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Evaluating Treatment Drug Courts in Kansas City, Missouri and Pensacola, Florida

Executive Summary

Award #97-DC-VX-K002

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Prepared for
National Institute of Justice

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Background

The National Institute of Justice (NIJ) awarded Abt Associates Inc. a grant to evaluate adult treatment drug court programs in two phases and at two sites—Escambia County (Pensacola), Florida and Jackson County (Kansas City), Missouri. In addition to a review of the literature, Phase I involved a retrospective study of the 1993-1997 cohorts including:

- case studies - documenting program development, policies and procedures, caseflow, and lessons learned; and,
- impact evaluations - using survival analysis to assess the effects of the drug court programs on criminal recidivism among felony drug offenders.

Phase II was a prospective study for the 1999-2000 cohorts that involved:

- program retention models - using logistic regression to predict program status, and survival analysis to predict length of stay, based on intake interview data; and,
- descriptive analyses – exploring Escambia County court data for recorded events, and followup interview data from both programs’ participants for self-reported events and perceptions, concerning the period of program participation.

A separate technical report was produced for each phase, but they are complementary and should be read in conjunction. The following provides an overview of the research design and findings pertaining to the case studies, the impact evaluations, and program status modeling. In preview, the impact evaluation demonstrated that both programs were successful in reducing recidivism rates, and that the time until rearrest increased with participation in Jackson County. In Escambia County, 49% of the Phase II cohort graduated and 14% remained active in the program; in Jackson County, 28% graduated and 23% remained active. Demographics were the best predictors of program status (graduate or active), while treatment motivation, alcohol and other drug (AOD) use and dependency, and mental health varied in influence; these factors also varied in influence by site.

Phase I Case Studies

Escambia County Drug Court

The Escambia County drug court offers AOD treatment under close court supervision to eligible defendants. When the program began in June 1993, it only accepted first-time drug offenders. The drug court now accepts drug offenders and non-drug offenders who are substance abusers; however defendants with violent criminal histories are excluded. It is funded by a combination of Federal, State, and local grants; contributors include the State Justice Institute, the Florida Department of Corrections, and Federal local law enforcement block grant programs. The drug court team includes two judges, an Assistant State Attorney, a Public Defender, a Treatment Liaison, a Court Administrator, officers representing Probation and Community Control, and a Court Clerk.

Eligible defendants are referred by Pretrial Services or the Assistant State Attorney's office. Following their initial court appearance, offenders are assessed by Pathway Addiction Treatment Center, which is the single outpatient treatment provider under contract. To successfully graduate, participants must complete three phases of treatment, which correspond to reduced levels of supervision. They must appear in court on a regular basis, provide specimens for random urinalysis, attend intensive outpatient treatment sessions at Pathway and community-based treatment meetings, and pay restitution costs and other fees. Employment is not a requirement, but participants must establish community support systems. Staff refer participants to outside childcare, education, housing, and employment services. Upon successful completion of the program, the plea is withdrawn for graduates on deferred sentence status; graduates on probation with suspended sentence do not serve any jail time. Between June 1993 and July 1999, 691 defendants entered the Escambia County drug court; 40 percent of the participants graduated and 8 percent remained active in the program at the time of this evaluation.

Jackson County Drug Court

Since its inception in October 1993, the Jackson County drug court has offered intensive outpatient treatment and a variety of services to eligible substance abusing defendants. The program is supervised by the prosecutor's office, and funded by Missouri's Community-Backed Anti-Drug Tax (COMBAT), the Drug Court Program Office (DCPO), and Federal and local law enforcement block grants. The chief drug court prosecutor determines eligibility, based on the current offense (non-drug trafficking charges) and criminal history (e.g., violent offenses), for offenders referred by law enforcement. A Commissioner and a Judge serve on the drug court.

Eligible defendants are given the opportunity to participate at their first court appearance, and if they agree to participate, their treatment needs are assessed by County Court Services, the sole outpatient treatment provider under contract. Depending on the level of treatment required, defendants undergo drug testing, attend individual and group counseling sessions, and make frequent court appearances. Jackson County drug court, through contractual arrangements, provides other resources including employment counseling and health care services. Participants must abstain from drug use, not get arrested on felony charges, perform community service, either remain employed or in school, and pay all fines in order to graduate from the program. Defendants who successfully complete the program earn the dismissal of their charges. Between October 1993 and April 1998, a total of 1,444 defendants entered the Jackson County drug court; 24 percent graduated, and another 24 percent were active participants at the time of this evaluation.

