NATIONAL DRUG COURT INSTITUTE REVIEW

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INTRODUCTION

The Editorial Board is pleased to present the second issue of the *National Drug Court Institute Review* (Volume II, 1). It marks an important beginning in research on the participant's perceptions of the drug court program and those factors that influence the participant's success or failure.

This issue asks fundamental questions about what influences the success or failure of the drug court participant and how drug courts can maximize those factors that encourage success; Questions that we can hope to continue to ask and answer in future issues of *NDCIR.*

In this issue:

- Douglas B. Marlowe, J.D., Ph.D., University of Pennsylvania, and Kimberly C. Kirby, Ph.D., Temple University describe and define the different kinds of sanctions compatible to a drug court setting and their impact on the participant.
- Roger H. Peters, Ph.D., *et al.,* University of South Florida, in his latest evaluation of the First Judicial Circuit (Pensacola Florida), determines the broad factors that predict success or failure for participants and how that information can be used to make drug courts more effective in working with traditionally less successful populations.
- Susan Turner, Ph.D., *et al.,* RAND, in the course of completing a three-year evaluation of the Maricopa County Drug Court Program (Phoenix, Arizona), interviewed successful and unsuccessful participants to learn of the impact of the drug court program from the participant's perspective.

- C. West Huddleston, NDCI Deputy Director, provides commentary on the implications of linkages between drug courts and jail-based treatment and the role of the drug court as a "re-entry" mechanism for offenders being released from local custody.
- Finally, this issue of the *NDCIR* is concluded with a "Research Update" on five recent drug court research evaluations, compiled by Michelle Shaw and Dr. Kenneth Robinson, Correctional Counseling, Inc.

THE NATIONAL DRUG COURT INSTITUTE REVIEW

Published semi-annually, the *NDCIR*'s goal is to keep the drug court practitioner abreast of important new developments in the drug court field. Drug courts demand a great deal of time and energy of the practitioner. There is little opportunity to read lengthy evaluations or keep up with important research in the field. Yet, our ability to marshal scientific and research information and "argue the facts" can be critical to a program's success and ultimate survival.

The *NDCIR* builds a bridge between law, science and clinical communities, providing a common tool to all. A headnote and subject indexing system allows access to evaluation outcomes, scientific analysis and research on drug court related areas. Scientific jargon and legalese are interpreted for the practitioner into a common language.

A new section of the *NDCIR* appearing first in this issue, entitled Research Update, is devoted to short, to-the-point summations of recent evaluations and research. The practitioner will be able to quickly grasp research outcomes and find them again when the need arises through the Review's cumulative indexing.

Although the *NDCIR*'s emphasis is on scholarship and scientific research, it will also provide commentary from experts in the drug court and related fields on important issues to drug court practitioners.

THE NATIONAL DRUG COURT INSTITUTE

The National Drug Court Institute Review is a project of the National Drug Court Institute. NDCI was established under the auspices of the National Association of Drug Court Professionals and with the support of the Executive Office of the President, Office of National Drug Control Policy and the Drug Courts Program Office, Office of Justice Programs, U.S. Department of Justice. Its founding corporate sponsors, Roche Diagnostics, DuPont and BI, Incorporated, have provided essential financial support for the National Drug Court Institute.

The National Drug Court Institute's mission is to promote education, research and scholarship to the drug court field and other court-based intervention programs.

Historically, education and training in the drug court field have only been available at regional workshops and the annual national conference; analysis and scholarship was largely limited to anecdotes and personal accounts.

That situation has changed. Evaluations exist on dozens of drug court programs. Scholars and researchers have begun to apply the rigors of scientific review and analysis to the drug court model. There is now a level of experience and expertise necessary to support an institute.

Since its creation in December 1997, NDCI has launched a comprehensive practitioner training series for judges, prosecutors, public defenders, court coordinators and treatment providers; developed a research division responsible for convening a series of research advisory committees and working groups designed to develop a scientific research agenda and publication dissemination strategy for the field; and published a monograph series on relevant issues to drug court institutionalization and expansion.

ACKNOWLEDGEMENTS

I wish to thank all those who have contributed to this issue of the *National Drug Court Institute Review*. To General Barry McCaffrey, for his leadership and support, but also his belief in our vision at the National Drug Court Institute; to Assistant Attorney General Laurie Robinson and Drug Courts Program Office Director Marilyn Roberts for their support of the field and for NDCI; to Dr. Doug Marlow, Dr. Kimberly C. Kirby, Dr. Roger Peters, Amie L. Haas, Mary R. Murrin, Dr. Susan Turner, Dr. Peter Greenwood, Terry Fain, Dr. Elizabeth Deschenes, C. West Huddleston, Dr. Kenneth Robinson and Michelle Shaw for their contributions as writers.

Jeffrey Tauber
Director
National Drug Court Institute

CONTENTS

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.

Douglas B. Marlowe is Senior Scientist and a faculty member at the Treatment Research Institute at the University of Pennsylvania. A lawyer and a clinical psychologist, Dr. Marlowe conducts research focused on coercive interventions for substance-abusing criminal offenders.

Kimberly C. Kirby is an Associate Professor and Director of the Institute on Behavioral Research in Addictions at Temple University in Philadelphia. She was trained in applied behavior analysis and has conducted numerous studies examining the influence of specific consequences on the behavior of substance abusers.

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 EXPECTED 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.

[1] *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

[1] Preliminary 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 subcultures 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 techniques¾techniques 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 al-

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 ¾

- *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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PREDICTORS OF RETENTION AND ARREST IN DRUG COURTS

By Roger H. Peters, Ph.D., Amie L. Haas, M.A., and Mary R. Murrin, M.A.

As the drug court movement has grown, so has the body of research on program outcomes and participant characteristics. Attempts to determine which participant characteristics and circumstances might influence drug court outcomes, however, have been limited. Completed in 1998, the Escambia County (Florida) Adult Drug Court evaluation of "predictors of retention and arrest" is among the first to address this important area of research. This article presents the outcomes of the Escambia evaluation.

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ARTICLE SUMMARIES

EARLY PREDICTORS

[8] Early studies identified age, race/ethnicity, education, and marital status as predictors of success in drug courts.

TREATMENT OUTCOMES

[9] Treatment outcomes are predicted by similar demographic factors, regardless of the treatment setting or "drug of choice."

GRADUATE / NON-GRADUATE SIMILARITIES

[10] Escambia graduates reported higher levels of education and more full-time employment.

PREDICTORS OF PROGRAM COMPLETION

[11] Successful completion of drug court can be predicted by type of substance abuse problem, type of criminal charge, living arrangements, and employment.

ARREST DURING FOLLOW-UP

[12] In a 30-month follow-up period, arrest rates for non-graduates were significantly higher for non-graduates than graduates.

PREDICTORS OF REARREST

[13] Drug court participants arrested during follow-up were younger, less likely to have completed high school, more likely to be single, and more likely to report cocaine as their primary substance abuse problem.

USING PREDICTORS

[14] Using the predictors identified in this and other subsequent studies, drug courts could potentially refine their recruitment, admission, and retention strategies.

The initial response to the rise in drug use and crime in the mid-1980s focused on increased law enforcement and incarceration, but had negligible effects in breaking the cycle of drug-related crime (Inciardi, *et al.*, 1996). Subsequent efforts have shifted the focus toward rehabilitative programs, where treatment becomes part of the adjudication process (Cooper & Trotter, 1994; Sherin & Mahoney, 1996; Tauber, 1994). With almost 550 programs in place or being planned (Cooper, 1999), drug courts represent the most prominent example of these judicial initiatives.

With the implementation of drug court programs across the country comes a corresponding need to evaluate the effectiveness and impact of these interventions, particularly with respect to the impact drug courts may have in reducing drug use and criminal behavior among program participants. The work already done in the field only serves to highlight the value of comprehensive evaluations of drug court programs and the importance of continuing this work (Belenko, 1996, 1998; Peters, 1996; U.S. General Accounting Office [GAO], 1997). Comprehensive evaluations are important to drug court practitioners and the communities they serve because they can be used to help shape the focus of programs based on what works, what doesn't work, which individuals are successful, and what resources work with which populations. Over time a significant body of literature describing the drug court process has been assembled, including a growing number of evaluations examining program outcomes (Belenko, 1998; Deschenes et al., *1996; Finigan, 1998; Goldkamp & Weiland, 1993; Peters & Murrin [in press]; Tauber, 1993). Recent reviews of the emerging literature consistently indicate positive outcomes for drug court programs across studies (Belenko, 1998; U.S. Department of Justice, 1998). For active program participants, employment rates are high, and so are the rates of reductions in both substance abuse and recidivism. In addition, follow-up studies show that reductions in recidivism continue beyond the life of the program, albeit at a somewhat less dramatic rate (Belenko, 1998). Re-*

cent research also indicates that retention rates for drug court participants are typically higher than those observed among groups in other treatment programs, including groups of non-offenders in treatment programs (Belenko, 1998).

Despite the breadth of program outcome data available to drug court practitioners today, many questions remain as to which factors influence *outcomes, and what we can do to improve program outcomes across the board. For instance¾*

- As it exists today, what kind of individual is our drug court program most likely to engage, and keep engaged?
- What kind of individual is most likely to achieve success (e.g., employment, getting/staying drug-free and crime-free) because of our program?
- What characteristics can help us predict a person's likelihood of success in our drug court program—age, gender, living arrangements, personal history, criminal history?
- How can we use predictors of success to narrow the range of services offered to those who are likely to succeed anyway and conserve resources?
- How can we use predictors of success to modify our program in order to increase the likelihood of success for high-risk candidates? Would provisions for childcare, vocational education, or *other* auxiliary program components increase their chances of success?

In 1998, the Louis de la Parte Florida Mental Health Institute, University of South Florida, completed one of the few studies to date designed to identify predictors of retention and rearrest among drug court participants. Included in the study were 95 individuals admitted to the Escambia County (Florida) Adult Drug Court Program between June 1993 and June 1996. The study's purpose was to examine characteristics of drug court graduates and non-graduates, and to determine

whether characteristics of drug court participants can be used to predict program retention or arrest during an extended follow-up.

This article describes the Escambia program, as well as the nature and outcomes of the study. The findings indicate the importance of exploring substance abuse, criminal history, employment, living arrangements, and other areas of psychosocial problems that may influence program outcomes. The study found that individuals who were employed at least part-time and lived with their parents were more likely to complete the drug court program. Successful graduates also had fewer prior arrests than non-graduates and were more likely to use alcohol or marijuana as their primary substance of choice.

These are important findings. Not only do they indicate which participants are likely to succeed, but more importantly, they also indicate which participants are likely not to succeed. Early identification of factors that put a person at risk for dropping out of a program may be helpful to planners and practitioners as they develop treatment and supervision plans. It may also signal a need to get high-risk participants involved in specialized services that may give them the leg up they need to capitalize on the drug court experience.

REVIEW OF RELATED RESEARCH

Of the recent studies examining drug court outcomes, only two have attempted to provide predictive modeling (Deschenes et al.*, 1996; Goldkamp & Weiland, 1993). Both studied the relationships among several unrelated variables and developed models to predict the probability of success in drug court programs based on combinations of demographic and background variables. These initial attempts at predictive modeling have met with limited success in accurately classifying or predicting the success or failure of drug court participants. One study attempted to develop a model to predict outcomes from the Maricopa County Drug Court in Arizona (Deschenes* et al.*, 1996). Factors such as age at first arrest,*

number of prior arrests, drug use history, and risk level were analyzed through [1]logistic regression to generate predictive models for violations of community supervision and rearrest during a 12-month follow-up period. The model used to predict violations of community supervision and rearrest was not highly effective in predicting arrest; the probability of making an accurate prediction was only 59 percent probability. A logistic regression model examining predictors of arrest (specifically ethnicity and frequency of prior arrests) improved the accuracy of predicting arrest to 68 percent, although the model provided relatively poor specificity and sensitivity.

An earlier attempt at predictive modeling examined outcomes from the Dade County Felony Drug Court (Goldkamp & Weiland, 1993). Regression techniques were used to predict outcomes during an 18-month period of drug court involvement based on three independent variables: 1) income; 2) prior drug convictions; and 3) pre-trial release status at the time of arrest for the current offense. Statistical analyses suggested that this model explained only 20 percent of the overall variance in drug court outcomes. Another model was generated to examine predictors of arrest during the 18-month period; and included four variables: 1) college education; 2) age; 3) prior robbery arrests; and 4) prior failures-to-appear in misdemeanor cases. Although statistically significant, this model did not accurately predict rearrest of drug court participants at various risk levels, and further attempts to predict failure-to-appear in court among drug court participants were also unsuccessful.

[8] *Several studies describe the relationship between demographic variables and drug court outcomes. Although predictive models were not developed, the variables identified in these studies are useful for the purpose of this research. In*

[1] Logistic regression predicts the maximum likelihood of the probability of a relationship between two variables. (i.e., X has an impact on Y or in this case, drug use history has an impact on rearrest.)

the Dade County study, several variables were associated with successful program completion (Goldkamp & Weiland, 1993). These included race/ethnicity, education, and marital status. The Dade County study found that drug court participants who were Caucasian, who had more years of education, and who were currently or previously married had lower rates of recidivism after a one-year follow-up (Goldkamp & Weiland, 1993). An evaluation of the FIRST Diversion Project (Tauber, 1993) indicated that age may also be an important predictor of drug court recidivism, with younger offenders having fewer arrests, fewer days in custody, and higher rates of successful charge dismissal during a two-year follow-up period. This finding is interesting, but questionable, based on a small statistical base, given the elevated risk for rearrest typically associated with younger offenders (Villeneuve & Quinsey, 1995). In a study of the Multnomah County STOP program (Finigan, 1998), decreased rates of recidivism were associated with graduation from the drug court program, and graduates were found to have 49 percent fewer arrests than non-graduates during a two-year follow-up period.

