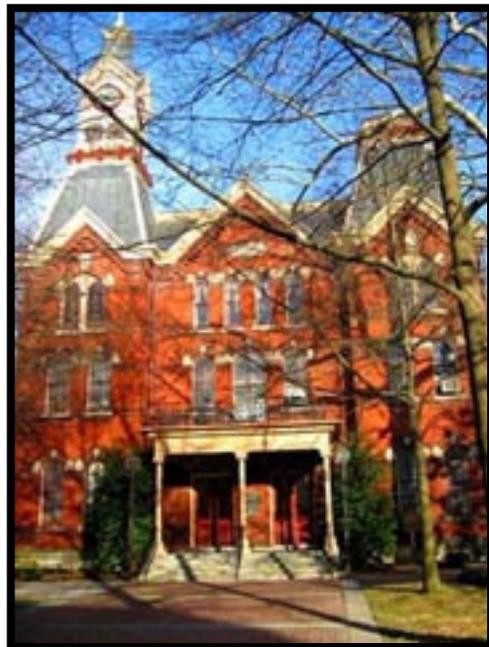


Wicomico County Circuit Court Adult Drug Treatment Court Program Outcome and Cost Evaluation



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December 2009



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Submitted by

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December 2009



Informing policy, improving programs

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EXECUTIVE SUMMARY

What Are Drug Treatment Courts?

Drug treatment 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. The purpose of drug treatment courts is to guide offenders, identified as abusing substances, into treatment that will reduce drug use and criminality, and consequently improving the quality of life for participants and their families. In the typical drug treatment court program, participants are closely supervised by a judge who is supported by a team of agency representatives that operate outside of their traditional, sometimes adversarial roles. Benefits to society take the form of reductions in crime committed by drug treatment court participants, resulting in reduced costs to taxpayers and increased public safety.

How Was This Study Conducted?

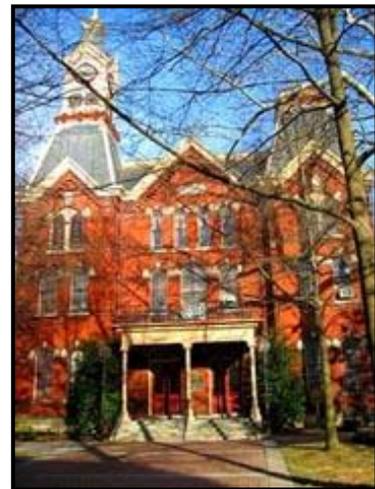
NPC Research, under contract with the Administrative Office of the Courts of the State of Maryland, conducted an outcome and cost study of the Wicomico County Circuit Court Adult Drug Treatment Court (DTC) program.

Wicomico County Circuit Court Adult Drug Treatment Court Program Description

The Wicomico County Circuit Court Adult Drug Treatment Court Program (DTC) was created to provide intensive intervention to nonviolent felony offenders whose criminality is likely a result of their dependence on substances. Generally, prospective drug treatment court participants have not responded to regular probation and outpatient treatment. The Wicomico County DTC admitted its first participant in September 2005. At capacity, the DTC program is designed to serve 50 active participants. As of October 2009, 85 individuals had entered the drug treatment court since the program's inception.

The DTC program has four phases, which cumulatively take 18 to 24 months to complete. During all phases, participants must comply with their individualized substance abuse treatment plan, health care instructions, medication requirements, curfew rules, and referrals made by the resource manager. They must attend drug treatment court review hearings and submit to regular drug tests. For the 37 drug court participants included in this study who had since exited the program, either successfully or unsuccessfully, the average number of days in the program was 470 (just over 15 months). Graduates spent an average of 634 days in the program (almost 21 months), whereas non-graduates spent an average of 345 days in the program (approximately 11 months). A minimum of 210 consecutive clean days are required in order to graduate. The graduation rate for this program is approximately 43%.

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

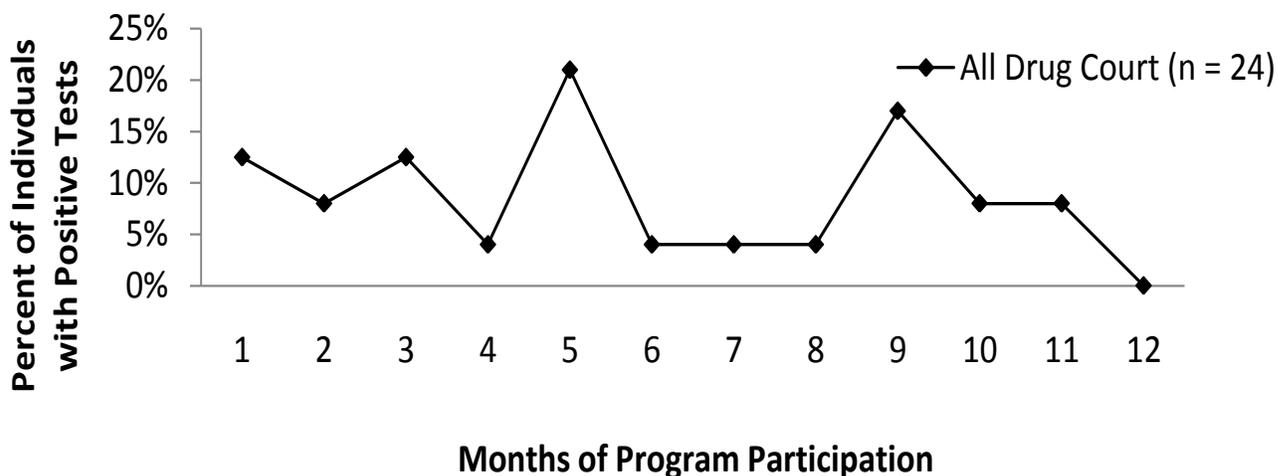


1. Does the DTC Reduce Substance Abuse Among Program Participants?

YES: DTC 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 12 months or more of program services, regardless of graduation status. The rate of substance use, as measured by positive drug tests among program participants, had an inconsistent pattern, but overall declined significantly over time (from month 1 to month 12), implying that involvement in the DTC reduces substance use. It is important to note that even in month 5, with the highest rate of positive tests, only 1 in 5 participants (21%) had a positive test and the rates are lower in the other months.

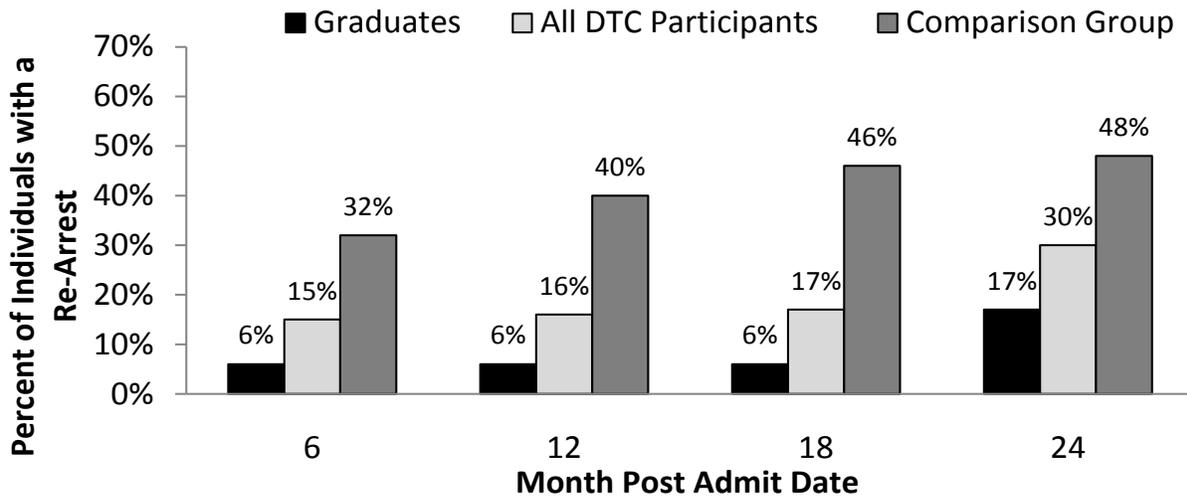
Figure A. Percent of DTC Participants with a Positive UA Test Over Time



2. Does the DTC Program Reduce Recidivism Among Program Participants?

YES: DTC participants showed reductions in recidivism following entrance into the program.

Figure B shows the percentage of individuals re-arrested, grouped by their amount of available follow-up time, for the program graduates, all DTC participants and a matched comparison group of individual offenders who were eligible for the program but did not participate. DTC participants were significantly less likely to be re-arrested than the comparison group individuals at 6, 12, and 18 months, and different at the level of a trend ($p < .10$) at 24 months.

Figure B. Individual Re-Arrest Rate Over Time by Group¹

In addition, DTC participants had significant reductions in offending comparing their rates in the 2 years before the program and 2 years after their start dates. They also had significantly fewer new arrests per person than the comparison group members.

3. Does the DTC Result in Savings of Taxpayer Dollars?

YES and NO: Outcome costs for DTC graduates showed significant savings, when factored against the comparison group. When non-graduates were also factored in, however, the cost rose significantly and the average cost showed a small savings over the comparison group for the 24 months following program entry.

The average cost of criminal justice system outcomes (e.g., re-arrests, probation, court cases) for DTC graduates in the 24 months following program entry was \$4,911, which is significantly less than the average outcomes cost for individuals who were eligible for the program but did not participate (\$18,725). When all individuals who entered the DTC were factored in, the outcome costs were \$18,182 (\$543 lower than the group that did not participate). DTC individuals were re-arrested less often, had fewer court cases, and spent less days in prison than the comparison group. However, DTC individuals have a higher number of jail and probation days than the comparison group, mostly due to non-graduates.

Recommendations for Program Improvement

The Wicomico County Adult Drug Treatment Court program demonstrates promise in reducing negative behaviors, in particular, substance use and criminality.

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

1. Though the program does not have jurisdiction over offenders until they enter the program or at least have had a court hearing in the Circuit Court, team members may be able to establish creative collaborations between partner agencies to reduce the time between

¹ Sample sizes: Graduates with 6 months n = 16, 12 months n = 16, 18 months n = 16, and 24 months n = 12; All DTC participants with 6 months n = 48, 12 months n = 45, 18 months n = 41, and 24 months n = 33; Comparison group n = 88 at all four time points (6, 12, 18, and 24 months).

arrest and program entry (or at least a referral to a substance abuse assessment and/or treatment services, even if the program participation does not begin officially), or bring the information about the cost implication of having this gap between arrest and program entry to key decision-makers to facilitate discussion and problem-solving at a community level. It is important to capitalize on opportunities for intervention when a person has a crisis point (such as an arrest) which may create a window of greater motivation for change.

