92 | 37.9 | 137 | 62.3 |
| High School Graduate | 121 | 49.8 | 83 | 37.7 |
| Post High School | 30 | 12.3 | 0 | 0.0 |
| $\chi^2$=44.889, p=.000 | | | | |
| | | | | |
| **Current Charge** | | | | |
| Person | 0 | 0.0 | 22 | 9.6 |
| Drug | 167 | 70.2 | 120 | 52.2 |
| Property | 60 | 25.2 | 62 | 27.0 |
| DUI | 0 | 0.0 | 5 | 2.2 |
| Other | 11 | 4.6 | 21 | 9.1 |
| $\chi^2$=50.454, p=.000 | | | | |
| | | | | |
| **Current Offense Level** | | | | |
| F1 | 0 | 0.0 | 4 | 1.8 |
| F2 | 3 | 1.8 | 15 | 6.7 |
| F3 | 8 | 4.9 | 20 | 8.9 |
| F4 | 39 | 23.9 | 89 | 39.6 |
| F5 | 113 | 69.3 | 97 | 43.1 |
| $\chi^2$=28.719, p=.000 | | | | |
| | | | | |
| **Any Prior Arrest** | | | | |
| Yes | 183 | 94.8 | 193 | 92.3 |
| No | 10 | 5.2 | 16 | 7.7 |

**Table A2. Characteristics of Drug Court Participants and Matched Parolees**

| Characteristic | Treatment N | % | Parole N | % |
|---|---|---|---|---|
| **Race** | | | | |
| White | 103 | 53.4 | 103 | 53.4 |
| Not White | 90 | 46.6 | 90 | 46.6 |
| | | | | |
| **Gender** | | | | |
| Male | 162 | 83.9 | 162 | 83.9 |
| Female | 31 | 16.1 | 31 | 16.1 |
| | | | | |
| **Age** | | | | |
| 18-25 | 58 | 31.9 | 33 | 18.5 |
| 26-35 | 52 | 28.6 | 76 | 42.7 |
| 36-45 | 54 | 29.7 | 54 | 30.3 |
| 46+ | 18 | 9.9 | 15 | 8.4 |
| Mean | 32.52 | | 33.50 | |
| | | | | |
| **Marital Status** | | | | |
| Married | 37 | 19.9 | 24 | 12.4 |
| Not Married | 149 | 80.1 | 169 | 87.6 |
| | | | | |
| **Employment Status** | | | | |
| Employed | 96 | 52.2 | 62 | 32.1 |
| Unemployed | 88 | 47.8 | 131 | 67.9 |
| $\chi^2$=15.553, p=.000 | | | | |
| | | | | |
| **Education Level** | | | | |
| Less than High School | 70 | 37.2 | 112 | 64.0 |
| High School Graduate | 99 | 52.7 | 54 | 30.9 |
| Post High School | 19 | 10.1 | 9 | 5.1 |
| $\chi^2$=26.067, p=.000 | | | | |
| | | | | |
| **Current Charge** | | | | |
| Person | 0 | 0.0 | 0 | 0.0 |
| Drug | 122 | 66.7 | 99 | 51.3 |
| Property | 52 | 28.4 | 94 | 48.7 |
| DUI | 0 | 0.0 | 0 | 0.0 |
| Other | 9 | 4.9 | 0 | 0.0 |
| $\chi^2$=23.226, p=.000 | | | | |
| | | | | |
| **Current Offense Level** | | | | |
| F1 | 0 | 0.0 | 3 | 1.6 |
| F2 | 3 | 2.5 | 59 | 30.6 |
| F3 | 8 | 6.6 | 31 | 16.1 |
| F4 | 29 | 24.0 | 39 | 20.2 |
| F5 | 81 | 66.9 | 61 | 31.6 |
| $\chi^2$=57.971, p=.000 | | | | |
| | | | | |
| **Any Prior Arrest** | | | | |
| Yes | 143 | 94.7 | 158 | 81.9 |
| No | 8 | 5.3 | 35 | 18.1 |
| $\chi^2$=12.763, p=.000 | | | | |