In addition to the research conducted in drug courts, several studies have examined predictors of treatment outcome and retention among offenders. These studies identify a range of demographic factors associated with outcome, including age, criminal history, employment status, gender, marital status, and race/ethnicity (Hepburn & Albonetti, 1994; Land et al.*, 1990; Rhodes, 1986; Visher* et al.*, 1991). Offenders at greatest risk for poor outcomes in substance abuse treatment are generally younger, non-Caucasian, male, less educated, single, and have more extensive criminal histories. Other studies have examined psychological and therapeutic factors affecting offender treatment outcomes. For example, Broome and Associates report that in addition to demographic variables (ethnicity, gender, and employment status), higher rates of self-esteem, counselor competence, and peer support are associated with favorable treatment outcomes and lower recidi-*

vism among substance-involved offenders (Broome et al., *1996).*

Other research indicates that completion of substance abuse treatment is associated with lower recidivism during follow-up. Reductions in recidivism are directly proportional to the duration of offender treatment (Van Stelle et al., *1994). Although the authors found no difference in the number of felony arrests between treatment graduates and non-graduates during follow-up, they did find that compliance with treatment was associated with lower recidivism.*

[9] *Treatment retention and outcomes have been widely examined in non-offender samples. In general, treatment outcomes are predicted by similar demographic factors, regardless of the treatment setting or "drug of choice" (McLellan* et al., *1994). The predictors identified in these studies are quite similar to those found in criminal justice settings. They include employment (Stephens & Cottrell, 1972; Westermeyer, 1989), occupational status (Gillis & Keet, 1969), and marital status (McCance & McCance, 1969; Rudfield, 1958). Individuals with the poorest treatment outcomes are typically single, unemployed, and have low occupational or socioeconomic status. Studies have also found higher rates of substance abuse relapse among individuals with more chronic and severe substance abuse histories (McLellan* et al., *1994).*

THE ESCAMBIA COUNTY ADULT DRUG COURT PROGRAM

The Escambia County Adult Drug Court program began in June 1993 as a collaborative initiative involving the court, the prosecutor, the public defender/defense bar, community supervision and pre-trial services agencies, treatment agencies, and state correctional and social service agencies. The drug court program is designed to treat nonviolent offenders who have a history of drug use and a limited history of criminal justice involvement. Eligible participants must agree to enroll in the program and enter a no-contest plea to the in-

stant charges. Persons with more lengthy criminal records must enter a plea of no contest and agree to community supervision as a condition of release to the community.

The Escambia program provides a comprehensive range of services, delivered in three phases of treatment over a period of approximately one year. Services include initial screening by the pretrial services agency, assessment, individual and group counseling, regular drug testing, peer support groups, involvement in community support and aftercare groups, referral to ancillary services, educational programming, and vocational training. A range of short and long-term residential treatment is also available. As in many drug courts, treatment services are of graduated intensity, with more intensive services provided during the first two phases of the program.

All drug court participants are required to attend periodic status hearings in front of the drug court judge to monitor abstinence, progress in treatment, and other progress toward recovery goals. Detailed status reports for each participant are available from the drug court treatment agency for review prior to court hearings. Community supervision officers monitor abstinence and compliance with program activities, and provide case management services, with a focus on vocational, employment, and educational activities. Upon successful completion of the drug court program, participants may have their pleas withdrawn, with charges dismissed by the State Attorney's Office.

RESEARCH DESIGN

This study of the Escambia County Adult Drug Court Program focuses on predictors of two major outcomes: 1) completion of a drug court program; and 2) criminal recidivism. The study examines characteristics of drug court participants associated with these outcomes, including gender, ethnicity, age, marital status, education, living arrangements, employment, income, prior criminal justice involvement, current

charge, prior history of drug abuse, primary substance abuse problem, and mental health problems. Also explored are differences between drug court graduates and non-graduates. This latter group includes individuals terminated by the court prior to program completion due to rearrest, probation violations, absconding, or other infractions.

Criminal justice outcomes in the study were examined during a 30-month follow-up period that included at least 12 months of involvement in the drug court program. At least 19 months of follow-up criminal justice information was available for all drug court participants, a minimum of 24 months of information was available for 95 percent of the sample, and the full 30 months of follow-up information was available for 82 percent of the sample. Statistical procedures were used to control for differing "time at risk" among drug court participants during the 30-month follow-up period.

[2]*Research analyses were used to identify factors that predicted program completion and arrest during follow-up. Evaluators employ this type of analysis to examine individual differences in "survival" due to treatment and prognostic factors, while holding the time of the intervention constant (Marumbini & Valsecchi, 1995). In these analyses, "survival" is defined as remaining in the drug court until completion, or remaining "arrest free" during the follow-up period. Hypotheses for the study were that characteristics found to predict retention in treatment and follow-up arrest in previous studies of treatment outcomes among offenders would also be relevant in predicting drug court outcomes.*

The study set out to examine all participants admitted to the drug court program after June 1993, and who graduated or were terminated from the program by July 1996. This sampling strategy was employed to provide a minimum of one year's follow-up for each participant after discharge from the drug court program. This strategy also ensured that the "lag" time of approximately six months in entering local arrest data

[2] Cox regression analysis

into the NCIC (National Crime Information Center) and the FCIC (Florida Crime Information Center) criminal justice databases would not affect the accuracy of outcome data obtained. Of the 168 participants admitted to the Escambia County Adult Drug Court Program after June 1993 and discharged by July 1996, complete information on each of the variables examined in this study was available for only 95 individuals. The resulting subsample of 95 individuals used for this study included 43 participants who had graduated from the program and 52 non-graduates.

PROCEDURE

Information for the study was obtained from NCIC/ FCIC records compiled by the Escambia County Pre-trial Release office, as well as from treatment records, probation records, and the records from the Clerk of the Court's office. A research assistant was trained in data collection and entry procedures, and individually compiled data from the various different databases. Criminal history information was manually coded from printed NCIC/FCIC records. These records provided information regarding arrest dates, primary charges, disposition of charges, and sentences received. Evaluators had intended to use the Clerk of the Court's records to identify arrests that had occurred in the county of residence. However, a comparison of NCIC/FCIC and Clerk of the Court's records for a sample of drug court participants indicated that the Clerk of the Court's database did not include a comprehensive record of county arrests. For this reason, all information regarding arrests, offense types, and sentencing came from NCIC/FCIC records.

Probation records included information regarding participant demographics and background, education and employment, monthly wages and supplemental income, military history, current living arrangements, and arrests or violations. Records from the Clerk of the Court's Office described the date of admission to the drug court program, the criminal

charges leading to drug court admission, sentence status, length of supervision, dates that bench warrants were issued or revoked, dates and types of sanctions imposed, dates of attendance at drug court status hearings, and date and type of discharge from the drug court program. The intake assessment included a range of demographic and background information, substance abuse history and treatment history, and other psychosocial information. Treatment records included a comprehensive intake assessment and a substance abuse reporting form required by a state social service agency. Status reports provided information regarding completion dates for the three phases of the program, status hearing dates, and the record of attendance in treatment. The Transfer/Discharge Summary forms described program admission and discharge dates, type of discharge, discharge diagnoses, and judicial disposition for persons who were discharged from the drug court/treatment programs.

Evaluation project staff followed rigorous procedures to protect the confidentiality of the drug court participants involved in the evaluation. They carefully adhered to federal confidentiality laws and regulations and to all other applicable laws and regulations governing the confidentiality of information obtained from research subjects (42 C.F.R. Part 2). Existing informed consent procedures were modified to address participation in the evaluation study. Whenever possible, program participants were identified through numeric or alphanumeric codes.

VALIDITY OF DATA

The consistency and comprehensiveness of drug court data varied according to the source file examined. For example, one drug court file obtained from the records of the Escambia Clerk of the Court was sealed, and six additional files from the Clerk's office could not be located. The same was true of 10 treatment record files, and 52 files from the probation re-

cords had been dispersed to field officers and were unavailable for review.

To assess the reliability of data collected for the evaluation study, a systematic review of coded outcome evaluation data was completed for a 10 percent random sampling of drug court participant records. This sampling included a review of each different source of evaluation information for selected drug court participants. An error rate of less than 1 percent was detected for each type of record reviewed (treatment, probation, and Clerk of the Court's office), indicating that information had been coded accurately.

FINDINGS OF THE STUDY

PROGRAM RETENTION

Of the 95 individuals included in the sample, 43 (i.e., 45 percent) graduated from the drug court program. The average duration of drug court involvement for all participants was 288 days; graduates averaged 392 days in the program, compared to 202 days for non-graduates.

[10] *As described in Tables 1 and 2, program graduates and non-graduates did not differ significantly on several demographic variables, including age at entry into the program, gender composition, marital status, average monthly family income, rates of self-reported mental health problems and history of abuse (e.g., sexual, physical, or emotional). However, the two groups did differ in several important respects. A significantly higher proportion of graduates (70 percent) completed high school or received a GED than non-graduates (42 percent), and a higher proportion of drug court graduates also reported full-time employment compared to non-graduates (15 percent). Current living arrangements reported by drug court graduates and their non-graduating counterparts differed as well. A higher proportion of graduates (58 percent) lived with their parents (compared to 35 percent of non-graduates), whereas more non-graduates (58 percent) resided with their partners and/or*

alone with their children (compared to 16 percent of graduates).

Table 1. Characteristics of Drug Court Program Graduates and Non-Graduates ¾ Demographic Variables.

Variable	Graduates (n = 43)	Non-graduates (n = 52)	sig.
Demographics			
Gender (% men)	76.7	69.2	.316
Ethnicity (% Caucasian)	44.2	28.8	.061
Age[a] M (SD)	31.24 (7.33)	30.22 (7.65)	.311
Current Marital Status			.451
Married (%)	11.6	11.5	
Previously married (%)	39.5	28.8	
Never married or single (%)	48.8	59.6	
Education			.009
Completed high school/GED (%)	69.8	42.3	
Current Living Arrang.			.030
Living with partner (%)	11.6	23.1	
Living with children alone (%)	4.7	25.0	
Living with parents (%)	58.1	34.6	
Other (%)	25.6	17.3	
Current Employment Status			.003
Full-time (%)	34.9	15.4	
Part-time (%)	41.9	38.5	
Unemployed/other (%)	23.3	46.2	
Monthly Family Income ($)	619.84 (533.19)	463.88 (677.10)	.188

[a] Age refers to age of offender at time of entry into drug court program.
M = mean SD = standard deviation sig. = significance level

The groups also differed with regard to criminal justice involvement and substance use problems (see Table 2). Drug court graduates had significantly fewer prior arrests (an average of 2.5) than the non-graduates (an average of 6.7). Program graduates were also slightly, but not significantly older at their first arrest than non-graduates (31.24 compared to 30.22), and slightly more likely to enter drug court following a drug possession arrest than non-graduates (71

percent compared to 58 percent). With regard to substance use, program graduates were more likely to report alcohol or marijuana as their primary substance abuse problem (71 percent compared to 27 percent), whereas non-graduates were more likely to report problems with cocaine use (about 28 percent). Histories of prostitution and diagnoses of substance "dependence" (versus "abuse") were also found to be associated with drug court retention and graduation. However, due to the small number of drug court participants reporting a history of prostitution and to the lack of precision in comparing diagnoses from several different diagnostic systems, these factors were not included in the prediction model used in this study.

PREDICTORS OF PROGRAM COMPLETION

As noted earlier, regression analysis was used to identify factors that predicted program completion. Demographic, criminal justice, substance abuse, and mental health variables were entered into the Cox regression model using a forward step-wise conditional likelihood ratio method.
[11] *As shown in Table 3, results from the regression analysis indicate that successful completion of drug court can be predicted by participants' primary substance abuse problem, type of criminal charges, living arrangements, and employment status, $c^2(9) = 32.14$, $\underline{p} < .001$. Those who reported cocaine as their primary substance abuse problem graduated from drug court at a significantly lower rate than individuals who reported problems with alcohol or marijuana. Participants who were referred to drug court on the basis of drug possession charges had significantly higher rates of graduation in comparison to other individuals. Current living arrangements and employment status also influenced the probability of drug court graduation; individuals who lived with their children alone (without another adult in the home) were slightly less likely to graduate from drug court than those*

who resided with family or friends or those who lived alone. Individuals who were employed full-time were also slightly more likely to graduate from the drug court program.

Table 2. Characteristics of Drug Court Program Graduates and Non-Graduates ¾ Criminal Justice Involvement and Substance Abuse/Mental Health Problems.

Variable	Graduates (n = 43)	Non-graduates (n = 52)	sig.
Criminal Justice Involvement			
Months spent in drug court program M (SD)	12.88 (1.37)	6.63 (4.90)	.013
Age at first arrest M (SD)	26.10 (6.52)	23.28 (6.45)	.085
Number of prior arrests M (SD)	2.53 (3.68)	6.73 (10.32)	.030
Current charge – drug possession (%)	71.2	57.7	.091
Substance Abuse/Mental Health Issues			
Primary substance abuse problem			.013
Alcohol (% reporting)	18.6	1.9	
Cocaine (% reporting)	27.9	71.2	
Marijuana (% reporting)	45.6	25.0	
Other (% reporting)	7.7	1.8	
Prior history of abuse (% reporting)[a]	23.3	19.2	.586
Mental health problems (% reporting)	5.8	7.0	.801

Notes:

[a] History of abuse includes self reports of physical, sexual, or emotional abuse in the past.

M = mean SD = standard deviation sig. = significance level

Table 3. Results From Cox Regression Analysis Predicting Graduation Status.

