CRIME AND JUSTICE RESEARCH INSTITUTE

From Whether to How Drug Courts Work: Retrospective Evaluation of Drug Courts in Clark County (Las Vegas) and Multnomah County (Portland)

Phase II Report from the National Evaluation of Drug Courts (I)

Executive Summary

John S. Goldkamp
Temple University

Michael D. White
University of North Florida

Jennifer B. Robinson
University of Ottawa

August 2001

The research described in this report was supported by grant #98-DC-VX-K001 from the National Institute of Justice, United States Department of Justice. The points of view expressed in the document do not represent the official positions of the National Institute of Justice, the local justice agencies in Multnomah County and Clark County, nor the Federal Government.

520 N. Columbus Blvd., Suite 600 Philadelphia, PA 19123
215-627-3766 FAX: 215-627-7810 email: info@cjri.com
www.cjri.com

From Whether to How Drug Courts Work: Retrospective Evaluation of Drug Courts in Clark County (Las Vegas) and Multnomah County (Portland)

Executive Summary

CONTENTS

ACKNOWLEDGMENTS

The research we have undertaken involved data collection, observation, interview and continuing discussion with a variety of officials and key actors in two of the nation's first and longest operating drug courts. As we have tried to recreate the past and trace the evolutionary steps taken by the growing drug courts into the present, we have had to rely on the cooperation, assistance and patience of quite a number of very busy people.

Las Vegas (Clark County)

In Clark County, the Honorable Jack Lehman welcomed the research and extended the assistance of drug court and court administrative staff. Court Administrator Chuck Short and his staff, Rick Loop and Michael Ware, solved all our logistical problems, providing space, computers, data access, and valuable critical insight. We are grateful to Ken Hoesch, Information Technology System Technician, and Dale Huling, Information Technology Customer Support Specialist, for their help in dealing with computer data access. John Marr, of Choices Unlimited and Marcon Associates, has been our principal contact, source of insight and problem-solver in various phases of data collection. We cannot overstate the value of the assistance John and his staff have provided us in data collection, or of the critical substantive feedback John has provided on an ongoing basis. We appreciate the help that Kendis Stake, Drug Court Manager, has provided in helping with our preliminary efforts to examine the Family and Juvenile Drug Court applications in Las Vegas.

Our efforts were also greatly strengthened by valuable assistance and data access provided by the District Attorney's Office and the Defender's Office. Deputy District Attorney Bart Pace was helpful in providing access to data and offering valuable insights into aspects of the drug court. Anita Harold also helped to answer questions relating to accessing data on the computer. In the Public Defender's Office, we are most grateful for the help, suggestions, insights and data access provided by Deputy Public Defenders, David Gibson and David Grauman and other members of their staff, such as Dale Ficklin, Systems Administrator, who were helpful from the start. Linda Talley, Computer Systems Manager in the Office of the County Clerk, her assistant Jan Boyle, and Mary Mosley, Assistant County Clerk, were extremely helpful to us in our efforts to access computerized data describing Drug Court operations. Cindy Kim in the Records Department of the Henderson Police Department and Barbara Telles in the Records Department of the North Las Vegas Police Department provided important help for us in our data collection efforts for which we are grateful. Lynne Cavalieri, Director of Detention Records for the Las Vegas Police Department provided invaluable assistance in helping us locate confinement information. We thank Shirley Williams and Judy Krause of the Las Vegas Justice Court for their assistance in providing data relating to the Justice Court and the Laughlin Justice Court.

Finally, we would also like to thank our data collectors in Las Vegas: this is where the real work of the research began, on the front line of data collection. Thanks are owed to Susan Lindsay, Erin Reese, Craig Bourke, Cristen Carnell, Lisa Kopinski, Greg and Nicole Kuper, Caroline Taylor and Nancy Younan.

Portland (Multnomah County)

Our work in Portland was encouraged and welcomed by the Honorable Harl Haas, the original and then returned Drug Court judge, the Honorable Michael Schrunk, Multnomah

County District Attorney for the last 18 years, Jim Hennings, Director of the Metropolitan Public Defender's Office, and Valerie Moore, Director of InAct, Inc. All four have assisted us in providing space, access to computers and data, and answering questions and offering critical feedback on an ongoing basis. Our debt of gratitude, for their active participation, interest, and willingness to help solve all problems, is enormous. All four have our deepest thanks and appreciation.

In the District Attorney's Office, where our staff lived and worked for a year and a half, we have been greatly assisted by Thomas Simpson, Management Assistant, in working with the computer system, and Deputy District Attorney James Hayden, in collecting information about the drug-free exclusion zones. Jim Henning's staff has been especially cooperative, including Robert Williams Jr., the STOP Program Manager, and has provided valuable data and staff space for which we are very grateful. Robert Williams was always available to answer our questions, and often did so at almost any hour of the day or night. We are indebted to Robert for his tireless assistance. We were saddened by his untimely death. We will miss him. We want to thank Valerie Moore and her staff at InAct for their patience as we stayed underfoot in cramped quarters for long months of data collection. We thank Fecadu Aghedow for his help in reading the computerized data relating to treatment.

Our data collection effort in Portland was led by Kathe Nagy and assisted by Tamiko Hennings, Brooke Houglum, Tonya Parson, J.J. Starkey, Melissa Willey, and others. We are grateful for their substantial labors that serve as the backbone of the information discussed in this report.

In Philadelphia, we are grateful for the research assistance of Todd Anderson in helping prepare and correct the data we analyzed, as well as some last minute help from Kate Lunger and Amy Sawhill. We thank LaSaundra Scott for her data entry assistance. We are thankful for the editorial, graphics, and related contributions of Luanne Wong in producing this report.

From Whether to How Drug Courts Work: Retrospective Evaluation of Drug Courts in Clark County (Las Vegas) and Multnomah County (Portland)

Phase II Report from the NIJ National Evaluation of Drug Courts (I)

By
John S. Goldkamp
Michael D. White
Jennifer B. Robinson

Executive Summary

The Scope of Phase II Research in Clark County, Nevada, and Multnomah County, Oregon

This report presents Phase II findings from the national evaluation of the Portland (Multnomah County) and Las Vegas (Clark County) drug courts funded by the National Institute of Justice. With drug courts established shortly after the nation's first was piloted in Miami in 1989, these court systems have operated two of the longest functioning and most highly recognized drug courts in the United States. The dual site research is presented as case studies of two important drug courts applying a common framework for addressing critical evaluation questions, and is not intended as a comparative study of the two sites. The research asks common questions of two different drug courts in depth and tests assumptions of the drug court model.