2. Continue to review drug testing procedures and make adjustments where needed to ensure that participants cannot use without detection.
3. Strengthen supports during transition periods (such as at Phase changes and other significant changes in program requirements or activities).
4. Discuss the difference between treatment responses and behavioral responses to ensure that the most appropriate response (i.e., increase treatment intensity vs. sanctions) is occurring for participants who have positive drug tests.
5. Review the services available for participating individuals, to make sure that the intensity of services matches the need as indicated by the substance abuse assessment and criminogenic risk assessment.
6. Continue to support participants with transitional services, to ensure they know who to contact after leaving the program in the event of a crisis or if they need support, to maximize their chance for success after the end of treatment and program participation.
7. 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.
8. Assess participants' high number of jail days, which include commitments to residential treatment programs (Health General and RSAT), and discuss whether there are alternatives that could be utilized with equivalent effectiveness, without undermining the continuum of care and therapeutic response, to reduce both program and outcome costs.

Overall, the results of this study demonstrate that the Wicomico County Adult Drug Treatment Court is having a positive impact, even in this early cohort of participants. A review of program policies and practices will benefit the program as it continues to serve very high-risk and high-need individuals in the future.

INTRODUCTION AND BACKGROUND

The Drug Treatment 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 treatment courts across the country. The first drug treatment court was implemented in Florida in 1989. As of October 2009, there were over 2,300 adult, juvenile, family and other specialized drug treatment courts active in all 50 states, the District of Columbia, Northern Mariana Islands, Puerto Rico, and Guam with another 214 being planned (National Association of Drug Court Professionals, 2009).

Drug treatment courts are designed to guide offenders identified as drug-addicted into treatment that will reduce drug dependence and improve the quality of life for them and their families. Benefits to society often take the form of reductions in crime committed by drug treatment court participants, resulting in reduced costs to taxpayers and increased public safety.

In the typical drug treatment court program, participants are closely supervised by a judge who is supported by a team of state and local agency representatives who operate outside of their traditional roles. The team typically includes a drug treatment 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 treatment 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 treatment court programs can be viewed as blending resources, expertise, and interests of a variety of state and local jurisdictions and agencies.

Drug treatment courts have been shown to be effective in reducing recidivism (GAO, 2005) and in reducing taxpayer costs due to positive outcomes for drug treatment court participants (Carey & Finigan, 2004; Carey, Finigan, Waller, Lucas, & Crumpton, 2005). Some drug treatment courts have even been shown to cost less to operate than processing offenders through traditional “business-as-usual” court processes (Carey & Finigan, 2004; Crumpton, Brekhus, Weller, & Finigan, 2004a & 2004b; Finigan, Carey & Cox, 2007).

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 treatment courts across the state. The results presented in this report include the costs associated with the Wicomico County Circuit Court Adult Drug Treatment Court program, and the outcomes of participants as compared to a sample of similar individuals who received traditional court processing.

Process Description: Wicomico County Circuit Court Adult Drug Treatment Court

Wicomico County is located in the southeastern part of Maryland, bordering Delaware to the north. To the south are Somerset and Worcester Counties, in Maryland. According to the 2008 Census estimate, the population of Wicomico County was 94,046, with nearly 77% age 18 or older and the median age, 36 years. Wicomico County’s racial/ethnic composition was 73% White with 24% African American and 3% of the population identified as Hispanic/Latino of any race. The Census also found that the median family income of the county was \$55,419 and the median household income was \$49,981, with 13% of individuals living below poverty level.

The county's unemployment rate in 2008 was 5.4%. The main industries of employment are educational services and health care/social services.

BACKGROUND AND TEAM

The Wicomico County Circuit Court Adult Drug Treatment Court Program (DTC) has also been called the Wicomico County Adult Drug Court Program. Throughout this report we will use the former name and the abbreviation "DTC." DTC admitted its first participant in September 2005. At capacity, the DTC program is designed to serve 50 active participants. As of July 2009, 77 individuals had entered the drug treatment court since the program's inception; 21 of these participants had graduated, 30 were unsuccessful at completing the program, and 26 individuals were active participants. The DTC operations team is made up of the Judge, program coordinator, a parole/probation agent, two representatives from corrections, three representatives from law enforcement, an Assistant State's Attorney, an Assistant Public Defender, Wicomico County Health Department representatives (including the Director of Addictions and two addictions counselors), a resource manager, and the Circuit Court Administrator.

ELIGIBILITY & DRUG TREATMENT COURT ENTRY

Prospective participants to the DTC must be residents of Wicomico County, Maryland, and be 18 years of age or older. In addition, their charge must be a nonviolent Circuit Court charge and does not have to be directly drug related. The offender must be substance abusing with a dependency diagnosis. Generally, prospective drug treatment court participants have not responded to regular probation and outpatient treatment. Charges and behaviors that preclude an individual's entry into the program are violent offenses or a propensity toward violent behavior, sales of a controlled substance for profit, and firearm and sex offenses.

Offenders who are referred to drug treatment court by the Parole and Probation Department are sent due to a violation of probation. An offender with a new arrest is typically referred to the program by corrections, law enforcement, or defense counsel. In addition, the judge may order that an individual be screened for program participation, if she believes him or her to be suitable. The completed referral form and signed program release forms are to be sent to the coordinator before the prospective participant is ready to make a plea. Sentencing may be deferred for 45 days for the screening process to occur. Once the coordinator has received the referral, she forwards a copy to the State's Attorney's Office, where a criminal history check is conducted to be completed within 2 weeks of receipt. If the prospective participant legally qualifies for the program, a clinical screening is conducted by the Wicomico County Health Department. To be eligible for program entry, the prospective participant must meet American Society of Addiction Medicine (ASAM) criteria for level 2, intensive outpatient care, or greater.

DRUG TREATMENT COURT PROGRAM PHASES

The DTC program has four phases, which cumulatively take 18 to 24 months to complete. During all phases, participants must comply with their individualized substance abuse treatment plan, health care instructions, medication requirements, curfew rules, and referrals made by the resource manager.

Phase Requirements

Phase 1 lasts a minimum of 3 months. During this phase, the participant must have a complete physical examination, followed by a health education appointment to learn more about mental illness-related issues and communicable diseases (e.g., tuberculosis and HIV). They also undergo

a substance abuse assessment by the Wicomico County Health Department. They must maintain compliance with their treatment provider's treatment plan and submit to between two and six urinalyses each week. Participants must obtain (or currently be living in) housing approved by the drug treatment court team, and they must have a land line telephone. The participant must obtain employment within 6 weeks of program entry and must visit the parole/probation agent at least 2 times each month. Participants in this phase attend drug treatment court hearings twice monthly.

Phase 2 of the drug treatment court program lasts a minimum of 6 months. Participants must maintain suitable housing with a land line telephone, as evaluated by the parole/probation agent and/or law enforcement at least once each month. A monthly face-to-face contact with the parole/probation agent is required. During this visit, the participant must provide proof that he or she is working a minimum of 25 hours per week. A total of 20 hours of community service is also required in Phase 2; however, if the participant is not working, additional community service is required in lieu of employment hours. Participants must come to drug treatment court 1 to 2 times monthly, and they must show proof that they have attended at least three self-help meetings every week. Participants in this phase must submit two to six random urine tests weekly, and they must be clean for a minimum of 120 consecutive days in order to move on to the next phase.

DTC Phase 3 takes a minimum of 6 months to complete. Participants are required to maintain safe and clean housing. Participants must also be employed a minimum of 30 hours per week and attend at least one drug treatment court hearing monthly. At the drug treatment court hearing they must show proof of employment and evidence of attendance of at least four self-help meetings per week. Random UAs take place 1 to 6 times per week, and participants must remain clean for a minimum of 150 consecutive days in order to advance to Phase 4.

Phase 4 takes a minimum of 3 months to complete. During this phase, participants are expected to complete substance abuse treatment and pay all restitution and parole/probation supervision fees. Maintenance of suitable housing and weekly call-ins to the parole/probation agent are required. Participants are expected to work a minimum of 35 hours weekly and they must attend drug treatment court at least once monthly. They must also have completed a total of 50 hours of community service and attend 5 self-help meetings each week. Random UAs are conducted for participants in this phase 1 to 6 times weekly, and an aftercare plan with the resource manager must be completed. A minimum of 210 consecutive clean days are required in order to graduate.

PROGRAM RESOURCES

Seventy-seven participants had been admitted to the program as of July 2009, and data on program resources received were collected by the evaluation team from narratives in program files. Resources made available within the community to individuals during their program participation include GED classes (9% of participants received this service), training and other vocational programs offered through Goodwill Industries (66%),² nutrition and life skills classes (37%), parenting classes (4%), medical health care referrals (39%) and anger management (10%) for those who need them. Overall, 87% of program participants received services from at least one community resource, with most (59%) receiving at least four programs.

Among the 25 participants who entered the program without a high school degree or equivalent, 7 (28%) attended GED classes. Thirty-seven individuals were unemployed upon entry to the program and 27 of those (73%) attended vocational training as part of the program participation. An additional 19 people who did have a job when they entered the program also attended the vo-

² All participants starting in April 2006 were referred to Goodwill for at least an initial intake and resume workshop; program files indicated two-thirds received training or a vocational program.

ational training. Of these 46 individuals who attended vocational training, 29 (63%) confirmed that they had jobs when they finished the program (others may also have found employment but it was not indicated in their files and 14 were still active in the program).

Most participants (81%) attended support groups in the community such as Alcoholics Anonymous or Narcotics Anonymous. The average number of groups attended by participants was 55 for graduates and 37 for non-graduates. It is important to note that while support groups are required for all participants, the participants who did not have support group participation listed were either non-graduates or currently active (and may not yet have reached Phase 2). It will be important for the program to confirm that staff is consistently recording this information and that client records are complete.

INCENTIVES AND SANCTIONS

DTC participants receive rewards from the judge for doing well in the program. Staff reported that reduction in program requirements is the most sought-after reward. Incentives include applause, reduced supervision, decreased frequency of court appearances, curfew restriction reduction, and decreased community service requirements. Community businesses donate gifts (e.g., beach towels, music CDs and gift cards) which are typically given out upon phase advancement or program graduation.

After a non-compliant act/behavior occurs, such as committing a new crime or missing treatment, case management or parole/probation appointments, the DTC team discusses the issues surrounding the infraction at the pre-court meeting taking place just prior to the participant's next regularly scheduled drug treatment court hearing. The team discusses what would best change the behavior of the participant, to motivate her or him towards making a positive change. During the pre-court meeting, the coordinator identifies previous sanctions and treatment responses by the team and the team will discuss other options that may change the participant's behavior and the suggestion's appropriateness given the infraction. The judge takes the team's recommendations into consideration and then makes the final decision. Sanctions are graduated and may include increased frequency of court appearances or community service hours, electronic monitoring, escalating periods of jail confinement, assignment to the courtroom jury box for the duration of a drug treatment court session, extension of program phases and extension of curfew restriction hours.