VARIABLE	b	SE	WALD	df	sig.
Primary Substance Abuse Problem			9.08	3	.028
Alcohol versus cocaine	-2.30	1.03	4.97	1	.026
Marijuana versus cocaine	-0.81	0.36	5.06	1	.025
Other versus cocaine	-0.76	1.07	.50	1	.479
Drug Possession as Current Charge	-0.67	0.32	4.43	1	.035
Current Living Arrangements			8.23	3	.042
Living with partner versus other living arrangements	0.00	0.50	0.00	1	.999
Living with children alone versus other living arrangements	0.88	0.47	3.42	1	.064
Living with parents versus other living arrangements	-0.14	0.46	0.09	1	.867
Current Employment Status			7.41	2	.091
Full-time versus other[a]	-1.32	0.48	7.41	1	.007
Part-time versus other[a]	-0.30	0.32	0.87	1	.350

Notes:

[a] Other employment defined as less than part-time employment or unemployment.

β = beta coefficient SE = standard error df = degrees of freedom
sig. = significance level based on the Wald Statistic

ARREST OF PROGRAM PARTICIPANTS

[12] *An examination of arrest rates during the 30-month follow-up period revealed that 67 percent of all participants were arrested at least once during the follow-up period. Significantly fewer graduates were arrested than non-graduates,* $c^2(1) = 28.24$, $p \leq .001$, *with differences between groups reflected across several offense categories (felony, drug, violent, property crime, and probation/parole). Individuals who were not arrested during follow-up remained in the drug*

court program for an average of two and one-half months longer than other participants. This is a highly significant difference.

[13] *Participants who were arrested during follow-up had several distinctive characteristics. As shown in Table 4, those arrested during follow-up were younger than other drug court participants (the average age of those arrested was 29.5 compared to 33.6 for others) and less likely to have completed high school or to have received a GED degree (48 percent compared to 70 percent). They were also more likely to be single (65 percent and 37 percent respectively). With respect to patterns of substance use (see Table 5), those who were arrested were significantly more likely to report cocaine as their primary substance abuse problem than were other participants (58 percent compared to 40 percent). Those arrested during follow-up also had slightly more frequent prior arrests (an average of 5.3 compared to 4.07 for participants not arrested), and were slightly less likely to have become involved in drug court as a result of a drug possession charge.*

PREDICTORS OF ARREST DURING FOLLOW-UP

A second Cox regression analysis was used to identify factors that predicted rearrest during the follow-up period. Demographic, criminal justice, substance abuse, and mental health variables were entered into the Cox regression model using a forward step-wise conditional likelihood ratio method, with arrest during the follow-up period defined as the terminal event. A model was then developed to identify factors that predicted arrest following enrollment in the drug court. As shown in Table 6, results indicate that arrest during the follow-up period is predicted by participants' primary substance abuse problem and age at time of entry into the drug court program, $c^2(4) = 19.78$, $\underline{p} < .001$. *Participants who reported cocaine as their primary substance abuse problem had sig-*

nificantly higher rates of arrest than individuals who reported problems with alcohol or marijuana. Younger offenders were also significantly more likely to be arrested during the follow-up period than their older peers.

Table 4. Characteristics of Program Participants as a Function of Arrest During 30-Month Follow-Up ¾ Demographic Variables.[1]

Variable	Arrested (n = 60)	Not Arrested (n = 30)	sig.
Demographics			
Gender (% men)	66.7	83.3	.132
Ethnicity (% Caucasian)	35.0	36.7	.574
Age[a] M (SD)	29.46 (6.98)	33.64 (6.63)	.054
Current Marital Status			.044
Married (%)	11.7	10.0	
Previously married (%)	23.3	53.3	
Never married or single (%)	65.0	36.7	
Education			.020
Completed high school/GED (%)	48.3	70.0	
Current Living Arrangements			.138
Living with partner (%)	20.0	13.3	
Living with children alone (%)	45.0	46.7	
Living with parents (%)	18.3	10.0	
Other (%)	16.7	30.0	
Current Employment Status			.287
Full-time (%)	21.7	33.3	
Part-time (%)	38.3	40.0	
Unemployed/other (%)	40.0	26.7	
Monthly Family Income (in Dollars) M (SD)	509.37 (622.44)	627.77 (650.43)	.186

Notes:

[a] Age refers to age of offender at time of entry into drug court program.

[b] History of abuse includes self reports of physical, sexual, or emotional abuse in the past.

M = mean SD = standard deviation sig. = significance level

[1]*Five individuals were excluded from this analysis due to missing information on one or more key variables, yielding a total of 90 drug court participants examined in this analysis.*

Table 5. Characteristics of Program Participants as a Function of Arrest During 30-Month Follow-Up ¾ Criminal Justice Involvement and Substance Abuse Problems.[1]

Variable	Arrested (n = 60)	Not Arrested (n = 30)	sig.
Criminal Justice Involvement			
Months spent in drug court program M	9.07	11.59	.001
Age at first arrest M (SD)	23.85 (6.37)	25.72 (6.57)	.164
Number of prior arrests M (SD)	5.30 (9.59)	4.07 (6.35)	.243
Current charge – drug possession (%)	61.7	73.3	.246
Substance Abuse/Mental Health Issues			
Primary substance abuse problem			.019
Alcohol (% reporting)	5.0	16.7	
Cocaine (% reporting)	58.3	40.0	
Marijuana (% reporting)	35.0	36.7	
Other (% reporting)	1.7	6.7	
Prior history of abuse (% reporting)[a]	21.7	20.0	.937
Mental health problems (% reporting)	3.3	13.3	.132

Notes:

[a] History of abuse includes self reports of physical, sexual, or emotional abuse in the past.

M = mean SD = standard deviation sig. = significance level

[1]Five individuals were excluded from this analysis due to missing information on one or more key variables, yielding a total of 90 drug court participants examined in this analysis.

Table 6. Results From Cox Regression Analysis Predicting Arrest During 30-Month Follow-Up.

Variable	*b*	*SE*	*Wald*	*df*	*sig.*
Age[a]	*-0.07*	*0.02*	*10.13*	*1*	*.002*
Primary Substance Abuse Problem			*15.70*	*3*	*.001*
Alcohol versus cocaine	*-1.81*	*0.62*	*8.53*	*1*	*.003*
Marijuana versus cocaine	*-0.98*	*0.31*	*9.98*	*1*	*.002*
Other versus cocaine	*-1.25*	*1.02*	*1.49*	*1*	*.222*

Note:

[a] *Age refers to age of participant at time of entry into Drug Court program.*

b = beta coefficient SE = standard error df = degrees of freedom
sig. = significance level based on the Wald statistic

CONCLUSIONS

IMPORTANCE OF MAJOR FINDINGS

Retention and graduation from the Escambia program were successfully predicted by a combination of factors, including the following (listed in order of importance)¾

1. *Primary substance abuse problem (alcohol or marijuana versus cocaine).*
2. *Current charges (drug possession versus other charges).*
3. *3) Living arrangements (with children alone versus with family, friends, or alone)*
4. *Full-time employment.*

Although previous drug court studies have not extensively considered factors associated with retention and graduation, employment status and the primary substance abuse problem have predicted treatment outcomes in other studies involving various different substance abusing populations (McLellan et al.*, 1994; Stephens & Cottrell, 1972; Westermeyer, 1989).*

The findings of this study appear to indicate that retention in and graduation from drug court may hinge on two key factors: 1) the severity of an individual's substance abuse problem and his or her drug of choice; and 2) stability and support provided at work and at home. With respect to the first factor, drug court participants who report cocaine as their primary substance abuse problem may be more likely to drop out of drug court due to their higher rates of relapse. The primary substance abuse problem and the type of criminal charges may also reflect different levels of substance abuse severity. Given this scenario, drug court participants who reported marijuana or alcohol as their primary substance abuse problem and who were charged with drug possession may have had less severe substance abuse problems, thus reducing the likelihood of relapse and increasing their chances of recovery and successful involvement in the program.

As found in other studies (Finigan, 1998), drug court program graduates were less likely to be arrested than non-graduates. In order of importance, the primary substance abuse problem (cocaine, versus alcohol or marijuana), and younger age at entry to the drug court successfully predicted arrest during the 30-month follow-up period. These factors are consistent with predictors identified in other studies examining treatment outcomes among substance abusing populations. The importance of cocaine as the primary substance abuse problem in predicting both retention and arrest among drug court participants appears to reflect a strong association between a participant's drug of choice, severity of addiction, and criminal recidivism. As already noted, prior experience with cocaine may be associated with higher rates of relapse, and lead to participant's return to criminal behavior. Finally, the findings of this study make clear the importance of continuing drug court assessment activities that explore substance abuse and criminal history, employment, living arrangements, and other areas of psychosocial problems of drug court participants and potential participants. Early

identification of factors for program dropout may be helpful in developing treatment and supervision plans, and signal the need for involvement in specialized services. For example, drug court participants who have more serious charges or a history of cocaine use may require more intensive activities focused on orientation, engagement, and case management. Similarly, participants who live alone with their children or who do not have full-time employment may need greater support and supervision to complete drug court requirements, as well as assistance in providing for childcare, vocational training, and job placement. Consideration of risk factors for dropout or arrest is consistent with individualized treatment approaches endorsed by most drug courts.

METHODOLOGICAL CONSIDERATIONS

When interpreting the results of this study, it is important to remember that the Escambia study examined participants who entered drug court during the initial stages of program implementation. At that time, important substantive and procedural changes were under way which affected the target population, treatment services provided, court hearings, supervision approaches, and personnel decisions. The range of problems, barriers, and rapid changes that occurred during early stages of program implementation (Mahoney et al., *1998; Peters, 1996) are likely to have influenced the outcomes experienced by drug court participants. For example, it is likely that subsequent enhancements to the drug court program may have favorably affected rates of retention and follow-up arrest among participants.*

It is also important to remember that the study involved a relatively small sample of drug court participants. The sample size was limited by the small number of persons admitted to the program during the first two years of drug court implementation, and by the need for a sufficiently long follow-up period to examine criminal recidivism after program dis-

charge. In light of the small sample size, research is needed in other jurisdictions to assess the validity of the predictors identified in this study, and to identify other relevant factors that may contribute to drug court outcomes.

THE NEED FOR FURTHER RESEARCH

The Escambia study found that a participant's history of criminal justice involvement was strongly associated with program retention and arrest outcomes, but the association was not nearly as powerful as other psychosocial factors in predicting these outcomes. It is also interesting that criminal history measures were more strongly associated with retention in drug courts rather than with arrest during follow-up. Additional research is needed to explore the relationship between criminal history measures and drug court outcomes during extended follow-up periods. Predictors of other relevant drug court outcomes should also be examined, e.g., substance abuse relapse and completion of aftercare programs.
There is also a need for further research exploring the predictive value of certain factors associated with drug court retention/graduation and arrest (e.g., history of prostitution, diagnosis of substance "dependence" versus "abuse") but not fully examined in this study due to the small number of participant responses or to other methodological concerns. Other promising areas that might be examined as potential predictors of drug court outcomes include motivation and readiness for treatment, mental health problems, self-esteem, and level of peer support.
[14] *Drug courts have the potential to use the predictors identified in this and other subsequent studies in a number of ways. For instance, recruitment, admission, and retention strategies could be refined in order to promote successful community reintegration of program participants. Drug courts in the early stages of program implementation might choose to select a higher proportion of individuals with "low*

risk" characteristics for program admission, and expand the participant base later, as treatment and supervision plans are enhanced and procedures to strengthen program retention and graduation are put in place.

A more important benefit for applying these predictors may be to alert drug courts to the need to intensify treatment and supervision for individuals who are characterized by multiple "risk" factors. Given that the most substantial treatment-related reductions in criminal recidivism are achieved with offenders who have moderate to high "risk" levels (Andrews et al.*, 1990), it is likely that the application of risk identification and management will ultimately be more beneficial than risk avoidance. Additional work is needed to identify risk prediction models that would allow development of specialized reentry, aftercare, and supervision plans for offenders of differing risk levels who are discharged from drug courts.*

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PERCEPTIONS OF DRUG COURT: HOW OFFENDERS VIEW EASE OF PROGRAM COMPLETION, STRENGTHS AND WEAKNESSES, AND THE IMPACT ON THEIR LIVES

By Susan Turner, Ph.D., Peter Greenwood, Ph.D., Terry Fain, M.A., and Elizabeth Deschenes, Ph.D.

In 1992, Maricopa County, Arizona Probation began an experiment that included a post-sentence drug court for first-time felony probationers convicted of drug possession or use. Modeled after the FIRST drug court in Alameda County, California, the Maricopa program combined specialized drug treatments with court supervision and utilized behavioral contracts, including status hearings before the judge, a system of rewards and sanctions, a phased outpatient treatment regimen, and urine monitoring. In interviews conducted three years after initial placement in the program, 29 Maricopa drug court participants offered their perceptions of the difficulty of completing program requirements. They also assessed the program's strengths and weaknesses, as well as its helpfulness in attaining their goals. This article presents the results of those interviews.

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ARTICLE SUMMARIES

EVALUATING THE FTDO PROGRAM IN MARICOPA

[15] This evaluation of the First Time Drug Offender (FTDO) Program is among the first to focus on participants' perceptions of the drug court process.

12-MONTH/36-MONTH OUTCOMES

[16] At 36 months, drug court participants were less likely to receive technical violations than the testing tracks, and fewer were arrested during the follow-up period.

Difficulty of Compliance

[17] Participants found it easier to comply with treatment-related requirements than other requirements.

HELPFULNESS, STRENGTHS/WEAKNESS

[18] Participants split on their perceptions of FTDO's helpfulness and ranked some components stronger than others. Yet, 76 percent would recommend the program to others.

> Much of the current focus of drug court research has been on the implementation and effectiveness of drug courts (see, e.g., Goldkamp, 1994; Inciardi, McBride and Rivers, 1996; Substance Abuse and Mental Health Services Administration, 1996). Ongoing surveys of adult, family, and juvenile courts by the Drug Court Clearinghouse and Technical Assistance Project catalog drug court programs along a number of dimensions related to eligibility requirements, participant characteristics, and program components (Cooper, 1995, 1997; Cooper and Bartlett, 1998). The Drug Courts Program Office sets standards for process and outcome data collection as part of the federal funding requirements (DCPO, 1996). A 1998 review of 30 evaluations from 24 drug courts explored drug court process and impact findings (Belenko, 1998), and the National Institute of Justice has funded a national study of 14 drug courts, primarily aimed at developing a typology of drug courts and determining their potential for subsequent outcome evaluations.