The Phase I report (Goldkamp, White, & Robinson, 2000) traced the developmental histories of the Clark County and Multnomah County drug courts, described important milestones in their implementation, discussed their application of the drug court model, and examined one-year outcomes among successive cohorts of participants and comparison group defendants over time. The design of the two-court evaluation strategy, described in detail in the Phase I report, had several key features. First, the research made use of a drug court typology (Goldkamp, 1999, 2000) as a frame of reference to organize questions and findings according to critical dimensions underlying the drug court model and to improve the external validity of findings. Second, the research considered the evolution of the innovations in each site from a longitudinal perspective, examining the changing context of the drug courts and factors influencing their effectiveness. The longitudinal approach, involving a retrospective evaluation of the courts from their origins, provided a more comprehensive view of the operation of the drug courts than possible using the more common evaluation design that focuses on the operation of courts during one period of time. Third, Phase I findings emphasized the importance of factors external to the drug courts in influencing their input (orientations and enrollments of participants) and output (treatment results and rates of reoffending) of the two drug courts over time.[1]

[1] See Goldkamp et al. (2001a) for an analysis of the impact of such factors as changing laws, prosecutorial policy, judicial assignment, etc.

This report, describing findings from the second phase of the two-site evaluation, is organized in four general parts:

- Part One Productivity II: Participant Outcomes and Service Delivery—in which in-depth analyses of criminal justice and treatment outcomes are presented
- Part Two Drug Court Operation: Selected Issues—in which drug court workload, judicial staffing, acupuncture, and participant fees are studied
- Part Three Drug Courts in Context—in which the competing early disposition (X-PLEA) program in Multnomah County is examined, drug courts are analyzed in their geographic context, and the rural and juvenile "spin-off" drug courts in Clark County are described
- Part Four Producing the Drug Court "Effect": An Analytic Model—in which we formulate a causal model of drug court impact and apply it in analyses of the Clark County and Multnomah County drug courts

PART ONE Productivity II: Participant Outcomes and Service Delivery

Assessing the Impact of the Drug Court Innovation in Two Jurisdictions: Do Drug Courts Work?

When, referring to the drug court innovation, public officials ask, "Does it work?"[2] their question implies a comparison: "Compared to how the judicial system was doing without a drug court, is the addition of a drug court an improvement?" There are at least two meanings of "working" that have been the foci of this research. The first and more common usage simply refers to producing a successful outcome on a certain criterion measure. It is no exaggeration to state that the "yardstick" most commonly employed by many public officials in assessing the potential utility of drug courts is crime reduction, with cost reduction a close second favorite. The second meaning of "working" has to do with how a drug court operates to produce its effect. It is in this area that the current research hopes to move evaluation of drug courts in an important new direction. We have adopted the position that this question—"how" the drug court works when it does—is of critical importance to the evaluation of drug courts, as it goes to the core elements of the drug court model that has become so popular. In the conclusion to this report, we consider a causal model of drug court impact that looks inside the "black box" of drug court treatment and applies a causal analysis to the drug courts in Clark County and Multnomah County.

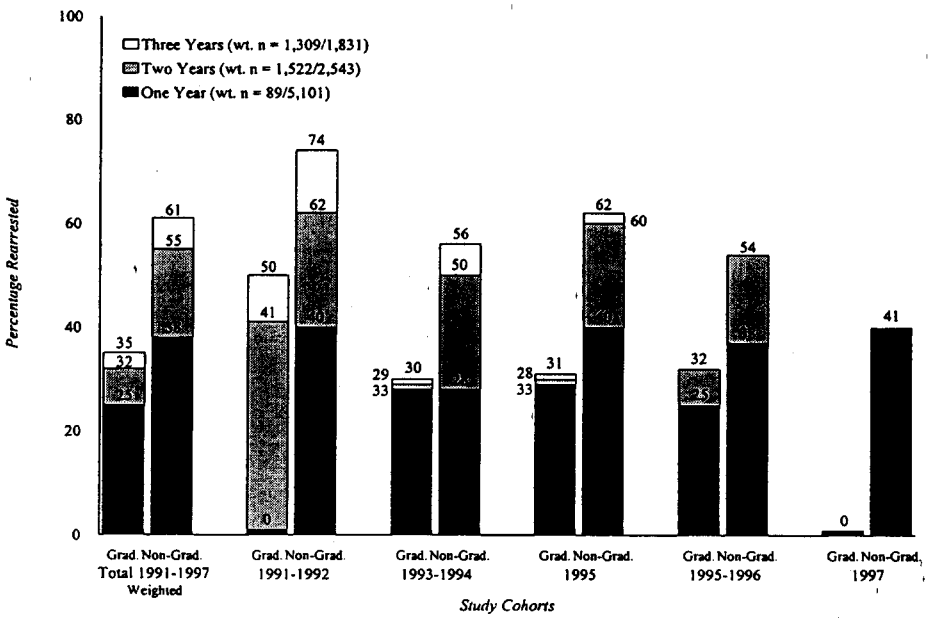
Impact as a Comparison

The measurement of the relative impact of drug courts requires a comparative framework. In fact, the question is not just, "Do drug courts work?" but rather "Do drug courts work better than . . . not having drug courts?" Whichever success criterion one may choose to emphasize (e.g., crime, drug use, or dollars), the drug court must be compared to a non-drug court condition to permit inferences about relative impact. Drug court participants should show better results than some appropriate comparison group not undergoing the drug court treatment process.

Local evaluations have commonly drawn comparisons between the outcomes of graduates and non-graduates—an approach that almost always shows favorable results. Comparison of graduates and non-graduates of the Multnomah and Clark County drug courts are no exception. The findings appear to show a dramatic and consistent drug court crime reduction effect; with drug court graduates generally showing substantially lower rearrest rates over the follow-up periods from entry than non-graduates.