Sanctions used by the program since inception include:

- Jail time (70% of participants, with a range of 1-11 jail sanctions imposed per person)
- Community service (69% of participants, with an average of 42 hours per person imposed)
- Curfew with electronic monitoring (54% of participants, with a range of 1-8 times per participant), curfew alone (25%), and restricting area (3%)
- Increased level of care at treatment provider (22% of participants)
- Increased frequency of program components, including UA tests (10% of participants), support groups (9%), supervision (5%), and drug treatment court hearings (7%)
- Writing assignments, including logbook (25% of participants) and other assignments (8%)
- Verbal reprimands (10% of participants)
- Attending court in the jury box (5% of participants).

GRADUATION AND NON-COMPLETIONS

In order to graduate from DTC, participants must satisfy program requirements for all four phases, including successful completion of substance abuse treatment; payment of any outstanding court costs, fines, and/or restitution; successful completion of any recommended aftercare; continued regular employment; and completion of 210 days of consecutive clean time.

Participants' program participation may be revoked for threatening violence, possession of a dangerous and deadly weapon, illegal activity, including but not limited to attempting to solicit fellow drug treatment court participants for drug activity, soliciting drugs from other providers (MDs, etc.), failure to attend sessions or comply substantially with conditions of treatment and/or continued non-compliance with supervision guidelines. The decision to remove a participant unsuccessfully from the program is based on the recommendation from the drug treatment court team, with the judge having the ultimate decision-making authority.

OUTCOME/IMPACT EVALUATION

Outcome Evaluation Methods

RESEARCH STRATEGY

The primary criminal justice system outcome of interest to drug treatment court programs is the rate of participant re-offending after beginning, or completing, the programs. Re-arrests are defined in this study as any new individual arrest after program entry and this study does not include non-criminal events, such as traffic citations.

This study examines outcomes over a 2-year period for program participants and a matched comparison group. NPC Research staff identified a sample of DTC participants who entered the program between November 2005 and December 2008. This time frame included all DTC 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 1 year of program implementation (due to typical program adjustments), 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. Shorter follow-up periods have 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. Longer follow-up periods allow for more time to see program impact but the group sizes can sometimes become too small 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 DTC by dividing the number of participants who graduated by the total number who exited the program, for those participants who had enough opportunity to have completed the program. The graduation rate does not include active participants.

Differences in demographics and criminal history between DTC graduates and non-graduates were examined to determine if there were indications that specific groups 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 the DTC reduce substance abuse among program participants?
2. Does the DTC program reduce recidivism?
3. To what extent are participants successful in completing the DTC program?
4. 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 treatment court evaluation projects for data collection, management, and analysis of these data. The data collected included days spent in prison and jail; criminal justice histories in the form of arrest records, local court case information; substance abuse treatment services; and program data from multiple sources.³ 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 are 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.

Wicomico County Adult Drug Treatment Court

Data (for DTC participants only) were provided by the DTC office that included names, demographic information, program acceptance status, time spent in DTC, drug test dates and results, sanctions, ancillary services, case management and probation officer contacts, and discharge date and status.

Maryland Department of Public Safety & Correctional Services

The Maryland Department of Public Safety & Correctional Services (DPSCS) provided data for both DTC participants and comparison group members 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 jail stays, and probation and parole episode information through July 2009.

Maryland Judicial Information System

The Maryland Administrative Office of the Courts provided data from their JIS system on court cases heard in Wicomico County for DTC participants and comparison group members from 2002 through September 2009.

Substance Abuse Management Information System (SAMIS)

Substance abuse treatment data (for DTC participants only) were obtained from administrative records at the Maryland Alcohol and Drug Abuse Administration (ADAA). These records included dates of treatment episodes, level of care for services provided (e.g., individual counseling session, intensive outpatient session, detoxification) and drug testing conducted by treatment facilities.

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 DTC participants. These data include the results of urinalysis tests, dates of court hearings, and contacts with probation officers for individuals in the program from December 2007⁴ to August 2009.

³All 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.

⁴ December 2007 is when the program began using this data system.

Table 1. Data Sources

Database	Source	Example of Variables
DTC Program Coordinator's List of Participants	Program Coordinator	Acceptance status, time spent in DTC, UA test dates and results, discharge status.
DTC Program paper files	Program Coordinator	Case management and probation officer contacts, UA test dates and results, sanctions, ancillary services
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)
Maryland Judiciary Case Search (online electronic data)	Maryland Judiciary	DTC court hearing information for Circuit Court cases
Substance Abuse Management Information System (SAMIS)	Maryland Department of Health and Mental Hygiene (DHMH); Alcohol and Drug Abuse Administration (ADAA)	Number of treatment episodes; time spent in treatment; level of care, drug of choice

SAMPLE SELECTION

Drug Treatment Court Participant Group

This study examines outcomes over a 2-year period for program participants and a matched comparison group. All DTC participants who entered the program from November 2005 to December 2008 who were found in the statewide criminal justice databases were selected for this study (29 individuals were not found or did not have enough follow-up time). DTC participant information was obtained from a list kept by the DTC Program Coordinator. The number of DTC participants in this study's cohort is presented in Table 2 by the year of their admission.

Table 2. Wicomico DTC Admissions by Year

Year	Admissions
2005	9
2006	12
2007	20
2008	7 ⁵
Total	48

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 Wicomico County at the time of their violation and have had no history of violent offenses. These criteria were established in consultation with the DTC coordinator in accordance with the program eligibility criteria.

Offenders meeting these criteria who had never attended the DTC were identified from a list of people arrested or on probation for a DTC-eligible charge and who also had a DTC-eligible criminal history. The DTC program participants and comparison group individuals were matched on age, gender, race/ethnicity, indication of a drug issue by their probation officer, and criminal history. Any differences in the data used for matching between the DTC participants and comparison group individuals were controlled for in the subsequent outcome analyses. The final sample included 48 drug treatment court participants and 88 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 the study's research questions are described below.

1. Does the DTC program reduce substance abuse among program participants?

The dates of positive drug tests (urinalyses or UAs) for DTC participants were obtained from the program through the SMART system, paper file data collection, and electronic data provided by the DTC coordinator. To determine whether there was a reduction in drug use, participants who had 12 months of test data received a code at 1-month intervals of yes (had at least 1 positive test) or no (had no positive tests).

In addition, the 2-year means for re-arrests with drug charges were calculated for the DTC and comparison groups. Univariate analysis of variance was performed to compare the mean number of re-arrests for all DTC participants with the comparison group. The means comparing the DTC to the comparison groups were adjusted for differences between the groups on gender, age at eligible arrest, race/ethnicity, number of prior arrests, type of prior arrests, type of eligible arrests, and time at risk to re-offend. Time at risk was calculated by summing the total amount of days

⁵ The number of entries into the DTC program in 2008 was low as a direct result of the stay on DTC admissions due to a pending lawsuit brought on by the Maryland Office of the Public Defender, and this agency's decision not to represent new participants in the DTC program. This court case has now been resolved.

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 individuals 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 drug treatment court, may have been discharged from the program and are therefore not equivalent to drug treatment court graduates.

2. Does the DTC program reduce recidivism?

Univariate analysis of variance was performed to compare the mean number of re-arrests for the DTC and comparison groups. The means comparing the DTC 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, type of eligible arrest, 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 individuals 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 drug treatment court, may have been discharged from the program and are therefore not equivalent to drug treatment court graduates.

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

3. To what extent are participants successful in completing the DTC program and within the intended time period?

To measure the program's 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 DTC program by the number of graduates, i.e., participants who completed the program successfully, of those participants who have had enough opportunity to have completed the program (no active participants are included in this calculation). 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 graduate within the program's intended time period.

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

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

All individuals who were studied for the outcomes report had at least 6 months of follow-up time, which included 48 DTC participants (16 graduates, 21 non-graduates, and 11 active participants) and 88 comparison group individuals.

LIMITATIONS

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

A quasi-experimental design was used rather than random assignment for comparison group selection: The individuals in the study sample were not randomly assigned to the ADC and comparison 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. The comparison group sample was created from data provided by the Department of Public Safety and the Administrative Office of the Courts and is matched on demographic variables and criminal history. Information on addiction severity was not available in selecting the comparison group individuals.

Unavailable data: Statewide criminal histories data were unavailable for some of the study participants, further reducing the sample sizes.

Short follow-up time period: Because of the small sample sizes, it was necessary to include all DTC participants through September 2008, which resulted in a follow-up time period for some participants of only 6 months (due to lead time needed to access some data). Many ADC 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: ADC 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 Wicomico County Circuit Court Adult Drug 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 DTC and comparison groups. Independent samples t-tests and chi-square analyses showed no significant differences between the DTC and comparison groups on the characteristics tested.

Table 3. DTC and Comparison Group Characteristics

	All DTC Participants N = 48	Comparison Group N = 88
Gender		
Male	54%	56%
Female	46%	44%
Ethnicity		
Caucasian	94%	91%
Non-Caucasian ⁶	6%	9%
Mean age at eligible arrest date	33 years	33 years
Median	30 years	31 years
Range	19 – 54 years	19 – 51 years
Primary drug of choice ⁷		
Cocaine	56%	
Heroin	23%	N/A
Marijuana	8%	
Alcohol	8%	
All Others ⁸	4%	
Type of charge at eligible arrest ⁹		
Drug-related	63%	49%
Property-related	33%	39%
Person-related	19%	16%
‘Other’ ¹⁰	52%	41%
Average number of <u>total</u> arrests in the 2 years prior to the arrest leading to program participation	1.94 (range 1 – 6)	1.65 (range 1 – 4)
Average number of <u>drug</u> arrests in the 2 years prior to the arrest leading to program participation	.98 (range 0 – 4)	.75 (range 0 – 3)

⁶ All non-Caucasian comparison group members are listed as African American in the probation data. All non-Caucasian, non-graduates are African American; one graduate is African American and one is listed as “other” in the program data.

⁷ These data are only available for DTC participants.

⁸ Percentages do not equal 100 due to rounding. ‘Other’ includes Ecstasy and ‘other’ amphetamines.

⁹ The eligible arrest includes one or more charges, so the percentages in this section add to greater than 100.

¹⁰ ‘Other’ charges include violations of probation and charges that are not easily categorized as drug-related, person or property, such as some driving-related and weapon-related charges.