[15] *The knowledge that this body of work has given us is invaluable; yet it provides only part of the picture. To fully understand any program's effectiveness, we must also be aware of the perceptions of its participants.*

Over the years, we have gained insight into the unique role of the judge in the drug court (Satel, 1998; Tauber, 1993; National Association of Drug Court Professionals, 1997), and evidence suggests that drug court participants positively value the increased role of the judge. We have also seen that

participants see drug court as a way to reduce their potential sentences (Satel, 1998). Beyond this, however knowledge of the offender's view of the drug court experience is limited. A better understanding of offender perceptions of drug court programs can help us determine whether specific components of the program model (e.g., personal responsibility, swift and certain sanctions) meet participants' expectations and thus whether theoretical concepts are being implemented correctly. Offender perceptions can also help us gauge the severity of drug court sanctions as seen through the eyes of those who are subject to them. This information is particularly salient as we contend with detractors who claim that drug courts are too lenient (Inciardi et al., *1996; Leen & Van Natta, 1994).*

In 1994, the RAND Corporation received a grant from the National Institute on Drug Abuse to conduct a 36-month follow-up study of offenders participating in the Maricopa County, Arizona drug court program and other Maricopa offenders sentenced to standard probation. The follow-up study included personal interviews with approximately 25 percent of the participants from each group. For those in the drug court sample, the interviews included questions designed to garner their perceptions of and attitudes toward the Maricopa drug court program.

This article presents the findings of the RAND interviews pertaining to drug court participants' perceptions of the drug court program. Specifically, it focuses on the interviewees' assessments of ¾

- The difficulty of drug court program compliance.
- The helpfulness of the drug court experience.
- The strengths and weaknesses of the program.
- Whether they would recommend the program to other first-time drug offenders.

Although our results are based on a relatively small sample of drug court participants in a post-sentence drug court model, they nevertheless provide new insights into how of-

fenders view the drug court experience[1]. Results such as these can be useful to program planners and policymakers in their quest to ensure that drug court programs respond to the needs of offenders and serve as sound community supervision options.

THE MARICOPA FTDO PROGRAM

As a post-adjudication program for offenders sentenced to probation for a felony drug offense, the Maricopa County (Phoenix) First Time Drug Offender (FTDO) Program is an unusual variation on the drug court model. Patterned after Oakland, California's FIRST program (Tauber, 1993; Setterberg, 1994), the original FTDO drug court program combined began operations in 1992 and specialized drug treatment with court supervision. The program was designed to last not less than 6 months and not more than 12 months.

To be eligible for the Maricopa program, offenders had to meet several criteria, including: 1) they were sentenced to probation for a first felony conviction for possession of marijuana, dangerous drugs, narcotics; 2) they had no prior felony drug convictions and not more than one non-drug related felony conviction; and 3) they were eligible for standard probation.

Each drug court participant was required to appear before the drug court judge for status hearings at least once per month and more often if the participant was found to be in need of additional motivation or accountability for non-compliance. The drug court program was based on a point system of rewards and punishments and solidified by individ-

[3] Funding for the original FTDO project and 12-month evaluation was provided by Grant 91-DD-CX-K050 from the National Institute of Justice; the three-year follow-up funding was provided by the National Institute on Drug Abuse, Grant DA-08627.

ual contracts with each program participant. For every class, process group, or 12-step meeting attended, the participant was awarded one point; for each negative ("clean") urine test, another point. Based on total points accumulated, the participant received rewards, e.g., reductions in probation sentences and deferred jail time or promotion to the next phase of the program. Participants with unsatisfactory point totals repeated a phase or received a sanction, e.g., jail time.

The treatment component of the program was broad-based, combining traditional drug education, counseling, and 12-step techniques with social skills training, relapse prevention, and group therapy. Designed and implemented by a private contractor, the objective of the treatment was to treat the offender as a whole; drug use was regarded as a symptom of other problems. The treatment regimen contained four major components: 1) drug education classes; 2) process groups; 3) case management; and 4) aftercare. Participants were assessed individually upon treatment entry, and individual counseling was also available.

The treatment program had three phases. Each phase lasted two months and could be repeated at any time during the client's participation in the FTDO program. During the initial phase, known as orientation*, which focused on drug education and social skills training, the client was expected to attend one class, one process group, and at least one 12-step meeting per week, to contact his or her probation officer once per week and to submit to random urine tests at a minimum of once per month. The curriculum included: drug education and awareness, treatment modalities—the 12-step method, the psychopharmacology of addiction, relapse prevention, AIDS and sexually transmitted disease, family roles, codependency, conflict resolution, social skills training (e.g., decision making, communication, coping with anxiety, developing empathy, dealing with authority, coping with anger), the developmental model of recovery, spirituality, self-esteem, and goal setting. The focus of the second phase, known as* stabilization*, was on relapse prevention. The client was expected to*

continue to attend one process group and one 12-step meeting per week and to continue to comply with other terms of probation including one contact every other week and random urine testing at a minimum of once per month. During the final or transition *phase, the client continued attending 12-step meetings, had at least one contact every other week with probation, and one process group meeting per week, clients were also randomly drug tested at a minimum of once a month. Clients who completed all three phases of the program within 6-12 months could have their probation terminated or were transferred to standard probation if they had probation conditions, such as community service hours or financial obligations, to complete.*

After completing the three phases of the treatment program, the client could receive aftercare *for up to 9 months. During this phase, clients continued to attend a weekly process group. Booster sessions in drug education, the developmental model of recovery, or relapse prevention were offered for clients experiencing difficulty in becoming or remaining drug free.*

12-MONTH FOLLOW-UP

The design of the Maricopa FTDO program incorporated two experiments. The purpose of one experiment was to evaluate the impact of different levels of drug testing; the other tested the drug court model. In 1996, RAND completed a randomized evaluation of the drug testing and treatment experiment.

The offenders who took part in the experiments were randomly assigned to one of four alternative interventions. Alternatives 1-3 were variations in the frequency of drug testing during probation (no testing, monthly testing, and bi-weekly testing); the fourth alternative was assignment to the drug court program. Data collection included participant background information (e.g., personal characteristics and prior record); process information on the characteristics of super-

vision and services provided under each experimental condition; and 12-month follow-up data on the prevalence and frequency of probationers' subsequent drug use, crime, and prosocial behaviors.

Based on the results of the 12-month follow-up evaluation, RAND determined that¾

- *Sixty-one percent of drug court participants had either successfully graduated from drug court or were still in the program one year after their initial admission.*
- *Eighty-five percent of drug court participants received some form of drug treatment (mostly outpatient) in comparison to 46 percent of their counterparts on standard probation.*
- *Drug court clients were also ten times more likely to participate in individual and group counseling.*
- *Estimated costs for drug court participants were slightly lower than costs for standard probation (due to the fact that the majority of drug court participants spent less time on probation).*
- *The drug court succeeded in providing treatment for drug offenders, but had little impact on officially recorded recidivism.*

For the complete results of the 12-month follow-up, see Deschenes et al., *1996.*

36-MONTH FOLLOW-UP

At the time the data collection period for RAND's 12-month follow-up evaluation ended, many of the participants were still enrolled in drug court. In addition, data collection was restricted to official-record information only, i.e., documentation in treatment and probation files on the nature and extent of services provided, drug testing, and subsequent contacts with the criminal justice system. No self-reported information on drug use behaviors, crimes committed, drug-related

knowledge, attitudes, intentions, or other psychosocial indicators of program impact was collected or assessed.

The purpose of the 36-month follow-up evaluation was to supplement the 12-month official-record data with two years of additional follow-up, thus providing a more complete and comprehensive view of the long-term outcomes for the study participants. In total, the 36-month follow-up involved 506 participants. Of this number, 143 were drug court participants; the rest were assigned to one of the testing groups. The addition of interviews with a sampling of participants provided an opportunity to gather self-reported information on drug use, criminal behaviors, perceptions, and attitudes that the 12-month evaluators did not have. [16] In terms of officially recorded recidivism measures, few significant differences between the probation testing tracks and the drug court program emerged from the 12-month study.

Between 40 and 55 percent of all probationers included in the follow-up had a technical violation during the 12-month period, and, while it is true that drug court participants were less likely to incur a drug-related technical violation, they were not significantly less likely to incur a technical violation of some kind. In terms of arrests, drug court and testing probationers were equally likely to be arrested ¾with slightly less than one-third of both groups having an arrest for a new criminal offense during the 12-month follow-up.

At 36 months, the picture is different. As shown in Table 1, in the longer time frame drug court participants were less likely to receive a technical violation (particularly drug-related violations) than the testing tracks (64.1 percent vs. 75.2 percent). In addition, significantly fewer drug court participants were arrested in the 36 months following initial assignment than those in the testing conditions (33.1 percent vs. 43.7 percent). The differences in arrest rates do not appear to be the result of fewer arrests for any particular offense category (person, property, or drug offenses).

Table 1. Extent of Recidivism Over 36 Months[a] (in Percent of Each Group).

	Drug Testing Conditions	Drug Court
Any technical violation	75.3	64.1[b]
Fees	30.2	24.6
Community service	23.1	19.0
Employment	14.0	12.7
Alcohol-related	8.8	9.2
Treatment	0.8	0.0
Drug-related	60.0	54.2[b]
No show/abscond	44.5	41.5
Other[c]	45.9	44.4
Average number of violations	4.0	3.4
Any arrest	43.7	33.1[b]
Person	11.0	8.5
Property	15.1	9.9
Drug	17.3	13.4
Other	18.1	18.3
Average number of arrests	0.8	0.6
Any conviction	31.0	24.6
Any incarceration	26.1	19.7
Any jail time	23.6	22.5
Any revocation	6.6	4.9
Any prison	14.6	12.7
Of those with technical violations	(274)	(91)
Any jail time	29.6	34.1
Any prison	19.3	18.7
Of those arrested	(159)	(47)
Any jail time	47.8	51.1
Any prison	31.4	31.9

Notes:

[a] The measures presented in this table are based on the official record data collection sample for the full study of 506 offenders in the three drug testing conditions and drug court.

[b] Significant difference ($p < .05$) between test groups and drug court subject.

[c] "Other technical violations" include curfew, weapons, association with minors, and summary charges.

During the 36-month follow-up period, approximately 50 percent of the drug court participants performed community service, and virtually all of them participated in counseling. In total, 86.4 percent participated in group counseling, combined with offender participation in Alcoholics/Narcotics Anonymous (AA/NA) groups (69.3 percent). The numbers receiving individual or family counseling were small (0.7 percent each), and 4.3 percent received other types of counseling. Smaller percentages underwent residential or formal outpatient drug treatment (12.9 and 22.1 percent respectively), and 7.1 percent received drug education. More than two-thirds were employed at some time during follow-up.

PARTICIPANTS' PERCEPTIONS OF DRUG COURT

As part of the 36-month follow-up evaluation of the Maricopa FTDO, RAND conducted individual interviews with a sample of drug court participants. RAND used the interviews to gather self-reported information on offender demographics, drug use, and crime on a monthly basis over the full follow-up period. Information was also gathered on HIV risk behaviors; offender attitudes and perceptions regarding crime, drug abuse treatment, and HIV risk; and the nature of treatment services received (e.g., frequency and duration).[4]

In addition, the interviewers asked the drug court participants a series of questions designed to ascertain their percep-

[4] The interviews followed a format used successfully in prior studies by NIDA, the University of California at Los Angeles, and RAND (see Anglin *et al.*, 1996).

tions of the drug court program, specifically in terms of its difficulty, helpfulness, strengths, and weaknesses.
Of the 143 drug court participants included in the 36-month follow-up, 31 were interviewed. Of these, 29 provided responses to the questions of their perceptions of the drug court.

CHARACTERISTICS OF THE INTERVIEWEES [5]

As shown in Table 2, the majority of the drug court participants who were interviewed were male, white, and unemployed. The average age was just under 32 years. About half had not attained a high school education. Almost 55 percent had been in drug treatment prior to their current drug court placement, and 71 percent were polydrug users, with the vast majority having alcohol problems. Other than alcohol, cocaine and marijuana were the most frequent drugs of use/abuse.
The offenders' prior criminal records varied. One-fifth had no prior record of arrests or incarcerations, and an equal proportion had had a prior jail term. Almost one-quarter had been incarcerated in prison. The average number of prior arrests for the sample was 5.8. Approximately one-third of the sample had been convicted of possession of narcotics, and almost four in ten for possession of drug paraphernalia. Although offenders convicted of drug dealing charges as their current offense were excluded from the drug court program, 16 percent had been drug dealers at some time in the past.
The average probation sentence imposed for drug court participants was three years. For approximately one-third of the sample, the current probation sentence was accompanied by a term of incarceration in local jail.

[5] Background information reported in Table 1 was collected from probation files.

Table 2. Characteristics of Drug Court Participants Interviewed.[a]

	Sample Size (N)	(31)[b]
Demographic/individual	% Male	74.2
	% African-American	9.7
	% Hispanic	29.0
	% Anglo-American	61.3
	% Less than H.S. education	48.4
	% Married	25.8
	% Unemployed at arrest	60.0
Type of occupation	% Prof. Clerical, service	43.3
	% Skilled, semi-skilled	26.7
	% Unskilled, never worked	16.7
	% Unemployed	13.3
Drug history	Age at first drug use	16.0
	Age at first drug abuse	26.1
	% Prior drug treatment	54.8
	% Drug dealer	16.1
History of use/abuse	% Alcohol	77.4
	% Marijuana	38.7
	% Methamphetamines	9.7
	% Cocaine	41.9
	% Crack	3.2
	% Heroin	6.4
	% Other drugs	9.7
Polydrug use	% Alcohol and marijuana	32.3
	% Alcohol and cocaine	38.7
	% Marijuana and cocaine	12.9
	% Marijuana and heroin	3.2
	% Cocaine and heroin	3.2
Prior criminal record	Age at first conviction	23.9
	Mean no. of prior arrests	5.8
	Mean no. prior prob. terms	0.9
	Mean no. prior jail terms	0.7
	Mean no. prior prison terms	0.2
	% No priors	20.0
	% Prior arrests only	16.7
	% Prior probation terms	20.0
	% Prior jail	20.0
	% Prior prison	23.3
	% Low risk (0-9 on scale)	35.5
	% Medium risk (10-14)	32.3
Average risk score		12.4
Average need score		16.6
Average age, current conviction		31.7
Type of current offense	% Possession of narcotics	35.5
	% Possession of dangerous drugs	6.4
	% Possession of marijuana	19.4
	% Possession of drug paraphernalia	38.7
Type of current sentence	% Probation only	64.5
	% Probation and jail/prison	35.5
	Length term imposed (mos.)	36.8

[a] The background information reported in this table was collected from probation files.

