

WHAT WORKS?

THE TEN KEY COMPONENTS OF DRUG COURT: RESEARCH-BASED BEST PRACTICES

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[1] Best Practices in Drug Courts—Studies of 69 Drug Courts revealed significantly better outcomes for programs that followed the Ten Key Components.

[2] Characteristics of Effective Drug Courts—The most effective and cost-effective Drug Courts worked collaboratively as a team, provided structure and accountability, offered wraparound services, trained team members, and monitored performance and outcomes.

[3] Characteristics of Cost-Effective Drug Courts—Investments in treatment and supervision services, staff training, program evaluation, and management information systems were recouped by greater improvements in outcome costs to the taxpayer.

DRUG COURT PROGRAMS VARY tremendously in how they operationalize the Ten Key Components (NADCP, 1997). Although research clearly shows that adult Drug Courts can significantly improve treatment outcomes and reduce recidivism, outcomes vary considerably across participants and programs (e.g., Lowencamp, Holsinger, & Latessa, 2005; Mackin et al, 2009; Carey & Waller, 2011). Thus, we must not only examine the effectiveness of the nation's Drug Courts, but get inside the "black box" to determine which practices lead to better participant and program outcomes such as reduced criminal recidivism and lower costs (i.e., greater savings).

For this study, we determined Drug Court practices related to lower recidivism and lower costs in sixty-nine Drug Courts nationally. The

analysis builds on a previous study of eighteen Drug Courts in four states and one U.S. territory (Carey, Finigan, & Pukstas, 2008).

RESEARCH ON DRUG COURT EFFECTIVENESS

Drug Courts use the coercive authority of the criminal justice system to provide treatment to addicts in lieu of incarceration. This model of linking the resources of the criminal justice system and substance treatment programs has proven effective for increasing treatment participation, decreasing criminal recidivism, and reducing use of the health care system (Carey & Finigan, 2004; Gottfredson, Najaka, & Kearley, 2003; Finigan, 1998).

In a 2001 review for the National Drug Court Institute, Belenko summarized Drug Court research, both published and unpublished, conducted between 1999 and 2001. Conclusions from his review indicated that Drug Courts were relatively successful in reducing drug use and criminal activity while participants were in the program. Program completion rates nationally were (and remain) around 47 percent. Belenko (1998, 2001) noted that the research on long-term outcomes was less definitive. In his report, he called for more research into the services that Drug Court participants receive while in the program as well as the long-term impact of Drug Courts. A myriad of research on Drug Courts has answered his call since this important review.

A 2005 review by the Government Accountability Office (GAO), looking at six New York State Drug Court programs found a significant reduction in crime in five of those programs. New arrests leading to a conviction one year postprogram decreased by 6–13 percentage points.

Adding to this evidence, a 2006 meta-analysis of sixty Drug Court outcome evaluations showed that postadjudication Drug Courts reduced recidivism by an average of 10%, and preadjudication courts averaged a 13% reduction (Shaffer, 2006).

Another study found twenty-four Oregon Drug Court programs reduced recidivism (measured as number of rearrests) on average by 44% (Carey & Waller, 2011). Finally, the National Institute of Jus-

tice's (NIJ's) Multisite Adult Drug Court Evaluation (MADCE) of twenty-three Drug Courts found an average reduction in recidivism of 16% (Rempel & Zweig, 2011).

Research has also shown that Drug Court programs are cost beneficial in local criminal justice systems with cost-benefit ratios ranging \$3–\$27 for every one dollar invested in the program (Carey & Finigan, 2004; Carey, Finigan, et al., 2006; Carey & Waller, 2011; Crumpton et al., 2004; Fomby & Rangaprasad, 2002; Marchand, Waller, & Carey, 2006a and 2006b). More limited research has shown that Drug Courts also fiscally benefit other publicly supported services, such as child welfare, physical health care, mental health care, and employment security (Finigan, 1998; Crumpton, Worcel, & Finigan, 2003; Carey, Sanders, et al., 2010a and 2010b). Studies show some Drug Courts cost less to operate than standard court processing of offenders (Carey & Finigan, 2004; Carey, Finigan, et al., 2006). The overall findings continue to show that Drug Courts are effective in many areas. The question as to *why* has fueled another body of research on Drug Courts.

Since Belenko's report, more Drug Court research has focused on identifying the characteristics of an effective Drug Court program and profiling the ideal participant. To this end, Marlowe and colleagues found that high-risk participants graduated at higher rates, provided more drug-negative urine specimens at six months after program admission, and reported significantly less drug use and alcohol intoxication at six months when they were matched to hearings held every other week as compared with the usual less frequent schedule (Marlowe et al., 2007). Many Drug Courts are working toward identifying and enrolling high-risk/high-need offenders into their programs as their target population.

In research on characteristics of an effective program (defined as a program that significantly reduced recidivism), Shaffer (2006) found that a program length between eight and sixteen months provided the best recidivism outcomes. Programs that lasted less than eight or more than sixteen months were significantly less effective. Also, program requirements such as restitution and education were associated with program effectiveness. Finally, Drug Courts that had

internal treatment providers were more effective than Drug Courts that had external treatment providers. Shaffer suggests this may be because of the direct control a Drug Court would enjoy with an internal provider. NIJ's MADCE study indicated drug testing, judicial supervision, and the threat of jail or prison upon termination were important contributing factors as to why Drug Courts work (Rempel & Zweig, 2011). Many of Shaffer's and the MADCE findings are supported by the promising practices research described below (Carey, Finigan, & Pukstas, 2008) and by the research presented in this paper.

PROMISING PRACTICES RELATED TO POSITIVE OUTCOMES IN DRUG COURTS

Results from previous Drug Court research in eighteen Drug Courts in four states and one U.S. territory (Carey, Finigan, & Pukstas, 2008) as well as other research in California (Carey, Pukstas, et al., 2008; Carey, Waller, & Weller, 2010; Carey, Finigan, et al., 2006) and Oregon (Carey & Waller, 2011; Finigan, Carey, and Cox, 2007) have shown several promising practices within the framework of the Ten Key Components. Carey and colleagues collected data on over 200 practices engaged in by twenty-five California Drug Courts and twenty-four Oregon Drug Courts. In all three of these studies, analyses were run to determine which practices related to higher graduation rates, lower recidivism, and greater cost savings. The studies found the following themes related to the best outcomes:

- *Team Engagement*—All team members (judge, attorneys, coordinator, probation, treatment, law enforcement) should attend case staffings and court sessions.
- *Wraparound Services*—Participants need additional support services such as anger management, educational assistance, and relapse prevention.
- *Drug Testing*—Programs should drug test two to three times per week, obtain test results back within forty-eight hours, and require participants to have no positive drug tests for at least ninety days before graduation.

