

Baltimore City Circuit Court Adult Drug Treatment Court and Felony Diversion Initiative: Outcome and Cost Evaluation *Final Report*



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NPC Research

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Informing policy, improving programs

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EXECUTIVE SUMMARY

In the past 20 years, one of the strongest movements in the United States focused on reducing substance abuse among the criminal justice population has been the spread of drug courts across the country. Drug courts are designed to guide offenders identified as drug-addicted into treatment that will reduce drug dependence and improve the quality of life for offenders and their families. Drug court programs are a collaborative process between multiple agencies including the court, prosecutor, defense attorney, probation, law enforcement, and treatment agencies. Benefits to society take the form of reductions in crime committed by drug court participants, resulting in reduced costs to taxpayers and increased public safety.

The first drug courts in Maryland were the Baltimore City District & Circuit Court Adult Drug Treatment Courts (DTC), implemented in 1994. These programs were established with the goal of identifying people with a substance abuse addiction and offering them a program with treatment rather than incarceration. The District Court program was started first and focuses on misdemeanor cases; the Circuit Court began a program for felony cases later the same year. In 2003, the Circuit Court began its Felony Diversion Initiative (FDI). This program was also envisioned as an alternative to incarceration for nonviolent felony offenders with drug problems. This program added assessment personnel at the court and developed agreements with partner agencies to significantly reduce the time between arrest and treatment entry. Participants in both DTC and FDI programs are supervised by Maryland Department of Public Safety & Correctional Services, Division of Parole and Probation (DPSCS). The full report details the two programs, including the key differences between them.

This evaluation was designed to answer key policy questions that are of interest to program practitioners, policymakers and researchers including:

- Do the Baltimore City Circuit Court programs reduce recidivism?
- Is there a cost-savings to the taxpayer due to participation in these programs?

Methods

Outcome Evaluation. The outcome analyses were based on a cohort of Baltimore City Circuit Court (BCCC) defendants who entered either the DTC or FDI program from April 1, 2004, through June 30, 2007, and a comparison group of offenders eligible for these programs but who received traditional court processing. Participants and comparison group members were tracked through administrative criminal justice and treatment databases for up to 48 months post drug court entry. Each program group and its comparison group were matched on age, gender, race/ethnicity, prior criminal history and indications of drug use. Outcomes analyzed included criminal justice recidivism over 4 years post program entry, reductions in drug use, graduation rate and participant characteristics that led to successful program completion.

Cost Evaluation. A *cost-benefit* evaluation calculates the cost of the program and also the cost of the outcomes, resulting in a cost-benefit ratio. For example, the cost of the program is compared to the cost-savings due to the reduction in re-arrests. The approach utilized by NPC Research 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 from multiple agencies. Transactions are those points within a system where resources are consumed and/or change hands. In addition, the TICA approach recognizes that these transactions take place within multiple organizations and institu-

tions that work together to create the program of interest. Finally, in order to maximize the study’s benefit to policymakers, a “cost-to-taxpayer” approach was used for this evaluation.

Results

Question #1: Does the BCCC reduce recidivism? How do rates of recidivism compare between the DTC and FDI?

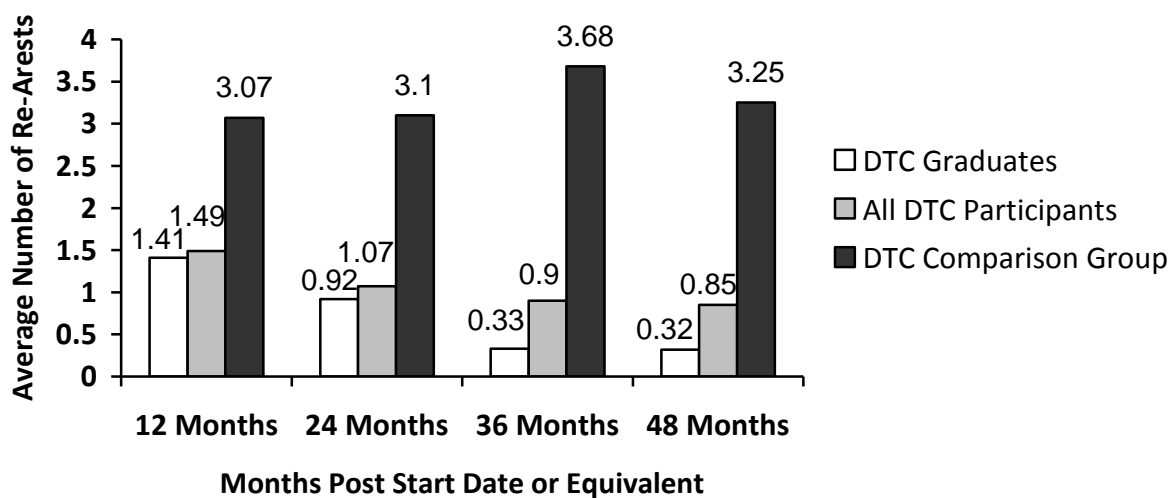
The results of the outcome analyses for the Baltimore City Circuit Court DTC and FDI programs were mixed.

DTC: At **36 months** after program entry, the DTC program group had **fewer cumulative new arrests** than the DTC comparison group. However, the differences in the other 3 years were not significant. **When adjusting for the time each participant was in the community (that is, not in prison or jail), DTC participants had fewer cumulative new arrests at all time points.** DTC participants had more Circuit Court cases at the 12 month follow-up point, more days in jail at all time points, and fewer prison days at all time points, than the comparison group.

FDI: FDI participants were re-arrested significantly less often than the FDI comparison group at **12 months**, though the differences were not significant at the rest of the time periods, probably because of the small number of participants who had available recidivism data at periods beyond 1 year. However, when adjusting for time in the community (not in prison or jail), the FDI group did not have significantly different re-arrest rates than the comparison group at any time point. **FDI participants had fewer prison days at 12 months than the comparison group.**

DTC and FDI Compared: FDI participants had significantly fewer arrests by 12 months than DTC participants, though they also spend more time in inpatient treatment during their first year. When adjusting for time in the community, DTC participants had fewer new arrests at 36 months than the FDI group.

Figure A. Average Number of Cumulative Re-Arrests Adjusted for Time at Risk¹ for DTC Graduates, All DTC Participants, and the DTC Comparison Group Over 48 Months



¹ Time at risk is calculated as the number of days that the individual was in the community and not in jail or prison; that is, the amount of “opportunity” he/she had to re-offend.

Figure B. Average Number of Cumulative Re-Arrests Adjusted for Time at Risk for FDI Graduates, All FDI Participants, and the FDI Comparison Group Over 48 Months

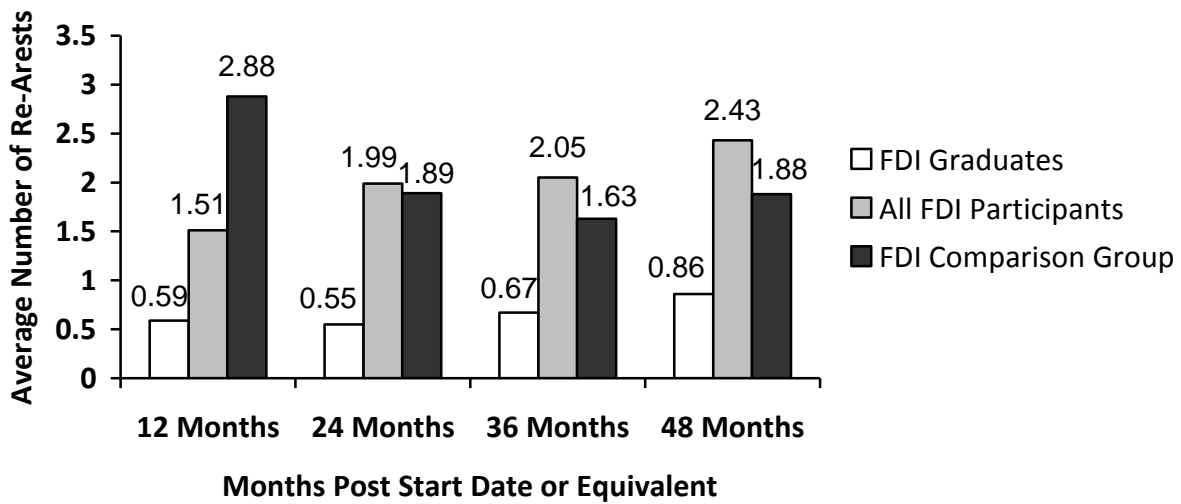
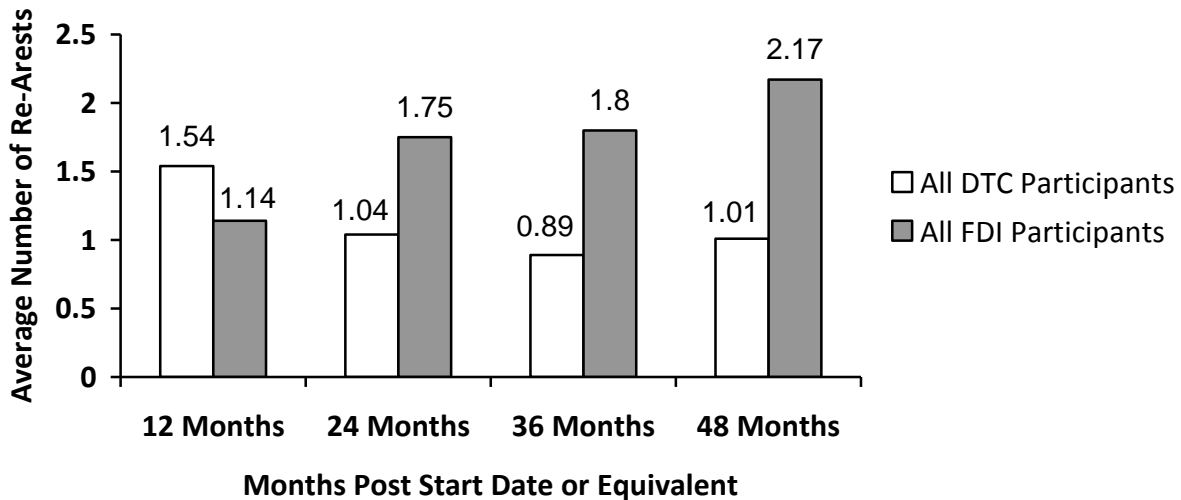


Figure C. Average Number of Cumulative Re-Arrests Adjusted for Time at Risk for All DTC Participants Compared to All FDI Participants Over 48 Months



In addition, the percentage of individuals who re-offended followed similar pattern as the numbers of new arrests:

- Fewer FDI participants than the FDI comparison group had been re-arrested by 12 months post program entry.
- Fewer DTC participants than the DTC comparison group had been re-arrested by 36 months post program entry.
- Fewer FDI than DTC participants has been re-arrested by 12 months, but when adjusting for time at risk, fewer DTC participants had been re-arrested by 36 months.
- Neither DTC nor FDI participants had significantly fewer charges of any particular type than the respective comparison groups at 48 months.

- DTC participants at more days in jail, but fewer days in prison, at all follow-up time points than the DTC comparison group.
- DTC participants had more new Circuit Court cases at 12 months than the DTC comparison group.
- FDI participants had fewer prison days at 12 months than the FDI comparison group.

Question #2: Does participation in DTC or FDI reduce levels of substance abuse in terms of subsequent drug arrests?

DTC participants with 4 years of follow-up time had more re-arrests with drug charges than the comparison group by 48 months after program entry. This result was true both cumulatively (total over the 48 months) and in the 4th year after program entry. FDI participants did slightly better, with a marginally significant difference in the 3rd year after program entry. In that year, FDI participants had slightly fewer drug arrests than the FDI comparison group.

Question #3: How successful are the programs in bringing participants to completion and graduation?

For these cohorts, **39% of DTC** drug court program participants (188 of 298) and **54% of FDI** program participants (46 of 85) completed their program successfully. For DTC, their graduation rate is lower than the national average of 50% (Cooper, 2003), while the FDI graduation rate is slightly higher than the national average.

The **average length of stay for all DTC participants** (n = 486) was **687 days (approximately 22 ½ months)**.

The **average length of stay for all FDI participants** (n = 85) was **887 days (approximately 29 months)**.

Interestingly, the DTC program lengths of stay are equal for the graduates and non-graduates, while the difference between these FDI graduates and non-graduates is substantial (8 months longer for graduates).

83% of DTC graduates met the expected minimum program duration of 18 months.

72% of FDI graduates met the expected minimum duration of 30 months.

These results show that the DTC and FDI programs are about on target with their intended length of stay for drug court participants.

Question #4: What factors are related to graduation and recidivism?

Program success:

- DTC graduates were older and had fewer total prior arrests in the 5 years before program participation than non-graduates
- FDI graduates spent longer in the program and had fewer total prior arrests in the 5 years before program participation than non-graduates
- Comparing FDI and DTC: FDI graduates were more likely to be women, were younger, had a longer program stay, and had fewer total prior arrests (including drug arrests) in the 5 years before program participation than the DTC graduates.

Recidivism:

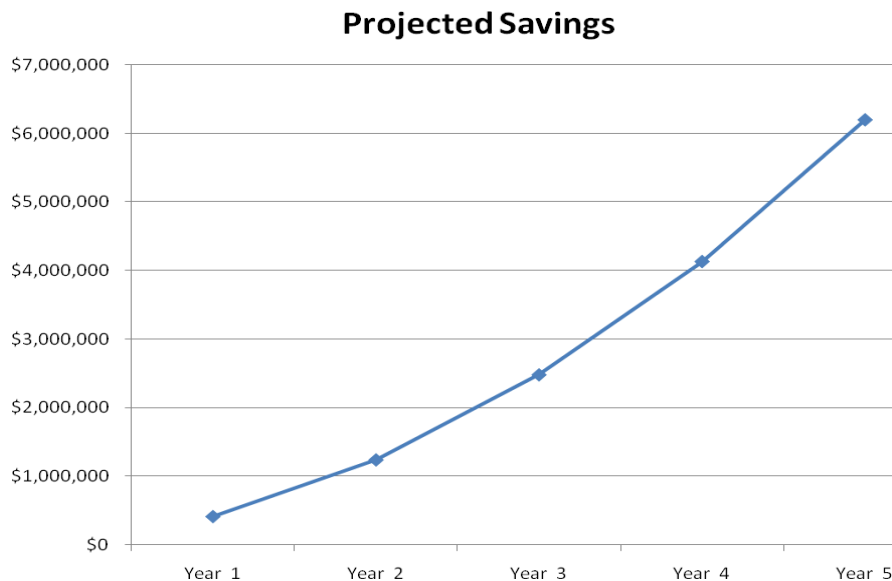
- DTC participants who remained in the program longer and who subsequently did not graduate had higher recidivism rates.
- No characteristic strongly predicted re-offending for the FDI group, though non-graduates tended to have higher recidivism.

Question #5: How much do the DTC and FDI programs cost?

- Program participation in DTC costs an average of \$17,991 per person, regardless of completion status (graduates cost an average of \$17,770).
- Program participation in FDI costs an average of \$23,762 per person, regardless of completion status (graduates cost an average of \$25,098).

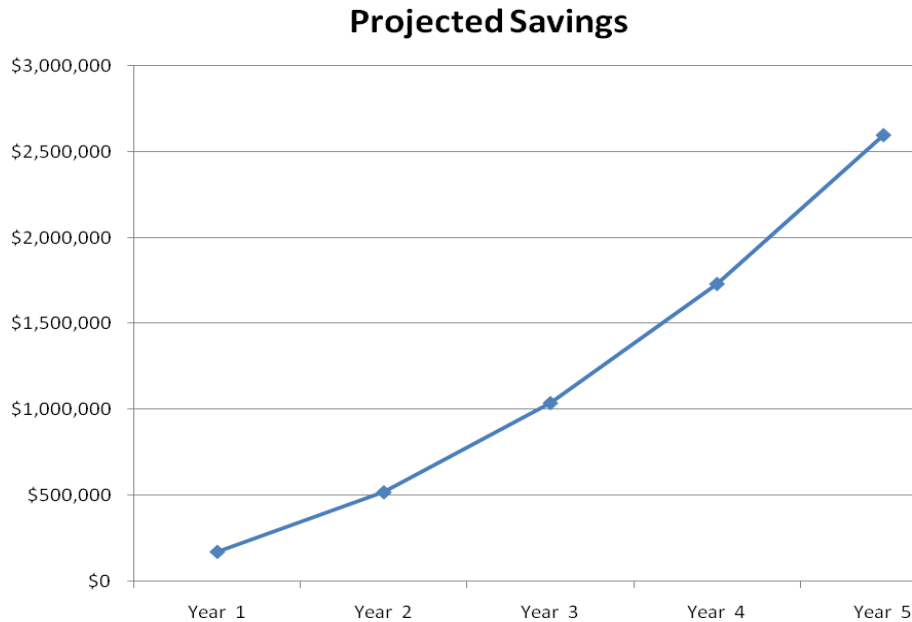
Question #6: What is the 4-year cost impact on the criminal justice system of sending offenders through DTC, FDI, or traditional court processing?

- The DTC program saves an average of **\$3,451 per participant** over 4 years. This savings will continue to grow with the number of participants that enter each year. If the DTC program continues to admit a cohort of **479** participants annually, the savings of \$3,452 per participant over 4 years results in an annual savings of **\$413,377** per cohort, which can then be multiplied by the number of years the program remains in operation and for additional cohorts per year. This accumulation of savings is demonstrated in Figure D. After 5 years, the accumulated savings come to over **\$6 million**.

Figure D. Projected DTC Criminal Justice Cost Savings Over 5 Years

- The FDI program saves an average of **\$5,542 per participant** over 4 years. This savings will continue to grow with the number of participants that enter each year. If the FDI program continues to admit a cohort of **125** participants annually, the savings of \$5,540 per participant over 4 years results in an annual savings of **\$173,125** per cohort, which can then be multiplied by the number of years the program remains in operation and for additional cohorts per year. This accumulation of savings is demonstrated in Figure E. After 5 years, the accumulated savings come to nearly **\$2.6 million**.

Figure E. Projected FDI Criminal Justice Cost Savings Over 5 Years



Question #7: What is the impact on the criminal justice system of the time between the eligible arrest and DTC or FDI program entry (in terms of arrests and jail)?

Looking only at two key costs for the criminal justice system (arrests and jail time), DTC participants cost \$5,913 on average for the period of time between their arrest and program entry (an average of 140 days). FDI participants cost an average of \$4,724 for the 98 days between their arrests and program entry dates. These costs emphasize that the sooner the DTC gets offenders into the program, the more criminal justice system costs can be minimized.

Question #8: What is the cost-benefit ratio of DTC or FDI program involvement?

- After 25 years, the projected cost-benefit ratio for DTC is 1:20. That is, for every dollar (\$1) spent on the program, the taxpayers save \$1.20 in criminal justice system costs.
- After 25 years, the projected cost-benefit ratio for FDI is 1.46. That is, for every dollar (\$1) spent on the program, the taxpayers save \$1.46 in criminal justice system costs.

In sum, the BCCC programs had:

- A 5-year criminal justice system cost savings of **\$3,451 for DTC** participants and **\$5,542 for FDI** participants,
- A projected **120% return on its DTC investment** after 25 years (a 1:1.20 cost benefit ratio), and
- A projected **146% return on its FDI investment** after 25 years (a 1:1.46 cost benefit ratio).

Overall, these results demonstrate that the BCCC programs is effective at achieving important reductions in recidivism and prison usage, resulting in reduced outcome costs to Maryland taxpayers and benefits to participants.

Recommendations

The Baltimore City Circuit Court DTC and FDI programs both have benefits and areas where they could make improvements. Key recommendations for the DTC and FDI programs are listed below and described in more detail in the full report.

1. Have pre-court team meeting (DTC) or team discussions about client progress prior to court progress hearings.
2. Involve treatment providers in review hearings.
3. Work on quicker entry into the programs.
4. Add treatment services for co-occurring disorders.
5. Focus on increasing positive reinforcement and acknowledgement of success.
6. Institute random drug testing (DTC) or increase number of tests per week.
7. Work to increase the drug court graduation rate.
8. Set aside time to discuss the findings and recommendations in this evaluation, both to enjoy the recognition of the team's accomplishments and to determine whether any program adjustments are warranted.

BACKGROUND

The Drug Court Model

In the past 20 years, one of the foremost movements in the United States focused on reducing substance abuse among the criminal justice population has been the spread of drug courts across the country. The first drug court was implemented in Florida in 1989. As of May 2009, there were 2,037 adult and juvenile drug courts active in all 50 states, the District of Columbia, Northern Mariana Islands, Puerto Rico, and Guam, with another 214 being planned (American University, 2009).

Drug 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 take the form of reductions in crime committed by drug court participants, resulting in reduced costs to taxpayers and increased public safety.

In the typical drug court program, participants are closely supervised by a judge who is supported by a team of agency representatives operating outside their traditional roles. The team typically includes a drug court coordinator, substance abuse treatment providers, prosecuting attorneys, defense attorneys, law enforcement officers, and parole and probation officers who work together to provide needed services to drug court participants. Prosecuting attorneys and defense attorneys hold their usual adversarial positions in abeyance to support the treatment and supervision needs of program participants. Drug court programs blend the resources, expertise and interests of a variety of jurisdictions and agencies.

Drug courts have been shown to be effective in reducing recidivism (Government Accounting Office, 2005) and in reducing taxpayer costs due to positive outcomes for drug court participants (including fewer re-arrests, less time in jail and less time in prison) (Carey & Finigan, 2004; Carey, Finigan, Waller, Lucas, & Crumpton, 2005). Some drug courts have even been shown to cost less to operate than processing offenders through traditional “business-as-usual” court processes (Carey & Finigan; Crumpton, Brekhus, Weller, & Finigan, 2004a, 2004b; Carey et al.).

The first drug courts in Maryland were the Baltimore City District & Circuit Court Adult Drug Treatment Courts (DTC), implemented in 1994. These programs were established with the goal of identifying people with a substance abuse addiction and offering them a program with treatment rather than incarceration. The District Court program was started first and focuses on misdemeanor cases; the Circuit Court began a program for felony cases later the same year. Participants in both courts are supervised by Maryland Department of Public Safety & Correctional Services, Division of Parole and Probation (DPSCS).

In 2001, NPC Research, under contract with the Administrative Office of the Courts of the State of Maryland, began cost studies of adult and juvenile drug courts across the state. The results presented in this report include the costs associated with the Baltimore City Circuit Adult Drug Treatment Court (DTC) program and another Baltimore Circuit Court program, Felony Diversion Initiative (FDI), and the outcomes of their participants, compared to sample of similar individuals who received traditional court processing. This study selected a cohort of DTC and FDI participants and followed them for up to 48 months after they started either the DTC or FDI program to examine the extent to which the services impacted their outcomes including re-arrests, jail, probation and prison. Individuals with similar criminal charges and demographic characteristics as the DTC and FDI groups, during the same time period, were identified and

then comparison groups were developed that matched the DTC & FDI groups. The comparison group offenders have never participated in any of Baltimore City's Court programs for adult offenders.

Process Description: Baltimore City Circuit Court Adult Drug Treatment Court and Felony Diversion Initiative

BALTIMORE, MARYLAND

The largest city in the state, Baltimore is situated in central Maryland, approximately 40 miles northeast of Washington, D.C. Baltimore has a population of 636,919 according to the 2008 Census estimate.² The median age for the area is 35 years and the racial/ethnic composition is approximately 64% Black, 31% White, 2% Asian, 1% "some other race" and 1% "two or more races."

According to the 2007 Census estimate, 21% of individuals and 17% of families in Baltimore City were living below poverty level, which is more than twice that of the state of Maryland, (at 8% during the same time period). Data released by the City of Baltimore Health Department indicated that there is a 20-year difference in the life expectancy between some of Baltimore City's poorest and wealthiest neighborhoods (Linskey, 2008). However, according to the health department's most recent report on intoxication deaths associated with drugs of abuse, the number of deaths decreased significantly in 2008; by 50% compared to the third quarter of 2007 (City of Baltimore Health Department, 2009). Baltimore's Commissioner of Health noted that rates this low had not been reported in 13 years. While it is not clear what is causing this decline, the health department speculates that various efforts, including increased access to treatment and coordination with the criminal justice system, may be having a positive impact on the number of drug overdose cases in Baltimore.