[b] Of the 31 Drug Court participants who were part of the study, 29 provided evaluators with their perceptions of the drug court program.

INTERVIEWEE PERFORMANCE DURING AND FOLLOWING DRUG COURT

Nearly two-thirds of the sample interviewed (62 percent) reported completing the drug court program successfully. The reasons most frequently reported by the remaining 38 percent for unsuccessful completion were testing positive on urinalysis tests and violating the drug court contract. None of the sample self-reported any arrests for new offenses either during or following drug court participation.

PERCEPTIONS OF THE DRUG COURT PARTICIPANTS

Using rating scales ranging from 1 to 5, the interviewees responded to several questions designed to ascertain their perceptions of the drug court program. Specifically, they responded to questions in which they were asked to ¾

- Rate the difficulty level of several key drug court requirements (including both treatment and nontreatment components).
- Assess the helpfulness of the drug court experience (e.g., in staying off drugs, in finding employment).
- Identify the court's strengths and weaknesses.
- Indicate whether they would recommend the program to others.

TREATMENT-RELATED DRUG COURT REQUIREMENTS

[17] The treatment-related requirements imposed on Maricopa participants varied somewhat depending upon the phase of treatment. The FTDO plan called for participants in all three Treatment Path I to attend an education/treatment group once each week and a 12-step (NA/AA) group twice a week, to submit to random UA testing and to appear before the drug court judge for status hearings once per month.

Using a 1-to-5 scale ranging from "not at all difficult" to "very difficult", the interviewees assessed the difficulty level of complying with the key requirements of the drug court treatment component. As noted in Figure 1, more than 86 percent of respondents felt that urinalysis (UA) testing requirements were "not at all difficult" to complete, and more than half felt the same way about the difficulty of attending AA/NA meetings and treatment groups. Fewer than 5 percent felt that submitting to UA testing or weekly treatment groups was "very difficult."[6]

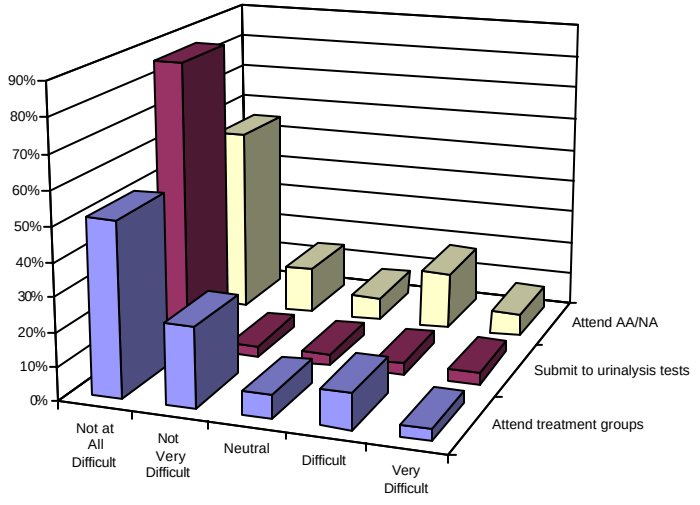

Figure 1. Participants' Perceptions: Difficulty of Completing Drug Treatment Requirements.

[6]Analyses tested whether perceptions of drug court differed for successful versus unsuccessful participants using chi-square tests. In none of the results reported in this paper were results significantly different for these two groups. This may be due in part to the small sample sizes of the two groups.

NONTREATMENT-RELATED DRUG COURT REQUIREMENTS

Using the same scale to rank the difficulty of probation terms and conditions not directly related to the drug treatment aspects of their supervision, the respondents indicated that some of the nontreatment-related requirements were more difficult to complete than conditions specifically related to drug treatment and testing. Among the nontreatment requirements in the FTDO plan were community service (throughout all three treatment phases) and maintaining contact with a probation officer (weekly during Treatment Path I, biweekly during Path II, and monthly during Path III.

Displayed in Figure 2 are the interviewees' responses pertaining to the difficulty of performing community service, maintaining contact with probation officers, and payment of financial conditions. More than 20 percent felt it was "very difficult" to meet the financial conditions of the program (which included monthly probation fees, fines, and a mandatory assessment for virtually all drug court participants). Another 20 percent felt that the financial conditions were "difficult" to complete. Similarly, almost 30 percent felt that it was "very difficult" to complete community service. In contrast to responses regarding financial and community service obligations, more than 80 percent indicated that that it was "not at all difficult" to maintain contact with their probation officers.

HELPFULNESS OF THE DRUG COURT EXPERIENCE

[18] Asked to apply a scale in which 1 = "not at all helpful" and 5 = "very helpful," the drug court participants indicated the extent to which they felt the drug court experience was helpful to them. The results indicate a split among the interviewees as to their overall perceptions of the program. While almost 40 percent of participants felt that the drug court was "very helpful," more than 30 percent felt that it was either "not at all helpful" or "not very helpful."

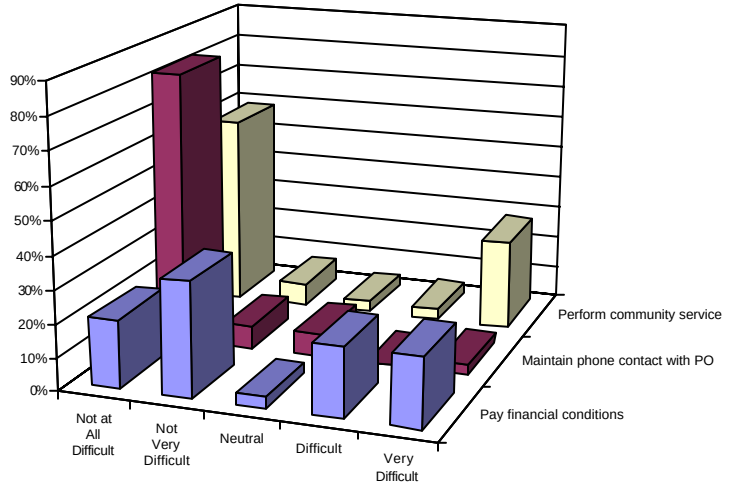

Figure 2. Participants' Perceptions: Difficulty Completing Nontreatment-Related Program Requirements.

Specific perceptions regarding the impact of drug courts on criminal behavior were more positive than those regarding drug use (see Figure 3). Approximately three-quarters of all respondents felt that drug court was "somewhat helpful" or "very helpful" in remaining crime free, but only about 40 percent responded as favorably in their assessment of the helpfulness of drug court in remaining drug free (similarly, about 40 percent also felt that drug court was "somewhat helpful" or "very helpful" in remaining alcohol free).

Perceptions regarding the impact of drug court on other life areas were not as positive (Figure 4). More than 65 percent felt that drug court was "not at all" or "not very" helpful in getting a job, and over 50 percent felt it was "not at all" helpful in maintaining a job.[7]

[7] One might not expect to see favorable ratings regarding employment, given that job seeking was not central to the treatment component.

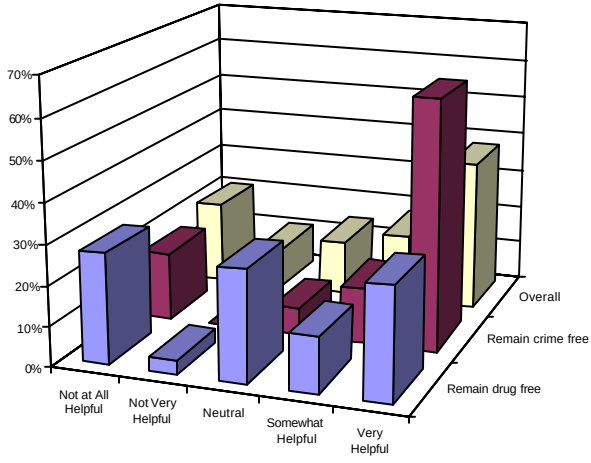

Figure 3. Participants' Perceptions: Helpfulness of the Drug Court Experience – Overall.

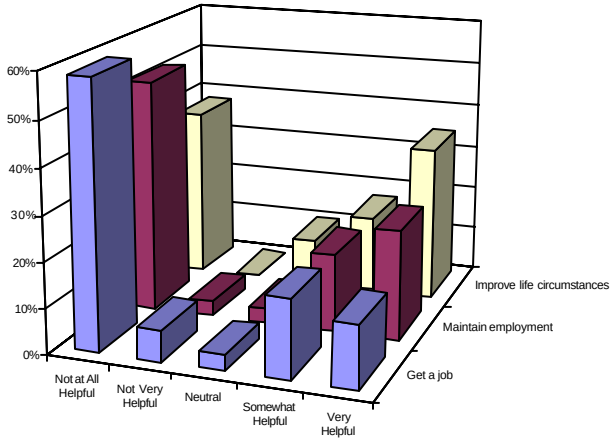

Figure 4. Participants' Perceptions: Helpfulness of the Drug Court Experience – Life Circumstances.

Figure 5 illustrates perceptions related to the more administrative aspects of court and probation interactions. Slightly more than half of all respondents felt that the drug court helped them in complying with the terms and conditions of their probation sentences. Resting at the opposite end of the scale ("not at all helpful") on the question on court interaction were about one-fourth of the respondents. A slightly smaller number (20 percent) had the same feeling about the court's helpfulness with the terms and conditions of probation. In contrast to items regarding the difficulty of completing drug court requirements and other areas of helpfulness, a fair percentage of participants were neutral in their evaluations of the drug court's influence on their probation compliance and interactions with the court.

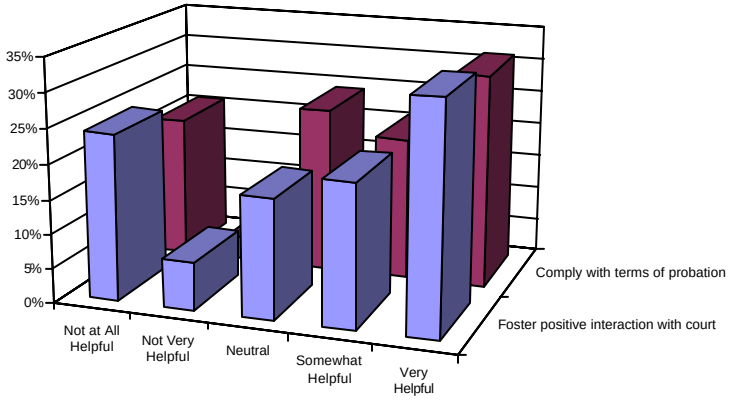

Figure 5. Participants' Perceptions: Helpfulness of the Drug Court Experience – Interaction With Court and Probation.

STRENGTHS AND WEAKNESSES OF THE COURT

Offenders were also asked to share their perceptions of the strengths and weaknesses of the drug court program, including the program's structural components. They applied a scale ranging from "very strong" to "very weak."
As illustrated in Figure 6, almost 85 percent of responding participants felt that reducing the length of the probation sentence was a strength of the drug court program (rankings of "strong" or "very strong"). Almost 70 percent also viewed monitoring of drug use via urinalysis tests as a strength, and nearly 80 percent felt that structuring probation with a contract was a "strong" or "very strong" component of the program. In addition, slightly over 70 percent felt that the requirement to appear before the judge, once per month throughout the program, was a "strong" or "very strong" component.

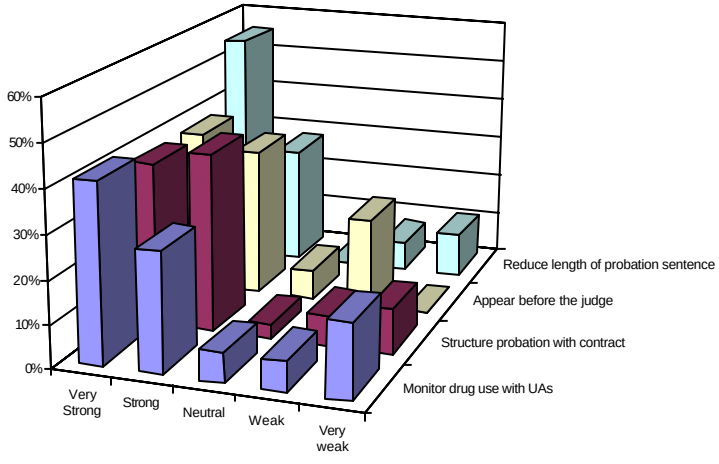

Figure 6. Participants' Perceptions: Strengths and Weaknesses of the Drug Court Program – Supervision/Monitoring.

Five additional program components¾drug treatment, drug education, AIDS education, attendance at AA/NA meetings, and the requirement to remain in treatment longer¾were also regarded as program strengths (see Figure 7). However, the responses were not as overwhelmingly positive as those for the structural components depicted in Figure 6.