- *Responses to Participant Behavior (Incentives and Sanctions)*—Team members should receive written rules or guidelines regarding sanctions and incentives and require participants to pay program fees and complete community service in order to graduate.
- *Drug Court Hearings and the Judge’s Role*—Participants should be required to attend Drug Court hearings once every two weeks and the judge should spend at least three minutes per participants on average at court hearings.
- *Data Collection and Monitoring*—Data should be maintained electronically and programs should participate in evaluation and use program statistics to make program improvements.
- *Training*—Staff should participate in training prior to program implementation, judges should receive formal training, and all team members should be trained as soon as possible.

Volumes of research has been conducted on Drug Courts during the over twenty years of their existence. One can find journal articles written on almost any aspect of Drug Courts, from racial differences in Drug Court graduation rates (McKean & Warren-Gordon, 2011) to the effect of faith on program success (Duvall et al., 2008). Moreover, Drug Court best practices continue to be identified and taught at national Drug Court training conferences. Using a larger sample, this article further supports this previous research by confirming, updating, and adding to the research findings about specific Drug Court practices that relate to significantly better outcomes.

METHODS

Between 2000 and 2010, NPC Research conducted over 125 evaluations of adult Drug Court program operations. For this study, we selected sixty-nine of these evaluations because they used consistent methods for collecting detailed process information, included recidivism and cost analyses using the same methodology, and had sufficient sample sizes (total $n \geq 100$) for valid analysis. All process evaluations were designed to assess how and to what extent the Drug Court programs had implemented the Ten Key Components. The Drug Courts represented diverse geographic areas in Oregon, California, Indiana, Maryland, Michigan, Vermont, and Guam. In total, this

study included 32,719 individuals (16,317 Drug Court participants and 16,402 comparison group members).¹

Participation by the Drug Court programs in these evaluations was voluntary. These courts either directly contracted with NPC Research for evaluation services as part of their own quality improvement initiatives or collaborated with NPC Research as part of larger state or federal grant initiatives.

Data Collection

The data used in these analyses were collected as a part of process, outcome, and cost evaluations performed by NPC Research between 2000 and 2010. A brief description of the process, outcome, and cost data collection methodology is summarized below.²

Process Data Collection

For the process evaluations, the team relied on a multi-method approach. This strategy included a combination of site visit observations, key informant interviews, focus groups, and document reviews. This broad approach allowed the team greater access to descriptive program data than would have been available using any single method. A standard methodology was applied at each site to provide comparable data.

Key informant interviews were conducted with the Drug Court coordinator, judge, prosecutor, defense attorney, treatment providers, and probation and law enforcement representatives. Frequently, representatives from other involved agencies were also interviewed. NPC Research developed a standardized Drug Court typology interview guide and online survey to provide a consistent method for collecting structure and process information. The topics for the survey and typology interview guide were based on the Ten Key Components

¹ See http://www.npcresearch.com/Files/Appendix_A_Adult_drug_courts_participating_in_this_research.pdf for the programs included in this analysis.

² Detailed descriptions of the methodology and data collection performed for each Drug Court's full evaluation can be found in the program site-specific reports at www.npcresearch.com.

(NADCP, 1997) and were chosen from three main sources: the evaluation team's extensive Drug Court experience, the American University Drug Court Survey, and a published paper by Longshore and colleagues (2001) describing a conceptual framework for Drug Courts. The survey and typology interview guide covered many areas including specific Drug Court characteristics, structure, processes, and organization.

Outcome Data Collection

For the Drug Court participant sample, NPC Research identified individuals at each Drug Court who enrolled in the programs over a specified time period (at least a 2-year period). These individuals were selected using a Drug Court database or paper files listing Drug Court participants. To create a comparison group, NPC Research identified similarly situated individuals who were eligible for Drug Court but did not participate and received traditional court processing. Both groups were examined through existing administrative databases for a period of at least two years following entry. When databases were not available, data were gathered from paper files maintained by the program and other agencies involved with the offender population. The evaluation team utilized county and statewide data sources on criminal activity and treatment utilization to determine how Drug Court participants and the individuals from comparison groups differed in court processing and subsequent recidivism-related events (e.g., rearrests, new court cases, new probation, and incarceration).

Cost Data Collection

NPC Research performed the cost studies in these Drug Court programs using an approach called transaction and institutional cost analysis (TICA) (Crompton, Carey, & Finigan, 2004). 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 or change hands. In the case of Drug Courts, when a Drug Court participant appears in court or has a drug test, resources such as judge time, public defender

time, court facilities, and urine cups are used. Court appearances and drug tests are transactions. In addition, the TICA approach recognizes that these transactions take place within multiple organizations and institutions that work together to create the program. These organizations and institutions contribute to the cost of each transaction with program participants. TICA is a practical approach to conducting cost assessment in an environment such as a Drug Court, which involves complex interactions among multiple taxpayer-funded organizations.

In order to maximize the study's benefit to policymakers, a cost-to-taxpayer approach was used in these evaluations. This focus helps define which cost data should be collected (costs and avoided costs involving public funds) and which cost data are omitted from the analyses (e.g., costs to the individual participating in the program). In this approach, any criminal-justice-related cost incurred by the Drug Court or comparison group participant that directly impacts a citizen (either through tax-related expenditures or the results of being a victim of a crime perpetrated by a substance abuser) is used in the calculations.

Process Data Analysis

Analysis of Drug Court Practices

Statistical frequencies were performed across all sixty-nine Drug Court programs on each of over 200 adult Drug Court practices to determine the number of programs that implemented each practice. The frequencies provided us with the amount of variation that existed across programs in implementing any particular practice. The practices were categorized by component for each of the Ten Key Components (based on earlier work by Carey, Finigan, & Pukstas, 2008).

Some Drug Court practices did not vary greatly across these sixty-nine Drug Courts. If all Drug Courts performed the same practice, it was not possible to determine whether courts that performed a given practice had better outcomes than courts that did not. If a practice was not included in the results as a practice related to positive outcomes, this does not necessarily mean that the practice is not important; alternatively, it might not have been measurable with these

data. Practices that were common in over 90% of the programs are reported on the NPC Research Web site.³

Analysis of Practice in Relation to Recidivism and Costs

The analyses presented in this paper include only evaluations that had recidivism and cost outcomes (a total of sixty-nine programs). The quantitative analysis assessed court-level characteristics (practices performed or services provided by the program) and court-level outcomes, specifically, average reduction in number of rearrests and average increase in cost savings for each Drug Court. Costs, in particular, can vary across jurisdictions based on many factors that are not related to the Drug Court program, including cost of living in the area and the availability of different resources. For this reason, the *percent difference* (effect size) between the Drug Court participant sample and the comparison sample was used as a method for equilibrating the results across sites.