The crime rate in Baltimore City is the highest in the state (compared to the other counties) at 6,362.5 per 100,000. Its rate of violent crime is also the highest in the state, and it ranked second behind Prince George's County in its property crime rate (Maryland Uniform Crime Reporting [MD UCR] data, 2007). However, the crime rates in Baltimore City have consistently decreased every year since 1999, the first year rates and trends were published by MD UCR.

PROGRAM OVERVIEWS

Following are brief descriptions of the Drug Treatment Court and Felony Diversion Initiative Programs of the Baltimore City Circuit Court. This information describes the program goals, teams, eligibility criteria, and program requirements. In general, these programs are quite parallel, serving similar populations and having comparable goals for the reduction of substance use and criminality of participants. The teams from both meet together every other month, to coordinate with, share information, and learn from each other.

Drug Treatment Court (DTC)

The DTC is a program operated by the Baltimore City Circuit Court through collaboration with multiple state and city agencies. The program is supported by its partner agencies paying the salaries of their staff who participate in the drug court team, a grant from the Maryland Office of Problem-Solving Courts (that pays for the program coordinator), a grant from the Maryland Di-

² Demographic data were retrieved from the U.S. Census Bureau at www.census.gov in July 2009.

vision of Parole and Probation (DPP), and state and local treatment dollars which come through Baltimore Substance Abuse Systems (BSAS) [that cover the cost of treatment providers].

Participants who agree to join the DTC plead guilty to their charge(s), and are released from jail to enter community-based treatment services. They are closely supervised and undergo regular drug testing and court reviews.

The program's goals³ are to:

- 1) Enhance public safety.
- 2) Provide non-violent offenders, who have been assessed as drug-dependent, fully integrated and comprehensive substance abuse treatment services with close criminal justice supervision and judicial monitoring.
- 3) Provide an alternative to incarceration for criminal defendants whose crimes are drug involved, in turn providing the judiciary with a cost-effective sentencing option, freeing valuable incarceration-related resources for violent offenders, and reducing the average length of pre-trial jail time.
- 4) Provide resources and support to assist the drug dependent offender in obtaining skills necessary for the maintenance of sobriety and being productive members of society.
- 5) Reward positive life changes while maintaining accountability for negative conduct.

Baltimore City's Circuit Court Adult Drug Treatment Court (DTC) began operation in 1994. As of summer 2008 there were 445 active participants. It is estimated that over 3,000 individuals have participated since the program's inception and approximately 39% have graduated from the program.

Felony Diversion Initiative (FDI)

The FDI is run by the Circuit Court of Baltimore City and allows people charged with nonviolent offenses who have a history of substance abuse to plead guilty and participate in a supervised community-based program as an alternative to incarceration. Prospective participants are assessed at the courthouse by substance abuse experts. If a person is found to be in need of treatment, that person is transferred to an inpatient treatment program, rather than remain imprisoned for long periods of time (Ehlers & Pranis, 2008).

FDI placement is based on specific eligibility criteria, that is, felons with extensive drug records who are facing potential long-term incarceration, and determination of appropriateness by a professional assessor. If there is a dispute between the State's Attorney's Office and the Office of the Public Defender, the Judge makes a decision regarding program entry. Residential treatment is followed by community-based services that include job training and placement services, and continued treatment to encourage transition back to the community. Designated parole and probation officers work as a team to support participants in the program, which requires monthly progress hearings overseen by the FDI judge (Ehlers & Pranis, 2008).

³ From the DTC Policy and Procedures Manual.

The program's goals⁴ are to:

1. Enhance public safety by reducing the recidivism of substance abusing offenders.
2. Provide nonviolent drug-dependent offenders fully integrated and comprehensive substance abuse treatment services with close criminal justice supervision and judicial monitoring.
3. Provide a cost-effective alternative to incarceration for nonviolent criminal defendants whose crimes are drug involved, freeing valuable incarceration resources for violent offenders.
4. Provide early and prompt placement in treatment thereby reducing the average length of pre-trial detention.⁵
5. Provide resources and support to assist the drug dependent offender in obtaining skills necessary for the maintenance of sobriety.
6. Promote the accountability of offenders for their conduct by rewarding positive life changes.
7. Rehabilitate drug offenders to be productive, self-sustaining members of society.

Baltimore City's Felony Diversion Initiative began operation in 2003. As of summer 2008, there were 103 active participants. Approximately 254 individuals have participated since the program's inception and approximately 54% have graduated.⁶

TEAM/STAFF STRUCTURE

Drug Treatment Court (DTC)

The DTC team is comprised of the DTC judge, the Drug Court Coordinator, probation agents, state's attorney, public defender, and a paralegal who assists the public defender. A law enforcement representative (Baltimore City Sheriff's Office) occasionally attends advisory committee meetings. Representatives from BSAS administer treatment funds and contracts with providers to provide treatment services. Treatment providers enter participant treatment information into a data system and provide written progress reports to the court prior to progress hearings.

Felony Diversion Initiative (FDI)

FDI's team includes the FDI judge, public defender, state's attorney, special probation agents, placement coordinator (who is also the in-court assessor), and case manager. The placement coordinator helps reserve treatment and probation space, availability in the day reporting centers, and space in all support programs. This person informs the state's attorney and assessor when slots are full. The program refers to a wide range of treatment providers, as long as they are certified by BSAS.

⁴ From the FDI Policy and Procedures Manual

⁵ The program aims to get participants into treatment within 24 hours of their first court date, in order to reduce potential additional criminal offenses and/or jail time. The current actual time between court appearance and treatment entry is 2 days (from program data), which is considerably less than traditional court processing.

⁶ FDI program staff provided the evaluation team with information on which participants successfully completed the program. While the program differentiates "successful completions" from "graduates," the data provided does not make this distinction, so the use of "graduate" in this report includes all participants who completed the program successfully, whether or not they officially graduated.

ELIGIBILITY & PROGRAM ENTRY

In general, eligibility for these programs includes adults (18 or older) living within Baltimore City with a nonviolent felony charge, who do not have a history of violent offenses, and who DO have a serious or chronic substance abuse problem. They cannot already be on probation unless the other judge consents to the offender participating and following the rules established by the DTC/FDI program. Individuals are not eligible if they are currently on parole.

Drug Treatment Court (DTC)

Entry into DTC generally takes 3-5 months, during which time prospective participants typically are held in jail. The defendant's charge(s), criminal history, and demographic information are reviewed for program eligibility. Defendants are then assessed and if found eligible must submit a guilty plea for the current offense. The person is then put on probation and typically enters intensive outpatient treatment. Data from the outcome study indicate that average number of days from arrest to program entry is 140 and 76% of DTC participants enter the program within 5 months of arrest.

Felony Diversion Initiative (FDI)

The focus of the FDI is to identify and assess eligible nonviolent offenders with drug problems and admit them into treatment quickly, diverting them from jail. The policy is for eligibility to be determined, plea agreements developed and reviewed by defendants and the state's attorney, and arraignments held, all within 45 days of arrest. In addition, the program aims to place participants in treatment within 24 hours of their initial court date.

Data from the outcome study show that the mean number of days from arrest to program entry was 98 and the median (50th percentile) was 80 days for the cohort of participants in this study (representing participants from 2004-2007)⁷; 7% of FDI participants during this time period of the program entered the program within 45 days of arrest. The mean number of days from arrest to program entry for all program participants (n = 68) was 80 days and the median (50th percentile) was 58 days. Upon program entry, the defendant is placed on probation and is sent to residential treatment. The current actual time between first court hearing and treatment entry is about 2 days.

PROGRAM PHASES

Drug Treatment Court (DTC)

DTC uses a model called "Substance Abuse Treatment and Education Program" or "STEP," which is similar to typical "phases" found in other drug courts. Drug court participants enter the program, are rewarded for positive behavior, are sanctioned for negative behavior, and progress through the program "steps" and requirements. Participants must remain in the program for at least 18 months.

Felony Diversion Initiative (FDI)

FDI has four phases, though the first phase involves assessment and is prior to actual program entry. Phase 2 is residential treatment (a minimum of 6 months), Phase 3 is outpatient treatment, and Phase 4 is probation with the participant having finished all formal treatment. Participants must remain on probation (in the program) for a minimum of 3 years.

⁷ The difference between the mean and median indicate that there are a few participants with very long periods between arrest and program entry that pushed the mean higher but do not have as strong an impact on the median.

INCENTIVES AND SANCTIONS

Drug Treatment Court (DTC)

The primary incentive for participants to enter DTC is to avoid jail/prison time and to reduce the length of probation. During participation, rewards include decreased attendance at court sessions (progress hearings), praise, and reduction in required UAs. Graduation is considered a reward because probation is closed at that time.

Sanctions include reprimands from the judge, being asked to sit in the jury box or witness stand, 1 or more days in jail, and receiving the original sentence.

Felony Diversion Initiative (FDI)

FDI also offers the incentive of avoiding significant incarceration time. During participation, rewards include applause; praise; being placed on Honor Roll status (called first during court sessions [progress conferences]); decreases in progress reporting and treatment requirements; recognition ceremonies with small gifts as awards; and encouragement to give a speech to the court audience.

Sanctions include increased frequency of meetings with probation and at court, increased attendance at 12-step meetings, 1 or 2 weeks (or longer) in jail, and being assigned to the inpatient treatment program at the Detention Center.

GRADUATION AND UNSUCCESSFUL COMPLETIONS

Drug Treatment Court (DTC)

In order to graduate from DTC, participants must have spent at least 18 months in the program, be clean for at least 12 months, and be compliant with other program requirements for at least 12 months.

Participants who are not successful in completing program requirements are released from the program and receive a probation violation on their record. They are sent to prison. Participants are dropped from the program if they abscond from the program, receive a new felony charge (case-by-case basis), are consistently non-compliant, or have medical or mental health reasons they are unable to participate.

Felony Diversion Initiative (FDI)

The expected length of participation in FDI is a minimum of 3 years' probation, with 6 months taken off for compliant behavior. Treatment requirements may be completed in advance of this time. Participants are recognized if they have stayed drug free a minimum of 1 year, have no pending charges, and are in compliance with all requirements of probation.

Participants who do not comply with program goals or who have become supervision risks are released from the program and receive a probation violation. The most common reasons participants are dropped from the program are acquiring a new conviction, repeated absconding from probation, and repeated unsatisfactory treatment placements. Participants are generally not dropped for positive UAs. Participants may be discharged without a violation if they have a medical issue that prevents their participation in the program.

COMPONENTS OF THE TWO PROGRAMS

There are many similarities between these programs. Table 1 illustrates the key program components of the DTC and FDI programs. The FDI program has made many program adjustments during the past few years since its implementation; this table reflects current policies and procedures of both programs.

Table 1. Key Characteristics of DTC & FDI Programs

	Drug Treatment Court	Felony Diversion Initiative
Eligibility requirements (per program policy guidelines) <ul style="list-style-type: none"> • Crime 	<i>Sentences for convictions for crimes of violence must have been completed a minimum of 5 before date of current offense (both programs)</i>	<i>Sentences for convictions for crimes of violence must have been completed a minimum of 5 years before date of current offense (both programs)</i> Convictions for crimes of violence must have occurred min. of 10 years ago
<ul style="list-style-type: none"> • Crime 	<i>Excludes people with charges of possession of a handgun, armed robbery and other cases involving a handgun, arson, abduction or kidnapping, child abuse, rape, sex offenses, and homicide convictions (both programs)</i>	<i>Excludes people with charges of possession of a handgun, armed robbery and other cases involving a handgun, arson, abduction or kidnapping, child abuse, rape, sex offenses, and homicide convictions (both programs)</i>
<ul style="list-style-type: none"> • Residency 	<i>May allow people living in Baltimore County on a case by case basis, if they can access Baltimore City treatment resources (both programs)</i>	<i>May allow people living in Baltimore County on a case by case basis, if they can access Baltimore City treatment resources (both programs)</i>
<ul style="list-style-type: none"> • Substance use 	<i>Participant must have serious or chronic substance abuse issue; Focus is on heroin and cocaine users (both programs)</i>	<i>Participant must have serious or chronic substance abuse issue; Focus is on heroin and cocaine users (both programs)</i>
<ul style="list-style-type: none"> • Mental health 	<i>Program accepts and will treat defendants with a dual diagnosis of drugs and mental health disorders; however, assessor will exclude if person has serious psychiatric issue that would prevent participation in required program activities (both programs)</i>	<i>Program accepts and will treat defendants with a dual diagnosis of drugs and mental health disorders; however, assessor will exclude if person has serious psychiatric issue that would prevent participation in required program activities (both programs)</i>
<ul style="list-style-type: none"> • Criminal justice status 	<i>Not on active parole; Not on active probation unless supervision is transferred (Circuit) or held in abeyance (District) (both programs)</i>	<i>Not on active parole; Not on active probation unless supervision is transferred (Circuit) or held in abeyance (District) (both programs)</i>
Substance abuse assessment	<i>Occurs at courthouse on same day as arraignment (both programs)</i> Assessment tools: ASI and LSIR	<i>Occurs at courthouse on same day as arraignment (both programs)</i> Assessment tools: ASI and ASAM Patient Placement Criteria

	Drug Treatment Court	Felony Diversion Initiative
Time to entry	Time between arrest and drug court entry (which occurs after arraignment): 3-5 months ⁸	Quicker time to treatment: Arraignment held within 45 days of arrest; assessment occurs at courthouse on day of arraignment; defendant can plea at arraignment. ⁹ Defendant assessment and placement into a drug treatment program within 24 hours of court appearance
Program model • Treatment	Treatment generally begins with intensive outpatient (2 months), then outpatient (4 months min.; in practice 8-12 months) Approximately 50% of participants to go 45-day inpatient program if they are not successful in community treatment	Greater treatment intensity: Entry into program begins with a minimum of 6 months of residential treatment (or alternate treatment in the case of a few exceptions), then outpatient (plus school or work), then supervision through end of probation
• UAs	2x/week (days/times scheduled) in Step One, reducing to 1x/week (Step Two), 1x/2 weeks (Step Three), 1x/month (Step 4), and 1x/6 weeks (Step 5). However, timing of reduced frequency in practice determined on case-by-case basis (reduced for positive behavior).	More testing by policy: N/A in Phase 1 (assessment phase), 1x/week in residential (Phase 2), 2x/week for 1 st 6 weeks of Intensive/Standard Outpatient and then 1x/week thereafter (Phase 3), 1x/week in Phase 4. However, timing of testing is individualized as needed.
• Probation meetings	Frequency determined on case-by-case basis. Generally: • 1x/week, Step 1 • 1x/2 weeks, Step 2 • 1x/month, Step 3 • 1x/8 weeks, Steps 4 & 5	Frequency determined on case-by-case basis, but usually 1x/month minimum Generally: • N/A, Phase 1 (Assessment) • 1x/month, Phase 2 (residential) • 2x/month, Phase 3 (outpatient) 1x/month, Phase 4
• Court reviews	Reduced in each Step and for positive behavior • 1x/3 weeks, Step 1 • 1x/6 weeks, Step 2 • 1x/7 weeks, Step 3 • 1x/8 weeks, Steps 4 & 5	1x/mo throughout program (except Assessment Phase 1)

⁸ Actual average time to entry is 140 days.

⁹ Actual average time to entry is 98 days.

	Drug Treatment Court	Felony Diversion Initiative
<ul style="list-style-type: none"> • Team meetings 	No team meetings to review client progress prior to court sessions; <i>monthly team meetings are held to discuss program issues; advisory committee meetings with both teams (DTC & FDI) held every other month; treatment provider group meeting every 45 days</i>	Team meetings to review client progress held prior to each court session; <i>monthly team meetings are held to discuss program issues; advisory committee meetings with both teams (DTC & FDI) held every other month; treatment provider group meeting every 45 days</i>
<ul style="list-style-type: none"> • Incentives 	<p><i>Same for both programs:</i></p> <ul style="list-style-type: none"> • Applause in court • Verbal praise • Priority court review system • Decrease in supervision, urinalysis, progress reporting, & treatment requirements • Awards (small gifts) • Invitation to speak to court audience 	<p><i>Same for both programs:</i></p> <ul style="list-style-type: none"> • Applause in court • Verbal praise • Honor Roll system • Decrease in supervision, urinalysis, progress reporting, & treatment requirements • Recognition ceremonies and awards (small gifts) • Invitation to speak to court audience
<ul style="list-style-type: none"> • Sanctions 	<ul style="list-style-type: none"> • Verbal admonishment/reprimand • Increased supervision and treatment requirements (comparable to FDI list) • Community service • Electronic monitoring • Incarceration • Writing an essay • Sitting in courtroom as long as required by judge 	<ul style="list-style-type: none"> • Increased reporting to Probation Agent • Increased urinalysis • Increased Court reviews • Increased attendance at 12-step programs • Increased duration of probation • Incarceration • ACT-SAP program
<ul style="list-style-type: none"> • Staffing 	<ul style="list-style-type: none"> • Judge • Program Coordinator (same as FDI) • Probation and Parole Supervisor • Parole and Probation Agents • State's Attorney • Public Defender • BSAS representative • Treatment providers • Case managers • Department of Probation and Parole Assessor 	<ul style="list-style-type: none"> • Judge • Program Coordinator • Placement Coordinator/ Assessor • Case Managers • Probation and Parole Supervisor • Parole and Probation Agents • State's Attorney • Public Defender • BSAS representative • Treatment providers • ACT-SAP representative

OUTCOME EVALUATION

Outcome Evaluation Methods

RESEARCH STRATEGY

The primary criminal justice system outcome of interest to drug treatment court programs is the recidivism of participants after beginning, or completing, the programs. Re-arrests are defined in this study as any criminal arrest (this study does not include non-criminal events, such as traffic citations).

NPC Research staff identified participants who entered the DTC or FDI between April 2004 and July 2007. This time frame allowed for the availability of at least 1 year of recidivism data post-program entry for all study participants.

An additional indicator of the success of a drug treatment court program is the rate of program participant graduation. Therefore, the graduation rates were calculated for DTC and FDI by dividing the number of participants who graduated by the number who completed the program during the study time period. The national average for drug court programs is around 50% (Belenko, 2001). The graduation rate does not include active participants.

Differences in demographics and criminal history between DTC graduates and non-graduates and FDI graduates and non-graduates were examined to determine if there were indications of specific groups that would need additional attention from the DTC or FDI programs to increase successful outcomes.

OUTCOME/IMPACT STUDY QUESTIONS

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

1. Does participation in the Drug Treatment Court or Felony Diversion Initiative reduce the number of re-arrests for those individuals compared to traditional court processing?
2. Does participation in DTC or FDI reduce levels of substance abuse in terms of subsequent drug arrests?
3. To what extent are participants successful in completing these programs?
4. What participant and program characteristics predict successful outcomes for these two programs (program completion, decreased recidivism)?

DATA COLLECTION AND SOURCES

NPC staff members adapted procedures developed in previous drug court evaluation projects for data collection, management, and analysis of the DTC data. These data included probation and parole records, days spent in prison and local jail, criminal justice histories in the form of arrest records, local court case information and program data from multiple sources. The initial data sets contained records numbering in the millions for thousands of participants. Once all data were gathered on the study participants and the comparison groups were chosen, 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 (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 Table 2.

Baltimore City State's Attorney's List of Participants

Data were provided by the Office of The State's Attorney, Circuit Court that included names and demographics, program acceptance status, time spent in DTC, and discharge status.

Baltimore City FDI Coordinator's List of Participants

Data were provided by the FDI Program Coordinator that included names and demographics, program acceptance status, time spent in FDI, and discharge status.

Maryland Department of Public Safety & Correctional Services

The Maryland Department of Public Safety & Correctional Services (DPSCS) provided data from their management information system that stores Maryland criminal justice information in the OBSCIS I & II and Criminal Justice Information System (CJIS) systems, including arrest information, charges, prison and local jail stays and probation and parole episode information.

Maryland Judicial Information System

The Maryland Administrative Office of the Courts provided data from their JIS system on court cases heard in Baltimore City.

Maryland Judiciary Case Search

The Maryland Judiciary Case Search was used to collect the number of court hearings for DTC and FDI participants during their program participation.

Substance Abuse Management Information System (SAMIS)

Substance abuse treatment data for the DTC and FDI participants 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. These data provided information to cost treatment received following program entry.

Table 2. Data Sources

Database	Source	Example of Variables
Circuit Court State Attorney's List of Participants (electronic data)	Baltimore City Circuit Court State Attorney's Office	Acceptance status, time spent in DTC, discharge status.
FDI Program Coordinator's List of Participants	Program Coordinator	Acceptance status, time spent in FDI, discharge status.
Offender Based State Correctional Information System (OBSCIS I & II) [electronic data]	Maryland Department of Public Safety & Correctional Services (DPSCS)	Demographics, DTC, FDI related probation program data, probation and parole episodes and prison data.
Criminal Justice Information System (CJIS) [electronic data]	Maryland Department of Public Safety & Correctional Services (DPSCS)	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 and FDI 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

STUDY GROUP SELECTION

All DTC participants and all FDI participants who entered their respective programs from April 1, 2004, to July 31, 2007, were selected, resulting in 685 DTC participants and 122 FDI participants. The FDI is a smaller program and this study reflects the early years of implementation, compared to the DTC which is a larger and more established program.

All DTC participant information was obtained from a list kept by the State Attorney's office, which includes individuals referred to and accepted into the DTC program. All FDI participant information was obtained from a list kept by the program coordinator, which includes individuals referred to and accepted into the FDI program.

This report examines outcomes over a 4-year period for program participants from each program and a matched comparison group for each program.

Comparison Group

Two comparison groups were created for this study based on the eligibility criteria used by each program to select its participants. These individuals were identified for each program from a list of people arrested on either a DTC-eligible charge who had a DTC-eligible criminal history or an FDI-eligible charge who had an FDI-eligible criminal history. The BCCC program participants and their respective comparison group individuals were matched on age, gender, race/ethnicity, indication of a drug issue by their probation officer, type of charge for the eligible arrest (drug or other) and criminal history. Criminal histories for this population of DTC and FDI participants are complex and creating the comparison group required a multi-level matching approach.

For both the DTC and FDI comparison groups, offenders had to have a Circuit Court case with both a drug charge and a felony charge. All comparison group members had been arrested for either possession with intent to distribute, distribution, or another felony charge at the arrest that brought them into the program.

Similarly, all comparison group individuals were chosen due to an arrest for felony drug possession or drug distribution charges during the study time frame (only Circuit Court charges were selected). These individuals were then matched to the DTC or FDI participants respectively on 1) the number of prior serious charges (higher assault charges, armed robbery, handguns, rape, child abuse, aggravated assault); 2) total lifetime priors; 3) total number of arrests in 5 years prior to the arrest bringing them into the program; 4) total number of each type of arrest (drug, property, person and other) in the 5 years prior to the arrest bringing them into the program; and 5) on their age at first arrest. Any differences in the data used for matching between the DTC or FDI participants and their comparison groups were controlled for in the subsequent outcome analyses.

All four groups were examined through existing administrative databases for a period up to 4 years from the date of DTC/FDI program entry. For DTC comparison group members, an equivalent "start date" was calculated by adding 140 days (the average number of days from DTC-eligible case arrest to DTC entry that had been calculated from the DTC participants) to the eligible arrest date. For FDI comparison group members, an equivalent "start date" was calculated by adding 98 days (the mean number of days from FDI-eligible case arrest to FDI entry that had been calculated from the FDI participants) to the eligible arrest date. The evaluation team utilized the data sources described in Table 2, to determine whether there was a difference in re-arrests, incarceration and other outcomes of interest between the DTC program partici-

pants and its matched comparison group individuals and the FDI program participants and its matched comparison group individuals.

All individuals who were studied for the outcomes report had 1 year of follow-up, which included 685 DTC participants (188 graduates and 301 non-graduates with 196 active participants), 683 DTC comparison individuals, 122 FDI participants (46 graduates and 40 non-graduates with 36 active participants), and 153 FDI comparison group individuals.