**Table A3.  Characteristics of Drug Court Participants and Matched CBCF Participants**

| Characteristic | Treatment | | CBCF | |
|---|---|---|---|---|
| | N | % | N | % |
| Race | | | | |
| White | 127 | 56.7 | 127 | 56.7 |
| Not White | 97 | 43.3 | 97 | 43.3 |
| | | | | |
| Gender | | | | |
| Male | 186 | 83.0 | 186 | 83.0 |
| Female | 38 | 17.0 | 38 | 17.0 |
| | | | | |
| Age | | | | |
| 18-25 | 68 | 32.5 | 66 | 31.6 |
| 26-35 | 59 | 28.2 | 67 | 32.1 |
| 36-45 | 61 | 29.2 | 60 | 28.7 |
| 46+ | 21 | 10.0 | 16 | 7.7 |
| Mean | 32.18 | | 33.50 | |
| | | | | |
| Marital Status | | | | |
| Married | 37 | 17.0 | 40 | 17.9 |
| Not Married | 181 | 83.0 | 184 | 82.1 |
| | | | | |
| Employment Status | | | | |
| Employed | 100 | 46.5 | 110 | 49.1 |
| Unemployed | 115 | 53.5 | 114 | 50.9 |
| | | | | |
| Education Level | | | | |
| Less than High School | 75 | 34.1 | 135 | 60.8 |
| High School Graduate | 121 | 55.0 | 75 | 33.8 |
| Post High School | 24 | 10.9 | 12 | 5.4 |

$\chi^2$=31.930, p=.000

| Characteristic | Treatment | | CBCF | |
|---|---|---|---|---|
| Current Charge | | | | |
| Person | 0 | 0.0 | 27 | 12.1 |
| Drug | 145 | 67.4 | 104 | 46.4 |
| Property | 60 | 27.9 | 59 | 26.3 |
| DUI | 0 | 0.0 | 0 | 0.0 |
| Other | 10 | 4.6 | 34 | 15.2 |

$\chi^2$=60.164, p=.000

| Characteristic | Treatment | | CBCF | |
|---|---|---|---|---|
| Current Offense Level | | | | |
| F1 | 0 | 0.0 | 5 | 2.2 |
| F2 | 3 | 2.1 | 8 | 3.6 |
| F3 | 7 | 4.9 | 27 | 12.1 |
| F4 | 37 | 25.7 | 84 | 37.5 |
| F5 | 97 | 67.4 | 100 | 44.6 |

$\chi^2$=20.937, p=.000

| Characteristic | Treatment | | CBCF | |
|---|---|---|---|---|
| Any Prior Arrest | | | | |
| Yes | 169 | 94.4 | 224 | 100.0 |
| No | 10 | 5.6 | 0 | 0.0 |

$\chi^2$=12.832, p=.000

**Table A4.  Characteristics of Drug Court Participants and Matched Halfway House Participants**

| Characteristic | Treatment | | Halfway House | |
|---|---|---|---|---|
| | N | % | N | % |
| Race | | | | |
| White | 80 | 44.9 | 80 | 44.9 |
| Not White | 98 | 55.1 | 98 | 55.1 |
| | | | | |
| Gender | | | | |
| Male | 151 | 84.8 | 151 | 84.8 |
| Female | 27 | 15.2 | 27 | 15.2 |
| | | | | |
| Age | | | | |
| 18-25 | 49 | 29.2 | 29 | 21.2 |
| 26-35 | 50 | 29.8 | 61 | 44.5 |
| 36-45 | 54 | 32.1 | 38 | 27.7 |
| 46+ | 15 | 8.9 | 9 | 6.6 |
| Mean | 32.80 | | 33.03 | |
| | | | | |
| Marital Status | | | | |
| Married | 31 | 17.9 | 19 | 10.7 |
| Not Married | 142 | 82.1 | 159 | 89.3 |
| | | | | |
| Employment Status | | | | |
| Employed | 81 | 47.4 | 81 | 45.5 |
| Unemployed | 90 | 52.6 | 97 | 54.5 |
| | | | | |
| Education Level | | | | |
| Less than High School | 61 | 35.3 | 119 | 68.4 |
| High School Graduate | 92 | 53.2 | 44 | 25.3 |
| Post High School | 20 | 11.6 | 11 | 6.3 |
| $\chi^2$=38.240, p=.000 | | | | |
| | | | | |
| Current Charge | | | | |
| Person | 0 | 0.0 | 47 | 26.4 |
| Drug | 114 | 67.1 | 58 | 32.6 |
| Property | 47 | 27.6 | 63 | 35.4 |
| DUI | 0 | 0.0 | 0 | 0.0 |
| Other | 9 | 5.1 | 10 | 5.6 |
| $\chi^2$=74.987, p=.000 | | | | |
| | | | | |
| Current Offense Level | | | | |
| F1 | 0 | 0.0 | 28 | 15.7 |
| F2 | 2 | 1.9 | 53 | 29.8 |
| F3 | 7 | 6.7 | 32 | 18.0 |
| F4 | 22 | 21.0 | 40 | 22.5 |
| F5 | 74 | 70.5 | 25 | 14.0 |
| $\chi^2$=109.233, p=.000 | | | | |
| | | | | |
| Any Prior Arrest | | | | |
| Yes | 131 | 94.9 | 178 | 100.0 |
| No | 7 | 5.1 | 0 | 0.0 |
| $\chi^2$=9.234, p=.002 | | | | |