This study defines *recidivism* as the average number of rearrests over two years from program entry. *Reduction in recidivism* is defined as the percent decrease in average number of rearrests for the Drug Court participants when compared with the comparison group.

Outcome costs are defined as costs incurred because of criminal recidivism for both the Drug Court participants and comparison group members in the two years after Drug Court entry (or an equivalent date for the comparison group). Recidivism-related costs include rearrests, new court cases, probation and parole time served, and incarceration in jail and prison. For this study, reductions in outcome costs (or increases in cost savings) were calculated as the percent difference in outcome costs between the Drug Court group and the comparison group. The higher the percentage, the bigger the cost savings for Drug Court participants over the comparison group.

For the analyses of Drug Court practices in relation to outcomes, we coded the vast majority of the data on program practices as *yes* or *no* questions, either *yes*, the program performed that practice, or *no*,

³ See Appendix B at http://www.npcresearch.com/Files/Appendix_B_Practices_performed_in_90_percent_or_more_of_the_programs_in_this_analysis.pdf.

the program did not perform that practice. For example, the practice “a representative from treatment regularly attends Drug Court sessions” was coded as *yes* if the treatment representative regularly attended court or *no* if the treatment representative did not. In a few cases, we used continuous data (such as the number of days between arrest and program entry). We analyzed program recidivism and cost outcomes for those practices where the data revealed sufficient variation across sites.

To be considered a *best practice* for this article, data on a Drug Court practice had to be available in at least forty programs ($n \geq 40$), with at least ten programs in each yes or no category. That is, at least ten programs engaged in that practice *and* at least ten programs did not engage in that practice. However, in three cases where differences were substantial and significant, we included a practice where we had data for only thirty-five programs. In addition to best practices, we also included *promising practices*, where $n \geq 20$ and at least five programs represented each *yes/no* category.

We considered analyzing the practice and outcome data using a mixed model approach that used a nested design with *Drug Court program* as a grouping variable and outcome data at the client level (number of rearrests and two-year outcome costs per individual); however, we determined this would not best support the purpose of this analysis of best practices, which was to determine what program practices are related to program-level outcomes rather than individual outcomes (e.g., average reductions in recidivism, not whether or not a particular individual was rearrested or experienced a specific program practice). Therefore, these data could best be applied to program level analyses such as t-tests. The use of control variables was also considered (such as program population characteristics—ethnicity, gender, or drug of choice; rural vs. urban; program capacity; number of case managers or treatment providers; etc.). However, the sample size ($n = 69$) was not large enough to control for the numerous potential variables. Further, determining which variables to include as controls for each separate program practice on a theoretical basis when analyzing over 200 program practices was too complicated to be feasible and would not provide helpful or meaningful results.

We ran t-tests to compare the reduction in recidivism and the improvement in cost savings between courts that answered *yes* and courts that answered *no* for each practice. In cases where the data for a practice were continuous variables (such as number of treatment agencies that worked with the program), we used regression analyses to determine overall significance and examined the data for clear cut points. We then ran t-tests using these cut points. Results were considered statistically significant at $p < .05$ and considered “trends” up to $p < 0.15$.

Drug Court Population and Program Characteristics

Of the sixty-nine programs with recidivism data, 69% were post-plea only, 96% took offenders with felony charges, and 51% took offenders with either misdemeanor or felony charges.

The Drug Court programs included in this analysis ranged from a capacity of 20 active participants to over 400. The participant population for these programs varied in racial/ethnic composition within each Drug Court from 100% Latino to 99% White to 96% African-American. Participant gender ranged from 13% female in some Drug Courts to 55% female in others. Drugs of choice also varied widely, with some courts being made up entirely of methamphetamine users (100%), some consisting of mostly heroin users (80%), while others had a majority of marijuana users (78%). The average length of stay in these Drug Courts ranged from five months to twenty-nine months. The average graduation rate was 46%. A table that provides a description of the range in program and participant characteristics across the study sites can be found on the NPC Research Web site.⁴

Recidivism rates and costs also varied widely between sites based on factors that had little to do with the program itself, such as the availability of the police to make arrests (e.g., fewer police may result in fewer arrests) and the cost of living in the area. For this reason, we equilibrated the recidivism and cost outcomes across programs by

⁴ See http://www.npcresearch.com/Files/Characteristics_of_program_and_participant_population_in_69_drug_courts.pdf.

creating a percent difference between the Drug Court group and its comparison group for each outcome to establish the effect size. The effect size for the recidivism rate consisted of the difference in the number of rearrests between the Drug Court participants and comparison group divided by the number of rearrests for the comparison group. The percent increase in cost savings was calculated by subtracting the recidivism-related costs for the Drug Court from the recidivism costs for the comparison group, then dividing by the comparison group recidivism costs.

The average reduction in recidivism across these sixty-nine programs was 32%, and the average increase in cost savings was 27%. Just over 9% of the sixty-nine Drug Court programs had significantly greater participant recidivism than their comparison group, and 3% had outcomes that cost significantly more money than the comparison group. An additional 10% showed no significant difference in recidivism between the Drug Court and comparison group, and 23% showed no significant difference in costs. Just over 81% of the programs had significant reductions in recidivism of 10% or greater (up to 100% reductions), and 74% had significant cost savings of 16% or higher (up to 95% savings in costs).

Limitations of the Analyses

One limitation of these analyses is that some Drug Courts may have comparatively high-risk populations, for example, populations that have higher rates of mental illness, more severe addictions, low educational levels, and few economic opportunities. Drug Courts with proportionately more participants in this situation are more likely to have fewer positive outcomes, despite the fact that such Drug Courts might be implementing best practices. The data on risk level of the participants in these Drug Courts were not available to determine how this factor might have impacted outcomes.

Secondly, and related to the first limitation, is that the analyses performed were univariate correlations and there was no experimental control over what services or policies were provided by the programs in this study. Therefore, we cannot confidently attribute causality. That is, we cannot say with certainty that a particular practice caused

a particular reduction in recidivism or increase in cost savings. The more effective programs might have differed on variables that had nothing to do with their outcomes.

These analyses of best practices did not control for program population characteristics or some context characteristics (such as rural vs. urban programs). However, because of the vast flexibility and variation in the Drug Court model, many types of programs and populations were represented in this sample and, therefore, these findings should hold for many Drug Court programs.

RESULTS

The findings from these analyses are extensive. We found over fifty practices with significant correlations with recidivism or cost or both and some practices which were of interest because they were not significantly related to outcomes. The presentation of the results is therefore broken down into sections. The first section provides the full list of practices that met the criteria for best practices. This section also includes lists of the top ten practices by effect size for reduced recidivism and the top ten practices related to cost savings. The second section describes the promising practices that were significantly related to reductions in recidivism or to cost savings. The third section describes practices that are interesting because they were not significantly related to either outcome. Finally, the last section provides a discussion of the overarching themes among these practices.