Table 3. Study Group Sizes

Study Group	N
DTC	685
DTC Comparison	683
FDI	122
FDI Comparison	153

DATA ANALYSES

Once all data were gathered on the study participants, the data were compiled and cleaned and moved into SPSS 15.0 for statistical analysis. The evaluation team is trained in a variety of univariate and multivariate statistical analyses using SPSS. The analyses used to answer specific questions were:

1. *Does participation in DTC or FDI reduce the number of re-arrests for those individuals compared to traditional court processing?*

Univariate analysis of variance was performed to compare the mean number of re-arrests for all DTC and FDI participants with the comparison groups. The means for within DTC or within FDI groups reported are adjusted based on gender, age at the arrest that brought them into the program, race/ethnicity, and number of prior arrests (both total and drug arrests). The means comparing all DTC and all FDI groups are adjusted based on these same variables, in addition to number of prior property arrests, as this was a significant difference between DTC and FDI groups at start. 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 court, may have been discharged from the program and are therefore not equivalent to drug court graduates.

Crosstabs were run to examine differences in recidivism rate between the program and comparison groups. Chi-square analyses were used to identify any significant differences in re-arrest rates between drug court and comparison group participants.

2. *Does participation in DTC or FDI reduce levels of substance abuse in terms of subsequent drug arrests?*

The 4-year means for re-arrests with drug charges were calculated for all program participants and their respective comparison groups. Univariate analysis of variance was performed to compare the means of all drug court participants with the comparison group. The reported means were adjusted based on gender, age at the arrest that brought them into the program, ethnicity, the number of prior arrests (both total and drug arrests) and the number of arrests between the arrest that brought them into the program and program start date (both total and drug). As ex-

plained above, the actual mean of graduates is included for reference but should not be compared directly with the comparison group.

3. *To what extent are participants successful in completing these programs?*

To measure the programs' level of success at graduating participants, graduation rates and average lengths of stay were calculated. Graduation rates were calculated by dividing the number of participants who are no longer active in their respective program by the number of graduates (participants who completed the program successfully). Average length of stay was calculated at the mean number of days between the program start date and program end date for each participant.

4. *What participant and program characteristics predict successful outcomes for these two programs (program completion, decreased recidivism)?*

Graduates and unsuccessfully discharged participants from each program were compared on the basis of demographic characteristics and number of arrests during the 5 years prior to program entry to determine whether any significant patterns predicting program graduation or recidivism could be found. In order to best determine which demographic characteristics were related to successful program completion, Chi-square and independent samples t-tests were performed to identify which factors were significantly associated with program success.

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

Outcome Evaluation Results

Table 4 provides the demographic information for the DTC and FDI participants and the comparison groups. Independent samples t-tests and chi-square analyses showed no significant differences between DTC and DTC Comparison or between FDI and FDI Comparison groups on the characteristics listed in the table.

However, there were several variables that showed significant differences between the two program groups, DTC and FDI, including gender, 'other' charge on the arrest that resulted in their program involvement, and number of prior property arrests. A significantly larger proportion of the FDI group was female (though because of the size of these groups, more females are served by the DTC program) and had 'other' charges along with the felony drug charges that brought them into the program compared to the DTC group. The FDI group also had significantly fewer prior property arrests compared to the DTC group. These differences were statistically controlled for in all analyses comparing the FDI and DTC groups.

As illustrated in Table 4, the majority of participants in both the DTC and FDI programs are male (greater than 60%), are African American (93% and 94% respectively), use opiates as their drug of choice (greater than 70%), and have a median age of almost 40. In addition, the vast majority of participants in both programs entered their program on drug charges and had close to five prior arrests.

**Table 4. DTC, FDI,¹⁰ and Comparison Group Characteristics
(Study Cohorts 2004-2007)**

	All DTC Participants N = 685	DTC Comparison Group N = 683	All FDI Participants N = 122	FDI Comparison Group N = 153
Gender				
Male	78%	80%	64%	67%
Female	22%	20%	36%	33%
Ethnicity				
African American	93%	95%	94%	97%
Non-African American	7%	5%	6%	3%
Mean age at arrest date	39 years	39 years	38 years	38 years
Median	39 years	39 years	38 years	38 years
Range	18 – 69 years	18 – 65 years	18 – 57 years	19 – 56 years
Primary drug of choice	N = 561	N = 458	N = 99	N = 86
Opiates	71%	73%	73%	73%
Cocaine	13%	10%	14%	17%
Alcohol	8%	12%	6%	7%
Type of charge at arrest				
Felony drug-related	100%	100%	98%	100%
Property-related	5%	4%	3%	3%
Person-related	2%	1%	3%	1%
'Other' charges	29%	32%	39%	33%
Average number of arrests in the 5 years prior to the arrest leading to program participation	5.12 (range 0 – 22)	4.89 (range 0 – 18)	4.75 (range 0 – 18)	4.41 (range 0 – 15)
Average number of drug arrests in the 5 years prior to the arrest leading to program participation	3.70 (range 0 – 17)	3.52 (range 0 – 14)	3.56 (range 0 – 17)	3.18 (range 0 – 11)
Average number of property arrests in the 5 years prior to the arrest leading to program participation	1.14 (range 0 – 16)	1.10 (range 0 – 15)	.75 (range 0 – 5)	.90 (range 0 – 5)

¹⁰ FDI staff indicated that the cohort selected for this study represents a group of participants who are younger, have less serious criminal histories, and are facing less jail time, than their typical participant population.

Research Question #1: Recidivism

Does participation in DTC or FDI reduce the number of re-arrests for those individuals compared to traditional court processing?

A larger proportion of DTC participants had been re-arrested at the 12- and 24-month follow-up period than the comparison group (see Figure 2a, p. 28). A smaller proportion of DTC participants had been arrested at 36 months after drug court entry than the comparison group. However, when adjusting for time at risk (meaning the time the individual was in the community [not in jail and not in prison] with theoretically more opportunity to commit crimes), DTC participants had significantly fewer re-arrests at all time points (the 12- and 48-month time points were marginally significant).

A smaller proportion of FDI participants had been arrested, for a smaller average number of new crimes, than the comparison group at 12 months; however, this effect disappeared when adjusting for time the participants were in the community.

FDI participants had fewer new arrests at 12 months than the DTC group, on average, but when adjusting for time at risk, this difference disappeared and DTC participants had fewer new arrests at the 36 month follow-up.

These results are complicated by the time that participants of these programs and the comparison groups spent in jail or prison. DTC participants had more time in jail (per data from the Baltimore City Detention Center) but less in prison (per data from DPSCS, DOC) at all time points than their comparison group and FDI participants had fewer days in prison at 12 months than their comparison group.

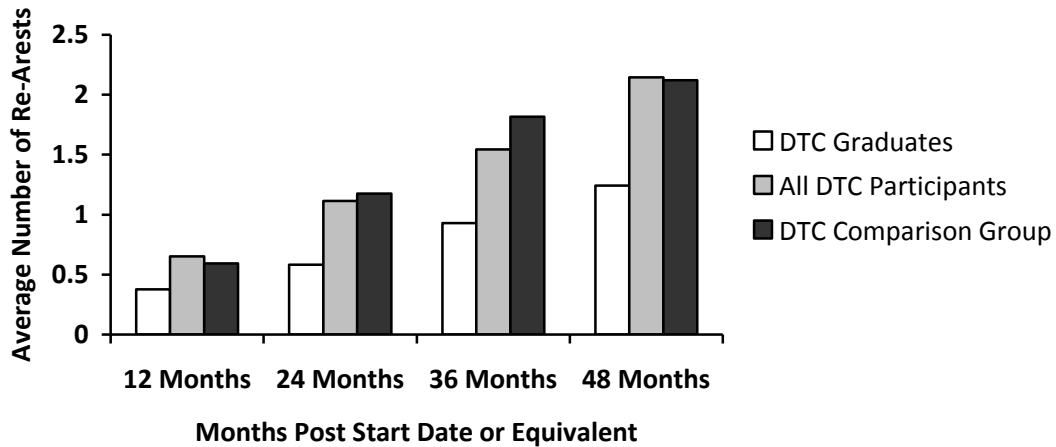
The details of these findings are presented below.

DTC Number of Re-Arrests

DTC participants had been re-arrested significantly less often than the DTC comparison group at 36 months post drug court entry or equivalent date. However, there was no significant difference in number of cumulative re-arrests between DTC participants and the comparison group at the other time points. DTC graduates had the lowest number of cumulative re-arrests at every time point. It is important to note that the groups of participants are different at each follow-up point, with the entire group (685 participants) having 12 months of follow-up time and smaller groups at each subsequent follow-up period, with a subset of 85 having 48 months available to study. It is unclear if the participants tend to do better in their 3rd year, after receiving services, or if the participants who did not successfully complete the program are simply not offending at that point because they are in jail. Outcome data do demonstrate an increase in jail days in the 3rd year.

Figure 1a illustrates the average number of cumulative re-arrests each year for 48 months after entering the drug court program for DTC graduates, all DTC participants, and the DTC comparison group. The reported average number of cumulative re-arrests was adjusted for age, ethnicity (African American or non-African American), gender, total prior arrests, and total prior drug arrests.

Figure 1a. Average Number of Cumulative Re-Arrests for DTC Graduates, All DTC Participants, and the DTC Comparison Group Over 48 Months

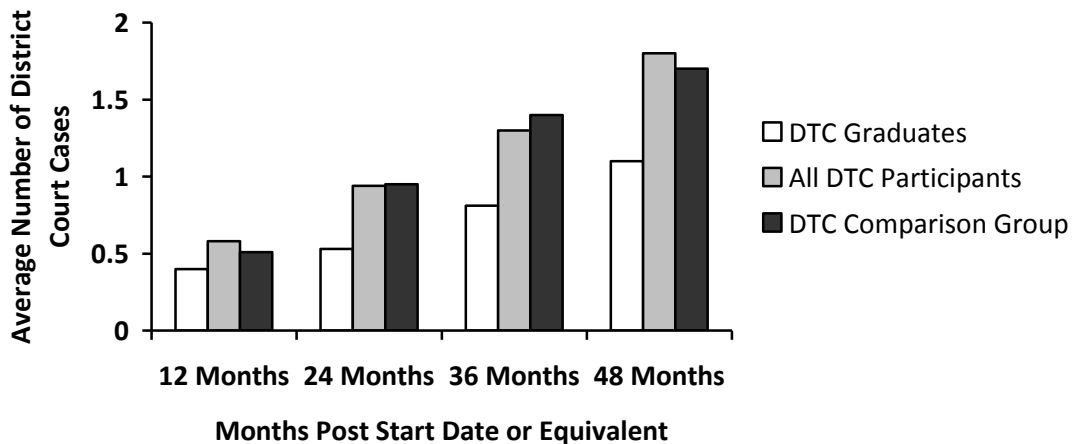


Note: N sizes by group and time period are as follows: 12 Months: DTC Graduates n = 188, All DTC n = 685, DTC Comparison n = 683; 24 Months: DTC Graduates n = 172, All DTC n = 518, DTC Comparison n = 604; 36 Months: DTC Graduates n = 112, All DTC n = 318, DTC Comparison n = 481; 48 Months: DTC Graduates n = 33, All DTC n = 85, DTC Comparison n = 294.

DTC Number of Subsequent Court Cases

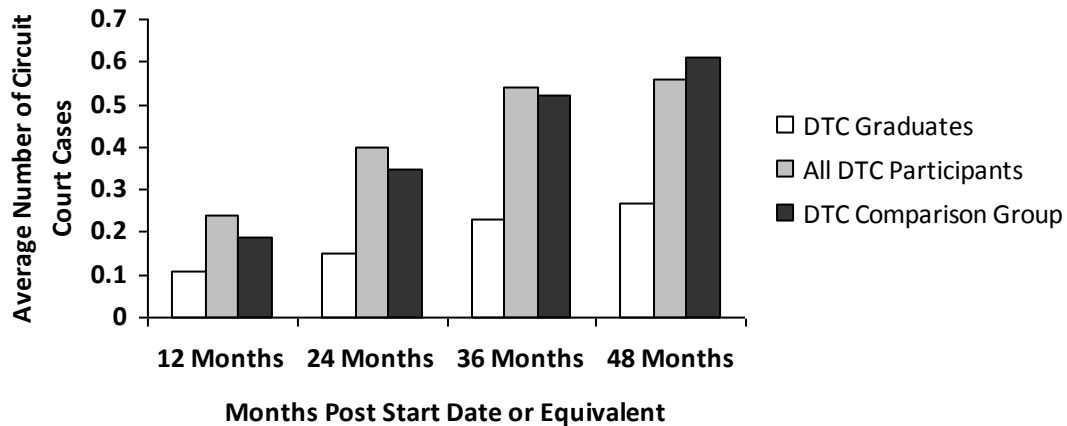
There were no differences between DTC Participants and the DTC comparison group in the average cumulative number of District Court cases at any time period. However, DTC participants had a significantly larger number of new Circuit Court cases at 12 months post program entry than the DTC comparison group (illustrated in Figures 1b and 1c below).

Figure 1b. Average Number of Cumulative District Court Cases for DTC Graduates, All DTC Participants, and the DTC Comparison Group Over 48 Months



Note: N sizes by group and time period are as follows: 12 Months: DTC Graduates n = 188, All DTC n = 685, DTC Comparison n = 683; 24 Months: DTC Graduates n = 172, All DTC n = 518, DTC Comparison n = 604; 36 Months: DTC Graduates n = 112, All DTC n = 318, DTC Comparison n = 481; 48 Months: DTC Graduates n = 33, All DTC n = 85, DTC Comparison n = 294.

Figure 1c. Average Number of Cumulative Circuit Court Cases for DTC Graduates, All DTC Participants, and the DTC Comparison Group Over 48 Months

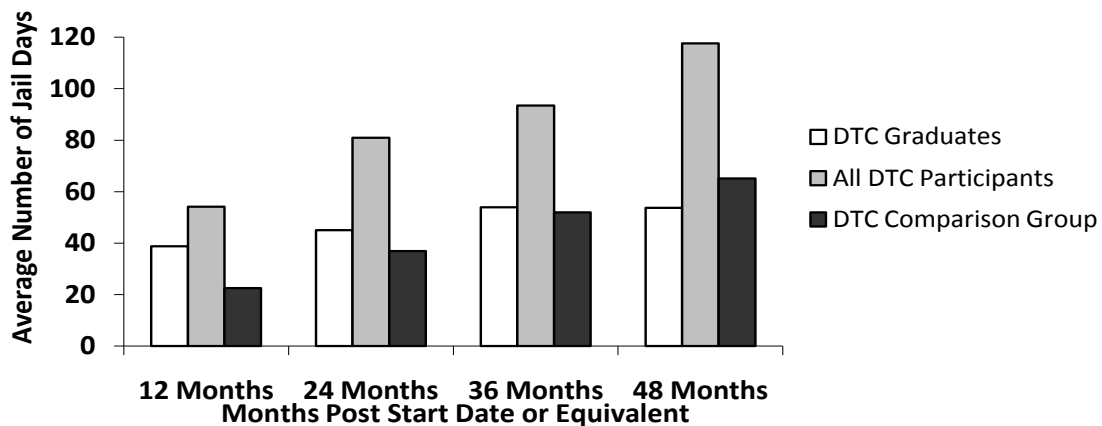


Note: N sizes by group and time period are as follows: 12 Months: DTC Graduates n = 188, All DTC n = 685, DTC Comparison n = 683; 24 Months: DTC Graduates n = 172, All DTC n = 518, DTC Comparison n = 604; 36 Months: DTC Graduates n = 112, All DTC n = 318, DTC Comparison n = 481; 48 Months: DTC Graduates n = 33, All DTC n = 85, DTC Comparison n = 294.

DTC Number of Subsequent Incarceration Days

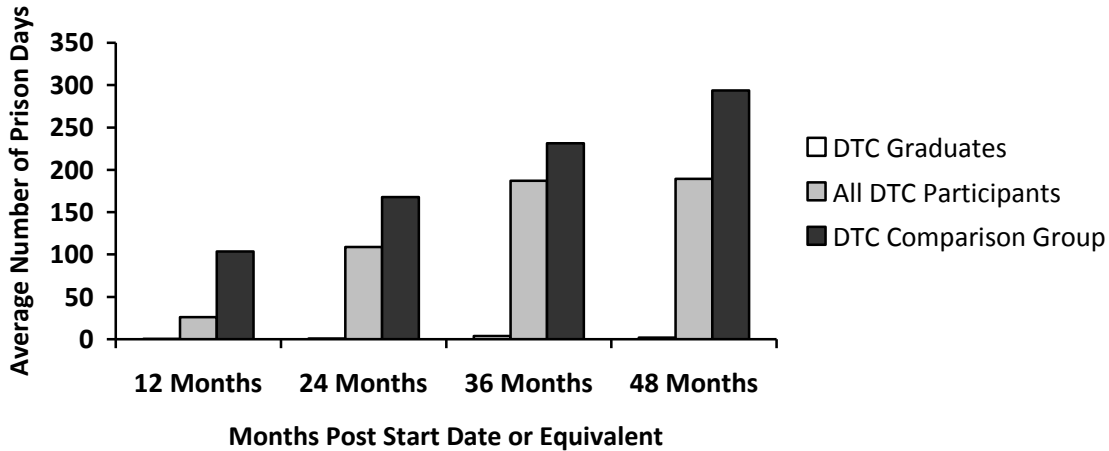
DTC participants had significantly more days in jail, not including jail days attributed to program sanctions, than the DTC comparison group at every follow-up time point, but significantly fewer prison days at every time point (36 months was marginally significant) than the comparison group. The DTC graduates had an average of less than 1 day of prison at both the 12-month and 24-month point.

Figure 1d. Average Number of Cumulative Jail Days for DTC Graduates, All DTC Participants, and the DTC Comparison Group Over 48 Months



Note: N sizes by group and time period are as follows: 12 Months: DTC Graduates n = 188, All DTC n = 685, DTC Comparison n = 683; 24 Months: DTC Graduates n = 172, All DTC n = 518, DTC Comparison n = 604; 36 Months: DTC Graduates n = 112, All DTC n = 318, DTC Comparison n = 481; 48 Months: DTC Graduates n = 33, All DTC n = 85, DTC Comparison n = 294.

Figure 1e. Average Number of Cumulative *Prison Days* for DTC Graduates, All DTC Participants, and the DTC Comparison Group Over 48 Months

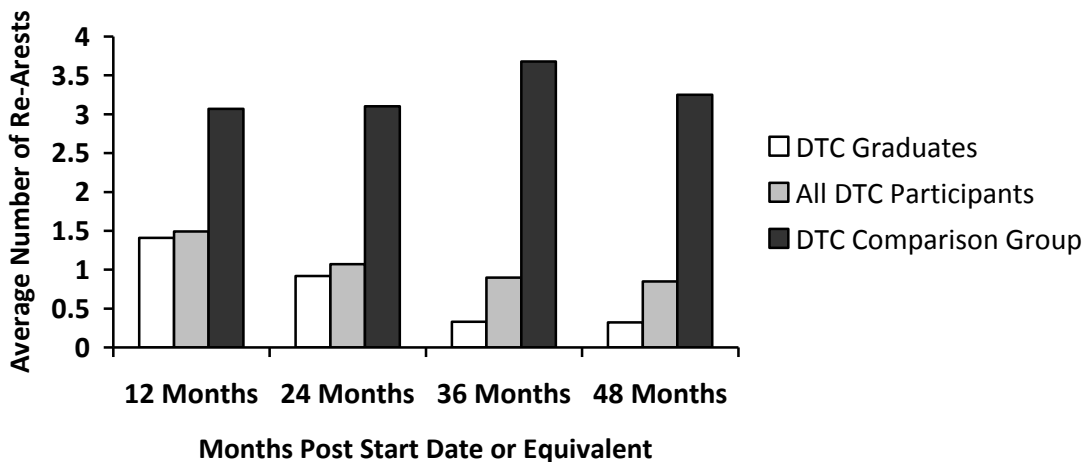


Note: N sizes by group and time period are as follows: 12 Months: DTC Graduates n = 188, All DTC n = 685, DTC Comparison n = 683; 24 Months: DTC Graduates n = 172, All DTC n = 518, DTC Comparison n = 604; 36 Months: DTC Graduates n = 112, All DTC n = 318, DTC Comparison n = 481; 48 Months: DTC Graduates n = 33, All DTC n = 85, DTC Comparison n = 294.

DTC: Adjusting for “Time at Risk”

Another way to look at the mean number of cumulative re-arrests is to calculate the number of arrests per time at risk (e.g., not incarcerated in jail or prison). This calculation produces an adjusted number of arrests within each 12-month time period in order to take into account the time out of jail or prison that an individual would have an opportunity to re-offend. Results are illustrated in Figure 1f, which includes both jail and prison days combined. DTC participants had significantly fewer cumulative re-arrests at all time points (12 and 24 months were marginally significant) than the comparison group.

Figure 1f. Average Number of Cumulative Re-Arrests Adjusted for Time at Risk for DTC Graduates, All DTC Participants, and the DTC Comparison Group Over 48 Months



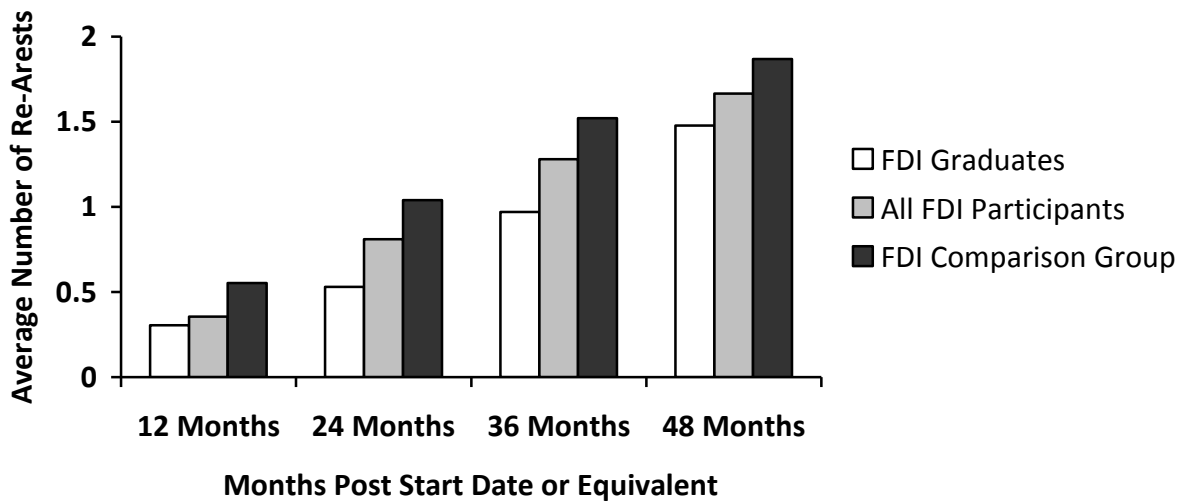
Note: N sizes by group and time period are as follows: 12 Months: DTC Graduates n = 188, All DTC n = 685, DTC Comparison n = 683; 24 Months: DTC Graduates n = 172, All DTC n = 518, DTC Comparison n = 604; 36 Months: DTC Graduates n = 112, All DTC n = 318, DTC Comparison n = 481; 48 Months: DTC Graduates n = 33, All DTC n = 85, DTC Comparison n = 294.

FDI Number of Re-Arrests

Figure 1g shows that FDI participants were re-arrested significantly less often than the corresponding comparison group at 12 months post drug court entry or equivalent date. A similar pattern is retained through the other time points, though significance was not reached after 12 months, probably due to the decrease in the number of participants who had available recidivism data at periods beyond 1 year. FDI graduates had the lowest number of re-arrests at every time point.

Figure 1g illustrates the average number of re-arrests for 48 months after entering the drug court program for FDI graduates, all FDI participants, and the FDI comparison group. The reported average number of re-arrests was adjusted for age, ethnicity (African American or non-African American), gender, total prior arrests, and total prior drug arrests.