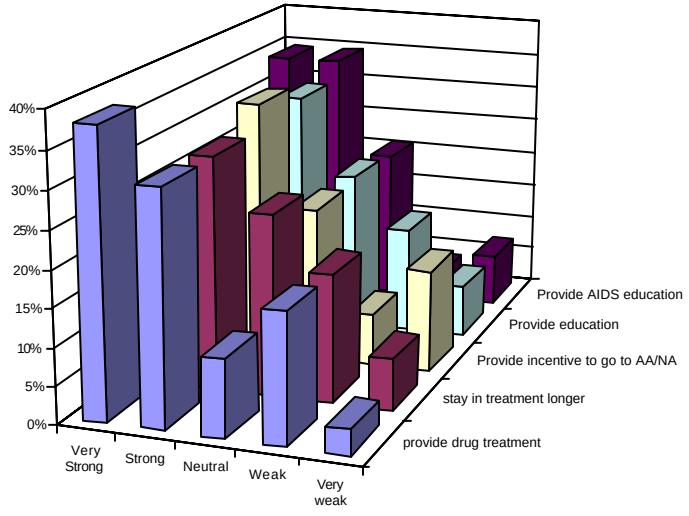

Figure 7. Participants' Perceptions: Strengths and Weaknesses of the Drug Court Program – Education/Treatment.

RECOMMENDATIONS TO OTHERS

When asked whether they would recommend the program to other first-time drug offenders, 76 percent responded "definitely yes."

CONCLUSIONS

Overall, the drug court participants who were interviewed¾both graduates and those who did not complete the program¾were very positive in their evaluations of the program. An overwhelming majority would recommend the program to other offenders. Their recommendations appear to be

based primarily on perceptions that the drug court 1) helped them remain crime free, and 2) provided them with a means to reduce the length of their probation sentence.[8]

The participants recognized the program components (e.g., appearing before the judge, structuring probation, and UA monitoring) that program planners feel are important to drug court models as strengths. At the same time, however, they did not feel the program had a positive impact on all areas of their lives. Interestingly, despite the primary focus on drug treatment, a greater percentage of offenders felt the drug court was a greater help in remaining "crime free" than "drug free." Negative perceptions were also particularly apparent in terms of obtaining and maintaining employment.

The difficulty of completing program components provides some unexpected findings. Although one might expect that the focus on monitoring provided by UAs and the intensity of the treatment program requirements would serve as a tough sanction, the monitoring and treatment components of the drug court were actually perceived as relatively easy to complete. A majority of offenders rated these components as either "easy" or "very easy." The requirements that were perceived as difficult to complete were probation conditions completely unrelated to the drug court program, i.e., payment of financial conditions and, to a lesser extent, completion of community service.

Because the collection of comparable data on offender perceptions of the difficulties in completing routine probation requirements was not a part of the study, a comparison of drug court participant and probationer perceptions is not possible at this time. However, if drug courts are to be a serious intermediate sanction (research has shown that both offenders and staff can rank "equivalencies" of punishment between community-based sanctions and incarceration) (Pe-

[8] Analyses of the drug court participants versus probationers in the testing tracks of the study showed that at one year, a significantly greater percentage of drug court offenders had completed their probation terms than those assigned to routine probation.

tersilia & Deschenes, 1994), we need to improve our understanding of the components of the programs. It may be that offenders do not perceive drug courts in the same way that program planners do.[9] *For this reason, we must not overlook the important role of offender perceptions in the development of intermediate sanctions.*

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[9] In fact, Petersilia and Deschenes found that correctional staff rated conditions of probation as more difficult than inmates did.

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NDCI COMMENTARY

JAIL-BASED TREATMENT AND RE-ENTRY DRUG COURTS, A UNIQUE OPPORTUNITY FOR COLLABORATION AND CHANGE

By C. West Huddleston

With more than two-thirds of the millions of men and women who pass through American jails testing positive for recent drug use, our jails may constitute the best setting for drug screening and assessment, and for getting those in need of treatment on a recovery track. And yet, only 7 percent of the jails house wide-ranging drug assessment and treatment programs.

The success that drug courts have enjoyed to date rests on a foundation of collaboration among the legal, treatment, and law enforcement communities. Helping to build effective jail-based treatment programs can broaden and strengthen that foundation. In this article, NDCI Deputy Director West Huddleston explores the need for jail-based treatment from the drug court perspective, and offers a working model for a jail-based treatment program linked to a re-entry court.

C. West Huddleston is Deputy Director of the National Drug Court Institute. His areas of expertise are in the field of in-custody substance abuse programming as well as drug court implementation and operation. Mr. Huddleston is a licensed

Alcohol and Drug Abuse Counselor and has administered programs on the local, state and federal levels.

ARTICLE SUMMARIES

Jail-Based Treatment Gap

[19] IN SPITE OF SCIENTIFIC EVIDENCE THAT JAIL-BASED TREATMENT CAN SUBSTANTIALLY REDUCE RECIDIVISM, ONLY 7 PERCENT OF JAILS OFFER WIDE-RANGING SERVICES.

JAIL-BASED TREATMENT AND DRUG COURTS

[20] A drug court objective is to keep participants engaged in treatment. It is counterproductive to detain participants in jails without treatment services.

A "WORKING" MODEL

[21] A working model for effective jail-based treatment with functional linkages to drug courts must consider many issues.

COMMUNICATION WITH DRUG COURTS

[22] Regular appearances before the judge, even while in custody, are part of the drug court process, and are needed to hold participants accountable and motivated.

JAIL STAFF SUPPORT

[23] The support of jail staff is key to the success of an "in-custody" program.

PROGRAM SPACE

[24] When physical space is limited, creative scheduling may be the solution. Plan treatment sessions around the schedules of other jail activities.

STAFF ASSIGNMENT

[25] It is imperative that jail-based treatment programs employ a variety of support groups and treatment modalities, and that jail staff working with the programs be cross-trained and enthusiastic about the programs.

FOLLOW-UP AND RE-ENTRY COURTS

[26] Direct linkages with Re-Entry Drug Courts and aftercare is critical if an offender is to re-enter the community successfully

There is no single reason why drug courts succeed where other programs have not. It is true that drug courts provide more comprehensive supervision, more frequent testing, and closer monitoring than other forms of community supervision (Belenko, 1998). It is also true that drug courts constantly seek ways to improve their programs, and strive to make inroads into new areas of supervision and accountability for drug-using offenders living in our communities. We have formed linkages with community police officers, intensified probation supervision, and taken advantage of improvements in drug testing, electronic monitoring, and MIS technology to address a broader range of offenders than ever before.

Pressed to name a single cause for the success of drug courts, we might point to the foundation on which our programs rest¾collaboration. New research on drug courts and drug treatment programs has found that the best new programs are those that are collaborative efforts in which components of the criminal justice system, community public health agencies, cognitive and behavioral counselors, drug treatment specialists, health care providers, and employment specialists (Lewis, 1998) work as a team to keep offenders accountable to the court and engaged in treatment.

Such findings suggest the importance of drug courts continuing to improve their collaboration efforts, thus increasing their ability to address the drug and alcohol abuse problems that undermine offenders' chances of staying out of trouble. The collaborative link yet to be formed lies between drug courts and jails, or more specifically, jail-based treatment programs, the drug court and their role as a re-entry

mechanism for an offender's successful reintegration into the community.

THE JAIL-BASED TREATMENT GAP

[19] *According to the Bureau of Justice Statistics (BJS), 11 million offenders pass through American jails each year, and 70 percent of all arrestees who are sampled test positive for recent drug use. More than half of all jail inmates in 1996 were already under supervision at their most recent arrest; almost one-third were on probation, an eighth were on parole, and another eighth were on bail or bond. Seven out of ten jail inmates had prior sentences to probation or incarceration, and more than four in ten had served three or more sentences. Compared to jail inmates in 1989, inmates in 1996 reported a higher percentage of use of every type of drug except cocaine; yet only 17 percent reported prior participation in a treatment or self-help program (Harlow, 1998).*

In spite of scientific evidence that jail-based drug and alcohol programs can be effective in reducing recidivism (Field, 1995, 1989; Lipton, 1996; Peters et al., *1993; Rouse, 1991; Wexler* et al., *1990, 1994), most jails have been slow to develop strong substance abuse programs. A recent national survey noted that only 7 percent of jails offer a wide range of services (Peters and May, 1992) and only 30 out of 1,700 jails reported providing more than 10 hours of weekly substance abuse treatment (Hughey and Klemke, 1996). Thus the percentage of offenders who receive comprehensive drug treatment while in jail is minimal.*

Unfortunately, limitations on drug treatment available in our jails constitute a problem that extends to drug courts. Jail-based treatment can provide drug courts with a critical opportunity to address an offender's substance-abuse problem early in the process, but adequate jail-based treatment programs are rare. Even where programs do exist, few jurisdictions have developed collaborative linkages between drug courts and the jails that work successfully within the drug court framework.

THE NEED FOR JAIL-BASED TREATMENT IN DRUG COURT

[20] *Many drug courts rely upon their local jails to incarcerate defendants prior to the start of their drug court program or to house defendants briefly as a sanction. Whether pre-plea, post-plea, or as a sanction, it is counterproductive to detain drug court defendants in jails where treatment services do not exist. After all, the objective of the drug court is to keep defendants engaged in treatment. Rather than providing a forced break from treatment services, we could be taking advantage of offender jail time by furnishing treatment during periods of incarceration.*

Local jails provide an excellent setting for screening, assessment, delivery of initial treatment services, social detoxification (stabilization), and for forging links with community treatment programs. The highly structured, controlled environment of a jail can exert a tremendous influence over an offender's motivation to seek treatment and commitment to stay in treatment (Swartz et al., *1996). The fact that jail-based treatment may be legally coerced does not diminish its effectiveness. Individuals who are legally coerced into drug treatment are just as successful in recovery as those who enter treatment voluntarily, and they often remain in treatment programs longer (Anglin* et al., *1990). According to Dr. Sally Satel, a psychiatrist and a consultant to the Washington, D.C. drug court, "Addicts needn't want to change their lives—at least not at first—for a treatment program to succeed. Moreover, with the fear of doing time hanging over their head, a drug abuser is more likely to stay in and finish treatment. The longer they stay," Dr. Satel continued, "the better their chances of turning their life around." Indeed, absent its coercive role, the impact of drug court would be as bleak as the traditional approach.*

The challenges ahead are to construct a bridge between county jails and drug courts, and establish jail-based treatment systems capable of delivering services to drug court defendants wherever they are in the detainment process. We

must be able to engage defendants in treatment services immediately upon detainment, and upon release, we must be able to refer them immediately to outpatient and ancillary services, all the while providing supervision through the drug court program.

A WORKING MODEL

With jail-based treatment systems in place, incarceration can become an offender's chance to meet a substance abuse problem upstream, before his or her drug use or criminal activity escalates. Without jail-based treatment systems, the time spent in detention is lost. A 1994 review of criminal justice research stated that there were no studies that found punishment alone reduced recidivism (D.A. Andrews, 1994). If the goal is to expand the net to catch a broader range of offenders passing through the revolving door of the criminal justice system, then the next step for drug courts is to expand their collaboration efforts with jail-based treatment programs, especially in those communities where drug courts exist.

[21] *In building a working model for effective jail-based treatment programs with functional linkages to local drug courts, several issues must be considered. Among them are communication between jail and drug court, treatment staffing, program space, experience and training, programming, jail staff assignment, follow-up services, and re-entry into the community.*

COMMUNICATION WITH THE DRUG COURT

[22] *One unique aspect of drug court and jail-based treatment model is the judge's ongoing supervision of the defendant while the defendant participates in the jail-based program. Just as in drug court, the defendant must regularly appear before the drug court judge and stand accountable for his or her behavior while participating in the in-custody treatment program.*

The involvement of the judge is critical to the success of the jail-based treatment program and to the drug court defendant's future upon release from custody. The drug court judge "serves as an authority figure … providing the attention, dependable if stern parental approval, that many addicts, coming from chaotic backgrounds and broken homes, seem to crave" (Satel, 1998). A recent survey reported that "eighty percent of drug court participants indicated they would not have remained in the treatment program if they did not appear before a judge as part of the process" (Cooper, 1997).

In this working model, the judge's active participation in the defendant's treatment begins with an inclusive "staffing," i.e., a meeting in which participants' cases are discussed by the practitioners of the drug court. Included in the staffing are representatives from the jail-based treatment program, who collaboratively update the drug court judge on the status of each participant.

Armed with accurate and up-to-date information, the drug court judge then holds a status hearing, which occurs in an open courtroom. Here, the drug court participants who are being detained in the jail and who are participating in the jail-based treatment program, are brought before the drug court on a regular basis and held publicly accountable for their progress, or lack thereof, while in the jail-based treatment program

The judge and the treatment team have a unique opportunity to grant the most powerful incentive available to jailed participants who are progressing in their program. Negative reinforcement is the removal of punishment; *thus the judge rewards the participant for compliance by reducing the amount of time he or she is ordered to jail. A participant can actually work his or her way out of jail through sobriety and positive behavior. In addition, with the right collaboration between the judge, sheriff and the jail-based treatment staff, the judge might grant rewards to the participant, while in the program, such as TV or visitation privileges. Such reward*

systems are standard in therapeutic in-custody programs, but how much more powerful would the incentive be if it came from the drug court judge?

This working model allows the participant to remain motivated, and thus helps the jail-based treatment program as well. Communication between the jail-based treatment program and the drug court judge provides the essential link for momentum, allowing for swift and sure responses to the participant's behavior in treatment.

JAIL STAFF SUPPORT

[23] *The support of both the Sheriff and the officers of the jail is key to the success of any in-custody program. Officers' attitudes toward inmate services and programs have a great influence on inmates' attitudes (Taxman* et al., *1994). It is therefore paramount that jail staff support the jail-based treatment program and that the program in turn be designed such in a way as to gain the confidence and support of the officers. For example, a program that disrupts the daily schedule of a jail or interferes with the flow and security of the facility will not last. Jail-based treatment programs must mesh well and offer benefits to the facility for jail personnel to "buy-in."*

PROGRAM SPACE

[24] *Finding program space is a difficult task for any jail-based program. Unless the program is in a therapeutic community (TC) or a segregated unit, it should operate during treatment hours that work around inmate counts, meals, and community work programs so as not to interfere with normal operations.*

Ideally, jail-based treatment populations should be segregated from other inmates as much as possible in order to

keep outside influences to a minimum and facilitate participant control. An alternative approach that many jail-based programs employ is to conduct therapy and support groups throughout the facility during the evening. This model enables the treatment population to maintain job assignments within the jail, remain busy in the evening, and keep away from the general population as much as possible.