Best Practices

Table 1 lists the best practices along with the overall effect sizes and level of significance for reductions in recidivism and for cost savings. These effect sizes show how large the reductions in recidivism and the increases in cost savings are for Drug Courts that perform a specific practice compared with the Drug Courts that do not. For example, courts where law enforcement is a member of the Drug Court team had 87% greater reductions in recidivism than courts that did not have law enforcement on the team. The figure 87% is the effect size. Although the Drug Courts that do not include law enforcement on the

team still reduced recidivism, the Drug Courts that do include law enforcement reduced recidivism 87% more. Table 1 also has the practices organized within each of the Ten Key Components (NADCP, 1997) following the convention established by these authors in an earlier study (Carey, Finigan, & Pukstas, 2008).⁵

| TABLE 1 | DRUG COURT BEST PRACTICES RELATED TO REDUCED RECIDIVISM AND HIGHER COST SAVINGS (BY KEY COMPONENT) | | |
|-----------------|--|-------------------------|--------------------------|
| KC ¹ | Practice | Reduction in Recidivism | Increase in Cost Savings |
| 1 | Law enforcement is a member of the Drug Court team | 0.87* | 0.44† |
| 1 | Judge, both attorneys, treatment, program coordinator, and probation attend staffings | 0.50* | 0.20 |
| 1 | The defense attorney attends Drug Court team meetings (staffings) | 0.21 | 0.93* |
| 1 | A representative from treatment attends Drug Court team meetings (staffings) | 1.05† | 0.00 |
| 1 | Coordinator attends Drug Court team meetings (staffings) | 0.58† | 0.41 |
| 1 | Law enforcement attends Drug Court team meetings (staffings) | 0.67* | 0.42~ |
| 1 | Judge, attorneys, treatment, probation, and coordinator attend court sessions (status review hearings) | 0.35† | 0.36~ |
| 1 | A representative from treatment attends court sessions (status review hearings) | 1.00† | 0.81† |

⁵ NPC Research provides a table of these best practices with greater detail including the specific recidivism reductions and relative cost savings in programs that did and did not perform each practice as well the sample size for each category. See Appendix C at http://www.npcresearch.com/Files/Appendix_C_Best_practices_comparing_yes_to_no_with_N_sizes.pdf.

| TABLE 1 | DRUG COURT BEST PRACTICES RELATED TO REDUCED RECIDIVISM AND HIGHER COST SAVINGS (BY KEY COMPONENT) | | |
|-----------------|---|----------------------------|-----------------------------|
| KC ¹ | Practice | Reduction in Recidivism | Increase in Cost Savings |
| 1 | Law enforcement attends court sessions (status review hearings) | 0.83* | 0.64* |
| 1 | Treatment communicates with court via e-mail | 1.19* | 0.39 |
| 2 | Drug Court allows nondrug charges | 0.95* | 0.30 |
| 3 | The Drug Court excludes offenders with serious mental health issues | 0.16 | -0.43* |
| 3 | The time between arrest and program entry is 50 days or less | 0.63* | -0.19 |
| 3 | Program caseload (number of individuals actually participating at any one time) is less than 125 | 5.67* | 0.35 |
| 4 | The Drug Court works with two or fewer treatment agencies | 0.74* | 0.19 |
| 4 | The Drug Court has guidelines on the frequency of individual treatment sessions that a participant must receive | 0.52* | -0.19 |
| 4 | The Drug Court offers gender-specific services | 0.20† | -0.10 |
| 4 | The Drug Court offers mental health treatment | 0.80† | 0.12 |
| 4 | The Drug Court offers parenting classes | 0.65* | 0.52~ |
| 4 | The Drug Court offers family/ domestic relations counseling | 0.65† | -0.12 |
| 4 | The Drug Court offers anger management classes | 0.48 | 0.43~ |

| TABLE 1 DRUG COURT BEST PRACTICES RELATED TO REDUCED RECIDIVISM AND HIGHER COST SAVINGS (BY KEY COMPONENT) | | | |
|--|--|-------------------------|--------------------------|
| KC ¹ | Practice | Reduction in Recidivism | Increase in Cost Savings |
| 4 | The minimum length of the Drug Court program is 12 months or more | 0.57* | 0.39 |
| 5 | Drug test results are back in two days or less | 0.73* | 0.68* |
| 5 | In the first phase of Drug Court, drug tests are collected at least two times per week | 0.38 | 0.61~ |
| 5 | Participants are expected to have greater than 90 days clean (negative drug tests) before graduation | 1.64~ | 0.50† |
| 6 | Only the judge can give sanctions to participants | 0.31~ | 0.04 |
| 6 | Sanctions are imposed immediately after noncompliant behavior (e.g., Drug Court will impose sanctions in advance of a participant's regularly scheduled court hearing) | 0.32 | 1.00* |
| 6 | Team members are given a copy of the guidelines for sanctions | 0.55† | 0.72~ |
| 6 | In order to graduate participants must have a job or be in school | 0.24 | 0.83* |
| 6 | In order to graduate participants must have a sober housing environment | 0.14 | 0.48~ |
| 6 | To graduate participants must have paid all court-ordered fines and fees (e.g., fines, restitution) | 0.48~ | 0.30 |
| 7 | Participants have status review sessions every two weeks in first phase | 0.48† | -0.23 |

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|-----------------|---|-------------------------|--------------------------|
| KC ¹ | Practice | Reduction in Recidivism | Increase in Cost Savings |
| 7 | Judge spends an average of 3 minutes or greater per participant during status review hearings | 1.53* | 0.36 |
| 7 | The judge was assigned to Drug Court on a voluntary basis | 0.84~ | 0.04 |
| 7 | The judge's term is indefinite | 0.35* | 0.17 |
| 8 | The results of program evaluations have led to modifications in Drug Court operations | 0.85† | 1.00* |
| 8 | Review of the data and/or regular reporting of program statistics has led to modifications in Drug Court operations | 1.05* | 1.31* |
| 9 | All new hires to the Drug Court complete a formal training or orientation | 0.54† | 0.07 |

NOTE: Practices that are significantly related to reductions in recidivism are not always significantly related to cost savings and vice versa. This finding is most likely because the two outcomes are indicators of different factors. The recidivism outcome essentially reflects the number of times participants engaged the criminal justice system (i.e., the number of rearrests). The cost outcome often reflects the seriousness of the crimes associated with those rearrests. More serious charges often result in more extensive sentences—more time incarcerated and on probation or parole—and a greater number of new court cases, all of which are related to higher costs.

