

It is, of course, possible that participants' prior drug treatment histories might have simply reflected the severity of their drug abuse problems. That is, individuals with more serious or longer-term drug problems may have been more likely to have been referred or mandated into treatment. In fact, individuals with a prior drug treatment history did have significantly higher baseline ASI drug clinical factor scores ($p < .05$), higher baseline ASI drug composite scores ($p = .07$), and more lifetime years of drug use ($p < .05$) than those without such a history. While this confirms that subjects with prior drug treatment histories did have more severe drug problems, it is important to note that these indices of drug severity did *not* interact with group assignment to predict any dependent measure of outcome. In addition, there was no relationship between APD diagnosis and previous drug treatment.

The results of this first study provided support for the Risk Principle in a drug court context. High risk offenders performed more favorably when they were provided with more intensive judicial supervision, and low risk offenders performed more favorably when they were provided with less intensive judicial supervision. The differential effects for the high-risk vs. low-risk offenders apparently "canceled each other out" in the main analyses for the sample as a whole, and would have been missed entirely if the analyses had not specifically tested for interaction effects.

Importantly, however, because this study was conducted in one jurisdiction with one drug court program and one judge, questions remained about the generalizability of the findings. It was conceivable, for example, that this particular drug court judge might have been unusually adept at handling more serious antisocial offenders. If so, the results might not be applicable to other drug courts. Therefore, the study was replicated in four new drug courts in rural and semi-urban communities.

**Replication Study in Dover and Georgetown:
Misdemeanor Clients**

[6] The results of the replication study with misdemeanor clients are detailed in a recent publication (Marlowe, Festinger & Lee, in press) and the salient findings are briefly reviewed here. As was previously found in Wilmington, there were *no* differences between the bi-weekly and as-needed participants on counseling sessions attended, urinalysis results, self-reported drug use, self-reported alcohol intoxication, or self-reported criminal activity during the first 14 weeks of the program, or in graduation rates from the program.

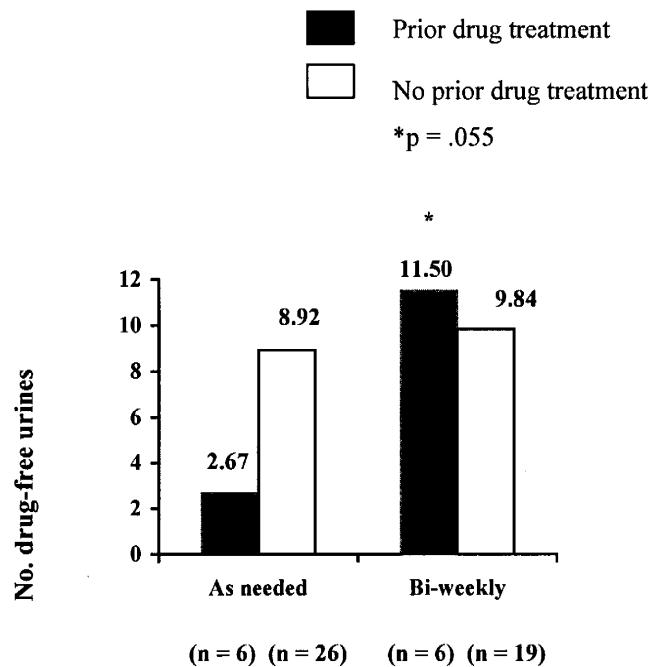
Importantly, the interaction effect was replicated from the previous study concerning participants' prior history of drug abuse treatment. As depicted in Figure 3, participants with a prior drug treatment history provided substantially more drug-free urine samples during the first 14 weeks of drug court when they were assigned to bi-weekly status hearings (11.50 ± 4.81) as opposed to as-needed hearings (2.67 ± 3.61) and this difference was marginally significant after statistically controlling for current criminal charges ($p = .055$).

In addition, there were substantial differences in graduation rates and termination rates for participants with prior drug treatment histories. Over 80 percent of participants with a prior drug treatment history graduated from the program when they were assigned to bi-weekly hearings, compared to less than 20 percent of those assigned to as-needed hearings ($p = .05$).

Because of the very large magnitude of these effects, statistical significance was reached after recruiting only a small number of participants with prior drug treatment histories (as-needed = 6, bi-weekly = 6). Such small numbers raise serious concerns about whether this study sample was

truly representative of the drug court population. It is possible that there might have been something unusual about these 12 individuals that was responsible for the differences that were detected. From a *scientific* standpoint, it would have been advisable to continue enrolling more drug court clients into the study and to check to be certain that the results remained the same over time with more subjects.

Figure 3. Replication study: Interaction of prior drug treatment history and frequency of judicial status hearings on urinalysis results during the first 14 weeks of misdemeanor drug court. Reprinted with permission from D.B. Marlowe, D.S. Festinger, & P.A. Lee (forthcoming 2003). The role of judicial status hearings in drug court: A controlled replication. *Offender Substance Abuse Report*, Volume 3, No. 3. Copyright 2003 by D.B. Marlowe, D.S. Festinger, P.A. Lee, and Civic Research Institute, Inc. Reprinted with permission from Civic Research Institute, Inc.



This course of action was not acceptable, however, from an *ethical* or *practical* standpoint. Given the serious legal repercussions to clients of failing in drug court, and the serious public safety concerns of having drug offenders continue to use drugs in the community, it was necessary to report these early findings to the Steering Committees and IRBs overseeing the study and to request their guidance about how to proceed. It was ultimately determined that the “risk/benefit ratio” had shifted for the study, meaning that the foreseeable risks to clients might have been higher than previously believed. This would require alterations to the consent form that would inform all current and future participants about the possible risks of being scheduled for as-needed hearings.

Although the risk appeared at present to be limited to *misdemeanor* participants with *prior drug treatment histories*, it was possible that it might have also extended to *felony* participants and to those with *APD*. Understandably, therefore, the judges and other program personnel were reluctant to continue randomly assigning clients to as-needed hearings. Given that the study had already yielded important and practical scientific information by replicating some of the previous findings from Wilmington, it was felt that the emerging ethical concerns overshadowed the remaining scientific questions. Therefore, recruitment was suspended indefinitely for the study and remedial procedures were instituted to assist the few negatively affected participants. Unfortunately, because it was necessary to stop the study prematurely, there was insufficient statistical power to follow up on other previous findings such as whether there was an interaction effect for misdemeanor participants with APD.

**Replication Study in Dover and Georgetown:
Felony Clients**

[7] The results of the replication study with felony clients have not previously been published. The felony

participants were predominantly young adults (mean \pm SD = 28.99 \pm 8.54 years of age), male (73%), Caucasian (57%) or African American (39%), single (80%), high school educated (11.89 \pm 1.44 years), and employed (75%). Their most serious current criminal charges were possession or consumption of narcotics (61%), distribution or possession with intent to distribute drugs (36%), or possession of drug paraphernalia or hypodermic syringes (4%). Most of these individuals (87%) had been previously arrested, 29 percent had a prior criminal conviction, 21 percent had been previously incarcerated, and 23 percent met DSM-IV criteria for APD. They were represented by public defenders (54%), by private defense counsel (37%), or were pro se (9%).

The participants reported currently abusing cannabis (45%), alcohol (41%), cocaine (25%), opiates (21%), sedatives (11%), or hallucinogens (5%). Roughly one third (32%) had a prior history of drug abuse treatment. Based upon ASI cut-off scores for classifying the treatment needs of offenders (Lee et al., 2001), 35 percent of these participants produced "sub-threshold" drug composite scores similar to a non-substance using population (drug composite score \leq .04), 58 percent produced "moderate" drug composite scores similar to a national sample of substance abuse clients in outpatient treatment ($>$.04 and \leq .24), and 7 percent produced "severe" drug composite scores similar to a national sample of substance abuse clients in residential drug treatment ($>$.24). A check on randomization confirmed that each of these demographic, drug-use, and criminal-history variables was equally distributed in the two study conditions. Equivalent numbers of clients from the two counties were represented in the sample and outcomes did not differ between counties; therefore, the data were not nested by county in the analyses.

Several important cautions must be kept in mind before presenting the outcomes. First, as previously discussed, it was necessary to stop the study prematurely. As

a result, there were an insufficient number of participants to ensure that the study sample was representative of felony drug court clients generally. Second, there were relatively lower consent rates and greater attrition rates from the bi-weekly condition for the felony participants. In the previous studies, over 50 percent of misdemeanor clients consented to participate and less than 10 percent dropped out of the bi-weekly condition because of its onerous time demands (Marlowe, Festinger, Lee, et al., in press). In contrast, only 40 percent of felony clients consented to participate in this study and 28 percent dropped out of the bi-weekly condition. This may have been due to the fact that the felony programs were six to 12 months in length, compared to only four to six months for the misdemeanor programs. Understandably, the felony participants were often unwilling or unable to attend bi-weekly status hearings for such a long time, in part because the hearings interfered with their ability to maintain employment or education. Regardless of the reason, this raises further concerns about whether the sample was fairly representative of felony drug court clients.

With these caveats in mind, the results were consistent with what was found in the studies of misdemeanor participants. The study maintained excellent integrity of the experimental conditions. As can be seen in Table 1, participants in the bi-weekly condition were scheduled to attend significantly more judicial status hearings than participants in the as-needed condition and they actually attended significantly more status hearings ($p < .0001$). There were, however, *no* differences in counseling sessions attended, urinalysis results, self-reported drug use, self-reported alcohol intoxication, or self-reported criminal activity during the first 16 weeks of the program, or in graduation rates.

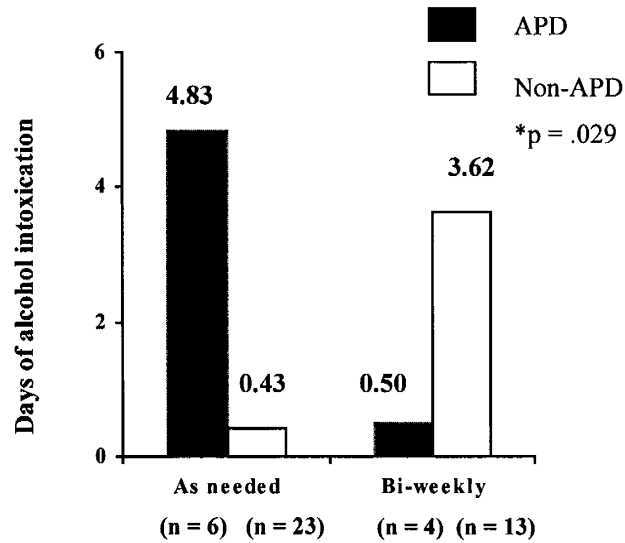
Table 1
Performance During the First 16 Weeks of Felony Drug Court, and Program Completion Status

| | As Needed <u>M(SD)</u> | (n=33) <u>%</u> | Bi-weekly <u>M(SD)</u> | (n=23) <u>%</u> |
|--|----------------------------------|---------------------------|----------------------------------|---------------------------|
| Status hearings scheduled | 0.97 (1.36) | 46% | 4.39 (0.99)† | 100%† |
| Status hearings attended | 0.73 (1.10) | 42% | 3.83 (1.27)† | 100%† |
| Counseling sessions attended | 8.55 (8.82) | 91% | 7.09 (3.69) | 91% |
| Total drug-free urines provided | 7.85 (4.96) | 88% | 7.26 (5.45) | 78% |
| Consecutive drug-free urines provided | 5.73 (4.71) | | 4.74 (4.80) | |
| Self-reported days of illicit drug use | 2.76 (9.55) | 28% | 2.67 (4.35) | 39% |
| Self-reported days of alcohol intoxication | 1.34 (4.20) | 17% | 3.06 (5.43) | 33% |
| Self-reported days of illegal activity | 0.00 (0.00) | 0% | 0.83 (3.54) | 6% |
| Graduated | | 53% | | 35% |
| Terminated or absconded | | 25% | | 41% |
| Still enrolled in program | | 22% | | 24% |

% = proportion of participants who met any criterion on each variable (e.g., attended any status hearings). Alcohol intoxication = felt the effects of alcohol or had 5 drinks in one day. †p < .0001.

Because of the small number of participants, it was not possible to evaluate many of the potential interaction effects. For most of the analyses, there were too few participants who had APD or a prior drug treatment history *and* were assigned to bi-weekly status hearings *and* remained in the study long enough to provide outcome data. Figure 4 depicts one of the few interaction analyses that could be fairly evaluated that produced significant results. Consistent with the previous findings, participants with APD reported engaging in more alcohol intoxication during the first three months of drug court when they were assigned to as-needed hearings (4.83 ± 8.54 days of intoxication) as opposed to bi-weekly hearings (0.50 ± 1.00); conversely, non-APD participants reported more alcohol intoxication when assigned to bi-weekly hearings (3.62 ± 6.19 days) as opposed to as-needed hearings (0.43 ± 1.31) ($p = .029$). Again, because of the small number of participants for this analysis, as well as the large number of statistical comparisons that were performed and the potential unreliability of self-report data, this finding should be viewed as *preliminary* and must be replicated in future studies.

Figure 4. Interaction of antisocial personality disorder (APD) and frequency of judicial status hearings on self-reported alcohol intoxication during the first 3 months of felony drug court.



DISCUSSION

[8] The results of this program of research provide compelling evidence that the judge *is* a key component of drug court -- for a subset of offenders. Similar patterns of results were obtained in randomized, controlled studies conducted in different drug courts located in urban and rural jurisdictions and serving both misdemeanor and felony offenders. In each case, consistent with Responsivity Theory and the Risk Principle, frequent status hearings were associated with improved outcomes for high-risk drug offenders, but were associated with equivalent or worse outcomes for low-risk offenders.

It bears repeating, however, that the small number of participants in the replication studies raise serious questions about whether the samples were fairly representative of drug court clients generally. Because the results were reproduced in sequential experimental studies, and because they are supported by previously validated criminal justice theories

(i.e., Responsivity and the Risk Principle), one is justified in placing greater confidence in the reliability of the findings. Nevertheless, it is essential that other researchers replicate this work in new settings with a larger number of participants.

This research has obvious implications for drug court practice and drug policy. Judicial status hearings are expensive and time consuming and should be targeted to clients who would be expected to benefit most from them. For low risk clients, the data suggest that it might be appropriate and cost-effective to maintain relatively non-porous boundaries between treatment providers and criminal justice personnel, giving these clients an opportunity to focus on their recovery in a safe and discreet clinical setting. Such an approach, however, would appear to be contraindicated for high-risk clients who are likely to “fall through the cracks” or to exploit gaps in communication (Marlowe, in press).

The findings also raise questions about whether high-risk offenders could reasonably be expected to succeed in the type of low-intensity diversionary intervention exemplified in Proposition 36 or Proposition 200. In the absence of ongoing judicial supervision, high-risk offenders in the present studies were substantially more likely to use illicit drugs, to use alcohol to intoxication, and to be terminated from the drug court program. At least in these studies, poorly performing clients could be readily brought in for status hearings. Under Proposition 36 or 200, such individuals would be entitled to several formal violation-of-probation (v.o.p.) hearings and limited responses would be available from the bench. At a minimum, it would appear that some mechanism should be in place in these statutes to permit poorly responding individuals to be readily transferred into a more intensive judicially managed program.

The variables of APD and drug treatment history were the most robust indicators of risk-level in these studies. This is consistent with prior research indicating that APD is

often associated with worse outcomes in drug abuse treatment (e.g., Alterman & Cacciola, 1991; Marlowe et al., 1997; Woody et al., 1985). It is more difficult, however, to interpret the influence of prior drug treatment history. It remains an open question whether this reflects the severity of subjects' drug problems, past negative experiences with drug treatment, or some other unknown influence. Arguably, individuals with a prior drug treatment history that wind up in drug court may have already failed at one or more experiences with standard treatment. Such individuals may require a more intensive and structured intervention in order to show improvement. It is also possible that prior negative experiences with treatment might have made these clients less willing to revisit standard treatment interventions. Enhanced supervision by the judge may have been required to get them to give treatment a "second chance." Further research is needed to get a definitive handle on the nature of this interaction effect.

Regardless, the findings underscore the importance of assessing APD and drug treatment history at the point of clients' entry into drug court. It might be most effective and cost-effective to prospectively assign drug court clients to different schedules of court hearings depending upon their risk level and clinical needs. Moreover, from the standpoint of research or evaluation efforts, it would appear essential to measure these traits as potential predictors of outcomes, and to determine whether they may be significantly interacting with various drug court interventions.

Perhaps the most important finding from these studies is that researchers and drug court professionals can work collaboratively to answer questions of practical relevance to the drug court field using rigorous scientific methods. It is possible to experimentally manipulate the core ingredients of drug court without offending clients' sensibilities or running afoul of their due process rights. With sufficient planning and foresight, researchers and

practitioners can work jointly to anticipate ethical quandaries, to safeguard clients' rights of confidentiality and autonomy, and to identify and correct any negative reactions that might be experienced by clients or staff during the course of the project. Where indicated, the study can be stopped prematurely and remedial measures can be instituted to ameliorate any short-term harm caused by the research interventions.

Without such controlled experimental research, there is *no* way to be confident in the effectiveness of drug court programs or to insure that drug courts aren't causing undue harm to a certain segment of clients. One can always take steps to avoid or reduce anticipated harm from a research study. It is far more difficult to avoid unforeseen harm from an unstudied intervention.

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EFFECTIVE USE OF SANCTIONS IN DRUG COURTS: LESSONS FROM BEHAVIORAL RESEARCH

**By Douglas B. Marlowe, J.D., Ph.D. and
Kimberly C. Kirby, Ph.D.**

While many believe that the use of graduated sanctions is at least in part responsible for the success of drug courts, the body of research on this question is extremely limited. In fact, relatively few controlled studies of punishment or negative reinforcement have been conducted with noninstitutionalized adults, either in drug courts or in other settings, and apart from generic recommendations that sanctions be delivered quickly, reliably, and with sufficient intensity, little information is available on their use.

Although the circumstances and contexts of basic behavioral research in this area differ from the drug court environment, the principles that have emerged appear to apply across a variety of settings. Based on this research, several recommendations can be made on the use of graduated sanctions in drug court programs. Drs. Marlowe and Kirby present those recommendations here as they review behavioral research on the effects of punishment and negative reinforcement for predicting and controlling behavior.

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ARTICLE SUMMARIES

**INCREASED
PERFORMANCE**

[1] Contrary to traditional clinical wisdom, drug court participants perform well in treatment, due in part to the effective use of sanctions.

**SANCTIONS NEED
NOT BE PAINFUL**

[2] Wanton or excessive infliction of pain is inconsistent with the goals of punishment or negative reinforcement.

**IN THE EYES
OF THE BEHAVIOR**

[3] Rewards and punishments are not always received as the deliverer intended them. How they are received depends upon the receiver's history.

**REGULARITY
OF SANCTIONS**

[4] Regular and immediate delivery of sanctions is

important to the success of the receiver.

**CLARIFICATION OF EX-
PECTED BEHAVIORS**

[5] Provision of "explicit behavioral instructions" and "predictable" sanctions will help drug court participants avoid the "helplessness syndrome."

**EFFECTIVE
PUNISHMENT**

[6] To be effective, sanctions must be part of an overall behavior modification plan.

**RESEARCH
POTENTIAL**

[7] Due to negatively perceived historic acts, specific areas of behavior modification research have been ignored for decades, and now need the attention of more modern research.

Traditional clinical wisdom holds that substance abusers cannot be forced into treatment with effective results. Presumably, legally mandated or coerced clients are less motivated to succeed in treatment than those who seek it on their own volition, and motivation is often presumed to be a prerequisite for positive behavioral change (Miller & Rollnick, 1991). They may also be reluctant to trust and engage with treatment providers if they perceive them as being on the side of criminal justice authorities and against their own legal interests (Schottenfeld, 1989). Further, the pressure of being forced into treatment can invoke counterproductive feelings of anger, resentment, and powerlessness, and undermine positive traits such as initiative, self-determination, and self-respect.

[I] Contrary to expectations, however, a substantial body of evidence indicates that legally mandated and coerced clients generally perform as well or better than others in terms of treatment retention, abstinence, and psychosocial functioning across a diverse range of settings (Anglin et al., 1998; Anglin & Hser, 1991; Brecht & Anglin, 1993; Collins & Allison, 1983; Group for the Advancement of Psychiatry [GAP], 1994; Hiller et al., 1998; Marlowe et al., in press, Marlowe et al., 1996; Simpson & Friend, 1988). The results are particularly promising for drug courts, which appear to produce retention rates that are superior to both probationary and community-based programs (Belenko, 1998).