Figure 1g. Average Number of Cumulative Re-Arrests for FDI Graduates, All FDI Participants, and the FDI Comparison Group Over 48 Months

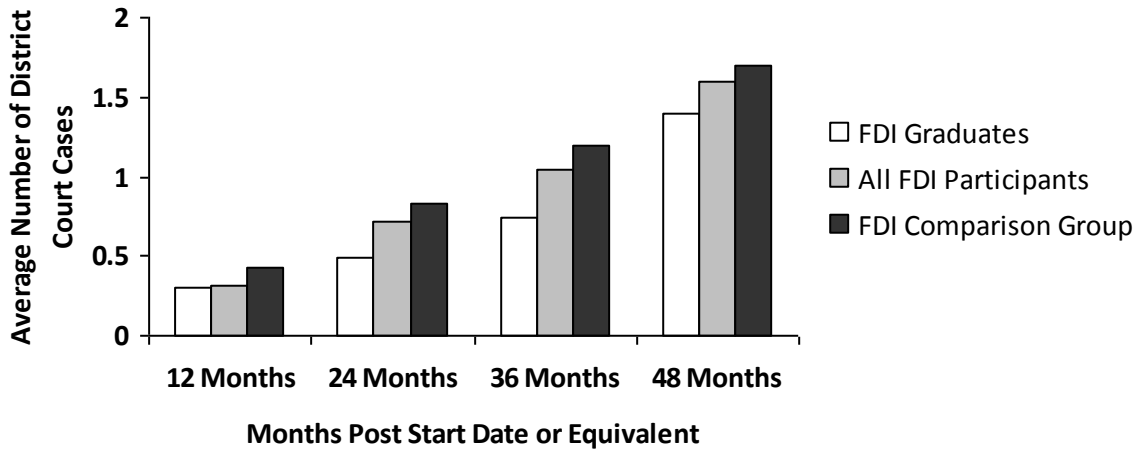


Note: N sizes by group and time period are as follows: 12 Months: FDI Graduates n = 46, All FDI Participants n = 122, FDI Comparison Group n = 153; 24 Months: FDI Graduates n = 43, All FDI Participants n = 87, FDI Comparison Group n = 138; 36 Months: FDI Graduates n = 34, All FDI Participants n = 61, FDI Comparison Group n = 111; 48 Months: FDI Graduates n = 23, All FDI Participants n = 39, FDI Comparison Group n = 76.

FDI Number of Subsequent Court Cases

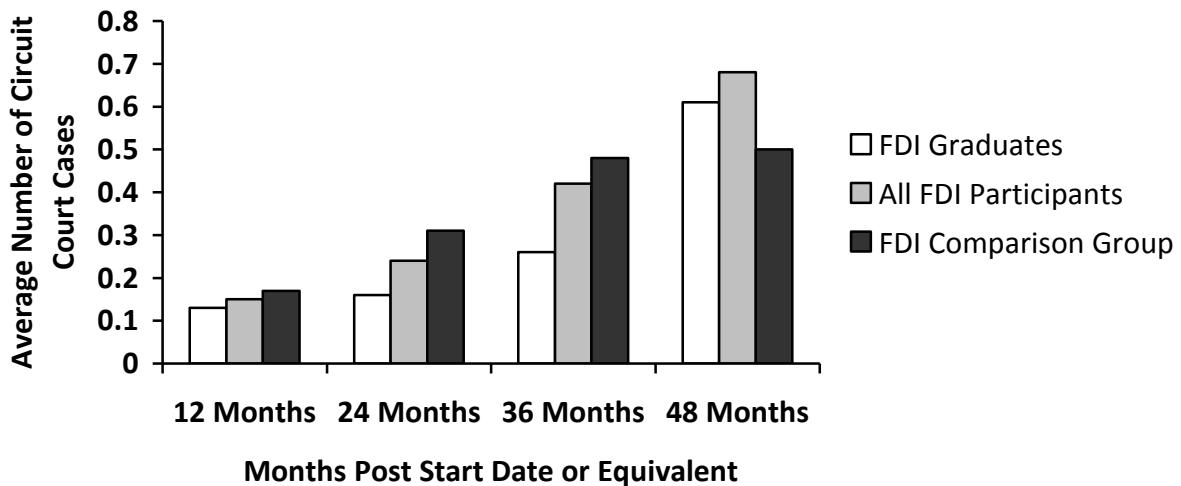
There were no differences between FDI Participants and the FDI comparison group in the average cumulative number of District Court or Circuit Court cases at any time period. These results are illustrated in Figures 1h and 1i.

Figure 1h. Average Number of Cumulative District Court Cases FDI Graduates, All FDI Participants, and the FDI Comparison Group Over 48 Months



Note: N sizes by group and time period are as follows: 12 Months: FDI Graduates n = 46, All FDI n = 122, FDI Comparison n = 153; 24 Months: FDI Graduates n = 43, All FDI n = 87, FDI Comparison n = 138; 36 Months: FDI Graduates n = 34, All FDI n = 61, FDI Comparison n = 111; 48 Months: FDI Graduates n = 23, All FDI n = 39, FDI Comparison n = 76.

Figure 1i. Average Number of Cumulative Circuit Court Cases for FDI Graduates, All FDI Participants, and the FDI Comparison Group Over 48 Months

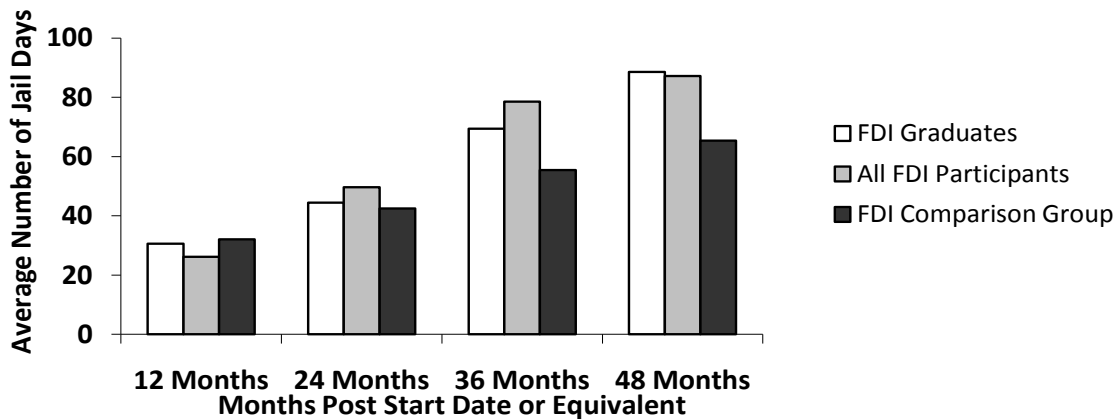


Note: N sizes by group and time period are as follows: 12 Months: FDI Graduates n = 46, All FDI n = 122, FDI Comparison n = 153; 24 Months: FDI Graduates n = 43, All FDI n = 87, FDI Comparison n = 138; 36 Months: FDI Graduates n = 34, All FDI n = 61, FDI Comparison n = 111; 48 Months: FDI Graduates n = 23, All FDI n = 39, FDI Comparison n = 76.

FDI Number of Subsequent Incarceration Days

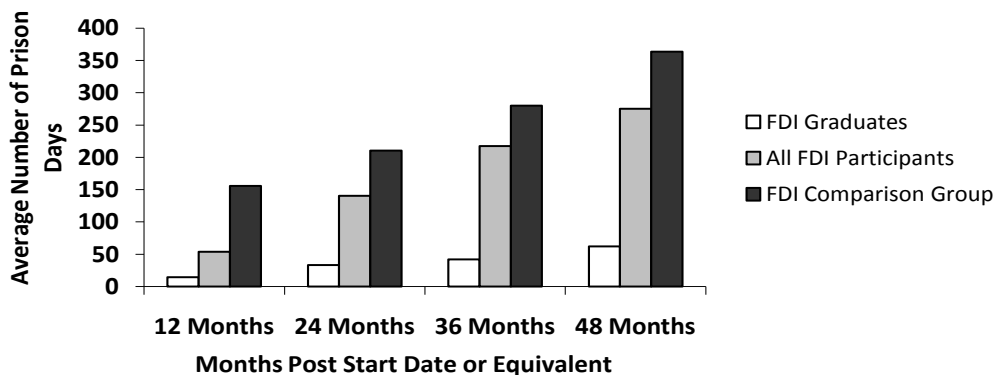
There were no differences in the average number of jail days for FDI participants or the FDI comparison group at any of the follow-up time points. FDI participants had significantly fewer days in prison at 12 months than the FDI comparison group, though this finding is not surprising since diverting offenders from incarceration is one of the primary purposes of this program. However, there were not differences in average numbers of days in prison at any of the later time points.

Figure 1j. Average Number of Cumulative *Jail Days* for FDI Graduates, All FDI Participants, and the FDI Comparison Group Over 48 Months



Note: N sizes by group and time period are as follows: 12 Months: FDI Graduates n = 46, All FDI Participants n = 122, FDI Comparison Group n = 153; 24 Months: FDI Graduates n = 43, All FDI Participants n = 87, FDI Comparison Group n = 138; 36 Months: FDI Graduates n = 34, All FDI Participants n = 61, FDI Comparison Group n = 111; 48 Months: FDI Graduates n = 23, All FDI Participants n = 39, FDI Comparison Group n = 76.

Figure 1k. Average Number of Cumulative *Prison Days* for FDI Graduates, All FDI Participants, and the FDI Comparison Group Over 48 Months

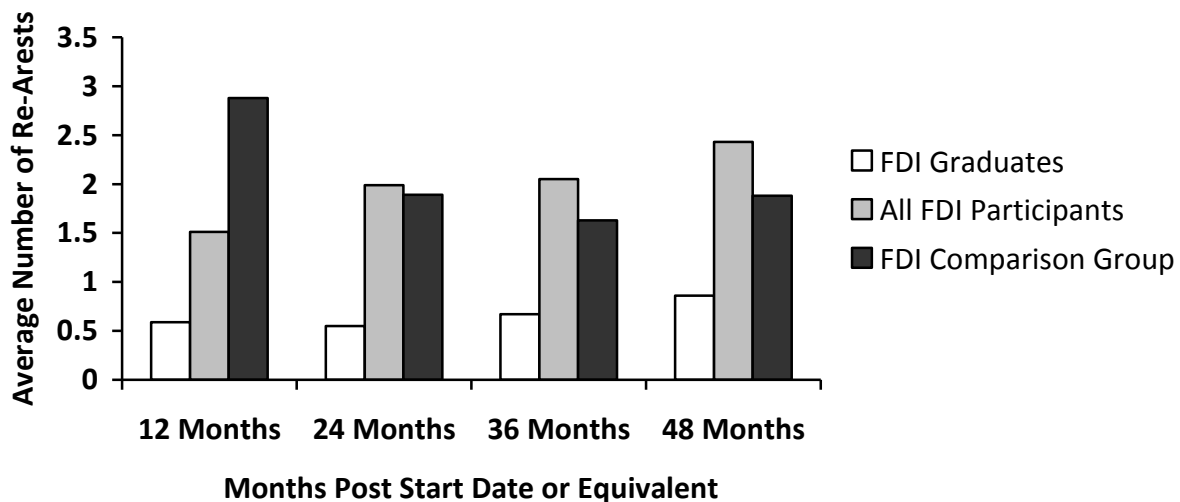


Note: N sizes by group and time period are as follows: 12 Months: FDI Graduates n = 46, All FDI Participants n = 122, FDI Comparison Group n = 153; 24 Months: FDI Graduates n = 43, All FDI Participants n = 87, FDI Comparison Group n = 138; 36 Months: FDI Graduates n = 34, All FDI Participants n = 61, FDI Comparison Group n = 111; 48 Months: FDI Graduates n = 23, All FDI Participants n = 39, FDI Comparison Group n = 76.

FDI: Adjusting for “time at risk”

Unlike the DTC program, FDI participants did not have significantly different numbers of cumulative re-arrests compared to the FDI comparison group. When adjusting for the amount of time FDI participants and comparison group members spent in the community, the significant differences described in Figure 1c above disappeared. FDI participants and FDI comparison group members did not have statistically different numbers of re-arrests at any of the four time points (See Figure 11).

Figure 11. Average Number of Cumulative Re-Arrests Adjusted for Time at Risk for FDI Graduates, All FDI Participants, and the FDI Comparison Group Over 48 Months



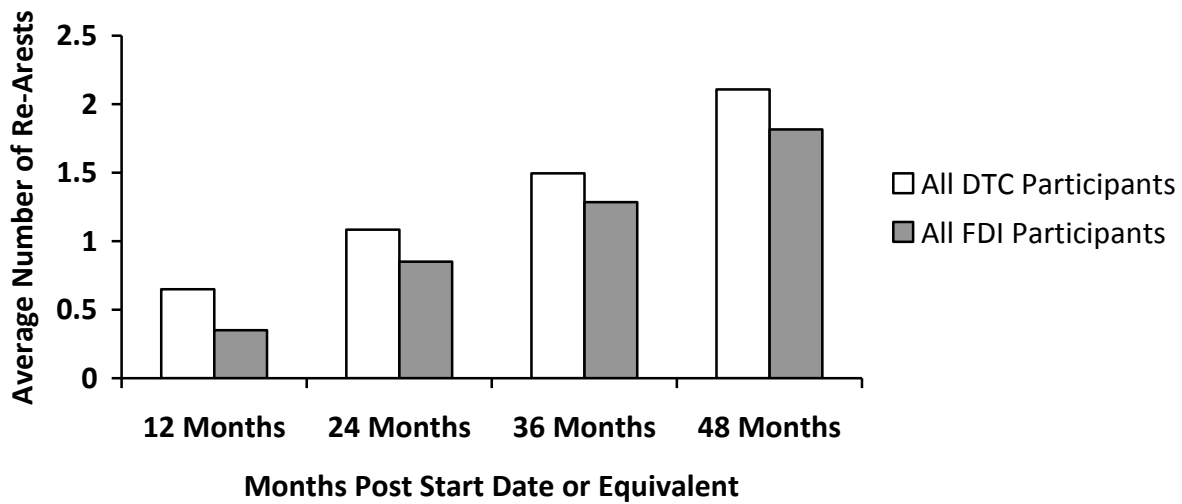
Note: N sizes by group and time period are as follows: 12 Months: FDI Graduates n = 46, All FDI n = 122, FDI Comparison n = 153; 24 Months: FDI Graduates n = 43, All FDI n = 87, FDI Comparison n = 138; 36 Months: FDI Graduates n = 34, All FDI n = 61, FDI Comparison n = 111; 48 Months: FDI Graduates n = 23, All FDI n = 39, FDI Comparison n = 76.

FDI Compared to DTC – Number of Re-Arrests

Figure 1m demonstrates that FDI participants were re-arrested significantly less often than the DTC participants at 12 months, and while not significant at the subsequent time points, it is likely that the small numbers of participants, particularly for the FDI group, prevent statistical significance from emerging.

Figure 1m illustrates the average number of re-arrests for 48 months after entering the respective program for all FDI and all DTC participants. The reported average number of re-arrests was adjusted for age, ethnicity (African American or non-African American), gender, total prior arrests, total prior drug arrests, and total prior property arrests.

Figure 1m. Average Number of Cumulative Re-Arrests for All DTC Participants Compared to All FDI Participants Over 48 Months (Study Cohorts 2004-2007)

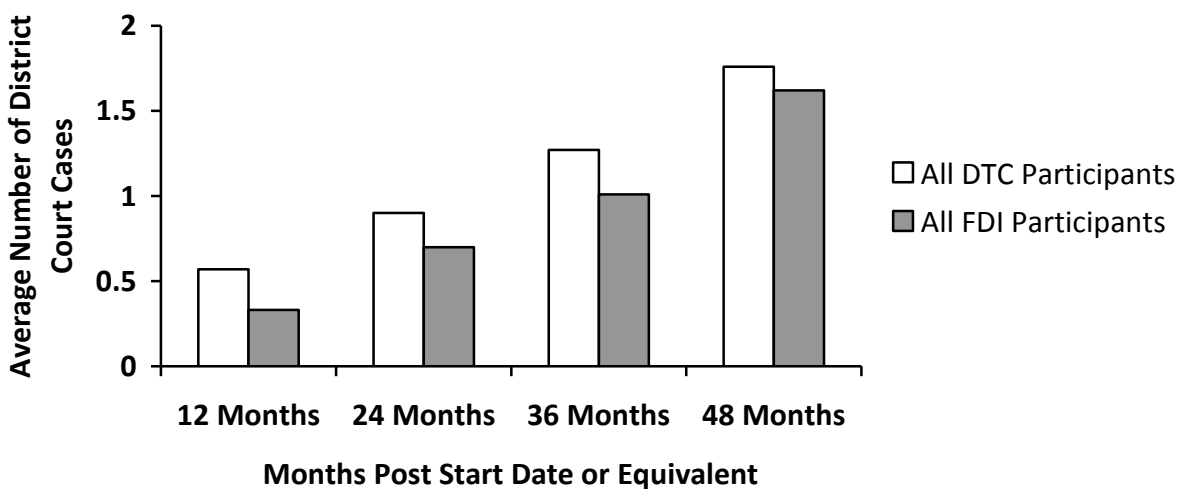


Note: N sizes by group and time period are as follows: 12 Months: All DTC n = 685, All FDI n = 122; 24 Months: All DTC n = 138, All FDI n = 87; 36 Months: All DTC n = 318, All FDI n = 61; 48 Months: All DTC n = 85, All FDI n = 39.

FDI Compared to DTC – Number of Subsequent Court Cases

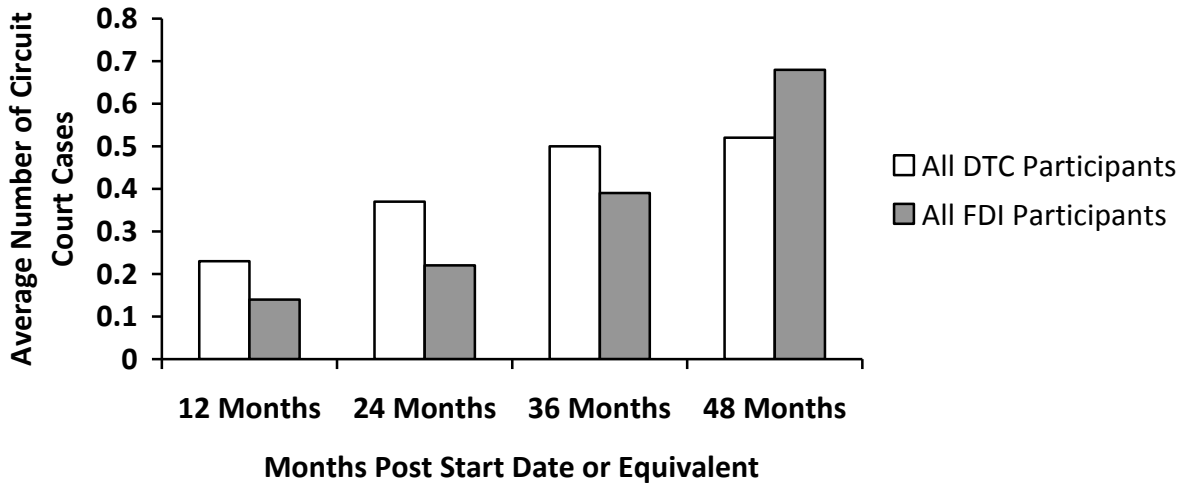
FDI participants had significantly fewer District Court cases at 12 months and significantly fewer Circuit Court cases at both 12 and 24 months, compared to DTC participants. These results are illustrated in Figures 1k and 1l below.

Figure 1n. Average Number of Cumulative District Court Cases for All DTC Participants Compared to All FDI Participants Over 48 Months



Note: N sizes by group and time period are as follows: 12 Months: All DTC n = 685, All FDI n = 122; 24 Months: All DTC n = 138, All FDI n = 87; 36 Months: All DTC n = 318, All FDI n = 61; 48 Months: All DTC n = 85, All FDI n = 39.

Figure 1o. Average Number of Cumulative *Circuit* Court Cases for All DTC Participants Compared to All FDI Participants Over 48 Months

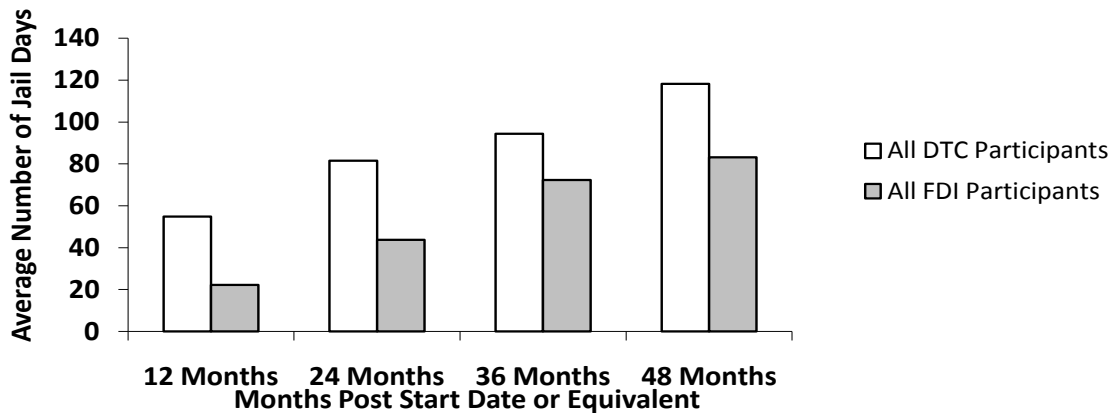


Note: N sizes by group and time period are as follows: 12 Months: All DTC n = 685, All FDI n = 122; 24 Months: All DTC n = 138, All FDI n = 87; 36 Months: All DTC n = 318, All FDI n = 61; 48 Months: All DTC n = 85, All FDI n = 39.

FDI Compared to DTC – Number of Subsequent Incarceration Days

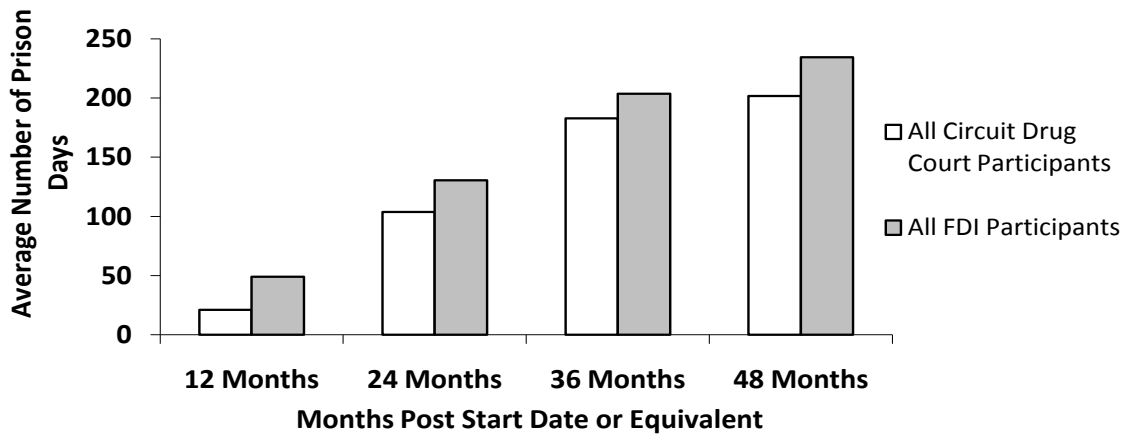
FDI participants had significantly fewer jail days at 12- and 24-month follow-up periods, but not at the other time periods, though the trend remains, and statistical significance may not have been reached because of small numbers of participants with the longer follow-up times. FDI participants also had a marginally significant result of fewer prison days at 12 months, though again the small numbers in the follow-up groups may have prevented statistical significance from emerging.

Figure 1p. Average Number of Cumulative *Jail Days* for All DTC Participants Compared to All FDI Participants Over 48 Months



Note: N sizes by group and time period are as follows: 12 Months: All DTC Participants n = 685, All FDI Participants n = 122; 24 Months: All DTC Participants n = 138, All FDI Participants n = 87; 36 Months: All DTC Participants n = 318, All FDI Participants n = 61; 48 Months: All DTC Participants n = 85, All FDI Participants n = 39.