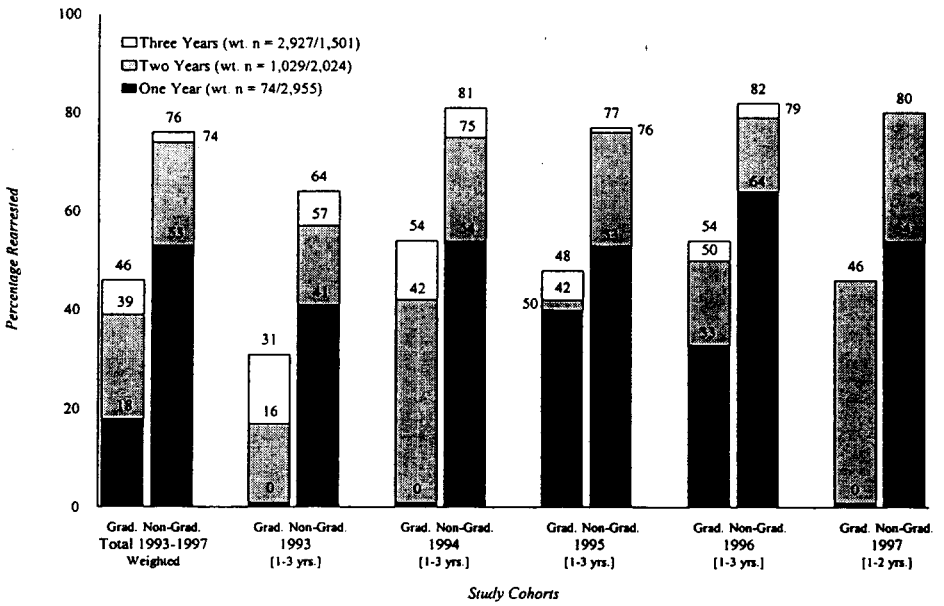
[2] See, for example, the two reviews published by the General Accounting Office (1995; 1997).

Multnomah County (Portland): (Any) Rearrests of Drug Court Graduates vs. Non-Graduates over One, Two, and Three Years



Crime and Justice Research Institute

Clark County (Las Vegas): (Any) Rearrests of Drug Court Graduates vs. Non-Graduates over One, Two, and Three Years



*Significant at p = ≤0.05

Crime and Justice Research Institute

Study Design

A more appropriate analysis of drug court impact would compare, within a given time frame, the outcomes of complete cohorts of drug-involved offenders that enter the treatment process with those of similar cohorts of defendants who do not enter drug court but whose cases instead are processed in the normal fashion. The design of this evaluation was constructed to

capture the effects of important changes in both drug courts over time (including changes in targeted and enrolled populations) by studying cohorts of defendants enrolled in successive time periods. To ensure that the sampling design was representative of each time period, approximately equal numbers of cases were randomly drawn in each designated time period for the samples of drug court participants as well as samples of comparison groups.

The Multnomah County Design: The sampling strategy employed for the evaluation of the Multnomah County Drug Court (STOP program) stratified according to two-year time periods from 1991 to 1997. We randomly sampled 150 drug court participants from each stratum represented by the following periods: 1991-92,[3] 1993-94, 1995-96, and 1997 alone. This resulted in about 75 cases from each individual year, with the exception of 1997, from which we sampled 143 defendants (total n=692).

A special feature of the Multnomah County Drug Court study design was to employ two comparison groups of drug defendants for each time period selected at the point of entry into the judicial process shortly after arrest. The two comparison group strategy subdivided non-drug court participants into a) those who did not attend the Defender orientation and who did not attend the petition hearing to enter drug court (total n=401); and b) those who attended the Defender orientation prior to first appearance in drug court as well as the drug court petition hearing (first drug court appearance), but did not enter the drug court process (total n=401). The design employed two comparison groups for greater specificity based on the rationale that the two non-drug court groups were quite different, consisting of those not choosing or not entering court (though attending all required appearances) and those skipping all initial procedures at the outset and also not entering drug court (by design or default).

This retrospective sampling strategy (adjusted by the use of post hoc controls in comparative analyses of outcomes) was the only reasonable option available for designating comparison groups in Multnomah County, where all eligible defendants were referred to defender orientation prior to any further criminal processing. For drug court participants and comparison group defendants entering the court process from 1991 through 1994, the criminal justice outcomes follow-up covered one-, two- and three-year periods. For the 1995-96 cases, one- and two-year follow-up periods were employed. For those entering the processing in 1997, the follow-up period was one year.

The Clark County Drug Court Design: Our sampling approach in Clark County, designed to represent cases from 1993 through 1997,[4] was stratified by one-year periods. For each of the years 1993, 1994, 1995, 1996, and 1997, we randomly sampled about 100 drug court participants (total n=499) and 100 comparison group defendants entering the judicial process at the District Court arraignment stage (total n=510). The comparison group defendants were identified from overall entering felony drug cases and included mainly defendants who were not made aware of the drug court option and whose cases were processed in the normal manner.

[3] The 1991-92 sample was supplemented with an additional random sample of 96 cases upon discovering that treatment records for the earliest participants were lost when the program changed treatment providers after 11 months of operation.

[4] In the second phase of the research, we sampled from 1998 as well to permit a one-year follow-up of participants enrolling in that year.

Thus, they were similar to drug court defendants who entered the process and who did pursue the drug court path. (In Las Vegas, the courts did not employ a central screening process that would have allowed us to distinguish among types of non-enrollees as we did in Portland.) The Las Vegas design incorporated one-, two-, and three-year follow-up periods marked from the point of entry in the judicial process (not from date of termination from the program) for 1993, 1994, and 1995 defendants, and one- and two-year follow-up periods for 1997 defendants.

Recidivism among Drug Court Participants One, Two, and Three Years after Entry

A basic assumption of the drug court model is that, compared with essentially similar drug offenders, drug court participants should reoffend less often and take longer to reoffend when they do.

Rearrest among Clark County Drug Court Participants and Non-Drug Court Defendants over One, Two, and Three Years

When all years are considered together (1993 through 1997), Clark County Drug Court participants recorded lower rates of rearrest for any offense at one, two, and three years from the point of entry into the drug court, compared to a similar, contemporaneous comparison group of drug defendants who did not enter drug court.

- At one year, 52 percent of drug court participants compared to 65 percent of comparison group defendants were rearrested; at two years, 62 percent of drug court participants versus 74 percent of comparison group defendants were rearrested; at three years, 65 percent of drug court participants versus 79 percent of comparison group defendants were rearrested.[5]

When the yearly cohort-specific findings are considered, the relative rates of rearrest vary by year—a pattern noted in the Phase I report which dealt only with one-year findings.