A number of commentators have surmised that close monitoring of attendance, substance use, and criminal activity, combined with the imposition of increasingly severe sanctions for successive infractions, are at least partly responsible for the success of drug courts and similar probation programs (Anglin et al., 1998; Byrne et al., 1992; Harrell & Cavanagh, 1995; Office of Juvenile Justice and Delinquency Prevention [OJJDP], 1995; Taxman, 1998), and indirect evidence appears to support the theory that the severity and certainty of criminal justice sanctions are inversely related to the likelihood of criminal recidivism (Apospori & Alpert, 1993; Bren-

nan & Mednick, 1994; Piliavin et al., 1986). Virtually all probationary and drug court programs impose a progressive list of penalties for successive infractions of program rules (e.g., for each "dirty" urine sample provided, each failed court appearance, or each subsequent misdemeanor conviction) (Chavaria, 1992; Gonska, 1994). Very few studies, however, have specifically evaluated graduated sanctions interventions in a drug court or any other setting.¹

To our knowledge, no effort has been made to dismantle a sanctions program and identify its operative ingredients. And apart from generic recommendations that sanctions be delivered quickly, reliably, and with sufficient intensity (Anglin et al., 1998; Harrell & Cavanagh, 1995; Taxman, 1998), little information has been garnered on how to design sanctions, how to tailor sanction schedules to optimize outcomes, or how to avoid some of the notorious pitfalls of using negative sanctions in treatment.

Clearly, the body of research on the use of sanctions in drug courts is extremely limited, and, for reasons that are explored below, relatively few controlled studies of punishment or negative reinforcement have been conducted with noninstitutionalized adults. In addition, legal restrictions on conducting research among inmates (Myerson et al., 1991) make it difficult to gather direct evidence from correctional samples.

Much of the basic behavioral research that has been conducted in this area has taken place in the animal laboratory or in institutionalized settings for mentally ill or developmentally delayed persons. The circumstances and contexts of these studies were obviously quite different from the drug court environment. However, the basic behavioral principles

¹Preliminary data are available from the D.C. Superior Court Drug Intervention Program (Harrell & Cavanagh, 1995), which suggest that clients can be readily recruited into a sanctions condition, and that they may in fact perform significantly better than clients in a traditional counseling setting in terms of retention and urinalysis-confirmed abstinence. These promising findings must still be confirmed in a randomized trial on a larger sample of offenders.

that have emerged from this research appear to apply across a variety of settings and species (Griffiths et al., 1980).

Based on the body of research that is available, several recommendations can be made on the use of graduated sanctions in drug court programs. We present those recommendations here as we review basic behavioral research on the effects of punishment and negative reinforcement for predicting and controlling behavior.

PUNISHMENT AND NEGATIVE REINFORCEMENT RESEARCH: REVIEW & RECOMMENDATIONS

The terms “punishment” and “negative reinforcement” appear often in the review that follows. As defined in behavioral research, they refer to the specific effect(s) of a sanction on behavior, and not to the nature of the sanction itself. In the strictest sense, “punishment” is defined as any consequence of a specific behavior that reduces the likelihood that the behavior will be repeated, or repeated at the same rate, in the future (Azrin & Holz, 1966; Martin & Pear, 1992). For example, a person is imprisoned for the crime of using drugs. Upon his release he stops using drugs. In this instance, imprisonment has functioned as a “punishment” for drug use. If, however, a second person is imprisoned for the crime of using drugs, but continues to use them after her release, then the imprisonment has not functioned as a punishment for drug use, regardless of how it was intended.

“Negative reinforcement” is defined as the removal of a sanction contingent on a target behavior, which has the effect of increasing that behavior (Sidman, 1966). Suppose a third person is imprisoned for the same crime. This inmate receives progressive reductions in her sentence as she completes various stages of a treatment program. The reduction in her sentence constitutes “negative reinforcement” because the reduction increased the target behavior of treatment completion.

SANCTIONS NEED NOT BE PAINFUL, HUMILIATING, OR INJURIOUS.

[2] Early researchers on punishment and negative reinforcement tended to employ aversive sanctions, such as electric shocks, seclusion, or physical restraint. Understandably, this approach precipitated a strong public and professional backlash, and the study of punishment fell into disrepute among most behavioral researchers and practitioners.

In general, it is necessary to search the literature of the 1950s or 1960s in order to uncover primary resources and empirical studies of punishment. By the 1970s, punishment had almost disappeared as an area of inquiry in psychological research, and most of today's clinical textbooks simply review the most common negative side effects of punishment, and then conclude that positive reinforcement (rewarding desirable behavior) is far preferable for changing behavior (Martin & Pear, 1992; Goldfried & Davidson, 1976; Hall, 1975). The adage that "one can catch more flies with sugar than with vinegar" aptly summarizes much of contemporary psychological thought about punishment.

Remembering that "punishment" simply refers to a method of curtailing undesirable behavior, and that "negative reinforcement" refers to a method of enhancing desirable behavior, we can see that it is quite possible to engage in a scientific study of these phenomena without being sadistic or authoritarian. In fact, the wanton or excessive infliction of pain is inconsistent with the goals of punishment or negative reinforcement. If one's purpose is to predict and control the behavior of others, then orderly, modulated responses to their actions are required. The infliction of pain or discomfort on a person without regard to his or her ability to respond is unlikely to render that person predictable or controllable. Rather, this kind of treatment tends to make a person behave in unpredictable and unmanageable ways.

SANCTIONS ARE IN THE EYES OF THE BEHAVER.

[3] Not all punishments are painful, and not all painful events are punishing. Certainly, parents and teachers understand that scolding or spanking does not necessarily decrease a child's inappropriate behavior. Indeed, some children find it rewarding; they are gratified that someone is finally paying attention to them. For many children and adults, ridicule or rebuke is preferable to being ignored.

At the extreme, some individuals find physical restraint or the infliction of pain to be rewarding. For instance, certain sub-cultures view physical pain or incarceration as a "baptism of fire" or a "badge of honor." To the amazement of the public, policymakers, and even some corrections officials, prestige and camaraderie can be unexpected rewards of what was intended to be punishment (Marlowe et al., in press; Skolnick, 1990).

The efficacy of a particular intended punishment is determined in large part by a subject's personal history and life circumstances. In one study, impoverished inmates ranked a \$5,000 fine as being more aversive than three years of probation or six months in jail (Petersilia & Deschenes, 1994). It is not likely that middle-class defendants would agree. Asked how they would rank various intervals of intensive probation (one, three, and five years) against equivalent periods of jail time, many inmates in the same study group either expressed a preference for the jail time or ranked the two options equally. These individuals viewed intensive probation as being more confining or more demanding than jail. Married and employed inmates, however, preferred probation to incarceration (Crouch, 1993). Apparently, these inmates with meaningful ties to the community are willing to be subjected to stringent supervision in exchange for the opportunity to retain those ties to the community that they have established. It is unclear whether these rankings reflect the actual effects that these sanctions would have on inmate behavior; how-

ever, the results suggest that one type of sanction might not be equally effective for all offenders.

Just as intended punishment might operate as a reward, intended rewards could inadvertently operate as punishment (Torres, 1996a), and it is safe to say that a person's previous life experiences affect how he or she interprets or reacts to either punishment or reward. For example, in many drug treatment programs, drug-free urine specimens can be exchanged for clinic privileges, reduced attendance requirements, payment vouchers, or take-home doses of methadone. The objective here is to reward desirable behavior rather than to punish undesirable behavior. The drawback is that some clients may react to a missed opportunity to earn a positive privilege as though it were a negative sanction, and the unanticipated outcome could be an outburst or a desire to flee treatment.

SANCTIONS MUST BE OF SUFFICIENT INTENSITY.

Studies have consistently demonstrated an orderly relationship between the intensity of a negative sanction and its effects on the undesired behavior. Take, for example, this illustration of punishment: A mouse is trained to press a bar lever to obtain food. The frequency of bar pressing can subsequently be reduced by shocking the mouse each time it presses the lever, and precisely how much the bar-pressing rate will decline is directly proportional to the strength of the electric shock (Azrin & Holz, 1966). At some level of intensity, the bar pressing ceases altogether after only one or two learning trials.

The implications of this finding, however, are not as straightforward as one might think. Subjected to punishment at low to moderate intensities, both animals and human beings can become habituated (accustomed) to being punished, resulting in their being able to withstand unusually high levels of punishment. If a mouse were to be subjected to gradually increasing intensities of electric shock, it would continue to

press the bar-lever beyond intensities that would completely deter other mice (Azrin et al., 1963).

By analogy, recidivist offenders could become habituated to threats from the criminal justice system, and cease to be deterred by even long periods of incarceration. Indeed they may tend to minimize the seriousness of prison in comparison to other sanctions (McClelland & Alpert, 1985). For some individuals, each instance of incarceration may actually increase the likelihood of future incarcerations. Criminologists tend to attribute this phenomenon to the socialization of youthful offenders into an antisocial milieu, or to the fact that the brutality of prison begets brutality by inmates, a theory that are not necessarily incompatible with the habituation theory. Numerous factors undoubtedly conspire in certain cases to make prison a substantially less effective sanction than might be anticipated.

[4] The findings on habituation have important implications for the use of graduated sanctions in drug courts. Virtually all probationary and drug court programs impose graduated sanctions (Chavaria, 1992; Gonska, 1994), and the implications of habituation must be taken into account when developing a graduated sanction plan that can last the life of a treatment program. Every time we meet an infraction with a light sanction, we run the risk of habituating the offender to the next level of sanction. This is not to say that graduated sanctions are contraindicated. Rather, it suggests that building up the intensity of sanctions slowly could be counterproductive; generally speaking, early sanctions should exceed a meaningful threshold of intensity. For the first infraction or two, a stern warning and a fairly moderate sanction might be in order (e.g., a requirement to spend several hours or several days observing court sessions). In the very early stages of treatment, the most pressing issue may be to demonstrate that infractions can be detected and will be acted upon. However, a pattern of relatively weak sanctions can serve as an invitation to test the limits and engage in further misconduct.

As a defendant becomes increasingly accustomed to criminal justice sanctions, it will become necessary for the judge to “up the ante” in order to continue to control the defendant’s conduct. At some point, however, a sanction “ceiling” will be reached, after which further escalation would be impractical or a violation of Eighth Amendment or Due Process requirements. Premature exhaustion of the court’s arsenal of sanctions leaves a judge little recourse beyond returning the defendant to criminal court to face disposition of the original charges. Devising a set of intermediate sanctions that have sufficient “sting” and yet are practical to implement calls for substantial ingenuity. Too slow to escalate, and the defendant could become habituated to punishment; too quick, and the judge runs the risk of exhausting his or her options. The ideal mid-tier sanction is easily managed, lends itself to further escalation, and foreshadows to the defendant what might be involved in stronger sanctions. An example would be several days in residential detention or jail. Such a sanction would presumably lend itself to reasonable implementation by the court, should not unduly burden the jail system, and would strongly hint at things to come if the defendant fails to modify his or her behavior.

SANCTIONS SHOULD BE DELIVERED FOR EVERY INFRACTION.

Just as important as the intensity of punishment is the regularity with which it is delivered. In behavior analysis, this is referred to as the schedule of reinforcement. In a “continuous fixed ratio” (FR1) schedule, sanctions are delivered for every infraction. “Intermittent” FR schedules can also be established; a sanction would be delivered for every second infraction on an FR2 schedule, for every third infraction on an FR3 schedule, and so on. Sanctions can also be delivered on a “fixed interval” (FI) schedule, in which a sanction is delivered for an infraction occurring after a fixed time. For example, a sanction might be delivered for the first infraction that occurs after Wednesday.

As borne out by behavioral research outcomes, the smaller the ratio of punishment to infractions, the more consistent and enduring is the suppression of the undesired behavior (Azrin & Holz, 1966). Put simply, FR1 schedules are the most effective. Intermittent or FI schedules can work, but more time and more learning trials will be required. For instance, a mouse on an FR3 schedule will not be shocked after pressing a bar the first two times, but will be shocked the third time it presses the bar. This is apt to stretch the time and the number of trials it will take the mouse to stop pressing the bar. Add to this the fact that the mouse will continue to receive food pellets for pressing the bar, which will reinforce the mouse's tendency to press the bar. The lapse in punishment, in combination with continued reward derived from the food, will make it more difficult to suppress the bar pressing in the future.

By analogy, a person who is punished for using drugs one time but not the next time is less likely to suppress drug-taking behavior in the future than another person who is punished for every infraction. Further, like the mouse with its food, the drug user receives the reward of drug use without an accompanying punishment. Finally, the drug user is apt to perceive a "hole" in the system to be exploited in the future. Few programs set out to deliver punishment on an intermittent or FI schedule, but most wind up doing so without knowing it. A well-intended effort to give a defendant "one more chance" might have the unintended effect of switching the defendant to an intermittent (FR2) schedule. The matter becomes more complicated if the timing of punishment varies over the course of treatment. For example, in a court with a revolving docket, a defendant might appear before different judges on a predictable schedule over the course of a month. If the sitting judge during the first and third weeks of the month is strict and a lenient judge takes the bench during the second and fourth weeks, the unintended effect may be to place the defendant on an FI schedule. In effect, the defendant would be punished for the first infraction after two

weeks. Alternatively, the defendant might effectively be placed on an FR1 schedule by the strict judge and on an intermittent schedule (e.g., FR2 or FR3) by the lenient judge. In effect, the defendant learns that the first judge will punish him or her for every infraction, while the second judge imposes punishment only for every second or third infraction. This arrangement is likely to lead to "anticipatory suppression" (Skinner, 1953) of drug use during the first and third weeks of the month, with more frequent drug use during the remaining weeks.

SANCTIONS SHOULD BE DELIVERED IMMEDIATELY.

To have the greatest chance of reducing undesirable behavior, sanctions should be delivered as quickly as practicable after an infraction occurs. In laboratory settings, intervals of just one hour have been demonstrated to decrease a sanction's efficacy (Azrin, 1956). A long delay could negate the impact of the sanction entirely, or it could bring about only temporary change. The impact of a sanction is strongest when it is delivered immediately after an infraction. When a sanction is delayed, many new behaviors will fall in between the violation and the sanction. In this case, the sanction might be inadvertently paired with behavior that is desirable, or at least not undesirable. For example, a defendant lapses to drug use on Monday, but remains drug-free and attends all scheduled treatment appointments for the remainder of the week. If the judge imposes a sanction on Friday, it could act to punish the defendant's abstinence. At a minimum, the delay could complicate matters. If the judge praises the defendant for his or her abstinence from Tuesday through Friday and subsequently imposes a sanction for Monday's lapse, the praise might ring hollow.

UNDESIRABLE BEHAVIOR MUST BE RELIABLY DETECTED.

Failure to uncover an infraction is, in behavioral terms, functionally equivalent to putting the individual on an intermittent

schedule. It also lowers the credibility of the detection system, effectively inviting future efforts to test its limits (Torres, 1996b).

Programs that perform urinalyses on a regular weekly or bi-weekly schedule risk placing their clients on an intermittent schedule, and precipitating anticipatory suppression of drug use only on the days immediately preceding the tests. For this reason, many community-based treatment programs conduct urine testing on a random monthly or bi-weekly schedule. Clients in these programs can expect to be tested two, three, or four times per month, but they have no advance notice of the specific days on which testing will occur. In theory at least, the fear of detection remains constant throughout the month.

Random testing may keep some clients clean, but it invites others to "play the odds." Many commonly abused substances remain detectable in urine for less than 48 to 72 hours (Gilman et al., 1990). If testing occurs twice a month, the window of detection is thus typically less than six days, so the odds favor undetected use for 24 days out of a 30-day month. Factor into this equation the fact that testing rarely occurs on a weekend (which tend to be high drug-use days) and a drug user can lapse on a Friday evening with a reasonable chance of delivering a "clean" urine specimen on Monday morning. Now, factor in the low odds of a test actually being called on that particular Monday, and the chance of detection becomes negligible. Finally, note that tests are typically spaced at least several days apart from each other, so each test effectively signals a period of respite from detection.

Ideally, testing should be performed at least two to three times per week. Frequent testing may not close the window of opportunity for undetected drug use completely, but the opening will become quite small, increasing the chances of detection. In addition, frequent testing will facilitate the immediate levying of sanctions, eliminating the possibility of inadvertently establishing an intermittent or FI schedule.

The accuracy of positive urinalysis results can and will be challenged, but a challenge is seldom cause to delay the imposition of any but the most severe sanction (e.g., program expulsion). If follow-up testing does in fact uphold a challenge, the wrongfully imposed sanction can subsequently be terminated or compensated, and it is unlikely that a single instance of undeserved punishment, particularly punishment of moderate or low intensity, would cause serious or lasting harm. Failure to reliably detect and implement a sanction, on the other hand, is quite likely to detract from the efficacy of the intervention.

It is important to inform clients at the point of their entry into treatment that they bear the relatively slight risk of false positives (typically less than 3 percent) from the urine tests. It is also important to recalibrate drug-testing equipment on a regular basis to avoid recurrent unreliable results, and to have independent laboratories validate results by routinely performing confirmatory analyses of randomly selected specimens.

SANCTIONS MUST BE PREDICTABLE AND CONTROLLABLE.

Punishment can only be effective if the individual has both the ability and the opportunity to respond as desired. An individual cannot learn to behave as expected if the demands placed upon him or her are excessive, or if he or she lacks the skills required to respond appropriately. Similarly, an individual cannot seek to avoid sanctions or even know when to expect them if he or she is unaware of the behaviors that trigger them.

[5] Unpredictable or uncontrollable sanctions can lead to a behavioral syndrome known as “learned helplessness” (Seligman, 1975), in which the person who is punished becomes aggressive, withdrawn, or despondent. For instance, children who are unable to predict when a parent will become angry or displeased with them often present as clingy,

depressed, or irritable, and out of a sense of futility they may give up trying to satisfy even basic expectations.

It is essential to specify clearly what behavior(s) is expected of a person in order to avoid punishment. Ideally, the expected behavior will be clearly quantified and operationalized. A simple instruction to "stay clean" is open to interpretation; as such, the defendant might not be able to predict what behavior will avoid a sanction. In contrast, a requirement that the defendant deliver two clean urine specimens per week and attend three counseling sessions per week is substantially more predictable and controllable.

The importance of providing explicit behavioral instructions cannot be overstated. Clients who do not clearly appreciate what is expected of them, and what behaviors will avoid the imposition of punishment, may become complacent or simply stop trying. Further, substance abusers are notorious for attempting to manipulate ambiguities to their own favor. Clear behavioral instructions will reduce the likelihood that clients will evade responsibility by claiming ignorance of the rules.

Strict compliance at the outset may be an unrealistic expectation, particularly for individuals who experience severe cravings or withdrawal symptoms. Unable to satisfy such expectations, the individual might be tempted to give up. It may be preferable to establish a series of graduated, attainable expectations that constitute steps toward the desired behavior (e.g., achieving a percentage reduction in drug use or attending a specified number of treatments). This is called "shaping."

Of course, certain conduct, such as violent criminal recidivism or high-risk sexual behaviors, may be too serious or dangerous to permit gradual approximations. For an individual who cannot readily suppress such behaviors, it may be preferable not to rely on punishment after the fact, but rather to place the individual in a residential environment to prevent opportunities for acting out.

Shaping is not without other risks. Undesired behavior could be permitted to continue unabated, and perhaps to continue

to be rewarded. It is important, therefore, even during the early stages of shaping, that target behaviors cross some meaningful threshold of utility. For drug court clients, each behavioral step should be demonstrably related to the end goals of abstinence from substance abuse and crime, and each successive step should bring the client demonstrably closer to attaining those goals.

SANCTIONS MAY HAVE UNINTENDED SIDE EFFECTS.

Punishment has many iatrogenic (negative, unanticipated) side effects. When used excessively or inappropriately, it may precipitate a learned helplessness syndrome, which is counterproductive to the goal of improving behavior. Individuals who experience excessive, uncontrollable, and/or unpredictable sanctions often become irritable, despondent, and isolated, and thus less open to positive behavioral change.

Punishment can also provoke efforts to escape (Sidman, 1966). Indeed, an individual's immediate and understandable reaction to pain or discomfort is to attempt to flee. The more uncomfortable the sanction, the more intense the effort to escape. It is not surprising, therefore, that individuals enrolled in treatment programs that rely excessively on sanctions often abscond in large numbers.

