

Anne Arundel County DUI Court Program Outcome and Cost Evaluation



Submitted to:

Gray Barton
Executive Director
Office of Problem-Solving Courts
2011-D Commerce Park Drive
Annapolis, MD 21401

Submitted by:

NPC Research
Portland, Oregon

December 2009



4380 SW Macadam Ave., Suite 530
Portland, OR 97239
(503) 243-2436
www.npcresearch.com

Anne Arundel County DUI Court Program Outcome and Cost Evaluation

Submitted by
NPC Research

Research Team

Juliette R. Mackin, Ph.D., Principal Investigator
Lisa M. Lucas, B.A., & Callie H. Lambarth, M.S.W., Outcome Study Coordinators
Mark S. Waller, B.A., & Theresa Herrera Allen, Ph.D., Cost Analysts
Shannon M. Carey, Ph.D., & Michael W. Finigan, Ph.D.,
Consultants on Drug Court Research

For questions about this report or project, please contact Juliette Mackin at
(503) 243-2436 x 114 or mackin@npcresearch.com.

December 2009



Informing policy, improving programs

ACKNOWLEDGEMENTS

This report is made possible by the good work, support, and participation of many people and organizations, including:

- Frank Broccolina, Maryland State Court Administrator
- Gray Barton, Executive Director; Jennifer Moore, Deputy Director, Maryland Office of Problem Solving Courts
- Hon. Jamey H. Hueston, Chair of the Judicial Conference Committee on Problem-Solving Courts
- Hon. Kathleen G. Cox, Chair, Drug Court Oversight Committee
- Hon. John P. McKenna, Administrative Judge, Anne Arundel District Court of Maryland,
- Hon. Thomas J. Pryal, Judge, District Court for Anne Arundel County, Presiding Judge, Anne Arundel County DUI Court Program
- Molly Nussear, Coordinator, Anne Arundel County DUI Court Program as well as the rest of the staff at the DUI Court Program
- Darren Douglas, Public Defender, Public Defenders Office of Anne Arundel County
- Colin Kelly - Assistant State's Attorney, Ginger Schroeder, Paralegal and Kim Stello, Paralegal, State's Attorney, State's Attorney's Office of Anne Arundel County
- Rhonda Rudiger, Supervisor, and the rest of the staff at Anne Arundel County Health Department,
- Sandora Cathcart, Anne Arundel County Detention Center,
- John Colmers, Secretary; Gay Hutchen, IRB Administrator, Maryland Department of Health and Mental Hygiene
- Kathleen Rebbert-Franklin, Deputy Director, Maryland Alcohol and Drug Abuse Administration
- Thomas Cargiulo, Administration Director; Chad Basham, Database Administrator; Bill Rusinko, Research Director, Maryland Alcohol and Drug Abuse Administration
- Robert Gibson, Director, Planning and Statistics; Tom Stough, Chief of Statistics; Ravi Bhayankar, DP Program Manager; Boyce Williams, Analyst, Department of Public Safety & Correctional Services
- Mary Hutchins, Security Administrator/Project Analyst, Administrative Office of the Courts/JIS
- Rita Butler, Janet Bridger and Kathleen Lester, Institute for Governmental Service and Research, University of Maryland
- Jennifer Aborn, Bob Linhares, Judy Weller, Tiana Jacobson, and Charley Korns, NPC Research

TABLE OF CONTENTS

EXECUTIVE SUMMARY.....	I
INTRODUCTION AND BACKGROUND.....	1
The DUI Court Model.....	1
Anne Arundel County Adult Drug/DUI Court (District Court) Program Description.....	2
Implementation and Team	2
Background	2
Incentives and Sanctions.....	3
Graduation and Unsuccessful Completions	3
OUTCOME/IMPACT EVALUATION.....	5
Outcome Evaluation Methods	5
Research Strategy.....	5
Outcome/Impact Study Questions	5
Data Collection and Sources.....	6
Sample Selection.....	7
Data Analyses	8
Limitations	10
Outcome Evaluation Results.....	10
Policy Question # 1: Does Participation in the DUI Court Program Reduce Substance Use?.....	12
Policy Question # 2: Does Participation in the Dui Court Reduce Subsequent DUI Charges?.....	12
Policy Question # 3: Does Participation in the DUI Court Program Reduce Recidivism in the Criminal Justice System Overall (not including DUI charges)?.....	16
Policy Question #4: Do Participants of the DUI Court Program Complete the Program Successfully?.....	19
Policy Question #5: What Predicts Participant Success?.....	20
Outcome Summary	25
COST EVALUATION	27
Cost Evaluation Methodology	27
Cost Evaluation Design.....	27
Cost Evaluation Methods.....	28
Cost Evaluation Results	29
Cost Evaluation Question #1: Program Costs.....	30
Cost Evaluation Question #2: Outcome/Recidivism Costs	33
DISCUSSION & SUMMARY OF FINDINGS.....	41
REFERENCES	43

LIST OF TABLES

Table 1. Data Sources 7

Table 2. Anne Arundel DUI Court Admissions by Year (study participants only)..... 7

Table 3. DUI Court and Comparison Group Characteristics 11

Table 4. Average Number of Cumulative Re-Arrests by Charge Type at 24 Months 19

Table 5. Number of DUI Court Graduates in Study Sample by Year of Admission..... 20

Table 6. Characteristics of DUI Court Graduates and Non-Graduates..... 21

Table 7. Demographic and Criminal Justice History-Related Variables That Predict
Subsequent DUI Charges at 24 Months..... 22

Table 8. Demographic and Criminal Justice History-Related Variables That Predict
Recidivism in the Overall Criminal Justice System at 24 Months 24

Table 9. The Six Steps of TICA 29

Table 10. Average DUI Court Program Costs per Participant 32

Table 11. Average DUI Court Cost per Participant by Agency 33

Table 12. Average Number of Outcome Transactions per Person Over 24 Months 35

Table 13. Criminal Justice System Outcome Costs per Person Over 24 Months..... 36

Table 14. Criminal Justice System Outcome Costs by Agency per Person Over 24 Months .. 37

LIST OF FIGURES

Figure 1. Percent of DUI Court Participants With a Positive UA Test Over Time 12

Figure 2. DUI Arrest Rates 2 Years Before & 2 Years After Program Entry 13

Figure 3. Re-Arrest Rate for DUI Charges Over Time by Group 14

Figure 4. Number of DUI Arrests 2 Years Before & 2 Years After Program Entry 14

Figure 5. Cumulative Number of Re-Arrests for DUI Charges Over Time 15

Figure 6. Criminal Arrest Rates 2 Years Before & 2 Years After Program Entry 16

Figure 7. Re-Arrest Rate Over Time by Group 17

Figure 8. Number of Arrests 2 Years Before & 2 Years After Program Entry 17

Figure 9. Cumulative Number of Re-Arrests Over Time 18

Figure 10. Criminal Justice Recidivism Cost Consequences per Person Over 24 Months 38

Figure 11. Projected DUI Court Criminal Justice Cost Savings Over 5 Years 39

EXECUTIVE SUMMARY

What Are DUI Courts?

A DUI Court is an accountability court dedicated to changing the behavior of the hardcore offenders¹ arrested for Driving Under the Influence of Intoxicants. The goal of DUI Court is to protect public safety by using the highly successful Drug Court model that uses intensive supervision and long-term treatment to address the root cause of impaired driving: alcohol and other substance abuse. These court programs offer post-conviction intervention that involves coordination of multiple agencies and professional practitioners applying a variety of areas of expertise, intensive case management and supervision, and frequent judicial reviews. In the typical DUI court program, participants are closely supervised by a judge who is supported by a team of agency representatives that operate outside of their traditional and sometimes adversarial roles. Benefits to society take the form of reductions in DUIs and other crime committed by program participants, resulting in reduced costs to taxpayers and increased public safety. As of December 2008, there were 382 Hybrid DUI/Drug Courts in operation. (A Hybrid DUI/Drug Court is one that started out as a Drug Court that now also takes DUI Offenders.) In addition, there were another 144 designated DUI Courts bringing the total number of specialized courts dealing with hardcore impaired drivers to 526.

How Was This Study Conducted?

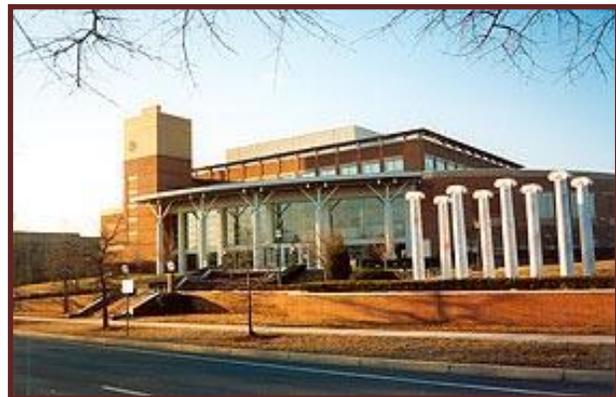
NPC Research, under contract with the Administrative Office of the Courts of the State of Maryland, conducted an outcome and cost study of the Anne Arundel County District Court DUI Court (AACDC) program.

Anne Arundel County DUI Court Program Description

Anne Arundel County District Court DUI Court program was formed in 2004 and admitted its first participants in 2005. As of July 2009, the program had served 57 people.

The program provides services aimed at participant rehabilitation for a minimum of 18 months. A program plan is designed with the individual's case manager and addresses areas such as family issues, physical health, employment, education and legal concerns. The entire plan consists of 4 levels of case management and includes breathalyzer tests, substance abuse treatment meetings, case manager meetings, and use of a Secure Continuous Remote Alcohol Monitor (SCRAM) bracelet. Participants in the DUI Court program are required to have an interlock on any vehicle they operate.

AACDC participants are rewarded for achieving and maintaining progress toward a substance free lifestyle. Incentives are provided by the judge as well as the case manager. Sanctions are



¹ Hardcore DUI offenders are defined as individuals who drive with a blood alcohol content (BAC) of 0.15 percent or greater, or who are arrested for or convicted of driving while intoxicated after a prior driving while impaired (DUI) conviction.

also part of the program and are imposed by the judge for misconduct and failure to comply. The graduation rate for this program is 57%. The average time for graduates to complete the program was 17 months. (Non-graduates spent an average of 9.5 months in the program, giving the program an overall length of stay of about 13.5 months.)

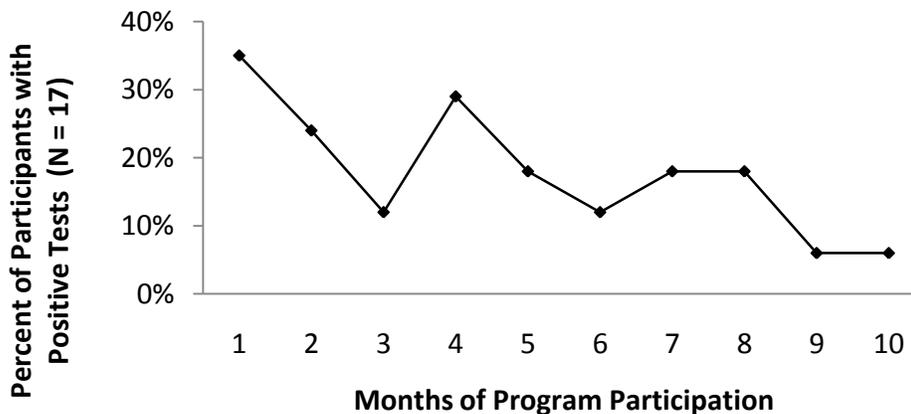
Four key policy questions of interest to program practitioners, researchers, and policymakers about DUI courts were addressed in this study.

1. Does Participation in the DUI Court Reduce Substance Use Among Program Participants?

YES: DUI Court participants showed reductions in drug use following entrance into the program.

Figure A shows the percentage of program participants with a positive urine analysis (UA) test in each 1-month period for individuals receiving 10 months or more of program services, regardless of graduation status. The rate of substance use, as measured by positive drug tests among program participants, appears to decline over time, implying that involvement in the DUI Court reduces substance use. This difference is not statistically significant, most likely due to the small number of participants with UA test results available for the full 10 months; however, the pattern parallels results from other studies with larger numbers that did demonstrate significance with this type of decline.

Figure A. Percent of DUI Court Participants With a Positive UA Test Over Time



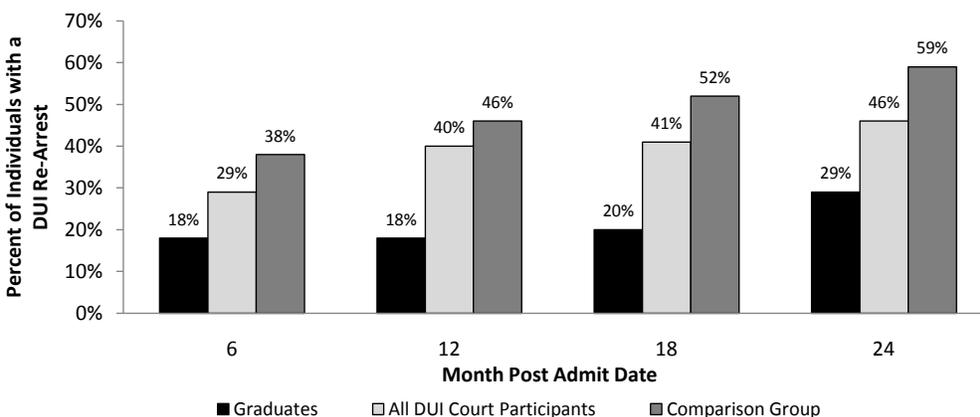
2. Does Participation in the DUI Court Reduce Subsequent DUI Charges?

YES: DUI Court participants showed reductions in DUI arrests following entrance into the program.