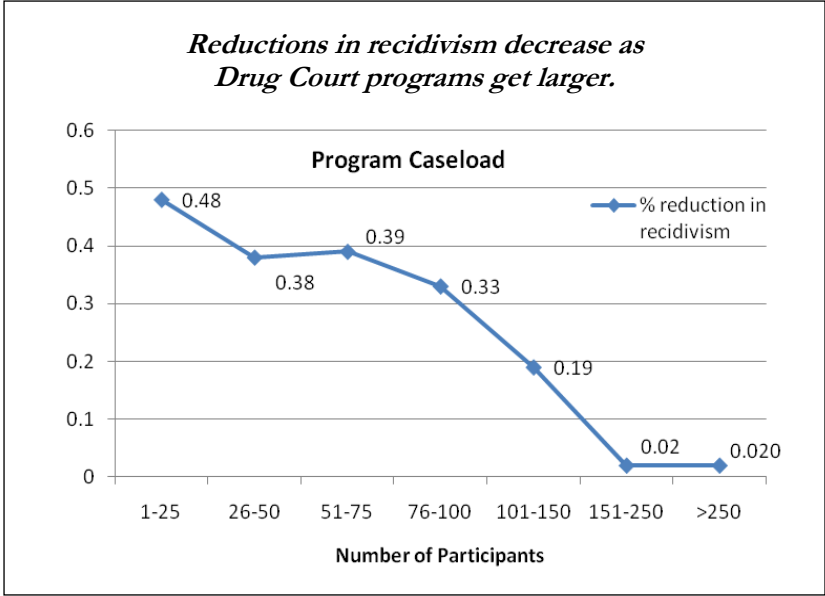
¹Key Component; ~Trend ($p < .15$); † $p < 0.1$; * $p < .05$

Top Ten Practices for Reducing Recidivism

Following are the top ten practices related to reducing recidivism from Table 1 ranked by effect size, starting with the largest.

1. Drug Courts with a program caseload (number of active participants) of less than 125 had more than five times greater reductions in recidivism than programs with more participants.

Figure 1 demonstrates how the reductions in recidivism decrease as programs get larger. Likely, as the Drug Court gets larger, the case-loads per case manager and treatment provider also get larger. The larger programs may be tempted to decrease the level of supervision or otherwise “water down” the Drug Court intervention. In addition, the role of the judge has been demonstrated to be a key factor in participant success. All of the Drug Courts in this study were single-judge programs and therefore the larger programs had a single judge seeing up to 400 active participants. Judges report difficulty in getting to know participants to the extent that they need to when they see over 100 participants. Although the reason for this result is not clear from the available data, this finding had the largest effect size by far of any finding in this study. Part of the reason for this extremely large effect size is that programs with populations of greater than 125 participants had a very small reduction in recidivism (an average of 6%) compared with programs with 125 or fewer, which had an average of 40% reduction in recidivism. Clearly the smaller programs did substantially better. We do not believe that, based on this result, larger



**Figure 1. Participant Caseload Compared
with Reductions in Recidivism**

programs must become smaller. More research is needed to fully understand what is driving this result. In the meantime, larger programs should be examining their practices to ensure that they are maintaining fidelity to the Drug Court model and to best practices.

2. Drug Courts where participants were expected to have greater than 90 days clean (negative drug tests) before graduation had 164% greater reductions in recidivism compared with programs that expected less clean time.

Graduation requirements have been an important issue, and a contentious one, for some Drug Courts. This finding is consistent with the literature, which shows that the longer individuals remain abstinent from drugs and alcohol, the more likely they will continue to remain abstinent in the future (e.g., Kelly & White, 2011).

3. Drug Courts where the judge spent an average of three minutes or greater per participant during court hearings had 153% greater reductions in recidivism compared with programs where the judge spent less time.

Three minutes does not seem like much time. Yet one of the crucial aspects of the Drug Court model is the influence of the judge, which requires significant and meaningful interaction with the participant. Our data show a linear effect on positive outcomes when more judge time is spent with the participant (see Figure 2). Moving from under three minutes to just over three minutes effectively doubles the reduction in recidivism, while spending seven minutes or more effectively triples the positive outcome.

4. Drug Courts where treatment providers communicated with the court or team via e-mail had 119% greater reductions in recidivism.

Good communication is important for any successful team effort, and this is particularly true of Drug Court. For a Drug Court to provide immediate sanctions and rewards, communication about participant activities must be quick and accurate. Using e-mail as a primary communication method allows swift communication simultaneously with all team members, making this an effective format.

Three minutes or more in front of the judge is related to significant reductions in participant recidivism.

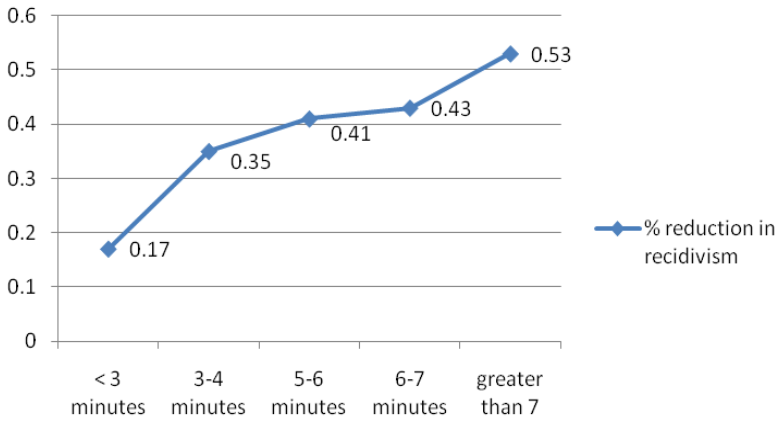


Figure 2. Number of Minutes before the Judge Compared with Reductions in Recidivism

5. Drug Courts where a representative from treatment attended Drug Court team meetings (staffings) had 105% greater reductions in recidivism.

Most of our sites ($n = 50$) required treatment providers to attend the case staffing because this is highly relevant to their role and is a crucial place for their feedback, but a large minority (11) did not. While they may have had feedback about participants delivered to the staffing, they did not send a representative to be part of the team. These data suggest that this is not as good a practice.

6. Drug Courts where internal review of the data and program statistics led to modifications in program operations had 105% greater reductions in recidivism.

Parallel to the practice of having independent evaluation of the Drug Court program (point ten on this top ten list) is the internal collecting, tracking, and use of data to improve program practice. The key elements to this best practice are twofold:

- The program uses an electronic data collection and management system that allows staff to provide the Drug Court with relevant statistics on program performance and operations, which the team can use to garner insights into its performance, guide improvements, and reveal areas where training is needed.
- The Drug Court *uses* the data as a basis for practical program change and continues to use it to monitor progress.

7. Drug Courts where a treatment representative attended court hearings had 100% greater reductions in recidivism than programs where treatment did not attend.