Finally, punishment has a noteworthy tendency to have an impact beyond what was intended (Sidman, 1966, 1989). For instance, a judge's intent upon issuing a sanction to a defendant is to help the defendant avoid drugs in the future. Unfortunately, what the defendant may actually learn to avoid is the judge, or all judges, or all criminal justice authorities. This is because the judge becomes more associated with the sanction than the behavior that triggered it. This is especially common when there is a lag time of several days or weeks between the infraction and the sanction.

Indeed, the judge is more spatially and temporally connected to the sanction than is the instance of drug use, which might have transpired several days or weeks before. Verbal instructions are frequently employed at this juncture in an effort to

“detach” the judge from the punishment, and to explicitly connect the punishment to the defendant’s own behavior. Like a parent who says, “This hurts me more than it hurts you,” in an effort to minimize some of the iatrogenic effects of punishment, a judge can make it clear that the sanction is a result of the defendant’s own conduct, and that he or she derives no pleasure from imposing it. The likelihood of success with this strategy depends on numerous factors, not the least of which is the judge’s true attitude. Judges who deliver sanctions with a sense of satisfaction, hostility, or vindictiveness are unlikely to convince a defendant that this is totally for the defendant’s own good. In fact, such negative sentiments are more apt to link the judge to the sanction, or to act as punishment in their own right, thus increasing the defendant’s efforts to avoid the judge.

BEHAVIOR DOES NOT CHANGE BY PUNISHMENT ALONE.

[6] Used in isolation, punishment is not a particularly effective means of controlling behavior. It can evoke many iatrogenic responses, among them habituation, efforts to escape, and despondency. The eventual outcome could be intransigence or unresponsiveness to intervention. When used with other behavior modification techniques—techniques like extinction, positive reinforcement, and negative reinforcement—punishment can become a much more effective tool (Azrin & Holz, 1966).

EXTINCTION

“Extinction” refers to a decrease in an undesirable behavior resulting from a loss of rewards previously associated with that behavior (Martin & Pear, 1992). Drug use, for instance, has a number of reinforcing effects, including euphoria, kinship with other substance abusers, and sexual pleasures. A treatment provider who relies solely on punishment to alter drug use behavior must compete with these pleasurable rewards. It will take a substantial amount or intensity of pun-

ishment to counteract twenty hours a week of intense euphoria. If, however, other techniques can be employed to constrain the individual from experiencing the pleasurable effects of the drugs, then the drug-taking behavior should decline at a more efficient rate.

Extinction generally occurs when an individual continues to engage in the target undesirable behavior, but no longer receives the concomitant positive reinforcement. It follows, therefore, that an individual who continues to take drugs but no longer feels their euphoric effects might reasonably be expected to decrease his or her drug use.²

Contrary to expectations, preventing a person from using drugs (for instance, by placing him or her in a restrictive residential setting) does not necessarily lead to extinction. This is because neither drug taking nor the rewards of drug taking can occur. Only when drug taking occurs in isolation from its rewards can extinction be anticipated.

POSITIVE REINFORCEMENT

Punishment is most likely to be effective in the long run when it is used in combination with "positive reinforcement" of behaviors that 1) are fundamentally incompatible with the undesired behavior; 2) carry their own natural rewards; and 3) are likely to be rewarded in the client's natural social environment (Sisson & Azrin, 1989). For instance, eating right, spending time with one's family, and holding down a good job have natural rewards such as improved health, more satisfying family relationships, enhanced income, and the esteem of others in one's own social environment. All of these things are fundamentally incompatible with drug abuse.

Payment vouchers are a good example of positive reinforcement, and one that a number of studies have demonstrated to have very powerful effects. For instance, payment vouchers can be awarded for providing drug-free urine samples, and

²"Antagonist" medications such as naltrexone, which block the pleasure-inducing effects of opiates and alcohol, may work, in part, through an extinction process.

then used by the recipients to facilitate healthy, drug-incompatible lifestyles (Higgins et al., 1994, 1991; Kirby et al., 1998, 1997; Milby et al., 1996; Silverman et al., 1996). In these studies, the vouchers serve to immediately reward early abstinence, and thus to “capture” such appropriate behavior. They are further used to acquire goods and services that bring the client into contact with natural contingencies in the environment that reward healthy, adaptive behaviors. For example, the vouchers might be exchanged for memberships to health clubs, movie tickets, or new work or church clothing, which would support adaptive activities such as health maintenance, recreation, and gaining employment. Although animal studies indicate that positive reinforcement and punishment appear to have synergistic effects (i.e., when used in combination, each may increase the effects of the other) (Azrin & Holz, 1966), to our knowledge positive reinforcement programs have not been systematically investigated in conjunction with sanctions for the treatment of substance abusers. Depending on how they are implemented, it is conceivable that one intervention might either improve or detract from the utility of the other. It is well documented that sanction schedules and voucher schedules, when properly administered and used independently, can produce very large “effect sizes” (the statistical representation of the magnitude of their effects) (Crowley, 1984, 1986; Kirby et al., 1998). There is no clear evidence that one intervention is necessarily superior to the other (Stitzer et al., 1986); in theory at least, sanctions and voucher schedules could be implemented in a complementary fashion to achieve maximum benefit.

When punishment and positive reinforcement programs operate in tandem, it is important to delineate clearly between the two and to ensure that they are not contingent upon the same or substantially similar behavior. For instance, a drug court client might receive positive rewards (e.g., social recognition or access to improved housing) for attaining specific treatment plan goals. The same client might also receive negative sanctions (e.g., an increased schedule of court appearances)

for poor attendance or evidence of recent drug use. In general, the client should not receive both sanctions for poor attendance and rewards for good attendance.

As a practical matter, having sanctions and rewards contingent on the same behavior can be confusing, and there is always the risk that the sanctions and rewards will cancel each other out. For example, it is conceivable that a client could keep some appointments and miss others in the same week, and be issued both sanctions and rewards for the same overall course of conduct.

A related issue is whether or not to include a "response cost" in positive reinforcement schedules. A "response cost" is defined as a loss of rewards that is contingent on undesirable behavior (Martin & Pear, 1992). For example, a client who provides a "dirty" urine specimen might lose previously earned payment vouchers, or a portion of the value of future vouchers. For all intents and purposes, a response cost functions as punishment. Therefore, employing it as part of a positive reinforcement schedule may be tantamount to mixing different schedules (punishment and positive reinforcement) for the same category of behavior. In addition, a response cost can undermine the effects of previous rewards, particularly if it sets a client back to "square one." It could cause a client to give up on the program.

NEGATIVE REINFORCEMENT

Much of the ambivalence about using sanctions in treatment stems from the confusion of "negative reinforcement" with punishment. Negative reinforcement is not punishment. Punishment is defined as any contingency that reduces the likelihood that a behavior will occur in the future. Negative reinforcement, on the other hand, occurs when the removal of a stimulus, contingent on a behavior, increases the behavior. In short, punishment reduces a behavior; negative reinforcement increases a behavior.

"Escape conditioning" and "avoidance conditioning" are two variations on the negative reinforcement theme. In the case of escape conditioning, the aversive sanction has d-

ready been presented, and the individual can terminate the sanction by engaging in the desired behavior. In avoidance conditioning, the individual can forestall the sanction by engaging in the desired behavior. A conditional release program, in which an inmate can reduce or terminate a prison sentence by completing treatment, is a prime example of escape conditioning. Pre-trial or pre-sentencing diversion programs, in which a criminal record or a sentence can be averted by completing treatment, exemplify avoidance conditioning. Contrary to assumptions, therefore, much of what transpires in drug courts actually exemplifies negative reinforcement, and not punishment (Marlowe, in press).

Behavioral theorists tend to link punishment and negative reinforcement under the same rubric of "aversive conditioning" or "coercion," arguing that they produce the same or similar negative side effects (Sidman, 1989). Experiments involving shock conditioning of rodents are often invoked to support this argument. If a mouse presses a lever to obtain a food pellet, it is a simple matter to reduce the lever-pressing behavior by shocking the mouse each time it presses the lever. As stated so far, this is a straightforward example of punishment. Now, add a chain that the mouse can pull to terminate the shock and this becomes an example of escape conditioning (because removal of the shock increases the rate of chain pulling). In this instance, the mouse may begin to avoid a range of things that have been inadvertently associated with the shock, such as food, levers, or the experimenter. The mouse might also exhibit "superstitious" behavior (Skinner, 1948) such as pulling the chain whenever it experiences any form of pain or discomfort, or it might exhibit other maladaptive reactions such as cowering, social isolation, or aggression. These iatrogenic effects could have disastrous consequences, such as reducing the mouse's overall level of food intake, or reducing its engagement in productive activities.

In this paradigm, the mouse is initially punished, and is then given the opportunity to terminate the punishment through escape reinforcement. It should not be surprising that pun-

ishment and negative reinforcement would produce comparable avoidance responses when they are linked to each other in this manner. But what happens if the initial sanction and the opportunity for escape are not so intimately tied together? In drug courts, the judge is rarely responsible for the defendant's initial arrest or incarceration. Unlike the arresting officer or the arraignment judge, who are spatially and temporally connected to the original criminal justice sanction, the drug court judge should be less apt to trigger an avoidance reaction from the defendant. In fact, he or she may be seen as interceding between the defendant and imprisonment. By removing the threat of incarceration, contingent upon success in treatment, the drug court judge might be viewed as a highly reinforcing or gratifying presence.

Negative reinforcement differs fundamentally from punishment in that it focuses on increasing desirable behavior rather than on decreasing undesirable behavior. In this sense, it actually shares more in common with positive reinforcement than with punishment. And like positive reinforcement, it is most likely to be successful in the long run when it is used to promote conduct that 1) is fundamentally incompatible with drug use; 2) carries its own natural rewards; and 3) is likely to be rewarded in the client's natural social environment. In addition to punishing substance use, therefore, drug courts are most likely to be successful if they use their leverage over defendants to enhance behaviors related to health maintenance, employment, involvement in family activities, and adaptive social functioning. For instance, criminal charges might be held in abeyance contingent on the defendant's taking measurable steps toward obtaining a job, rekindling family relationships, or meeting parenting obligations. Assuming that such steps are reasonably obtainable by the client, they are quite likely to compete heavily with substance abuse, and thus to potentiate the effects of other drug court interventions.

Although both punishment and negative reinforcement rely to some degree on negative sanctions for their effects, their

mechanisms of action are fundamentally different. Their long-term effects also differ. In animal laboratory testing, avoidance conditioning has been demonstrated to have the most lasting effects, followed, respectively, by escape conditioning and punishment (Azrin & Holz, 1966; Sidman, 1955). The reason for this is not entirely understood; however, it may be related to the frequency of contact between the individual and the negative sanctions, and thus to the potential for habituation. In avoidance conditioning, the individual may never need to come into contact with the sanction; the threat of imposition of the sanction may be all that is required. At most, only one or two sanctions are typically necessary. In escape conditioning, the individual is first exposed to the negative sanction, and must then learn to behave as expected in order to terminate it. In the case of punishment, repeated imposition of sanctions may be required to suppress the undesirable behavior.

Whatever the reasons for the differences in endurance, the lesson for drug courts should be apparent: The more the threat of sanction is realized, and the more the judge focuses on suppressing "bad" behavior rather than on increasing "good" behavior, the greater the risk of habituation and ultimate treatment failure. The optimum way to proceed appears to be to hold a realistic threat of serious sanction over the defendant's head, and to forestall use of that sanction contingent on drug-incompatible conduct. In tandem with this avoidance schedule, "stinging" sanctions should be delivered, when necessary, to quickly suppress drug-taking and related behaviors when they first emerge.

THE NEED FOR MORE RESEARCH

[7] Because punishment and negative reinforcement have been unnecessarily linked to historic acts of cruelty, they have received scant research attention in recent years. Recourse to decades-old data is required to find scientific guidance on how to design and tailor sanctions programs. In contrast, the progress of research in terms of identifying the operative features of positive reinforcement schedules for the

treatment of substance abuse has been impressive (Higgins et al., 1991, 1994; Kirby et al., 1997, 1998; Milby et al., 1996; Silverman et al., 1996). Comparable efforts are required to “tinker” with the various features of sanctions schedules to make them as effective and as humane as they can be.

More specifically, there is a need for research designed to—

- ◆ *Identify the optimum rate at which sanctions should be ratcheted upward in intensity to minimize habituation and avoid ceiling effects.*
- ◆ *Determine how negative sanctions might be combined with other behavior modification techniques (e.g., extinction or positive reinforcement) to maximize outcomes.*
- ◆ *Determine the proper parameters for including response costs in positive reinforcement programs.*
- ◆ *Identify techniques for reducing learned helplessness, maladaptive escape behaviors, and other iatrogenic effects of sanctions.*
- ◆ *Explore alternative methods for monitoring substance use and delivering sanctions so as to improve the detection of infractions and minimize the delay interval between infractions and their consequences.*

Drug courts, in particular, provide a unique and exciting venue in which to study and rekindle interest in punishment and negative reinforcement paradigms. The opportunity for careful scrutiny of clients’ behaviors, coupled with frequent judicial contacts and the possibility of rapid imposition of meaningful penalties, provide these behavior modification techniques, at last, with a “fair trial” in a useful “real world” context. Because drug courts incorporate due process and other legal safeguards into their procedures, they should also present a relatively reduced risk for the kinds of abuses that sanction paradigms may have invoked in the past.

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RESEARCH

The State of Drug Court Research

Moving Beyond 'Do They Work?'

Written by

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Moving Beyond ‘Do They Work?’

Introduction

When the Miami Drug Court opened its doors in 1989, it launched a dramatic shift in how courts respond to the criminal behavior of drug-addicted defendants. By combining treatment with close judicial supervision, the drug court model offers a new alternative to the unproductive and costly cycle of addiction, crime and incarceration. Unlike conventional courts, the success of drug courts is measured not by how quickly they process cases, how many convictions they produce, or how much jail time defendants receive; but on achieving tangible impacts—less drug use and crime, gains in employment and education, improved mental and physical health, and cost savings from diverting offenders away from jail and prison. Their vast potential has led to a stunning national expansion—over 1,300 drug courts in early 2005, less than 15 years after the Miami program enrolled its first defendant.¹

To test their performance, early drug court evaluations primarily focused on the bottom line: did they work? *Most evaluations found that drug courts, while not a cure-all, produce meaningful reductions in re-offending compared with conventional prosecution.*² The combination of favorable results and massive, ongoing efforts to open new drug courts nationwide has now spawned an urgent set of second-generation questions focusing less on *whether* drug courts work and more on *how* and *for whom*, along with *how they might work better*. These are “action research” questions. Action research focuses less on evaluating bottom-line success and more on providing feedback that can improve everyday program quality. Among the topics that drug court action researchers are currently investigating are:

Target population Which categories of participants (e.g., based on drug use and treatment history, criminal history, charges, socioeconomic variables, mental health, or other factors) are especially likely to benefit from drug court? Are today’s programs reaching and enrolling the ideal target population?

Program components How important is each component of the drug court model (e.g., team approach, treatment, case management, judicial supervision, rewards, and sanctions)? How is each component best administered?

Quality of treatment Which treatment modalities are most appropriate for different categories of participants, and are such modalities widely available? How can

drug courts better monitor the quality of the treatment services on which they depend?

Drug court retention and graduation How long should drug court participants be retained in the program in order to benefit from the intervention? What steps can be taken to improve retention? How important is drug court retention and graduation in achieving positive *long-term* outcomes?

The answers to these questions can be used by drug court practitioners to refine their practices and apply resources more wisely. States engaged in large-scale institutionalization efforts can incorporate known best practices into statewide drug court protocols. Indeed, action research may be critical to the long-term sustainability of drug courts. Without understanding which of the key drug court components have the greatest impact, and which categories of participants will benefit most, newer drug courts coping with fewer resources and lacking the charismatic leadership of early pioneering judges may not know which parts of the model must be preserved intact—and which can be tinkered with. This may lead the success of drug courts to slip hand-in-hand with institutionalization.

Although the early 2000s have seen the completion of many valuable studies, some of the most interesting results have yet to be widely disseminated. This paper synthesizes some of the more revealing national findings and highlights areas where we need to know more. Although findings discussed here typically required extensive data collection and evaluation expertise, drug courts can also do a great deal on their own, with modest investments in data collection and analysis. A companion paper discusses how local drug courts can start their own action research program, using simple and easy-to-collect data to answer practical questions about their volume, participant characteristics, and performance.³ This paper provides a broader context by focusing on general lessons learned.

The Drug Court Model: What Are We Evaluating?

What do drug court evaluations typically report? In most examples to date, the evaluation found that drug court participants (including both graduates *and* failures) had lower recidivism rates than similar defendants prosecuted with conventional methods. Some evaluations have considered other outcomes, such as drug use, employment, health care, time spent in jail and prison, or cost savings; but most have examined effects on recidivism alone—mainly because the availability of official criminal justice records makes recidivism analyses the easiest and least costly to implement.

As important as it is to know that drug courts reduce recidivism, this is not nearly enough. The figure on the next page illustrates how little we learn merely from knowing that a drug court, in its totality, reduced re-offending. More helpful at this point would be research telling us which specific drug court components made the greatest difference in producing successful outcomes, and which, if any, made no difference. Perhaps a drug court receiving a positive evaluation would have been equally effective with a model excluding rewards and sanctions; or excluding case management; or

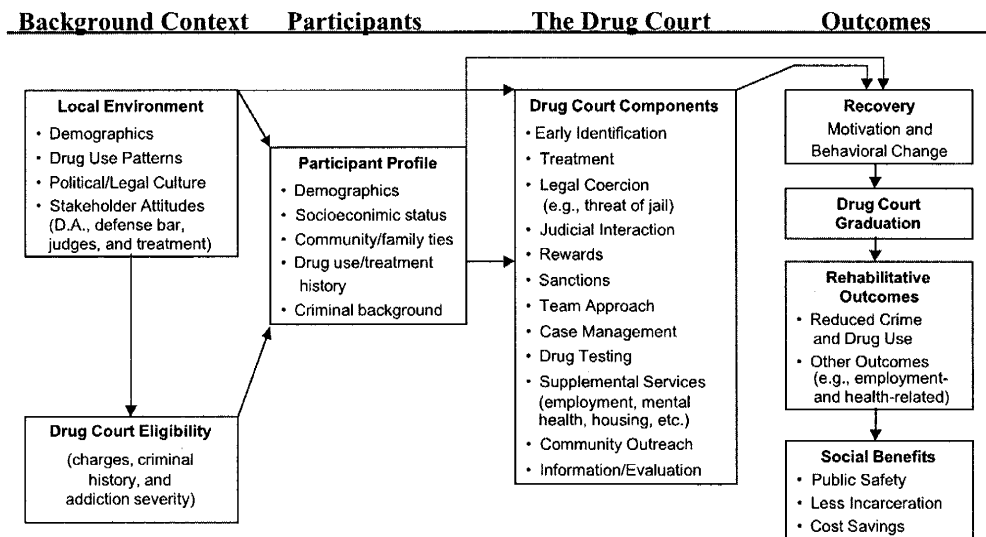
excluding treatment while relying only on court-based judicial supervision. Or perhaps the drug court would have produced even better results if certain policies were administered differently, for example if in-court interactions with the judge were longer or more probing; or if more effective treatment modalities were used; or if drug testing was more frequent. Consider just a few of the specific components that are *believed* to underlie drug court success (see the third column in the figure):

Early Identification Drug court participants are believed to be most receptive to change at the “crisis moment” of the arrest (or outset of the case); hence potential participants should be identified, assessed, and placed in treatment as rapidly as possible.

Community-Based Treatment Effective substance abuse treatment modalities are believed to exist that can promote sobriety; hence drug courts should match participants to appropriate community-based residential or outpatient treatment programs. However, the “science” of treatment-matching is not very well-developed; there is little evidence indicating which treatment interventions work best and with which populations.

Legal Coercion Drug court participants are believed to be retained in treatment at higher rates than those entering voluntarily because drug courts offer concrete legal incentives to do well—namely, the prospects of a charge reduction or case dismissal in the event of graduating and jail or prison in the event of failing.

THE DRUG COURT MODEL



Judicial Supervision Through regular status hearings before the drug court judge, in which the judge engages in direct conversation with the participant about progress and setbacks, the judge is thought to play an instrumental role in promoting sobriety.

Rewards and Sanctions Drug courts are believed to encourage progress by applying a continuum of intermediate sanctions and rewards; sanctions are thought to be most effective when applying principles of *certainty* (each infraction receives a sanction), *celerity* (sanctions are imposed as soon as possible after the infraction occurs), and *severity* (sanctions rise in severity in response to repeat infractions and consider the severity of the behavior).