Although all DUI Court participants and graduates were arrested for DUI charges during the 2 years prior to program admission (as per program eligibility criteria, as this includes the DUI charge that brought them into the program), only 46% of all program participants and 29% of program graduates had been rearrested for DUI charges in the 2 years after entering the DUI Court program. The change in arrest rates for the DUI Court group is significantly greater than that of the comparison group.

As shown in Figure B below, the DUI Court group and graduates have a pattern of fewer re-arrests for DUI charges over time. These differences are not statistically different for these small group sizes. The graduates were rearrested for DUI charges less often than the non-graduates at the level of a trend at the 6 month time period and significantly less often at 12 and 18 months.

Figure B. Re-Arrest Rate for DUI Charges Over Time by Group²



3. Does Participation in the DUI Court Reduce Recidivism in the Criminal Justice System Overall?

YES: There is a pattern of lower recidivism rates and lower numbers of re-arrests for program participants.

Criminal Justice Recidivism Rate

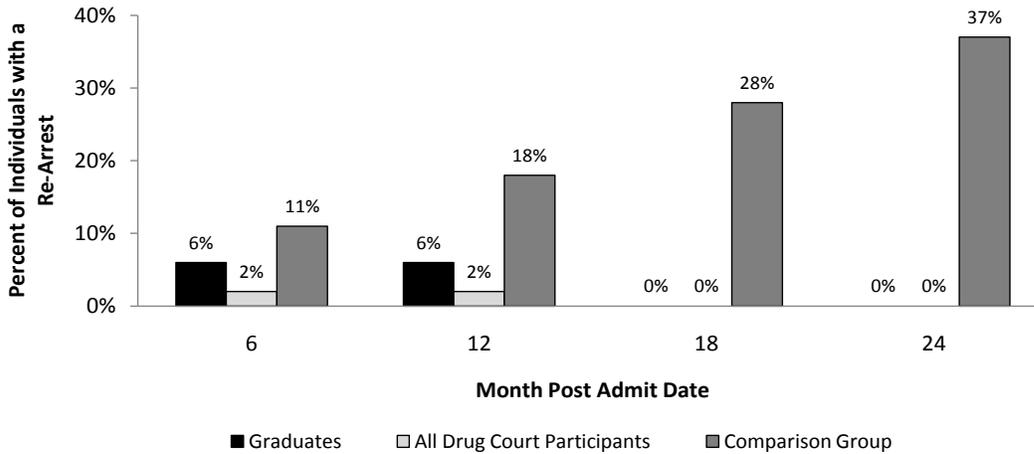
Figure C shows arrest rates, the percentage of individuals arrested in the criminal justice system overall, using a 24-month pre-post comparison. The pre time period includes the 2 years prior to program entry or equivalent, which is compared to the post time period which begins at program entry (or equivalent for the comparison group). Comparison group individuals were arrested significantly more often than the DUI Court group at the 24-month follow-up point. The change over time was also significant, indicating that DUI Court participants reduced their arrest rates more than the comparison group.

As shown in Figure C, the recidivism rate for DUI Court participants appears lower than the comparison group at every time period, regardless of graduation status. The DUI Court participants were re-arrested significantly less often than the comparison group at 18 and 24 months and at the level of a trend in months 6 and 12.

In the 24 months following entry to the program, none of the DUI Court participants and graduates were re-arrested, while 37% of the comparison group members were re-arrested.

² Sample sizes: Graduates with 6 months n = 17, 12 months n = 17, 18 months n = 15, and 24 months n = 7; All DUI Court participants with 6 months n = 41, 12 months n = 38, 18 months n = 27, and 24 months n = 11; Comparison group with 6 months n = 98, 12 months n = 85, 18 months n = 76, and 24 months n = 59.

Figure C. Re-Arrest Rate Over Time by Group³



4. Does the DUI Court Result in Savings of Taxpayer Dollars?

YES: The DUI Court results in significant cost savings and a return on taxpayer investment in the program

The program investment costs are \$7,151 per DUI Court participant. When program costs are divided by the average number of days in the program, the cost per day per participant for the DUI Court program is \$17.35.

The cost due to recidivism over 24 months from program entry was \$7,390 per DUI Court participant compared to \$9,016 per comparison individual, resulting in a savings of \$1,626 per participant (regardless of whether they graduate). The vast majority of the cost in outcomes for DUI Court participants over the 24 months from DUI Court entry was due to time in jail (\$5,597), mostly for participants who were unsuccessful in completing the program.

In sum, there is a clear benefit to the taxpayer in terms of criminal justice related costs in choosing the DUI Court process over traditional court processing.

Recommendations for Program Improvement

The Anne Arundel County DUI Court program demonstrates promise in reducing substance use and criminality. The small number of individuals who had 24 months of time after program entry may have limited this study’s ability to find significant differences in some of the recidivism analyses; however, future studies may be able to demonstrate additional positive recidivism outcomes.

There are several areas that the program could focus on that have the potential to benefit participants and improve outcomes.

³ Sample sizes: Graduates with 6 months n = 17, 12 months n = 17, 18 months n = 15, and 24 months n = 7; All DUI Court participants with 6 months n = 41, 12 months n = 38, 18 months n = 27, and 24 months n = 11; Comparison group with 6 months n = 98, 12 months n = 85, 18 months n = 76, and 24 months n = 59.

1. Unsuccessful participants have a high number of outcome jail days. The program may want to assess why that is, and whether there are alternatives that could be utilized with equivalent effectiveness, to reduce outcome costs.
2. The team may want to assess the Court's sentencing process for unsuccessful participants to ensure that these individuals are not being treated more harshly due to their inability to complete the program.
3. In order to increase this program's graduation rate, and reduce the use of jail time for unsuccessful participants, it may be useful to:
 - a. Look at the assessment process and ensure that high quality, comprehensive assessment is occurring and that the results of those assessments are being used to make treatment planning decisions.
 - b. Review the services available for participating individuals, to ensure intensity of services matches the need as indicated by the substance abuse assessment and criminogenic risk assessment.
 - c. Talk to program participants, particularly those who are not as successful, about the challenges they face and their unmet needs, to inform the team about how best to address the barriers to their success and increase the proportion of individuals who graduate.
4. Data collection procedures for this study indicated that the program has begun entering information into the SMART data system and that other program records were housed in paper files. Continue to use SMART and advocate for the development of that system to facilitate the availability of summary reports so that the program can have access to and use its data for program monitoring and planning. In addition, look for creative solutions to the program's need for administrative support to help with data entry, such as interns, community volunteers, or grants to pay for administrative staff time.
5. The process of information-gathering for this study revealed several gaps in available electronic information at the program level that could be useful for the program to have locally as well as for future program planning and monitoring. Review the program coordinator's list of participants since inception currently in Microsoft Excel for additional information that could be included. NPC would suggest at a minimum including date of birth, state identification number, jail identification number, and social security number.
6. The numbers served in this program are low given the size of Anne Arundel County and what is probably large community need. This DUI Court program would likely benefit from an economy of scale if it were able to increase its numbers. The program may want to look at the reasons why the numbers served have been low, including whether there are barriers to identifying eligible offenders, barriers to partner agencies making referrals to the program, or barriers to offenders to joining the program. Addressing existing barriers could make the program's benefits available to a larger group of DUI offenders. However, the program needs to ensure that it can meet the needs of the participants it does accept, including having enough staff to provide case management services. Continue to advocate for adequate funding to make the drug court staff positions appealing enough to draw and retain skilled individuals.

INTRODUCTION AND BACKGROUND

The DUI Court Model

In the last 20 years, one of the most dramatic developments in the movement to reduce substance abuse among the criminal justice population in the United States has been the spread of drug courts across the country. This model has been demonstrated to be so successful at reducing criminality (GAO, 2005), and in reducing taxpayer costs due to positive outcomes for drug court participants (Carey & Finigan, 2004; Carey, Finigan, Waller, Lucas, & Crumpton, 2005), it has been expanded to address specialized populations and issues, such as individuals arrested for Driving Under the Influence (DUI).

A DUI Court is an accountability court dedicated to changing the behavior of the hardcore offenders⁴ arrested for Driving Under the Influence of Intoxicants. The goal of DUI Court is to protect public safety by using the highly successful Drug Court model that uses intensive supervision and long-term treatment to address the root cause of impaired driving: alcohol and other substance abuse. These court programs offer post-conviction intervention that involves coordination of multiple agencies and professional practitioners applying a variety of areas of expertise, intensive case management and supervision, and frequent judicial reviews. In the typical DUI court program, participants are closely supervised by a judge who is supported by a team of agency representatives that operate outside of their traditional roles. The team typically includes a drug court coordinator, addiction treatment providers, prosecuting attorneys, defense attorneys, law enforcement officers, and parole and probation officers who work together to provide needed services to drug court participants. Prosecuting attorneys and defense attorneys hold their usual adversarial positions in abeyance to support the treatment and supervision needs of program participants. Drug court programs can be viewed as blending resources, expertise, and interests of a variety of state and local jurisdictions and agencies.

Benefits to society take the form of reductions in DUIs and other crime committed by program participants, resulting in reduced costs to taxpayers and increased public safety. As of December 2008, there were 382 Hybrid DUI/Drug Courts in operation. (A Hybrid DUI/Drug Court is one that started out as a Drug Court that now also takes DUI Offenders) In addition, there were another 144 designated DUI Courts bringing the total number of specialized courts dealing with hardcore impaired drivers to 526.

In 2001, NPC Research, under contract with the Administrative Office of the Courts of the State of Maryland, began cost studies of adult, juvenile and family drug courts across the state. The results presented in this report include the costs associated with the Anne Arundel County District Court DUI Court program and the outcomes of participants as compared to a sample of similar individuals who received traditional court processing. This program is a combined drug court and DUI court program, but this report will focus only on the participants who are served by the DUI court side of the program. Another report will cover the adult drug court participant outcomes and associated costs.

⁴ Hardcore DUI offenders are defined as individuals who drive with a blood alcohol content (BAC) of 0.15 percent or greater, or who are arrested for or convicted of driving while intoxicated after a prior driving while impaired (DUI) conviction.

Anne Arundel County Adult Drug/DUI Court (District Court) Program Description

ANNE ARUNDEL COUNTY, MARYLAND

Anne Arundel County is located in the center of the state of Maryland. It lies west of the Chesapeake Bay and is considered a suburb of Baltimore City and Washington, DC. Annapolis is the county seat of Anne Arundel County and has a population of 36,408, according to the 2007 Census estimate.⁵ The population of Anne Arundel County is 512,790 with 76% of the population aged 18 or older and a median age of 38. Anne Arundel County's racial/ethnic composition is 78% White and 15% Black; 4% of the population is Asian and 2% are other ethnicities. The 2006 Census estimate found that the median family income is \$91,071, and the median household income is \$79,294; with 5% of individuals and 3% of people in families living below poverty level. The county's unemployment rate was 6.9% as of June 2009, according to the U.S. Department of Labor.⁶ The main industries of employment are educational services, health care, and social assistance.

ANNE ARUNDEL COUNTY DUI COURT OVERVIEW

The Anne Arundel County DUI Court (AACDC) is located in Annapolis. The DUI court program was implemented as a program alongside the Anne Arundel Adult Drug Court program, already in operation. Participants from both programs attend hearings together, although requirements are different. The program provides services aimed at participant rehabilitation for a minimum of 18 months. It is the mission of the AACDC to serve the community and to promote public safety by providing comprehensive services for individuals who commit crimes as a result of their addiction to alcohol.

IMPLEMENTATION AND TEAM

With funding assistance from the Maryland Drug Treatment Court Commission, Anne Arundel County began to plan for its DUI court in fall 2004. By spring 2005, the program was fully implemented. The AACDC operations team is made up of the Judge, Drug Court Coordinator, Clinical Case Manager Supervisor, DUI Case Managers, Treatment Assessor, Assistant State's Attorney, and Assistant Public Defender.

BACKGROUND

The primary objectives of the Anne Arundel DUI Court are to provide a coordinated, ongoing program to aid participants in reducing or eliminating their use of alcohol. Additionally, the program is intended to help participants become more self-sufficient.

ELIGIBILITY CRITERIA

The States Attorney's Office determines eligibility based on the prospective participant's prior record, including nature of prior offenses and pre-defined program criteria. In order to be eligible for the DUI court, an individual must be 18 years or older, a county resident, have no history of violence and no interfering mental health issues. The eligible charge may be a prospective partic-

⁵ Demographic data were retrieved from the U. S. Census Bureau at <http://www.census.gov> in August 2009.

⁶ Employment information was retrieved from <http://www.bls.gov>

ipant's first, second or third DUI. Individuals are ineligible if they have any pending warrants, sentences or are currently on parole.

DUI COURT PROGRAM PLAN

The program plan is designed with the individual's case manager and addresses areas such as family issues, physical health, employment, education and legal concerns. The entire plan consists of 4 levels of case management and lasts at least 18 months. Participants in the DUI Court program are required to have an interlock on any vehicle they operate.

The first level of case management is 16 weeks long and includes breathalyzer tests, substance abuse treatment meetings, case manager meetings, and use of a SCRAM bracelet. Case management level 2 is also 16 weeks long. Breathalyzer tests are reduced, though attendance at treatment meetings and with the case manager is still required. The third level of the case management plan encourages progress toward the completion of the program, including participation in aftercare until graduation requirements are met. The fourth and final level of case management is 20 weeks long. Participants continue random breathalyzer tests and take part in continuing care.

INCENTIVES AND SANCTIONS

AACDC participants are rewarded for achieving and maintaining progress toward a substance free lifestyle. Incentives are provided by the judge as well as the case manager. Sanctions are also part of the program and are imposed by the judge for misconduct and failure to comply. Sanctions may include community service, daily monitoring, and specific hours in lockup.