Lessons Learned

Since 1993, both drug courts programs have modified case screening, outpatient treatment delivery, and various policies and practices in response to participant needs and other concerns realized over time. A few of the lessons learned can be summarized in the following points.

- § Law enforcement and other political support: Institutionalization of the drug court requires support from judges, prosecutors, probation and community control, as well as other CJS officials who appropriate resources and who refer and manage defendants; this includes law enforcement, elected officials, legislators, and others. One political force (e.g., a prosecutors office) may initiate program development, but acceptance among other groups is necessary for program viability. For instance, support among Jackson County law enforcement was demonstrated by their willingness to modify screening procedures to avoid losing eligible defendants because of statutory detention limitations.
- § Staff cooperation: Although drug court team members fulfill discrete roles (e.g., prosecutors represent the State=s interests in protecting public safety), staff continually educate one another and reach decisions through consensus. Court staff inform treatment staff about legal considerations, and treatment staff inform court staff about addiction models of AOD use and other treatment issues. This reduces referral of inappropriate defendants, improves client management in the courtroom and the community, and ultimately promotes therapeutic jurisprudence.
- § Court disposition: Many drug courts begin as pretrial diversion programs, but deferred prosecution status may impair prosecution of unsuccessfully terminated cases (e.g., due to delays in identifying witnesses and gathering evidence). Instead, the Escambia County drug court secures convictions using either deferred sentence or probation with suspended sentence dispositions. Upon graduation, deferred sentence defendants withdraw their plea and the case is dismissed. Other defendants are sentenced to

drug court as a condition of probation; upon unsuccessful termination, a suspended sentence of 11 months and 30 days jail is imposed.

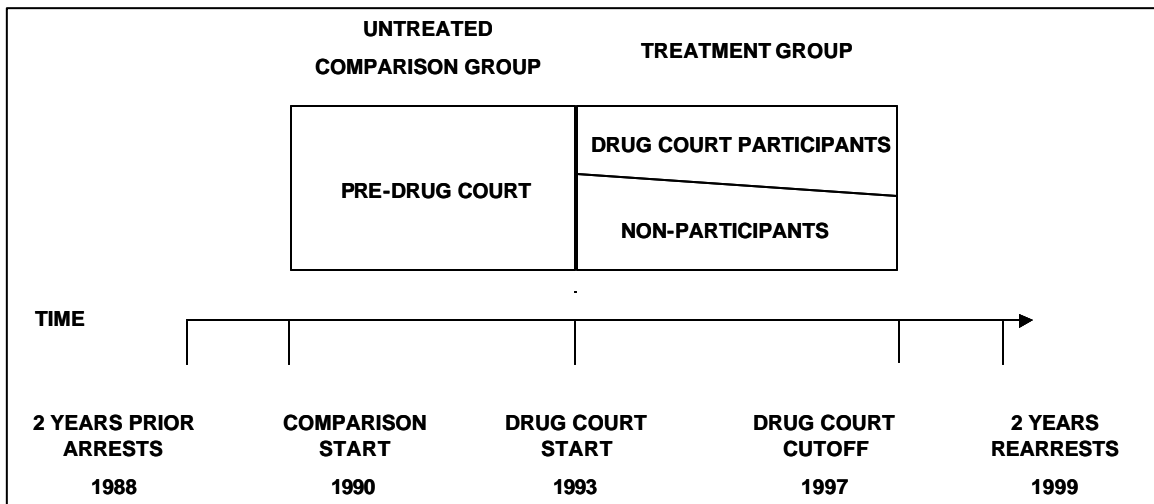
§ Criminal justice system supervision and sanctions: Selection of appropriate defendants that satisfies multiple stakeholder interests is not just a matter of adjusting eligibility criteria. To access the desired volume of target populations without jeopardizing public safety or political acceptance, programs require intensive community supervision and sanctioning capabilities to handle high-risk defendants (i.e., those with more serious criminal histories or instant offenses). Drug courts often employ graduated sanctions, whereby responses to program violations (e.g., additional urinalysis tests or shock incarceration) escalate according to frequency and severity. When successful as in Escambia County this may result in improved referrals from judges and prosecutors who regard the drug court as a reasonably safe option. However, jail overcrowding (as experienced in Jackson County) may reduce judges' ability to use intermediate jail sanctions as a tool to motivate program compliance.