Team Approach Drug courts are believed to be more effective when the parties (e.g., judge, lawyers, and clinical staff) curtail the adversarial process and work together to figure out what will best promote the recovery of each participant.

Official drug court publications and everyday practitioners hold all of these components to be important, but are any backed by evidence? This paper considers what we know now concerning: (1) whether drug courts work, (2) how the work, and (3) for whom. The first question, while the most researched, is covered only briefly, given this paper's focus on probing deeper to what lies behind the more widely known findings. Nearly all results presented here pertain exclusively to adult drug courts, since research is only beginning to emerge on the family and juvenile drug court models.

Do Drug Courts Work?

Before tackling the more challenging questions of how and for whom drug courts work, what does the literature show concerning their overall success? (See fourth column of the figure.) It is worth noting here that much of the literature to date has been plagued by methodological issues necessitating the careful interpretation of many drug court studies. For instance, in a review of the literature, Steven Belenko points to a lack of precision in defining data sources, timeframes, and measures as well as data quality issues and missing data in many studies.⁴ Additionally, several studies have relied on inappropriate comparison groups (e.g., drug court graduates compared to drug court failures; drug court participants compared to those who were found ineligible for the program) or have used no comparison group.

1. Treatment Retention *Drug court retention rates far exceed those for the general treatment population.*

Retention is a key measure of program success. A one-year retention rate, for example, indicates the percentage of participants who, exactly one year after entering drug court, had either graduated or remained active in the drug court program. Earlier research finds that longer retention not only indicates success in treatment but also predicts continued future success in the form of lower *post-treatment* drug use and criminal offending.⁵

Drug courts have been consistently found to produce higher retention rates than community-based treatment programs accepting a combination of voluntary and court-mandated treatment participants.⁶ This is believed to be due in part to the legal pressure entailed by the threat of incarceration drug court participants face in the event of failure; several studies confirm that legal coercion is a sizable force improving both short-term and long-term treatment outcomes.⁷

As for hard numbers, one review estimates that drug courts nationwide have an average one-year retention rate of 60 percent.⁸ A study of 11 New York State drug courts found a slightly higher median one-year retention rate of 66 percent; and estimated graduation rates exceeded 50 percent in eight of 11 sites.⁹ On the other hand, a study of four “mentor” drug courts in other states reported an average graduation rate of only about one-third.¹⁰ Nevertheless, every one of these estimates improves considerably upon those obtained at community-based treatment programs, where many participants enter voluntarily—*without the pressure of a court mandate*. Nationwide, approximately half of those enrolling in outpatient treatment are retained for less than three months.¹¹ Since attrition always increases over time, one-year retention rates across these same programs would presumably drop much lower. Indeed, focusing on therapeutic communities (involving residential treatment), one study reports one-year rates ranging from just 10-30 percent, lower than even the very worst performing drug courts.¹² So drug courts have clearly achieved success in keeping addicted persons in treatment for longer than other treatment models.

2. Recidivism *Adult drug courts significantly reduce recidivism, although the level of impact varies over time and by court.*

In their comprehensive review, David Wilson and colleagues reported that 37 of 42 studies found lower recidivism rates among drug court participants than “comparison groups” composed of similar but non-participating defendants. Most of the studies defined recidivism as re-arrests, some as re-convictions. The average effect size was approximately 13 percentage points.¹³ Other literature reviews that considered fewer total drug court evaluations, mainly by eliminating ones with particularly weak methodologies, still reported lower recidivism rates among drug court participants than comparison group defendants in nearly all sites.¹⁴

An important caveat to these results is that most studies only examined recidivism over a brief time frame, usually coinciding with the *in-program* period of active drug court participation. Only a handful extended the measurement period beyond two years after program intake. A study of the Baltimore City Treatment Court, which used a strong research design where defendants were randomly assigned either to the drug court or conventional case processing, tracked defendants over a third year and found sustained differences, with a recidivism rate that was 10 percent lower for drug court participants than the comparison group.¹⁵ Several studies have been able to *isolate* recidivism over a *post-program* period after drug court participation has ended (i.e., after the date of graduation or failure/release from incarceration). A study of six New York State drug courts, for example, reported consistent recidivism reduc-

tions over a one-year period after graduation or failure—an average 31 percent reduction in relation to the comparison group during a comparable one-year post-disposition period. When focusing on graduates alone, the impact is truly staggering—an average 71 percent reduction across the same six sites. On the other hand, drug court failures were as or more likely as comparison group defendants to re-offend. This means the benefits of the drug court accrue primarily to those who successfully complete; therefore, to have a substantial net impact when averaged across *all* participants, graduating a significant percentage may be extremely important.¹⁶

Overall, qualifications concerning methodology and measurement periods notwithstanding, results to date offer strong support for drug courts. Indeed, the U.S. Government Accountability Office (GAO) concluded definitively in its 2005 report that adult drug courts succeed in reducing recidivism.¹⁷

3. Drug Use *Studies show varying levels of continued drug use among drug court participants. Many comparison groups are not tested for drug use.*

Few studies directly measure reductions in drug use, primarily due to the inherent difficulties in locating both drug court participants and comparison group members for follow-up interviews and urinalysis testing. In one study, participants in Maricopa County, Arizona were found less likely than defendants randomly assigned to a regular probation group to test positive for heroin or cocaine one-year after program entry; however participants were found *more* likely to test positive for marijuana.¹⁸ Two other studies found that drug court participants were significantly less likely than comparison group defendants to use several illegal substances after a short follow-up period.¹⁹ The GAO aptly concluded that results are limited and mixed when it comes to effects on drug use.

4. Other Rehabilitative Outcomes *Virtually no studies measure other outcomes such as employment, welfare dependence, and mental or physical health. Some evidence suggests that drug courts may produce modest gains in these areas.*

Studies of the Baltimore City and Brooklyn drug courts detected few significant social and economic impacts, such as reductions in family, psychiatric, medical, or employment problems. However, where differences were evident, the tendency was for drug court participants to show modest relative improvement on these types of measures. Clearly, more research is needed here.

5. Cost Savings *While few studies measure cost impacts, nearly all of the available evidence demonstrates that drug courts save money over the long-term.*

Most studies considering cost savings have focused on savings to the criminal justice system (e.g., courts, corrections, probation, or prosecutors). These savings are the easiest to quantify but not necessarily the largest, as compared with others, such as reduced taxpayer-funded health care costs and emergency room visits, reduced dependence on public assistance, and savings to the community through reduced victimization costs. According to two recent reviews of the literature, nearly all complet-

ed cost studies show significant net savings.²⁰ Of the completed studies, the most noteworthy are two statewide evaluations of drug courts in Washington and California. The Washington State study found savings of \$3,892 per drug court participant; or savings of about \$1.74 for every dollar invested.²¹ The California study reported average yearly savings of \$2,000 per participant, though results varied widely across six separate drug court sites. Two California sites produced per participant savings in excess of \$15,000 while, on the other end of the spectrum, one produced net costs of just over \$9,000 (this was the only site that failed to save money on net).²² Since many of the savings stem from reductions in recidivism (the savings arise because justice system agencies do not have to deal with future cases), drug courts that achieve larger reductions in recidivism will naturally produce larger cost savings. Further, since recidivism-related savings accrue in the long-term, one should acknowledge that the immediate up-front costs to the court system of running a drug court generally exceed those of conventional case processing. Other justice system agencies, such as the District Attorney's Office, the defense bar, or corrections may see more immediate cost efficiencies, particularly in those drug courts managing to reduce incarceration time on the initial drug court case. Still, it is clear that drug courts do not always produce a short-term budgetary payoff and should rather be viewed as an investment in the future.

6. Reduced Use of Incarceration *As an alternative to incarceration, drug courts typically aspire to reduce the time that defendants spend in jail or prison. Limited data indicates that this happens to some degree, but not always.*

Some drug court critics argue that, due to the lengthy jail or prison sentences commonly imposed on drug court failures, when considering all drug court participants together, they face more severe criminal justice sanctions on average than conventional prosecution.²³ Indeed, the study of the Baltimore drug court found that while participants spent fewer days than the comparison group in jail due to their sentence, they spent substantially more time in jail due to intermediate sanctions for noncompliant behavior. Therefore, when all time was considered, the total number of days that drug court participants spent incarcerated was only slightly lower than for the comparison group.²⁴ In the New York State study, drug court participants in three of six sites averaged significantly fewer days incarcerated than the comparison group on the initial case; but participants in one court spent significantly more time incarcerated and in the final two sites, there was not a significant difference in either direction.²⁵ (Of course, since drug courts reduce recidivism, it is likely that if including incarceration time served as a result of new offenses, most drug courts would ultimately achieve reductions in net jail or prison time.)

Further breaking down the results in the New York study, it bears emphasizing that drug court graduates were never incarcerated as part of their final sentence; therefore, graduates gained the full benefit of the alternative to incarceration opportunity. On the other hand, in four of six New York sites, drug court failures averaged significantly longer sentences than the comparison group. This again underscores

the critical role of drug court graduation determining whether or not participants will benefit from the intervention.

How Do Drug Courts Work?

Here the evidence is more limited. The third column of the figure included above identifies 12 drug court components, of which notable evidence exists bearing on seven.

1. Early Identification *Those drug court participants who are identified and begin treatment quickly are more successful than those whose entry into a community-based treatment program is delayed.*

A growing body of research suggests that immediate engagement is critical. Participants engaged early in the drug court process, often measured by whether a participant actually begins attending treatment within the first 30 days after formally agreeing to enter a drug court, are more likely to be retained and to have successful long-term outcomes.²⁶ *Implication:* Drug courts should strive to implement formal, streamlined intake procedures that can move potential participants rapidly from screening and assessment to formalization of participant status to placement in a suitable community-based treatment program. Where treatment slots are difficult to locate, or systematic delays in case processing cannot be overcome, this may hinder a drug court's effectiveness. To compensate, strategies such as holding pre-placement groups onsite at the drug court may help to keep participants engaged while they wait for a community-based treatment slot to become available.

2. Treatment *Some contend that treatment per se does not contribute to the overall effectiveness of drug courts and that, instead, judicial supervision makes the greatest difference. Contrary to this position, evidence indicates that treatment can make a difference; but little is known about the relative impact of different treatment modalities; or about which modalities are most appropriate for different categories of participants.*

In the drug court world, while it may be sacrilege to label treatment as irrelevant, Mark Kleiman believes that the limited scope and duration of the drug court coupled with high costs ultimately restrict the potential impact of this intervention. Therefore, in the interest of achieving the most comprehensive impacts, Kleiman argues that the drug court model could be replaced with a bare-bones approach requiring substance abstinence reinforced through drug screening and guaranteed sanctions for noncompliant behavior—but excluding a requirement of attendance in community-based treatment.²⁷ Others respond that treatment itself is essential. Many studies (though not specifically of drug court participants) confirm that more time in treatment leads to more positive post-treatment outcomes on measures such as drug use, criminal activity, and employment.²⁸ The Baltimore drug court study confirms that participants who completed more total days in treatment reported less illegal drug use than others three years after program entry.²⁹

While the literature confirms that treatment is important, it is unclear whether drug courts use the most effective treatment modalities and programs. What is

known is that practices vary widely. For example, across 11 New York State drug courts, the percentage of participants initially referred to a residential treatment program ranged from 1 percent to 53 percent.³⁰ In part, this variation reflects the desire of some drug courts to keep participants in the community, rather than sending them to a residential facility.

Not only do practices between courts vary; information concerning “best practices” is limited. For example:

- What modality is most appropriate for different categories of participants (e.g., severely addicted heroin users, young marijuana users, or addicted women with children)?
- How much treatment is ideal—and do drug courts that require treatment stays well in excess of one year encounter a point of diminishing returns? (In recent years, several drug court researchers, including one of this article’s coauthors, have suggested that it may be counterproductive to keep participants enrolled for too long before allowing them to graduate.)
- Within each basic type of modality (e.g., residential, short-term rehabilitation, or outpatient), are quality treatment services available? Are treatment providers using methods found to be therapeutically effective? How can drug court staff assess the quality of available treatment?
- Do variations in treatment program quality tangibly affect participant outcomes?

From a comprehensive review of the treatment literature, Faye Taxman synthesizes existing treatment knowledge and recommends certain specific practices (e.g., cognitive behavioral approaches, matching defendants to appropriate programs, and clinical assessments) as crucial to successful outcomes.³¹ At the same time, Taxman laments that treatment programs serving drug court participants tend to spend relatively little time—less than 20 percent in one study—addressing clinical issues with an approach known to be effective.³² Several other researchers participating in a recent roundtable discussion echoed concerns that programs available to drug courts did not generally use the most effective of available modalities.³³ And drug court participants themselves criticized the quality of their treatment in several recent focus groups.³⁴ While it is debatable how much control drug courts can actually exert over treatment administered in community-based programs, these findings at least raise concerns about whether drug court effectiveness might be greater if the average quality of treatment was improved.

3. Legal Coercion *Legal coercion can increase the incentive for drug court participants to succeed.*

As discussed previously, part of the success of drug courts in retaining partici-

pants is believed to stem from the legal coercion entailed by the threat of incarceration for failing. Further, some evidence indicates that added amounts of legal coercion within drug courts can produce incrementally better outcomes. For instance, presumably because of the added leverage that results when participants are required to plead guilty in advance of participation, drug courts using “post-plea” as opposed to “pre-plea” models may be more effective. One study of a court-mandated treatment program (not a drug court per se) confirmed that the program’s one-year retention rate rose by 10 percent (64 percent to 74 percent) after switching from a pre-plea to post-plea model.³⁵ Also, comparing different post-plea situations, a study of the Brooklyn Treatment Court found that participants facing a progressively longer jail or prison sentence in the event of failing were increasingly likely to become engaged in treatment.³⁶ However, the recent statewide study in New York found less strongly supportive evidence for this relationship across a range of drug courts, and the Baltimore study did not confirm this relationship at all.³⁷ A study of the Las Vegas drug court similarly found that clients entering the drug court post-plea performed worse than pre-plea clients, but the authors believed this may be due to a higher risk clientele entering the court post-plea.³⁸ Thus while the coercive aspects common to all drug courts are effective when compared with voluntary treatment, further research is needed to clarify under what conditions extra levels of coercion produce added value in terms of additional improvements in participant outcomes.

In this regard, the work of Doug Young and Steven Belenko is highly suggestive. In one study, they found that treatment retention rates varied as a direct result of variation on four distinct legal coercion dimensions: (1) *information* (degree to which program rules and consequences of noncompliance were clearly communicated to participants); (2) *monitoring* (degree to which compliance was closely monitored through regular progress reports to the court and other means); (3) *enforcement* (degree to which noncompliant participants could expect to be rapidly caught, brought back to court, and face consistent consequences); and (4) *severity* (length of the resulting jail or prison sentence or other consequence). Further, this research suggests that legal coercion becomes more effective when coupled with clear communications by justice system authorities that reinforce participants’ impression that failure will elicit adverse consequences. This reinforcement creates a perception of coercion, which in turn mediates the relationship between the court’s objective mandate on one hand and the resulting compliance outcomes on the other. For example, the dimension of “severity” is not measured merely by the objective facts of what will happen if participants fail but by participant perceptions of how much jail or prison time or what other consequence they will face. *Implication:* Drug courts should convey clearly, frequently, and specifically to participants exactly what will happen if they graduate (case dismissal or other legal benefit) and what will happen if they fail (how much jail time they will have to serve); and should convey the nature of the court’s monitoring and enforcement efforts to detect and address noncompliance.³⁹

4. Judicial Supervision *Ongoing judicial supervision by the drug court judge works with “high-risk” drug court participants.*

Research suggests that judicial status hearings—especially ones that include positive feedback from the judge and that focus on “high-risk” participants—can be effective. A series of random assignment studies found that drug court participants diagnosed as having antisocial personality disorder and/or having previously failed a drug treatment program did significantly better when required to appear biweekly before the drug court judge. On the other hand, “low-risk” participants who did not have these characteristics did either similarly or worse across different drug court sites when monitored biweekly.⁴⁰ *Implication:* Scarce judicial supervision resources are best targeted to “high risk” participants.

Since participants who do attend status hearings often develop a relationship with the judge, some research has found that it can be damaging when one judge replaces another. A study of the Portland drug court reported declining treatment attendance after it switched from a single, dedicated judge to a judicial rotation system involving frequent changes in the presiding judge. Likewise, the study found that participants appearing before a single judge were less likely to be terminated unfavorably from the drug court program than participants appearing before multiple judges in the course of their participation.⁴¹

Concerning the content of effective status hearings, a Broward County, Florida study found that in general, supportive comments by judges resulted in fewer subsequent positive drug screens, while adverse comments had the opposite effect.⁴² And further confirming the importance of positive feedback, interviews with participants in two different drug courts using the same scales both found that participants rated “praise from the judge” and “direct interaction with the judge” as among the most useful drug court components.⁴³ Similarly, participants offering feedback in two separate focus group studies spanning nine drug court sites consistently underlined the motivating role of praise and approval from the judge.⁴⁴ By contrast, the overriding prevalence of negative and stigmatizing judicial feedback was held largely responsible for the negative evaluation results (higher rates of re-offending among participants than the comparison group) in one study of the Las Vegas drug court.⁴⁵

5. Rewards *Rewards appear effective when they are tangible and applied frequently throughout the drug court participation process; but the literature is limited.*

As noted above, several studies cite the importance of positive judicial feedback. Whether more tangible rewards such as tokens, journals, or gift certificates matter is, however, a different question. Classic behavioral modification techniques of course recommend the liberal use of rewards. Yet, only one study tests the impact of rewards in drug courts with a rigorous research design. For this reason, caution is still advised before making strong assumptions about the degree to which rewards make a difference. In the one completed study, Doug Marlowe and his colleagues randomly assigned participants in one drug court to one of three rewards schedules:

Standard rewards: hat or candle after three months of compliance; reduced community service after six months; reduced drug testing after seven; reduced treatment requirements after eight; reduced judicial status hearings after 10; and reduced homework assignments after 11.

Enhanced graduated rewards: gift certificates after each additional month of compliance (i.e., 12 total certificates) that begin at \$5 after month one and grow to \$60 after month 12.

Enhanced thinning rewards: gift certificates of \$30 after months one, two, and three of compliance; \$50 after month five; \$75 after month nine; and \$125 after month 12.

Within one year of the random assignment, the graduation rate and Phase Four completion rate (the drug court used four phases) were significantly higher for participants on the two “enhanced” schedules than for participants on the “standard” schedule. In particular, 55 percent and 60 percent respectively of participants on the two enhanced schedules had at least completed Phase Four by the one-year mark, but only 26 percent of those on the standard schedule had done so.⁴⁶ *Implication:* Based on this study, rewards are effective, but not in the way they are traditionally implemented in drug courts; instead, participants respond better when the rewards have tangible value, are administered more frequently throughout participation, and are administered in escalating quantities.

6. Sanctions *Drug court sanctions appear effective when applied consistently and fairly; but the literature is limited.*

Following classic behavior modification principles, sanctions and rewards have always been core components of the drug court model. In one study of the Washington, D.C. Judicial Sanctions Program, defendants assigned to receive sanctions in response to noncompliance were less likely to be rearrested than a second group of defendants assigned to receive regular drug testing but without judicial monitoring or sanctions.⁴⁷ But little is known about precisely why or how sanctions work—which specific types of sanctions are most effective, under what circumstances, and how much of a difference they truly make in a drug court setting. It is possible that intermediate sanctions are less important in drug courts than other aspects of judicial supervision, such as probing and positive judicial interactions with participants and the overarching incentive created by the threat of jail or prison for failing (see above). And because some research has shown that negative, stigmatizing in-court interactions can adversely affect subsequent performance, intermediate sanctions must be administered with care. Where similar sanctions are consistently applied in response to similar behaviors, and where the judge clearly articulates the reasons for imposing each sanction, participants may become more likely to respond positively. In general, research shows that where defendants believe justice system authorities have treated them fairly and with respect, they are more likely to comply

with court orders.⁴⁸ *Implication:* Drug courts need to cultivate a sense that their sanctioning process is fair. Developing and consistently implementing a formal graduated sanctions schedule may be helpful in this regard.