Figure 1q. Average Number of Cumulative *Prison Days* for All DTC Participants Compared to All FDI Participants Over 48 Months

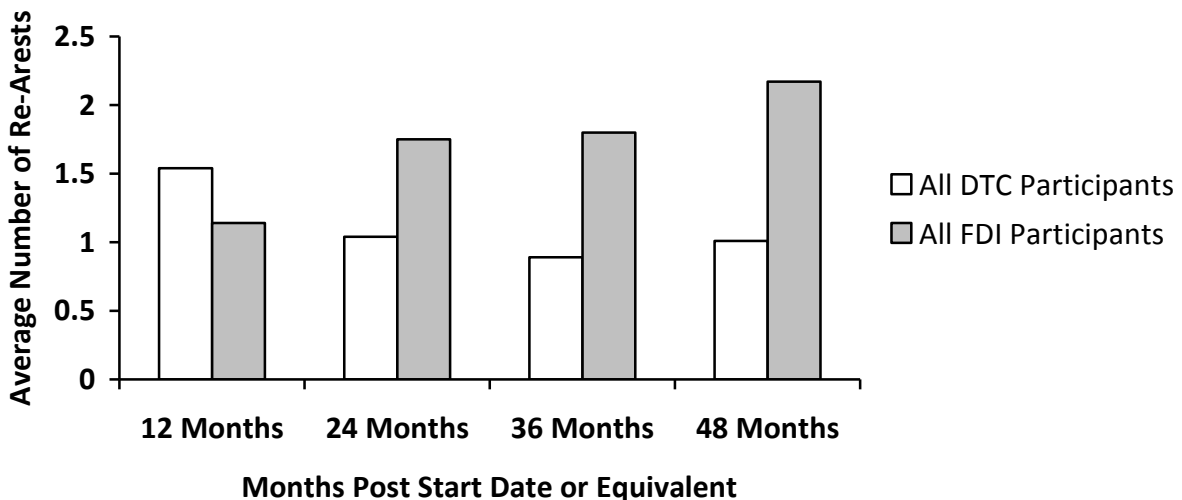


Note: N sizes by group and time period are as follows: 12 Months: All DTC Participants n = 685, All FDI Participants n = 122; 24 Months: All DTC Participants n = 138, All FDI Participants n = 87; 36 Months: All DTC Participants n = 318, All FDI Participants n = 61; 48 Months: All DTC Participants n = 85, All FDI Participants n = 39.

FDI Compared to DTC: Adjusting for “Time at Risk”

When adjusting for time at risk, the pattern changes somewhat for the DTC-FDI comparison, with DTC showing slightly fewer cumulative re-arrests at the 36-month time point. The patterns of adjusted re-arrests are illustrated in Figure 1r.

Figure 1r. Average Number of Cumulative Re-Arrests Adjusted for Time at Risk for All DTC Participants Compared to All FDI Participants Over 48 Months

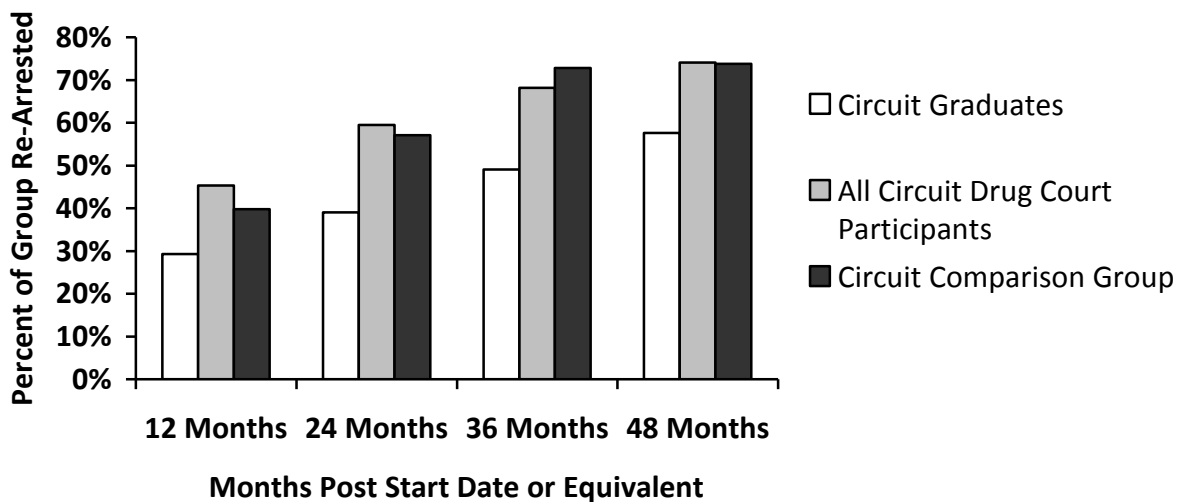


Note: N sizes by group and time period are as follows: 12 Months: All DTC n = 685, All FDI n = 122; 24 Months: All DTC n = 138, All FDI n = 87; 36 Months: All DTC n = 318, All FDI n = 61; 48 Months: All DTC n = 85, All FDI n = 39.

DTC Recidivism Rates

Recidivism rates, the percent of *individuals* re-arrested out of the total, were mixed for DTC participants as shown in Figure 2a. While at 36 months post drug court entry a smaller percentage of DTC participants were re-arrested compared to the comparison group, at 12 and 24 months, this percentage was higher than the comparison group and at 48 months there was no difference between the two groups. However, a smaller proportion of DTC graduates were re-arrested at each time point.

Figure 2a. Cumulative Percent of DTC Graduates, All DTC Participants, and DTC Comparison Group Participants Re-Arrested Over 48 Months

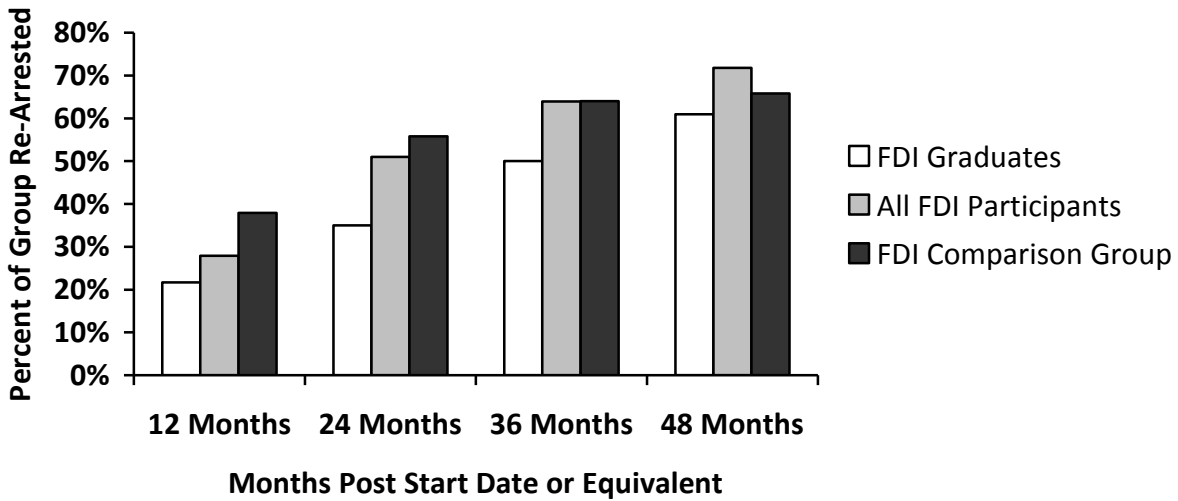


Note: N sizes by group and time period are as follows: 12 Months: DTC Graduates n = 188, All DTC Participants n = 685, DTC Comparison Group n = 683; 24 Months: DTC Graduates n = 172, All DTC Participants n = 518, DTC Comparison Group n = 604; 36 Months: DTC Graduates n = 112, All DTC Participants n = 318, DTC Comparison Group n = 481; 48 Months: DTC Graduates n = 33, All DTC Participants n = 85, DTC Comparison Group n = 294.

FDI Recidivism Rates

Recidivism rates were also somewhat mixed for FDI participants, as shown in Figure 2b. At 12 and 24 months post drug court entry, a smaller proportion of FDI participants were re-arrested compared to the FDI comparison group, which was a trend-level difference at 12 months ($p < .10$). A smaller proportion of FDI graduates were re-arrested at each time point.

Figure 2b. Cumulative Percent of FDI Graduates, All FDI Participants, and FDI Comparison Group Participants Re-Arrested Over 48 Months

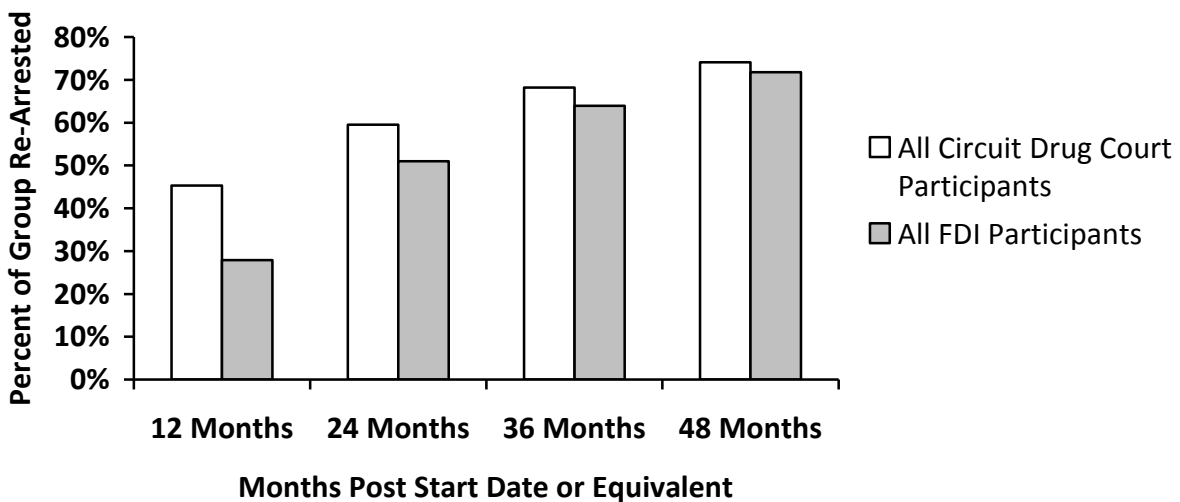


Note: N sizes by group and time period are as follows: 12 Months: FDI Graduates n = 46, All FDI Participants n = 122, FDI Comparison Group n = 153; 24 Months: FDI Graduates n = 43, All FDI Participants n = 87, FDI Comparison Group n = 138; 36 Months: FDI Graduates n = 34, All FDI Participants n = 61, FDI Comparison Group n = 111; 48 Months: FDI Graduates n = 23, All FDI Participants n = 39, FDI Comparison Group n = 76.

DTC Compared to FDI Recidivism Rates

Recidivism rates comparing all DTC drug court participants to all FDI participants are shown in Figure 2c. A significantly smaller percentage of all FDI participants had been re-arrested by 12 months post program entry compared to all DTC participants.

Figure 2c. Cumulative Percent of All DTC Participants Compared to All FDI Participants Over 48 Months (Study Cohorts 2004–2007)



Note: N sizes by group and time period are as follows: 12 Months: All DTC Participants n = 685, All FDI Participants n = 122; 24 Months: All Participants DTC n = 138, All FDI Participants n = 87; 36 Months: All DTC Participants n = 318, All FDI Participants n = 61; 48 Months: All DTC Participants n = 85, All FDI Participants n = 39.

DTC 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).¹¹ Table 5a presents the results of this analysis.

In the 4 years post drug court entry, DTC participants with 4 years of follow-up did not have significantly fewer arrests regardless in any charge type charges, compared to the DTC comparison group. As would be expected, in the 4 years following drug court entry, DTC graduates were re-arrested less often than other participants and the comparison group for all types of arrests.

Table 5a. Average Number of Cumulative Re-Arrests per Person by Charge Type and DTC Group at 48 Months

	DTC Graduates N = 33	All DTC Participants N = 85	DTC Comparison Group N = 294
Average number of drug arrests in the 48 months post drug court entry or equivalent	.82	1.55	1.51
Average number of property arrests in the 48 months post drug court entry or equivalent	.42	.59	.49
Average number of person arrests in the 48 months post drug court entry or equivalent	.18	.22	.29

¹¹ 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 numbers in Table 3a do not reflect the total average arrests in Figure 1a.

FDI Re-Arrests by Charge Type

There were no significant differences for any arrest type between FDI participants with 4 years of follow-up and the FDI comparison group. However, the lack of significance related to drug arrests may be due to small numbers of participants with enough follow-up time, as the pattern is emerging in a promising direction.

Table 5b. Average Number of Cumulative Re-Arrests per Person by Charge Type and FDI Group at 48 Months

	FDI Graduates N = 23	All FDI Participants N = 39	FDI Comparison Group N = 76
Average number of drug arrests in the 48 months post drug court entry or equivalent	1.00	1.06	1.30
Average number of property arrests in the 48 months post drug court entry or equivalent	.35	.43	.43
Average number of person arrests in the 48 months post drug court entry or equivalent	.17	.29	.27

DTC Compared to FDI Re-Arrests by Charge Type

There were no significant differences between DTC and FDI groups at 48 months in the mean number of cumulative drug, property, or person arrests.

Research Question #2: Reducing Substance Abuse

Does participation in DTC or FDI reduce levels of substance abuse in terms of subsequent drug arrests?

DTC participants with 4 years of follow-up time had more re-arrests with drug charges than the comparison group by 48 months after program entry.¹² This result was true both cumulatively (total over the 48 months) and in the 4th year after program entry. The differences between DTC and the DTC comparison group in the first 3 years were not significant. FDI participants did slightly better, with a marginally significant difference in the 3rd year after program entry.¹³ In that year, FDI participants had slightly fewer drug arrests than the FDI comparison group.

We were not able to obtain data to examine drug testing for this study to assess whether the number of positive tests decreased over time. However, by comparing the number of re-arrests for drug-related crimes, we can observe differences between program participants and comparison group participants over time.

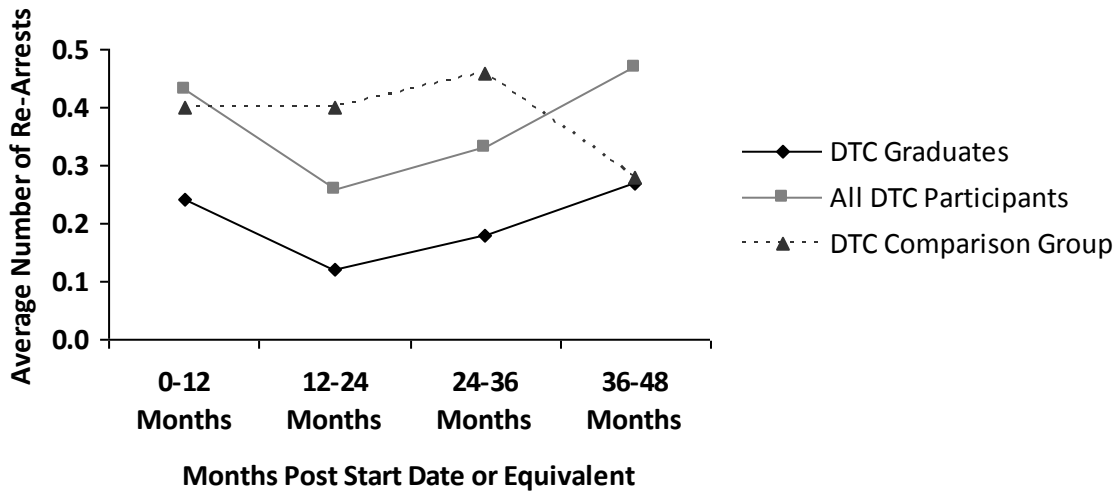
¹² This result occurred whether or not the analyses adjusted for time at risk.

¹³ This result occurred whether or not the analyses adjusted for time at risk.

DTC Number of Drug-Related Re-Arrests

The 4-year averages for the DTC graduates, all DTC participants, and the DTC comparison group members with 4 years of follow-up data can be found in Figure 3a. DTC graduates had the fewest number of drug re-arrests in each 1-year period.

Figure 3a. Average Number of Drug-Related Re-Arrests at 12, 24, 36, and 48 Months for DTC Graduates, All DTC Participants, and DTC Comparison Group

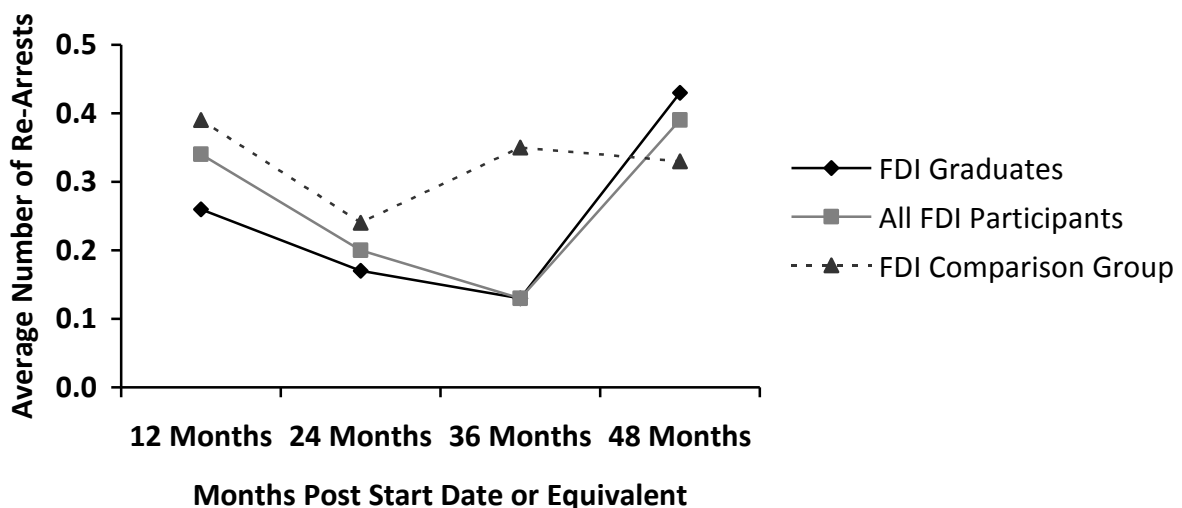


Note: N sizes by group are as follows: DTC Graduates n = 33, All DTC Participants n = 85, DTC Comparison Group n = 294.

FDI Number of Drug-Related Re-Arrests

The 4-year averages for the FDI graduates, all FDI participants, and the FDI comparison group members with 4 years of follow-up data can be found in Figure 3b. FDI participants in year 3 had slightly fewer drug re-arrests than the FDI comparison group.

Figure 3b. Average Number of Drug-Related Re-Arrests at 12, 24, 36, and 48 Months for FDI Graduates, All FDI Participants, and FDI Comparison Group

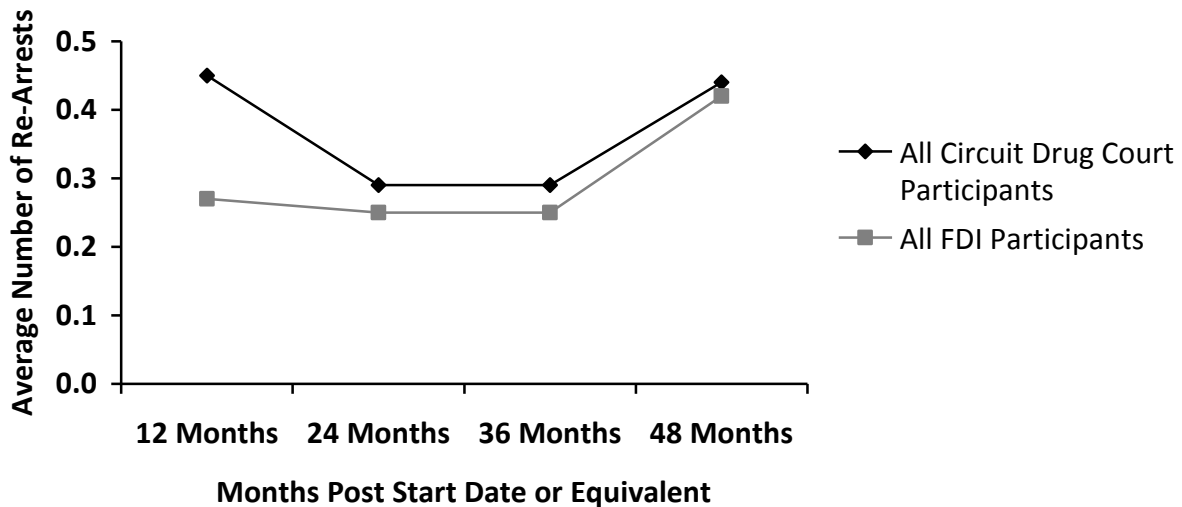


Note: N sizes by group are as follows: FDI Graduates n = 23, All FDI Participants n = 39, FDI Comparison Group n = 76.

DTC Compared to FDI Number of Drug-Related Re-Arrests

There was a significant difference between DTC and FDI participants in the average number of drug-related re-arrests at 12 months, when adjusting for time at risk, with FDI participants having fewer drug-related re-arrests at that time point.

Figure 3c. Average Number of Drug-Related Re-Arrests at 12, 24, 36, and 48 Months for All DTC Participants and All FDI Participants with 4 Years of Follow-up Data



Note: N sizes by group and time are as follows: All DTC Participants n = 85, All FDI Participants n = 39.

Overall, it appears that the FDI program participants have better recidivism outcomes than the DTC participants. One significant difference in program practice between these two groups is that the DTC participants have a significantly longer time period between arrest and entry into the program (means of 98 days for FDI and 140 days for DTC). In addition, the DTC participants spend more days in jail between arrest and program entry (68 days compared to 54 days for FDI participants). One of the 10 Key Components (Component #3) is that drug court participants are placed in the program promptly with the idea that it is more effective to intervene immediately after a new arrest. It is possible that the long wait has resulted in making the DTC participants less receptive to the treatment and other services provided by the DTC program.

Research Question #3: Program Completion

How successful are the programs in bringing participants to completion and graduation?

Whether a program is bringing its participants to completion is measured by program graduation rates and by the amount of time participants spend in the program. The program *graduation rate* is the percentage of participants who successfully completed the program, out of a cohort of participants who have left the program either by graduating or being unsuccessfully discharged. For these cohorts, 39% of DTC drug court program participants (188 of 486) and 54% of FDI program participants (46 of 85) completed their program successfully.¹⁴ For DTC, their graduation rate is lower than the national average of 50% (Cooper, 2003), while the FDI graduation rate is

¹⁴ FDI program data compiled in November 2009 indicate that the rate of graduation/ satisfactory closure for all participants no longer active in the program is now 59%.

slightly higher than the national average. The DTC team could make program improvements by identifying—and working to minimize—the barriers to completion for its participants.

In order to graduate, participants must comply with the program practices and requirements. Therefore, for programs to increase their graduation rates, they must increase the number of participants that comply with program requirements. One strategy program staff can use in dealing with this complex population is to provide additional assistance to those in need so those participants can learn new skills to successfully meet program requirements. Teams should be asking themselves, “How can we help as many participants as possible understand the lessons this program has to teach?” To successfully increase graduation rates, drug court teams must consider the challenges participants face, continually review program operations, and adjust as necessary.

To measure whether the program is following its expected time frame for participant completion, the average amount of time in the program was calculated for participants who had entered the DTC program between April 2004 and July 2007 and who have since been discharged from the program. The minimal requirements of the DTC would allow for graduation at approximately 18 months from the time the participant enters the conditional period to graduation, while FDI would allow for graduation at approximately 30 months from the time the participant enters the conditional period to graduation (while the standard program length is 36 months, the program routinely shortens the requirement to 30 months if participants are doing well).

The average length of stay in the program was calculated by subtracting each individual’s start date from her/his end date to come up with the number of days in the program.

The average length of stay for all DTC participants ($n = 486$) was 687 days (approximately 22 ½ months). DTC graduates ($n = 298$) spent an average of 688 days in the program while DTC non-graduates ($n = 188$) spent an average of 686 days in the program.

The average length of stay for all FDI participants ($n = 85$) was 887 days (approximately 29 months). FDI graduates ($n = 46$) spent an average of 1,001 days (or approximately 33 months) in the program while FDI non-graduates ($n = 39$) spent an average of 753 days (approximately 25 months) in the program.

Interestingly, the DTC program lengths of stay are equal for the graduates and non-graduates, while the difference between these FDI graduates and non-graduates is substantial (8 months).

The proportion of DTC graduates who met the expected minimum duration of 18 months was 83%. The proportion of FDI graduates who met the expected minimum duration of 30 months was 72%.

These results show that the DTC and FDI programs are about on target with its intended length of stay for drug court participants.

Research Question #4: Predictors of Program Success

What participant and program characteristics predict program success and decreased recidivism?