GRADUATION AND UNSUCCESSFUL COMPLETIONS

Upon successful completion of all program requirements, participants become eligible for DUI court graduation. The participant must meet with his/her case manager to ensure that all requirements have been met, including financial obligations. The graduate then has his/her case closed and no further sentence is given. If a participant fails to complete the program, further sentencing is imposed. The graduation rate (the number of participants who completed the program successfully divided by the number of participants who exited the program) is 57%.

OUTCOME/IMPACT EVALUATION

Outcome Evaluation Methods

RESEARCH STRATEGY

The primary criminal justice system outcome of interest to DUI court programs is criminal justice recidivism of participants after beginning, or completing, the programs, including charges specifically for DUI. Re-arrests are defined in this study as any new criminal arrest after program entry and this study does not include non-criminal events, such as traffic citations. Arrests for DUI charges are separated out in each analysis to demonstrate the impact of the program on reducing DUI charges specifically.

This study examines outcomes over a 2-year period for program participants and a matched comparison group. NPC Research staff identified a sample of DUI Court participants who entered the program between April 2005 and August 2008. This time frame included all DUI Court participants since the program's inception and allowed for the availability of at least 6 months of recidivism data post-program entry for all sample participants. Although it is generally advisable to leave out participants in the first 6 months to a year of program implementation (due to typical program adjustments when starting out) that was not feasible for this study due to the small number of participants.

Many of the outcome results present data for different groups of individuals who had 6, 12, 18 and 24 months of available follow-up time, with the 6-month group being the largest and the 24-month group being the smallest. The shorter follow-up period has the advantage of larger numbers but the disadvantage of representing time that most individuals were still in the program and with little time to demonstrate program impact. The longer follow-up periods allow for more time to see program impact but the group sizes become too small in some cases to be able to measure significant differences between the program and comparison groups. The cost study section of this report uses the 24-month follow-up period to balance the need for a large enough group but also enough time to measure program impacts.

Graduation rates were calculated for the DUI Court by dividing the number of participants who graduated by the total number who exited the program during the study time period. The graduation rate does not include active participants.

Differences in demographics and criminal history between DUI Court graduates and non-graduates were examined to determine if there were indications that specific groups would need additional attention from the program to increase successful outcomes.

OUTCOME/IMPACT STUDY QUESTIONS

The outcome evaluation was designed to address the following study questions:

1. Does participation in the DUI Court reduce substance use among program participants?
2. Does participation in the DUI Court reduce subsequent DUI charges?
3. Does participation in the DUI Court reduce recidivism in the criminal justice system overall?
4. To what extent are participants successful in completing the DUI Court program?
5. What participant and program characteristics predict successful outcomes (i.e., program completion, decreased recidivism)?

DATA COLLECTION AND SOURCES

NPC staff members adapted procedures developed in previous drug court evaluation projects for data collection, management, and analysis of these data. The data collected included days spent in prison and local jail, criminal justice histories in the form of arrest records, local court case information, substance abuse treatment services and program data from multiple sources.⁷ Once data were obtained for the participant and comparison groups, the data were compiled, cleaned and moved into SPSS 15.0 for statistical analysis. The evaluation team employed univariate and multivariate statistical analyses using SPSS, which is described in more detail in the data analysis section. The majority of the data necessary for the outcome evaluation were gathered from the administrative databases described below and in presented in Table 1.

Anne Arundel County DUI Court

Data were provided by the DUI Court office that included names, demographic information, program acceptance status, time spent in the program, and discharge status for participants only.

Maryland Department of Public Safety & Correctional Services

The Maryland Department of Public Safety & Correctional Services (DPSCS) provided data for DUI Court program participants and the comparison group individuals from their management information system that stores Maryland adult criminal justice information in the OBSCIS I & II and Criminal Justice Information System (CJIS) systems, including arrest information, charges, prison and local jail stays and probation and parole episode information through July 2009.

Maryland Judicial Information System (JIS)

The Maryland Administrative Office of the Courts provided data from their JIS system on court cases heard in Anne Arundel County for DUI Court participants and the comparison group. Traffic data were also provided from January 2002 through September 2009.

Statewide Maryland Automated Record Tracking (SMART) operated by the University of Maryland, Institute for Governmental Services and Research

Data were extracted from SMART, a client tracking system for state agencies and private treatment providers, for DUI Court participants. These data include the results of urinalysis tests, dates of court hearings, and contacts with probation officers for individuals in the program from May 2009 (when the program began using this data system) to August 2009.

⁷All data were gathered for this study with appropriate Institutional Review Board approval, including HIPAA waivers. Memoranda of Understanding (MOUs) with individual data sources were also obtained as needed.

Table 1. Data Sources

Database	Source	Example of Variables
Program Coordinator's List of Participants	Program Coordinator	Acceptance status, time spent in DUI Court, discharge status.
Offender Based State Correctional Information System (OBSCIS II) [electronic data]	Maryland Department of Public Safety & Correctional Services (DPSCS)	Demographics, prison data.
Criminal Justice Information System (CJIS) [electronic data]	Maryland Department of Public Safety & Correctional Services (DPSCS)	Adult arrest history, arrest charges.
Judicial Information Systems (JIS) [electronic data]	Maryland Judiciary, on behalf of the State court systems (including the Motor Vehicle Administration and DPSCS)	District Court case management (e.g., case dates), traffic data.
Maryland Judiciary Case Search (online electronic data)	Maryland Judiciary	DUI Court hearing information for Circuit Court cases.

SAMPLE SELECTION

DUI Court Participant Group

This study examines outcomes over a 2-year period for program participants and a matched comparison group. All DUI Court participants who entered the program from April 2005 to August 2008 were selected for this study (16 individuals did not have enough follow-up time and were excluded from the study). DUI Court participant information was obtained from a list kept by the Program Coordinator. The number of DUI Court participants in this study's cohort is presented in Table 2 by the year of their admission.

Table 2. Anne Arundel DUI Court Admissions by Year (study participants only)

Year	Admissions
2005	4
2006	5
2007	21
2008	11
Total	41

Comparison Group

A comparison group was created for this study based on the eligibility criteria used by the program to select its participants. Potential participants must be adult residents of Anne Arundel County at the time of their violation, have no more than two prior DUI offenses and have had no history of violent offenses. These criteria were established in consultation with the program coordinator and state's attorney's office representative in accordance with the written program eligibility criteria.

Possible comparison individuals were identified from a list of people on probation in Anne Arundel County through the District Court for a DUI charge and who also had a DUI Court-eligible criminal history. The DUI Court program participants and comparison group individuals were matched on age, gender, race/ethnicity, indication of an alcohol or drug issue by their probation officer and criminal history. Any differences in the data used for matching between the DUI Court participants and comparison group individuals were controlled for in the subsequent outcome analyses. The final sample included 41 DUI Court participants and 98 comparison individuals.

DATA ANALYSES

Once the comparison group was selected and all data were gathered on all study participants, the data were compiled, cleaned, and imported into SPSS 15.0 for statistical analysis. The analyses used to answer specific questions were:

1. Does participation in the DUI Court reduce substance use among program participants?

The dates of positive drug tests (urinalyses or UAs) for DUI Court participants were obtained from the program through the program paper files. To determine whether there was a reduction in drug use, the number of individuals who were tested over 10 months while in the program was coded as being tested and testing positive (yes/no) during each 1-month time period from program start.

2. Does participation in the DUI Court reduce subsequent DUI charges?

Univariate analysis of variance was performed to compare the mean number of re-arrests for DUI charges for the DUI Court participant and comparison groups. The means comparing the DUI Court and comparison groups were adjusted for any differences between the groups on gender, age at eligible arrest, race/ethnicity, number of prior arrests, type of prior arrests present, type of eligible arrests present, and time at risk to re-offend. Time at risk was calculated by summing the total amount of days the individual was incarcerated during each follow-up period and then subtracted that number from the total possible time during the follow-up period, resulting in the total amount of time in each follow-up period that the individual was potentially in the community to re-offend.

The non-adjusted means for graduates within each group are included for reference but should not be compared directly with the comparison group as the comparison group includes an unknown number of individuals who, had they participated in the DUI Court, may have been discharged from the program and are therefore not equivalent to drug court graduates.

Crosstabs were run to examine differences in recidivism rates, i.e., the percentage of individuals re-arrested, between DUI Court participant and comparison groups. Chi-square analyses were used to identify any significant differences in re-arrest rates between DUI Court and comparison groups.

3. Does participation in the DUI Court reduce recidivism in the criminal justice system overall?

Univariate analysis of variance was performed to compare the mean number of re-arrests for DUI Court and comparison groups. The means comparing the DUI Court and comparison groups were adjusted for any differences between the groups on gender, age at eligible arrest, race/ethnicity, number of prior arrests, type of prior arrests present, type of eligible arrests present, and time at risk to re-offend. Time at risk was calculated by summing the total amount of days the individual was incarcerated during each follow-up period and then subtracted that number from the total possible time during the follow-up period, resulting in the total amount of time in each follow-up period that the individual was potentially in the community to re-offend.

The non-adjusted means for graduates within each group are included for reference but should not be compared directly with the comparison group as the comparison group includes an unknown number of individuals who, had they participated in the DUI Court program, may have been discharged from the program and are therefore not equivalent to drug court graduates.

Crosstabs were run to examine differences in recidivism rates, i.e., the percentage of individuals re-arrested, between DUI Court and comparison groups. Chi-square analyses were used to identify any significant differences in re-arrest rates between DUI Court and comparison groups.

4. To what extent are participants successful in completing the DUI Court program and within the intended time period?

To measure the programs' level of success at graduating participants, graduation rates and average lengths of stay were calculated. Graduation rates were calculated by dividing the number of participants who were no longer active in the DUI Court program by the number of graduates, i.e., participants who completed the program successfully. Average length of stay was calculated as the mean number of days between the program start date and program end date for each participant, to determine if, on average, participants graduated within the intended time period.

5. What participant and program characteristics predict successful outcomes, i.e., program completion and decreased recidivism?

Graduates and non-graduates from the DUI Court were compared on demographic characteristics and number of arrests during the 2 years prior to program entry to determine whether any characteristics predicted program graduation or recidivism. In order to best determine which demographic characteristics were related to graduation, Chi-square and independent samples t-tests were performed to identify which factors were significantly associated with program success.

Participant characteristics were also examined in relation to subsequent re-arrests following program entry. Chi-square and independent samples t-test were performed to identify which factors were significantly associated with recidivism. Logistic regression was also used, including all variables of interest in the model, to determine which characteristics were significantly related to being re-arrested, above and beyond other characteristics.

Ultimately, the DUI Court and comparison groups were examined through data provided by DPSCS for a period up to 2 years from the date of DUI Court program entry or equivalent. The evaluation team utilized the arrest history data to determine whether there was a difference in re-arrests, placements, and other outcomes of interest between the DUI Court and comparison groups.

All individuals who were studied for the outcomes report had at least 6 months of follow-up time, which included 41 DUI Court participants (17 graduates, 13 non-graduates, and 11 active participants) and 98 comparison group individuals.

LIMITATIONS

Findings from this study should be interpreted with caution due to the following limitations:

Differences between the comparison group and DUI Court group: The individuals in the study sample were not randomly assigned to DUI Court and control groups due to the desire of the program to serve all eligible participants who opted to participate and the interest in having a larger group of individuals served to measure recidivism. Attempts made to create a comparison group sample from the data provided by the Maryland Department of Public Safety & Correctional Services and the Administrative Office of the Courts proved somewhat challenging as DUI charges were not apparent in the criminal histories data and motor vehicle records were not available. Local jail data in the form of a list of dates booked in and out of the Anne Arundel County Detention Center for DUI charges was also used in the matching process; however, these data were somewhat incomplete. Additionally, traffic data provided information from 2002 to September 2009 for Anne Arundel County only allowed for matching of DUI cases between the two groups locally, for that amount of time only, rather than statewide lifetime counts of prior DUI charges.

Unavailable data: As mentioned above, DUI charges did not consistently appear in the statewide criminal histories data, motor vehicle records were unavailable and many of the study participants did not have a statewide criminal history record, perhaps due to having fewer local offenses. Data on treatment services was missing from state records. Finally, data from the Administrative Office of the Courts on traffic offenses was only provided from 2002 to September 2009.

Short follow-up time period: Because of the small sample sizes, it was necessary to include all DUI Court participants through the September 2008, which resulted in a follow-up time period for some DUI Court participants of only 6 months. Many DUI Court study participants were still receiving program services at the time of the study. In addition, 6 months is a relatively brief period of time to observe outcomes of interest.

Start-up participants were included in the participant sample: DUI Court participants who received services during the implementation of the program were included to increase sample sizes. Typically, participants in court programs during the first 6 to 12 months post program startup are excluded in order to avoid introducing biases based on implementation factors, including lower fidelity to the intended program model, lack of staff experience with the program, and staff turnover.

A future study of the potential impacts of the Anne Arundel County District Court DUI Court program is suggested, given the limitations of the current study. An increased follow-up time period, larger sample sizes that would increase statistical power and allow participants who were in the program during the first year of the program to be omitted, as well as obtaining data that were more complete would provide additional information about the impact of this program.

Outcome Evaluation Results

Table 3 provides demographic information for the DUI Court and comparison groups. Independent samples t-tests and chi-square analyses showed no significant differences between the DUI Court and comparison groups on the characteristics listed in this table.