7. Team Approach *The impact of the team approach has not been rigorously tested, but drug courts appear to function better when a non-adversarial team model is present.*

Most drug courts hold regular case conferencing meetings including the judge, attorneys, treatment providers, and other affiliated staff. In these meetings, disparate goals (e.g., of opposing attorneys) are supposed to be put aside to promote the recovery of each participant. While it is difficult to quantify the impact of a team model, a couple studies suggest it may be important. In one involving focus groups with judges from drug courts and other “problem-solving courts” (e.g., domestic violence courts, mental health courts, community courts, etc.), judges repeatedly cited the team approach as among the most critical ingredients for their programs to be effective.⁴⁹ Also, a recent process evaluation of the Staten Island, New York drug court found that the strong personal and working relationships established among team members—the judge, prosecutors, and assigned defense counsel especially—enabled the court to successfully address multiple implementation challenges during the planning stages and first year and a half of operations.⁵⁰ Still, these studies by no means involved rigorous, carefully designed tests of the team model.

8. Other Drug Court Components *There is little or no evidence on the role of case management, drug testing, community outreach, and supplemental services in areas such as employment, housing, or mental health.*

Concerning case management in particular, today’s drug courts exhibit considerable diversity of practice. Different drug courts range from employing their own on-site case management team (the most costly option); to collaborating with local departments of probation to perform case management; to eliminating case management services altogether and folding their functions under substance abuse counselors at assigned treatment programs.⁵¹ Yet it is entirely unclear which, if any, of these approaches is more or less effective than any other.

9. Graduation *Participants who reach graduation are more likely to attain continued success thereafter.*

What role does drug court graduation play in producing long-term rehabilitative outcomes (see middle of fourth column in the figure above)? Can those who fail drug court nonetheless gain from the experience? Several studies suggest they cannot—that graduation is a pivotal milestone and that without it continued progress is unlikely.⁵² For example, the New York study found that across six drug courts, there was consistently no additional benefit gained from completing more time in the drug court program only to fail in the end. Among those who failed, more time enrolled in the drug court or attending treatment prior to failure had no impact on future re-

offending rates. *Implication:* Graduation is the key to successful long-term outcomes; drug courts should seek to graduate a meaningful percentage of their participants.

For Whom Do Drug Courts Work?

Are some components—or the drug court model overall—more effective with some categories of participants than others? If policy-makers knew who benefits the most, they could adjust their target populations appropriately. By contrast, consider how a drug court’s target population is typically defined now (see first column of the figure above). Local community values and the specific attitudes of powerful stakeholders (e.g., the prosecutor, defense bar, and judiciary) inevitably influence a drug court’s eligibility criteria: e.g., whether it will admit defendants charged with felonies or misdemeanors only; whether drug sales charges are eligible; and what type of prior criminal history is acceptable. The drug court population also reflects the character of the local population (e.g., the racial makeup or income distribution; and the nature of the local drug problem). In addition to these factors, in the ideal, the target population would be defined at least in part based on hard evidence concerning which categories of participants (e.g., based on drug use, treatment, or criminal history, sex, age, race, socioeconomic background, or other factors) are most likely to benefit from the intervention.

1. Categories of Defendants Most Likely to Perform Better in Drug Court than in Conventional Court *Little is known about which categories of defendants are most likely to benefit from the drug court intervention; but three have emerged as likely candidates: (a) “high risk” offenders, (b) those facing greater legal consequences for failing drug court, and (c) drug offenders (as opposed to offenders arrested for property crimes and other offenses).*

A number of studies indicate that “high risk” offenders are especially likely to benefit from the drug court model. As noted above, biweekly judicial status hearings had a positive impact on drug court participants with previous failed treatment episodes and/or anti-social personality disorders; while biweekly status hearings made no difference or even a negative difference for other categories of participants. Also, a study of the Los Angeles drug court found that while the drug court did not produce significantly different re-arrest rates from the comparison group among “low risk” defendants, it did generate considerably lower re-arrest rates among both “medium” and “high risk” defendants. In this study, high risk defendants had more serious criminal records and weaker community ties.⁵³

Complementing this research is the finding cited above that participants perform better if their offenses were more serious – and hence face more severe legal consequences if they fail. When comparing those processed through the drug court with those processed through conventional methods, it turns out that the drug court makes a greater relative difference in reducing the likelihood of re-offending for those with a prior criminal record. *Implication:* drug courts produce better outcomes if they expand their eligibility criteria to defendants with a prior criminal record, previous failed treatment, and other risk factors; conversely, limiting the drug court opportunity to less serious types of offenders (as many jurisdictions have chosen to

do) will reduce program efficacy. In particular, courts accepting participants over whom they can exercise more legal coercion stand to produce better outcomes.

Finally, a study of one drug court found that it produced a relatively greater reduction in recidivism for defendants entering on drug than on non-drug charges, such as property offenses or prostitution.⁵⁴ In general, drug courts may work better at reducing crime related to drug use and addiction but relatively less well with crime driven by other criminal impulses or motivations. And while many property offenders may be seeking to support an addiction, it is possible that on average, crimes committed by property offenders are less often driven by an addiction and more often by other criminal propensities. Of course, this relationship should be interpreted with caution until additional research replicates the finding.

2. Categories of Defendants Likely to Perform Well in Either Drug Court or

Conventional Court *Certain categories of defendants are likely to perform well both in and outside the drug court: those who (a) are older, (b) have no prior criminal record, (c) abuse a primary drug other than heroin and cocaine, (d) have no dual diagnosis, and (e) have higher socioeconomic status.*

There are certain categories of defendants who are likely to perform well or poorly whether they are in drug court or not. Those who have a tendency to do poorly are not necessarily inappropriate for drug court; however, they may be candidates for extra monitoring or services. Synthesizing a large number of studies emerging over the past five years, some of the personal characteristics found to increase the probability of success (whether in a drug court or not) include:

- Older age;⁵⁵
- No prior criminal record;⁵⁶
- Primary drug is not a “hard drug”—e.g., heroin and cocaine;⁵⁷
- No dual diagnosis is present (major depression, bipolar disorder, or suicidal ideation);⁵⁸ and
- Higher socioeconomic status (e.g., as measured by educational attainment or employment status).⁵⁹

Therefore, defendants lacking the above characteristics are more likely than others to require extra attention, although more research is needed to determine exactly what kinds of interventions are most effective.⁵⁹

Conclusion

The past several years have seen a remarkable convergence of support throughout the research community around the effectiveness of drug courts. Recent opinion pieces by John Goldkamp, Adele Harrell, and Doug Marlowe, three of the most prominent researchers in the field, all conclude that adult drug courts have been proven effective, a conclusion further echoed in an early 2005 report by the Government Accountability Office. Marlowe adds for emphasis, “We know that drug courts outperform virtually all other strategies that have been attempted for drug-involved offenders.”⁶⁰ Alongside this bold endorsement, however, Marlowe

offers an equally important caution, “Some components [of the model] may be indispensable, others may not be worth the cost, and still others may have negative side effects.”⁶¹ Indeed, the future of drug courts may well depend not on producing additional studies demonstrating their effectiveness overall but on increasing our understanding of which components are critical, which are not, and for which categories of participants the intervention works best.

Information concerning the essential ingredients of drug courts becomes all the more important in light of recent efforts by many states to “go to scale,” expanding the reach of drug courts to far greater numbers of defendants. These efforts appear to fall under two possible paths. One involves increasing the number of drug courts as well as attempting to boost the volume of defendants served by each one. Many states, including California, Florida, Louisiana, Missouri, and New York, have already begun proceeding in this manner through statewide coordination and expansion efforts.⁶² The second possible path involves applying “problem-solving” practices (i.e., the set of practices common to drug and other specialized courts) outside the specialized court setting—throughout conventional courts.⁶³ While this second path has not been undertaken systematically by any state, interest in this area is growing.

Both paths of expansion stem in no small part from the documented success of adult drug courts. Yet, it is unclear whether broader institutionalization can produce equally positive results. It is possible that a drug court approach will not work as well if institutionalized throughout greater numbers of courtrooms, targeting a wider range of defendants, and requiring the collaboration of far more judges, attorneys, and other stakeholders who may not all possess the dedication or skill of the movement’s pioneers. This paper has sought to inform the future of the drug court movement by summarizing what we know so far about successful drug court implementation. While the research cannot give policymakers a blueprint for how to go to scale with drug court, it does offer a number of helpful lessons that will hopefully spark new thinking about how to ensure that courts are making a difference in the lives of addicted offenders.

Notes

1. Office of Justice Programs, BJA Drug Court Clearinghouse and Technical Assistance Project, American University, 1,367 drug courts open as of March 29, 2005.
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3. See M. Rempel, *Action Research: Using Information to Improve Your Drug Court*, New York: Center for Court Innovation (2005).
4. S. Belenko, *Research on Drug Courts: A Critical Review 2001 Update*, National Center on Addiction and Substance Abuse, Columbia University (2001).
5. M. D. Anglin, M.-L. Brecht, and E. Maddahian, "Pre-treatment Characteristics and Treatment Performance of Legally Coerced Versus Voluntary Methadone Maintenance Admissions," 27 *Criminology*, 537, 556 (1989); G. DeLeon, "Legal Pressure in Therapeutic Communities," 18 *Journal of Drug Issues*, 625, 640 (1988); R. Peters and M. Murrin, "Evaluation of Treatment-Based Drug Courts in Florida's First Judicial Circuit," Tampa, FL: Department of Mental Health Law and Policy, Louis de la Parte Florida Mental Health Institute, University of South Florida (1998); F. Taxman, *Reducing Recidivism Through A Seamless System of Care: Components of Effective Treatment, Supervision, and Transitional Services in the Community*, Greenbelt, MD: Washington/Baltimore HIDTA Project (1998); F. Taxman, B. Kubu, and C. DeStefano, *Treatment as Crime Control: Impact of Substance Abuse Treatment on the Individual Offending Rates of Hard-Core Substance Abusing Offenders*, Greenbelt, MD: Washington/Baltimore HIDTA Project (1999).
6. W.S. Condelli and G. DeLeon, "Fixed and Dynamic Predictors of Client Retention in Therapeutic Communities," 10 *Journal of Substance Abuse Treatment* (1993); B.F. Lewis and R. Ross, *Retention in Therapeutic Communities: Challenges for the Nineties, Therapeutic Community: Advances in Research and Application*, eds. F. M. Tims, G. DeLeon, and N. Jainchill. NIDA, Rockville, MD (1994).
7. M. D. Anglin, *et al.*, *supra* note 5; G. DeLeon, *supra* note 5; M. Hiller, K. Knight, and D. D. Simpson, "Legal Pressure and Treatment Retention in a National Sample of Long-Term Residential Programs," *Criminal Justice and Behavior* 25:463-481 (1998); D. Young and S. Belenko, S., "Program Retention and Perceived Coercion in Three Models of Mandatory Drug Treatment," *Journal of Drug Issues* 22: 2: 297-328 (2002).
8. S. Belenko, "Research on Drug Courts: A Critical Review," 1 *National Drug Court Institute Review* 1 (1998).
9. M. Rempel, D. Fox-Kralstein, A. Cissner, R. Cohen, M. Labriola, D. Farole, A. Bader, and M. Magnani, *The New York State Adult Drug Court Evaluation: Policies, Participants, and Impact*. Report submitted to the New York State Unified Court

System and the Bureau of Justice Assistance, New York: Center for Court Innovation (2003).

10. D. F. Anspach, V. Collom, and A. Ferguson, "Assessing the Impact of Functional Components of the Drug Court Model on Post-Program Recidivism." Presented at the Annual Conference of the American Society of Criminology, Denver, CO (November 2003).

11. P. D. Simpson, G. W. Joe, and B. S. Brown, "Treatment Retention and Follow-Up Outcomes in the Drug Abuse Treatment Outcomes Study (DATOS)," *Psychology of Addictive Behaviors* 11(4): 294-307 (1997).

12. The study of therapeutic communities is B. F. Lewis and R. Ross, "Retention in Therapeutic Communities: Challenges for the Nineties," in *Therapeutic Community: Advances in Research and Application*, eds. F. M. Tims, G. DeLeon, and N. Jainchill. NIDA, Rockville, MD (1994). Concerning a baseline for what retention might look like in the worst performing drug courts, in a study of 11 New York State drug courts, the one with the lowest one year retention rate was found to have a rate of 47 percent. Rempel *et al.*, *supra* note 9.

13. D. Wilson, O. Mitchell, and D.L. MacKenzie, "Systematic Review of Drug Court Effects on Recidivism." Paper presented at the Annual Meetings of the American Society of Criminology, Chicago, IL (2002).

14. See S. Aos, P. Phipps, R. Barnoski, and R. Lieb, *The Comparative Costs and Benefits of Programs to Reduce Crime Version 4.0*. Olympia: Washington State Institute for Public Policy (2001); S. Belenko, *Research on Drug Courts: A Critical Review 2001 Update*, National Center on Addiction and Substance Abuse, Columbia University (2001); Government Accountability Office, *supra* note 2; J. Roman and C. DeStefano, "Drug Court Effects and the Quality of Existing Evidence," in *Juvenile Drug Courts and Teen Substance Abuse*, eds. J. Butts and J. Roman. Washington, DC: Urban Institute Press (2004).

15. D. C. Gottfredson, B. Kearley, S. S. Najaka, and C. Rocha, "The Baltimore City Drug Treatment Court: 3-Year Self-Report Outcome Study," *Evaluation Review* 29:1 (2005).

16. M. Rempel *et al.*, *supra* note 9. Results exceeded the statistical margin of error in five of the six sites. The New York study also found significant reductions in recidivism (in five of six sites) over a one-year post-program period, which involves a period of time beginning after the point of drug court graduation and failure. Two other studies have similarly detected post-program reductions in recidivism, A. Bavon, "The Effect of the Tarrant County Drug Court Project on Recidivism," 24 *Evaluation and Program Planning*, 13, 22 (2001); and J. E. Fielding, G. Tye, P. Ogawa, I. J. Imam, A. M. Long, "Los Angeles County Drug Court Programs: Initial Results," 23 *Journal of Substance Abuse Treatment*, 217, 224 (2002).

17. Government Accountability Office, *supra* note 2.

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21. S. Aos *et al.*, *supra* note 14.
22. S. M. Carey, "Evaluating the Cost of California's Drug Courts and Subsequent Policy Effects," Presented at the Annual Conference of the American Society of Criminology, Nashville, TN (November 2004).
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25. M. Rempel *et al.*, *supra* note 9.
26. M. Rempel and C. D. DeStefano, "Predictors of Engagement in Court-Mandated Treatment: Findings at the Brooklyn Treatment Court, 1996-2000," 33 *Journal of Offender Rehabilitation*, 87, 124 (2001); and M. Rempel *et al.* *supra* note 9.
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28. Anglin *et al.*, *supra* note 5; DeLeon, *supra* note 7; Gottfredson *et al.*, *supra* note 19; R. Peters and M. Murrin, "Effectiveness of Treatment-Based Drug Courts in Reducing Criminal Recidivism," *Criminal Justice and Behavior* 27: 72-96 (2000); D. D. Simpson *et al.*, "Treatment Retention and Follow-Up Outcomes in the Drug Abuse Treatment Outcomes Study (DATOS)," 11 *Psychology of Addictive Behavior*, 294, 307 (1997); K. A. Sirotnik and M. W. Roffe, "An Investigation of the Feasibility of Predicting Outcome Indices in the Treatment of Heroin Addiction," 12 *International Journal of the Addictions*, 755, 775 (1977); F. Taxman, *Reducing Recidivism Through A Seamless System of Care: Components of Effective Treatment, Supervision, and Transitional Services in the Community*, Greenbelt, MD: Washington/Baltimore HIDTA Project (1998); F. Taxman *et al.*, *Treatment as Crime Control: Impact of Substance Abuse Treatment on the Individual Offending Rates of Hard-Core Substance Abusing Offenders*, Greenbelt, MD: Washington/Baltimore HIDTA Project (1999).
29. Gottfredson, *et al.*, *supra* note 19.
30. M. Rempel *et al.*, *supra* note 9. The differences in use of residential treatment stem partly from variations in the addition severity level of participants, but that factor alone cannot explain the magnitude of the differences. Regarding the tremendous variations in the modalities and quality of services available at treatment programs used by drug courts, see also D. F. Anspach, *et al.*, *supra* note 10.
31. F. Taxman, "Unraveling What Works for Offenders in Substance Abuse Treatment Services," 2 *National Drug Court Institute Review*, 93, 134 (1999).

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33. A. Fox, *Bridging the Gap: Researchers, Practitioners, and the Future of Drug Courts*, New York: Center for Court Innovation (2004).
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47. A. Harrell *et al.*, *Findings from the Evaluation of the D.C. Superior Court Drug Intervention Program*, The Urban Institute: Washington, D.C., (1998).

48. See T. Tyler, *Why People Obey the Law*, New Haven, CT: Yale University Press (1990).
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50. K. O'Keefe, "The Staten Island Treatment Court Preliminary Evaluation," Submitted to the Staten Island Treatment Court and the New York State Unified Court System, New York: Center for Court Innovation (December 2003).
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53. J. E. Fielding *et al.*, *supra* note 16.
54. M. Rempel *et al.*, *supra* note 9.
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Center for Court Innovation

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NATIONAL
DRUG COURT
INSTITUTE

PAINTING THE CURRENT PICTURE:

A NATIONAL REPORT CARD
ON DRUG COURTS AND
OTHER PROBLEM SOLVING
COURT PROGRAMS IN THE
UNITED STATES

C. West Huddleston, III

Judge Karen Freeman-Wilson (ret.)

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About the Office of National Drug Control Policy (www.whitehousedrugpolicy.gov)

The White House Office of National Drug Control Policy (ONDCP), a component of the Executive Office of the President, was established by the Anti-Drug Abuse Act of 1988.

The principal purpose of ONDCP is to establish policies, priorities, and objectives for the Nation's drug control program. The goals of the program are to reduce illicit drug use, manufacturing, and trafficking, drug-related crime and violence, and drug related health consequences. To achieve these goals, the Director of ONDCP is charged with producing the National Drug Control Strategy. The Strategy directs the Nation's anti-drug efforts and establishes a program, a budget, and guidelines for cooperation among Federal, State, and local entities.

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The National Association of Drug Court Professionals (NADCP) was established in 1994 as the premier national membership and advocacy organization for drug courts. Representing over 16,000 drug court professionals and community leaders, NADCP provides a strong and unified voice to our nation's leadership. By impacting policy and legislation, NADCP creates a vision of a reformed criminal justice system. NADCP's mission is to reduce substance abuse, crime, and recidivism by promoting and advocating for the establishment and funding of drug courts and providing for the collection and dissemination of information, technical assistance, and mutual support to association members.

About the National Drug Court Institute (www.ndci.org)

The National Drug Court Institute (NDCI) is the educational, research and scholarship arm of the National Association of Drug Court Professionals (NADCP), and is funded by the White House Office of National Drug Control Policy (ONDCP); the Bureau of Justice Assistance (BJA) and the National Institute of Justice (NIJ), U.S. Department of Justice; and the National Highway Traffic Safety Administration (NHTSA), U.S. Department of Transportation. In addition to staging over 130 state of the art training events each year, NDCI provides on-site technical assistance and relevant research and scholastic information to drug courts throughout the nation.

Painting the Current Picture:
A National Report Card on Drug Courts
and Other Problem Solving Court
Programs in the United States

Volume I, Number 2

C. West Huddleston, III
Judge Karen Freeman-Wilson (ret.)
Douglas B. Marlowe, J.D., Ph.D.
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May 2005

National Drug Court Institute

Painting the Current Picture: A National Report Card on Drug Courts and Other Problem Solving Court Programs in the United States Volume I, Number 2.

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Introduction

Painting the Current Picture: A National Report Card on Drug Courts and Other Problem Solving Court Programs in the United States¹

Published annually, this report provides an update of drug court and other problem solving court activity in every state, territory, and district in the United States since the release of the inaugural issue of *Painting the Current Picture: A National Report Card on Drug Courts and Other Problem Solving Court Programs in the United States* in May 2004.

Volume 1, Number 2 provides summary results from the 2004 National Survey on Drug Courts and Other Problem Solving Courts, conducted by the National Drug Court Institute (NDCI) in the last half of 2004 and ending on December 31, 2004.

The NDCI National Survey instrument was sent to a Primary Point of Contact (PPC) in each state² in July 2004. To this end, each respective state identified for NDCI either the person responsible for tracking state drug court activity or the person most familiar with the state's drug court operations. The representative organizations ranged from the State Supreme Court (e.g., Louisiana), the Administrative Office of the Courts (e.g., Missouri, California), the Governor's Office (e.g., Texas), the Single State Agency for Alcohol and Drug Services (e.g., Oklahoma) or independent state commissions (e.g., Maryland). In those instances in which a state did not have a designated statewide drug court coordinator or director, the state Drug Court Association or Congress of State Drug Court Associations was asked to identify a PPC.