**Table A5. Characteristics of Drug Court Participants and Matched Comparison Group Members**

| Characteristic | Treatment | | Comparison | |
|---|---|---|---|---|
| | N | % | N | % |
| **Race** | | | | |
| White | 162 | 58.1 | 426 | 51.9 |
| Not White | 117 | 41.9 | 395 | 48.1 |
| | | | | |
| **Gender*** | | | | |
| Male | 193 | 69.2 | 653 | 79.5 |
| Female | 86 | 30.8 | 168 | 20.5 |
| $\chi^2$=12.589, p=.000 | | | | |
| | | | | |
| **Age** | | | | |
| 18-25 | 78 | 30.2 | 200 | 27.4 |
| 26-35 | 79 | 30.6 | 255 | 35.0 |
| 36-45 | 78 | 30.2 | 208 | 28.5 |
| 46+ | 23 | 8.9 | 66 | 9.1 |
| Mean | 32.51 | | 32.64 | |
| | | | | |
| **Marital Status** | | | | |
| Married | 50 | 18.4 | 132 | 16.6 |
| Not Married | 222 | 81.6 | 663 | 83.4 |
| | | | | |
| **Employment Status** | | | | |
| Employed | 126 | 46.8 | 350 | 42.6 |
| Unemployed | 143 | 53.2 | 471 | 57.4 |
| | | | | |
| **Education Level** | | | | |
| Less than High School | 95 | 34.7 | 495 | 64.2 |
| High School Graduate | 148 | 54.0 | 247 | 32.0 |
| Post High School | 31 | 11.3 | 29 | 3.8 |
| $\chi^2$=77.143, p=.000 | | | | |
| | | | | |
| **Current Charge** | | | | |
| Person | 0 | 0.0 | 95 | 11.8 |
| Drug | 185 | 69.0 | 369 | 46.0 |
| Property | 71 | 26.5 | 269 | 33.5 |
| DUI | 0 | 0.0 | 5 | 0.6 |
| Other | 12 | 4.4 | 65 | 8.1 |
| $\chi^2$=85.541, p=.000 | | | | |
| | | | | |
| **Current Offense Level** | | | | |
| F1 | 0 | 0.0 | 40 | 5.0 |
| F2 | 3 | 1.6 | 129 | 16.2 |
| F3 | 10 | 5.3 | 105 | 13.2 |
| F4 | 43 | 22.8 | 248 | 31.1 |
| F5 | 133 | 70.4 | 276 | 34.6 |
| $\chi^2$=92.685, p=.000 | | | | |
| | | | | |
| **Any Prior Arrest** | | | | |
| Yes | 200 | 95.2 | 735 | 94.0 |
| No | 10 | 4.8 | 47 | 6.0 |

**Table A6.  Consumer Price Index**

| Year | CPI |
|------|------|
| 1997 | 156.7 |
| 1998 | 159.3 |
| 1999 | 162.7 |
| 2000 | 168.3 |
| 2001 | 172.8 |
| 2002 | 174.9 |
| 2003 | 178.3 |
| 2004 | 182.6 |

The following formula was used to calculate the change in the index between years:

$CPI_{year2} - CPI_{year1}$ = Index Point Change

The Index Point Change was converted to a percentage by doing the following:

(Index Point Change / $CPI_{year1}$) x 100

Source: *http://www.bls.gov/cpi/*

**Table A7. Drug Court Breakeven Points**

|  | 2003 | 2004 | 2005 | Average |
|---|---|---|---|---|
| **Breakeven (excluding sanction)** | | | | |
| Versus Probation | -0.209 | -0.204 | -0.198 | -0.203 |
| Versus CBCF | 0.178 | 0.174 | 0.169 | 0.174 |
| Versus Halfway House | 2.305 | 2.246 | 2.185 | 2.244 |
| Versus DRC+Parole | 2.133 | 2.078 | 2.022 | 2.077 |
| | | | | |
| **Breakeven resulting in probation** | | | | |
| Versus Probation | -0.206 | -0.201 | -0.195 | -0.201 |
| Versus CBCF | 0.176 | 0.172 | 0.167 | 0.171 |
| Versus Halfway House | 2.274 | 2.215 | 2.156 | 2.214 |
| Versus DRC+Parole | 2.104 | 2.050 | 1.995 | 2.048 |
| | | | | |
| **Breakeven resulting in Halfway House** | | | | |
| Versus Probation | -0.059 | -0.058 | -0.056 | -0.058 |
| Versus CBCF | 0.051 | 0.049 | 0.048 | 0.049 |
| Versus Halfway House | 0.653 | 0.638 | 0.620 | 0.637 |
| Versus DRC+Parole | 0.605 | 0.590 | 0.574 | 0.589 |
| | | | | |
| **Breakeven resulting in CBCF** | | | | |
| Versus Probation | -0.149 | -0.145 | -0.141 | -0.145 |
| Versus CBCF | 0.127 | 0.124 | 0.121 | 0.124 |
| Versus Halfway House | 1.645 | 1.604 | 1.561 | 1.603 |
| Versus DRC+Parole | 1.522 | 1.484 | 1.444 | 1.483 |