Most of the programs in this study required treatment providers to attend the case staffing because this is highly relevant to their role and is a crucial place for their feedback. However, the role of treatment seems less obvious when it comes to status hearings. Status hearings for Drug Court generally involve sanctions and rewards for activities related to treatment. Having treatment providers attend status hearings demonstrates to participants that the team works together to make decisions about their care and demonstrates in court that the program is intended to be therapeutic. This also makes it more difficult for participants to tell different stories to treatment and the Drug Court, thus “playing off” treatment providers and the rest of the team against each other.

8. Drug Courts that allowed nondrug charges (e.g., theft or forgery) had 95% greater reductions in recidivism than Drug Courts that accepted only drug charges.

This practice has been a source of controversy among Drug Courts. Early in the Drug Court movement, common belief held that the Drug Court was primarily geared to offenders with drug possession charges. This idea ignored the important role of drug addiction and abuse in many other crimes such as burglary or robbery. Increasingly, prosecutors and other referral sources to Drug Court began to feel that offenders with nondrug charges would also benefit from Drug Court. These data support that conclusion. This finding illustrates the greater impact Drug Court can have on public safety when participants with more serious offenses (including higher-risk participants) are given the benefit of intense supervision and treatment.

9. Drug Courts that had a law enforcement representative on the Drug Court team had 88% greater reductions in recidivism than programs that did not.

Programs that include a law enforcement representative on the team describe that role as crucial for two main reasons:

- Law enforcement often has more frequent contact than Drug Court personnel with Drug Court participants on the street and in home settings and therefore provides good insight into what is happening to participants in their lives outside of court and treatment.
- Including law enforcement creates a two-way process where law enforcement representatives not only contribute an important perspective to the Drug Court, but also return information to law enforcement organizations, which promotes a better understanding of the value of Drug Court.

10. Drug Courts that had evaluations conducted by independent evaluators and used them to make modifications in Drug Court operations had 85% greater reductions in recidivism than programs that did not use these results.

Evaluations by independent research teams are sometimes viewed by sites as an inconvenience required by a funder. Partly this perception may result from using evaluators who do not understand Drug Courts and do not address questions that might lead to program improvement. However, part of this perception may also reflect the discomfort or lack of familiarity of some Drug Court staff with the use of numbers or statistics. Whatever the reason, using evaluation feedback to modify program practices appears to be worth the effort.

The key elements to this best practice are twofold:

- The program has an evaluation by an independent research team that provides insights into its program performance, guidance on potential improvements, and training in ongoing data collection to monitor improvements.
- The Drug Court *uses* the independent evaluation as a basis for practical program change.

Top Ten Practices for Cost Savings

Many of the top ten practices for reducing recidivism are the same ones that also contribute to saving costs. Following are the top ten practices related to increased cost savings from Table 1 ranked by effect sizes, starting with the largest.

1. Drug Courts where internal review of the data and program statistics led to modifications in program operations had 131% higher cost savings.

Using data from program management information systems (MIS) to track progress and make program modifications correlates strongly with cost savings. Regularly monitoring data further provides feedback that the team can use to make necessary adjustments to meet goals in a timely and regular manner. This finding appears in both of the top ten practices lists.

2. Drug Courts that had evaluations conducted by independent evaluators and used them to make modifications in Drug Court operations had 100% greater cost savings.

Having a good, useful independent evaluation is important to this best practice. As with the preceding practice, this practice depends on the program's willingness to make changes based on data and to continue to use data to monitor progress. This finding appears in both of the top ten practices lists.

3. Drug Courts where sanctions were imposed immediately after noncompliant behavior had 100% greater cost savings.

The value of having sanctions imposed immediately after noncompliant behavior is a central tenet of behavior modification. It also appears to increase positive outcomes and cost savings in Drug Courts. *Immediately* is defined as bringing a participant in to the next available court hearing if they are not already scheduled for it, or administering the sanction before the next court hearing. Study results also showed that when programs wait until the scheduled court appearance for noncompliant participants instead of bringing them in earlier, participant outcomes do not improve. If teams wait too long (two weeks or more) before applying a sanction, the participants may

have other issues that are more relevant by then, or they may even have worked to improve their behavior by then, in which case they are receiving a sanction at the same time as they are doing well, providing them with a message that is unclear and may even be defeating.

4. Drug Courts where the defense attorney attended Drug Court team meetings (staffings) had 93% greater cost savings.

The value of having a defense attorney present at staffing is two-fold: first, it helps protect the rights of the Drug Court participant, and second, it appears to increase positive outcomes and cost savings. The goal of problem-solving courts is to change behavior by leveraging compliance with treatment while protecting both participant rights and public safety. Drug Court participants are seen more frequently, supervised more closely, and monitored more stringently than other offenders. Thus, they often have violations of program rules and probation. Counsel must be there to rapidly address the legal issues, settle the violations, and move the case back into treatment and program case plans.

5. Drug Courts where participants must have a job or be in school in order to graduate had 83% greater cost savings.

Both having a job and being in school have a clear and logical connection to costs after the participant leaves the program. If the participant is engaged in positive activities that lead to higher (and legal) income, they are less likely to engage in drug use or other criminal activities.

6. Drug Courts where a treatment representative attended court sessions had 81% greater cost savings.

Having a treatment representative at Drug Court sessions related to significant cost savings, illustrating the importance of treatment providers as team members. This finding appears in both of the top ten practices lists.

7. Drug Courts where team members are given a copy of the guidelines for sanctions had 72% greater cost savings.

Interestingly, the results also showed that providing *participants* with written guidelines was not related to recidivism or cost outcomes. Therefore, it appears that guidelines may be more crucial for the *team* in determining its responses to participant behavior. Written guidelines can provide a range of potential team responses to participants' behaviors, including treatment responses, sanctions, and incentives rather than a one-to-one response for each behavior. This range of potential responses serves to remind team members of the variety of incentives and sanctions available while also providing some consistency across participants. Programs without written guidelines have a tendency to use a smaller number of sanctions and limit themselves to the incentives that they are most familiar with.

8. Drug Courts where drug test results were available in 48 hours or less had 68% greater cost savings.

Receiving drug test results quickly allows the team to respond more quickly with swift and certain sanctions and incentives. One method that works well for many programs is to use instant-results tests for the majority of drug tests, only sending to a lab for confirmation if the participant continues to deny use after a positive instant result. If the confirmation test comes back positive, the participant pays for that test as a sanction for providing false information in addition to any sanction or treatment response for the drug use itself. If the confirmation is negative, then the program pays the testing fee.

9. Drug Courts where drug tests were collected at least two times per week in the first phase had 68% greater cost savings.