In addition to forwarding the survey instrument to an identified state drug court PPC, NDCI also courtesy-copied the survey instrument to, on average, 2 additional officials in each state, totaling 168 surveyors nationwide. These included the president of the state drug court association, designated members of the Congress of State Drug Courts Associations, National Association of Drug Court Professionals (NADCP) Board Members, and other individuals possessing comprehensive knowledge regarding drug court and other problem solving court activities in their state. Once NDCI received the completed survey from the PPC, the data were compiled and forwarded back to the PPC and other surveyors for final confirmation to ensure a thorough and accurate snapshot of the number and type of operational drug courts and other problem solving court programs in the United States as of the concluding date of the survey.

Specific to this volume and in addition to reporting the type and aggregate number of operational drug courts and other problem solving court programs throughout the United States, sections are dedicated to major drug court research scholarship since the release of Volume I, as well as state-specific drug court legislation and the amount of each state's appropriation supporting such court programs (Table V). This year's report also provides key information about drug court models, populations, and capacity, as well as the number of confirmed drug-free babies born to active female drug court participants in 2004. Finally, a new feature found in this volume includes a list of national organizations serving as a resource to the drug and other problem solving court field.

Timeline of Drug Courts and Other Problem Solving Courts in the United States

| Year | Event |
|------|---|
| 1989 | Height of crack cocaine epidemic in the U.S. First drug court opens in Miami, Florida |
| 1990 | Spending for corrections exceeds \$76 billion nationally |
| 1991 | 5 drug courts in existence. Drug offenses account for 31 percent of all convictions in state courts. State prison costs for low-level drug offenders exceed \$1.2 billion annually |
| 1992 | 10 drug courts in existence. One-third of women inmates in state prisons are drug offenders. First women's drug court opens in Kalamazoo, Michigan |
| 1993 | 19 drug courts in existence. Drug offenders account for 40 percent of federal prisoners. First community court opens in Manhattan, New York |
| 1994 | 40 drug courts in existence. U.S. total incarceration figure tops 1 million. Congress passes Violent Crime Control and Law Enforcement Act (the Crime Bill). National Association of Drug Court Professionals (NADCP) founded |
| 1996 | 75 drug courts in existence. Drug Courts Program Office (DCPO) established in U.S. Department of Justice. NADCP holds first National Drug Court Training Conference in Las Vegas, Nevada. First DWI court opens in Dona Ana, New Mexico. First juvenile drug court opens in Yorba Linda, California. First family drug court opens in Reno, Nevada |
| 1998 | 347 drug courts in existence. National Drug Court Institute (NDICI) founded. Federal funding for drug courts reaches \$40 million for FY 1999 |
| 1999 | 472 drug courts in existence. U.S. total incarceration figure tops 2 million. 10th anniversary of the first drug court. National District Attorneys Association passes resolution in support of drug courts. National Sheriff's Association passes resolution in support of drug courts |
| 2000 | 665 drug courts in existence. First Juvenile and Family Drug Court Training Conference held in Phoenix, Arizona. American Bar Association releases Proprietary Standard 2.77 - Procedures in Drug treatment courts. Conference of Chief Justices/Conference of State Court Administrators passes resolution in support of problem solving courts (CJA/COSCA) |
| 2001 | 847 drug courts in existence. NADCP and the National Council of Juvenile and Family Court Judges release <i>Best Strategies for Juvenile Drug Courts</i> |
| 2002 | 1,048 drug courts in existence. First campus drug court opens at Colorado State University. DCPO merges into EJA |
| 2003 | 1,183 drug courts in existence. 1,667 problem solving courts in existence. The National Institute of Justice reports drug court recidivism rates are as low as 16.4 percent nationwide one year after graduation |
| 2004 | 1,671 drug courts in existence. 2,558 problem solving courts in existence. NADCP holds 10th Annual Drug Court Training Conference. CJA/COSCA reaffirms support for problem solving courts by passing second joint resolution |
| 2008 | 230 drug courts in existence. 5.7 million people in the U.S. are under criminal justice supervision. Congress of State Drug Courts (NSDC) holds its first meeting. First Tribal healing to wellness court opens in Fort Hall, Idaho. NADCP, DCPO, and the Bureau of Justice Assistance (BJA) release <i>Defining Drug Courts: The Key Components</i> . First mental health court opens in Broward County, Florida |

Figure 1

Drug Courts: A National Phenomenon

“Drug courts are one of the most significant criminal-justice system initiatives in the past 20 years,” according to John Walters, Director of the Office of National Drug Control Policy (Walters, 2005). As demonstrated by the timeline on page 1, drug courts have grown exponentially, quickly becoming a national phenomenon. Drug courts represent the coordinated efforts of the judiciary, prosecution, defense bar, probation, law

There were 1,621 drug court operations in the United States (Table 1).

enforcement, treatment, mental health, social services, and child protection services to actively and forcefully intervene and break the cycle of substance abuse, addiction, and crime. As an alternative to less effective interventions, drug courts quickly identify substance abusing offenders and place them under strict court monitoring and community supervision, coupled with effective, long-term treatment services (Huddleston, Freeman-Wilson, & Boone, 2004)

In this blending of systems, the drug court participant undergoes an intensive regimen of substance abuse and mental health treatment, case management, drug testing, and probation supervision while reporting to regularly scheduled status hearings before a judge with specialized expertise in the drug court model (Fox & Huddleston, 2003). In addition, drug courts may provide job skills training, family or group counseling, and many other life-skill enhancement services.

No other justice intervention brings to bear such an intensive response with such dramatic results—results that have been well documented through the rigors of scientific analysis. From the earliest evaluations, researchers have determined that drug courts provide “closer, more comprehensive supervision and much more frequent drug testing and monitoring during the program than other forms of community supervision. More importantly, drug use and criminal behavior are substantially reduced while offenders are participating in drug court” (Belenko, 1998, 2001). To put it bluntly, “we know that drug courts outperform virtually all other strategies that have been attempted for drug-involved offenders...” (Marlowe, DeMauteo, & Festinger, 2003).

As of December 31, 2004, there were 1,621 drug court operations in the United States (Table 1). Remarkably, the growth does not appear to be slowing down. Currently, 215 jurisdictional teams are formally planning a drug court (Pierre, 2005), and another 263 jurisdictions submitted applications to the

Bureau of Justice Assistance (BJA), U.S. Department of Justice in response to the 2005 Drug Court Discretionary Grant solicitation (Mankin, 2005). In total, the number of

The number of operational drug courts has increased by 37 percent in the past year alone.

Table I

| Operational Drug Court Programs in the United States | |
|--|----------------------|
| Year | To Date ³ |
| 1989 | 1 |
| 1990 | 1 |
| 1991 | 5 |
| 1992 | 10 |
| 1993 | 19 |
| 1994 | 40 |
| 1995 | 75 |
| 1996 | 139 |
| 1997 | 230 |
| 1998 | 347 |
| 1999 | 472 |
| 2000 | 665 |
| 2001 | 847 |
| 2002 | 1,048 |
| 2003 | 1,183 |
| 2004 | 1,621 ⁴ |

probationary or post plea condition, suggesting that drug courts are working more often with a higher-risk offender population. This trend seems quite appropriate in light of research conducted by the Treatment Research Institute at the University of Pennsylvania, which concluded that high-risk clients who have more serious antisocial propensities or drug-use histories performed substantially better in drug court when they were required to attend frequent status hearings before the judge (Marlowe, Festinger, & Lee, 2004).

Combined, new DWI and reentry drug courts represent almost a 200 percent increase from December, 2003.

The increase in probationary or post-plea drug courts can also be explained by the fact that increasing numbers of drug courts are treating target populations that require a post-conviction probationary sentence. This is especially true for drug courts that accept impaired drivers or offenders who are being released from jail or prison custody. Combined, new DWI and reentry drug courts represent almost a 200 percent increase from December, 2003.

operational drug courts has increased by 37 percent in the past year alone (Table II and Table III). It is clear that drug court and drug court principles are becoming institutionalized as a way of doing business in the courts.

More than 16,200 participants graduated from drug court in 2004.

Now numbering 811, adult drug courts comprise the majority of operational problem solving court programs in the United States (Table III and Figure II). However, unlike the first generation of adult drug court programs, which

69 percent of adult drug courts today have a probationary or post plea condition.

tended to be diversionary or pre-plea models, 69 percent of adult drug courts today have a

Table II

| Drug Court Types by Year | | |
|--------------------------|----------|----------|
| | 12/31/03 | 12/31/04 |
| Adult | 666 | 811 |
| Juvenile: | 268 | 357 |
| Family | 112 | 153 |
| DWI: | 42 | 176 |
| Reentry | 42 | 68 |
| Tribal: | 52 | 54 |
| Campus: | 1 | 1 |
| Total | 1,183 | 1,621 |

Table III

Number & Type of Operational Drug Court Programs in the United States (December 2004)

| | Total Drug Courts | Adult | Post-Plea | Pre-Plea | Juvenile | Family | Tribal* | DWI | Designated DWI | Hybrid DWI | Campus | Reentry Drug Court | Federal Judicial District |
|----------------|-------------------|-------|-----------|----------|----------|--------|---------|-----|----------------|------------|--------|--------------------|---------------------------|
| Alabama | 18 | 15 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Alaska | 12 | 5 | 0 | 0 | 1 | 1 | 1 | 5 | 3 | 2 | 0 | 0 | 0 |
| Arizona | 39 | 8 | 6 | 2 | 12 | 3 | 13 | 3 | 3 | 0 | 0 | 0 | 0 |
| Arkansas | 26 | 25 | 23 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| California | 158 | 37 | 57 | 8 | 39 | 22 | 0 | 4 | 4 | 0 | 2 | 0 | 0 |
| Colorado | 18 | 8 | 0 | 0 | 6 | 1 | 2 | 0 | 0 | 0 | 1 | 0 | 0 |
| Connecticut | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Delaware | 14 | 9 | 3 | 6 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| D.C. | 5 | 2 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 |
| Florida | 90 | 42 | 24 | 27 | 28 | 17 | 0 | 1 | 1 | 0 | 0 | 2 | 0 |
| Georgia | 29 | 18 | 4 | 14 | 5 | 1 | 0 | 4 | 4 | 0 | 0 | 0 | 0 |
| Guam | 2 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hawaii | 10 | 4 | 4 | 4 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Idaho | 40 | 22 | 22 | 0 | 10 | 1 | 1 | 6 | 2 | 4 | 0 | 0 | 0 |
| Illinois | 38 | 17 | 0 | 0 | 3 | 0 | 0 | 1 | 1 | 0 | 0 | 17 | 0 |
| Indiana | 18 | 12 | 1 | 11 | 4 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 |
| Iowa | 11 | 6 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Kansas | 4 | 1 | 0 | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Kentucky | 43 | 30 | 30 | 30 | 11 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Louisiana | 39 | 24 | 23 | 1 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Maine | 14 | 5 | 5 | 0 | 6 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Maryland | 18 | 7 | 7 | 0 | 9 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Massachusetts | 30 | 17 | 17 | 0 | 5 | 0 | 0 | 1 | 0 | 1 | 0 | 7 | 0 |
| Michigan | 67 | 25 | 0 | 0 | 14 | 5 | 2 | 21 | 21 | 0 | 0 | 0 | 0 |
| Minnesota | 7 | 5 | 4 | 5 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mississippi | 12 | 9 | 8 | 2 | 2 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 |
| Missouri | 124 | 53 | 35 | 23 | 18 | 10 | 0 | 19 | 2 | 17 | 0 | 24 | 0 |
| Montana | 13 | 2 | 0 | 2 | 2 | 4 | 4 | 1 | 0 | 1 | 0 | 0 | 0 |
| Nebraska | 9 | 4 | 4 | 1 | 4 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| Nevada | 24 | 6 | 6 | 0 | 4 | 3 | 4 | 5 | 5 | 0 | 0 | 2 | 0 |
| New Hampshire | 7 | 0 | 0 | 0 | 5 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 |
| New Jersey | 20 | 15 | 15 | 0 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| New Mexico | 53 | 6 | 6 | 6 | 13 | 3 | 5 | 6 | 6 | 0 | 0 | 0 | 0 |
| New York | 165 | 79 | 79 | 0 | 5 | 28 | 0 | 51 | 0 | 51 | 0 | 1 | 1 |
| North Carolina | 25 | 15 | 14 | 5 | 5 | 2 | 1 | 2 | 2 | 0 | 0 | 0 | 0 |
| North Dakota | 7 | 2 | 2 | 0 | 3 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ohio | 61 | 27 | 0 | 0 | 19 | 12 | 0 | 3 | 3 | 0 | 0 | 0 | 0 |
| Oklahoma | 47 | 31 | 31 | 0 | 10 | 2 | 3 | 1 | 1 | 0 | 0 | 0 | 0 |
| Oregon | 28 | 16 | 16 | 15 | 6 | 2 | 0 | 4 | 2 | 2 | 0 | 0 | 0 |
| Pennsylvania | 15 | 8 | 5 | 3 | 3 | 0 | 0 | 2 | 2 | 0 | 0 | 2 | 0 |
| Puerto Rico** | 7 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Rhode Island | 7 | 1 | 0 | 1 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| South Carolina | 27 | 12 | 0 | 0 | 12 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| South Dakota | 4 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tennessee | 53 | 36 | 35 | 1 | 13 | 1 | 0 | 3 | 3 | 0 | 0 | 0 | 0 |
| Texas | 41 | 24 | 17 | 12 | 6 | 3 | 1 | 3 | 0 | 3 | 0 | 4 | 0 |
| Utah | 25 | 12 | 5 | 8 | 5 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 |
| Vermont | 3 | 2 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Virgin Islands | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Virginia | 26 | 14 | 14 | 0 | 8 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| Washington | 35 | 13 | 1 | 12 | 10 | 5 | 5 | 1 | 1 | 0 | 0 | 0 | 0 |
| West Virginia | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Wisconsin | 6 | 3 | 3 | 2 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| Wyoming | 43 | 12 | 12 | 6 | 8 | 2 | 1 | 20 | 20 | 0 | 0 | 0 | 0 |
| Totals | 1,821 | 813 | 538 | 214 | 357 | 153 | 54 | 175 | 90 | 86 | 1 | 60 | 1 |

*2004 tribal data was derived from the American University Drug Clearinghouse and Technical Assistance Project (2004, November 9). Summary of drug court activity by state and county, Washington, DC: Author.

Total of 1,621 Operational Drug Courts in the United States (December 2004)

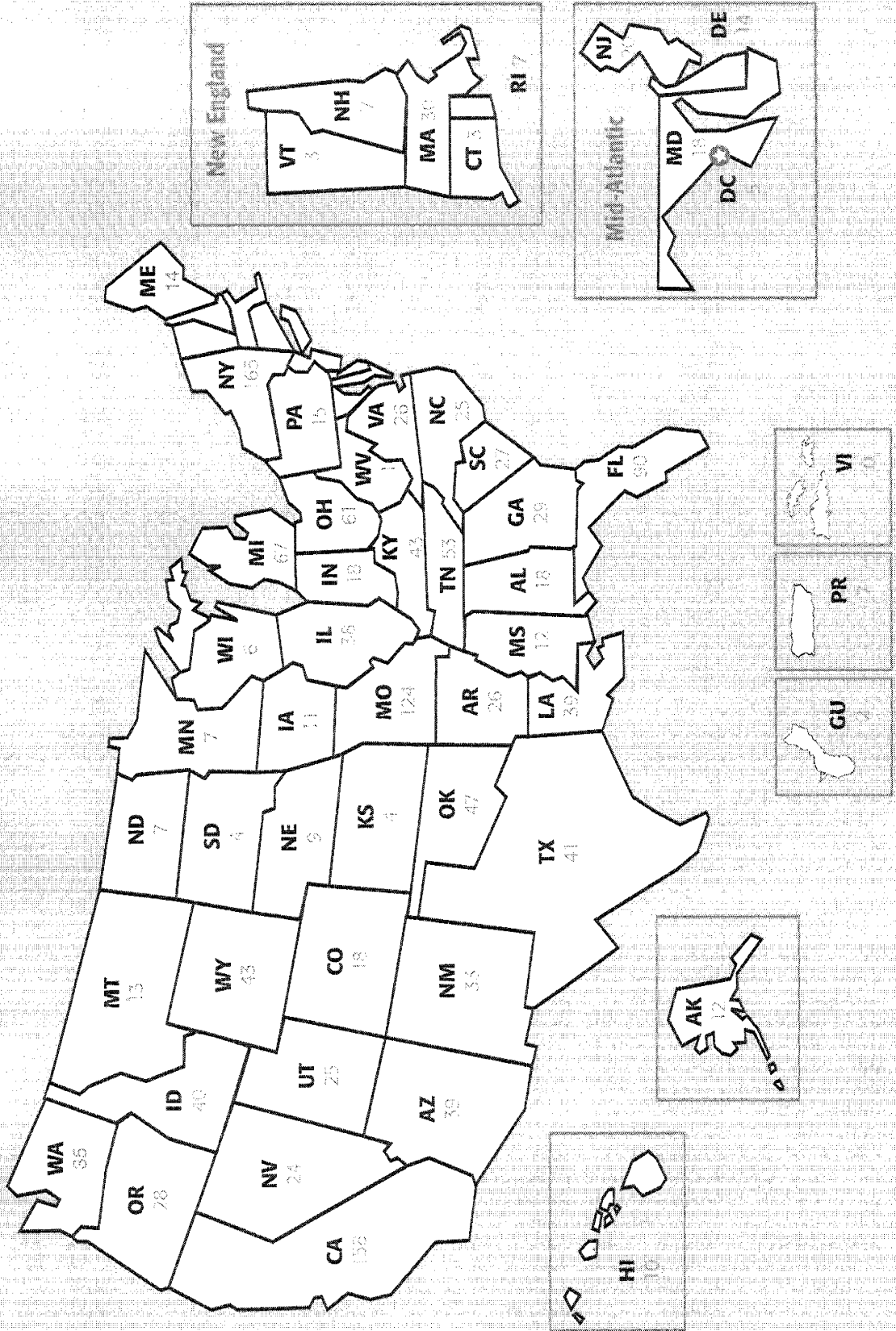
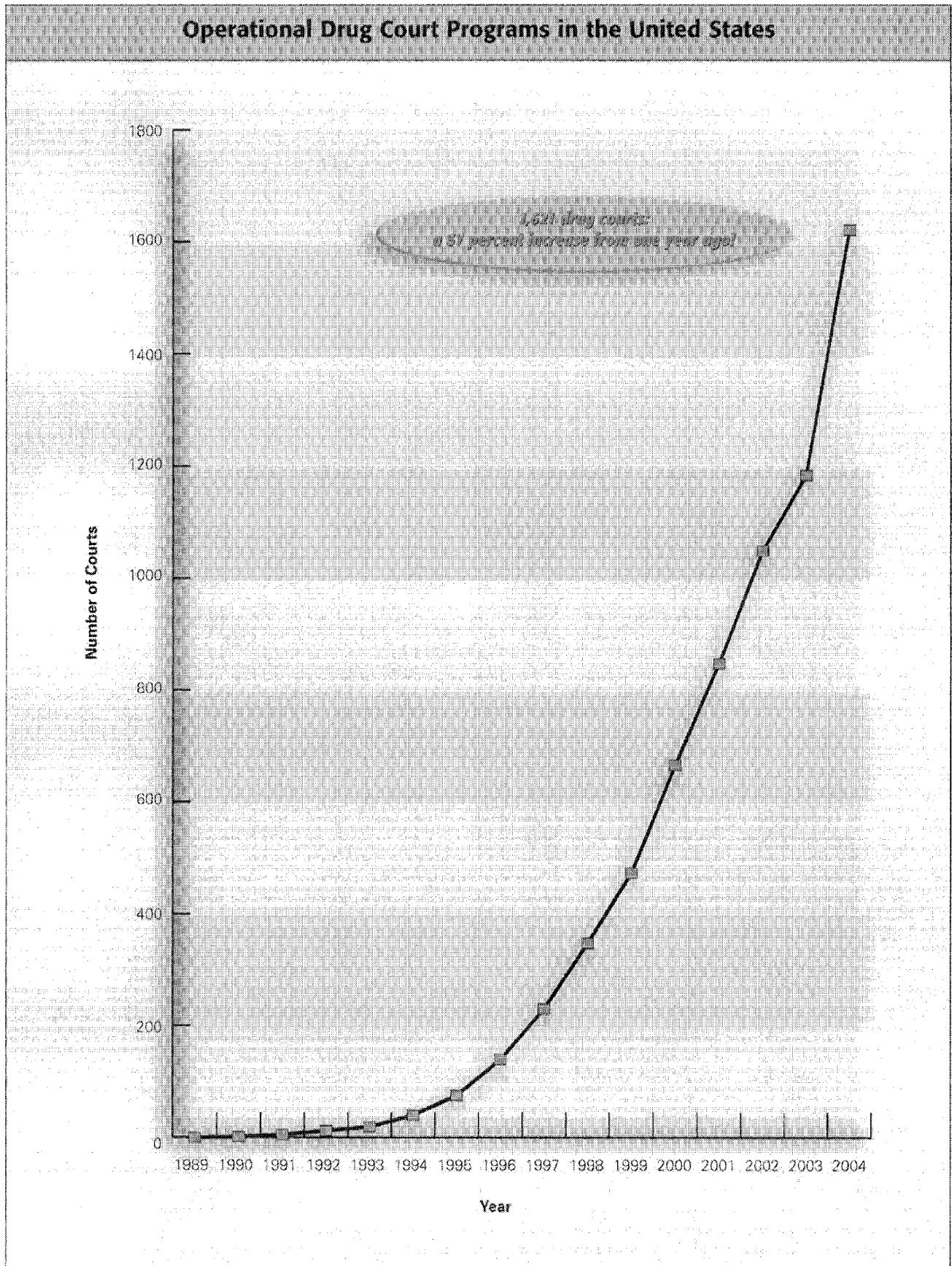


Figure II

Figure III



Drug Court Capacity

Certainly such an increase in drug courts suggests that the need for real solutions to

More than 70,000 drug court clients are being served at any given time throughout the United States.

issues such as substance abuse, child abuse and neglect, and driving under the influence is being met. In fact, more than 70,000 drug court clients are being served at any given time,

throughout the United States and its territories.⁷ In addition, more than 16,200 participants graduated from drug court in 2004.⁸ Given that only approximately two-thirds of the jurisdictions provided usable data on these items, the actual number of clients being served by drug courts nationally is certainly higher.