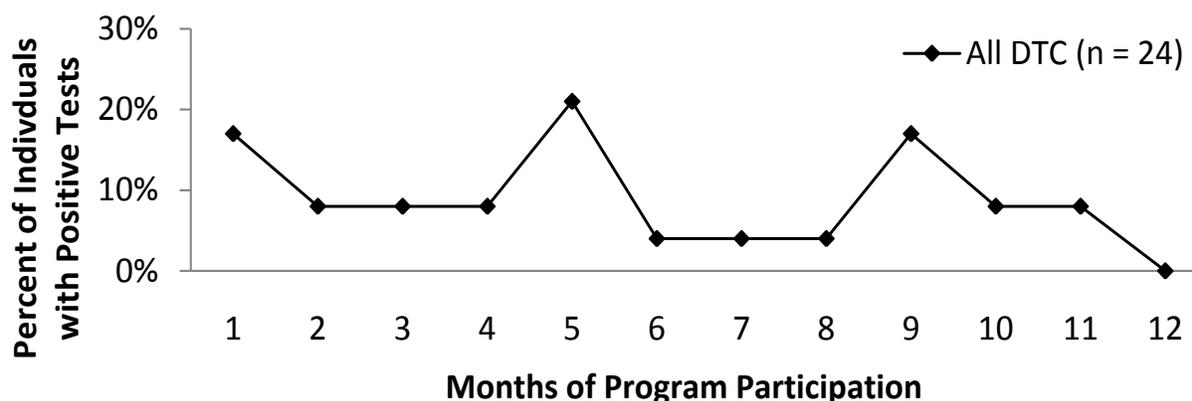
POLICY QUESTION #1: DOES PARTICIPATION IN THE DRUG TREATMENT COURT PROGRAM REDUCE SUBSTANCE USE?

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

Drug Testing

Figure 1 shows the percentage of program participants with a positive urine analysis (UA) test in each 1-month period for individuals receiving 12 months or more of program services, regardless of graduation status. The rate of substance use, as measured by positive drug tests among program participants, had an inconsistent pattern, but overall declined over time (the decrease from month 1 to month 12 is significant), implying that involvement in the DTC reduces substance use. It is important to note that even in month 5, with the highest rate of positive tests, only 1 in 5 participants (21%) had a positive test and the rates are lower in the other months. It is possible that these patterns indicate difficulties with transitions between phases (from phase 1 to 2 and from 2 to 3) and that the program may want to pay special attention to increasing support at those times, or helping prepare the participants for these transitions. It also could reflect differences in testing patterns, where some use may not be identified in some months, providing artificially low rates of positive tests. It will be important for the program to look at their testing procedures and ensure that participants are unable to use without detection.

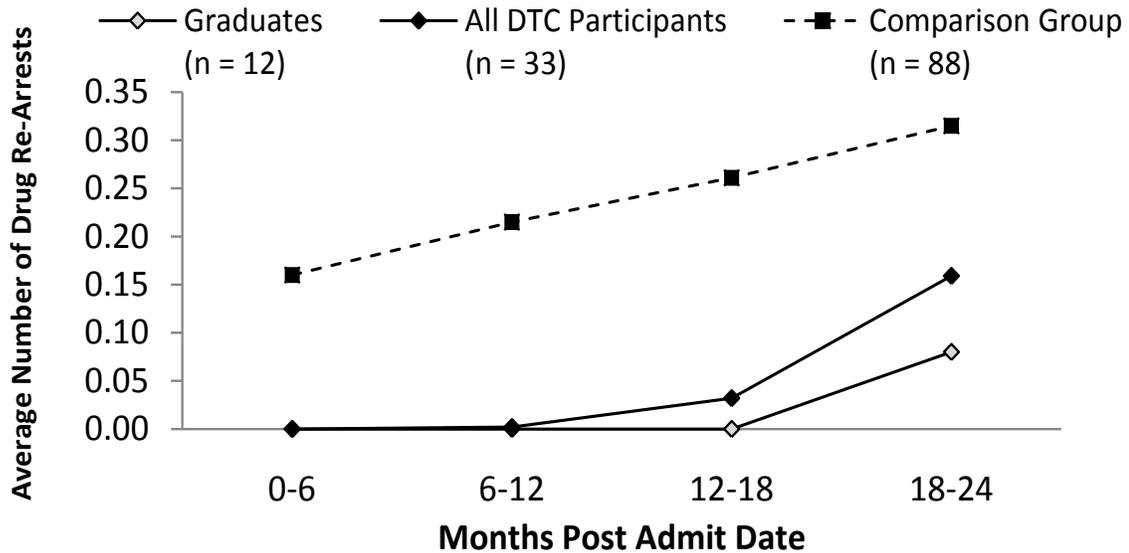
Figure 1. Percent of DTC Participants with a Positive UA Test Over Time



Drug-related Offenses

Figure 2 displays the mean number of drug re-arrests in the DTC and comparison groups during cumulative 6-month periods over 24 months after program entry (or equivalent). An examination of DTC and comparison group individuals showed that, while the comparison group had a steady increase in the number of drug re-arrests over 24 months, DTC participants showed a significantly lower number in the first 6, 12, and 18 months post DTC start. This is further evidence of reductions in drug use for program participants.

Figure 2. Average Number of Drug Re-Arrests Over Time



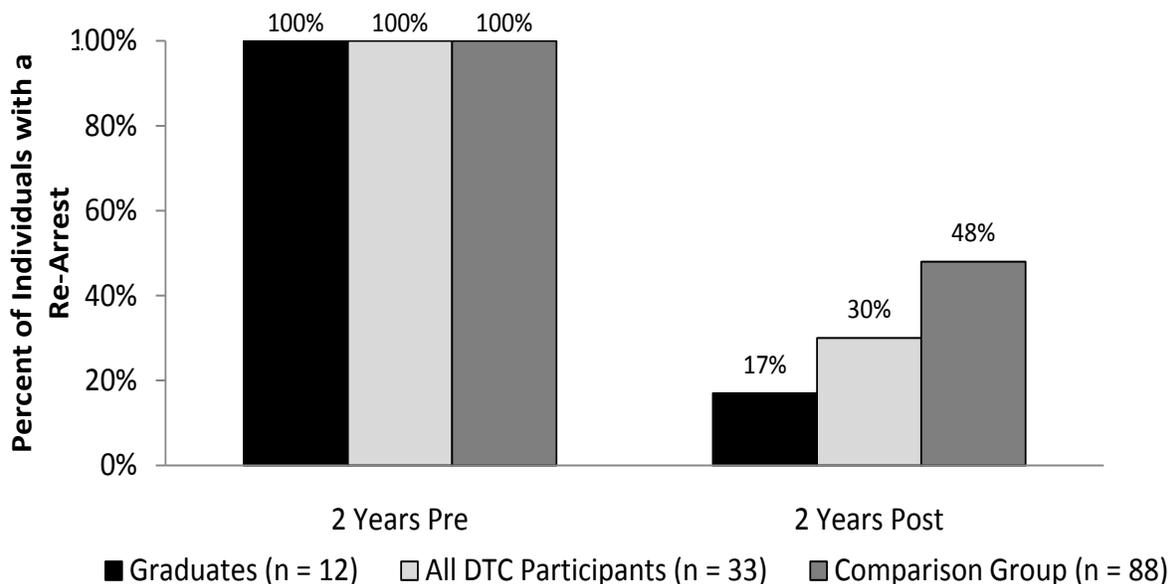
POLICY QUESTION #2: DOES PARTICIPATION IN THE DRUG TREATMENT COURT PROGRAM REDUCE RECIDIVISM?

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

Recidivism Rate

Figure 3 shows the recidivism rate, the percentage of individuals re-arrested, using a 24-month pre-post comparison. The pre time period includes the 2 prior to program start or equivalent, which is compared to the post time period which begins at program start date or equivalent.

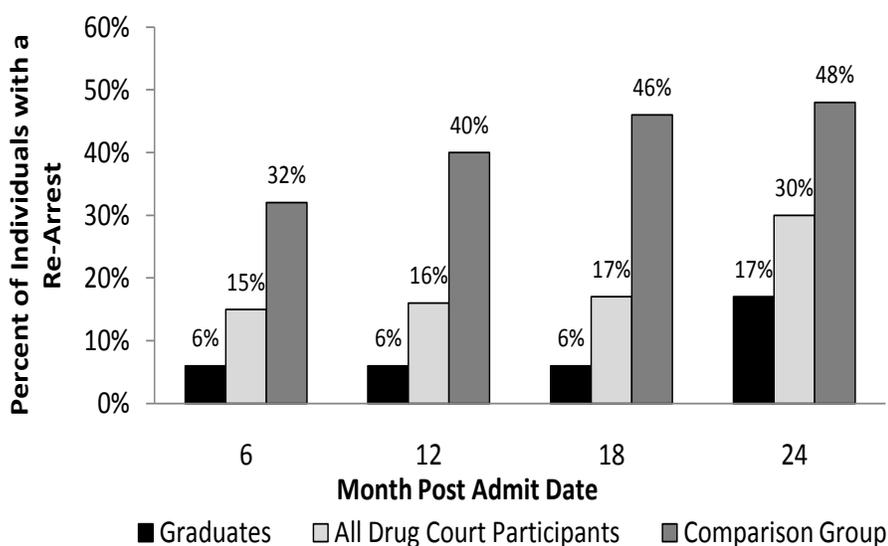
Figure 3. Individual Arrest Rates 2 Years Before & 2 Years After Program Participation



The percentage of individuals arrested in the DTC and comparison groups in the 2 years post program start was significantly less than the percentage re-arrested pre-program. However, in comparing the difference in rates at 2 years post start date or equivalent, a significantly small proportion of the DTC group was re-arrested than the comparison group, at the level of a trend ($p < .10$). This indicates that the DTC program is effectively reducing recidivism for its participants. Although all DTC participants were arrested during the 2 years prior to the admission, fewer than one third had been rearrested in the 2 years after entering the DTC program.

As shown in Figure 4, the recidivism rate for DTC participants, regardless of graduation status, is significantly lower than the comparison group at 6-, 12-, and 18-month periods, and different at the level of a trend ($p < .10$) at 24 months, even with very small numbers of participants.

Figure 4. Individual Re-Arrest Rate Over Time by Group¹¹



In the 12 months following entry into the program, 16% of all DTC participants and 6% of graduates were re-arrested, while 40% of the comparison group members were re-arrested. At the 24-month time period, the pattern continued, with 30% of all program participants having been re-arrested and 17% of graduates and compared to 48% of comparison group individuals.