Table 3. DUI Court and Comparison Group Characteristics

	All DUI Court Participants N = 41	Comparison Group N = 98
Gender		
Male	88%	84%
Female	12%	16%
Ethnicity		
Caucasian	83%	84%
Non-Caucasian ⁸	17%	16%
Mean age at eligible arrest date	38 years	36 years
Median	37 years	36 years
Range	19 – 65 years	20 – 63 years
Average number of DUI charges in the 2 years prior to program entry or equivalent ⁹	1.95 (range 1 – 4)	2.22 (range 1 – 5)
Average number of DUI charges found in all data sources prior to program entry or equivalent (jail data and traffic data from 2002-September 2009)	2.41 (range 1 – 7)	2.49 (range 1 – 6)
Type of prior arrest charges in the 2 years prior to the program entry or equivalent		
Drug-related	10%	13%
Property-related	7%	12%
Person-related	7%	10%
‘Other’	7%	10%
Average number of arrests in the 2 years prior program entry or equivalent	.32 (range 0 – 4)	.42 (range 0 – 5)
Average number of total arrests prior to program entry or equivalent	2.20 (range 0 – 12)	3.36 (range 0 – 20)

⁸ Non-Caucasian DUI Court participants were 86% African American and 14% “other” and the comparison group non-Caucasian individuals include 94% African American and 6% Hispanic participants.

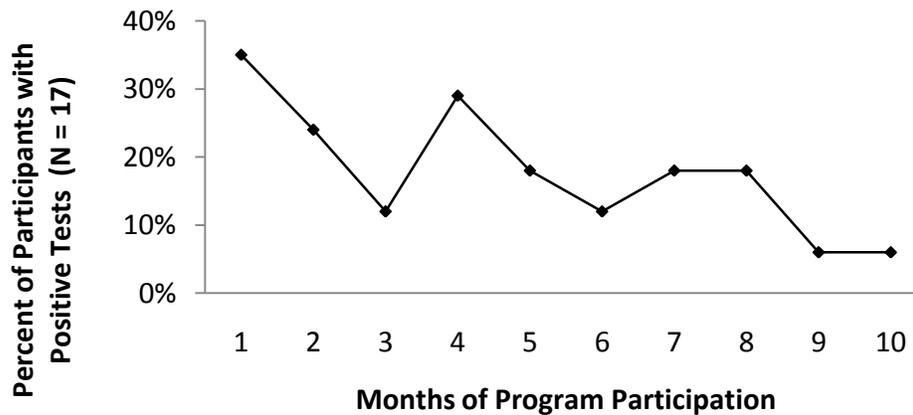
⁹ Eligibility criteria for the program include prior arrests for DUI charges, therefore all participants and comparison group individuals have at least one prior DUI arrest.

POLICY QUESTION # 1: DOES PARTICIPATION IN THE DUI COURT PROGRAM REDUCE SUBSTANCE USE?

YES: DUI Court participants showed reductions in drug use following entrance into the program.

Figure 1 shows the percentage of program participants with a positive urine analysis (UA) test in each 1-month period for individuals receiving 10 months or more of program services, regardless of graduation status. The rate of substance use, as measured by positive drug tests among program participants, appears to decline over time, implying that involvement in the DUI Court reduces substance use. This difference is not statistically significant, most likely due to the small number of participants with UA test results available for the full 10 months; however, the pattern parallels results from other studies with larger numbers that did demonstrate significance with this type of decline.

Figure 1. Percent of DUI Court Participants With a Positive UA Test Over Time

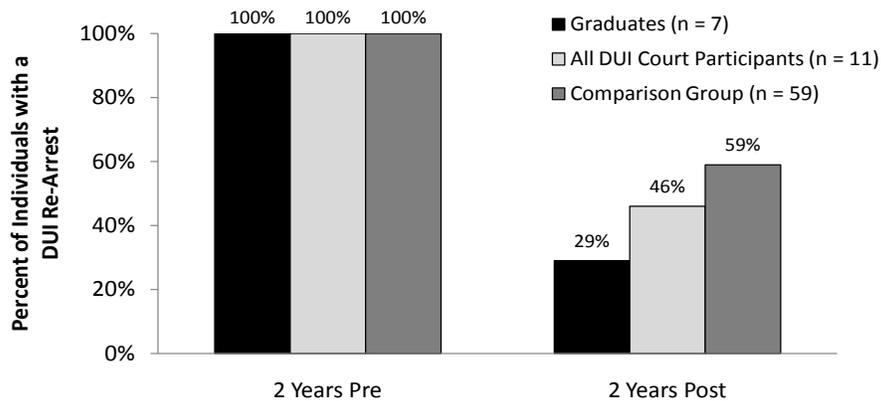


POLICY QUESTION # 2: DOES PARTICIPATION IN THE DUI COURT REDUCE SUBSEQUENT DUI CHARGES?

YES: DUI Court participants showed reductions in DUI arrests following entrance into the program.

DUI Re-arrest Rates

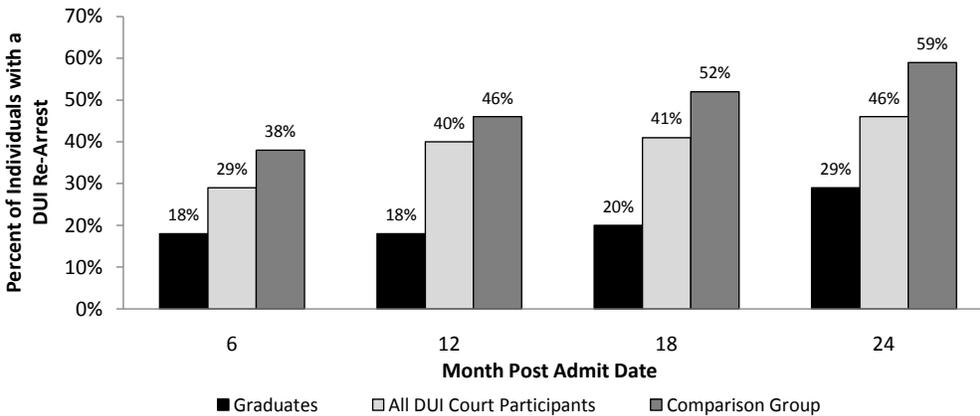
Figure 2 shows the DUI arrest rates, the percentage of individuals re-arrested for DUI charges, using a 24-month pre-post comparison. The pre time period includes the 2 years prior to program entry or equivalent, which is compared to the post time period which begins at program entry or equivalent.

Figure 2. DUI Arrest Rates 2 Years Before & 2 Years After Program Entry

Although all DUI Court participants and graduates were arrested for DUI charges during the 2 years prior to program admission (as per program eligibility criteria, as this includes the DUI charge that brought them into the program), only 46% of all program participants and 29% of program graduates had been rearrested for DUI charges in the 2 years after entering the DUI Court program. The differences in re-arrest rates between the comparison and DUI Court groups for DUI charges at 2 years post program entry are statistically equivalent, as are the differences between the graduates and the non-graduates. This lack of significance is likely due to small sample sizes (there are only 7 participants who had 2 years of follow-up data). Comparisons of confidence intervals highlight the change over time for the DUI Court group before and after program entry and for the comparison group before and after and equivalent date. The change in arrest rates for the DUI Court group is significantly greater than that of the comparison group. Graduates also changed significantly more than non-graduates.

As shown in Figure 3 below, the DUI Court group and graduates have a pattern of fewer re-arrests for DUI charges over time. These differences are again not statistically different for these small group sizes. The graduates were rearrested for DUI charges less often than the non-graduates at the level of a trend at the 6-month time period and significantly less often at 12 and 18 months.

Figure 3. Re-Arrest Rate for DUI Charges Over Time by Group¹⁰

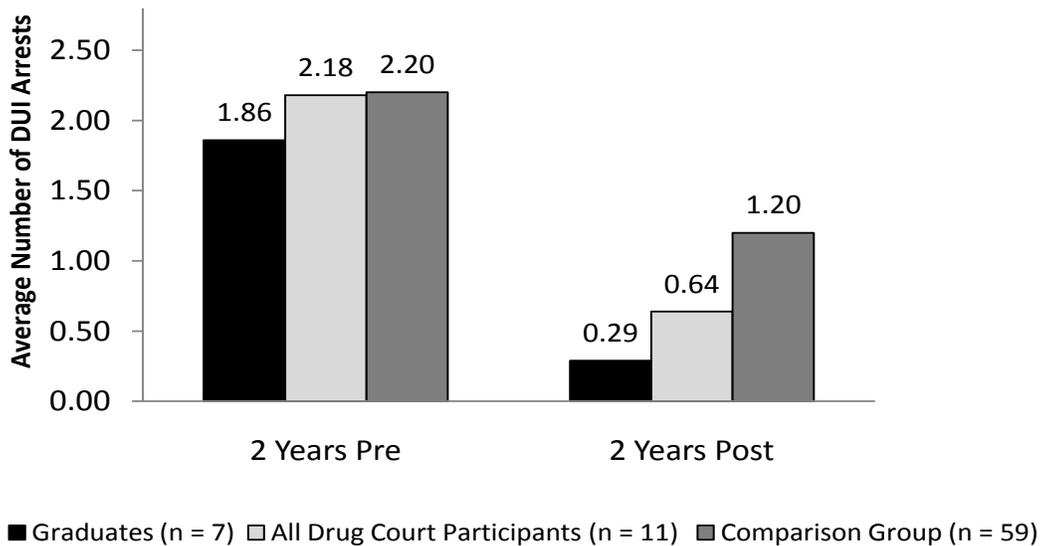


Number of DUI Re-Arrests

An analysis of the *number* of re-arrests for DUI charges per person shows a similar pattern as the rates in Figures 4 and 5.

The mean number of DUI arrests is compared through a 24-month pre-post comparison as shown in Figure 4. The pre time period includes the 2 years leading up program entry or equivalent, which is compared to the post time period which begins at DUI Court program entry or equivalent.

Figure 4. Number of DUI Arrests¹¹ 2 Years Before & 2 Years After Program Entry



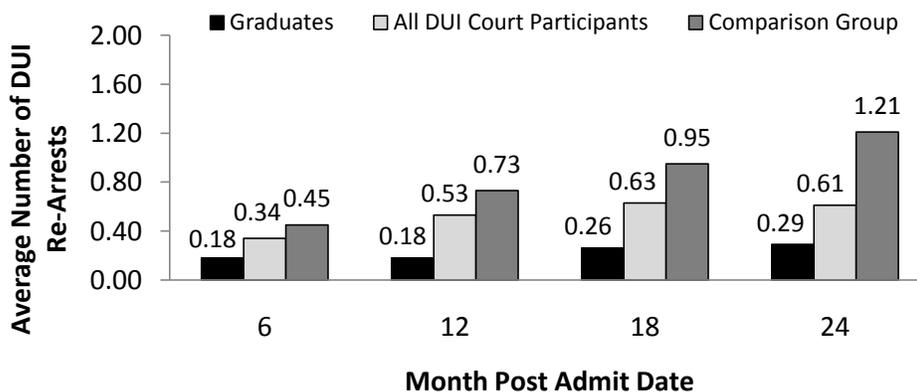
¹⁰ Sample sizes: Graduates with 6 months n = 17, 12 months n = 17, 18 months n = 15, and 24 months n = 7; All DUI Court participants with 6 months n = 41, 12 months n = 38, 18 months n = 27, and 24 months n = 11; Comparison group with 6 months n = 98, 12 months n = 85, 18 months n = 76, and 24 months n = 59.

¹¹ The average number of re-arrests presented in this figure was not adjusted for any differences between groups as the comparison being made in this analysis is between the same groups before and after program participation. Therefore these means are actual, unadjusted means and are slightly different from the adjusted means presented in the recidivism section as well as those presented in the cost section.

At the level of a trend, the DUI Court participants had a significantly fewer DUI re-arrests at 24 months after program entry than the comparison group. The DUI Court participants were re-arrested for DUI charges significantly less often in the 24 months after program entry than in the 24 months before program entry. The comparison group was also re-arrested for DUI charges significantly less often in the post period than in the pre-period. Graduates were also re-arrested for DUI charges significantly less often in the post-program start date period (non-graduates did not have significantly fewer arrests but this may be due to a small sample size). Interestingly, the graduates had significantly fewer arrests than the non-graduates in the pre-program involvement period.

Figure 5 shows the average number of DUI re-arrests over time for DUI Court graduates, all DUI Court participants, and the comparison group.¹² The DUI Court participants were re-arrested for DUI charges less often than the comparison group individuals at the 24-month time point at the level of a trend when the analysis controls for time at risk. Graduates were also re-arrested significantly less often than the non-graduates at 12 and 18 months.

Figure 5. Cumulative Number of Re-Arrests for DUI Charges Over Time¹³



¹² The mean number of re-arrests was adjusted to control for differences between DUI Court and comparison groups on gender, race/ethnicity, age at eligible arrest, prior arrest history, and total time at risk for re-offending. These results differ somewhat from the mean number of re-arrests reported in the cost section of this report, which are adjusted for differences between groups on demographic characteristics and prior arrest history but not for time at risk because the cost calculations include time incarcerated.

¹³ Sample sizes: Graduates with 6 months n = 17, 12 months n = 17, 18 months n = 15, and 24 months n = 7; All DUI Court participants with 6 months n = 41, 12 months n = 38, 18 months n = 29, and 24 months n = 11; Comparison group with 6 months n = 98, 12 months n = 85, 18 months n = 76, and 24 months n = 59.