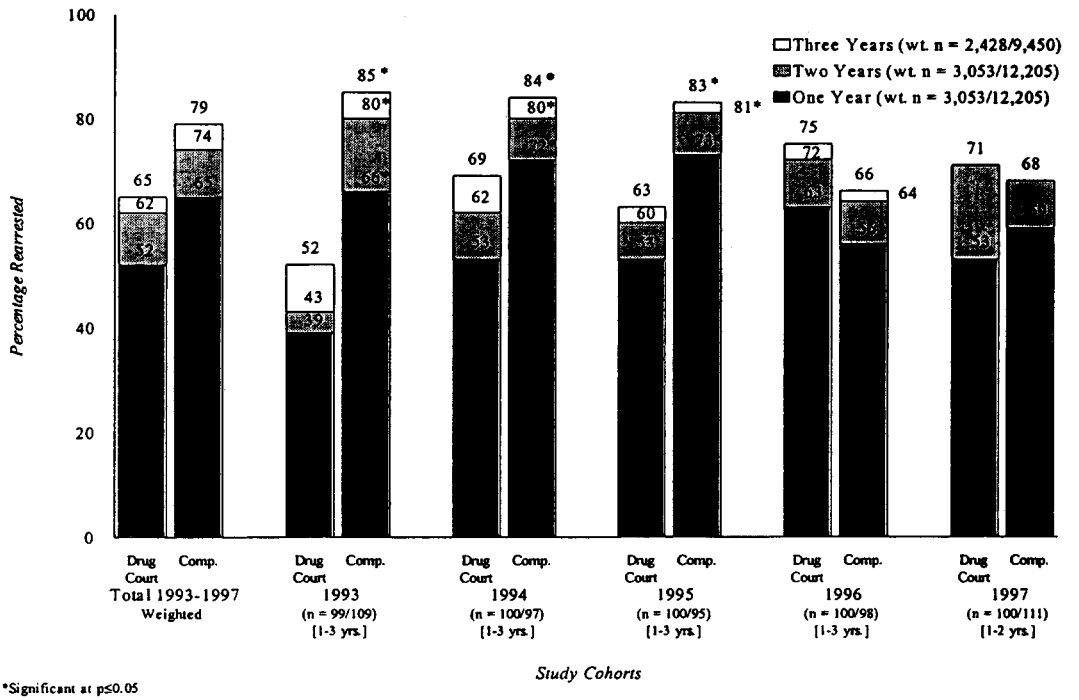
- Differences in rearrest between drug court participants and comparison group defendants were large through 1995, measured at one-, two- and three-year observation periods.
- However, in the 1996 cohort, drug court participants were rearrested more often than their comparison group counterparts (at each follow-up interval). For example, 75 percent of drug court participants entering in 1996 compared to 66 percent of comparison group defendants were rearrested within three years, measured from the date of entry into the drug court. In 1997, the one- and two-year rearrest rates started shifting back in the favorable direction.
- At one year, drug court participants (53 percent) were rearrested slightly less frequently than non-drug court comparison defendants (59 percent). At the two-year observation mark, a slightly greater proportion of the 1997 drug court participants (71 percent) than non-drug court defendants (68 percent) were rearrested. (Both differences were not statistically significant, however.)

[5] Note that in the Las Vegas study, one- and two-year follow-ups were conducted for all cohorts (1993-97), and three-year follow-ups were conducted for cohorts from 1993 through 1996. The overall statistics are based on weighted estimates from the stratified sample.

- Among 1998 drug defendants (not shown), the difference in first-year rearrest rates between drug court participants and non-participants was not statistically significant.

There were consistent and pronounced differences favoring Clark County Drug Court participants when drug rearrests were considered during all years and for all follow-up periods. Results for rearrests involving non-drug offenses are much more mixed. For non-drug offenses, drug court participants produce clearly lower rearrest rates only in the first study year cohort (consisting of defendants entering the court system in 1993).

Clark County (Las Vegas): (Any) Rearrest of Drug Court Participants and Comparison Group over One, Two and Three Years



*Significant at p≤0.05

Crime and Justice Research Institute

Rearrest among Multnomah County Drug Court and Non-Drug Court Defendants over One, Two and Three Years

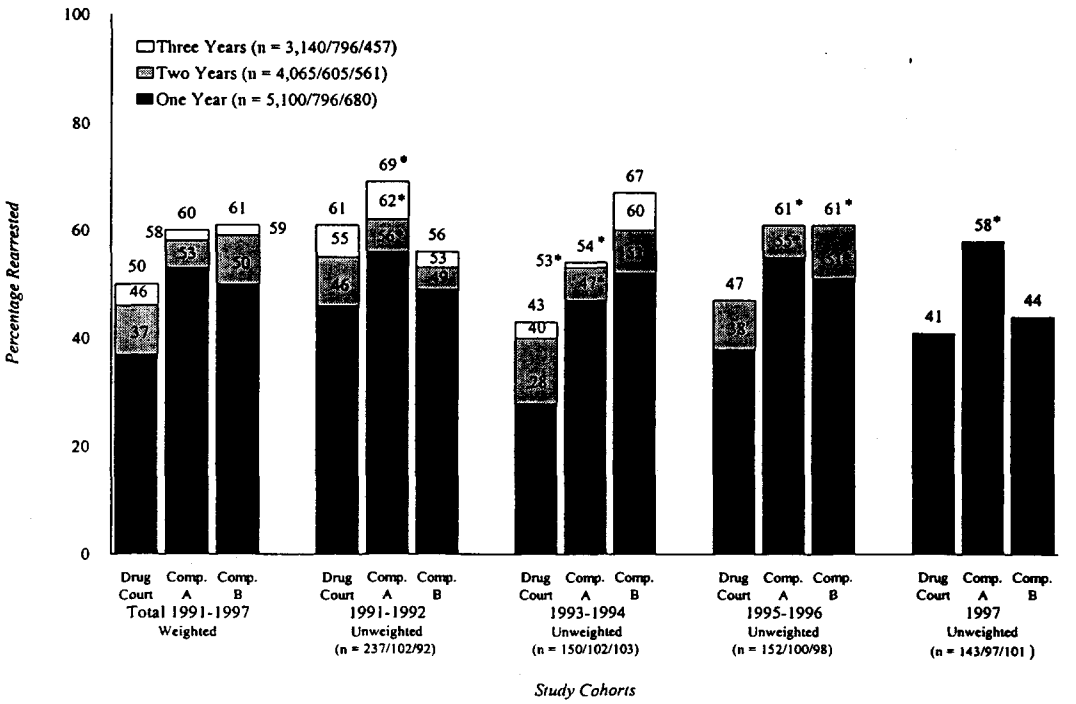
Overall, Multnomah County Drug Court participants were rearrested (for any offense at all) notably less often than their non-drug court counterparts.