§ Outpatient treatment and other services: Both programs contract with a single provider for assessment and outpatient treatment services. They found that multiple providers, or even multiple facilities operated by the same provider, caused uneven service delivery and dissatisfaction among participants. Apart from inpatient or other treatment services, delivery of support services is highly variable across drug court programs. Many participants are already aware of government subsidized services (e.g., food stamps), but important needs (esp. dental and employment) remain unmet. The Jackson County program has the resources to assist participants beyond referral and limited followup. They contract with several education, employment, and other ancillary service providers who conduct outreach on-site. As service delivery becomes more responsive, access to needed resources is improved and risk of relapse is reduced.

Phase I Recidivism Impact Evaluation

The impact evaluation used survival analysis to assess the effects of the drug court programs on criminal recidivism measured as the probability of, and time until, first rearrest. To reduce threats to validity (like selection bias) that would weaken the utility of the results, the evaluation used instrumental variable techniques to compare time until first rearrest for two consistently defined groups of defendants with similar criminal histories: those arrested before the drug court started versus those arrested between 1993 and 1997 (including drug court participants and non-participants as shown in Figure 1).

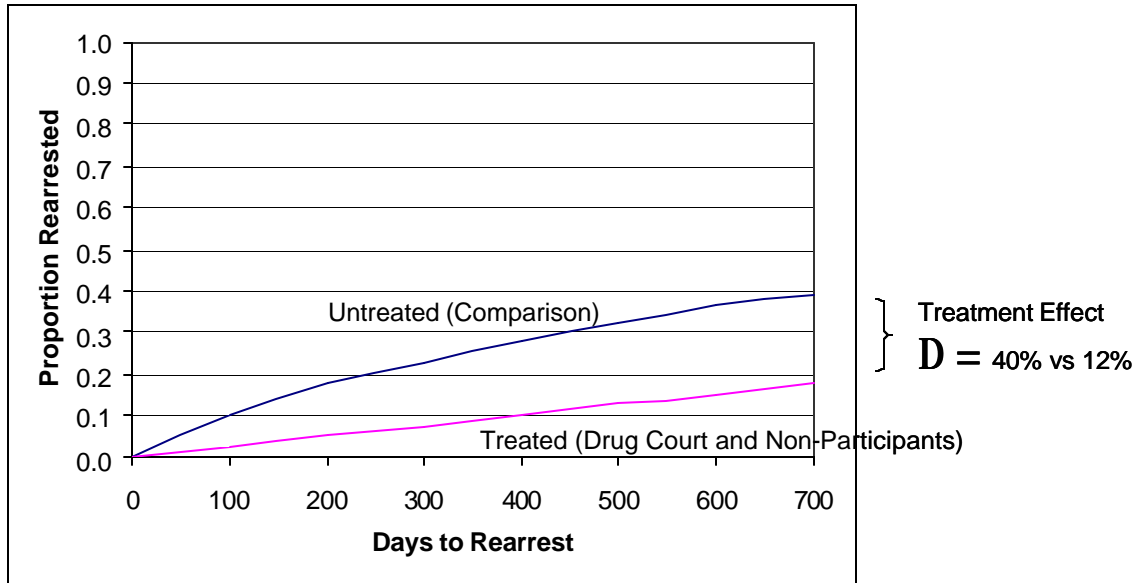
Figure 1. Impact Evaluation Sample Design



We conducted an outcome analysis using a 24-month followup period, first by estimating a simple survival model, and then by estimating a split-population survival model and using its parameter estimates to test for a treatment effect attributable to participation in drug courts. This method splits the population into two groups: people who will eventually recidivate, and people who will never recidivate. It also assumes that the timing of recidivism for those who will follows a statistical distribution. For our purposes a Weibull distribution. Instrumental variable techniques were used to deal with possible selection bias. Separate analyses for Escambia and Jackson Counties included only defendants who were arrested for drug-related felonies.