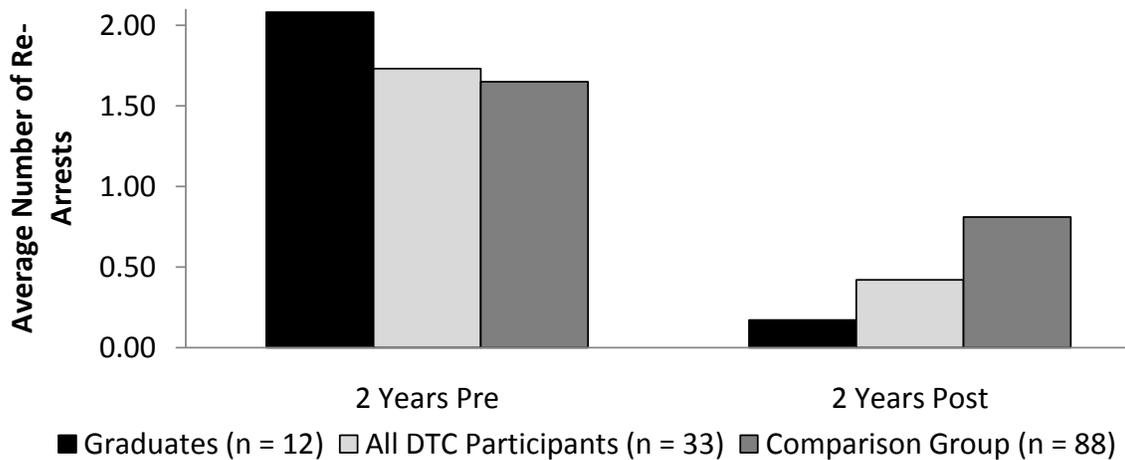
Number of Re-Arrests

An analysis of the average *number* of re-arrests per person shows a similar pattern as the re-arrest rate in Figures 3 and 4.

The mean number of re-arrests per person is compared through a 24-month pre-post comparison as shown in Figure 5. The pre time period includes the 2 years leading up program start or equivalent, which is compared to the post time period which begins at DTC start date or equivalent.

¹¹ Sample sizes: Graduates with 6 months $n = 16$, 12 months $n = 16$, 18 months $n = 16$, and 24 months $n = 12$; All DTC participants with 6 months $n = 48$, 12 months $n = 45$, 18 months $n = 41$, and 24 months $n = 33$; Comparison group $n = 88$ at all four time points (6, 12, 18, and 24 months).

Figure 5. Average Number of Re-Arrests¹² 2 Years Before & 2 Years After Program Participation



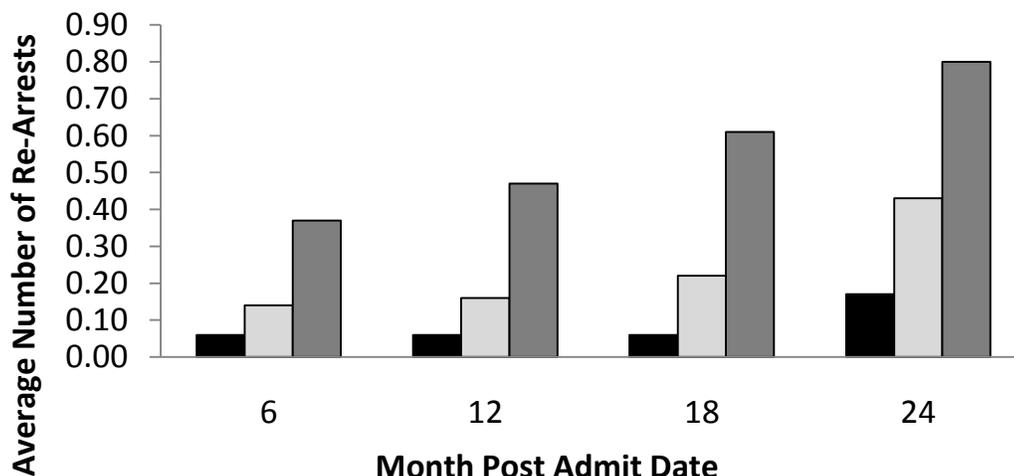
The DTC participants were re-arrested significantly less often in the 24 months post program than in the 24 months pre-program. This result may indicate an effect from the program on reducing the number of re-arrests among DTC participants. Further, the comparison group was also re-arrested significantly less often in the post period than in the pre-period, indicating that the traditional interventions for offenders are also effective at preventing re-arrests. However, the difference between the DTC and comparison groups at 24 months post-program was also significantly different, indicating that the DTC had significantly fewer re-arrests 24 months post program, compared to the comparison group.

Figure 6 shows the mean number of re-arrests over time for DTC graduates, all DTC participants, and the comparison group. DTC participants showed a significantly lower number of re-arrests at 6, 12, and 18 months, and a trend-level difference ($p < .10$) at 24 months, even with a very small number of participants.¹³

¹² 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.

¹³ The mean number of re-arrests was adjusted to control for differences between DTC 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.

Figure 6. Cumulative Average Number of Re-Arrests Over Time by Group¹⁴



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).¹⁵ Table 4 presents the results of this analysis.

In the 2 years post drug treatment court entry, DTC participants with 2 years of follow-up had fewer arrests compared to the comparison group (trend level). As would be expected, in the 2 years following drug treatment court entry, DTC *graduates* were re-arrested less often than other participants and the comparison group for all types of arrests. While the numbers of each type of charge are smaller for the DTC participants than the comparison group, the differences do not reach significance at 24 months after program entry, probably due to the small numbers in the DTC program group.

¹⁴ Sample sizes: Graduates with 6 months n = 16, 12 months n = 16, 18 months n = 16, and 24 months n = 12; All DTC participants with 6 months n = 48, 12 months n = 45, 18 months n = 41, and 24 months n = 33; Comparison group n = 88 at all four time points (6, 12, 18, and 24 months).

¹⁵ 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.

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

	DTC Graduates N = 12	All DTC Participants N = 33	Comparison Group N = 88	Significantly Different? ¹⁶ ($p < .05$)
Average number of drug arrests in the 24 months post drug treatment court entry or equivalent	.08	.17	.31	No
Average number of property arrests in the 24 months post drug treatment court entry or equivalent	0	.14	.38	No
Average number of person arrests in the 24 months post drug treatment court entry or equivalent	0	.05	.14	No

POLICY QUESTION #3: DO PARTICIPANTS OF THE DTC PROGRAM COMPLETE THE PROGRAM SUCCESSFULLY?

YES: DTC graduates are successful in completing the DTC program within the intended time period.

The expected program duration for the DTC is 24 months. The average time for graduates to complete the program was approximately 21 months, and 75% of graduates completed the program within the expected 24-month program duration, with 81% participating for at least 18 months. Non-graduates spent an average of 11 months in the program.

During the study period, the overall graduation rate for the DTC was 43%, while the national average graduation rate for adult drug treatment court programs is around 50% (Belenko, 2001).

However, it is important to note that the number of participants who have had an opportunity to complete the program is still quite small, and the annual graduation rate for study participants (see Table 5) has been increasing. If the first year of program implementation is not included (which is often the case, to allow for programs to work out the details of the program and make adjustments), the graduation rate for this program exceeds the national average.

The DTC program may want to examine the portion of their services that focuses on keeping individuals engaged in the program and determine if further assistance is needed to ensure that the participants have what they need to enable them to successfully participate in required activities, e.g., transportation, child care, and other services.

¹⁶ Yes indicates $p < .05$, No indicates $p > .10$, Trend indicates $p > .05$ and $p < .10$.

Table 5. Number of DTC Graduates in Study Sample by Year

Admission Year	Number Graduated (N = 16)	Number Discharged (N = 21)	Graduation Rate
2005	1	8	11%
2006	6	6	50%
2007	9	7	56%
Total	16	21	43%

POLICY QUESTION #4: WHAT PREDICTS PARTICIPANT SUCCESS?

Which characteristics of drug treatment court participants are associated with graduation and reduced recidivism?

Graduation

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

Characteristics of graduates and non-graduates were compared and are presented in Table 6. Graduation was significantly associated with a longer length of stay in the program, and more time at risk of re-offending (not incarcerated) during the length of stay in the program. Graduation was also significantly associated with attending support groups during the program and number of AA or NA¹⁷ meetings attended during the program. Further, graduates had a lower rate of receiving jail sanctions during the program, and higher rate of receiving vocational training during the program, at the level of a trend ($p < .10$), compared to non-graduates. It is unclear whether these characteristics were reflective of these participants doing better than the non-completers or if the program provided them with the supports they needed to be more successful. It does appear that the small numbers of participants may be masking significant differences in other areas, such as prior employment. It is possible that these characteristics may emerge as predictive of graduation in future studies of this program.

Graduates had a higher average number of drug arrests (at the level of a trend, $p < .10$) during the 2 years prior to entering the program, so this program is clearly effective at supporting drug offenders.

¹⁷ “AA” refers to Alcoholics Anonymous; “NA” refers to Narcotics Anonymous.

Table 6. Characteristics of DTC Graduates and Non-Graduates

	DTC Graduates N = 16	DTC Non- Graduates N = 21	Significantly Different?¹⁸ (<i>p</i> < .05)
Gender			
Female	44%	33%	No
Ethnicity			
Non-Caucasian ¹⁹	13%	5%	No
Mean age in years, at start date	30	33	No
Employed at start date	63%	36%	No
Education level at start date			
Less than high school	31%	43%	No
Mean length of stay in DTC in days	634	345	Yes
Mean number of days at risk for re-offending during the program	578	251	Yes
Mean number of days incarcerated (jail and/or prison) during the program	56	94	No
Jail sanctions imposed during the program	56%	81%	Trend
Other sanctions imposed during the program	88%	71%	No
Received vocational training during the program	44%	19%	Trend
Attended AA/NA groups during the program	100%	62%	Yes
Average number of AA/NA groups attended during the program	63	23	Yes
Average number of <u>total lifetime</u> arrests prior to the arrest leading to program participation	5.19	4.14	No
Average number of <u>total</u> arrests in the 2 years prior to the arrest leading to program participation	2.31	1.67	No
Average number of <u>drug</u> arrests in the 2 years prior to the arrest leading to program participation	1.31	.67	Trend
Average number of <u>property</u> arrests in the 2 years prior to the arrest leading to program participation	.94	.71	No
Average number of <u>person</u> arrests in the 2 years prior to the arrest leading to program participation	.81	.86	No

¹⁸ Yes indicates $p < .05$, No indicates $p > .10$, Trend indicates $p > .05$ and $p < .10$.

¹⁹ All non-Caucasian, non-graduates are African American; one graduate is African American and one is listed as “other” in the program data.

When DTC participant characteristics were examined together in relation to graduation status in a logistic regression model, not receiving any jail sanctions was a significant predictor of graduation above and beyond other characteristics. Further, at the level of a trend ($p < .10$), being employed and being younger at drug treatment court start were predictive of graduation. These characteristics may indicate that graduates were functioning better prior to program participation (employed), and may have had less severe drug use histories (younger).

Recidivism

Participant characteristics and arrest history were also examined in relation to whether or not participants were re-arrested in the 2 years following DTC entry. These analyses include DTC participants who had 24 months of follow-up time post DTC entry. The results are shown in Table 7.