TREATMENT STAFF EXPERIENCE AND TRAINING

Space is not the only problem facing a new jail-based treatment program. Many jail officers fear that substance abuse treatment staff neglect security procedures. It is important, therefore, that jail-based treatment staff have experience working in correctional settings and a clear understanding of facility rules, information flow, security procedures, and "offender games" (i.e., the deviant and manipulative ways of a correctional population). In addition, all jail treatment staff should attend the same orientation class that new jail officers receive. This will ensure that treatment staff know the specific policies and procedures of the facility. An experienced and oriented jail treatment staff will ensure a safe and secure facility and gain the confidence of the jail personnel.

EFFECTIVE PROGRAMMING

[25] *Substance abuse treatment is like a jigsaw puzzle, and it is imperative that jail-based treatment programs incorporate a variety of support groups and treatment modalities (e.g., cognitive-behavioral treatment) in order to increase the likelihood of success for jailed offenders. In the last ten years, criminal justice researchers have published a wide range of research on the types of programs that show the most success with jailed offender populations (Andrews* et al., *1990; Andrews, Zinger* et al., *1990; Lipton, 1996; Peters* et al., *1993; Wexler* et al., *1994). This research suggests that jail-based treatment programs should target the following dynamic pre-*

dictors: anti-social personality; criminogenic needs; companions; interpersonal conflict; social achievement; and substance abuse. These areas, if addressed, produce a significant reduction in return rates since they can be changed throughout the course of a jail-based treatment program. Jail-based treatment providers should be licensed, and they should be carefully selected for their expertise in these dynamic predictors and their documented track records of working with offender populations (Gendreau et al., *1996).*

JAIL STAFF ASSIGNMENT

Another important factor in the success of a jail-based treatment program is the assignment of jail staff. Whenever possible, the officers assigned to the program should be those who welcome it, and who have a desire to work with contract treatment providers and drug court personnel. The jail officers who work with a jail-based treatment program should see themselves as models for inmates, and they should be cross-trained in substance abuse screening and other treatment issues. Cross-training is a good way to get the jail staff working as a team (Taxman et al., *1994).*

RE-ENTRY DRUG COURTS

[26] *By filling the role of a re-entry court, drug courts can provide incentives for participants to complete jail-based treatment, a strong structure for defendants leaving jail, a continuum of treatment services, and a high-level of probationer accountability.*

Offenders who have completed the requirements of a jail-based treatment program are released into the community by the drug court judge during a status hearing in court. At the time of release, they are given clear instructions to report immediately for supervision, case management and treatment

services, with future drug court status hearing appearance dates.

The optimal procedure would be to have all participants with drug abuse problems and participating in a jail-based treatment program, brought before the drug court at the time of their release from jail. Probationers would appear before the drug court to be admonished and encouraged by the drug court judge and then immediately released from court for placement to appropriate supervisory and treatment services in the community.

Finally, Transitional (release) planning is important to an offender's successful transition into the community. Housing, employment, mobility and the acquisition of other needed services (e.g., medical, psychological and aftercare) are among the issues to address by the case manager, prior to release.

CONCLUSION

Jail-based treatment is a critical component of drug courts. For those receiving significant jail time before their release into the community, jails provide an important opportunity to begin intervention through the drug court process. For those who do poorly in the community phase of the drug court program—whether because of continued drug usage or failure to comply with other program conditions—jail sanctions offer the opportunity to participate in treatment in a controlled atmosphere, and with undivided attention (See Appendix 1).

Building a continuum of care between drug courts and jails is extremely difficult to address without open, timely communication, cooperation, and sound planning. With multiple players to report to, some cross-training is essential, and, of course, the jail staff must clearly comprehend the court's needs and address them while maintaining the integrity of their own mission. Finally connecting the offender back up with the drug court or re-entry court is necessary to completing the circle of intervention so critical to the participant's success.

HIGHLIGHTS OF EXISTING DRUG COURT AND JAIL-BASED TREATMENT LINKAGES

Although most drug courts are yet to develop strong linkages with existing jail-based treatment programs, some jurisdictions have established relationships that can serve as a model for others. For instance, in New Haven, Connecticut, when a drug court defendant is ordered to serve jail time as a sanction for drug use, the judge asks that the jail give the defendant priority access to all counseling, Alcoholics Anonymous (AA) and Narcotics Anonymous (NA) programs. In Denver, Colorado, the drug court judge monitors defendants in both in-custody and non-correctional therapeutic community programs. In Baton Rouge, Louisiana, a 90-day treatment program located within the East Baton Rouge Parish Prison facility works in concert with the Baton Rouge drug court to treat post-sentence drug court defendants.

In addition, a handful of drug courts have created comprehensive jail-based treatment programs that provide a continuum of care and accountability for drug court defendants. The following are programs that may serve as a model for such initiatives in other jurisdictions.

SAN BERNARDINO, CALIFORNIA

In addition to its detention center, the San Bernardino County Sheriff's Department operates the Glen Helen Rehabilitation Center (GHRC), a minimum security residential treatment facility for jail inmates. The facility is aimed at drug-abusing offenders who have been carefully classified for minimum security housing. Classification procedures are used to determine the "risk" that an inmate may pose while housed at the facility. Using information from the offender's criminal history, arrests and drug and alcohol history, variables such as violence, stability, escape risk, gang affiliation, substance abuse, and current conviction are tallied via a point system to determine where the inmate will be housed. Once classified to GHRC, the offender is assessed for deficits, matching the of-

fender's needs with treatment and educational services as well as job assignments.

The San Bernardino and Redlands drug courts have a unique relationship with the jail-based program. Jail staff are notified of the drug court referral by the court clerk. Drug court defendants are then placed into jobs within the facility that allow for attendance in all program groups and classes. Drug court defendants receive a multi-modal approach to services at GHRC that include substance abuse counseling, AA and NA support groups, anger management, parenting, life skills, basic education, literacy and GED classes, as well as a wide range of vocational classes.

After ten weeks of intensive treatment, the jail staff assesses each participant based on attitude, motivation, use of time, and tasks accomplished. These assessments are provided to the drug court judge prior to status hearings. At this time, the drug court judge either orders the defendant to continue treatment at GHRC, orders them to be released and referred to a community inpatient program, or orders them released and referred to outpatient services. In each case, the defendant will remain in the drug court program, monitored by the judge.

A 1995 impact evaluation of the San Bernardino program showed a significant reduction in recidivism of treated versus nontreated comparison groups.

IN SAN BERNARDINO COUNTY, CONTACT:

Gary Penrod, San Bernardino County Sheriff

Dr. Karen S. Dalton, San Bernardino County Sheriff's Office

Honorable Patrick Morris, San Bernardino County Drug Court Judge

Honorable Tara Reilly, Redlands Drug Court Judge

UINTA COUNTY, WYOMING

The Uinta County drug court and the Uinta County Sheriff's Office have successfully implemented a jail-based treatment program for serious, repeat offenders or those who have failed at, or walked away from, other treatment programs.

The jail-based treatment program is designed for a post-sentence disposition where the defendant receives a six-month sentence and immediately enters the six-week jail-based treatment program. While in the jail-based treatment program, the defendant appears in drug court once per week for a status hearing. Once the defendant completes the jail program, he or she appears in drug court for a sentence reduction hearing and is referred to intensive outpatient counseling and continued drug court supervision through the five-phase system. Requirements are gradually reduced until graduation.

A unique aspect of the Uinta County drug court program is that the jail-based treatment program personnel and the community aftercare treatment providers utilize the same systematic, offender-specific treatment modality, allowing for a true continuum of care. The Jail Administrator and other jail personnel are trained in the cognitive-behavioral treatment modality known as Moral Reconation Therapy (MRT®). MRT® addresses the defendant's faulty decision-making, tearing away the criminal identity and then helping the defendant build and achieve goals. MRT® has a long history of success with incarcerative populations and prides itself with over 10 years of outcome data showing impressive results, as recidivism is reduced by at least 30 percent.

IN UINTA COUNTY, CONTACT:

Forrest C. Bright, Uinta County Sheriff

Honorable Thomas Mealey, Drug Court Judge

Lieutenant Dave Evins, Detention Center Administrator

Mary Boyles, Treatment Specialist

LOS ANGELES, CALIFORNIA

In-custody drug treatment and drug abuse resistance education programs in the Los Angeles County Jail provide a program bridge to the 11 adult drug courts currently in operation. A drug court module for men is set aside at the Century Regional Detention Facility, complete with space for meetings, acupuncture, and counseling. This module is isolated

from the general population of the jail. A similar separate facility for women inmates exists in a different facility. A private, licensed drug treatment provider operates the in-custody drug treatment programs.

The most recently implemented drug court in Los Angeles County is the Sentenced Offender Drug Court. It requires completion of a mandatory 90-day jail-based treatment program phase (Impact Program), in addition to any previous period of incarceration served as a condition of the initial grant of probation. The target population for this program includes probationers with severe drug addiction and repeated criminal justice system involvement. The purpose of the in-custody component is to accommodate incarcerative sentences as well as to provide the first three months of treatment in a secure environment. Unique to this in-custody program is that transitional housing is made available to appropriate participants who do not have safe and sober living accommodations in the community.

A preliminary cost benefit analysis of the program showed a savings to the county through utilization of the in-custody treatment program.

IN LOS ANGELES COUNTY, CONTACT:

Leroy D. Baca, Los Angeles County Sheriff

Honorable Michael Tynan, Drug Court Judge

Ed Brekke, Administrator, Civil and Criminal Operations

Vann Hayes, Director, Impact Program

BROWARD COUNTY, FLORIDA

The Alternative Treatment Against Crack Cocaine (ATACC) program is a 26-bed intensive drug dependence treatment program located in the Fort Lauderdale City Jail pursuant to a contractual agreement with the county. It is a 90-day program that falls at the most intensive level of treatment in the continuum of care, and has been used by many of the judges in the criminal division of the courts for defen-

dants that have serious substance abuse treatment issues, but were not eligible for drug court due to having non-qualifying offenses, or previous non-qualifying convictions. The program provides 5 hours daily of group therapy, individual counseling sessions weekly, nightly AA/NA meetings, and extensive homework which is turned in every morning. The treatment orientation is based on a reality therapy model with a strong 12-Step basis, and an emphasis on community cohesiveness, with appropriate rewards and sanctions.

Because the ATACC Program has been established as an effective means for the most difficult of populations, the Broward County Drug Court utilizes the program as the most intensive level of care after other less intrusive means have failed. The drug court also refers those defendants to the program who are sentenced to a jail term prior to drug court, to get a head start in treatment. The drug court continues to monitor participant's progress while in the program and then serves as a re-entry mechanism when released.

A unique change to the current system is the move to place the outpatient treatment component under the Broward Sheriff's Office to create a seamless system. Such collaborations are the key to success and closing the revolving door of the courts and jail.

In Broward County, contact:

Ken Jenne, Broward County Sheriff

The Honorable Melanie G. May, Drug Court Judge

Mr. Robert J. Koch, In-Custody Substance Abuse Specialist

APPENDIX A: CLOSING THE CIRCLE

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RESEARCH UPDATE

REPORTS ON RECENT DRUG COURT RESEARCH

Compiled By Michelle Shaw and Dr. Kenneth Robinson

This issue of the NDCI Review synopsizes reports on five new studies in the field of drug court research: recidivism and Utah's Juvenile Drug Court; a baseline evaluation of the Delaware Drug Court; an evaluation of treatment-based drug courts in Florida's First Judicial Circuit; a first-year evaluation of the Monterey County, California Drug Court; and an evaluation of the Riverside County, California Drug Court.

Michelle Shaw is an Information Systems Specialist for Correctional Counseling, Inc. (CCI), a nationwide criminal justice training and research organization. She manages CCI's Research and Evaluation Division, which is based in Alexandria, Virginia.

Kenneth Robinson, a leading lecturer and trainer on cognitive behavioral treatment, has worked with offender populations in prison and mental health settings for 20 years. Dr. Robinson is the President of CCI and a faculty member of the National Judicial College.

ARTICLE SUMMARIES

RECIDIVISM AND THE UTAH JUVENILE COURT

[27] Compared to a statistically similar group of non-Juvenile Drug Court youths, the participants had significantly lower recidivism rates based on a one-year post-service follow-up.

DELAWARE DRUG COURT EVALUATION

[28] Delaware's urban and the rural drug courts are perceived as well defined, well implemented, and effective. The urban court is having a positive post-program impact on criminal recidivism; the more recently implemented rural court is still too new to generate conclusive results.

FLORIDA'S FIRST JUDICIAL CIRCUIT DRUG COURT EVALUATION

[29] This 30-month follow-up study showed that a comparison group of non-drug court participants are twice as likely to be rearrested as graduates of these Florida drug courts.

MONTEREY COUNTY FIRST-YEAR DRUG COURT EVALUATION

[30] The challenges to this court include engaging and retaining offenders. Still, its graduates have considerably lower rearrest rates than a comparison group, and the cost savings associated with this court are substantial.

RIVERSIDE COUNTY DRUG COURT EVALUATION

[31] Participants in the Recovery Opportunity Center, a California day treatment program, showed significantly greater reductions in arrest rates when compared to nonpartic ipants.

UTAH'S JUVENILE DRUG COURT AND RECIDIVISM

By Edward I. Byrnes, M.S.W. and Bruce V. Parsons, Ph.D.