Graduates and unsuccessfully discharged participants were compared on demographic characteristics and criminal history to determine whether there were any patterns in predicting program graduation or recidivism. The following analyses included DTC and FDI participants who entered the program from April 2004 through July 2007. Of the 698 individuals who entered the DTC court program during that time period and were no longer active in the program, 298 (61%) were non-graduates and 188 (39%) were graduates. Of the 85 individuals who entered the FDI program

during that time period and were no longer active in the program, 39 (46%) were non-graduates and 46 (54%) were graduates.

Program Success

Analyses were performed to determine if there were any demographic or criminal history characteristics of participants that were related to successful drug court completion, including gender, age, race/ethnicity, length of time in the program, and number of prior arrests (total, drug, person, and property) in the 5 years before drug court entry. Table 6 shows the results for graduates and non-graduates within the DTC and FDI programs.

This analysis revealed that DTC graduates were significantly older than DTC non-graduates at the arrest that brought them into the program, had significantly fewer total prior arrests in the 5 years prior to their arrest, and had significantly fewer property arrests in the 5 years prior to their arrest.

This analysis for FDI participants showed that FDI graduates remained in the FDI program significantly longer than FDI non-graduates and had significantly fewer total prior arrests in the 5 years before the arrest that brought them into the program.

When all DTC participant characteristics were examined together in relation to graduation status, there were two characteristics that were significant above and beyond the others at the level of a trend ($p < .10$): age at arrest and total number of priors in the 5 years prior to arrest; older participants were more likely to graduate and participants with fewer priors were more likely to graduate.

When all FDI participant characteristics were examined together in relation to graduation status, there were three characteristics that were significant above and beyond the others ($p < .05$) and related to program success: FDI graduates had fewer total priors and remained in the program longer. Unexpectedly, individuals with more property charges in the 5 years prior to arrest were over 5 times more likely to graduate. This finding is difficult to explain, although it is consistent with the national research showing that drug courts that include participants with charge types other than drug charges have higher graduation rates (Carey, Finigan, & Pukstas, 2008; Carey, Waller, & Weller, 2009). There was only one program participant (FDI graduate) who had only property-related crimes prior to program entry. All of the others who had property crimes also had another type.

FDI graduates were more likely to be women, stay in program longer, and have fewer prior drug arrests compared to DTC graduates. FDI graduates were also more likely to be younger than DTC graduates and have fewer total priors, at the level of a trend.

Table 6. Characteristics of DTC and FDI Graduates Compared to Non-Graduates

	DTC Graduates (N = 188)	DTC Non- Graduates (N = 298)	FDI Graduates (N = 46)	FDI Non- Graduates (N = 39)
Male	76% ¹⁵	76%	61%	64%
Mean age at the arrest that brought them into the program	40 ¹⁶	38	38 ¹⁷	39
African American	92%	94%	94%	95%
Mean number of days of program involvement	686 ¹⁸	688	1,001 ¹⁹	753
Mean number of lifetime total prior arrests before the arrest that brought them into program	12.78 ²⁰	15.13	13.20	15.80
Mean number of total prior arrests in 5 years before the arrest that brought them into program	4.6 ²¹	5.5	4.0 ²²	5.3
Mean number of prior <u>drug</u> arrests in 5 years before the arrest that brought them into program	3.5	3.9	2.9 ²³	3.8
Mean number of prior <u>property</u> arrests in 5 years before the arrest that brought them into program	.9 ²⁴	1.2	.8	.5
Mean number of prior <u>person</u> arrests in 5 years before the arrest that brought them into program	.4	.5	.3	.5

¹⁵ DTC graduates were significantly more likely to be male than the FDI graduates.

¹⁶ DTC graduates were significantly older than DTC non-graduates at the time of the arrest that brought them into the program.

¹⁷ Difference between DTC graduates and FDI graduates is marginally significant ($p < .10$).

¹⁸ Difference between DTC graduates and FDI graduates is significant ($p < .05$).

¹⁹ FDI graduates were in the FDI program significantly longer than FDI non-graduates.

²⁰ DTC graduates had significantly fewer total prior lifetime arrests than DTC non-graduates in the years prior to the arrest that brought them into the program.

²¹ DTC graduates had significantly fewer total prior arrests than DTC non-graduates in the 5 years prior to the arrest that brought them into the program.

²² FDI graduates had marginally fewer total prior arrests than FDI non-graduates and than DTC graduates in the 5 years prior to the arrest that brought them into the program ($p < .10$).

²³ FDI graduates had significantly fewer drug arrests than DTC graduates in the 5 years prior to the arrest that brought them into the program.

²⁴ DTC graduates had significantly fewer property arrests than DTC non-graduates in the 5 years prior to the arrest that brought them into the program.

Recidivism

Participant characteristics and arrest history were also examined in relation to whether or not participants were re-arrested in the 4 years following drug court entry. These analyses include all DTC and FDI participants and determine which variables, individually, are related to the presence of any re-arrest at 48 post program entry. Chi-square and independent samples t-test were performed to identify which factors were significantly correlated with recidivism. The results are shown in Table 7.

Table 7. Demographic and Court-Related Variables That Predict Recidivism

	DTC Participants 48 Months (N = 85)	Significant predictor of recidivism 48 months post DTC program entry?	FDI Participants 48 Months (N = 39)	Significant predictor of recidivism 48 months post FDI program entry?
Gender		No		No
Ethnicity		No		No
Age		No		No
# of prior total arrests		No		No
# of prior <u>drug</u> arrests		No		No
# of prior <u>property</u> arrests		No		No
# of prior <u>person</u> arrests		No		No
Length of stay	Spent more time in the program	Yes		No
Program out- come	Did not graduate	Yes	Did not graduate	Trend

Note: Yes = ($p < .05$), Trend = ($p > .05$ and $< .10$), No = ($p > .05$).

Predicting Recidivism: DTC

As shown in Table 7, DTC participants were more likely to have been re-arrested by 48 months after starting the DTC program if they spent *more* time in the program and if they did not graduate.

When these factors were entered into a logistic regression model, and each variable was controlled for, length of time in the program was marginally significant above and beyond the other characteristics ($p < .10$), indicating that individuals who remained in the program longer were more likely to have a re-arrest at 48 months. However, when the model also included program outcome, DTC graduates were significantly more likely to avoid re-arrests at 48 months compared to DTC non-graduates.

Predicting Recidivism: FDI

As shown in Table 5, FDI participants were slightly more likely to have been re-arrested by 48 months after starting the FDI program if they did not graduate.

When these factors were entered into a logistic regression model, and each variable was controlled for, no one characteristic proved to be a significant predictor of re-arrest at 48 months above and beyond the others, including graduation status.

OUTCOME SUMMARY

The outcome analyses were based on a cohort of BCCC participants who entered either the DTC or the FDI programs from April 2004 and July 2007, and comparison groups of offenders eligible for drug court but who received the traditional court process rather than either of the BCCC programs.

The results of the outcome analysis for the Baltimore City Circuit Court DTC and FDI programs are mixed.

- DTC participants had fewer re-arrests than the DTC comparison group over time, when adjusting for time in the community.
- DTC participants had more Circuit Court cases during their first year after starting the program. They also had more days in jail cumulatively across time, but fewer days in prison.
- FDI participants had fewer numbers of new arrests in the first year than the FDI comparison group, but this effect disappeared when adjusting for time in the community. They had fewer prison days in their first year.
- Average length of program participation was 22½ months for the DTC group and 29 months for the FDI group.
- The DTC graduation rate was 39% and the FDI graduation rate was 54%. The FDI graduation rate is higher even though its program requires (and results in) a longer length of stay.

COST EVALUATION

The Baltimore City Circuit Court Adult Drug Treatment Court (DTC) and Felony Diversion Initiative (FDI) cost evaluation was designed to address the following study questions:

1. How much do the DTC and FDI programs cost?
2. What is the 4-year cost impact on the criminal justice system of sending offenders through DTC, FDI, or traditional court processing?
3. What is the impact on the criminal justice system of the time between the eligible arrest and DTC/FDI program entry (in terms of arrests and jail)?
4. What is the cost-benefit ratio for investment in the DTC and FDI?

Cost Evaluation Methodology

COST EVALUATION DESIGN

Transaction and Institutional Cost Analysis

The cost approach utilized by NPC Research 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 from multiple agencies. 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 or has a drug test, resources such as judge time, defense attorney time, court facilities, and urine cups are used. Court appearances and drug tests are program transactions, while subsequent jail and probation days are outcome transactions. The TICA approach recognizes that these transactions take place within multiple organizations and institutions that work together. These organizations and institutions contribute to the cost of each transaction that occurs for program participants. TICA works well for conducting costs assessment in an environment such as a drug treatment court because it takes into account the 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 central core of the cost-to-taxpayer approach in calculating benefits (avoided costs) for DTC and FDI specifically is the fact that untreated substance abuse will cost various tax-dollar funded systems money that could be avoided or diminished if substance abuse were treated. In this approach, any cost that is the result of untreated substance abuse and that directly impacts a citizen (through tax-related expenditures) is used in calculating the benefits of substance abuse treatment.

Opportunity Resources

Finally, NPC's cost approach looks at publicly funded costs as "opportunity resources." The concept of opportunity *cost* from the economic literature suggests that system resources are available to be used in other contexts if they are not spent on a particular transaction. The term opportunity *resource* describes these resources that are now available for different use. For ex-

ample, 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, who, perhaps, possesses a more serious criminal justice record than does the individual who has received treatment and successfully avoided subsequent incarceration.

COST EVALUATION METHODS

The cost evaluation involves calculating the costs of the DTC and FDI programs, and the costs of outcomes (or impacts) after program entry (or the equivalent for the comparison group). In order to determine if there are any benefits (or avoided costs) due to program participation, it is necessary to determine what the participants' outcome costs would have been had they not participated in DTC or FDI. One of the best ways to do this is to compare the costs of outcomes for program participants to the outcome costs for similar individuals that were eligible for DTC or FDI but who did not participate. The comparison groups in this cost evaluation are the same as those used in the preceding outcome evaluation.

TICA Methodology

The TICA methodology is based upon six distinct steps. Table 8 lists each of these steps and the tasks involved.

Step 1 (determining DTC and FDI process) was performed during the site visits, through analysis of court and DTC/FDI documents, and through interviews with key stakeholders. Step 2 (identifying program transactions) and Step 3 (identifying the agencies involved with transactions) were performed by analyzing the information gathered in Step 1. Step 4 (determining the resources used) was performed through interviewing key stakeholders and by collecting administrative data from the agencies involved.²⁵ Step 5 (determining the cost of the resources) was performed through interviews with DTC/FDI and non-program staff and with agency finance officers, as well as analysis of budgets found online or provided by agencies. Step 6 (calculating cost results) involved calculating the cost of each transaction and multiplying this cost by the number of transactions. All the transactional costs for each individual were added to determine the overall cost per DTC and FDI participant and per comparison group individual. This information was generally reported as an average cost per person for the DTC and FDI program, and outcome/impact costs due to re-arrests, jail time and other recidivism costs. In addition, due to the nature of the TICA approach, it was also possible to calculate the cost for DTC and FDI processing for each agency as well as outcome costs per agency.

The costs to the criminal justice system outside of the DTC and FDI programs consist of those due to new arrests, subsequent court cases, probation/parole time served, prison time served, and jail time served. DTC program costs consist of all program transactions including drug court sessions, case management, drug tests, drug treatment, transitional housing, Addicts Changing Together Substance Abuse Program (ACT-SAP) days, and jail sanctions. FDI program costs consist of all program transactions including FDI court sessions, case management, drug tests, drug treatment, transitional housing, ACT-SAP days, and short-term jail stays that occurred during the program.

²⁵ The Maryland Office of the Public Defender chose not to provide cost information for this study; therefore, costs attributed to this agency are estimated based on data from cost evaluations conducted on Harford County District and Prince George's County Circuit drug courts.

Table 8. The Six Steps of TICA

	Description	Tasks
Step 1:	Determine flow/process (i.e., how participants move through the criminal justice system)	Site visits/direct observations 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)	Analysis of process information gained in Step 1
Step 3:	Identify the agencies involved in each transaction (e.g., court, treatment, police)	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)	Interviews with key stakeholders 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	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)	Indirect 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 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. (These calculations are described in more detail below)

Cost Evaluation Results

COST EVALUATION QUESTION #1: PROGRAM COSTS

How much do the DTC and FDI programs cost?

As described in the cost methodology, 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. Transactions are those points within a system where resources are consumed and/or change hands. DTC program transactions for which costs were calculated in this analysis included drug court appearances, case management, drug tests, drug treatment, transitional housing, ACT-SAP days, and jail sanctions. FDI program transactions for which costs were calculated in this analysis included FDI court appearances, case management, drug tests, drug treatment, transitional housing, ACT-SAP days, and short-term jail stays that occurred during the program. Only costs to the taxpayer were calculated in this study. All cost results represented in this report are based on fiscal year 2009 dollars.

DTC and FDI Transactions

In Baltimore City, DTC hearings include representatives from the Baltimore City Circuit Court, the Baltimore City State's Attorney Office, the Baltimore City Sheriff's Office, the Maryland Office of the Public Defender, and the Maryland Division of Parole and Probation (DPP). The cost of a ***DTC court appearance*** (the time during a session when a single participant is interacting with the judge) is calculated based on the average amount of court time (in minutes) each participant uses during the court session. This incorporates the direct costs of each DTC team member present during sessions, the time team members spent preparing for or contributing to the session, the agency support costs, and the overhead costs. The average cost for a single DTC court appearance is **\$105.13** per participant.

FDI court sessions include representatives from the Baltimore City Circuit Court, the Baltimore City State's Attorney Office, the Baltimore City Sheriff's Office, the Maryland Office of the Public Defender, and the Maryland Division of Parole and Probation. The cost of an ***FDI court appearance*** is calculated using the same TICA method used for calculating the cost of a drug court appearance. The average cost for a single FDI court appearance is **\$179.58** per participant. This cost per court session is higher than the DTC per session cost because the annual cost of FDI sessions is divided by a much smaller number of annual FDI sessions (104 court sessions per year for the DTC and 24 for the FDI).

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.²⁶ The main agency involved in case management for both the DTC and FDI is the Division of Parole and Probation, but staff from the Circuit Court are also involved in case management for the programs. The per day cost of case management is **\$4.16** per participant for DTC and **\$4.60** per participant for FDI. The cost per day of case management is higher for the FDI program because though they have lower staffing cost, the total cost is divided by fewer participants than the DTC program's staffing cost. The DTC program has an efficiency of scale that results in a slightly lower average cost.

²⁶ Case management can include home visits, meeting with participants, evaluations, phone calls, paperwork, answering questions, consulting with therapists, documentation, file maintenance, residential referrals, and providing resources and referrals for educational and employment opportunities.

Treatment for both DTC and FDI participants is provided by one of 12 private treatment providers. Treatment is funded by Baltimore Substance Abuse Systems (BSAS). Some of the treatment services provided include group, individual, intensive outpatient, and family counseling. Detoxification and residential treatment at the Intermediate Care Facility (ICF) are also funded by BSAS. Since this cost analysis is focused on the cost to taxpayers, the cost of drug treatment shown below is only the amount paid by public funds (non-taxpayer funds such as private insurance or private payments were not included). The cost of drug treatment reflects—as closely as possible—the true cost to taxpayers. The cost of *inpatient and outpatient treatment* (including group, individual, and family counseling) is **\$50.00** per session. The cost per day of *detoxification* is **\$215.00**.²⁷ The cost per day of *residential/ICF treatment* is **\$96.00**. All treatment costs were obtained by NPC from a representative of BSAS.

Halfway House transitional housing is offered to DTC and FDI participants at a rate of **\$32.00** per day. Halfway House provides up to 180 days of therapeutic community treatment.

Addicts Changing Together-Substance Abuse Program (ACT-SAP) is offered at the Baltimore City Detention Center. It is a 45-day treatment regimen including individual, group, family counseling, acupuncture, life skills training, and adult education groups. The Maryland Department of Public Safety & Correctional Services (DPSCS) pays for men's ACT-SAP episodes and BSAS pays for women's ACT-SAP episodes. The cost per episode of ACT-SAP is **\$520.00**.

Urinalysis (UA) drug tests are conducted by private treatment providers and DPP. BSAS pays for the UAs conducted by private treatment agencies at a rate of **\$6.32** per test. The cost of a UA drug test at DPP is **\$4.98**. All rates cover the full cost of materials, salary, support, and overhead associated with the test. DTC and FDI participants do not pay for drug testing.

Jail sanction days and jail days occur at the Baltimore City Detention Center, which is a facility operated by the DPSCS. Jail bed days are **\$87.00** per person per day. This rate was provided by a representative of the DPSCS Services. The rate includes all staff time, food, medical, booking, and support/overhead costs.

DTC Program Costs

Table 9 presents the average number of DTC transactions (court appearances, treatment sessions, etc.) per DTC participant and per DTC graduate, and the total cost for each type of transaction (number of transactions times the cost per transaction) for the case that led to participation in the DTC program. The sum of these transactions is the total per participant cost of the program. The table includes the average for DTC graduates (N = 188) and for all DTC participants (N = 486, 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.

²⁷ BSAS no longer pays for detoxification services. Individuals who require hospital-based detoxification for alcohol or drugs are now managed at local hospitals. Currently, those who are detoxifying from opiates are offered opioid maintenance therapy (OMT); the reimbursement rate from BSAS is \$65.00 per week for methadone or \$84.00 for Buprenorphine per week. Because the cost analyses were based on a cohort of DTC and FDI participants who entered from April 1, 2004, through June 30, 2007, NPC used the old BSAS detoxification rate of \$215.00 per day.

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 = 188	Average number of transactions per DTC participant	Average cost per DTC participant N = 486
DTC Court Appearances	\$105.13	21.86	\$2,298	21.11	\$2,219
Case Management	\$4.16	685.64 Days ²⁸	\$2,852	687.20 Days	\$2,859
Treatment Sessions	\$50.00	66.38	\$3,319	48.49	\$2,425
Residential Days	\$96.00	20.19	\$1,938	20.16	\$1,935
Detoxification Days	\$215.00	22.38	\$4,812	27.93	\$6,005
Transitional Housing Days	\$32.00	48.91	\$1,565	43.01	\$1,376
ACT-SAP Episodes	\$520.00	0.38	\$198	0.44	\$229
BSAS UA Drug Tests	\$6.32	30.71	\$194	24.15	\$153
Probation UA Drug Tests	\$4.98	82.31	\$410	82.86	\$413
Jail Sanction Days	\$87.00	2.12	\$184	4.33	\$377
Total DTC			\$17,770		\$17,991

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

Table 9 illustrates the per participant cost to the taxpayer for the DTC program. Drug treatment (treatment sessions, detoxification, and residential days) accounts for over 57% of program costs (\$10,365 out of \$17,991), but that is not unusual given that treatment is a key component of drug courts. Case management (\$2,859) is the second most expensive transaction for the program, followed by court appearances (\$2,219). Close contact and intense case management and supervision of participants are two more of the essential elements of drug courts, so higher costs in these areas are common in drug courts.

Transitional housing is also a substantial program cost (\$1,376). There was an average of about four jail sanction days on average for each DTC participant, which resulted in a cost of \$377.

DTC Costs per Agency

Another useful way to examine costs is to quantify them by agency. Table 10 provides per participant costs by agency for the DTC program. Because BSAS conducts the individual and group treatment sessions, detoxification, residential treatment, transitional housing, and some UA drug testing for the DTC program, it reasonably follows that it also shoulders the largest proportion of program costs (66%). The second largest proportion belongs to DPP, which has seven employees involved in court sessions, case management, and UA drug testing.

²⁸ Case management is calculated by number of days in drug court, so the average number of transactions in this case is the average number of days spent in the DTC.

Table 10. Average DTC Cost per Participant by Agency

Agency	Average Cost per DTC Graduate	Average Cost per DTC Participant
Baltimore City Circuit Court	\$1,081	\$1,055
Baltimore City State’s Attorney’s Office	\$718	\$694
Baltimore Substance Abuse Systems, Inc.	\$11,900	\$11,964
Baltimore City Sheriff’s Office	\$105	\$102
Maryland Office of the Public Defender	\$408	\$394
Maryland Division of Parole and Probation	\$3,248	\$3,247
Maryland Department of Public Safety & Correctional Services	\$310	\$535
Total	\$17,770	\$17,991

Notes: 1) Average agency costs per participant have been rounded to the nearest whole dollar amount. 2) Estimated using cost information from Harford County District and Prince George’s County Circuit drug court programs.

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 drug treatment, transitional housing, and UA drug testing conducted by BSAS are partially state-funded and partially funded by local sources, but in determining the financial impacts for Baltimore City and the State of Maryland, all BSAS costs were included in local costs because the breakdown of BSAS costs by jurisdiction could not be determined. Because the State’s Attorney, BSAS, and Sheriff’s Office are mostly locally funded, the majority of DTC program costs accrue to Baltimore City (71% or \$12,760 per participant). The State of Maryland portion of DTC program costs (29% or \$5,231) are mainly due to DPP’s involvement.

FDI Program Costs

Table 11 presents the average number of FDI transactions (court appearances, treatment sessions, etc.) per FDI participant and per FDI graduate, and the total cost for each type of transaction (number of transactions times the cost per transaction) for the case that led to participation in the FDI program. The sum of these transactions is the total per participant cost of the program. The table includes the average cost for FDI graduates (N = 46) and for all FDI participants (N = 85), 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 11. Average FDI Program Costs per Participant

Transaction	Transaction Unit Cost	Average Number of Transactions per FDI Graduate	Average Cost per FDI Graduate N = 46	Average Number of Transactions per FDI Participant	Average Cost per FDI Participant N = 85
FDI Court Appearances	\$179.58	28.47	\$5,113	25.22	\$4,529
Case Management	\$4.60	1,001.33 Days ²⁹	\$4,606	887.31 Days	\$4,082
Treatment Sessions	\$50.00	63.58	\$3,179	48.11	\$2,406
Residential Days	\$96.00	34.47	\$3,309	37.47	\$3,597
Detoxification Days	\$215.00	13.55	\$2,913	16.93	\$3,640
Transitional Housing Days	\$32.00	152.95	\$4,894	134.46	\$4,303
ACT-SAP Episodes	\$520.00	0.05	\$26	0.14	\$73
BSAS UA Drug Tests	\$6.32	35.16	\$222	28.26	\$179
Probation UA Drug Tests	\$4.98	60.87	\$303	53.54	\$267
Short-Term Jail Stays During the Program ³⁰	\$87.00	6.13	\$533	7.89	\$686
Total FDI			\$25,098		\$23,762³¹

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

Table 11 illustrates the per participant cost to the taxpayer for the FDI program. The average cost per participant is \$23,762. Taken together, transitional housing and drug treatment (treatment sessions, detoxification, and residential days) account for 59% of program costs. Drug treatment (\$9,643) is the most expensive transaction for the program, followed by FDI court appearances (\$4,529), transitional housing (\$4,303), and case management (\$4,082). As with the DTC program, there were few jail days (approximately 8 days per participant at a cost of \$686). Program costs per participant for the FDI are \$5,771 higher than DTC program costs, but this difference

²⁹ Case management is calculated by number of days in the program, so the average number of transactions in this case is the average number of days spent in the FDI.

³⁰ Short-term jail stays that occurred during the program could include jail sanctions or jail stays due to new offenses.

³¹ Total annual program costs for the FDI are lower than the DTC, but because the FDI serves a proportionally smaller number of participants per year than the DTC (125 vs. 479) its infrastructure costs are shared among the smaller number and thus the “per person” cost is higher. The example of case management is instructive of this fact. The ratio of participants to case management staff is 21:1 for the FDI (125 participants to 6 staff members involved in case management) and the ratio is 48:1 for the DTC (479 participants to 10 staff members involved in case management). If the FDI program expanded to serve additional participants, it would decrease its per person cost of case management (as well as overall program costs per participant). This must be balanced with the fact that at some point in the expansion the FDI would need to hire more case managers and probation agents, thus increasing its overall annual program costs.

may be in part due to participants having a longer average length of stay in the FDI program than in the DTC (887 days for FDI and 687 days for DTC).

FDI Costs per Agency

Table 12 provides per participant costs by agency for the FDI program. BSAS has by far the largest proportion of program costs (64%) because it is involved in or pays for nearly every FDI program transaction, including case management, drug testing, individual treatment, group treatment, detoxification, residential treatment, and transitional housing.