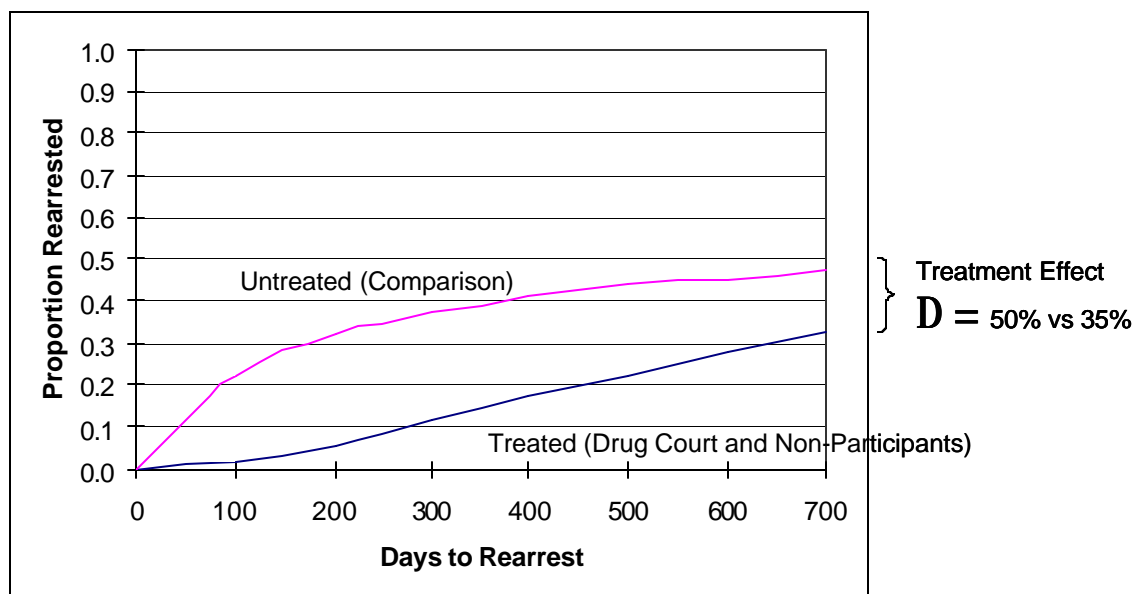
Using either estimation method, Escambia County results showed that males have a higher probability of recidivism than females, and Blacks have a higher probability than Whites. In addition, recidivism rates decreased with age, and offenders were more likely to recidivate if they had more serious criminal records. Using the simple survival model and defining recidivism as a felony arrest, we observed a statistically significant treatment effect. Turning to a split-population model, the treatment effect with regard to the probability of ever recidivating was statistically significant, but this method did not show that the timing of recidivism was affected by drug court participation. The findings imply that participation in the Escambia County drug court reduced recidivism for new felonies from roughly 40 percent to nearly 12 percent within the two-year followup period (see Figure 2a). We did not observe the same large effect when recidivism is defined as any rearrest—either a felony or a misdemeanor. The Escambia County drug court seems to have reduced criminal recidivism for felony, but not new misdemeanor, arrests.

Figure 2a. Program Effects on Felony Recidivism: Escambia County



We observed similar results in our analysis of the Jackson County drug court data. Employing either the simple survival or the split-population model and defining recidivism as a felony arrest, recidivism rates were the same for men and women, but higher for Blacks than for Whites. As in Escambia County, recidivism rates dropped as age increased, and rose for offenders with more serious criminal records. We found that the probability of recidivism fell, and the time to rearrest increased, with participation in drug court. The findings imply that participation in the Jackson County drug court reduced recidivism from approximately 50 percent to 35 percent (see Figure 2b). Defining recidivism as any felony or misdemeanor arrest, we observed a similar effect. The probability of eventually recidivating again fell with participation in drug court, and time to rearrest increased. Participation reduced recidivism for new felonies or misdemeanors from 65 percent to 45 percent.