Table 7. Demographic and Criminal Justice History-Related Variables for Re-offenders and Non-offenders During 24 Months after Program Participation

	Non- Offenders N = 23	Offenders N = 10	Significantly Different? ²⁰ ($p < .05$)
Gender			
Female	35%	50%	No
Ethnicity			
Non-Caucasian ²¹	4%	10%	No
Mean age in years, at start date	31	35	No
Employed at start date	44%	40%	No
Education level at start date			
Less than high school	39%	40%	No
Mean length of stay in DTC in days	478	421	No
Mean number of days at risk for re-offending during 24 months post program entry	522	571	No
Mean number of days incarcerated (jail and/or prison) during the 24 months post program entry	209	160	No
Jail sanctions imposed during the program	70%	70%	No
Other sanctions imposed during the program	78%	70%	No
Received vocational training during the program	26%	30%	No
Attended AA/NA groups during the program	78%	70%	No

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

²¹All non-Caucasian, non-graduates are African American; one graduate is African American and one is listed as “other” in the program data.

	Non- Offenders N = 23	Offenders N = 10	Significantly Different? ($p < .05$)
Average number of AA/NA groups attended during the program	48	27	No
Average number of <u>total lifetime</u> arrests prior to the arrest leading to program participation	4.13	5.00	No
Average number of <u>total</u> arrests in the 2 years prior to the arrest leading to program participation	1.78	1.60	No
Average number of <u>drug</u> arrests in the 2 years prior to the arrest leading to program participation	.91	.50	No
Average number of <u>property</u> arrests in the 2 years prior to the arrest leading to program participation	.74	.70	No
Average number of <u>person</u> arrests in the 2 years prior to the arrest leading to program participation	.26	.30	No

As shown in Table 7, none of the characteristics analyzed significantly distinguished the DTC participants who re-offended during the 24 months after program entry from those participants who had no new arrests. In addition, when these factors were entered into a logistic regression model, and each variable was controlled for, there was no factor that significantly predicted recidivism above and beyond the other characteristics. However, it is very likely that differences in some areas (such as time at risk, or number of AA/NA sessions attended during the program, where the averages look fairly different) did not emerge due to the small numbers of participants in these two groups (10 offenders and 23 non-offenders).

OUTCOME SUMMARY

Overall, outcomes for DTC participants are quite positive. After participation in the program, regardless of whether they graduate, DTC participants had fewer positive drug tests by 12 months after program participation and were re-arrested on drug charges less often than the comparison group of similar individuals who did not participate, indicating a reduction in drug use due to program participation.

Further, DTC participants had lower recidivism than the comparison group, measured both by the recidivism rate and the average number of re-arrests per person. When the re-arrest rate was examined using a 24-month pre-post model, DTC participants were re-arrested significantly less often after program entry compared to before program entry. Though there was also a significant reduction in the pre-post analysis for the comparison group, the recidivism rate for the DTC group was significantly lower than the comparison group's rate. A pre-post test on the *number* of re-arrests for each group showed a significant reduction in arrests for both drug treatment court par-

ticipants and the comparison group during the post period, but again the average number of re-arrests was significantly lower for the DTC group than the comparison group.

The graduation rate for the program was 43%, but 54% if the participants who entered during the first year of program operations are not included. The graduation rate has increased each year. A majority (75%) of graduates complete the program within the expected 24 months, with an average length of stay of 21 months. Non-graduates, in contrast, have an average length of stay of 11 months.

An examination of the characteristics of those who graduated from the program compared to those who did not graduate showed that DTC graduates had higher rates of attending support groups and receiving vocational training (trend level) and lower rates of receiving jail as a sanction. Graduates had a higher average number of drug arrests prior to program participation (trend level), an indication that this program supports this type of offender well. They also were more likely to be employed (trend level) and were younger (trend level) than the non-graduates. There were no significant predictors of which program participants would end up re-offending, though these results are likely due to the very small number of participants who had 24 months of follow-up data available.

In sum, the results of this study indicate that the DTC program is successful in its main goals of reducing participant drug use and reducing participant recidivism.

COST EVALUATION

The Wicomico County Adult Drug Treatment Court cost evaluation was designed to address the following study questions:

1. How much does the DTC program cost?
2. What is the 24-month cost impact on the criminal justice system of sending offenders through DTC or traditional court processing?
3. What is the impact on the criminal justice system of the time between the eligible arrest and DTC program entry (in terms of arrests and jail)?

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 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 an intuitively appropriate approach to conducting cost assessment in an environment such as a drug treatment court, which involves complex interactions 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 drug treatment 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 Wicomico County Adult Drug Treatment Court. The costs to the justice system (cost-to-taxpayer) in Wicomico County incurred by participants in DTC are compared with the costs incurred by those individuals who were similar to but did not enter DTC. In addition, program costs are calculated in order to determine the per agency costs of the Wicomico County Adult Drug Treatment Court program.

TICA Methodology

The TICA methodology as it has been applied in the analysis of the Wicomico County Adult Drug Treatment Court is based upon six distinct steps. Table 8 lists each of these steps and the tasks involved.

Steps 1 through 3 were performed through analysis of court and DTC 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 DTC and non-DTC 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 drug treatment 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 drug treatment 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 drug treatment court program costs consist of those due to new criminal arrests, court cases, probation time, jail time, and prison time. Program costs include drug treatment court sessions, case management, outpatient group and individual treatment sessions, intensive outpatient treatment, detoxification, residential treatment, alcohol monitoring, drug tests, transitional housing, jail sanctions, and electronic monitoring.

Table 8. 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 drug treatment 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. Drug treatment 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 drug treatment 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, drug treatment 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 Wicomico County Adult Drug Treatment 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 drug treatment court sessions, case management, outpatient group and individual treatment sessions, intensive outpatient treatment, detoxification, residential treatment, alcohol monitoring, drug tests, transitional housing, jail sanctions, and electronic monitoring. 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 DTC program cost?

Program Transactions

A ***Drug Treatment Court Session***, for the majority of drug treatment courts, is one of the most staff and resource intensive program transactions. In the Wicomico County Adult Drug Treatment Court, these sessions include representatives from:

- Maryland Circuit Court in Wicomico County (Judge, Court Clerk, Resource Manager and Drug Treatment Court Coordinator);
- Wicomico County State's Attorney's Office (State's Attorney);
- Maryland Office of the Public Defender (Public Defender);
- Maryland Division of Parole and Probation (Community Services Coordinator and Probation Agent);
- Wicomico County Health Department and Worcester County Health Department (Addiction Counselors);
- Wicomico County Department of Corrections (Classifications Counselor);
- Wicomico County Sheriff's Office (Deputy);
- Salisbury City Police Department (Lieutenant);
- City of Fruitland Police Department (Corporal).

The cost of a ***Drug Treatment 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 DTC session. This estimate includes the direct costs of each DTC 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 DTC appearance is **\$269.55** 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.²² The agencies involved in case management for the Wicomico County DTC

²² Case management includes meeting with participants, phone calls, referring out for other help, answering questions, reviewing referrals, consulting, making community service connections, assessments, documentation, file maintenance, and residential referrals.

program are the Circuit Court, Wicomico County Sheriff's Office, Maryland Division of Parole and Probation, Wicomico County Department of Corrections, Wicomico County Health Department, and Worcester County Health Department—Center for a Clean Start.²³ The daily cost of case management in this program is **\$11.05** per participant.

Drug Treatment Sessions are provided by the Wicomico County Health Department and the Worcester County Health Department—Center for a Clean Start. Both agencies offer outpatient individual and group treatment, as well as intensive outpatient drug treatment. About 87% of program participants attend treatment sessions at Wicomico County Health Department while 11% of program participants attend Center for a Clean Start. Individual sessions at the Wicomico County Health Department cost \$121.89 per participant per session and \$80.00 per participant per session at Center for a Clean Start. The average combined cost of individual treatment sessions per participant is **\$100.95**. For group sessions, the cost is \$41.56 per person per session in Wicomico and \$39.00 per person per session at Center for a Clean Start. The average combined cost for group sessions is \$40.28 per person per session. Intensive outpatient treatment (IOP) is \$125.00 per participant per day at both agencies.

Drug Tests performed by the Wicomico County Health Department, Worcester County Health Department—Center for a Clean Start, and Division of Parole and Probation are paid for by program participants. Drug tests are also performed by Wicomico County Department of Corrections (DOC) and Peninsula Addiction Services. The cost per DOC urinalysis (UA) test is \$10.67 and the cost per Peninsula Addictions UA is \$25.00, for a combined weighted average cost of **\$12.51** per UA test. The costs associated with UA tests performed at DOC and Peninsula Addictions are currently covered by a grant from the Maryland Office of Problem Solving Courts (OPSC). The Sheriff's Office, DOC, Health Department, and various local police departments all conduct breathalyzer tests upon request, but because these tests are rarely used and the cost is negligible, they were not included in this cost analysis. The Circuit Court uses SCRAM alcohol monitoring bracelets at a cost of **\$5.30** per day per participant. This cost is also currently covered by the OPSC grant.

Residential Treatment, Detoxification, and Transitional Housing are provided by multiple agencies. Transitional housing services are provided by Witness House of Hope, Joseph House Workshop, Linda's House, Oxford House, and Prison Ministries. Costs for these services range from \$10.00 to \$17.85 per participant per day. Participants are responsible for this cost, so it was not included in the cost analysis. Detoxification days are covered by Wicomico County Health Department and cost **\$250.00** per participant per day. The cost of residential care is an average of **\$205.00** per participant per day.²⁴

Jail Sanctions are provided by the DOC at the Wicomico County Detention Center at a rate of **\$66.75** per day. This rate was calculated by a representative of the DOC by dividing the Detention Center budget by the average daily inmate population. **Electronic Monitoring** is also provided by the DOC at a rate of **\$7.50** per day.

²³ Three DTC participants who were pregnant or post-partum received treatment services from neighboring county, Worcester County, rather than Wicomico County, through a special program offered there.

²⁴ The Office of Problem-Solving Courts has an intergovernmental MOU with Maryland Alcohol and Drug Abuse Administration (ADAA) to pay for treatment services for drug court participants. The funds are provided directly to the treatment provider/health department as needed. Clients then have treatment available, but there may still be a fee (e.g., sliding fee scale) for them to obtain services.

Program Costs

Table 9 provides the unit cost per transaction, the average number of DTC 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. Table 9 includes the average for DTC graduates (n = 16) and for all DTC participants (n = 37), regardless of completion status. 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.