Implementing new drug courts is undoubtedly one way to expand capacity and reach more

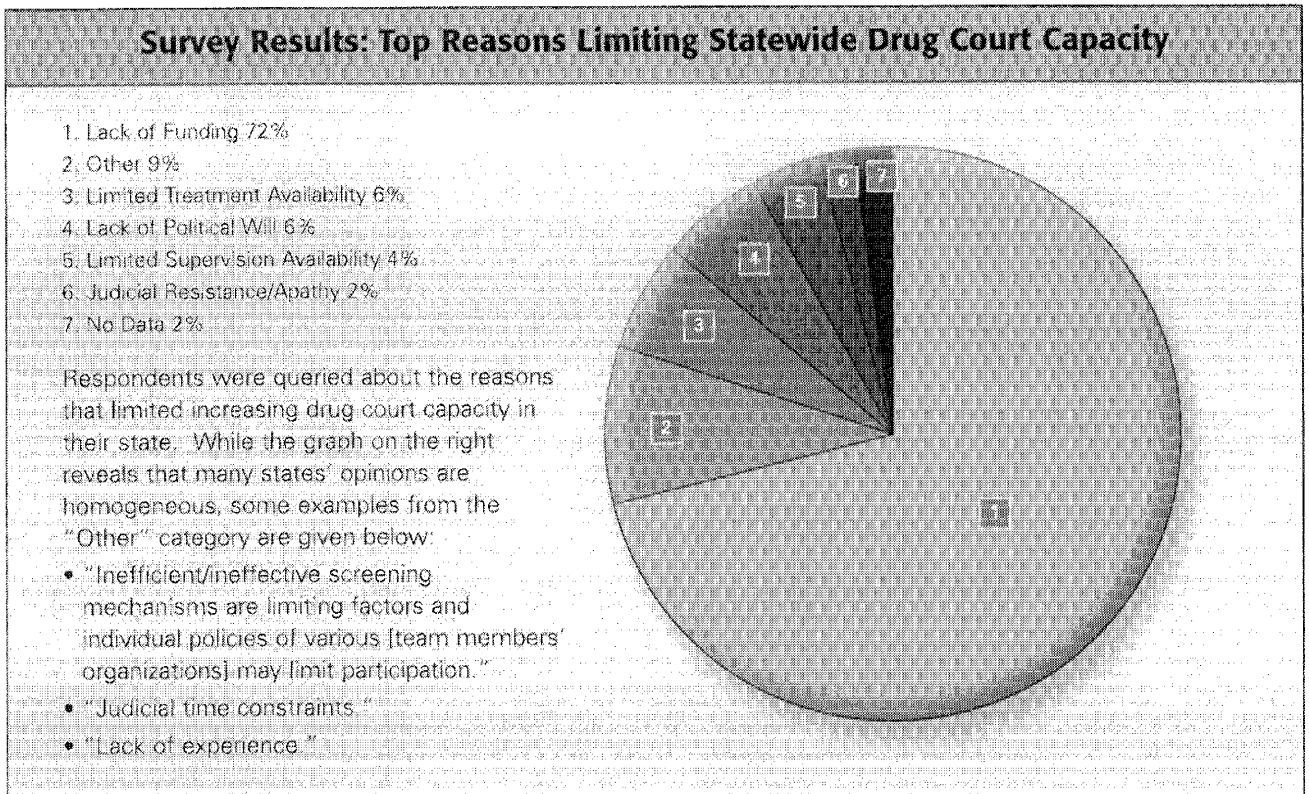
Table IV

| Drug Court Systems: Taking the Model To Scale | |
|--|---------|
| These four cities together represent more than 8,000 active drug court participants in the U.S. | |
| Minneapolis, MN | – 3,600 |
| Ft. Lauderdale, FL | – 2,600 |
| Santa Clara, CA | – 1,300 |
| Buffalo, NY | – 650 |

people in need. However, starting new courts is only part of the answer. To truly reduce a given community's crime and substance abuse problem, each drug court may have to expand its capacity to achieve its full impact.

Many drug courts throughout the nation have overcome capacity barriers by expanding their

Figure IV



eligibility criteria, accepting larger numbers of offenders, or in some cases serving all offenders who have a substance abuse-related problem. As Table IV demonstrates, several of these drug courts have taken the model “to scale” to serve significant numbers of drug offenders in their communities.

Such drug courts have successfully overcome the typical barriers that limit program

72 percent of responding jurisdictions reported that a lack of funding was their biggest issue.

population expansion. These barriers commonly include a lack of sufficient funding, limited availability of treatment or supervisory services, or insufficient political will.

Other courts, however, have experienced trouble even reaching full capacity once operational. This is oftentimes due to limiting factors outside the control of the court. Generally such factors include limited or absent key services necessary to serve the needs of the target population of participants. With two-thirds of states reporting, current drug court capacity rests at 87 percent.

When surveyed about the biggest impediments to increasing their drug court capacity, 72 percent of responding jurisdictions reported that a lack of funding was their biggest issue (Figure IV).

Drug Courts: New Evidence

In February 2005, the U.S. Government Accountability Office (GAO) published an extensive review of drug court research, which concluded that most adult drug court programs evidenced:

- * Lower rearrest and conviction rates for drug court participants than comparison group members.
- * Fewer recidivism events for drug court participants than comparison group members.
- * Recidivism reductions for participants who had committed various categories of offenses.

- * Recidivism reductions that were maintained for substantial intervals of time after the participants had completed the drug court program.
- * Positive cost/benefit/ratio for the drug court participants.

GAO also provided some opportunities for advancement in the drug court field. Implicit in the GAO’s analysis is a mandate to improve the quality of local drug court research to such levels that a more exhaustive national examination can be performed. Echoing an earlier commentary from online substance abuse policy organization, JOIN Together, GAO concluded that while the review may have established the efficacy of drug courts, exactly what about drug courts work is still open to question (Marlowe, 2004). Having discovered a successful model for rebuilding lives, the research community must fine-tune the approach through investigation of its constituent components. “To the extent that research can help discern best practices for drug courts, the models for effective programs can be enhanced” (GAO, 2005).

In most of the evaluations reviewed [by the GAO], adult drug court programs led to statistically significant reductions in recidivism.

Drug-Free Babies

Alcohol consumption during pregnancy is the leading known cause of birth defects. Fetal Alcohol Spectrum Disorders (FASD) may include stunted growth, facial deformities, small head circumference, mental retardation, and behavior abnormalities (e.g., Merck Research Laboratory, 2005). Consumption of illicit drugs during pregnancy, particularly cocaine and opioids, is highly associated with complications during delivery and can lead to serious consequences for the developing fetus or newborn (e.g., Lester et al., 2003). In addition to increasing the risk of infections that can be transmitted from mother to fetus,

such as hepatitis or sexually transmitted diseases, most illicit drugs readily cross the placenta and can constrict blood flow and oxygen supply to the fetus. Newborns may

During 2004, a total of 460 drug-free babies were born to active female drug court clients.

be physiologically addicted to drugs and may suffer withdrawal symptoms during their earliest hours or days of life (e.g., Vidaeff & Mastrobattista, 2003).

Such newborns tend to interact less with other people, may be hyperactive, tremble uncontrollably, or exhibit learning deficits that can continue through 5 years of age or later. Behavioral and learning problems may first emerge in children who were exposed to cannabis in utero when they are over 4 years old (e.g., Merck Research Laboratory, 2005).

The added costs to society of caring for drug-exposed babies can be exceptional. Cost estimates vary considerably depending upon the level of care the child receives and may not always be proportional to the degree of damage suffered. Speaking generally, the additional medical costs associated with the delivery of a drug-exposed baby are estimated to range from approximately \$1,500 to \$25,000 per day (e.g., Cooper, 2004). Sadly, seriously drug-exposed newborns may have shortened life expectancies, which paradoxically could cost society proportionately less in medical expenses (but with an incalculably greater cost in human tragedy). Neonatal intensive care expenses can range from \$25,000 to \$35,000 for the care of low birth-weight newborns and may reach \$250,000 over the course of the first year of life (Office of Justice Programs, 1997). Continuous care expenses through the age of 18 years for the developmentally delayed child can be as high as \$750,000 (Janovsky & Kalotra, 2003).

In the *Painting the Current Picture* survey, 60 percent of respondents (32 states) provided usable data on confirmed births of drug-free babies to their drug court participants. During the preceding 12 months, a total of 460 drug-free babies were reported to have been born to active female drug court clients. Respondents were instructed that this number should refer only to births from active female participants in their programs; therefore, it does not include drug-free children born to male participants or to program graduates. As such, it could substantially underestimate the impact of drug courts and other problem solving courts on all drug-free deliveries. Especially given a 60 percent response rate, the actual number of drug-free deliveries can be expected to be appreciably higher.⁹

“Drug court and problem solving court principles and methods have demonstrated great success in addressing certain complex social problems...”
(CCJ & COSCA, 2004).

Problem Solving Courts: Emerging Permutations

In 2004, the Conference of Chief Justices (CCJ) and the Conference of State Court Administrators (COSCA) passed a new national joint resolution committing all 50 State Chief Justices and State Court Administrators to “take steps, nationally and locally, to expand and better integrate the principles and methods of well-functioning drug courts into ongoing court operations.” Among other strongly positive statements, the national CCJ/COSCA joint resolution declared that “drug court and problem solving court principles and methods have demonstrated great success in addressing certain complex social problems, such as recidivism, that are not effectively addressed by the traditional legal process” (CCJ & COSCA, 2004).¹⁰

Figure V

Keeping the Fidelity of the Drug Court Model

Defining Drug Courts: The Key Components

1. Drug courts integrate alcohol and other drug treatment services with justice system case processing.
2. Using a non-adversarial approach, prosecution and defense counsel promote public safety while protecting participants' due process rights.
3. Eligible participants are identified early and promptly placed in the drug court program.
4. Drug courts provide access to a continuum of alcohol, drug, and other related treatment and rehabilitation services.
5. Abstinence is monitored by frequent alcohol and other drug testing.
6. A coordinated strategy governs drug court responses to participants' compliance.
7. Ongoing judicial interaction with each drug court participant is essential.
8. Monitoring and evaluation measure the achievement of program goals and gauge effectiveness.
9. Continuing interdisciplinary education promotes effective drug court planning, implementation, and operations.
10. Forging partnerships among drug courts, public agencies, and community based organizations generates local support and enhances drug court program effectiveness.

(NADCP, 1997)

The publication *Defining Drug Courts: The Key Components* (NADCP, 1997) is the point of origin for those who would understand what CCJ/COSCA refers to as the “principles and methods of well functioning [adult] drug courts. Although not all problem solving court

models may adhere to each of the ten Key Components, the parentage of most problem solving court models can be traced to these principles and practices (Figure V).

As the literature on the drug court model continues to demonstrate its effectiveness on the offender and the justice system at large, many jurisdictions have implemented a number of problem solving courts designed to address other problems that emerge in the traditional court system. Often modeled after drug courts, problem solving courts seek to address social issues such as mental illness, homelessness, domestic violence, prostitution, parole violation, quality of life, and community reentry from custody.¹¹ Recently, several new problem solving courts have emerged, expanding the model to

new populations; two such permutations are truancy courts and gambling courts. Currently, there are 937 problem solving courts other than drug courts in operation. Taken together, there are 2,558 total problem solving courts in the U.S.

There are 2,558 total problem solving courts in the U.S.

Definitions of Problem Solving Courts

Using the scientific and scholastic literature available, as well as interviews with key court professionals and scholars, NDCI presents the definitive descriptions for many of the problem solving courts discussed throughout this publication.

♦ **Adult Drug Court:** A specially designed court calendar or docket, the purposes of which are to achieve a reduction in recidivism and substance abuse among nonviolent substance abusing offenders and to increase the offender's likelihood of successful rehabilitation through early, continuous, and intense

judicially supervised treatment, mandatory periodic drug testing, community supervision and use of appropriate sanctions, and other rehabilitation services (BJA, 2003).

• **Campus Drug Courts:** (“Back on TRAC”— Treatment, Responsibility, and Accountability on Campus) are quasi-judicial drug court programs, within the construct of a university disciplinary process, that focus on students with substance abuse-related disciplinary cases that would otherwise result in expulsion from college. Similar to traditional drug courts, campus drug courts provide structured accountability while simultaneously rehabilitating the student. The overarching goal of the campus drug court is to decrease substance abuse involvement in a group not normally reached by the traditional interventions on campus. This is achieved through a collaborative systems model designed to encourage the student to make the necessary lifestyle changes that will contribute to their success, not only as a student, but also in their lives after they graduate from school (Asmus, 2002).

• **Community Court:** Community courts bring the court and community closer by locating the court within the community where “quality of life crimes” are committed (e.g., petty theft, turnstile jumping, and vandalism). With community boards and the local police as partners, community courts have the bifurcated goal of addressing the problems of defendants appearing before the court, while using the leverage of the court to encourage offenders to “give back” to the community in compensation for damage they and others have caused (Lee, 2000).

• **Domestic Violence Court:** A felony domestic violence court is designed to address traditional problems of domestic violence, such as low reports, withdrawn charges, threats to victim, lack of defendant accountability, and high recidivism, by intense judicial scrutiny of the defendant and close

cooperation between the judiciary and social services. A permanent judge works with the prosecution, assigned victim advocates, social services, and the defense to: ensure physical separation between the victim and all forms of intimidation from the defendant or his or her family throughout the entirety of the judicial process; provide the victim with the housing and job training he or she needs to begin an independent existence from the offender (Mazur and Aldrich, 2003); and continuously monitor the defendant in terms of compliance with protective orders and substance abuse treatment (Winick, 2000). Additionally, a case manager ascertains the victim’s needs and monitors cooperation by the defendant; and close collaboration with defense counsel ensures compliance with due process safeguards and protects the defendant’s rights.

Variants include the misdemeanor domestic violence court, which handles larger volumes of cases and is designed to combat the progressive nature of the crime to preempt later felonies, and the integrated domestic violence court in which a single judge handles all judicial aspects relating to one family, including criminal cases, protective orders, custody, visitation, and even divorce (Mazur and Aldrich, 2003).

• **DWI Court:** A DWI court is a distinct court system dedicated to changing the behavior of the alcohol/drug dependent offender arrested for Driving While Impaired (DWI). The goal of the DWI court is to protect public safety by using the drug court model to address the root cause of impaired driving: alcohol and other substance abuse. Variants of DWI courts include drug courts that also take DWI offenders, which are commonly referred to as “hybrid” DWI courts or DWI/drug courts.

The DWI court utilizes all criminal justice stakeholders (prosecutors, defense attorneys, probation, law enforcement, and others) along with alcohol or drug treatment professionals. This group of professionals comprises a “DWI

Court Team,” and uses a cooperative approach to systematically change participant behavior. This approach includes identification and referral of participants early in the legal process to a full continuum of drug or alcohol treatment and other rehabilitative services. Compliance with treatment and other court-mandated requirements is verified by frequent alcohol/drug testing, close community supervision, and interaction with the judge in non-adversarial court review hearings. During these review hearings, the judge employs a science-based response to participant compliance (or non-compliance) in an effort to further the team’s goal to encourage pro-social, sober behaviors that will prevent DWI recidivism (Loeffler & Huddleston, 2003).

• **Family Dependency Treatment Court:** Family dependency treatment court is a juvenile or family court docket of which selected abuse, neglect, and dependency cases are identified where parental substance abuse is a primary factor. Judges, attorneys, child protection services, and treatment and other social and public health personnel unite with the goal of providing safe, nurturing, and permanent homes for children while simultaneously providing parents the necessary support and services to become drug and alcohol abstinent. Family dependency treatment courts aid parents in regaining control of their lives, ensure the provision of necessary services for children, and promote long term stabilized recovery to enhance the possibility of family reunification within mandatory legal timeframes (Wheeler & Siegler, 2003).

• **Gambling Court:** Operating under the same protocols and guidelines utilized within the drug court model, gambling courts intervene in a therapeutic fashion as a result of pending criminal charges with those individuals who are suffering from a pathological or compulsive gambling disorder. Participants enroll in a contract-based, judicially supervised gambling recovery program and

are exposed to an array of services including Gamblers Anonymous (GA), extensive psychotherapeutic intervention, debt counseling, group and one-on-one counseling and, if necessary, due to the high rates of comorbidity, drug or alcohol treatment within a drug court setting. Participation by family members or domestic partners is encouraged through direct participation in counseling with offenders and the availability of support programs such as Gamblers Anonymous (GA). Participants are subject to the same reporting and court response components as drug court participants (Farrell, 2005).

• **Gun Court:** Developed largely from the intensive supervision precepts espoused by the drug court model, gun courts are a response to the increasing problem of weapons offenses. Defendants charged with illegal possession of a firearm are assigned to a special docket for prompt adjudication and placed under intensive supervision by a judge, case manager, and probation for immediate response to violation of court orders and recidivists instead of incarceration. Conditions of the program include gun surrender and continued non-possession of firearms with targeted random home visits to ensure compliance; random drug testing; drug and alcohol treatment, as necessary; conflict resolution and anger management; and a mandatory gun education program. Defendants are required to make weekly contact with case manager and attend periodic court hearings to monitor progress (Presenza, 2005).

• **Juvenile Drug Court:** A juvenile drug court is a docket within a juvenile court to which selected delinquency cases, and in some instances, status offenders, are referred for handling by a designated judge. The youth referred to this docket are identified as having problems with alcohol and/or other drugs. The juvenile drug court judge maintains close oversight of each case through regular status hearings with the parties involved. The judge



both leads and works as a member of a team that comprises representatives from treatment, juvenile justice, social and mental health services, school and vocational training programs, law enforcement, probation, the prosecution, and the defense. Over the course of a year or more, the team meets frequently (often weekly), determining how best to address the substance abuse and related problems of the youth and his or her family that have brought the youth into contact with the justice system (BJA, 2003).