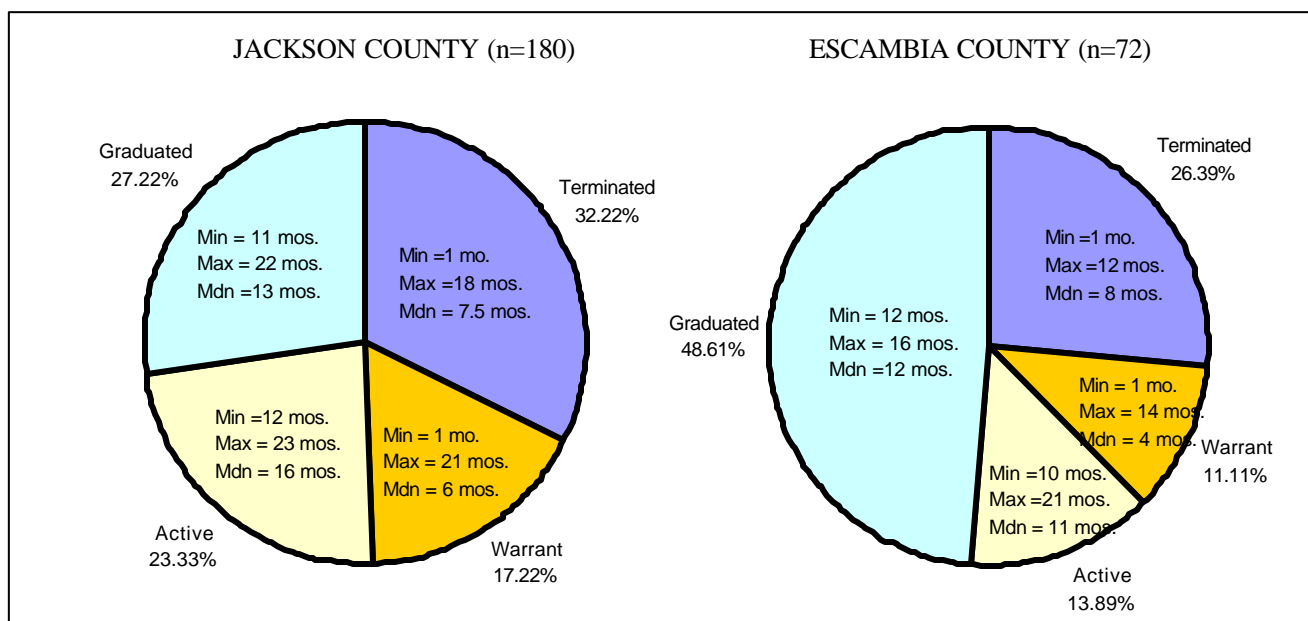
Figure 2b. Program Effects on Felony Recidivism: Jackson County



Phase II Program Retention Models

During Phase II we recruited 182 Jackson County and 74 Escambia County program participants for a prospective study of the cohort who entered the drug courts between October 1999 and October 2000. As of September 2001, 28% of the Jackson County participants and 49% of the Escambia County had successfully completed and graduated from the program (see Figure 3). Participants required as many as 22 months to complete the program, but the median length of stay was 13 months in Jackson County and 12 months in Escambia County among graduates. There remained 42 (23%) active participants in Jackson County and 10 (14%) active participants in Escambia County, so the final proportions of program successes were unknown. It is difficult to predict their outcomes since participants who were ultimately terminated lasted as many as 18 months in the program. Overall, the median length of stay among terminations was 7.5 months in Jackson County and 8 months in Escambia County.

Figure 3. Program Status and Retention by Site



Finally, 17% of the Jackson County and 11% of the Escambia County participants had absconded and were on warrant status in September 2001. Some remained in the program as many as 21 months before the last warrant was issued, but the median length of stay among absconders was 6 months in Jackson County and 4 months in Escambia County. Until those participants surrender, it is uncertain whether they will resume participation or be terminated from the program. Each case is judged individually, but one might assume that the likelihood of being accepted back into the program diminishes the longer they avoid surrender. By September 2001, 31 Jackson County participants had been in warrant status from 2 to 17 months, or 10 months on average. The 8 Escambia County participants had been in warrant status from 5 to 21 months, or 14 months on average.