Table 9. Average DTC Program Costs per Participant

Transaction	Transaction unit cost	Average number of transactions per DTC graduate	Average cost per DTC graduate N = 16	Average number of transactions per DTC participant	Average cost per DTC participant N = 37
Drug Treatment Court Appearances	\$269.55	33.44	\$9,014	24.43	\$6,585
Case Management	\$11.05	634.06 Days ²⁵	\$7,006	470.19 Days	\$5,196
Outpatient Individual Treatment Sessions	\$100.95	15.67	\$1,582	9.98	\$1,007
Outpatient Group Treatment Sessions	\$40.28	87.52	\$3,525	60.25	\$2,427
Intensive Outpatient Treatment Days	\$125.00	111.50	\$13,938	92.27	\$11,534
Residential Treatment Days	\$205.00	2.19	\$449	21.00	\$4,305
Detoxification Days	\$250.00	0.00	\$0	1.05	\$263
Urinalysis Tests	\$12.51	170.50	\$2,133	108.27	\$1,354
SCRAM Bracelet Days	\$5.30	3.81	\$20	2.19	\$12
Jail Sanctions	\$66.75	0.69	\$46	1.43	\$95
Electronic Monitoring	\$7.50	43.00	\$323	30.24	\$227
Total DTC			\$38,036		\$33,005²⁶

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

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

²⁶ DTC participants are required to make repayments to the Division of Parole and Probation, as well as pay court costs and fines. NPC was unable to acquire specific cost data on actual payments made, so these costs were not included in the analysis. Because non-DTC offenders do not pay these fees, DTC costs are likely lower than those shown in this report.

On average, the total program cost per participant in DTC is **\$33,005**. Note that the most expensive area of cost for the program is drug treatment (\$19,536), mostly due to a large cost for intensive outpatient treatment. This result is commensurate with the drug treatment court model, which emphasizes frequent and intensive drug treatment. The next highest cost is for drug treatment court appearances (\$6,585), followed by case management (\$5,196).

Program Costs per Agency

Another useful way to examine program costs is by agency. Table 10 shows the DTC program cost per participant by agency.

Table 10. Average DTC Cost per Participant by Agency

Agency	Average Cost per DTC Graduate N = 16	Average Cost per DTC Participant N = 37
Wicomico County Circuit Court	\$5,886	\$4,326
Wicomico County State’s Attorney’s Office	\$549	\$401
Wicomico County Sheriff’s Office	\$417	\$307
Wicomico County Health Department	\$20,009	\$15,824
Worcester County Health Department	\$4,560	\$3,475
Wicomico County Department of Corrections	\$1,650	\$1,270
Law Enforcement ²⁷	\$312	\$228
Maryland Division of Parole and Probation	\$1,311	\$963
Maryland Office of the Public Defender	\$738	\$540
Maryland Office of Problem Solving Courts	\$2,602	\$5,671
Total²⁸	\$38,034	\$33,005

Because the Wicomico County Health Department provides case management and drug treatment to DTC participants and its counselors attend drug treatment court sessions, the Health Department shoulders 48% of the total DTC program costs. Due to its support of residential treatment and drug testing, the OPSC incurs the next largest expense for the DTC (\$5,671), followed by the Circuit Court (\$4,326).

The other agencies involved in the DTC program (State’s Attorney’s Office, Office of Public Defender, Division of Parole and Probation, Law Enforcement, DOC, Worcester County Health Department, and Sheriff’s Office) incur their costs primarily through staff attendance at Wicomico County DTC sessions, case management, jail sanctions, or electronic monitoring.

²⁷ Law Enforcement includes the Salisbury City Police Department and the City of Fruitland Police Department.

²⁸ The total for graduates in this row does not match the totals in the outcome costs by transaction table due to rounding.

Local Versus State Costs for the DTC Program

State policy leaders and administrators may find it useful to examine programs costs by jurisdiction (state or local/county). The majority of DTC program costs accrue to Wicomico County. The local portion is 78% of total program costs per participant, or \$25,774. The State of Maryland portion of total program costs is 22% or \$7,231 per participant, mainly due to the OPSC's support of residential treatment and drug testing.

COST EVALUATION QUESTION #2: OUTCOME/RECIDIVISM COSTS

What is the 24-month cost impact on the criminal justice system of sending offenders through DTC 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 DTC 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.

Outcome Cost Data

The outcome statistics reflect data through April 2009. There were 121 individuals who had at least 24 months of available outcome data (33 DTC participants and 88 comparison group members). This follow-up period was selected to allow a large enough group of both DTC and comparison individuals to be included, as well as 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 DTC 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 DTC 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, these costs represent the majority of system costs. Outcome costs were calculated using information from the Wicomico County District Court, the Wicomico County Circuit Court, the Wicomico County State's Attorney's Office, the Maryland Office of the Public Defender, the Wicomico County Sheriff's Office, the Wicomico County Department of Corrections, the Maryland Department of Public Safety & Correctional Services, the City of Fruitland Police Department, the Salisbury City Police Department, the Maryland Division of Parole and Probation.

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 Wicomico County are conducted by multiple law enforcement agencies. An average of the Maryland State Police, Wicomico County Sheriff’s Office, City of Fruitland Police Department, and Salisbury City Police Department was used for this outcome cost analysis, using information provided by representatives of each of the law enforcement agencies. The average cost of a single arrest conducted by these agencies is **\$241.21**.

Court Cases include all court cases, including those cases that are reviewed and rejected by the Wicomico 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 Wicomico County District Court, Wicomico County Circuit Court, Wicomico County State’s Attorney’s Office, and the Maryland Office of the Public Defender. The average cost of a Circuit Court case is **\$2,315.85**. The average cost of a District Court case is **\$1,341.08**.

Probation Days are provided by the Maryland Division of Parole and Probation. The average cost of supervision is **\$4.09** per person per day. This information was provided to NPC by a representative of the Division of Parole and Probation.

Jail Days are provided by the DOC at the Wicomico County Detention Center at a rate of **\$66.75** per day. This rate was calculated by a representative of the DOC by dividing the Detention Center budget by the average daily inmate population.

Prison Days are provided by the Maryland Department of Public Safety & Correctional Services. A representative of the Department provided NPC with the cost of prison. The rate is **\$85.15** per person per day.

Outcomes and Outcome Cost Consequences

Table 11 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 Wicomico County DTC graduates, all participants (both graduates and non-graduates combined), and the comparison group for 24 months after entry date (or equivalent date).

Table 11. Average Number of Outcome Transactions by Group Over 24 Months

Transaction	DTC Graduates N = 12	All DTC Participants N = 33	Comparison Group N = 88
Arrests	0.17	0.43	0.81
Circuit Court Cases	0.00	0.10	0.28
District Court Cases	0.08	0.36	0.72
Probation Days	234.17	482.31	431.65
Jail Days ²⁹	57.00	145.56	86.32
Prison Days	0.00	66.64	110.27

²⁹ Some of these jail days reflect commitment to long-term residential treatment (Health General and RSAT). The DTC program keeps participants in the program even if they are sent to these other settings, even though during that time they are not receiving standard DTC services, so that they can return to the DTC program upon release from the treatment programs.

As can be seen in this table, DTC participants have fewer re-arrests, Circuit Court cases, District Court cases, and prison days than members of the comparison group. However, even with fewer arrests and court cases, DTC participants show a higher rate of probation days and jail days than the comparison group. It is possible that the higher average number of probation and jail days for DTC participants are due to participants who did not graduate from the program and received longer probation and/or jail sentences than offenders who never participated in the DTC. It is also possible that the crimes for which DTC participants were rearrested were for lower-level offenses that required lesser levels of punishment, as seen by more probation and jail days than comparison group members, but fewer prison days. Graduates of the DTC had smaller numbers than all DTC participants and comparison group members across every transaction. These results illustrate that participation in DTC is associated with less severe criminal recidivism activity.

Outcome Cost Results

Table 12 provides the costs associated with the outcomes for all DTC participants, DTC graduates, and the comparison group.

Table 12. Criminal Justice System Outcome Costs by Group Over 24 Months

Transaction	Transaction Unit Cost	DTC Graduates N = 12	All DTC Participants N = 33	Comparison Group N = 88
Arrests	\$241.21	\$41	\$104	\$195
Circuit Court Cases	\$2,315.85	\$0	\$232	\$648
District Court Cases	\$1,341.08	\$107	\$483	\$966
Probation Days	\$4.09	\$958	\$1,973	\$1,765
Jail Days	\$66.75	\$3,805	\$9,716	\$5,762
Prison Days	\$85.15	\$0	\$5,674	\$9,389
Total		\$4,911	\$18,182	\$18,725

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

Table 12 reveals that DTC participants cost less for every transaction except probation days and jail days, due to less severe criminal justice recidivism. The cost for jail is by far the most expensive transaction for DTC participants. The most expensive transaction for comparison group members is prison. In effect, the jail and prison costs for DTC participants and comparison group members are reversed (\$9,716 in jail costs and \$5,764 in prison costs for DTC participants, and \$5,762 in jail costs and \$9,389 in prison costs for comparison group members). If the use of jail had been less for the DTC participants (and especially the DTC participants who did not successfully graduate), the overall cost savings due to program participation would have been substantially greater. The total average cost savings after 24 months is **\$543** per DTC participant, combining graduates and non-graduates.

It is worth looking at the DTC graduates, since these individuals had substantially greater cost savings. Graduates can be viewed from an epidemiological perspective, as the group that has 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 \$13,814 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 (see Table 13).

Table 13. Criminal Justice System Outcome Costs by Agency & Group Over 24 Months

Jurisdiction/Agency	DTC Graduates N = 12	All DTC Participants N = 33	Comparison Group N = 88	Difference (Benefit)
Wicomico County Circuit Court	\$0	\$44	\$123	\$79
Wicomico County District Court	\$47	\$210	\$420	\$210
Wicomico County State’s Attorney’s Office	\$29	\$208	\$476	\$268
Wicomico County Department of Corrections	\$3,805	\$9,716	\$5,762	-\$3,954
Law Enforcement ³⁰	\$41	\$104	\$195	\$91
Maryland Office of the Public Defender	\$31	\$253	\$595	\$342
Maryland Division of Parole and Probation	\$958	\$1,973	\$1,765	-\$208
Maryland Department of Public Safety and Correctional Services	\$0	\$5,674	\$9,389	\$3,715
Total³¹	\$4,911	\$18,182	\$18,725	\$543