- The largest difference was found one year from drug court entry (37 percent of drug court participants compared to 53 and 50 percent of the two non-drug court comparison groups).[6]

[6] Cohorts from all time periods were measured over one year, cohorts entering the system from 1991 through 1996 were followed for two years, and cohorts from 1991 through 1994 were measured for a three-year follow-up.

- Although the differences were smaller, proportionately fewer drug court participants were rearrested over two and three years as well, when all cohorts were considered together (1991-97).

Multnomah County (Portland): (Any) Rearrests of Drug Court Participants and Comparison Group Defendants over One, Two, and Three Years



*Significant at p = ≤0.05

Crime and Justice Research Institute

When the defendant cohorts for the separate time periods are examined separately, the differences between drug court and comparison group rearrest rates varied notably.

- Using the one-year observation period as a measure, drug court participants were rearrested less frequently than Comparison Group A drug defendants (those failing to attend first drug court appearance) in each time period studied (1991-92, 1993-94, 1995-96 and 1997).[7]
- The rate of rearrest during the first year among drug court participants was significantly lower than the rates among Comparison Group B defendants (those who attended a first drug court session but did not enter treatment) only in the 1993-94 and 1995-96 cohorts.
- They were not significantly better than Comparison Group B defendants during the 1991-92 and 1997 cohorts.

These variations maintain for the two-year follow-up period (through 1996 cohorts only) and the three-year follow-up period (through 1994 cohorts only). The comparatively lower rates of rearrest among drug court participants are maintained when rearrests for drug offenses are considered and are somewhat more mixed when only non-drug offenses are considered. Overall,

[7] In each case the chi square statistics were significant at .05 or less.

however, these findings suggest a positive impact of the Multnomah County Drug Court on rates of reoffending among participants when compared to non-drug court counterparts.

Implications of Comparative Public Safety Outcomes

On a general level, the findings from both of the drug court jurisdictions studied support the view that drug courts fulfill their promise as a crime control tool. However, as we found in preliminary analyses of the data from the two sites in the Phase I report, the impact of the drug courts, at least as measured through rearrests of its participants, varies over time (by program year), type of rearrest offense, and length of follow-up period.

The fact that the two drug courts showed variation in their impact from year to year raises questions about factors that may account for it. We have conceived of several possible explanations for these varying outcomes:

a) Changes in the contexts or environments within which the drug courts operate
b) Changes in the relative impact of particular operational elements of the drug courts
c) Aspects of the research design or analytic method

This research has considered each of these possibilities.

In the first report, we explored the impact of a variety of outside or contextual factors on the operation of the courts (input and output measures) over time (Goldkamp et al., 2000; Goldkamp, White, & Robinson, 2001b). We found, for example, that in Clark County the shift in prosecutorial philosophy from diversion to conviction-based entry into the drug court may have explained the differences noted beginning in 1996. In Multnomah County, we found that the shift away from assignment of a single drug court judge to rotation of many judges and to non-judges may have had an impact on outcomes. In short, factors internal as well as external to the courts may have accounted for some of the outcomes we noted. In the Phase II research, we considered the relevance of these explanations for understanding the evaluation results.

Controlling for Sample Differences, Risk, Time at Risk, and Time Free

One of the major challenges in carrying out a retrospective evaluation of the two drug courts over time was the development of an appropriate comparative framework. In a prospective or ongoing evaluation, an experimental design is preferred because it produces the "best" (most similar) comparison groups and addresses most questions of internal validity. However, because a "retrospective experiment" is logically impossible (an experiment is by definition a prospective rather than retrospective exercise), comparison groups that are suitable must be identified, but they are likely to offer less than "identical" comparisons against which the progress of the drug court groups can be gauged. We considered matching samples of non-drug court defendants to drug court participants in each site for each of the successive study periods. However, we were limited in the type of information available that would be useful or appropriate for matching, and, hence, relied on random samples of ostensibly similar felony defendants in each site.

To examine the possibility that the findings could be explained by differences or changes in the comparison samples over time, rather than the impact of the drug courts themselves, the analysis contrasted the successive paired samples (comparison and drug court) over time on basic descriptive attributes. A number of key differences were identified when drug court and non-drug court samples were contrasted in both sites. In each case we carried out a multivariate analysis (logistic regression) to determine whether the sample indicator (drug court versus non-drug court) was a significant predictor of rearrest, once identified sample differences were taken into account (controlled).

In addition, the comparative analyses of drug court participants and comparison group defendants in Clark and Multnomah Counties controlled for the *a priori* risk attributes of participants and comparison group defendants, and for time at-risk and time free in the community. The findings from each type of analysis were remarkably consistent.

- In Clark County, the drug court produced significantly lower rearrest rates when all data (1993-97) were considered together and when the 1993, 1994, and 1995 cohorts were examined separately.
- The significant effect extended to 1997 when rearrest for drug offenses was considered. When non-drug offense rearrests are the focus, a drug court effect was found only in 1993 and over two years.
- In Multnomah County, there appeared to be an overall effect (1991-96) in the time free analysis and a specific cohort effect linked to 1993-94 drug court participants in all analyses.[8]

We conclude that the findings identified in the comparative analysis of rearrest were not explained by the sample design or analytic methods employed and, therefore, appear to represent real differences between drug court and comparison groups for the periods indicated.

Treatment Performance by Participants Two Years after Entering Drug Court

One of the recognized aims of the drug court approach is to promote more effective substance abuse treatment of drug offenders based on a synergism between hands-on judicial supervision and carefully adapted treatment services. In large part, the drug court treatment process was conceived to reduce criminal behavior through reduction and elimination of substance abuse among its participants—based on the assumption that reduced substance abuse produces reductions in criminal behavior.