To evaluate program retention, we used demographics, AOD use, and the other independent variables to predict two outcomes: program status and length of stay. Potential predictors of program retention in both sites included independent variables associated with:

- Demographics: age, education (HS/GED or not), race (Black or not), gender, employment (full-time, part-time, or not), and residency (own/rent home or not);
- AOD use: past month use of cocaine, hallucinogens, sedatives, or amphetamines (or not), and injection drug use ever (or not);
- Clinical status: abuse and dependency (SUDDS-IV score), prior treatment (any detox/rehab or not), mental health (any indicators of emotional problems or treatment, or not), and juvenile risk behaviors (number of positive indicators); and,

- Treatment motivation: number of positive indicators for each factor—problem recognition, desire for help, treatment readiness, and external pressures..

Nearly all Escambia County participants were felony drug offenders, so criminal history would not help us distinguish participants in predicting the program retention outcomes. Criminal history data were unavailable for Phase II Jackson County participants, but Phase I participants were fairly homogeneous in regard to prior drug felonies.

These data were used to describe the population of drug court participants and to determine which factors best predicted program graduation and retention. We were especially interested to learn whether prognostic indicators, such as level of AOD dependence, could prove useful to programs in predicting outcomes and thereby informing resource allocations.

Given that substantial time has passed since participants on warrant status absconded, they were grouped with terminations and compared to participants who either graduated or remained active in the program. The dependent variable for program status was defined as unsuccessful (terminations and warrants) versus successful (graduates and actives) participation. We used a stepwise logistic regression to estimate the relationship between treatment retention and participant characteristics. Generally, statistical tests indicate the degree of association between each individual variable and the probability of that outcome, controlling for the influence of other independent variables in the model.

Program status in Jackson County appeared to be associated with the variables shown in Table 1a. Demographics had the most predictive value. The probability of program success increased with age, education (HSGED), and employment (EMPLOY). For example, the odds ratio of 2.01 for education suggests that those with a high school diploma or GED were twice as likely to be successful (graduate or remain active). Males, Blacks, and participants who owned or rented their homes, were more likely to be unsuccessful (terminate or out on a warrant). Injection drug use (IDU) was the only AOD use variable correlated with unsuccessful program participation. The only clinical variable correlated with program status was mental health, in that participants with emotional problems or prior treatment experiences (MENTAL) had a higher probability of success. Last, participants who scored low on the problem recognition factor of treatment motivation had a higher probability of success.

Table 1a. Logistic Regression Analysis of Program Status: Jackson County

Parameter	Estimate	Std. Error	Estimate/		Odds Ratio
			Std. Error	P-value	
Constant	-0.52	0.73	-0.71	0.477	
AGE	2.05	1.12	1.83	0.067	7.80
HSGED	0.70	0.38	1.85	0.065	2.01
MALE	-0.37	0.43	-0.86	0.391	0.69
BLACK	-1.01	0.42	-2.42	0.016	0.36
EMPLOY	0.52	0.21	2.49	0.013	1.69
RESIDENCE	-0.63	0.41	-1.51	0.130	0.53
IDU	-0.80	0.66	-1.22	0.223	0.45
MENTAL	0.57	0.37	1.53	0.125	1.77
PROBLEM REC	-0.32	0.27	-1.19	0.234	0.73

In Escambia County, the same demographic variables were predictive of program status, except that males and participants who owned or rented their homes had a higher probability of success (see Table 1b); for example, the odds were that males were nearly three times more likely to graduate or remain active than females in Escambia County. Prior treatment experiences (PRIOR TREAT) and abuse/dependency diagnoses (SUDDS-IV SCORE) were clinical variables that predicted program status, in that participants who had previously been in detox or rehab, and participants with high levels of drug dependency, were more likely to be unsuccessful. Three of the four treatment motivation factors—problem recognition, treatment readiness, and external pressures—were associated with a higher probability of successful program participation.

Table 1b. Logistic Regression Analysis of Program Status: Escambia County

Parameter	Estimate	Std. Error	Estimate/		Odds Ratio
			Std. Error	P-value	
Constant	-6.92	5.20	-1.33	0.183	
AGE	6.16	2.60	2.37	0.018	472.98
HSGED	1.39	0.77	1.80	0.072	4.01
MALE	1.07	0.80	1.34	0.181	2.91
BLACK	-1.36	0.79	-1.73	0.084	0.26
EMPLOY	0.36	0.42	0.85	0.393	1.43
RESIDENCE	0.16	1.11	0.15	0.884	1.17
PRIOR TREAT	-1.52	0.88	-1.74	0.083	0.22
SUDDS-IV SCORE	-5.68	3.45	-1.65	0.100	0.00
PROBLEM REC	2.29	1.00	2.28	0.023	9.87
TREAT READY	1.14	0.54	2.12	0.034	3.13
EXTERNAL PRESS	1.31	0.46	2.86	0.004	3.72