- **Mental Health Court:** Modeled after drug courts and developed in response to the overrepresentation of people with mental illness in the criminal justice system, mental health courts divert select defendants with mental illness into judicially supervised, community-based treatment. Currently, all mental health courts are voluntary. Defendants are invited to participate in the mental health court following a specialized screening and assessment, and they may choose to decline participation. For those who agree to the terms and conditions of community-based supervision, a team of court staff, social services, and mental health professionals works together to develop treatment plans and supervise participants in the community. Participants typically appear at regular status hearings where incentives are offered to reward adherence to court conditions, sanctions for non-adherence are handed down, and treatment plans and other conditions are periodically reviewed for appropriateness. Completion (sometimes called graduation) is defined according to specific criteria (Council of State Governments, 2005).

- **Reentry Drug Court:** Reentry drug courts utilize the drug court model, as defined in The Key Components, to facilitate the reintegration of drug-involved offenders into communities upon their release from local or state correctional facilities. These are distinct

from "reentry courts," which do not utilize the drug court model, but work with a similar population. The offender is involved in regular judicial monitoring, intensive treatment, community supervision, and regular drug testing. Reentry drug court participants are provided with specialized ancillary services needed for successful reentry into the community (Tauber & Huddleston, 1999).

- **Teen Court:** Teen court (also called peer court or youth court) is a program run by teens for teens, usually in conjunction with the offender's school. The underlying philosophy of these programs is that positive peer pressure will help youths be less likely to reoffend and that youths are more receptive to consequences handed down from their peers than those given by adults. Therefore, youths who commit minor offenses such as petty theft, possession of alcohol, disorderly conduct, or status offenses receive consequences for their behavior not from the juvenile court system but from a "jury" of their peers in teen court. Law enforcement officers, probation officers, teachers, and others may refer youths to these voluntary programs. To participate, youths must admit to having committed the offense and the teen juries deliberate primarily on dispositional issues, handing down "sentences" ranging from community service to apologies, jury duty, essays, and educational workshops. In most situations, successful completion of the program means that the youth will not have a juvenile record or, in the case of a school referral, the juvenile will avoid school suspension or expulsion (Vickers, 2004).

- **Tribal Healing to Wellness Court:** A Tribal Healing to Wellness Court is not simply a tribal court that handles alcohol or other drug abuse cases. It is, rather, a component of the tribal justice system that incorporates and adapts the wellness court concept to meet the specific substance abuse needs of each tribal

community. It therefore provides an opportunity for each Native community to address the devastation of alcohol or other drug abuse by establishing more structure and a higher level of accountability for these cases and offenders through a system of comprehensive supervision, drug testing, treatment services, immediate sanctions and incentives, team-based case management, and community support (Tribal Law & Policy Institute, 2003). This non-adversarial community-based system encompasses traditional Native problem-solving methods and restores the person to their rightful place as a contributing member of the tribal community. Tribal Healing to Wellness Courts utilize the unique strengths and history of each tribe and realigns existing resources available to the community in an atmosphere of communication, cooperation, collaboration and healing (Lovell, 2005).

• Truancy Court: Rather than employing the traditional punitive approach to truancy, truancy courts are designed to assist a child in overcoming the underlying causes of truancy in his or her life by reinforcing education through efforts from the school, courts, mental health providers, families, and the community. Guidance counselors submit reports on the child's weekly progress throughout the school year, which the court uses to enable special testing, counseling, or other necessary services as required. Truancy court is often held on the school grounds and results in the ultimate dismissal of truancy petitions if the child can be helped to attend school regularly (National Truancy Prevention Association, 2005).

Drug Court Legislation and State Appropriations

Variations in individual state governments determine whether or not enabling or authorizing legislation is necessary for drug court implementation and operation. Some states have passed legislation specifically defining what drug courts are or specifying certain critical elements of the drug court structure (for example, defining eligibility criteria). Other states have passed legislation to create funding mechanisms for drug courts, such as special fines, fees, or assessments. However, many states with thriving drug court programs have not seen a need to pass legislation to implement, define, or fund their drug court programs.

"Appropriations" for drug court, as presented in Table V, represent earmarked funds in a state's budget either from drug court-specific legislation or from other statutory appropriations. "Appropriations" does not include local governmental or private funding, federally funded discretionary or formula awards, block grants, or client fees, and may not include funds used for drug courts from the budgets of state agencies like corrections, substance abuse treatment, or administrative offices of the courts.

Table V

| Drug Court Legislation & State Appropriations | | | |
|---|--|------|-------------------|
| State | Bill Number | None | Appropriations |
| Alabama | | X | |
| Alaska | HB 172 (2001); HB 4 (2002); HB 451 (2004); HB 342 (2004) | | \$486,900 |
| Arizona | (Pending) ARS §13-3472, 42-6109 | | |
| Arkansas | Act 1266 2003 | | \$884,000 |
| California | Health & Safety Code 11970.1-11970.4 | | \$21 million |
| Colorado | CRS 16-11-214 18-1.3-103(5) | | \$1,057,341 |
| Connecticut | HB6137 | | \$1,113,477 |
| Delaware | | X | |
| District of Columbia | | X | |
| Florida | FS 397.334 | | \$22,480,263 |
| Georgia | | X | \$450,000 |
| Guam | Bill No. PL26-125 | | \$214,000 |
| Hawaii | | X | \$2,614,571 |
| Idaho | Chapter 56, Title 19, Idaho Code | | \$2,660,000 |
| Illinois | Adult: 730 ILCS 1661; JV: 705 ILCS 4101; Reentry: SB 2654 | | |
| Indiana | IC 12-23-14.5, (enacted July 1, 2002, amended July 1, 2004) | | |
| Iowa | | X | |
| Kansas | | X | \$200,000-300,000 |
| Kentucky | | X | \$2,286,700 |
| Louisiana | LSA-RS 13:5301 et seq. | | \$11,829,890 |
| Maine | L.D. 2014 Sec. 1, 4MRSA 421, 422, 423 Chapter 8 | | \$1,850,000 |
| Maryland | | X | \$1 million |
| Massachusetts | | X | |
| Michigan | SB 998, PA 224 | | \$2,535,000 |
| Minnesota | | X | \$1.4 million |
| Mississippi | MSCODE 9-23-1 through 9-23-23; (Pending) Reg. Session SB2892 | | \$4.5 million |
| Missouri | Section 478.001-478.003 RSMo | | \$1.6 million |
| Montana | | X | |
| Nebraska | Bill No. LB454 | | |
| Nevada | Assembly Bill 29 | | \$6,326,241 |
| New Hampshire | | X | |
| New Jersey | L.2001, C. 243 | | \$27 million |
| New Mexico | | X | \$5.3 million |
| New York | | X | \$9.4 million |
| North Carolina | NC §Chapter 7A-791 | | \$1,062,476.75 |
| North Dakota | | X | \$60,000 |
| Ohio | | X | |
| Oklahoma | Title 22 Section 471 et seq. | | \$3,960,000 |
| Oregon | HB 3363 | | |
| Pennsylvania | | X | |
| Puerto Rico | | X | |
| Rhode Island | | X | \$1,775,000 |
| South Carolina | Session 114 H3632 | | \$300,000 |
| South Dakota | | X | |
| Tennessee | TCA 16-22-101 to 113 Drug Court Treatment Act of 2003 | | \$60,000 |
| Texas | H.B.1287 (2001); H.B. 2668 (2003) | | \$750,000 |
| Utah | Bill S.B. 281, 200 General Session | | \$2,025,180 |
| Vermont | Bill No. 128 | | \$300,000 |
| Virgin Islands | | X | |
| Virginia | House Bill 1430 2004 General Assembly | | \$520,000 |
| Washington | RCW 2-28-170 Drug courts | | \$5.3 million |
| West Virginia | WV Code 61-11-22(f)(1)-(5) | | |
| Wisconsin | | X | |
| Wyoming | Wyoming State Ann. Sections 5-10-101 et seq. | | \$3.2 million |

Table VI

Number & Type of Operational Problem Solving Court Programs in the United States (December 2004)

| | Other Problem Solving Courts | Reentry Court | Gun | Community | Mental Health | Teen Courts | Domestic Violence | Prostitution | Parole Violation | Homeless | Truancy | Child Support | Integrated Treatment | Other |
|---------------|------------------------------|---------------|----------|-----------|---------------|-------------|-------------------|--------------|------------------|----------|------------|---------------|----------------------|-----------|
| Alabama | 33 | 0 | 1 | 0 | 5 | 2 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Alaska | 17 | 0 | 0 | 2 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Arizona | 58 | 0 | 0 | 5 | 40 | 4 | 0 | 0 | 0 | 4 | 4 | 0 | 1 | 0 |
| Arkansas | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| California | 107 | 0 | 4 | 15 | 17 | 25 | 0 | 0 | 8 | 1 | 0 | 0 | 39 | 0 |
| Colorado | 4 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Connecticut | 7 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Delaware | 5 | 3 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| D.C. | 4 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Florida | 60 | -- | -- | 1 | 59 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Georgia | 7 | 0 | 0 | 1 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Guam | 7 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 2 | 0 | 0 |
| Hawaii | 3 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Idaho | 12 | 0 | 0 | 0 | 3 | 7 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| Illinois | 3 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Indiana | 27 | 1 | 0 | 1 | 2 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Iowa | 7 | 1 | 0 | 0 | 3 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Kansas | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Kentucky | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Louisiana | 4 | 2 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Maine | 5 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Maryland | 10 | 1 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Massachusetts | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Michigan | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Minnesota | 10 | 2 | 0 | 0 | 1 | 5 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mississippi | 3 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Missouri | 55 | 0 | 0 | 0 | 5 | 14 | 0 | 1 | 0 | 0 | 34 | 1 | 0 | 0 |
| Montana | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Totals | 837 | 16 | 2 | 23 | 111 | 393 | 141 | 4 | 5 | 6 | 131 | 45 | 17 | 43 |

^a Juvenile sex offender court
^b Proposition 36 Courts: Courts funded under a CA initiative that substitute drug treatment for incarceration for first and second time non-violent offenders. Since these courts do not follow the drug court model, they cannot be included in the drug court count; furthermore, they are located only in CA, so they do not merit cross-state consideration; hence they are classified as "other".
^c Integrated family court
^d Statewide reentry court
^e Gambling court
^f 2004 Puerto Rico data was derived from the American University Drug Court Clearinghouse and Technical Assistance Project (2004, November 9). *Summary of drug court activity by state and county*. Washington, DC: Author.

Total of 2,558 Operational Problem Solving Courts in the United States (December 2004)

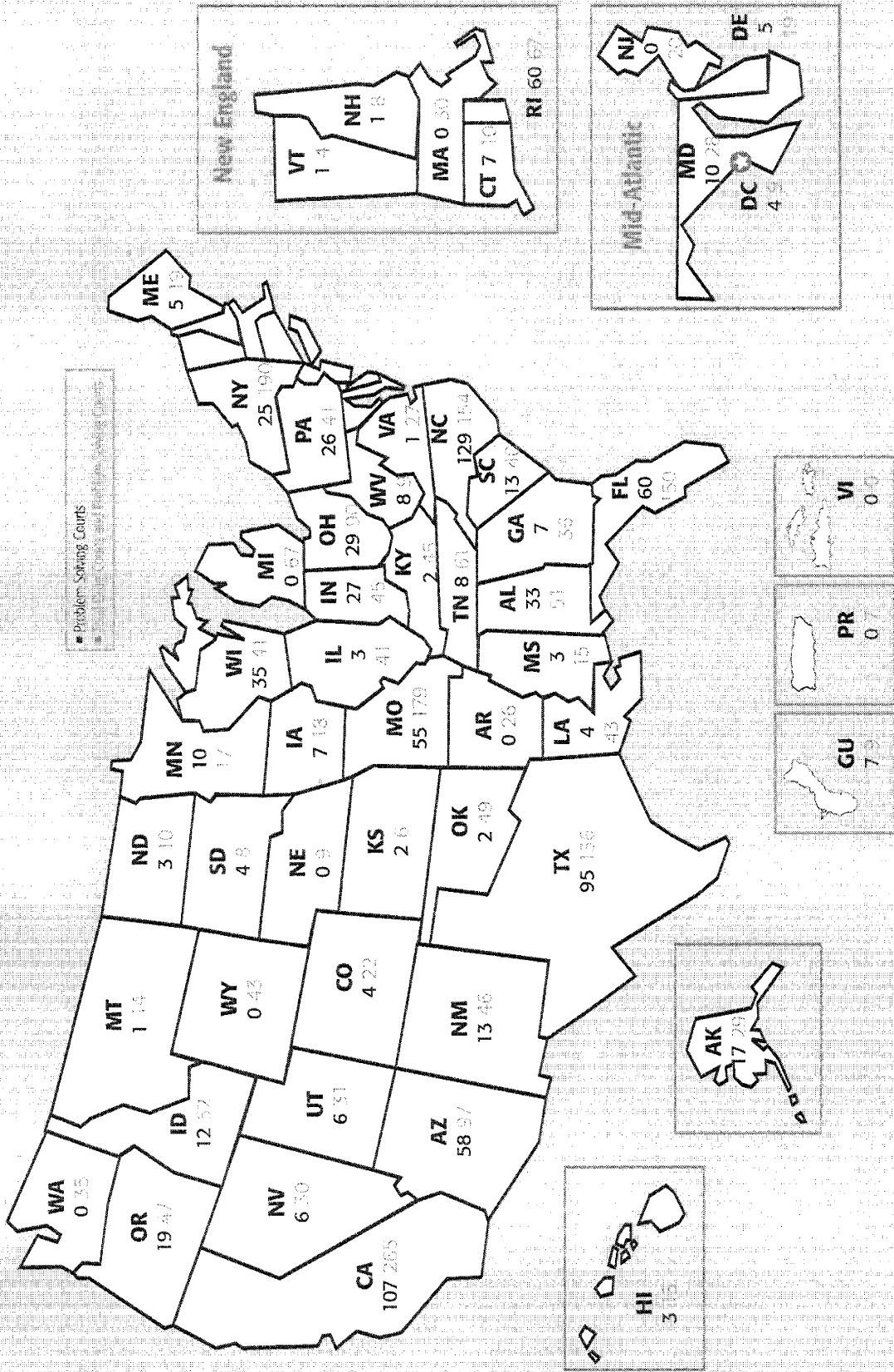


Figure VI

Table VII

| Primary State Points of Contact and Survey Respondants | | | |
|--|--------------------------------|--------------|--|
| State | Name | Phone | Email |
| Alabama | Foster Cook | 205-917-3784 | fcCook@beapsy1.jhs.uab.edu |
| Alaska | Robyn Johnson | 907-264-8250 | rajohnson@courts.state.ak.us |
| Arizona | Theresa Barrett | 602-542-9364 | tbarrett@supreme.sp.state.az.us |
| Arkansas | John Millar | 501-682-9400 | john.millar@arkansas.gov |
| California | Nancy Taylor | 415-865-7607 | nancy.taylor@jud.ca.gov |
| Colorado | Dee Colombini | 970-498-5872 | dee.colombini@judicial.state.co.us |
| Connecticut | Maureen Derbacher | 203-789-6404 | maureen.derbacher@jud.state.ct.us |
| Delaware | Susan McLaughlin | 302-577-2711 | susan.mclaughlin@state.de.us |
| District of Columbia | Eric Holder | 202-270-5528 | eric.holder@dc.sosa.gov |
| Florida | Michael McElroy | 850-414-1507 | mcelroym@ficcourts.org |
| Georgia | Michael Kendrick | 404-463-4155 | kentr.cm@ga.gov.us |
| Guam | Lisa Baza/Jeanette Quintanilla | 671-475-3361 | lvbaza@mail.justice.gov.gu |
| Hawaii | Janice Bennett | 808-599-3700 | Janice.S.Bennett@courts.state.hi.us |
| Idaho | Norma D. Jaeger | 208-947-7406 | njaeger@isc.state.id.us |
| Illinois | Dave Gaspenn | 217-785-7784 | dgaspenm@court.state.il.us |
| Indiana | Mary Kay Hudson | 317-234-2620 | mkhudson@courts.state.in.us |
| Iowa | 2003 survey data | N/A | N/A |
| Kansas | Don Noland | 620-724-6213 | distctgrks@ckt.net |
| Kentucky | Connie M. Payne | 502-573-2350 | ConniePayne@MAIL.ADC.STATE.KY.US |
| Louisiana | Jamie Pena/Scott Griffith | 504-599-0297 | jpena@lajao.org |
| Maine | John Richardson | 207-287-4021 | Fartwell.Dowling@maine.gov |
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Resource Organizations

The following organizations serve in an official capacity as a resource for drug courts and other problem solving courts. This list represents any national organization that receives federal funding for such activities.

American Bar Association-Judicial Division DWI courts and other specialized courts
(go to www.abanet.org)

Center for Court Innovation Community courts, domestic violence courts, drug courts, and other problem solving courts (go to www.problem-solvingcourts.org)

Council of State Governments Mental health courts (go to www.consensusproject.org)

Family Justice Drug courts (go to www.familyjustice.org)

Justice Management Institute Community courts, drug courts (go to www.jmijustice.org)

Justice Programs Office of the School of Public Affairs at American University Drug courts
(go to www.spa.american.edu/justice/)

National Alliance for the Mentally Ill Mental Health Courts (go to www.nami.org)

National Association of Drug Court Professionals and the National Drug Court Institute
Adult drug courts, campus drug courts, DWI courts, family dependency treatment courts, reentry drug courts (go to www.nadpc.org or www.ndci.org)

National Center for State Courts Drug courts, DWI courts, and other problem solving courts (go to www.ncsconline.org)

National Council of Juvenile and Family Court Judges Juvenile drug courts
(go to www.ncjfcj.org)

National Mental Health Association Mental health courts (go to www.nmha.org)

National Treatment Accountability for Safer Communities Drug courts
(go to www.nationaltasc.org)

National Truancy Prevention Association Truancy courts
(go to www.truancypreventionassociation.com)

National Youth Court Center Teen courts (go to www.youthcourt.net)

Native American Alliance Foundation Native American healing to wellness courts
(go to www.native-alliance.org)

The National Judicial College Campus drug courts (Back on TRAC), DWI courts, mental health courts and other problem solving courts (go to www.judges.org)

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End Notes

- ¹ This annual report was commissioned by the National Drug Court Institute (NDCI) and was made possible with funding from the Office of National Drug Control Policy (ONDCP), Executive Office of the President, under cooperative agreement #2005-DC-BX-K003 with the Bureau of Justice Assistance (BJA), U.S. Department of Justice, Washington, DC.
- ² The word “state” in this document represents all U.S. states, districts, and territories when used in this context.
- ³ All data, except for the years 1990, 2003, and 2004, were obtained from the Drug Court Activity Update: October 15, 2003 (American University, 2003, October 15). Data from 1990 were obtained from the Miami-Dade County, FL Adult Felony Drug Court (Koch, 2004); data from 2003 and 2004 were obtained from the National Survey of Drug Courts and Other Problem Solving Courts, National Drug Court Institute.
- ⁴ This figure represents the total number of adult drug courts, juvenile drug courts, family dependency treatment courts, DWI courts, reentry drug courts, tribal healing to wellness courts, campus drug courts, and federal district drug courts, and federal district drug courts.
- ⁵ NDCI received 2004 survey results from all states except Iowa. Therefore, in order to not artificially deflate the actual number of operational drug courts, 2003 survey data were used for Iowa.
- ⁶ NDCI received 2004 survey results from all states except Iowa. Therefore, in order to not artificially deflate the actual number of operational drug courts, 2003 survey data were used for Iowa.
- ⁷ 77 percent (41) of jurisdictions reporting as of December 31, 2004.
- ⁸ 74 percent (39) of jurisdictions reporting as of December 31, 2004.
- ⁹ An important caveat to this figure is that the total number of all births to drug court participants was not assessed; therefore, it is not possible to ascertain from these data the actual percentage of drug-free births.
- ¹⁰ Conference of Chief Justices/Conference of State Court Administrators, 2004.
- ¹¹ For a review of current problem solving court research, see “Just the (Unwieldy, Hard to Gather But Nonetheless Essential) Facts, Ma’am: What We Know and Don’t Know About Problem Solving Courts,” by Greg Berman and Anne Gulick, published in the *Fordham Urban Law Journal*, Vol. XXX, No. 3 (March 2003).
- ¹² NDCI received 2004 survey results from all states except Iowa. Therefore, in order to not artificially deflate the actual number of operational problem solving courts, 2003 survey data were used for Iowa.
- ¹³ NDCI received 2004 survey results from all states except Iowa. Therefore, in order to not artificially deflate the actual number of operational problem solving courts, 2003 survey data were used for Iowa.
- ¹⁴ At the printing of this publication, this correspondent is no longer employed in this position.



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