The second largest proportion belongs to DPP, because this agency’s Probation Agents conduct the majority of the FDI program case management. The Division of Parole and Probation is also involved in FDI court sessions and drug testing. The Circuit Court also shares a significant portion of total program costs, due to the Court’s involvement in FDI court sessions and case management.

Table 12. Average FDI Cost per Participant by Agency

Agency	Average Cost per FDI Graduate	Average Cost per FDI Participant
Baltimore City Circuit Court	\$1,637	\$1,450
Baltimore City State’s Attorney’s Office	\$955	\$846
Baltimore Substance Abuse Systems, Inc.	\$15,788	\$15,267
Baltimore City Sheriff’s Office	\$106	\$94
Maryland Office of the Public Defender	\$914	\$809
Maryland Division of Parole and Probation	\$5,154	\$4,565
Maryland Department of Public Safety & Correctional Services	\$545	\$731
Total³²	\$25,099	\$23,762

Notes: 1) Average agency costs per participant have been rounded to the nearest whole dollar amount. 2) Estimated using cost information from Harford County District and Prince George’s County Circuit drug court programs.

Local Versus State Costs for the FDI Program

State policy leaders and administrators may find it useful to examine programs costs by jurisdiction (state or local/county). The drug treatment, transitional housing, and UA drug testing paid for by BSAS are partially state-funded and partially funded by local sources, but in determining the financial impacts for Baltimore City and the State of Maryland, all BSAS costs were included in local costs because the breakdown of BSAS costs by jurisdiction could not be determined. Given that the State’s Attorney, BSAS, and Sheriff’s Office are mostly locally funded, the majority of FDI program costs accrue to Baltimore City (68% or \$16,207 per participant). The State of Maryland portion of FDI program costs (32% or \$7,555) are mainly due to DPP’s involvement.

³² Totals in this row may not match the totals in the program costs by transaction table due to rounding.

COST EVALUATION QUESTION #2: OUTCOME/RECIDIVISM COSTS

What is the 4-year cost impact on the criminal justice system of sending offenders through DTC, FDI, 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, FDI, 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, jail time, prison time, and probation/parole 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 Costs

This section describes the cost outcomes experienced by DTC, FDI, and comparison group participants after offender participation in either the DTC or FDI program compared to traditional court processing. Two comparison groups were used in this analysis in order to allow for a more complete match to the particular program participants being analyzed. The comparison groups used were the same as those in the outcome section above. Outcome costs were calculated for 4 years from the time of program entry for all groups (the mean number of days between arrest and drug court entry for the DTC group was added to the arrest dates for comparison group members so that an equivalent “program entry” date could be calculated for the DTC’s comparison group, and a similar method using FDI entry dates was used for the FDI’s comparison group). For each outcome transaction, the same data sources were used for both groups to allow for a valid outcome cost comparison. Lower costs for DTC (or FDI) participants compared to offenders who did not participate in the DTC (or FDI) program indicate that the program is providing a return on investments in the particular program.³³

The outcome costs experienced by DTC and FDI graduates are also presented below. Costs for graduates are included for informational purposes but should not be directly compared to the comparison groups. If the comparison group members had entered the program, some may have graduated while others would not have completed the program successfully. The DTC (or FDI) graduates as a group are not the same as a group made up of both potential graduates and potential non-graduates.

The outcome costs discussed below were calculated using information gathered by NPC from the Maryland Administrative Office of the Courts, Baltimore City Circuit Court, Baltimore City District Court, Baltimore City State’s Attorney’s Office, Baltimore City Detention Center, Baltimore City Police Department, Maryland Division of Parole and Probation, and Maryland Department of Public Safety & Correctional Services.

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 because this methodology accounts for all jurisdictional and agency institutional commitments involved in the support of agency operations, the costs that appear in

³³ Note that some possible costs or cost savings related to the program are not considered in this study. These include the number of drug-free babies born, health care expenses, and drug court participants legally employed and paying taxes. In addition, the cost results that follow do not take into account other less tangible outcomes for participants, such as improved relationships with their families and increased feelings of self-worth.

NPC's analysis may not correspond with agency operating budgets. This difference primarily results from the situation in which transactions include costs associated with resource commitments from multiple agencies. The resource commitments may take the form of fractions of human and other resources that are not explicated in source agency budget documents.

Outcome Transactions

Following is a description of the transactions included in the outcome cost analysis. Some of these same transactions were already described in the program costs above.

The Baltimore City Police Department is the primary law enforcement agency in Baltimore City and conducts the vast majority of the law enforcement arrests in the city, so the cost model of a Baltimore City Police Department arrest episode was used for this analysis. The cost model of *arrest* episodes was constructed from activity and time information provided by multiple representatives of the Department. The model of arrest practice was combined with salary, benefits and budgetary information for the Baltimore City Police Department to calculate a cost per arrest episode. The cost of a single arrest is **\$203.78**.

To construct the cost model for *subsequent court cases*, the budgets of the Baltimore City Circuit Court, Baltimore City District Court, Baltimore City State's Attorney's Office and Maryland Office of the Public Defender were analyzed. Caseload data from the Maryland Judiciary 2006-2007 Statistical Report were also used in determining the cost of a court case. The cost of an average *Circuit Court case* was found to be **\$3,284.84** and the cost of an average *District Court case* was found to be **\$1,400.35**. These costs take into account a broad range of case types, from dismissals through trials.

The cost per day of *jail* in Baltimore City was calculated based on information from the Baltimore City Detention Center. Jail bed days at the Detention Center are **\$87.00** per person, which includes all staff time, booking costs, food, medical, and support/overhead costs.

Prison facilities in Maryland are operated by the Maryland Department of Public Safety & Correctional Services, Division of Corrections (DOC). To represent the daily cost of prison time served by members of the DTC, FDI, and comparison groups, information in the Department's 2008 annual report, including budget, facilities, and average daily population data were analyzed. The resulting prison cost per day (an average of all facilities operated by DOC) is **\$85.15**.

Adult probation and parole services in Baltimore City are provided by the Maryland Division of Parole and Probation, a unit of the Department of Public Safety & Correctional Services, at a cost of **\$4.09** per day for case supervision. This information was provided by a representative of the Department of Public Safety & Correctional Services.

DTC Outcomes and Outcome Cost Consequences

Table 13 represents the criminal justice system outcome events for DTC graduates, all DTC participants (both graduates and non-graduates), and the DTC comparison group over a period of 4 years.

Table 13. Average Number of Outcome Transactions per DTC and Comparison Group Member (Including DTC Graduates) Over 4 Years

Transaction	DTC Graduates N = 33	All DTC Participants N = 85	DTC Comparison Group N = 294
Arrests	1.24	2.15	2.12
Circuit Court Cases	0.27	0.56	0.61
District Court Cases	1.06	1.84	1.71
Jail Days	53.67	117.63	65.06
Probation/Parole Days	599.55	817.94	612.63
Prison Days	1.85	189.43	293.82

DTC participants show higher numbers for arrests, District Court cases, jail days, and probation/parole days, but smaller numbers for Circuit Court cases and prison days than individuals in the DTC comparison group. From these results, an interpretation can be reasonably asserted that participation in DTC is associated with less severe criminal recidivism activity. With slightly more arrests, DTC participants had a larger proportion of the subsequent court cases in the District Court than did the DTC comparison group.³⁴ DTC participants had more probation/parole and jail days than the comparison group, in part due to ACT-SAP sanctions for DTC participants than for the comparison group.

From looking at the average numbers for graduates, it can be determined that the higher number of jail days for DTC participants is mainly due to participants who were unsuccessful in the program. Jail time served as a sanction was not included in this analysis (as jail time as a sanction is not considered an “outcome”). In addition, it is possible that DTC participants who are removed from the program are subsequently receiving heavier sentences than offenders who did not attempt the DTC program. It is also possible that this increased jail time is due to the DTC taking in some offenders who were already incarcerated, who ultimately failed the program and went back to jail to finish serving lengthy sentences that were determined prior to program participation. The DTC team should examine the possible reasons for the larger amount of jail time for unsuccessful DTC participants and create a plan for addressing this issue if appropriate.

³⁴ In Maryland, the Circuit Courts generally handle more serious criminal cases and major civil cases, while the District Courts generally handle traffic and misdemeanor criminal and civil cases.

Table 14 represents the cost consequences associated with criminal justice system outcomes for DTC graduates, all DTC participants (both graduates and non-graduates), and the DTC comparison group over a period of 4 years.

Table 14. Criminal Justice System Outcome Costs per DTC and Comparison Group Member (Including DTC Graduates) Over 4 Years

Transaction	Transaction Unit Cost	DTC Graduates N = 33	All DTC Participants N = 85	DTC Comparison Group N = 294
Arrests	\$203.78	\$253	\$438	\$432
Circuit Court Cases	\$3,284.84	\$887	\$1,840	\$2,004
District Court Cases	\$1,400.35	\$1,484	\$2,577	\$2,395
Jail Days	\$87.00	\$4,669	\$10,234	\$5,660
Probation/Parole Days	\$4.09	\$2,452	\$3,345	\$2,506
Prison Days	\$85.15	\$158	\$16,130	\$25,019
Total		\$9,903	\$34,564³⁵	\$38,016

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

Tables 14 and 15 reveal that DTC participants cost less for Circuit Court cases and prison days, due to less severe criminal justice recidivism. Even though DTC participants cost more for every other transaction, the large savings in prison costs for DTC participants more than makes up for the other costs. The cost for prison is the most expensive transaction for both DTC participants and DTC comparison group members, followed by jail days. If the use of jail had been less for the unsuccessful DTC participants, the overall cost savings due to program participation would have been substantially greater.

The total average cost savings after 4 years is **\$3,452** per DTC participant, regardless of whether or not the participant graduates. If the DTC program continues in its current capacity of serving a cohort of 479 participants annually, this savings of \$863 per participant per year (\$3,452 divided by 4) results in a yearly savings of **\$413,377** per cohort year, which can then continue to be multiplied by the number of years the program remains in operation and by the number of cohorts over time. This savings continues to grow for participants every year after program entry. If savings continue at the same rate, after 10 years the savings *per cohort* will total **\$4,133,770**.

³⁵ Even though the two programs are similar, the DTC and FDI participants have outcome transactions at slightly different rates (e.g., the average number of re-arrests and jail days per participant are different for each group), which results in the different costs.

DTC Outcome Costs by Agency

Of particular interest to state and local policymakers and managers are the financial impacts on the agencies that support the operation of the DTC program. Table 15 represents these financial impacts for agencies of Baltimore City and the State of Maryland.

Table 15. Criminal Justice System Outcome Costs by Agency per DTC and Comparison Group Member (Including DTC Graduates) Over 4 Years

Jurisdiction/Agency	DTC Graduates N = 33	All DTC Participants N = 85	DTC Comparison Group N = 294	Difference (Benefit)
Baltimore City Circuit Court	\$186	\$385	\$419	\$34
Baltimore City District Court	\$616	\$1,070	\$994	-\$76
Baltimore City State's Attorney's Office	\$852	\$1,614	\$1,632	\$18
Baltimore City Police Department	\$253	\$438	\$432	-\$6
Baltimore City Detention Center	\$4,669	\$10,234	\$5,660	-\$4,574
Maryland Office of the Public Defender ³⁶	\$717	\$1,348	\$1,353	\$5
Maryland Division of Parole and Probation	\$2,452	\$3,345	\$2,506	-\$839
Maryland Department of Public Safety & Correctional Services	\$158	\$16,130	\$25,019	\$8,889
Total³⁷	\$9,903	\$34,564	\$38,015	\$3,451

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

As shown in Table 15, cost savings are realized as the result of the DTC for some agencies impacted by the program, but not for others. The Circuit Court, State's Attorney's Office, Office of the Public Defender, and Department of Public Safety & Correctional Services all show cost savings as a result of the DTC program, but the District Court, Baltimore City Police Department, Baltimore City Detention Center, and Division of Parole and Probation do not.

In terms of their comparative recidivist experiences, DTC participants are shown to cost **\$3,451** (or **9%**) less per participant than members of this study's comparison group. Due to low rates of recidivism, DTC graduates show outcome costs of just \$9,903 (\$24,661 less than all DTC participants and \$28,112 less than the comparison group) after 4 years. Figure 4 provides a graph of the costs for each group over 4 years.

³⁶ Estimated using cost information from Harford County District and Prince George's County Circuit drug court programs.

³⁷ Totals in this row may not match the totals in the outcome costs by transaction table due to rounding.

Figure 4. Criminal Justice Recidivism Cost Consequences per Person: DTC Participants and Comparison Group Members (Including DTC Graduates) Over 4 Years

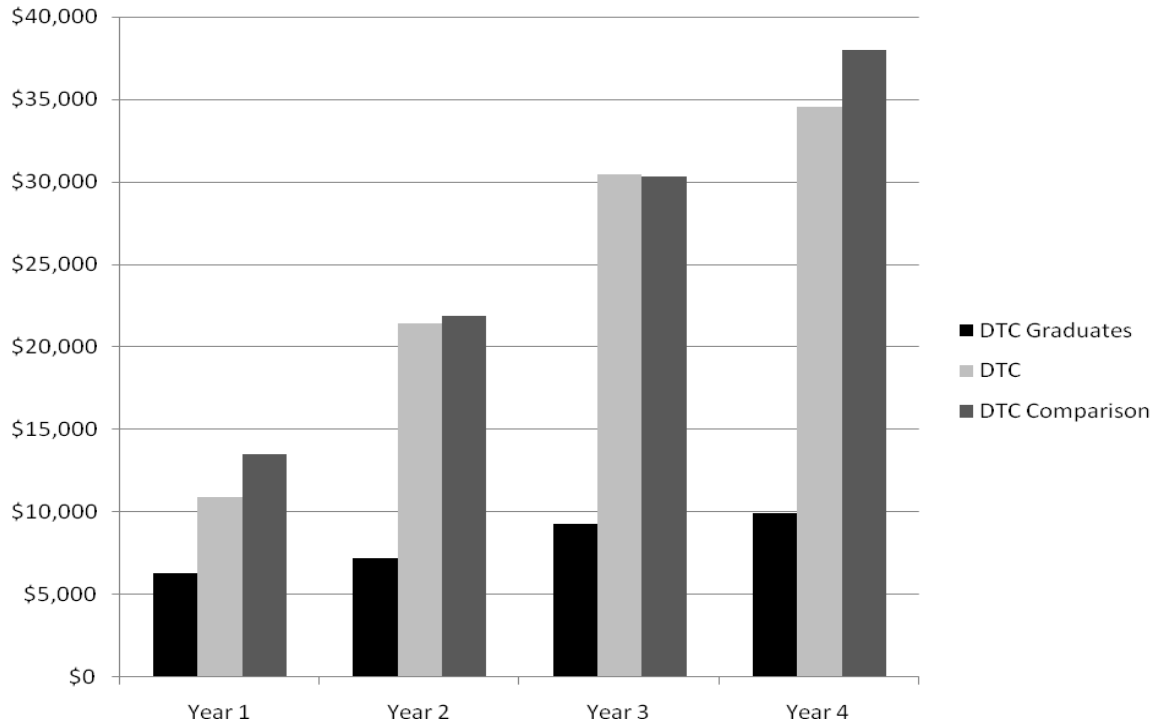
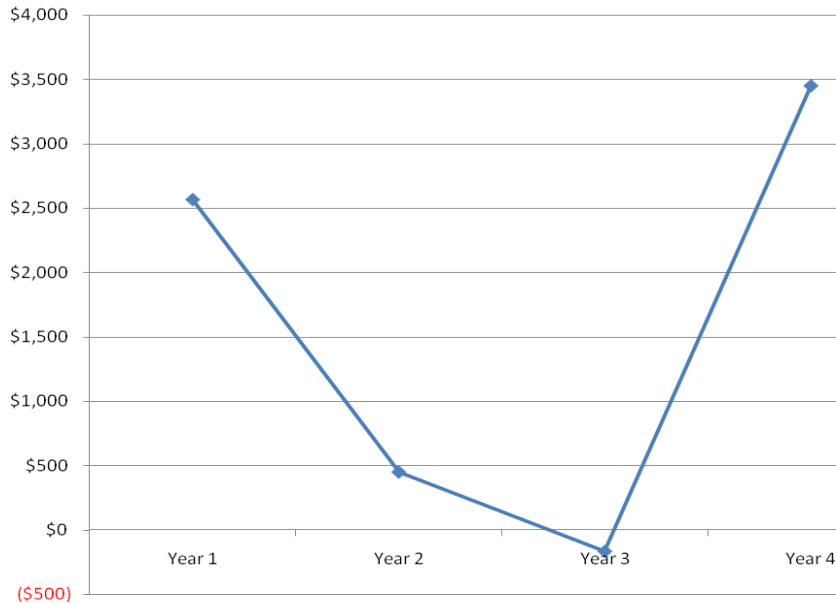


Figure 5 displays a graph of the cost savings (the difference between DTC participants and the comparison group) over the 4 years post-DTC entry. While there is a savings of just over \$2,500 in the first year after entry, the savings decrease between Year 2 and Year 3 going from just over \$450 in Year 2 to a loss of \$164 in Year 3. By Year 4, however, the savings reappear (to nearly \$3,500). This result may be because unsuccessful DTC participants received and served their jail sentences in Years 2 and 3. (Note that these results by year are not the same participants over time, but represent those different cohorts of participants who had at least 12, 24, 36, and 48 months of follow-up time, respectively.)

Figure 5. Cost Savings per DTC Participant for 4 Years Post-Drug Court Entry

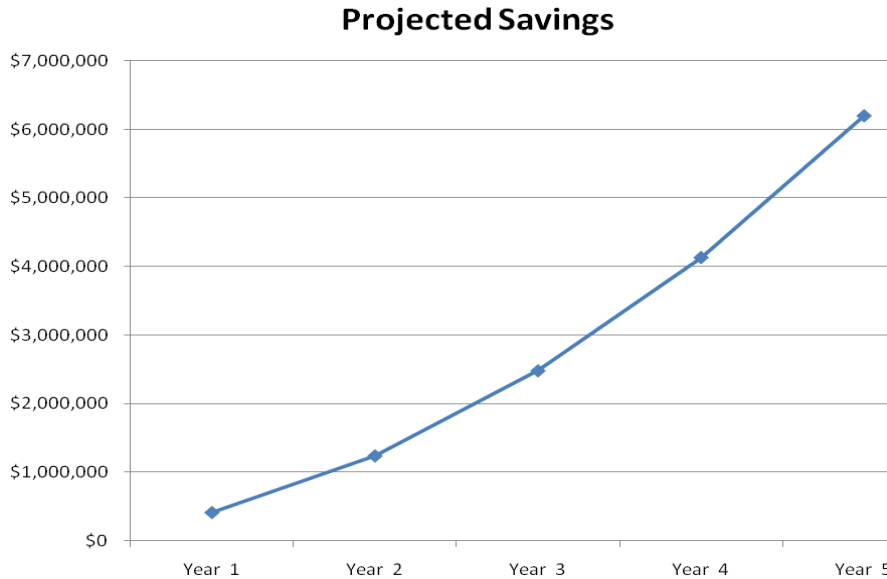


The cost savings illustrated in Figure 5 are those that have accrued in just the 4 years since program entry. Many of these savings are due to positive outcomes while the participant is still in the program.

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

This savings will also continue to grow with the number of participants that enter each year. If the DTC program continues to admit a cohort of **479** participants annually, the savings of \$3,452 per participant over 4 years results in an annual savings of **\$413,377** per cohort, which can then be multiplied by the number of years the program remains in operation and for additional cohorts per year. This accumulation of savings is demonstrated in Figure 6. After 5 years, the accumulated savings come to over **\$6 million**.

Figure 6. Projected DTC Criminal Justice Cost Savings Over 5 Years



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

FDI Outcomes and Outcome Cost Consequences

Table 16 represents the criminal justice system outcome events for FDI graduates, all FDI participants (both graduates and non-graduates), and the FDI comparison group over a period of 4 years.

Table 16. Average Number of Outcome Transactions per FDI and Comparison Group Member (Including FDI Graduates) Over 4 Years

Transaction	FDI Graduates N = 23	All FDI Participants N = 39	FDI Comparison Group N = 76
Arrests	1.48	1.67	1.87
Circuit Court Cases	0.61	0.68	0.50
District Court Cases	1.39	1.57	1.68
Jail Days	88.57	87.19	65.36
Probation/Parole Days	403.35	570.91	645.89
Prison Days	62.22	275.28	363.71

FDI participants show smaller numbers across every transaction except for Circuit Court cases and jail days. FDI participants had fewer arrests, District Court cases, probation/parole days, and prison days than individuals in the comparison group. From these results an interpretation can be reasonably asserted that participation in FDI is associated with positive effects in program participant outcomes in comparison to similar offenders who did not participate in the program.

It is interesting that FDI graduates also had more Circuit Court cases and jail days than members of the FDI comparison group, although every other transaction for graduates showed numbers lower than those of both FDI participants and FDI comparison group members.

Table 17 represents the cost consequences associated with criminal justice system outcomes for FDI graduates, all FDI participants, and the FDI comparison group.

Table 17. Criminal Justice System Outcome Costs per FDI and Comparison Group Member (Including FDI Graduates) Over 4 Years

Transaction	Transaction Unit Cost	FDI Graduates N = 23	All FDI Participants N = 39	FDI Comparison Group N = 76
Arrests	\$203.78	\$302	\$340	\$381
Circuit Court Cases	\$3,284.84	\$2,004	\$2,234	\$1,642
District Court Cases	\$1,400.35	\$1,946	\$2,199	\$2,353
Jail Days	\$87.00	\$7,706	\$7,586	\$5,686
Probation/Parole Days	\$4.09	\$1,650	\$2,335	\$2,642
Prison Days	\$85.15	\$5,298	\$23,440	\$30,970
Total		\$18,906	\$38,134	\$43,674

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

Tables 17 and 18 reveal that FDI participants cost less for every transaction, except for Circuit Court cases and jail days, due to lower criminal justice recidivism. The cost for prison is by far the most expensive transaction for both FDI participants and FDI comparison group members, followed by jail days.

The total average cost savings after 4 years is **\$5,540** per FDI participant, regardless of whether or not the participant graduates. If the FDI program continues in its current capacity of serving a cohort of 125 participants annually, this savings of \$1,385 per participant per year (\$5,540 divided by 4) results in a yearly savings of **\$173,125** per cohort year, which can then continue to be multiplied by the number of years the program remains in operation and by the number of cohorts over time. If the FDI expands to include greater numbers of participants, this savings will also grow. In addition, this savings continues to grow for participants every year after program entry. If savings continue at the same rate, after 10 years the savings *per cohort* will total **\$1,731,250**.

FDI Outcome Costs by Agency

Of particular interest to state and local policymakers and managers are the financial impacts on the agencies that support the operation of the FDI program. Table 18 represents these financial impacts for agencies of Baltimore City and the State of Maryland.

Table 18. Criminal Justice System Outcome Costs by Agency per FDI and Comparison Group Member (Including FDI Graduates) Over 4 Years

Jurisdiction/Agency	FDI Graduates N = 23	All FDI Participants N = 39	FDI Comparison Group N = 76	Difference (Benefit)
Baltimore City Circuit Court	\$419	\$467	\$344	-\$123
Baltimore City District Court	\$808	\$913	\$977	\$64
Baltimore City State's Attorney's Office	\$1,495	\$1,675	\$1,457	-\$218
Baltimore City Police Department	\$302	\$340	\$381	\$41
Baltimore City Detention Center	\$7,706	\$7,586 ³⁸	\$5,686	-\$1,900
Maryland Office of the Public Defender	\$1,228	\$1,377	\$1,218	-\$159
Maryland Division of Parole and Probation	\$1,650	\$2,335	\$2,642	\$307
Maryland Department of Public Safety & Correctional Services	\$5,298	\$23,440	\$30,970	\$7,530
Total³⁹	\$18,906	\$38,133	\$43,675	\$5,542

Notes: 1) Average agency costs per participant have been rounded to the nearest whole dollar amount. 2) Estimated using cost information from Harford County District and Prince George's County Circuit drug court programs.

As shown in Table 18, cost savings are realized as the result of the FDI for some agencies impacted by the program, but not for others. The District Court, Baltimore City Police Department, Division of Parole and Probation, and Department of Public Safety & Correctional Services all show cost savings, but the Circuit Court, State's Attorney's Office, Baltimore City Detention Center, and Office of the Public Defender do not. The greatest savings accrues to the Department of Public Safety & Correctional Services, due to the decreased prison time for FDI participants.