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

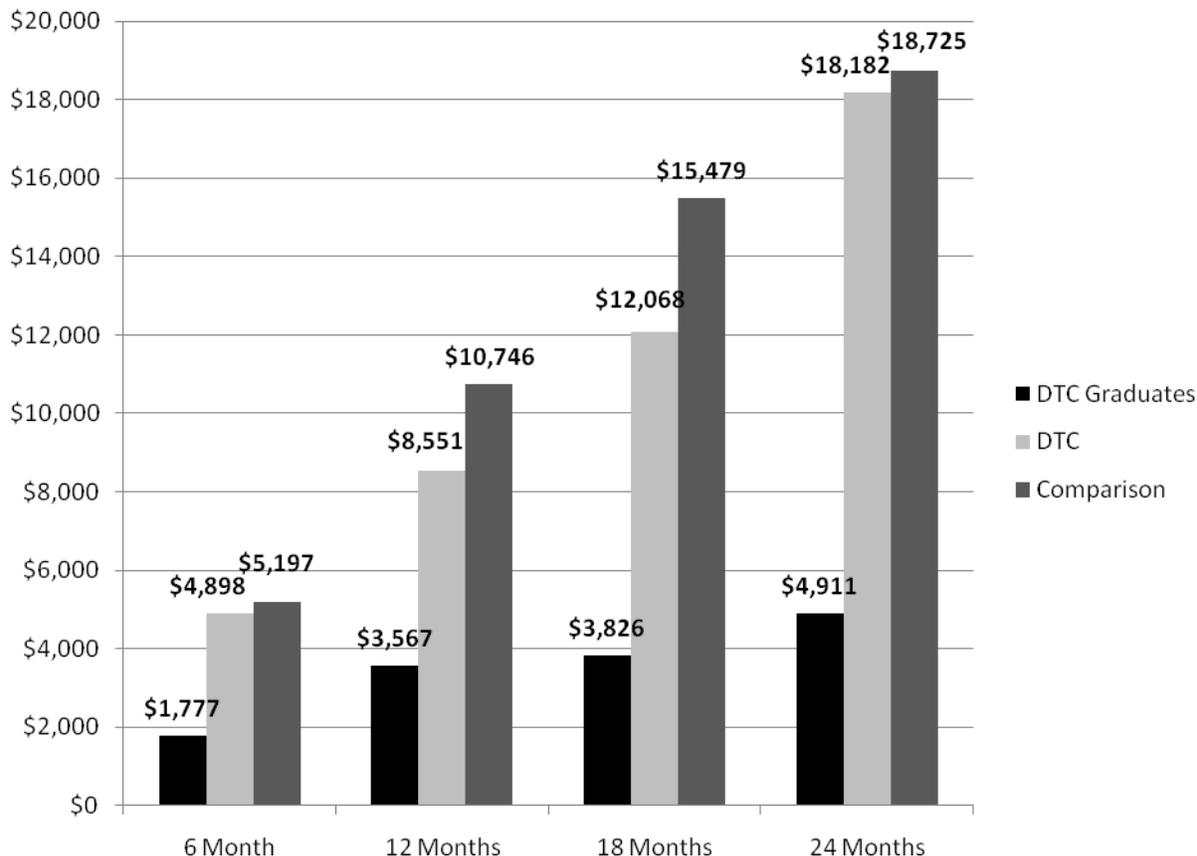
Similar to many of the drug treatment court studies in which NPC has been involved, greater outcome savings associated with DTC participants accrue to some agencies more than others. The Circuit Court, District Court, State’s Attorney, Public Defender, Law Enforcement, and Department of Public Safety & Correctional Services all show cost savings, but the Division of Parole and Probation and County Department of Corrections do not. The largest savings accrues to the Department of Public Safety & Correctional Services, due to the decreased prison time for DTC participants. The greatest outcome cost loss was shown for the Wicomico County Department of Corrections, due to more jail days for DTC participants than for comparison group individuals.

Figure 7 displays a graph of the cumulative outcome costs over the 24 months post-DTC entry (or equivalent). 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 Law Enforcement includes the 4 major agencies that make arrests in Wicomico County—the Maryland State Police, the Wicomico County Sheriff’s Office, the Salisbury City Police Department, and the City of Fruitland Police Department.

³¹ Totals in this row may not match the totals in the outcome costs by transaction table due to rounding.

Figure 7. Criminal Justice Recidivism Cost Consequences per Person by Group Over 24 Months



COST EVALUATION QUESTION #3: COST OF TIME BETWEEN ARREST AND DTC PROGRAM ENTRY

What is the impact on the criminal justice system of the time between the eligible arrest and DTC program entry (in terms of arrests and detention)?

Key Component #3 of the Key Components of Drug Courts is about identifying eligible individuals quickly and promptly placing them in the drug treatment court program. A shorter time between arrest and program entry helps ensure prompt treatment while also placing the offender in a highly supervised, community-based environment where he or she is less likely to be re-arrested and therefore less likely to be using other individual criminal justice resources. The longer the time between arrest and program entry, the greater the opportunity for offenders to re-offend before entering treatment. This gap leads to the question, what is the impact in terms of re-arrests and detention in the time between arrest and entry into the DTC program for participants? These two areas were selected to highlight this question because detention is the primary cost incurred by the program and arrests are representative of the public safety impact of individuals in the community committing additional crimes.

The DTC program does not have jurisdiction over offenders until they are admitted to the program. However, many of the team members represent key agencies that are involved with prospective and future participants prior to program entry. The costs associated with the period of

time between arrest and program entry are included here to illustrate the potential cost impact of this gap and the potential benefit of minimizing the time between these two key events. Team members may be able to address Key Component #3 and the pre-program time period as part of a community-level discussion, bringing this information back to key decision-makers in their respective agencies to find possible shared solutions.

This section describes the criminal justice costs for arrests and detention experienced by DTC participants between the time of the DTC eligible arrest and DTC program entry. Both transactions were described in the outcome costs section above. Costs were calculated from the time of the program eligible arrest to program entry (an average of 310 days for DTC participants). This long time period most likely reflects the limitations of a post-conviction program and/or the referral paths for participants into the drug treatment court (e.g., violations of probation rather than new arrests).

Costs Between Arrest and DTC Entry

Table 14 represents the costs of re-arrests and detention time per person for all DTC participants (graduates and non-graduates combined) from the program eligible arrest to program entry.

Table 14. Arrest and Jail Costs per DTC Participant From Arrest to Program Entry

Transaction	Transaction Unit Cost	Average Number of Transactions per DTC Participant	Average Cost per DTC Participant N = 48
Arrests	\$241.21	.17	\$41
Jail Days	\$66.75	101.96	\$6,806
Total			\$6,847

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

As can be seen in Table 14, there are substantial costs accruing to the individual justice system from the time of the DTC eligible arrest through entry into the DTC program (\$6,847 for all DTC participants). It should be noted that these costs only include arrests and jail time during the time from the DTC eligible arrest to entry into the DTC (an average of 310 days). Other criminal justice costs, such as court cases and probation days are also most likely accruing. These costs emphasize that the sooner the DTC admits offenders into the program, the more criminal justice system costs can be minimized.

COST SUMMARY

Overall, the DTC results in cost savings and a small return on taxpayer investment in the program. The program investment costs are \$33,005 per DTC participant. When program costs are divided by the average number of days in the program, the cost per day per participant for the DTC program is \$70.20.

The cost due to recidivism over 24 months from program entry was \$18,182 per DTC participant compared to \$18,725 per comparison individual, resulting in a savings of \$543 per participant (including both graduates and non-graduates). The majority of the cost in outcomes for DTC participants over the 24 months from DTC entry was due to time in jail (\$9,716), mostly for participants who were unsuccessful in completing the program.

DISCUSSION AND RECOMMENDATIONS

This study of the Wicomico County Adult Drug Treatment Court program shows preliminary outcomes that are very positive for drug treatment court participants, compared to individuals who had similar demographic characteristics and criminal histories but who did not participate in DTC. The DTC program is demonstrating that participants benefit from reductions in substance use and recidivism. Some of the outcome study results were not statistically significant, due to small numbers in both DTC and comparison groups for the follow-up periods of interest. However, most of the data show that the patterns are in a positive direction, and future studies will be able to test if these patterns remain with additional program participants.

This program has a very large duration of time (almost a year) between the arrest that makes the participant eligible for drug treatment court and her/his program entry date. Key Component #3 urges programs to establish systems for identifying prospective participants early and paving a smooth path into the program. Even in post-conviction programs, creative collaborations between partner agencies can reduce this time period and/or encourage participants who need treatment services to begin them even pre-adjudication. It is important to capitalize on opportunities for intervention when a person has a crisis point (such as an arrest) which may create a window of greater motivation for change.

The pattern of percents of participants with positive UA tests was somewhat erratic (rising and lowering) but from 1 month to 12 months after program entry showed an overall significant decline. It is possible that these patterns indicate difficulties with transitions between phases (from phase 1 to 2 and from 2 to 3) and that the program may want to pay special attention to increasing support at those times, or helping prepare the participants for these transitions. It also could reflect differences in drug testing patterns, where some use may not be identified in some months, providing artificially low rates of positive tests. It will be important for the program to look at their testing procedures and ensure that participants are unable to use without detection.

An important discussion for program staff to engage in is the distinction between substance use that represents a treatment need [e.g., using substances as a coping mechanism because the individual has not learned healthier tools], which requires increased treatment and other supports, from substance use as an acting-out or rebellious behavior [e.g., partying with friends because the individual thinks he or she can get away with it] that are best addressed with incentives and sanctions.

This program may also want to review the services available for participating individuals, to make sure that the intensity of services matches the need as indicated by the substance abuse assessment and criminogenic risk assessment. In addition, the program should ensure that all individuals have access to aftercare and transitional services, to maximize their chance for success after the end of treatment and program participation.

The outcome costs attributed to DTC participants are slightly lower than the comparison group members, on average (though graduates per person cost the system substantially less than the average comparison group member). The main cost that drives the difference between program and comparison groups is time spent in jail. The program may want to assess participants' high number of jail days, and discuss whether there are alternatives that could be utilized with equivalent effectiveness.

In addition, this program had not yet reached capacity during the study period. Once the program is running at capacity, it may benefit from an economy of scale, where the static program expenses (such as the cost of some team members) can be shared among a larger number of participants, decreasing the cost per participant.

The program is encouraged to continue maintaining detailed program data, to use for assessing program functioning and informing policy discussions. For example, data on incentives and sanctions could be used to ensure that the program's ratio of incentives to sanctions used is following behavior modification standards (use of more incentives than sanctions).

Overall, the results of this study demonstrate that the Wicomico County Adult Drug Treatment Court is having a positive impact, even in this early cohort of participants. A review of program policies and practices will benefit the program as it continues to serve very high-risk and high-need individuals in the future.

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.
- Crumpton, D., Brekhus, J., Weller, J. M., & Finigan, M. W. (2004a). *Cost analysis of Anne Arundel County, Maryland Drug Treatment Court*. Report to the State of Maryland Judiciary, Administrative Office of the Courts and Baltimore Substance Abuse Systems, Inc.
- Crumpton, D., Brekhus, J., Weller, J. M., & Finigan, M. W. (2004b). *Cost analysis of Baltimore City, Maryland Drug Treatment Court*. Report to the State of Maryland Judiciary, Administrative Office of the Courts and Baltimore Substance Abuse Systems, Inc.
- 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.npresearch.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, Drug court history. On-line at: <http://www.nadcp.org/learn/what-are-drug-courts/history>. Retrieved October 2009.