This study examines recidivism for alcohol and drug arrests and other crimes for participants in Utah's Juvenile Drug Court (JDC) for a one-year period following program discharge. The study is part of a three-year JDC evaluation effort being conducted by the University of Utah Social Research Institute. It is funded through a BJA Byrne Evaluation Partnership Grant.

DESCRIPTION/METHODOLOGY

[27] *This study compares recidivism rates for the 74 JDC participants with those of a comparison group of juvenile offenders who were not JDC participants. Of the 74 JDC participants, 73 had successfully completed the program, and all were involved with the program between October 1995 and April 1997. The participants ranged in age from 12 to 18, with an average age of 15. Nearly three-fourths (74 percent) were white; 9 percent were Latino, 3 percent Native American, 2 percent African-American, and 2 percent Asian/Pacific Islander. Most (71 percent) were male, and according to their Substance Abuse Subtle Screening Inventory (SASSI) profiles, 25 percent were chemically dependent. The average number of alcohol or drug charges prior to entering the program was 1.4, within a range of from 1 to 4; only 5 percent had felony drug charges.*

JDC is in Salt Lake City; the youths in the comparison group were from the Ogden, Utah area, which has demographic and social characteristics similar to Salt Lake City. The evalua-

tors identified 243 youths who were similar to the JDC youths in terms of age, ethnicity, and other personal characteristics, and who were referred to juvenile court in the same time frame as the JDC group's involvement with the program. From among these 243 youths, the evaluators randomly selected 74 for the comparison group.

OUTCOMES AND FINDINGS

Both groups showed decreases in their average numbers of criminal and alcohol and drug offenses, but the JDC group's reduction was of significantly greater magnitude. The JDC youths had a one-year general criminal charge recidivism rate of 29 percent, and an alcohol and drug offense recidivism rate of 16 percent. The average number of general criminal charges for the JDC group was 1.8 in the year prior to participation and 0.7 in the year after termination. For the comparison group the average was 1.1 general criminal charge in their one-year pre-service comparison period and 0.5 during the one-year post-service comparison period. As for alcohol and drug offenses, the average number of alcohol and drug offenses in the year prior to participation and the year following participation were 1.4 and 0.2, respectively, for the JDC group. For the comparison group, the numbers were 1.1 in their one-year pre-service comparison period and 0.1 in their one-year post-service comparison period.

THE DELAWARE DRUG COURT: A BASELINE EVALUATION BY STEPHEN A. WILLHITE AND JOHN P. O'CONNELL

This two-part evaluation was the first effort to study the Delaware Drug Courts. Part I of the evaluation focused on the qualitative aspects of court implementation. Part II explored offender characteristics and outcomes. "The Delaware

Drug Court: A Baseline Evaluation" was prepared by the Statistical Analysis Center, State of Delaware, and Anova Associates. It was funded by the Administrative Office of the Delaware Superior Court.

DESCRIPTION/METHODOLOGY

[28] *The evaluation had two components. One was a process component, designed as a series of comprehensive interviews with 33 individuals intimately involved in program design and implementation. Process evaluation interviews were conducted with various drug court "actors," including, but not limited to, Delaware Superior Court judges, judicial administration, the offices of the Delaware Attorney General and the Public Defender, the private defense bar, the Department of Corrections, addiction intervention private service providers, and Treatment Access Services Center staff.*

The second component was empirical in design. Its purpose was to determine if there was support for the perceived effectiveness of the overall program in reducing future drug use and criminal behavior. It combined and utilized the substantial databases available from the Delaware Superior Court, the Treatment Access Services Center, and the Delaware Criminal Justice Information System to present a view of participating offenders in the context of offender characteristics, treatment outcomes, and criminal behavior.

A pilot study group of 100 randomly selected offenders was defined for each of three offender groups: 1) Track I offenders (violators of the conditions of previously imposed probation) within the urban New Castle County implementation; 2) Track II offenders (diversion) within the urban New Castle County program; and 3) Track I and II offenders across the rural Kent and Sussex County programs. For comparison purposes, measures of criminal activity were observed during 1) a defined pre-Drug Court admission period; 2) the period of Drug Court participation; and 3) a follow-up post-participation period.

OUTCOMES AND FINDINGS

Virtually all active participants viewed the Delaware Drug Court program as well designed, well implemented, and effective in reaching desired outcomes. Beyond the expected startup difficulties inherent in complex, cross-agency implementations, they expressed no substantial concerns regarding current or future programmatic viability. Benefits were perceived as accruing to each of the program components, to the offenders involved, and to society in general.

Data reliability and validity issues precluded a definitive program assessment; nevertheless, patterns within the data tended to support an interpretation that the drug court program had a positive impact on the reduction of criminal behavior as it relates to substance abuse. This was most clearly demonstrated in the urban New Castle Track I. Track I participants who completed their programs had less criminal involvement than their terminated counterparts both during and following program participation. Additionally, the level of criminal involvement (crime seriousness) was substantially lower for program graduates than for those who were unsuccessful in drug court program treatment.

The data were not as robust for the Track II urban offenders, but patterns suggested a strong positive relationship between successful program completion and diminished post-program criminal involvement. Program graduates exhibited a 19 percent rearrest rate; those who were terminated had a 55 percent rearrest rate. The severity of crimes at post-program rearrest was also lower for program graduates than for those who did not complete their programs.

The analysis of the rural (Kent and Sussex Counties) offender group was inconclusive because the court had only recently been implemented and the post-program period was therefore insufficient.

SUMMARY OF EVALUATION OF TREATMENT-BASED DRUG COURTS IN FLORIDA'S FIRST JUDICIAL CIRCUIT

By Roger H. Peters, Ph.D. and Mary R. Murrin, M.A.

This report summarizes an evaluation of outcomes for two treatment-based drug court programs in Escambia and Okaloosa Counties in Florida's First Judicial Circuit, in which the outcomes for program graduates were contrasted with those of both non-graduates and comparison groups of individuals who did not participate in a drug court program. Implications for clinical practice and needs for additional drug court outcome research are discussed.[10]

Funding for the study came from a Justice Institute Grant to the Florida Office of the State Courts Administrator.

DESCRIPTION/METHODOLOGY

[29] *The evaluators reviewed outcomes during a 30-month follow-up period for Escambia and Okaloosa drug court program participants. The individuals included in the study either graduated or were discharged from one of the two programs between June 1994 and June 1996.*

The study contrasted the outcomes for drug court with outcomes for non-graduates and comparison groups of offenders who were placed on probation supervision during the same period, and who did not receive drug court services. Separate comparison groups were selected for each program, and were individually matched to the drug court groups according to demographic and criminal history characteristics.

[10] For a detailed examination of the portion of this study focusing on predictors of retention and arrest in Escambia County, see "Predictors of Retention and Arrest in Drug Courts" in this issue of the *NDCI Review.*

OUTCOMES AND FINDINGS

Using state and national criminal justice databases to collect data, the evaluators reviewed outcome measures that included frequency, rates, and types of follow-up arrests. They also examined rates of graduation from the drug court programs and rates of substance abuse detected among drug court participants.
The study found that drug court graduates from both programs were significantly less likely to be arrested and had fewer arrests during the 30-month follow-up period than either the non-graduate group or the comparison group of matched probationers. ***During the follow-up, graduates were arrested about half as frequently as their matched comparisons****. For both the Escambia and the Okaloosa drug courts, arrest rates during the 30-month follow-up period declined in direct relationship to the duration of drug court involvement. Drug court graduates also had lower rates of substance abuse than comparable groups of treated offenders.*

MONTEREY COUNTY, CALIFORNIA DRUG COURT FIRST YEAR EVALUATION REPORT SUMMARY

By Jan Roehl, Ph.D.

This comprehensive evaluation describes the policies and procedures of the Monterey program; presents information on the characteristics and progress of participants in the Drug Court's 18 months of operation (1995-1996); and compares the outcomes of drug court participants to a similar group of offenders adjudicated prior to the creation of the drug court. The evaluation was conducted by the Justice Research Center, with funding from the State Justice Institute.

DESCRIPTION/METHODOLOGY

[30] *State and local criminal justice records were used to compare the criminal behavior of drug court graduates, par-*

ticipants dismissed prior to graduation, and a randomly selected comparison group of nonviolent, drug-involved offenders. Recidivism was assessed by the number of arrests and convictions for drug-related, violent, and nonviolent offenses during the 12 months after graduation, termination, or adjudication.

The Monterey Drug Court is a 12-month program of treatment, 12-step meetings, and other recovery steps, with frequent urinalysis testing, staff monitoring, and close judicial supervision. Of the participants, 45 percent are Hispanic, 39 percent are white, and 11 percent are African-American. Most are unemployed and have a high school education, and 25 percent were homeless when arrested. Cocaine and heroin are the primary drugs of choice, followed by marijuana and alcohol; methamphetamine use is increasing. Although it is now a post-plea program, the Monterey court was a pre-plea program at the time of the evaluation.

OUTCOMES AND FINDINGS

Obstacles for the Court. *The major obstacles encountered by the court were substantial turnover in the Treatment Coordinator's position, which limited client services at times, and difficulty locating residential treatment.*

Engagement and Retention. *Engaging more referrals in the drug court program and retaining more of those who start the program are the court's major challenges. About 25 percent of all offenders referred to the court completed the program successfully and graduated. Another 25 percent entered the program but dropped out or were dismissed due to continuing drug use or failure to comply with drug court requirements; on average, these participants spent five months in drug court and treatment programs. The remainder never officially entered drug court or treatment services.*

Recidivism. *A comparison of arrest/conviction rates one year after program discharge showed that graduates do substantially better than a comparison group of nonparticipating offenders arrested on similar charges. Among graduates, two*

of 18 (11 percent) were arrested on misdemeanor drug charges, and one (6 percent) was arrested on felony drug charges, compared to 37 percent and 47 percent of the comparison group, respectively. The majority of the graduates reported no illicit substance abuse, and most reported positive outcomes in other areas, e.g., births of drug-free babies, families reunited, stable living situations, and full-time employment. Drug court dropouts had higher arrest rates than either the graduates or the comparison group.

Cost Benefits. *Preliminary data on cost benefits (i.e., cost savings) indicate that the program pays for itself several times over, in financial benefits to the criminal justice, health, and welfare systems, human and financial savings due to reduced criminal behavior, and the increased productivity and contributions of drug court graduates. This leads to the conclusion that the drug court should continue and be expanded*

RIVERSIDE COUNTY DRUG COURT EVALUATION
BY DALE K. SECHREST AND DAVID SHICHOR

In 1995 Riverside County (California) opened a drug court with a day treatment program called the Recovery Opportunity Center (ROC). Program goals included successful graduation, significant reductions in drug usage, employment, completion of a vocational training program or the GED, reductions in local and state incarceration rates, and reduced court involvement and the resultant cost savings. To determine success rates and relate them to various background and performance attributes of drug court participants, 102 cases were followed for up to 20 months from program admission.

DESCRIPTION/METHODOLOGY

[31] *Graduates were compared to removals, and both groups were compared with a group of "identically-charged and institutionally-committed pre-drug court baseline population."*

The comparison group of 243 drug offenders was selected at random from a field of almost 4,000 individuals who might have been candidates for the drug court.

FINDINGS AND OUTCOMES

The program was evaluated in a number of areas. The findings include the following.

Recidivism. *Of the 102 drug court admissions included in the study, 26 were still in the program at the time of the study. Out of the 76 who had either graduated or left the program without graduating, 15 (or 14.7 percent) re-offended during the evaluation period. Among the re-offenders were two of the 38 graduates (5.3 percent) and 13 of the 38 removals (34.2 percent). For the comparison group, 25.5 percent re-offended over a period of 2.5 years. Neither of the two graduates who re-offended was involved in drug crime or violent crime. Ten of the re-offending removals were involved in possession and possession for sale, with two property offenders and a probation violator.*

Interestingly, the drug court admissions had twice the mean number of prior offenses as the comparison group, and the program graduates had higher rates of prior arrests for drug sales than either the removals or the comparison subjects. Still, the drug court participants showed a 20.2 percent improvement in recidivism rates over a comparison group. Drug court graduates had a 30.3 percent improvement in recidivism over the comparison group, and removals had an 8.1 percent improvement over the comparison group.

Program Completion Goals. *The goal of the program was to graduate 65 percent of participants. In actuality, 62.7 percent (62 out of 102 admissions) had either graduated (n = 38) or were still in the program (n = 26) over an average follow-up period of about 18 months.*

Drug Use. *No positive (dirty) urine tests were recorded for 43.9 percent of all admissions during their involvement in the program. In total, 57.9 percent of graduates had no positive urine tests compared to 25 percent of the removals.*

Cost Benefits. *Rough calculations of potential savings to the community and the criminal justice system in relation to program costs were $1.5 million for the 102 subjects studied. Recommendations have been made regarding program operation, drug court expansion and long-term funding, and the creation of additional drug courts in the county.*

FOR ASSISTANCE IN OBTAINING COPIES OF REPORTS ON ANY OF THESE EVALUATIONS, PLEASE CONTACT THE NATIONAL DRUG COURT INSTITUTE.

Subject and Topic Index Notes

Subject and Topic Index

The following cumulative Subject and Topic Index is designed to provide easy access to both subject and topic references. Each reference can be located by:

- *Volume* *by using a roman numeral e.g. I*
- *Issue* *by using a number e.g. 2*
- *Subject reference* *by its page number in parenthesis e.g. (121)*
- *Topic reference* *by using a number in brackets e.g. [9]*

Headnote Index

The Headnote Index provides access to an article's major points or concepts using a cumulative indexing system. Each headnote can be located by:

- *Volume* *by using a roman numeral i.e. I*
- *Issue* *by using a number i.e. 2*
- *Headnote* *by using a number in brackets i.e. [4]*

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II1**[30]** Riverside County Drug Court Evaluation
II1**[31]** Maine's First Drug Court Evaluation

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II1**[9]** Treatment Outcomes
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II1**[11]** Predictors of Program Completion
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II1**[2]** Sanctions Need Not Be Painful
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