Drug testing is the one truly objective means Drug Courts have of assessing whether their services are successfully changing participant behavior. It plays a crucial role in participant success. In focus groups, participants regularly reported that the only thing that kept them from using at the beginning of the program (before they were truly engaged in recovery) was knowing they would be tested and caught. Drug testing at least twice per week makes it more difficult for participants to use between tests, particularly if the tests occur on a random schedule. Testing less frequently makes prediction easier so that participants can find times to use without detection.

10. Drug Courts where a law enforcement representative attended court sessions had 64% greater cost savings than courts where law enforcement did not.

A law enforcement team member provides a unique perspective on participants and can contribute information that is invaluable to the team and the participants.

Promising Practices

Promising practices are those that significantly related to recidivism and costs, but did not meet the more stringent criteria outlined for best practices. The practices listed in Table 2 show promise for providing adult Drug Court programs with a strong infrastructure that contributes to program and participant success.⁶

Offer Services to Address Participant Needs

Drug Court programs that provide participant supports appear to have better outcomes. Many program services that address participant needs, including gender-specific services, mental health treatment, parenting classes, family counseling, and anger management classes, help participants avoid rearrest and save the program money in the long run (see Table 1). Three practices related to program services were encouraging enough to include under promising practices: residential treatment, health care, and dental care.

Residential Treatment—Offering residential treatment often completes a continuum of treatment services for those participants with the most severe substance abuse issues and may translate into a 106% improvement in recidivism outcomes.

Health and Dental Care—Most Drug Court participants had lifestyles that negatively impacted their physical health and many did not have consistent access to health or dental care. For example, use of

⁶ The NPC Research Web site provides a table of promising practices with greater detail including the specific number of Drug Courts in each category and the specific recidivism reductions and relative cost savings. See Appendix D at http://www.npcresearch.com/Files/Appendix_D_Promising_practices_comparing_yes_to_no_with_N_sizes.pdf.

| TABLE 2 DRUG COURT PROMISING PRACTICES | | | |
|--|--|-------------------------|--------------------------|
| KC ¹ | Practice | Reduction in Recidivism | Increase in Cost Savings |
| 4 | The Drug Court offers residential treatment | 1.06 [†] | 0.26 |
| 4 | The Drug Court offers health care | 0.50 [~] | 0.46 |
| 4 | The Drug Court offers dental care | 0.59 [†] | 0.38 |
| 6 | Participants are required to pay court fees | 0.18 | 2.08* |
| 6 | The Drug Court reports that the typical length of jail sanction is longer than two weeks | -0.59* | -0.45 [~] |

NOTE: For promising practices, $n \geq 20$ with at least 5 in each category.

¹Key Component; [~]Trend ($p < .15$); [†] $p < 0.1$; * $p < .05$

some substances (e.g., methamphetamines) creates serious physical health and dental problems. Programs that offered dental care had 59% greater reductions in recidivism than programs that did not and programs that offered health care had 50% greater reductions in recidivism.

Although not statistically significant, offering any one of these three services also produced improvements in cost of 23–26 percent.

Require Participants to Pay Court Fees

Court fees are one way that Drug Court programs create an institutionalized, sustainable source of program funding. These fees must be proportional to a participant's ability to pay and should not create a barrier to success or a disincentive to participate in the program. This fee strategy enhances participant engagement, promotes the belief that the program is valuable, and allows participants to invest in their own change process. Programs that required court fees had 208% higher cost savings than programs that did not. Note that these cost savings do not reflect the costs of running the program, but specifically refer only to outcome costs, costs that occurred outside of the program and are related to recidivism events such as rearrests and time in jail.

Therefore, the cost savings are not achieved because the program had collected larger participant fees.

Consider Participant Sanctions Carefully

Two of the promising practices involve the use of sanctions in Drug Court programs, specifically the use of jail as a sanction and terminating program participation owing to rearrest for drug possession. Some view these sanctions as tougher on crime, yet the results of this study indicate that programs have better outcomes when they address noncompliance issues through other strategies.

Use Jail As a Sanction Sparingly—This study assessed the impact of using briefer compared with longer jail sanctions. Drug Courts that levied longer-term jail sanctions had worse outcomes than those using shorter-term jail sanctions (see Figure 3).

Programs that used sanctions of less than six days had average reductions in recidivism of 46% compared with 19% for programs that used longer-term jail sanctions. In addition, jail is an extremely expensive resource. Programs relying on jail sanctions longer than two weeks saw 45% less cost savings after program participation.

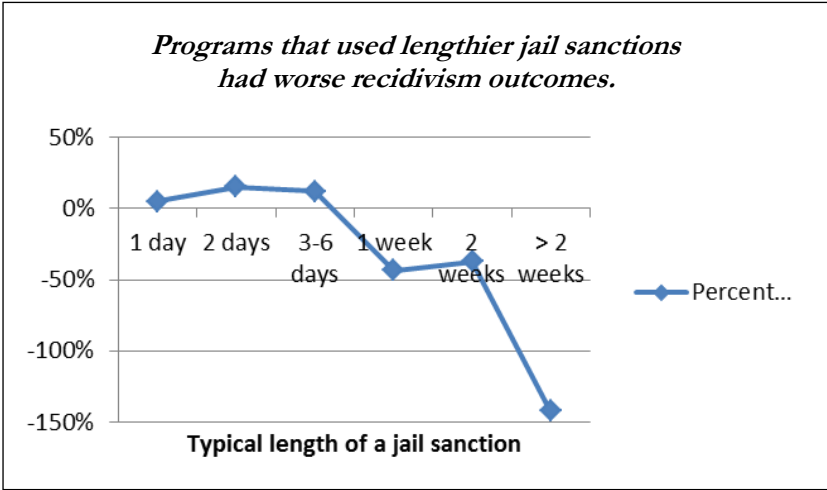


Figure 3. Duration of Jail Sanction Time Compared with Reduction in Recidivism

Retain Participants with New Possession Charges Rather Than Terminate Them—Although all programs must consider and establish policies and procedures for maintaining public safety and determining when participants are no longer appropriate for community-based interventions, a new arrest should not necessarily be grounds for automatic program termination. This study found that programs that terminated participants upon a new arrest for drug possession had lower recidivism reductions and lower cost savings than programs that did not terminate participants for a new drug charge. Programs that terminated participants for drug-possession arrests had 50% worse recidivism outcomes and 48% worse cost savings than programs that retained these participants in the program. These findings illustrate the importance of providing more services to this population of offenders, and that the continuity and persistence of Drug Court supervision and treatment pays off in the long run.