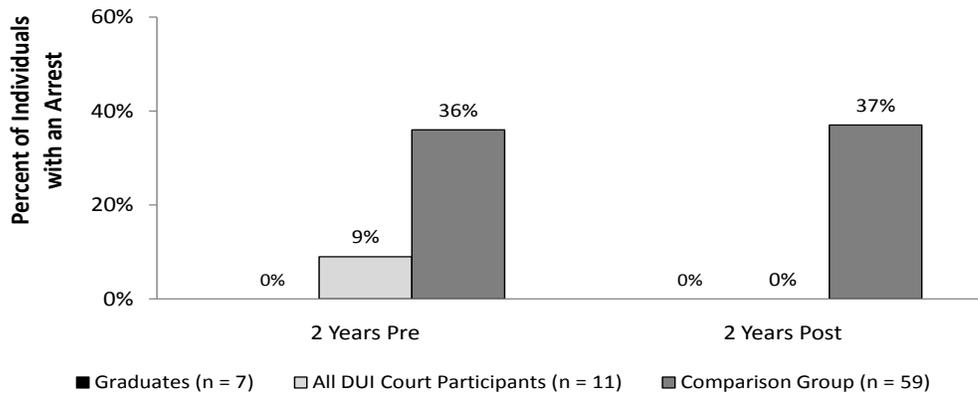
POLICY QUESTION # 3: DOES PARTICIPATION IN THE DUI COURT PROGRAM REDUCE RECIDIVISM IN THE CRIMINAL JUSTICE SYSTEM OVERALL (NOT INCLUDING DUI CHARGES)?

YES: There is a pattern of lower recidivism rates and lower numbers of re-arrests for program participants.

Criminal Justice Recidivism Rate

Figure 6 shows arrest rates, the percentage of individuals arrested in the criminal justice system overall, using a 24-month pre-post comparison. The pre time period includes the two prior to program entry or equivalent, which is compared to the post time period which begins at program entry or equivalent. Comparison group individuals were arrested significantly more often than the DUI Court group at the 24-month follow-up point. The change over time was also significant, indicating that DUI Court participants reduced their arrest rates more than the comparison group from pre-program start to post.

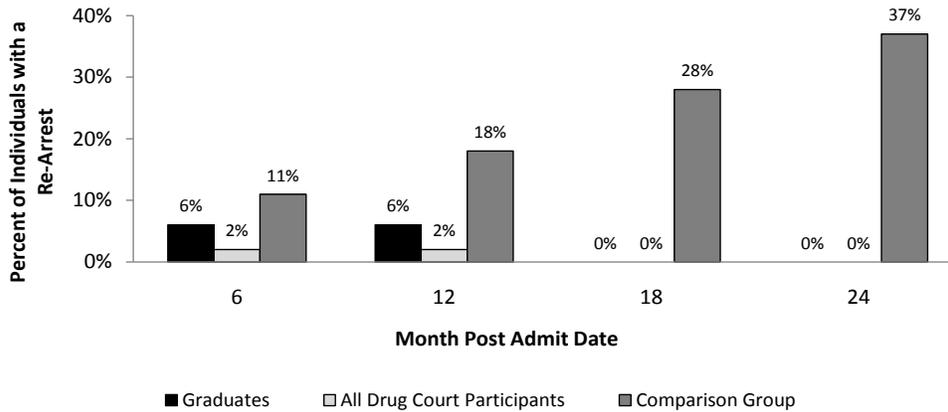
Figure 6. Criminal Arrest Rates 2 Years Before & 2 Years After Program Entry



As shown in Figure 7, the recidivism rate for DUI Court participants appears lower than the comparison group at every time period, regardless of graduation status. The DUI Court participants were re-arrested significantly less often than the comparison group at 18 and 24 months and at the level of a trend in months 6 and 12.

In the 24 months following entry to the program, none of the DUI Court participants and graduates were re-arrested, while 37% of the comparison group members were re-arrested.

Figure 7. Re-Arrest Rate Over Time by Group¹⁴



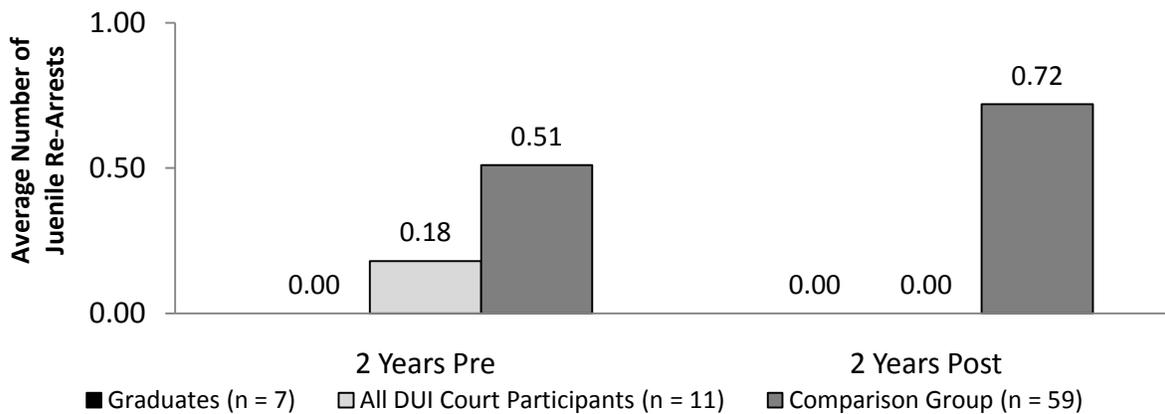
Number of Re-Arrests

An analysis of the *number* of re-arrests per person shows a similar pattern as the re-arrest rate in Figures 6 and 7.

The mean number of total criminal arrests is compared through a 24-month pre-post comparison as shown in Figure 8. The pre time period includes the 2 years leading up program entry or equivalent, which is compared to the post time period which begins at DUI Court entry or equivalent.

The DUI Court participants had significantly fewer re-arrests than the comparison group at the post entry time period. This result may indicate an effect from the program on reducing the number of re-arrests among DUI Court participants.

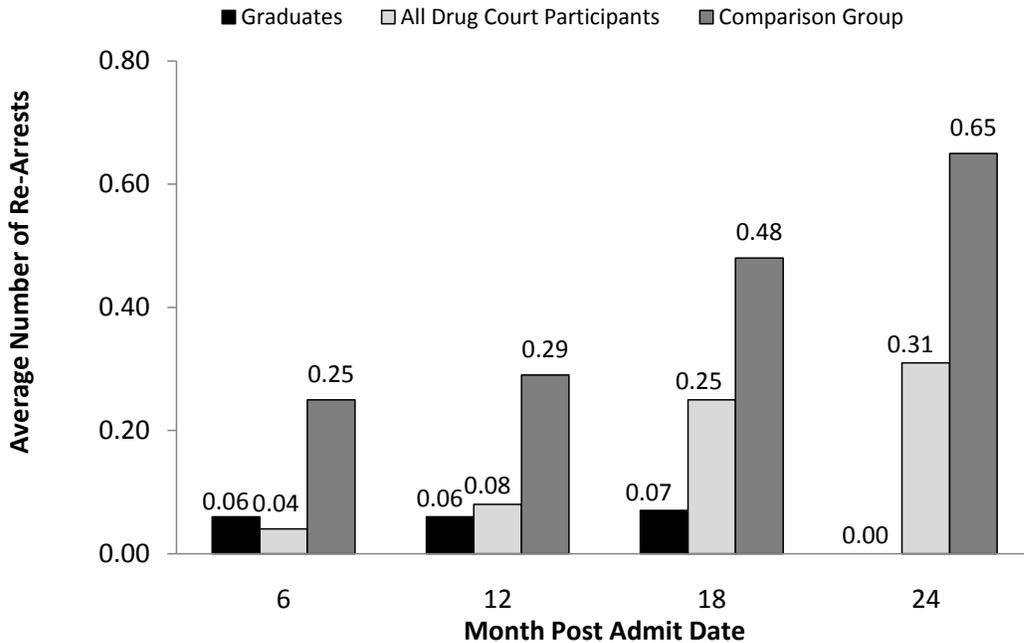
Figure 8. Number of Arrests¹⁵ 2 Years Before & 2 Years After Program Entry



¹⁴ Sample sizes: Graduates with 6 months n = 17, 12 months n = 17, 18 months n = 15, and 24 months n = 7; All DUI Court participants with 6 months n = 41, 12 months n = 38, 18 months n = 27, and 24 months n = 11; Comparison group with 6 months n = 98, 12 months n = 85, 18 months n = 76, and 24 months n = 59.

Figure 9 shows the average number of criminal re-arrests over time for DUI Court graduates, all DUI Court participants and the comparison group. DUI Court participants are statistically equivalent to the comparison group at all time points when the analysis takes into consideration time at risk.¹⁶ Graduates were not found to be significantly lower than the non-graduates, most likely due to the small sample sizes.

Figure 9. Cumulative Number of Re-Arrests Over Time¹⁷



¹⁵ The average number of re-arrests presented in this figure was not adjusted for any differences between groups as the comparison being made in this analysis is between the same groups before and after program participation. Therefore these means are actual, unadjusted means and are slightly different from the adjusted means presented in the recidivism section as well as those presented in the cost section.

¹⁶ The mean number of re-arrests was adjusted to control for differences between DUI Court and comparison groups on gender, race/ethnicity, age at eligible arrest, prior arrest history, and total time at risk for re-offending. These results differ somewhat from the mean number of re-arrests reported in the cost section of this report, which are adjusted for differences between groups on demographic characteristics and prior arrest history but not for time at risk because the cost calculations include time incarcerated.

¹⁷ Sample sizes: Graduates with 6 months n = 17, 12 months n = 17, 18 months n = 15, and 24 months n = 7; All DUI Court participants with 6 months n = 41, 12 months n = 38, 18 months n = 27, and 24 months n = 11; Comparison group with 6 months n = 98, 12 months n = 85, 18 months n = 76, and 24 months n = 59.

Re-Arrests by Charge Type

To present a more descriptive picture of the criminality of the groups, arrests were coded as drug-related (e.g., possession), property-related (e.g., larceny), or person-related (e.g., assault).¹⁸ Table 4 presents the results of this analysis.

In the 2 years post DUI Court entry, DUI Court participants and graduates with 2 years of follow-up have no subsequent arrests.¹⁹

Table 4. Average Number of Cumulative Re-Arrests by Charge Type at 24 Months

	DUI Court Graduates N = 7	All DUI Court Participants N = 11	Comparison Group N = 59	Significantly Different? (p < .05)
Average number of drug arrests in the 24 months post drug court entry or equivalent	0	0	.25	No
Average number of property arrests in the 24 months post drug court entry or equivalent	0	0	.24	No
Average number of person arrests in the 24 months post drug court entry or equivalent	0	0	.22	No

POLICY QUESTION #4: DO PARTICIPANTS OF THE DUI COURT PROGRAM COMPLETE THE PROGRAM SUCCESSFULLY?

Over half (57%) of DUI Court participants are successful in completing the program and complete in about the intended time period (minimum of 18 months).

During the study period, the overall graduation rate for the DUI Court was 57%, while the national average graduation rate for adult drug court programs is around 50% (Belenko, 2001).

The average time for graduates to complete the program was 17 months. Non-graduates spent an average of 9.5 months in the program (giving the program an overall length of stay of about 13.5 months).

Table 5 illustrates the graduation rate by the year that participants entered the DUI Court program. The graduation rate has varied significantly from year to year, though the rates may vary due to the small numbers of participants in each cohort.

¹⁸ When an individual received more than one charge per arrest, a single arrest could be coded as both a person and drug crime. Therefore, the totals in Table 4 do not reflect the average total arrests reported elsewhere.

¹⁹ This analysis did not control for time at risk due to 0 subsequent arrests for the DUI Court group.

Table 5. Number of DUI Court Graduates in Study Sample by Year of Admission

Admission Year	Number Graduated (N = 17)	Number Discharged (N = 13)	Graduation Rate
2005	4	0	100%
2006	2	3	40%
2007	11	7	61%
Total	17	13	57%

* Note: most of the individuals entering the program in 2008 were still in service at the time the data for this study were collected, so there are not enough individuals to calculate an accurate graduation rate for this year.

POLICY QUESTION #5: WHAT PREDICTS PARTICIPANT SUCCESS?

Which characteristics of DUI Court participants are associated with positive program outcomes, e.g., graduation and reduced recidivism?

Graduation

NPC examined the characteristics of DUI Court participants who successfully completed the program (graduates) and those who were “terminated” or left the program for non-compliance before completing (non-graduates) (please see Table 6). Differences between these two groups can illustrate the characteristics of the participants who are likely to have success in the DUI Court program and the characteristics of the participants who may need additional or specialized services to succeed.

Table 6. Characteristics of DUI Court Graduates and Non-Graduates

	DUI Court Graduates N = 17	DUI Court Non- Graduates N = 13	Significantly Different? ²⁰ ($p < .05$)
Gender			
Female	18%	8%	No
Ethnicity			
Non-Caucasian ²¹	12%	23%	No
Mean age in years, at eligible arrest date	40	37	No
Mean length of stay in DUI Court in days	507	287	Yes
Mean number of days at risk during program participation	485	273	Yes
Mean number of days incarcerated (jail and/or prison) during the program	23	16	No
Mean number of DUI charges from all data sources prior to program start date	1.76	2.54	Yes
Mean number of DUI charges in the 2 years prior to program start date	2.06	2.69	No

Graduates have significantly more days in the program than non-graduates, have more days in the community of those days in the program, and have fewer lifetime DUI charges prior to program participation. When DUI Court participant characteristics were examined together in relation to graduation status in a logistic regression model, gender was a significant predictor of graduation above and beyond other characteristics: graduates were more likely to be male and at the level of a trend, Caucasian.

Program staff are encouraged to talk to the participants who are having trouble in the program to learn what the barriers are for those participants in complying with program requirements and determine whether there is further assistance (e.g., transportation, learning to keep a calendar or schedule) that would make it possible for these participants to be successful in meeting program expectations.

DUI Recidivism

Participant characteristics and DUI arrest history were examined in relation to whether or not participants were re-arrested for a new DUI charge in the 2 years following DUI Court entry. These analyses include DUI Court participants who had 24 months of follow-up time post DUI Court entry. The results are shown in Table 7. Participants who did not have a subsequent DUI after program entry had less time in jail or prison during the 2-year follow-up period.

²⁰ Yes indicates $p < .05$, No indicates $p > .10$, Trend indicates $p > .05$ and $p < .10$.