Increasing Participation in Substance Abuse Treatment among Offenders

A first important—and overlooked—assumption of the drug court treatment model is that, by its existence, the drug court enrolls offenders in treatment services to a degree substantially more than would otherwise have been the case without drug court. The logic of the

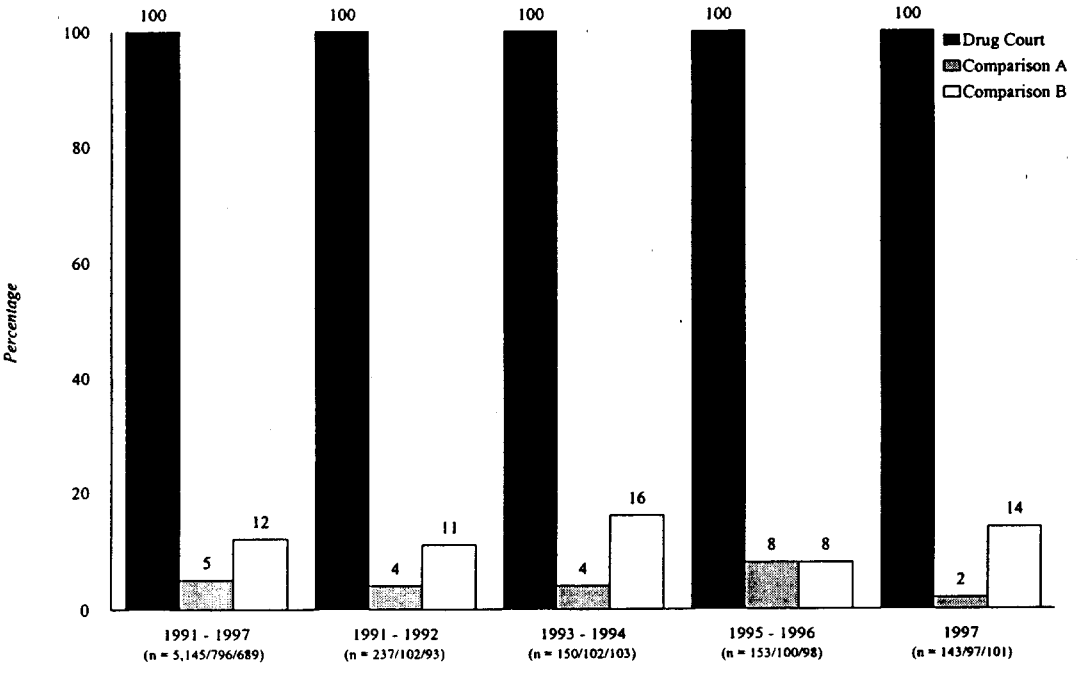
[8] We considered whether combining Comparison Groups A and B into an undifferentiated comparison group in Portland would have produced different results. In fact, looking at a two-year follow-up period, the only drug court effect found was overall (1991-96) for drug offense rearrests and this was not found when specific cohorts were examined.

drug court model implies that, because of the assumed crime reduction effect of substance abuse treatment, defendants exposed to treatment through drug court should perform better (commit less crime) than similar defendants who are not. Regardless of the ultimate success of the treatment process, there is a critical threshold assumption that the drug court is successful in placing offenders in treatment who would otherwise rarely enter substance abuse treatment.

Few studies have access to comparison group treatment data. In Multnomah County, however, we were able to examine the level of enrollment in treatment among non-drug court comparison group defendants by consulting State Health data. The Client Process Monitoring System (CPMS) data records all episodes of treatment for all individuals supported through public funds in the State of Oregon during the years of the study. To determine the extent to which comparison group defendants may also have entered treatment (using public funds) on their own and not through the drug court, we searched the State Health records to find evidence that they had paid episodes of treatment.

As a result of trying to match comparison group defendants to State treatment records, we found that a small proportion (five percent of Comparison A and 12 percent of Comparison B) overall, did enter treatment—with proportions varying by cohort. Nevertheless, compared with the 100 percent exposure to treatment achieved by those enrolled into drug court, only a relatively small number of drug offenders would find their way into needed treatment. These data support the threshold assumption that drug courts (at least as illustrated by the case of the Multnomah County Drug Court) do indeed dramatically increase the placement of drug-involved felony offenders in treatment.

Exposure to Substance Abuse Treatment among Multnomah County Drug Court Participants and Comparison Group Defendants, 1991 - 1997*



*[Note: By definition, all drug court participants were exposed to treatment. The Client Process Monitoring System (CPMS), a state health database, was used to document treatment exposure among comparison group defendants through records of publicly funded treatment episodes.]

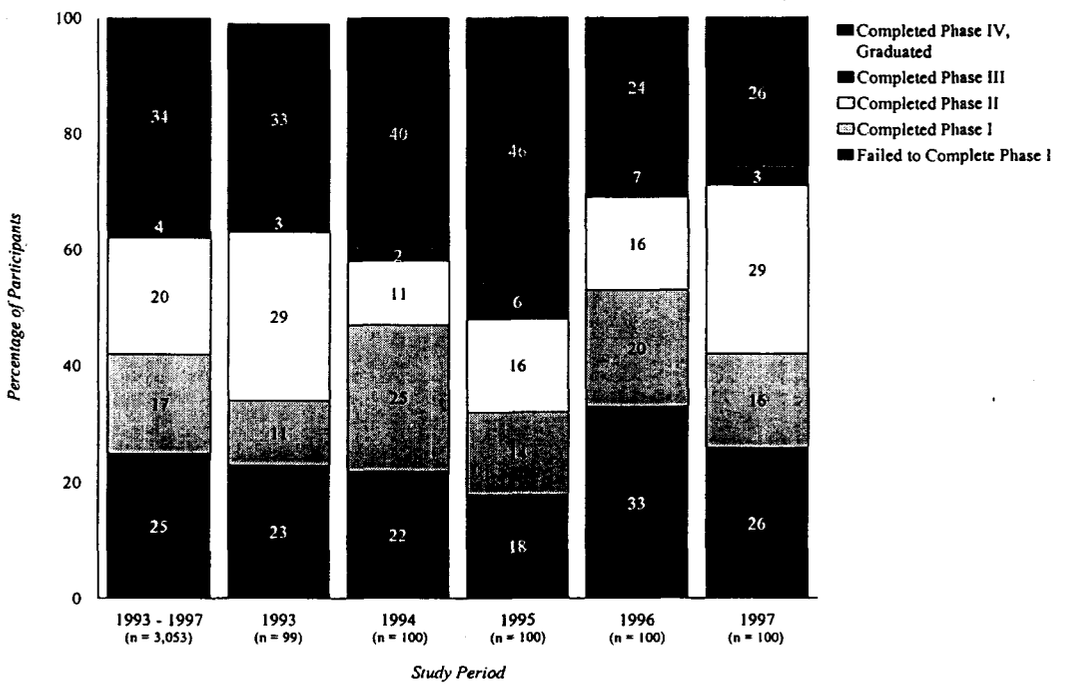
Crime and Justice Research Institute

Progress through Treatment: Early Termination

In both sites, the percentage of entering participants successfully graduating from the drug courts decreased over time—from nearly half at the peaks to roughly one-fourth toward the end of the respective study periods. These remarkably parallel findings have different explanations, however.