Train Staff in Preparation for Drug Court Program Implementation

Good management practices consistently demonstrate that employees need to understand their roles and tasks if they are to do their jobs effectively, and Drug Courts are no exception. As this article supports, Drug Court programs are collaborations with key elements that are important to implement to achieve desired outcomes. In this study, those programs that trained team members in preparation for program implementation averaged a 55% greater reduction in recidivism. Even more striking was the cost savings that resulted from training. Programs that invested in this practice had an average of 238% greater cost savings than programs that did not invest in training.

In sum, many of the promising practices described in this section involve activities or services that have resource implications programs might consider too expensive or time consuming, such as offering residential treatment or dental care or paying for staff training. However, this study provides evidence that these investments likely pay off in better long-term outcomes for both participants and the program as a whole. Smart use of system resources, such as limited

use of jail as a sanction and implementation of affordable participant fees, can also help make program investments feasible while at the same time improving outcomes.

Interesting Practices Not Significantly Related to Outcomes

Some practices are important by virtue of the fact that they were *not* significantly related to better or worse outcomes. Three main findings are particularly relevant to programs in determining their target population and their overall model. These findings relate to violence charges, mixing certain participant populations, and frequency of court appearances.

Drug Courts that allow participants with current violence charges or prior violence convictions had no difference in recidivism or cost outcomes.

This has been a highly political and controversial topic. Many prosecutors will not allow violent offenders in Drug Court because of public safety concerns. However, the data show that programs that allow violent offenders do equally well as programs that allow only nonviolent offenders. Other research also supports this finding (see Saum, Scarpitti, & Robbins, 2001; Saum & Hiller, 2008). In fact, research suggests allowing violent offenders into Drug Court programs can have a bigger positive effect on recidivism and cost outcomes than allowing only nonviolent offenders because greater savings are achieved when violent crimes are prevented rather than less serious (less costly) crimes.

In general, most violent offenders are not incarcerated for long and are subsequently back in the community under supervision that is much less intensive than the supervision provided by Drug Court. Because of proven reductions in recidivism for Drug Court programs compared with the traditional court system, Drug Courts actually do a better job of protecting public safety. However, choosing what kind of violence charges are allowed is important because the safety of the staff and other participants is paramount.

Drug Courts that mix pre- and postadjudication participants or allow participants with misdemeanors or felonies into the program had no difference in recidivism or cost outcomes.

The Drug Court model appears to work for offenders who have a substance use problem and are involved with the criminal justice system. Whether the program operated with a mix of pre- and postadjudication participants or operated either preadjudication or postadjudication exclusively had no relation to recidivism or cost in the current study. This finding is contrary to the findings by Shaffer (2006) and for the MADCE study (Rempel & Zweig, 2011) that mixing pre- and postadjudication offenders had worse outcomes compared with programs that served each of those populations exclusively. Further research needs to be performed to resolve this discrepancy.

Similarly, whether the charge that led to Drug Court participation was a misdemeanor or felony also had no relation to subsequent outcomes.

Drug Courts that see participants at court sessions weekly during the first phase had no better outcomes than courts that saw them every two weeks.

Although our best practice results show that seeing participants every two weeks in the first phase is related to significantly better outcomes (see Table 1) compared with programs that see participants monthly or less often, weekly court appearances do not appear to have significant additional benefit. Overall, what is important is assessing the risk and need level of participants and determining the appropriate level of court supervision needed at the time of entry (Marlowe et al., 2006). Perhaps for very high-risk and high-need participants, weekly court appearances might be appropriate, while participants that are more in the middle of the risk/need range might perform adequately with less frequent supervision.

Reiteration of Study Limitations

With over 200 practices being examined, determining a theoretical reason for using a particular covariate in the analysis for each in-

dividual practice was not feasible. Therefore, the analyses performed for the above results did not adjust for covariates (e.g., services available in the community or numbers of available case managers) or for the risk or need level of the participant populations.

SUMMARY AND CONCLUSIONS

Themes in Best Practices

Interestingly, when the best and promising practice results were examined for emerging themes among practices (see Tables 2 and 3), those themes led us back to the Ten Key Components. Following is a discussion of the main themes that emerged from a review of practices that significantly related to program outcomes.

Teams Sink or Swim Together—A holistic approach works. Having more people at the table collaborating pays off. Everyone brings value and the investment is worth the effort and cost. This result may be a function of communication. These data strongly make a case that all key players (e.g., judge, coordinator, treatment representative, prosecutor, defense attorney, law enforcement representative) should be members of the Drug Court team and be present both at status hearings and at staffing meetings.

Relationships Matter—Having teams that get together and work together, having fewer providers (which promotes more individual relationships and communication) and fewer participants (so that the team and judge know everyone), and ensuring participants get at least three minutes on average of the judge's attention at each review session all help create an effective program.

Wraparound and Habilitation Services Are Key—Drug Court programs that focus on providing participant supports have better outcomes. Programs with such wraparound services avert rearrests and save taxpayer money in the long run when they address participant needs such as relapse prevention, gender-specific services, mental health treatment, parenting classes, family counseling, anger management classes, health and dental services, and residential care.

Structure and Consistency Are Crucial—Practices that demonstrate this theme include having written guidelines for sanctions, guidelines on the number of individual treatment sessions, drug test results within forty-eight hours, drug testing at least twice per week, status reviews every other week, immediate sanctions (including those that occur outside of court and thus happen more swiftly), and a program designed to take at least twelve months. These factors ensure that participants are learning about structure, accountability, safety, and dependability.

Participants Must Be Set Up for Success—Participants should be stable before leaving the program. Best practices within this theme include requiring that participants have a job or be in school, have at least ninety days clean, have participated in the program at least twelve months, have sober housing, and have paid all fees before they can graduate. If these practices are in place, participants should be ready to set their own goals and succeed in their lives.

Continuous Program Improvement Leads to Positive Outcomes—Programs that collect and use data, seek out training, acquire the support and insights of experts (including evaluators), and use the data and expert feedback to make ongoing adjustments to enhance practices see improvements in outcomes. These results demonstrate that Drug Courts that develop practices that focus on understanding and improving program performance have better outcomes than those that do not.

The Drug Court Model Is Effective with Difficult Populations—Drug Courts work for a wide range of populations and for participants who are seen as difficult to change and serve. These findings show that an offender's criminal justice status (or mental health status) should not be a barrier. It does not matter whether a program's population is only preadjudication, only postadjudication, or a mix of both. Nor does it matter whether participants have violent histories or not, or whether they have misdemeanors or felonies. The focus is on treatment and consistent supervision. These results suggest that Drug Courts can successfully include a wide variety of offender populations.

Perhaps the most overarching theme is a picture of Drug Courts that are well organized. These programs have teams that are engaged in program activities and are collaborating, think through their program and clearly communicate expectations to staff and participants, and are dedicated to program improvement. These Drug Courts are the most effective in helping participants recover their futures, reducing participant recidivism, decreasing crime, and saving taxpayer money.

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