²¹ All non-Caucasian graduates were African American, non-Caucasian non-graduates include 67% African American and 33% "other" participants.

Table 7. Demographic and Criminal Justice History-Related Variables That Predict Subsequent DUI Charges at 24 Months

	Participants who were re-arrested for a DUI charge were more likely to have:	Significant Predictor of Subsequent DUI Charges at 24 Months?²² ($p < .05$)
Gender		No
Race/Ethnicity		No
Mean age at eligible arrest date		No
Mean length of stay in DUI Court program		No
Mean length of time at risk during the program		No
Program status at exit		No
Mean length of time at risk (NOT in jail and/or prison) over the 24 month follow-up period	Less time at risk	Yes
Average number of DUI arrests prior to program entry or equivalent from all data sources (jail data and traffic data from 2002-September 2009)		No
Average number of DUI arrests in the 2 years prior to program entry or equivalent		No
Total number of lifetime prior arrests		No
Total number of arrests in 2 years prior to DUI Court start date or equivalent		No
Total number of arrests with drug charges in 2 years pre DC start		No
Total number of arrests with property charges in 2 years pre DC start		No
Total number of arrests with person charges in 2 years pre DC start		No
Total number of arrests with other charges in 2 years pre DC start		No

²² Yes indicates $p < .05$, No indicates $p > .10$, Trend indicates $p > .05$ and $p < .10$.

When these factors were entered into a logistic regression model, and each variable was controlled for, race/ethnicity was significantly associated with a subsequent DUI charge in the 24 months post DUI Court entry, with Caucasian individuals being less likely to have a subsequent DUI charge.

Criminal Recidivism

Participant characteristics and criminal arrest history were also examined in relation to whether or not participants were re-arrested in the criminal justice system overall in the 2 years following DUI Court entry. These analyses include DUI Court participants who had 24 months of follow-up time post DUI Court entry (or equivalent). The results are shown in Table 8.

Participants who were arrested after program entry had more arrests prior to program entry, both in the 2 years and lifetime, and across drug-related, property, and person crimes.

Table 8. Demographic and Criminal Justice History-Related Variables That Predict Recidivism in the Overall Criminal Justice System at 24 Months

	Participants who were re-arrested were more likely to have:	Significant Predictor of Recidivism at 24 Months? ²³ ($p < .05$)
Gender		No
Race/Ethnicity		No
Mean age at eligible arrest date		No
Mean length of stay in DUI Court program		No
Mean length of time at risk during program		No
Program status at exit		No
Mean length of time at risk over the 24 month follow-up period		No
Mean number of days incarcerated (jail and/or prison) in the 24 month follow-up period		No
Average number of DUI arrests prior to program entry or equivalent (jail data and traffic data from 2002-September 2009)		No
Average number of DUI arrests in the 2 years prior to program entry or equivalent		No
Total number of lifetime prior arrests	A higher number of prior arrests	Yes
Total number of arrests in 2 years prior to DUI Court start date or equivalent	A higher number of prior arrests	Yes
Total number of arrests with drug charges in 2 years pre DC start	Prior drug charges	Yes
Total number of arrests with property charges in 2 years pre DC start	Prior property charges	Yes
Total number of arrests with person charges in 2 years pre DC start	Prior person charges	Yes
Total number of arrests with other charges in 2 years pre DC start	Prior "other" charges	Yes

²³ Yes indicates $p < .05$, No indicates $p > .10$, Trend indicates $p > .05$ and $p < .10$.

When these factors were entered into a logistic regression model, and each variable was controlled for, gender is associated with re-arrests in the 24 months post DUI Court entry at the trend level, with men being more likely to be re-arrested. The number of lifetime prior arrests was also significantly associated with re-arrests, with those having a higher number of lifetime priors more likely to be re-arrested.

OUTCOME SUMMARY

Overall, outcomes for Anne Arundel County DUI Court participants are quite positive. After program entry, regardless of whether they graduate, DUI Court participants had reductions in substance use and were re-arrested on criminal charges less often than the comparison group of similar individuals who did not participate. Patterns of DUI arrests also look promising but differences were not statistically significant, though DUI Court participants had statistically significant changes in both the DUI arrest rates and numbers of DUI charges from 2 years before program entry to 2 years after program entry. The number of DUI Court participants in the 24-month follow-up period was small, which likely prevented significant findings from emerging in some analyses.

The graduation rate for the program varied over time but overall was 57%, slightly higher than the national average. DUI graduates were more likely to have stayed in the program longer and have had more time in the community. They were also more likely to be male and Caucasian. Participants who did not have a new DUI arrest after program entry had less time in jail or prison during the 24-month follow-up period and be Caucasian. Participants who did not have a new criminal arrest after program entry were more likely to have fewer prior arrests and be female.

In sum, the results of this study indicate that the DUI Court program is successful in achieving positive participant outcomes.

COST EVALUATION

The Anne Arundel County DUI Court cost evaluation was designed to address the following study questions:

1. How much does the DUI Court program cost?
2. What is the 24-month cost impact on the criminal justice system of sending offenders through DUI Court or traditional court processing?

Cost Evaluation Methodology

COST EVALUATION DESIGN

Transactional and Institutional Cost Analysis

The cost approach utilized by NPC is called Transactional and Institutional Cost Analysis (TICA). The TICA approach views an individual's interaction with publicly funded agencies as a set of *transactions* in which the individual utilizes resources contributed by multiple agencies and jurisdictions. Transactions are those points within a system where resources are consumed and/or change hands. In the case of drug treatment and DUI Courts, when a participant appears in court, resources such as judge time, state's attorney time, defense attorney time, and court facilities are used. When a program participant has a drug test, 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 method for conducting cost assessment in an environment such as a DUI Court that takes into account the complex interactions that occur among multiple taxpayer-funded organizations.

Cost to the Taxpayer

In order to maximize the study's benefit to policymakers, a "cost-to-taxpayer" approach was used for this evaluation. This focus helps define which cost data should be collected (costs and avoided costs involving public funds) and which cost data should be omitted from the analyses (e.g., costs to the individual participating in the program). The core of the cost-to-taxpayer approach in calculating benefits (avoided costs) for DUI Court specifically is the fact that untreated substance abuse will cost various tax-dollar funded systems public funds that could be avoided or diminished if substance abuse were treated. In this approach, costs that result from untreated substance abuse are used in calculating the benefits of substance abuse treatment.

Opportunity Resources

NPC's cost approach looks at publicly funded costs as "opportunity resources." The concept of *opportunity cost* from economics relates to the cost of doing an activity instead of doing something else. The term *opportunity resource* as it is applied in TICA describes resources that are now available for a given use because they have not been consumed for an alternative activity. 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 person.

COST EVALUATION METHODS

The current cost evaluation builds on the outcome evaluation performed by NPC on the Anne Arundel County DUI Court program. The costs to the criminal justice system (cost-to-taxpayer) in Anne Arundel County incurred by participants in DUI Court are compared with the costs incurred by those who were similar to but did not enter DUI Court. In addition, the specific program costs are calculated separately in order to determine the per agency costs of the Anne Arundel County DUI Court program.

TICA Methodology

The TICA methodology as it has been applied in the analysis of the Anne Arundel County DUI Court is based upon six distinct steps. Table 9 lists each of these steps and the tasks involved.

Steps 1 through 3 were performed through analysis of court and DUI Court documents, including review of this program's process evaluation report and through interviews with key stakeholders. Step 4 was performed in the outcome evaluation. Step 5 was performed through interviews with DUI Court and non-DUI Court staff and with agency finance officers. Step 6 involved calculating the cost of each transaction and multiplying this cost by the number of transactions. All the transactional costs for each individual are added to determine the overall cost per individual. This information was generally reported as an average cost per individual. In addition, the TICA approach has made it possible to calculate the cost for DUI Court processing for each agency.

This evaluation utilized a previously conducted process evaluation and interviews with program staff to identify the specific program transactions to include in this study. Cost data were collected through interviews with DUI Court staff and jurisdiction and agency contacts with knowledge of jurisdiction and agency budgets and other financial documents, as well as from budgets either found online or provided by jurisdiction and agency staff.

The costs to the criminal justice system outside of the DUI Court program costs consist of those due to new criminal arrests, court cases, probation time, jail time, and prison time. Program costs include DUI Court sessions, case management, alcohol monitoring, drug tests, daily monitoring, and jail sanctions.

Table 9. The Six Steps of TICA

	Description	Tasks
Step 1:	Determine flow/process (i.e., how clients move through the system)	<ul style="list-style-type: none"> • Site visit • Interviews with key stakeholders (agency and program staff)
Step 2:	Identify the transactions that occur within this flow (i.e., where clients interact with the system)	<ul style="list-style-type: none"> • Analysis of process information gained in Step 1
Step 3:	Identify the agencies involved in each transaction (e.g., court, treatment, police)	<ul style="list-style-type: none"> • Analysis of process information gained in Step 1
Step 4:	Determine the resources used by each agency for each transaction (e.g., amount of judge time per transaction, amount of attorney time per transaction, number of transactions)	<ul style="list-style-type: none"> • Interviews with program key informants using cost guide. • Administrative data collection of number of transactions (e.g., number of court appearances, number of treatment sessions, number of drug tests)
Step 5:	Determine the cost of the resources used by each agency for each transaction	<ul style="list-style-type: none"> • Interviews with budget and finance officers • Document review of agency budgets and other financial paperwork
Step 6:	Calculate cost results (e.g., cost per transaction, total cost of the program per participant)	<ul style="list-style-type: none"> • Support and overhead costs (as a percentage of direct costs) are added to the direct costs of each transaction to determine the cost per transaction • The transaction cost is multiplied by the average number of transactions for program participants to determine the total average cost per transaction type • These total average costs per transaction type are added to determine the program and outcome costs

Cost Evaluation Results

Individual DUI Courts are intensive interventions that involve coordination of multiple agencies and professional practitioners applying a variety of areas of expertise, intensive case management and supervision, and frequent judicial reviews. DUI Courts are typically made possible through the application and coordination of resources drawn from multiple agencies located in more than one jurisdictional organization. Although the amount of staff time and other resources (buildings, materials and supplies and operating equipment) made available by a number of public organizations represents substantial public costs, research in DUI Courts demonstrates that due to decreased future system impacts (less frequent re-offending, for example), this investment frequently results in substantial future savings. In addition, DUI Courts can provide cost-effective intensive treatment and supervision in a community-based setting rather than relying on

next steps in the continuum of services such as residential placements. This report tests whether this pattern holds for the Anne Arundel County DUI Court program.

As described in the section above, the Transactional and Institutional Cost Analysis (TICA) approach was used to calculate the costs of each of the transactions that occurred while participants were engaged in the program. Program transactions calculated in this analysis include DUI Court sessions, case management, alcohol monitoring, drug tests, daily monitoring, and jail sanctions. The costs for this study were calculated to include taxpayer costs only. All cost results provided in this report are based on fiscal year 2009 dollars.

COST EVALUATION QUESTION #1: PROGRAM COSTS

How much does the DUI Court program cost?

Program Transactions

A DUI Court session, for the majority of DUI Courts, is one of the most staff and resource intensive program transactions. In the Anne Arundel County DUI Court, these sessions include representatives from:

- Anne Arundel County District Court (Judge, Court Clerk, Bailiff, DUI Case Manager, and DUI Court Coordinator);
- Anne Arundel County State’s Attorney’s Office (Assistant State’s Attorney, Paralegals);
- Maryland Office of the Public Defender (Assistant Public Defender);
- Anne Arundel County Health Department [AACHD] (Case Managers and Treatment Assessor).

The cost of a ***DUI Court Appearance*** (the time during a session when a single program participant interacts with the Judge) is calculated based on the average amount of court time (in minutes) each participant interacts with the judge during the DUI Court session. This includes the direct costs of each DUI team member present, the time team members spend preparing for the session, the agency support costs, and jurisdictional overhead costs. The average cost for a single DUI Court appearance is **\$180.90** per participant.

Case Management is based on the amount of staff time dedicated to case management activities during a regular work week and is then translated into a total cost for case management per participant per day.²⁴ The main agency involved in case management for the Anne Arundel County DUI Court program is the AACHD, but the District Court is also involved. The daily cost of case management in this program is **\$7.22** per participant.

Participants pay for ***DUI Court Treatment Sessions*** at one of the 12 treatment providers on a sliding scale, depending on income. If participants cannot pay or do not have insurance, the AACHD pays with funds from the Maryland Alcohol & Drug Abuse Administration (ADAA). Individual treatment per participant is **\$27.30** per session. Group treatment is **\$16.90** per participant per session. These rates were provided to NPC by a representative of the AACHD. However, due to a lack of administrative data on DUI Court treatment, treatment sessions were not included in this cost analysis.

²⁴ Case management includes meeting with participants, evaluations, phone calls, referring out for other help, answering questions, reviewing referrals, consulting, making community service connections, assessments, documentation, file maintenance, and residential referrals.

Drug Tests are performed by DUI Court Case Managers and multiple treatment providers. The District Court covers the cost of urinalysis (UA) testing done by the Case Managers, and the AACHD covers the cost of UA testing done at the treatment providers if the participant is unable to pay. The cost per UA test is **\$9.85**. The DUI Court uses breathalyzer tests at a rate of **\$0.22** per test and oral swabs at a rate of **\$3.00** per test. Both breathalyzer and oral swab tests are paid for by the District Court. The DUI Court also utilizes SCRAM alcohol monitoring at a rate of **\$10.00** per day, with an initial SCRAM installation fee of **\$60.00**. Drug testing costs were obtained from the DUI Court Coordinator and a representative of AACHD.