Discussion

Do the drug court programs lower criminal recidivism? During Phase I, we conducted a retrospective before and after study modified by level of program enrollment over time. We looked at rearrest and time to first rearrest during a two-year followup. Controlling for offender demographics, date (proxy for program development), and program enrollment over time, survival analyses showed that treatment reduced:

- the felony rearrest rate from 40% before there was a drug court to 12% since the drug court started in Escambia County; and,
- the felony rearrest rate from 50% before there was a drug court to 35% since the drug court started in Jackson County.

While Phase I of this study profiled the two drug court programs and demonstrated that they reduce recidivism among drug-involved felony offenders, Phase II more closely examined participant characteristics, as well as their experiences and perceptions, opening the proverbial “black box” of Phase I and analyzing how the programs work and for whom.

In Phase II, interview and court data established that participants’ criminal histories include felonies and both non/drug offenses, and that clinical diagnoses and self-reported drug use were serious. That is, participant characteristics were consistent with the target populations. Quantitative analyses indicated that demographics—age, employment, gender, race/ethnicity, residence, and education—were the best predictors of program status and time to program failure. In Jackson County, participants who were older, female, non-Black, employed, did not own or rent their home, or had a high school diploma or GED had a higher probability of graduating or remaining active in the program. Injection drug use, not having mental health problems, and problem recognition (a factor in treatment motivation) were associated with a higher probability of unsuccessful program participation (termination or warrant status). With the exception of problem recognition, survival analyses indicated that the same variables were associated with time to failure in Jackson County. In other words, participants who did not inject drugs, and participants with mental health problems, lasted longer in that program.

In Escambia County, the probability of program success was higher among participants who were older, male, non-Black, employed, owned or rented their own home, or had a high school diploma or GED. In addition, prior AOD treatment and high levels of AOD dependency were associated with unsuccessful program participation. Three of the four treatment motivation factors (problem recognition, treatment readiness, and external pressures) were associated with program success. Similarly, survival analyses indicated that time to failure in Escambia County was associated with the same demographics, prior AOD treatment, and treatment motivation (external pressures and treatment motivation).

In light of the relatively small samples sizes and the exploratory modeling procedure applied, it must

be noted that there is some margin of error in our findings regarding program status and retention. Nonetheless, these results may be used as a rough guide for drug court teams in deciding two things. First, how may clients be assessed and triaged into the appropriate program services? Second, can the programs accommodate participants with various needs, or should they consider modifications?

For instance, many of the demographic variables may be considered indicators of community stability. Given the circumstances under which participants are referred to these programs (e.g., repeated felony offending and AOD involvement), community ties are likely in disrepair for many participants. If those participants are accepted into the program, what can be done to stabilize and improve their employment situation as well as other areas of their lives, and thus increase their chances of successful program participation?

While there are several means to assess mental health status, AOD use and prior treatment experiences, and level of treatment motivation, it is sometimes difficult to predict outcomes based on these indicators. Participants in Jackson County with mental health problems were more likely to succeed and stay longer in the program, but this variable had no predictive value in Escambia County. Injection drug users did poorly in Jackson County, as did Escambia County participants with prior AOD treatment experiences. Treatment motivation may have changed since intake, but participants who reported treatment readiness and external pressures consistently did well in Escambia County.

On the other hand, the findings that Blacks were more likely to terminate or abscond, and that Blacks failed more quickly than non-Blacks, was consistent across sites. We collected data on a variable labeled “race/ethnicity” which represents issues that are complex in origin and remedy and would be difficult to measure directly. How can the drug court team identify racial and ethnic issues impacting their program, and what steps can they take to address them within the realm of the drug court program’s influence?

Our recommendation is that resources be devoted to improved record maintenance so that program monitoring and evaluation can progress, and these and similar policy questions may be addressed. This would allow drug court teams to: examine individual patterns more closely; tailor program services to current needs; use program service feedback when deciding resource allocations; and ensure accountability to the participants, their families, the public, and other program stakeholders.