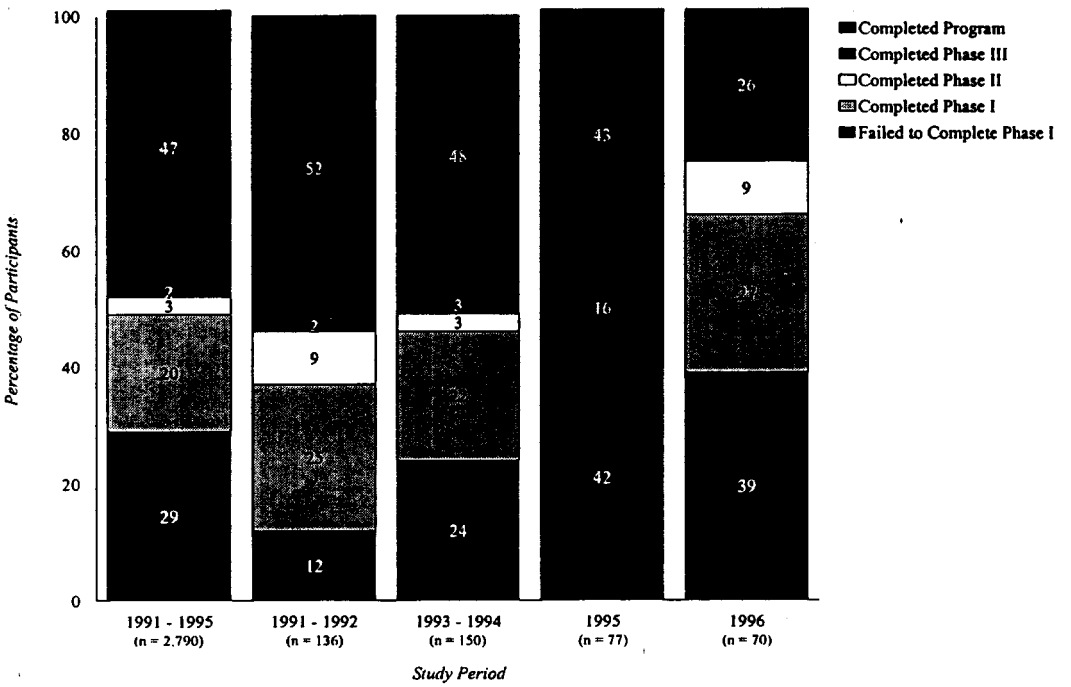
- In Clark County, the graduation rate expanded from about one-third of entrants to 46 percent in the 1995 cohort and then dropped dramatically to about 24 percent as the new conviction-based admission criteria went into effect. As we have seen in the rearrest analysis, this shift was associated with higher risk participants, longer times to graduation, and lower rates of graduation.
- In the Multnomah County Drug Court, the halving of the graduation rate from 1991-92 to 1996 was associated with a major shift in judicial approach, including use of non-judge referees, frequent rotation of a large number of judges and a shift in termination policy restricting the flexibility shown previously with defendants in the early stages of treatment.

Most Advanced Treatment Phase Completed by Clark County Drug Court Participants during Two-Year Observation Period, 1993 - 1997, by Year



Crime and Justice Research Institute

Most Advanced Treatment Phase Completed by Multnomah County Drug Court Participants during Two Year Observation Period, 1991 - 1996



[Note: From the STOP program's inception to July 1996, the treatment process consisted of four phases. Subsequently, the process was revamped to include three phases. Participants from 1995 and 1996 have been separated to accurately reflect the shift.]

Crime and Justice Research Institute

When multivariate analyses sought to identify the factors predictive of one measure of treatment progress, early termination (within six months) of participants for non-compliance, the results were modest in Clark County and more successful in Multnomah County. In Clark County, other factors being equal, having an alias and testing positively at the first treatment appointment (indications of prior system involvement and active drug use) were associated with a greater probability of early termination from the program, while being married or living with a significant other reduced such prospects. In the Multnomah County Drug Court, being non-white (African-American or Latino), having prior arrests for serious property offenses, and having prior failures to appear in court were related to a greater likelihood of early termination from drug court, while testing positively for marijuana or cocaine (or admitting to its active use) at assessment was associated with a smaller probability of early termination, other factors constant.

The finding that, controlling for other factors, being non-white decreases a person's chances of staying in treatment may be explained by the different patterns of drug use and crime associated with whites and non-whites. The finding that marijuana users will have a better chance of staying in treatment, net of other factors, suggests that the non-marijuana users in drug court will have a more difficult time. Other drugs include methamphetamines, heroin, and crack cocaine—all seen as more challenging for treatment than marijuana use. The race/ethnicity effect in Multnomah County, which reappears in analyses of graduation, suggests that special issues may be present relating to differences among groups that influence chances of staying in treatment and, consequently, ultimate success. Geographic analyses of neighborhoods and focus

group discussion with drug court participants in Multnomah County (Goldkamp et al., 2001b) support this interpretation of these predictive findings.

Time in Treatment

A related measure of treatment outcome, time in treatment, is usually viewed as related to treatment success (the longer in treatment, the better the treatment success).

- In Clark County, the time in treatment associated with participants remained high over the study period (median, 361 days), with the time in treatment increasing only slightly from the one- to the two-year follow-up.
- The time in treatment was lower among Multnomah County's participants overall (median, 236 days) for the study period through 1996, with a peak in the 1993-94 cohort and a sharp drop in the 1995-96 cohort (median, 209 days).

In Clark County, we speculate that as the court population shifted to convicted persons on probation or suspended sentence, participants were less inclined to violate drug court conditions out of fear of revocation compared to earlier diversion participants who did not directly risk jail. In Multnomah County, as the shift in judicial assignment and philosophy (and to automatic early termination policies) occurred, the fact that more participants were terminated translated into shorter average periods in treatment for drug court participants overall.

When we tried to predict time in treatment among Clark County participants, analyses simply could not produce a significant or useful model. We conclude that length of time in treatment was rather consistent (the dependent variable lacked variation) and that background or descriptive factors we had available did not shape the likelihood of time in treatment significantly.