Therapeutic Community Residential, Long-Term Residential, Detoxification, and Halfway House services are provided by multiple agencies and paid for by the AACHD. Therapeutic community residential is provided at a rate of **\$49.40** per day, long-term residential is provided at **\$81.25** per day, detoxification is provided at a rate of **\$134.55** per day, and halfway house services are provided at a cost of **\$54.00** per day. All rates were provided to NPC by a representative of the AACHD. Due to a lack of administrative data, residential, detoxification, and halfway house days were not included in this cost analysis.

Jail Sanction Days are provided by the Anne Arundel County Department of Detention Facilities at the Jennifer Road Detention Center and the Ordnance Road Correctional Center. An average cost of **\$94.63** per day was obtained using information found in the Department of Detention Facilities 2009 Budget. The Department of Detention Facilities also provides **Daily Monitoring**, in which DUI Court participants report to the detention center daily to be tested for drugs and provide a schedule of their whereabouts. Daily monitoring is used by the DUI Court as a sanction at a rate of **\$5.00** per day.

Program Costs

Table 10 provides the unit cost per transaction, the average number of DUI Court transactions per participant, and the average cost per participant for each type of transaction. The average cost per participant is the product of the unit cost multiplied by the average number of program transactions per participant. The sum of these transactions is the total per participant cost of the program. The table includes the average for DUI Court graduates ($n = 17$) and for all DUI Court participants ($n = 30$) from the outcome study who had completed their participation in the program, regardless of completion status (graduate or non-graduate). It is important to include participants who were discharged as well as those who graduated as all participants use program resources, whether they graduate or not. Participants who were still active in the program at the time of the study were not included because they had not fully used all of the resources they will use by the end of their participation.

Table 10. Average DUI Court Program Costs per Participant

Transaction	Transaction Unit Cost	Average Number of Transactions per DUI Court Graduate	Average Cost per DUI Court Graduate N = 17	Average Number of Transactions per DUI Court Participant	Average Cost per DUI Court Participant N = 30
DUI Court Appearances	\$180.90	17.38	\$3,144	14.58	\$2,638
Case Management	\$7.22	507.82 Days ²⁵	\$3,666	412.13 Days	\$2,976
UA Drug Tests	\$9.85	22.18	\$218	20.58	\$203
Oral Swab Tests	\$3.00	1.00	\$3	1.00	\$3
Breathalyzer Tests	\$0.22	68.94	\$15	61.33	\$13
SCRAM Installations	\$60.00	0.82	\$49	0.93	\$56
SCRAM Days	\$10.00	114.71	\$1,147	112.93	\$1,129
Daily Monitoring Days	\$5.00	2.00	\$10	2.50	\$13
Jail Sanction Days	\$94.63	0.82	\$78	1.27	\$120
Total DUI			\$8,330		\$7,151

Note: Average costs per participant have been rounded to the nearest whole dollar amount.

On average, the total cost per participant in DUI Court is **\$7,151**. Note that the most expensive area of cost for the program is case management (\$2,976). This result is commensurate with the treatment court model, which emphasizes frequent and intensive supervision. The next highest cost is for DUI Court appearances (\$2,638), followed by drug and alcohol monitoring (\$1,404).

Program Costs per Agency

Another useful way to examine program costs is to break them down by agency. Table 11 shows the DUI Court program cost per participant by agency.

²⁵ The average cost per participant for case management is calculated based on the average number of days participants spent in the DUI Court program.

Table 11. Average DUI Court Cost per Participant by Agency

Agency	Average Cost per DUI Court Graduate N = 17	Average Cost per DUI Court Participant N = 30
Anne Arundel County District Court	\$2,751	\$2,491
Anne Arundel County State’s Attorney’s Office	\$797	\$669
Anne Arundel County Health Department	\$4,517	\$3,708
Anne Arundel County Department of Detention Facilities	\$88	\$133
Maryland Office of the Public Defender	\$178	\$150
Total²⁶	\$8,331	\$7,151

Because the Anne Arundel County Health Department provides case management and some drug testing to DUI Court participants and its employees attend DUI Court sessions, the AACHD shoulders 52% of the total DUI Court program costs. Due to its support of drug and alcohol testing, DUI Court sessions, and case management, the District Court incurs the next largest expense for the DUI Court (\$2,491). The other agencies involved in the DUI Court program (State’s Attorney, Office of the Public Defender, and County Department of Detention Facilities) incur their costs primarily through staff attendance at DUI Court sessions and providing jail sanctions and daily monitoring of participants.

Local Versus State Costs for the DUI Court Program

State policy leaders and administrators may find it useful to examine programs costs by jurisdiction (state or local/county). The local or Anne Arundel County portion is 63% of total program costs per participant, or \$4,510, mostly due to the AACHD’s involvement in case management. The State of Maryland portion of total program costs is 37% or \$2,641 per participant, mainly due to the District Court employees’ involvement in DUI Court sessions and drug and alcohol monitoring.

COST EVALUATION QUESTION #2: OUTCOME/RECIDIVISM COSTS

What is the 24-month cost impact on the criminal justice system of sending offenders through DUI Court or traditional court processing?

As described in the cost methodology section of this report, the Transactional and Institutional Cost Analysis (TICA) approach was used to calculate the costs of each of the criminal justice system outcome transactions that occurred for DUI Court and comparison group participants. Transactions are those points within a system where resources are consumed and/or change hands. Outcome transactions for which costs were calculated in this analysis included re-arrests, subsequent court cases, probation time, jail time, and prison time. Only costs to the taxpayer were calculated in this study. All cost results represented in this report are based on fiscal year 2009 dollars or updated to fiscal year 2009 dollars using the Consumer Price Index.

²⁶ Totals in this row may not match the totals in the outcome costs by transaction table due to rounding.

Outcome Cost Data

The outcome statistics reflect data through April 2009. There were 70 individuals who had at least 24 months of available outcome data (11 DUI Court participants and 59 comparison group members). This follow-up period was selected to allow to allow more robust cost numbers through use of as long a follow-up period as possible (with as many individuals as possible having at least some time during the follow-up period that represented time after program involvement). All DUI Court participants in the cohorts included in these analyses had exited the program (graduated or were unsuccessful at completing the program).

Outcome costs were calculated for 24 months after DUI Court program entry (or an approximate start date for comparison group members). The outcome costs discussed below do not represent the entire cost to the criminal justice system. Rather, the outcome costs include the transactions for which NPC's research team was able to obtain outcome data and cost information. However, we believe that the costs represented capture the majority of system costs. Outcome costs were calculated using information from the Anne Arundel County Circuit Court, the Anne Arundel County District Court, the Anne Arundel County State's Attorney's Office, the Maryland Office of Public Defender, the Maryland Department of Public Safety & Correctional Services, the Anne Arundel County Department of Detention Facilities, the Maryland Division of Parole and Probation, the Annapolis Police Department, and the Anne Arundel County Police Department.

The methods of calculation were carefully considered to ensure that all direct costs, support costs and overhead costs were included as specified in the TICA methodology followed by NPC. It should be noted that, since NPC accounts for all jurisdictional and agency institutional commitments involved in the support of agency operations, the costs that appear in NPC's analysis typically will not correspond with agency operating budgets.

Outcome Transactions

Arrests for Anne Arundel County are conducted by multiple law enforcement agencies, but because they are the two largest agencies in the county, an average of the Annapolis Police Department and Anne Arundel County Police Department was used for this outcome cost analysis (using information provided by each agency). The average cost of a single arrest conducted by these agencies is **\$193.96**.

Court Cases include all court cases, including those cases that are reviewed and rejected by the Anne Arundel County State's Attorney's Office, as well as those cases that result in arraignment and are adjudicated. Court case costs are shared among the Anne Arundel County District Court, the Anne Arundel County Circuit Court, the Anne Arundel County State's Attorney's Office, and the Maryland Office of the Public Defender. The average cost of a Circuit Court case is **\$3,310.21**. The average cost of a District Court case is **\$1,561.63**.

Probation Days are provided by the Maryland Division of Parole and Probation. A representative of the Division provided NPC with the average cost of supervision, which was given as **\$4.09** per person per day.

Jail Days are provided by the Anne Arundel County Department of Detention Facilities at the Jennifer Road Detention Center and the Ordnance Road Correctional Center. An average cost of **\$94.63** per day was obtained using information found in the Department of Detention Facilities 2009 Budget.

Prison Days are provided by the Maryland Department of Public Safety & Correctional Services. The cost of a prison day is **\$85.15**, which was given to NPC by a representative of the Department.

Outcomes and Outcome Cost Consequences

Table 12 presents the average number of criminal justice system outcome events (e.g., the average number of re-arrests, the average number of probation days, etc.) incurred per participant for Anne Arundel County DUI Court graduates, all participants (both graduates and non-graduates combined), and the comparison group for 24 months after entry date (or equivalent date for the comparison group).

Table 12. Average Number of Outcome Transactions per Person Over 24 Months

Transaction	DUI Court Graduates N = 7	All DUI Court Participants N = 11	DUI Court Comparison Group N = 59
Arrests	0.00	0.30	0.66
Circuit Court Cases	0.00	0.05	0.25
District Court Cases	0.57	0.58	0.54
Probation Days	78.14	93.83	111.96
Jail Days	20.43	59.15	69.33
Prison Days	0.00	3.28	2.32

As can be seen in this table, DUI Court participants have fewer re-arrests, Circuit Court cases, probation days, and jail days than members of the comparison group. District Court cases and prison days are the only transactions for which DUI Court participants show a slightly higher rate than the comparison group. It is possible that the crimes for which DUI Court participants were rearrested were for lower-level offenses that required lesser levels of punishment, as seen by slightly more District Court cases than comparison group members, but fewer Circuit Court cases²⁷ and fewer probation days and jail days. The higher number of prison days for the DUI Court is due to participants who were unsuccessful in completing the program, as DUI Court graduates had no prison days.

Graduates of the DUI Court show smaller numbers than all DUI Court participants and comparison group members across every transaction, except for having slightly more District Court cases than comparison group members. From these results an interpretation can be reasonably asserted that participation in DUI Court is associated with lower criminal recidivism activity.

Outcome Cost Results

Table 13 demonstrates the costs associated with the outcomes described above for all DUI Court participants, DUI Court graduates, and the comparison sample.

²⁷ In Maryland, the Circuit Courts generally handle more serious criminal cases and major civil cases, while the District Courts generally handle traffic and misdemeanor criminal and civil cases.

Table 13. Criminal Justice System Outcome Costs per Person Over 24 Months

Transaction	Transaction Unit Cost	DUI Court Graduates N = 7	All DUI Court Participants N = 11	DUI Court Comparison Group N = 59
Arrests	\$193.96	\$0	\$58	\$128
Circuit Court Cases	\$3,310.21	\$0	\$166	\$828
District Court Cases	\$1,561.63	\$890	\$906	\$843
Probation Days	\$4.09	\$320	\$384	\$458
Jail Days	\$94.63	\$1,933	\$5,597	\$6,561
Prison Days	\$85.15	\$0	\$279	\$198
Total		\$3,143	\$7,390	\$9,016

Note: Average costs per participant have been rounded to the nearest whole dollar amount.

Table 13 reveals that DUI Court participants cost less for almost every transaction—except District Court cases and prison days—due to lower criminal justice recidivism. The cost for jail is by far the most expensive transaction for both DUI Court participants and comparison group members.

The total average cost savings after 24 months is **\$1,626** per DUI Court participant, regardless of whether or not the participant graduates. If the DUI Court program continues in its current capacity of serving a cohort of 16 participants annually, this savings of \$813 per participant per year (\$1,626 divided by 2) results in a yearly savings of **\$13,008** per cohort year, which can then continue to be multiplied by the number of years the program remains in operation and by the number of cohorts over time. This savings continues to grow for participants every year after program entry. If savings continue at the same rate, after 10 years the savings *per cohort* will total **\$130,080**.

Another interesting point of analysis involves the graduates. When this group is considered from an epidemiological perspective, graduates have received the designed “dosage” and term of treatment for the therapeutic intervention under consideration. From this perspective the difference in average total cost between this group and the comparison group of \$5,873 after 24 months is an immediate return on the therapeutic investment in the graduate group. However, it is important to remember that the graduates are not directly comparable to the comparison group as they are the most successful participants.

Outcome Costs by Agency

In this study, NPC was able to identify the criminal justice outcome costs on an agency-by-agency basis. In Table 14, the outcome costs are presented by agency.

Table 14. Criminal Justice System Outcome Costs by Agency per Person Over 24 Months

Jurisdiction/Agency	DUI Court Graduates N = 7	All DUI Court Participants N = 11	DUI Court Comparison Group N = 59	Difference (Benefit)
Anne Arundel County Circuit Court	\$0	\$45	\$224	\$179
Anne Arundel County District Court	\$333	\$338	\$315	-\$23
Anne Arundel County State’s Attorney’s Office	\$334	\$405	\$641	\$236
Anne Arundel County Department of Detention Facilities	\$1,933	\$5,597	\$6,561	\$964
Law Enforcement ²⁸	\$0	\$58	\$128	\$70
Maryland Department of Public Safety and Correctional Services	\$0	\$279	\$198	-\$81
Maryland Office of the Public Defender	\$224	\$283	\$491	\$208
Maryland Division of Parole and Probation	\$320	\$384	\$458	\$74
Total²⁹	\$3,144	\$7,389	\$9,016	\$1,627

Note: Average agency costs per participant have been rounded to the nearest whole dollar amount.

Greater outcome savings associated with DUI Court participants accrue to some agencies than others. The Circuit Court, State’s Attorney, Department of Detention Facilities, Law Enforcement, Public Defender, and Division of Parole and Probation all show cost savings, but the District Court and Department of Public Safety & Correctional Services do not (due to more District Court cases and prison days for DUI Court participants than for comparison group individuals). The largest savings accrues to the Department of Detention Facilities, due to the decreased jail time for DUI Court participants.