## Logistic Regression Predicting Arrest:
## Drug Court Participants and Matched Probationers

| Variable | B | S.E. | Wald | df | Sig |
|---|---|---|---|---|---|
| Group | .367 | .239 | 2.359 | 1 | .125 |
| Married | -.328 | .278 | 1.393 | 1 | .238 |
| Education* | .558 | .237 | 5.547 | 1 | .019 |
| Prior arrest | .304 | .466 | .425 | 1 | .514 |
| Employed | .131 | .229 | .327 | 1 | .567 |
| Status* | 1.164 | .230 | 25.522 | 1 | .000 |
| County* | -.016 | .055 | 12.270 | 1 | .000 |
| Constant | -1.084 | .561 | 3.732 | 1 | .053 |

$\chi^2$=53.682, p=.000

## Logistic Regression Predicting Arrest:
## Drug Court Participants and Matched Parolees

| Variable | B | S.E. | Wald | df | Sig |
|---|---|---|---|---|---|
| Group* | .522 | .251 | 4.320 | 1 | .038 |
| Married | -.270 | .336 | .645 | 1 | .422 |
| Education* | .879 | .248 | 12.579 | 1 | .000 |
| Prior arrest | .180 | .368 | .238 | 1 | .626 |
| Employed | .128 | .247 | .266 | 1 | .606 |
| Status | -.057 | .241 | .055 | 1 | .814 |
| County | -.066 | .005 | 1.743 | 1 | .187 |
| Constant | -.730 | .546 | 1.790 | 1 | .181 |

$\chi^2$=27.702, p=.000

## Logistic Regression Predicting Arrest:
## Drug Court Participants and CBCF Participants

| Variable | B | S.E. | Wald | df | Sig |
|---|---|---|---|---|---|
| Group* | 1.398 | .260 | 28.824 | 1 | .000 |
| Married | -.374 | .287 | 1.693 | 1 | .193 |
| Education* | .468 | .225 | 4.313 | 1 | .038 |
| Prior arrest | .597 | .841 | .505 | 1 | .477 |
| Employed | .454 | .220 | 4.242 | 1 | .039 |
| Status | .645 | .264 | 5.962 | 1 | .015 |
| County | -.007 | .005 | 2.232 | 1 | .135 |
| Constant | -1.511 | .866 | 3.045 | 1 | .081 |

$\chi^2$=57.708, p=.000

**Logistic Regression Predicting Arrest:**
**Drug Court Participants and Halfway House Participants**

| Variable | B | S.E. | Wald | df | Sig |
|---|---|---|---|---|---|
| Group* | .752 | .280 | 7.237 | 1 | .007 |
| Married | .043 | .360 | .014 | 1 | .905 |
| Education | .429 | .261 | 2.707 | 1 | .100 |
| Prior arrest | -.029 | .912 | .001 | 1 | .974 |
| Employed | -.040 | .249 | .026 | 1 | .872 |
| Status* | .775 | .257 | 9.071 | 1 | .003 |
| County | -.009 | .005 | 2.790 | 1 | .095 |
| Constant | -1.003 | .951 | 1.114 | 1 | .291 |

$\chi^2$=24.184, p=.001

**Logistic Regression Predicting Arrest:**
**Drug Court Participants and Comparison Group Members**

| Variable | B | S.E. | Wald | df | Sig |
|---|---|---|---|---|---|
| Group* | .702 | .179 | 15.383 | 1 | .000 |
| Married | .045 | .182 | .062 | 1 | .804 |
| Education* | .435 | .143 | 9.277 | 1 | .002 |
| Prior arrest | .245 | .299 | .675 | 1 | .411 |
| Employed | .250 | .139 | 3.228 | 1 | .072 |
| Status* | .374 | .142 | 6.906 | 1 | .009 |
| Gender* | .626 | .169 | 13.748 | 1 | .000 |
| County* | -.010 | .003 | 14.978 | 1 | .000 |
| Constant* | -1.543 | .407 | 14.386 | 1 | .000 |

$\chi^2$=73.522, p=.000