In terms of their comparative recidivist experiences, FDI participants are shown to cost **\$5,542** (or **12.7%**) less per participant than members of this study's comparison group. Due to low rates of recidivism, FDI graduates show outcome costs of \$18,906 (\$19,227 less than all FDI participants and \$24,769 less than the comparison group) after 4 years. Figure 7 provides a graph of the costs for each group over 4 years.

³⁸ While the FDI participants had higher costs related to the BCDC, they accrued less than the DTC participants did on average (\$7,586 for FDI compared to \$10,234 for DTC).

³⁹ 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: FDI Participants and Comparison Group Members (Including FDI Graduates) Over 4 Years

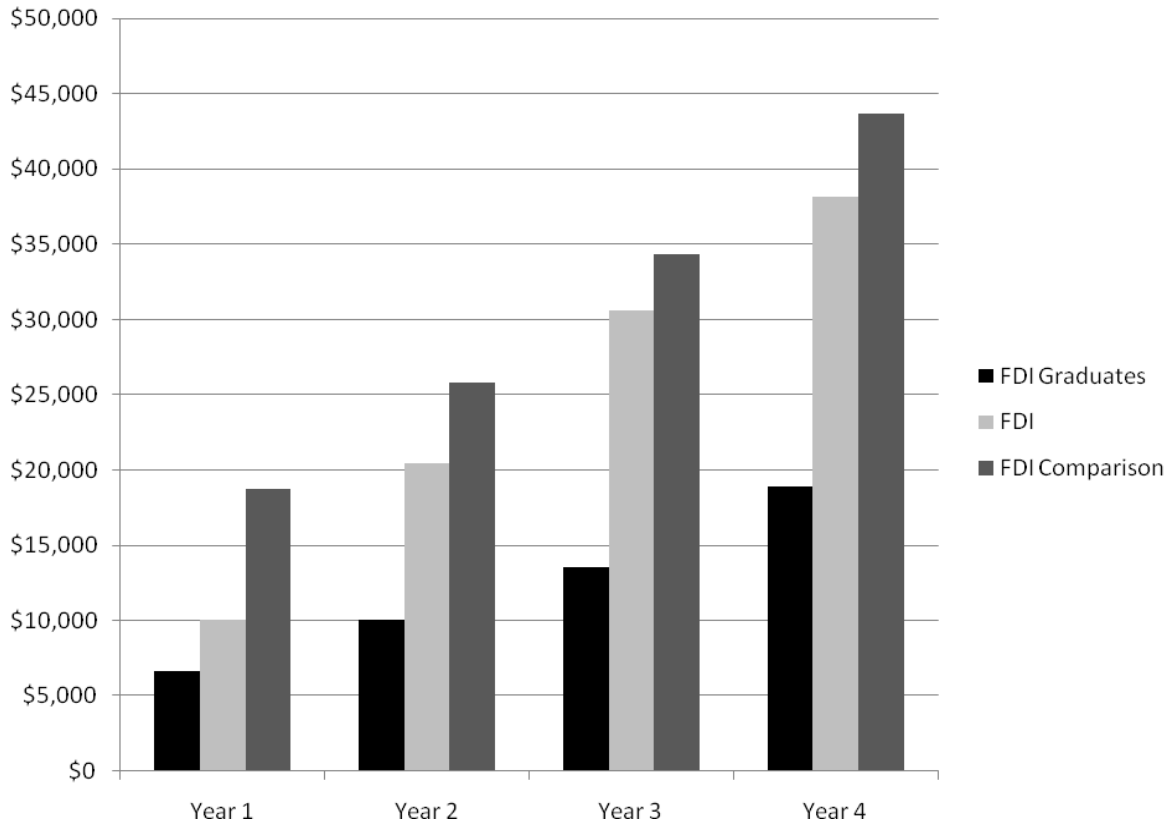
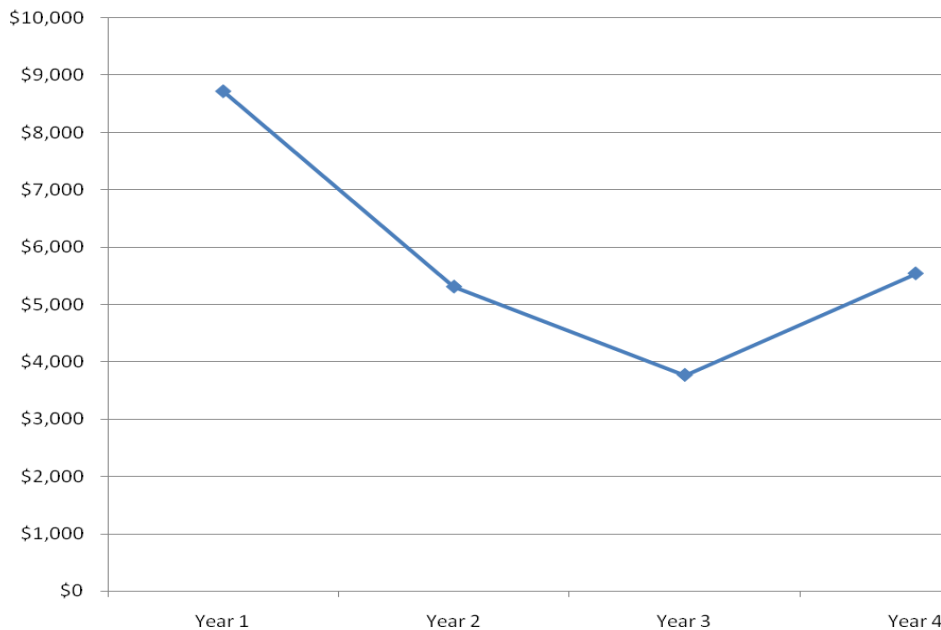


Figure 8 displays a graph of the cost savings (the difference between the FDI participants and the FDI comparison group) over the 4 years post-FDI entry. While there is a savings of \$8,724 in the first year after entry, the cumulative savings decrease in Year 2 and Year 3, going from \$5,310 in Year 2 to \$3,766 in savings by Year 3. By Year 4, the savings reverse the trend, with cumulative savings of \$5,540. (Note that these are not the same participants over time, but represent those who had at least 12, 24, 36, and 48 months of follow-up time, respectively.) This result shows the same general pattern as the DTC, with cost savings dropping from Year 1 to Year 3, but with an increase in overall cost savings beginning in Year 4.

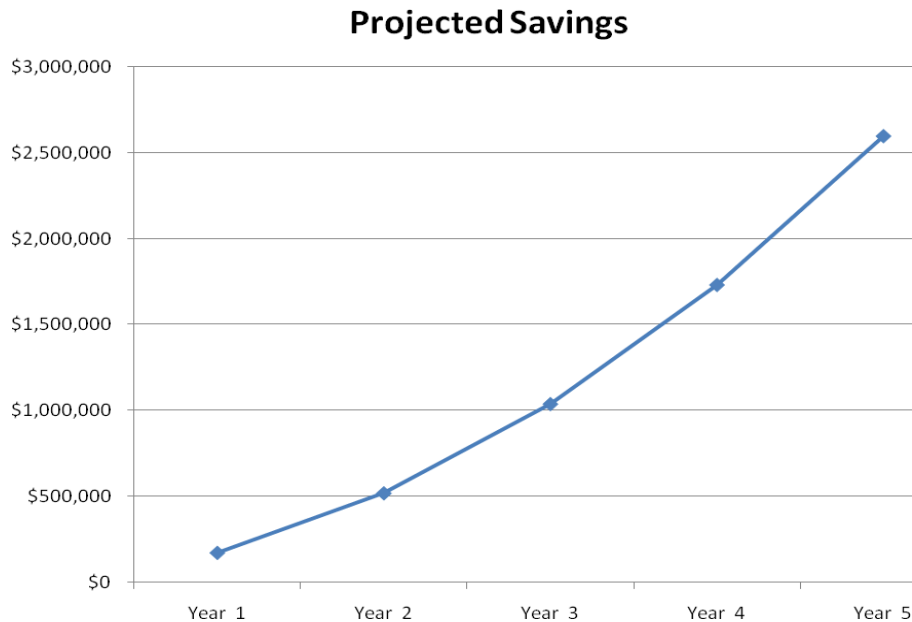
Figure 8. Cost Savings per FDI Participant for 4 Years Post-FDI Entry

The cost savings illustrated in Figure 8 are those that have accrued in just the 4 years since FDI entry. Many of these savings are due to positive outcomes while the participant is still in the program. Therefore, it is reasonable to infer that savings to the state and local criminal justice systems are generated from the time of participant entry into FDI.

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

This savings will also continue to grow with the number of participants that enter each year. If the FDI program continues to admit a cohort of **125** participants annually, the savings of \$5,540 per participant over 4 years results in an annual savings of **\$173,125** per cohort, which can then be multiplied by the number of years the program remains in operation and for additional cohorts per year. This accumulation of savings is demonstrated in Figure 9. After 5 years, the accumulated savings come to nearly **\$2.6 million**.

Figure 9. Projected FDI Criminal Justice Cost Savings Over 5 Years



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

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

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

Key Component #3 of the Key Components of Drug Courts is about identifying eligible individuals quickly and promptly placing them in the drug 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 criminal justice resources such as jail. 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 jail in the time between arrest and entry into the DTC or FDI programs for participants?” These two areas were selected to highlight this question because jail is the primary cost incurred by these programs and arrests are representative of the public safety impact of individuals in the community committing additional crimes.

This section describes the criminal justice costs for arrests and jail experienced by DTC and FDI participants between the time of the DTC or FDI eligible arrest and DTC/FDI 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 (a mean of 140 days for DTC participants, 139 days for DTC graduates, 98 days for FDI participants, and 113 days for FDI graduates).

Costs Between Arrest and DTC Entry

Table 19 represents the costs of re-arrests and jail time per person for DTC graduates and all DTC participants (graduates and non-graduates combined) from the program eligible arrest to program entry.

Table 19. Re-arrest and Jail Costs per DTC Member (Including DTC Graduates) From Arrest to Program Entry

Transaction	Transaction Unit Cost	Average Number of Transactions per DTC graduate	Average Cost per DTC Graduate N = 188	Average Number of Transactions per DTC Participant	Average Cost per DTC Participant N = 685
Arrests	\$203.78	0.12	\$24	0.16	\$33
Jail Days	\$87.00	73.16	\$6,365	67.59	\$5,880
Total			\$6,389		\$5,913

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

As can be seen in Table 19, there are substantial costs accruing to the criminal justice system from the time of the DTC eligible arrest through entry into the DTC program (\$5,913 for all DTC participants and \$6,389 for DTC graduates). 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 140 days for DTC participants and 139 days for DTC graduates). Other criminal justice costs, such as court cases and probation days are also most likely accruing. These costs emphasize that the sooner the DTC gets offenders into the program, the more criminal justice system costs can be minimized.

Costs Between Arrest and FDI Entry

Table 20 represents the costs of re-arrests and jail time per person for FDI graduates and all FDI participants (graduates and non-graduates combined) from the program eligible arrest to program entry.

Table 20. Re-arrest and Jail Costs per FDI Member (Including FDI Graduates) From Arrest to Program Entry

Transaction	Transaction Unit Cost	Average Number of Transactions per FDI Graduate	Average Cost per FDI Graduate N = 46	Average Number of Transactions per FDI Participant	Average Cost per FDI Participant N = 122
Arrests	\$203.78	0.15	\$31	0.08	\$16
Jail Days	\$87.00	62.93	\$5,475	54.11	\$4,708
Total			\$5,506		\$4,724

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

As can be seen in Table 20, there are substantial costs accruing to the criminal justice system from the time of the FDI eligible arrest through entry into the FDI program (\$4,724 for all FDI participants and \$5,506 for FDI graduates). Again, these costs only include arrests and jail time during the time from the FDI eligible arrest to entry into the FDI (a mean of 98 days for FDI participants and 113 days for FDI graduates). Other criminal justice costs, such as court cases and probation days are also most likely accruing. These costs emphasize that the sooner the FDI gets offenders into the program, the more criminal justice system costs can be minimized.

Comparison of DTC and FDI Jail Days

The difference between the average number of jail days accumulated by DTC participants (68) compared to FDI participants (54) is statistically significant (DTC participants had more jail days on average than FDI participants from arrest to program entry). The difference in jail days between the DTC graduates and FDI graduates is not significant.

COST EVALUATION QUESTION #4: COST BENEFIT RATIO

What is the cost-benefit ratio of investment in the DTC and FDI programs?

Of particular interest to state and local policymakers is the cost benefit ratio of the DTC and FDI programs. The final assessment of the cost differences between the DTC/FDI approaches and traditional court processing requires a matching of outcome costs to investment costs. This calculation is usually expressed as the “cost-benefit ratio.”

DTC Cost-Benefit Ratio

In Baltimore City, the DTC program costs \$17,991 per person. This investment, combined with the benefits due to positive outcomes results in a projected cost-benefit ratio of 1:1.20 after 25 years. That is, for every dollar (\$1) spent on the program, the taxpayers save \$1.20 in criminal justice system costs. As described earlier in this report, if other system costs were included, such as health care, welfare and employment system costs, this cost-benefit ratio might increase dramatically. For example, Finigan’s (1998) study of the STOP drug court in Multnomah County found a cost-benefit ratio of 1:10. That is, for every dollar spent on the program, \$10 was saved in public costs. In addition, if the program implements program improvement strategies, it may increase its cost savings and consequently increase its cost-benefit ratio in the future.

FDI Cost-Benefit Ratio

In Baltimore City, the FDI program costs \$23,762 per person. This investment, combined with the benefits due to positive outcomes results in a projected cost-benefit ratio of 1:1.17 after 20 years. After 25 years, the projected cost-benefit ratio becomes 1:1.46. That is, for every dollar (\$1) spent on the program, the taxpayers save \$1.46 in criminal justice system costs. Again, if other system costs were included, such as health care, welfare and employment system costs, this cost-benefit ratio might increase dramatically.

Cost-Benefit Summary

Overall, the DTC and FDI programs resulted in significant cost savings and a return on taxpayer investment in the program. The program investment costs are \$17,991 per DTC participant and \$23,762 per FDI participant, although this is somewhat misleading because the average FDI participant spends 200 more days in the program than does the average DTC participant—887 days for FDI versus 687 days for DTC. 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 \$26.18 and the cost per day per participant for the FDI is \$26.78.

The cost due to recidivism over 4 years from program entry was \$34,564 per DTC participant compared to \$38,016 per comparison individual, resulting in a savings of \$3,452⁴⁰ per participant (regardless of whether they graduate). The cost due to recidivism over 4 years from program entry was \$38,134 per FDI participant compared to \$43,674 per comparison individual, resulting in a savings of \$5,540 per participant (regardless of whether they graduate). The vast majority of the cost in outcomes for DTC participants over the 4 years from DTC entry was due to time in jail (\$10,234) and prison (\$16,130), most likely for participants who were unsuccessful in completing the program. For the FDI, the majority of the cost in outcomes over the 4 years from FDI entry was also due to time in jail (\$7,586) and prison (\$23,440).

In sum, the investment cost per participant is lower for the DTC than the FDI, but the outcome savings for the DTC are lower than that of the FDI. The DTC program had a cost savings of \$3,452 per participant over 4 years and the FDI program had a cost savings of \$5,540 per participant over 4 years, so there is a clear benefit to the taxpayer in terms of criminal justice related costs in choosing the DTC or FDI process over traditional court processing.

⁴⁰ This figure is slightly different from the one reported in the Costs by Agency section of this report due to rounding in that earlier section.

RECOMMENDATIONS

Drug courts are complex programs designed to deal with some of the most challenging problems that communities face. Drug courts bring together multiple and traditionally adversarial roles plus stakeholders from different systems with different training, professional language, and approaches. They take on groups of clients that frequently have serious substance abuse treatment needs. Adults with substance abuse issues involved in the criminal justice system must be seen within an ecological context; that is, within the environment that has contributed to their attitudes and behaviors. This environment includes their neighborhoods, families, friends, and formal or informal economies through which they support themselves. The drug treatment court must understand the various social, economic and cultural factors that affect them.

The Baltimore City Circuit Court DTC and FDI programs both have benefits and areas where they could make improvements. Key recommendations for the DTC and FDI programs are listed below. Some of these recommendations relate to practices that have been demonstrated to improve cost outcomes in other studies that the Baltimore City Circuit Court programs may want to consider implementing.

1. Have pre-court team meeting (DTC) or team discussions about client progress prior to court progress hearings.

Clear and consistent communication is essential in programs such as these that involve multiple partners and stakeholders from a variety of agencies. Each partner needs to fully understand her/his role in the program and convey the information they know from their unique perspective and relationship with the program participants.

2. Related to #1 above, involve treatment providers in review hearings.

Treatment providers have a wealth of information about how each participant is progressing, and the context in which successes and challenges are happening. Studies across multiple programs indicate that programs which involve treatment in review hearings, where the treatment provider or representative appears in person, have greater cost savings (Carey et al., 2008; Carey et al., 2009). It is likely due to improved communication and stronger relationships that programs with greater treatment involvement have better outcomes.

3. Work on quicker entry into the programs.

Conduct a review and analysis of the case flow from referral, to eligibility determination, to drug court entry. DTC participants experience long (costly) waits in jail prior to program entry (3-5 months). If this out of community time is essential, ensure that appropriate assessment is happening in jail and that treatment is offered as needed during this time. The FDI program aims to have a quicker time to entry, which it does, though the actual time during the cohort of this study is much longer than policy; however, the average number of days for all program participants (n = 68) was slightly less at 80 days. The median (50th percentile) number of days between arrest and program entry is 58 days, closer to the policy. In addition, the average number of days from program entry to starting treatment is 6 days. Once program participants are admitted, they begin receiving services quickly. Most recently, for participants entering the program in 2009 (n = 27), the average is 59 days (median = 50), so the program is clearly making progress in this area. Its collaborative model between partner agencies seems to be more effective than the DTC model in this regard, though FDI could

make additional strides in identifying barriers and delays that hinder its ability to meet its own guidelines. Programs that expect the time between arrest and program entry to be 20 days or less have greater cost savings (Carey et al., 2008; Carey et al., 2009).

4. Add treatment services for co-occurring disorders.

Mental health issues are extremely prevalent in drug court populations. In the general population, close to three in four people with drug use disorders have at least one co-occurring psychiatric disorder (Regier et al., 1993). Work with community partners to increase treatment capacity in Baltimore City. Key agency partners can use the advisory committee or other community connections to advocate for additional services. Emphasize the holistic and collaborative nature of drug court, and identify how these connections make the program successful for participants. Additional funding or collaborations could help to better meet client needs—widely identified by respondents and program participants during the DTC’s process evaluation (Crumpton et al., 2007)—in the following areas:

- Mental health issue screening and assessment
- Mental health treatment services
- Dual diagnosis services

5. Focus on increasing positive reinforcement and acknowledgement of success.

Liberal use of incentives and rewards are powerful motivators and behavioral change tools and can be included at very low cost to a program. For example, allowing recognition (applause) in court for participants who are doing well (DTC) does not incur expense but can increase participant buy-in and engagement. Principles of behavioral intervention indicate the importance of having incentives outnumber sanctions. Consider increasing incentives and reinforcements in both programs.

6. Institute random drug testing (DTC) or increase number of tests per week.

One of the key components of effective substance abuse intervention is a well designed drug testing model. Drug testing is one of the key therapeutic tools for decreasing or stopping drug use (Marlowe 2008). Drug tests serve as deterrents for use (for participants) and also indicators of a participant’s treatment needs (for staff). They provide an objective tool for measuring participant progress. It is important that testing, especially in the early months of the program, to be either random or frequent enough to minimize opportunities to use without detection.

7. Work to increase the drug court graduation rate.

The DTC has a graduation rate of 39%, substantially lower than the national average (Cooper, 2000). While each program needs to be assessed on its own merits and taking its own context and population into account, there is clearly room in the DTC program to work on increasing support and decreasing barriers to success for program participants. While the two programs do not serve identical populations, they groups are relatively similar. FDI, though a longer program, has a higher graduation rate (54%) and could potentially offer suggestions to the DTC program regarding strategies for engaging and retaining participants and providing services that strengthen a participant’s ability to complete the program.

In order to graduate, participants must comply with the program practices and requirements. Therefore, for programs to increase their graduation rates, they must increase the number of

participants that comply with program requirements. One strategy drug court staff can use in dealing with this complex population is to provide additional assistance so participants can learn new skills to successfully meet program requirements. Teams should be asking themselves, “How can we help each participant understand the lessons this program has to teach?” To successfully increase graduation rates, drug court teams must consider the challenges participants face, continually review program operations and adjust as necessary to help participants address those challenges.

8. Set aside time to discuss the findings and recommendations in this evaluation, both to enjoy the recognition of the team’s accomplishments and to determine whether any program adjustments are warranted.

The programs’ teams should continue to review data (such as HATS data, the average duration of time from referral to assessment, etc.) as part of ongoing self-assessment activities and use this information to discuss various aspects of the programs’ functioning and any areas that may benefit from adjustment.

9. Continue to allow judges to remain in the program for longer periods of time.

Research has demonstrated that drug court programs that allow judges to remain involved for more than 2 years have greater cost savings (Carey et al., 2008; Carey et al., 2009). This longevity may be associated with judges who have greater personal interest and commitment to the program, have a greater knowledge of and interest in the drug court model, and who learn from their experience over time. Even programs that had judges repeat rotations found that the participants in the program were more likely to succeed during the judge’s second rotation compared to the first (Finigan et al., 2007). The DTC program, during the time of this study cohort, rotated drug court judges. However, they have since discontinued this practice. Both programs now have judges who have served the program at least 2 years, which will likely contribute to positive participant outcomes in the future.

SUMMARY AND CONCLUSIONS

OUTCOME STUDY SUMMARY

The outcome analyses were based on a cohort of BCCC participants who entered either the DTC or the FDI programs from April 2004 and July 2007, and comparison groups of offenders eligible for drug court but who received the traditional court process rather than either of the BCCC programs.

The results of the outcome analysis for the Baltimore City Circuit Court DTC and FDI programs are mixed.

- Participation in DTC is associated with less severe criminal recidivism activity. DTC participants had fewer re-arrests than the DTC comparison group over time, when adjusting for time in the community.
- DTC participants had more Circuit Court cases during their first year after starting the program. They also had more days in jail cumulatively across time, but fewer days in prison.
- FDI participants had fewer numbers of new arrests in the first year than the FDI comparison group, but this effect disappeared when adjusting for time in the community. They had fewer prison days in their first year.
- Average length of program participation was 22½ months for the DTC group and 29 months for the FDI group.⁴¹
- The DTC graduation rate was 39% and the FDI graduation rate was 54%. The FDI graduation rate is higher even though its program requires (and results in) a longer length of stay. The DTC program in particular would benefit from having the team consider ways to assist participants in addressing practical challenges participants face in meeting program requirements (such as childcare issues, work schedules and transportation).

COST-BENEFIT STUDY SUMMARY

Overall, the DTC and FDI programs resulted in significant cost savings and a return on taxpayer investment in the program. The program investment costs are \$17,991 per DTC participant and \$23,762 per FDI participant, or a cost per day per participant for the DTC program of \$26.18 and a cost per day per participant for the FDI of \$26.78.

The costs due to recidivism over 4 years from program entry resulted in a savings of \$3,452 per DTC participant and \$5,540 per FDI participant. The vast majority of the cost in outcomes for DTC participants over the 4 years from DTC/FDI entry was due to time in jail and prison, primarily for participants who were unsuccessful in completing the program.

In sum, the investment cost per participant is lower for the DTC than the FDI, but the outcome savings for the DTC are lower than that of the FDI. Savings due to both programs provide a clear benefit to the taxpayer in terms of criminal justice related costs in choosing the DTC or FDI process over traditional court processing.

As the existence of the BCCC continues, the savings generated by program participants due to decreased criminal activity can be expected to continue to accrue, repaying investment in the program and beyond. Taken together these findings indicate that the BCCC programs are beneficial to both participants and Maryland taxpayers.

⁴¹ These averages include both graduates and non-graduates and a range of individual actual lengths of stay in the program. The DTC group on average takes slightly longer than the expected minimum of 18 months to complete the program, while the FDI group on average takes just less than its program's 30 month minimum duration.

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