In terms of their comparative re-offending experiences, DUI Court participants are shown to cost \$1,627 (or 18%) less per participant than members of this study’s comparison group. Due to low rates of recidivism, DUI Court graduates show outcome costs of \$3,144 (\$4,245 less than all DUI Court participants and \$5,872 less than the comparison group) after 24 months.

Cumulative Cost Savings

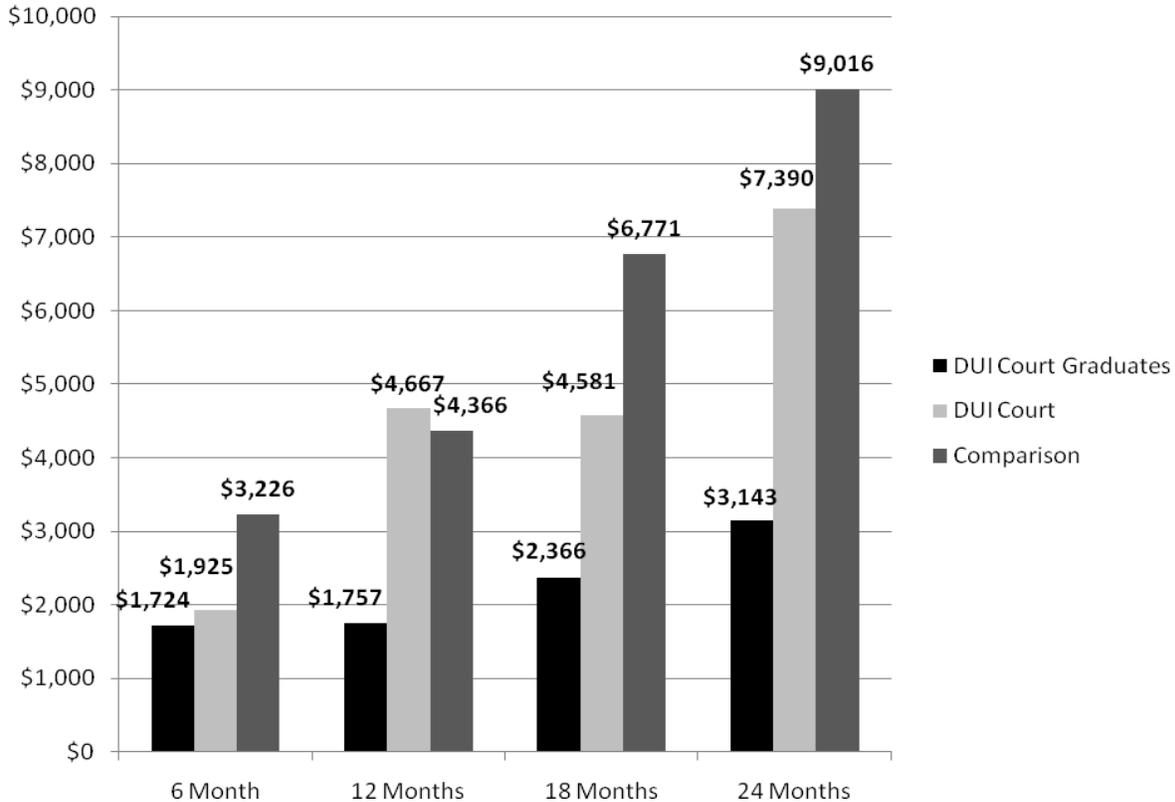
Figure 10 displays a graph of the cumulative outcome costs over the 24 months post-DUI Court entry (or the equivalent for the comparison group). Note that these results by 6-month periods are not the same participants over time, but represent those different cohorts of participants who had at least 6, 12, 18, and 24 months of follow-up time, respectively.³⁰

²⁸ Law Enforcement includes the Annapolis Police Department and the Anne Arundel County Police Department.

²⁹ Totals in this row may not match the totals in the outcome costs by transaction table due to rounding.

³⁰ Sample sizes: Graduates with 6 months n = 17, 12 months n = 17, 18 months n = 15, and 24 months n = 7; All DUI Court participants with 6 months n = 41, 12 months n = 38, 18 months n = 27, and 24 months n = 11; Comparison group with 6 months n = 98, 12 months n = 85, 18 months n = 76, and 24 months n = 59.

Figure 10. Criminal Justice Recidivism Cost Consequences per Person Over 24 Months



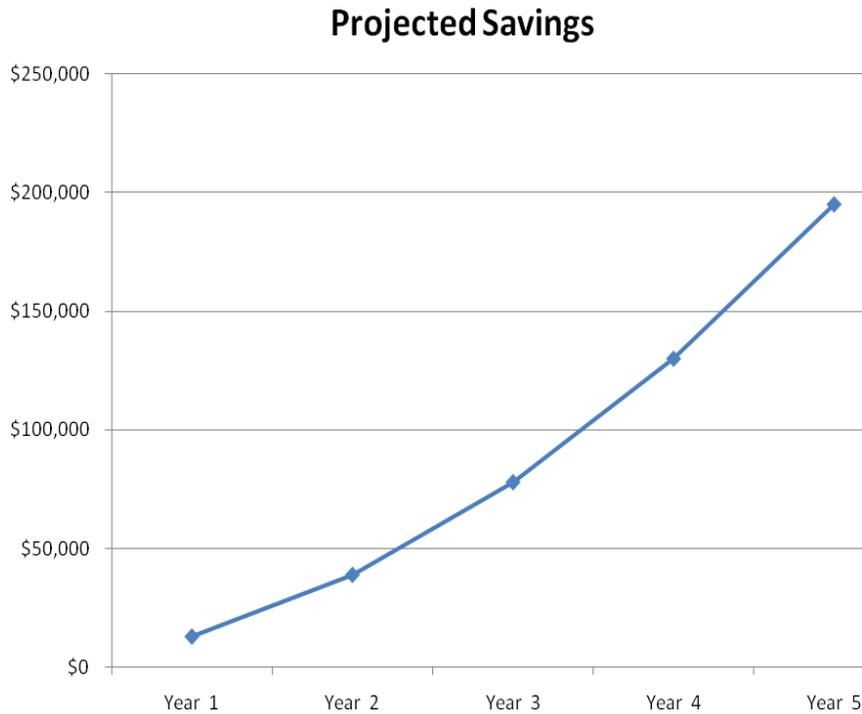
The cost savings illustrated in Figure 10 are those that have accrued in just the 24 months since DUI Court entry. Many of these savings are due to positive outcomes while the participant is still in the program. Therefore, it is reasonable to state that savings to the state and local criminal justice systems are generated from the time of participant entry into DUI Court.

Projected Cost Savings

If DUI Court participants continue to have positive outcomes in subsequent years (as has been shown in drug courts, e.g., Carey et al., 2005; Finigan, Carey, and Cox 2007) then these cost savings can be expected to continue to accrue over time, repaying the program investment costs and providing further savings in opportunity resources to public agencies.

This savings will also continue to grow with the number of participants that enter each year. If the DUI Court program continues to admit a cohort of **16** participants annually, the savings of \$1,626 per participant over 24 months results in an annual savings of **\$13,008** per year, which can then be multiplied by the number of years the program remains in operation and for additional new participant cohorts per year. This accumulation of savings is demonstrated in Figure 11. After 5 years, the accumulated savings come to over **\$195,000**.

Figure 11. Projected DUI Court Criminal Justice Cost Savings Over 5 Years



As the program continues, the savings generated by DUI Court participants due to decreased substance use and decreased criminal activity can be expected to continue to accrue, repaying investment in the program and beyond. Taken together, these findings indicate that the DUI Court is both beneficial to DUI Court participants and beneficial to Maryland taxpayers.

COST SUMMARY

Overall, the DUI Court results in significant cost savings and a return on taxpayer investment in the program. The program investment costs are \$7,151 per DUI Court participant. When program costs are divided by the average number of days in the program, the cost per day per participant for the DUI Court program is \$17.35, which is significantly lower than the per day cost of both jail (\$94.63) and prison (\$85.15).

The cost due to recidivism over 24 months from program entry was \$7,390 per DUI Court participant compared to \$9,016 per comparison individual, resulting in a savings of \$1,626 per participant (regardless of whether they graduate). The vast majority of the cost in outcomes for DUI Court participants over the 24 months from DUI Court entry was due to time in jail (\$5,597), mostly for participants who were unsuccessful in completing the program. In sum, there is a clear benefit to the taxpayer in terms of criminal justice related costs in choosing the DUI Court process over traditional court processing.

DISCUSSION & SUMMARY OF FINDINGS

This study of the Anne Arundel County DUI Court program shows preliminary outcomes that are very positive for participants, compared to individuals who had similar demographic characteristics and criminal histories but who did not participate in the program. Some of these results were not statistically significant, due to small numbers in both DUI Court and comparison groups for the follow-up periods of interest. However, the trends in re-arrest rates and average numbers of new arrests look promising for the program participants.

After program entry, regardless of whether they graduate, DUI Court participants had reductions in substance use and were re-arrested on criminal charges less often than the comparison group of similar individuals who did not participate. Patterns of DUI arrests also look promising but differences were not statistically significant when comparing the program to the comparison group, though DUI Court participants had statistically significant changes in both the DUI arrest rates and numbers of DUI charges from 2 years before program entry to 2 years after program entry. The number of DUI Court participants in the 24-month follow-up period was small, which likely prevented significant findings from emerging in some analyses.

The graduation rate for the program varied over time but overall was 57%, slightly higher than the national average. DUI graduates were more likely to have stayed in the program longer and have had more time in the community. They were also more likely to be male and Caucasian. Participants who did not have a new **DUI arrest** after program entry had less time in jail or prison during the 24-month follow-up period and were less likely to be Caucasian. Participants who did not have a new **criminal arrest** after program entry were more likely to have fewer prior arrests and be female.

The results of this study indicate that the DUI Court program is successful in reducing participant recidivism and protecting public safety. As a result, the DUI Court provides notable cost savings and a return on taxpayer investment in the program. The program investment costs are \$7,151 per DUI Court participant or \$17.35 per day.

Recidivism costs over 24 months from program entry resulted in a savings of \$1,626 per participant (regardless of whether they graduate). Savings were substantially higher per person for DUI Court graduates, at nearly \$6,000 per person. The vast majority of the cost in outcomes for DUI Court participants over the 24 months from DUI Court entry was due to time in jail, mostly for participants who were unsuccessful in completing the program. Unsuccessful participants accrue more days in jail (and thus create a greater outcome jail cost) than offenders served through traditional court processing. It is possible that these individuals are not receiving the intensity of supervision or treatment that they need to be successful. The team may want to look at the assessment process and ensure that high quality, comprehensive assessment is occurring and that the results of those assessments are being used to make treatment planning decisions. Then, the program will want to assess the availability of appropriate services to meet the needs of participants. In addition, the team may want to assess the Court's sentencing process for unsuccessful participants to ensure that these individuals are not being treated more harshly due to their inability to complete the program. Asking program participants, particularly those who are not as successful, about the challenges they face and their unmet needs, can also inform the team about how best to address the barriers to their success and increase the proportion of individuals who graduate.

NPC staff faced multiple challenges accessing data, particularly electronic data, on the program participants and identifying potential comparison group members. The program should continue to enter current and future participant information into the SMART system to ensure that information is available for program and evaluation use in the future. The program may want to advocate for the development of the SMART system to facilitate the availability of summary reports so that the program can have access to and use its data for program monitoring and planning. In addition, the program may want to consider reviewing the program coordinator's Excel file list of participants since inception for additional information that could be included. NPC would suggest at a minimum including date of birth, state identification number, jail identification number, and social security number. In addition, look for creative solutions to the program's need for administrative support to help with data entry, such as interns, community volunteers, or grants to pay for administrative staff time.

The numbers served to date by this program indicate that the Anne Arundel DUI Court program has not yet reached capacity and would likely benefit from an economy of scale if it were able to increase its numbers. The program may want to look at the reasons why the numbers served have been low, including whether there are barriers to identifying eligible offenders, barriers to partner agencies making referrals to the program, or barriers to offenders to joining the program. Addressing existing barriers could make the program's benefits available to a larger group of DUI offenders. However, the program needs to ensure that it can meet the needs of the participants it does accept, including having enough staff to provide case management services. Continue to advocate for adequate funding to make the drug court staff positions appealing enough to draw and retain skilled individuals.

REFERENCES

- Belenko, S. (2001). *Research on Drug Courts: A Critical Review, 2001 Update*. New York: National Center on Addiction and Substance Abuse.
- Carey, S. M., & Finigan, M. W. (2004). A detailed cost analysis in a mature drug court setting: Cost-benefit evaluation of the Multnomah County Drug Court. *Journal of Contemporary Criminal Justice, 20*(3), 292-338.
- Carey, S. M., Finigan, M. W., Waller, M. S., Lucas, L. M., & Crumpton, D. (2005). *California drug courts: A methodology for determining costs and avoided costs, Phase II: Testing the methodology, final report*. Submitted to the California Administrative Office of the Courts, November 2004. Submitted to the USDOJ Bureau of Justice Assistance in May 2005.
- Finigan, M. W., Carey, S. M., & Cox, A. (2007). The Impact of Mature Drug Court Over 10 Years of Operation: Recidivism and Costs.” Submitted to the U.S. Department of Justice, National Institute of Justice.
http://www.npcresearch.com/Files/10yr_STOP_Court_Analysis_Final_Report.pdf
- Government Accountability Office (2005). *Adult drug courts: Evidence indicates recidivism reductions and mixed results for other outcomes*. Retrieved October 2006, from <http://www.gao.gov/new.items/d05219.pdf>, February 2005 Report.
- National Association for Drug Court Professionals, 2009, DUI Court information. On-line at: <http://www.dwicourts.org/learn/about-dwi-courts/what-dwi-court>. Retrieved December 2009.