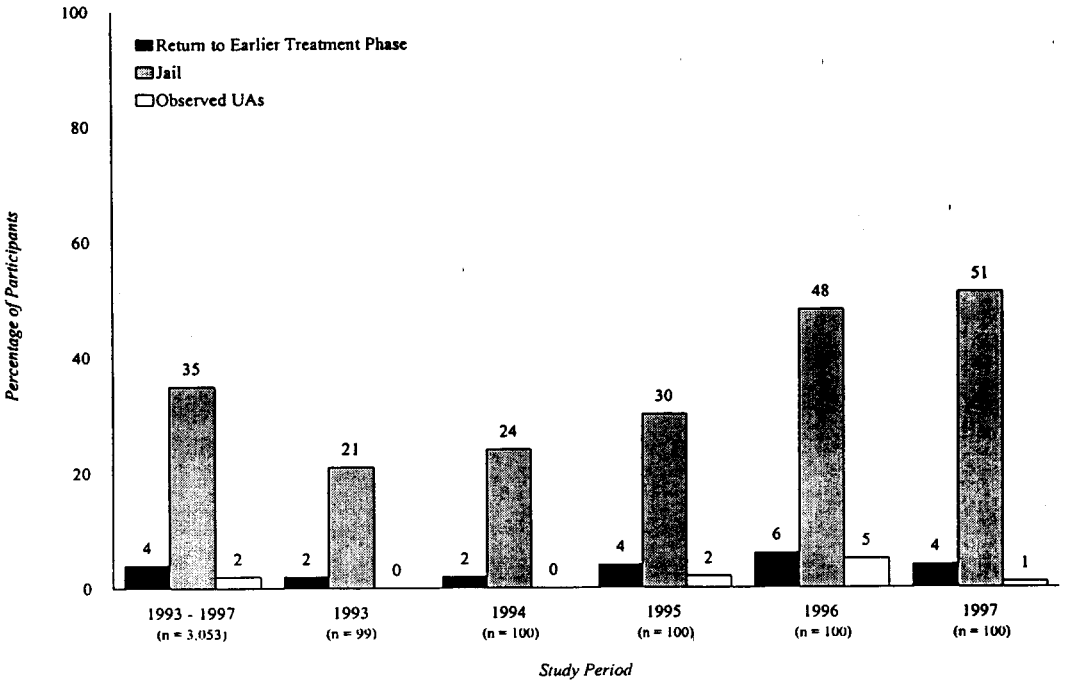
A modest predictive solution was obtained when examining the Multnomah County data: having no prior felony arrests and having no positive tests at entry to treatment increased the length of time in treatment. This is consistent with the findings predicting early termination; participants with no prior histories and no positive test results have greater success in adhering to the treatment regimen, while higher risk participants have a more difficult time. This appears to suggest that the lowest risk, least drug-involved are more likely to succeed in drug court.

Use of Sanctions and Confinement

Over two years from drug court entry, as sanctions for noncompliance, Clark County Drug Court participants were jailed in steadily increasing proportions from 1993 through 1997.

- Overall, 35 percent of drug court participants were confined at least once as a result of a sanction.
- The overall rate masks a remarkable increase over time from 21 percent of the 1993 cohort to 51 percent of the 1997 cohort.

Types of Sanctions Imposed on Clark County Drug Court Participants during Two-Year Observation Period, 1993 - 1997



Crime and Justice Research Institute

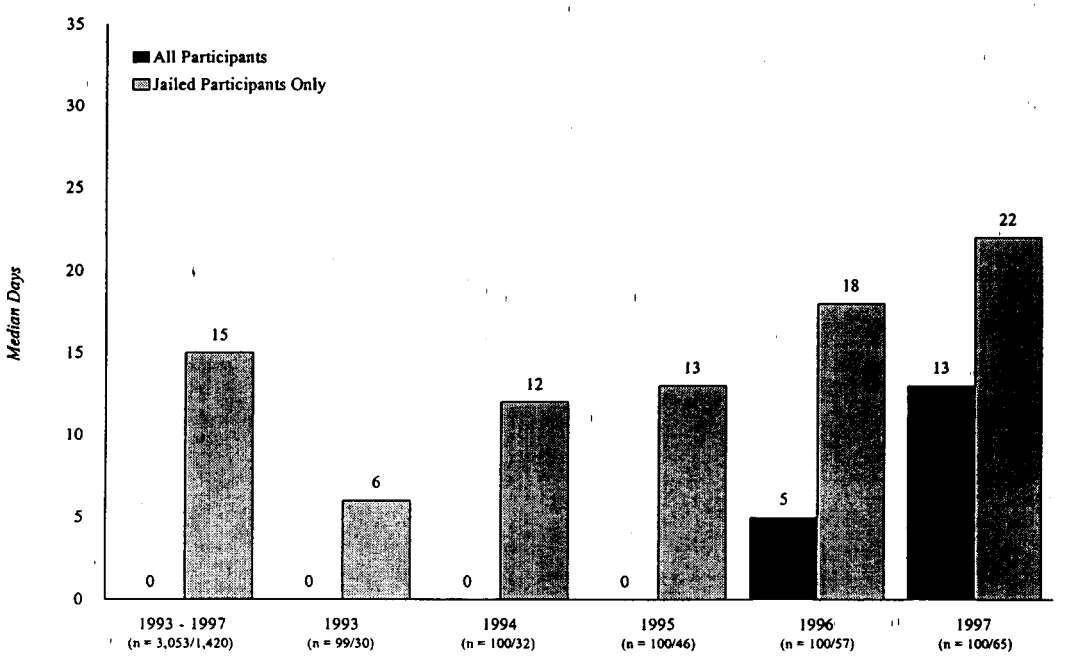
The average (median) time spent in confinement as a result of drug court sanctions among Clark County Drug Court participants also increased over the years studied as the court shifted to the policy of admitting mainly participants who pled guilty.

- During the two-year follow-up, participants overall (1993-97) spent a median of zero days in jail.
- However, days in confinement ranged from a median of zero days in jail among the 1993, 1994, and 1995 drug court participants, to a median of five days among 1996 participants and 13 days among 1997 participants during the 24 months from entry.

When only those who were confined are examined (rather than participants as a group, some of whom were never confined), the increasing trend in median length of confinement can be seen more clearly.

- The median number of days in confinement increased from six days among the 1993 participants to 13 days in 1995 and 22 days in 1997, more than a threefold increase in the average length of confinement.

Confinement of Clark County Drug Court Participants Directly Attributable to the Drug Court during Two-Year Observation Period, 1993 - 1997



[Note: Confinement includes both Drug Court sanctions and Drug Court bench warrant confinement.]

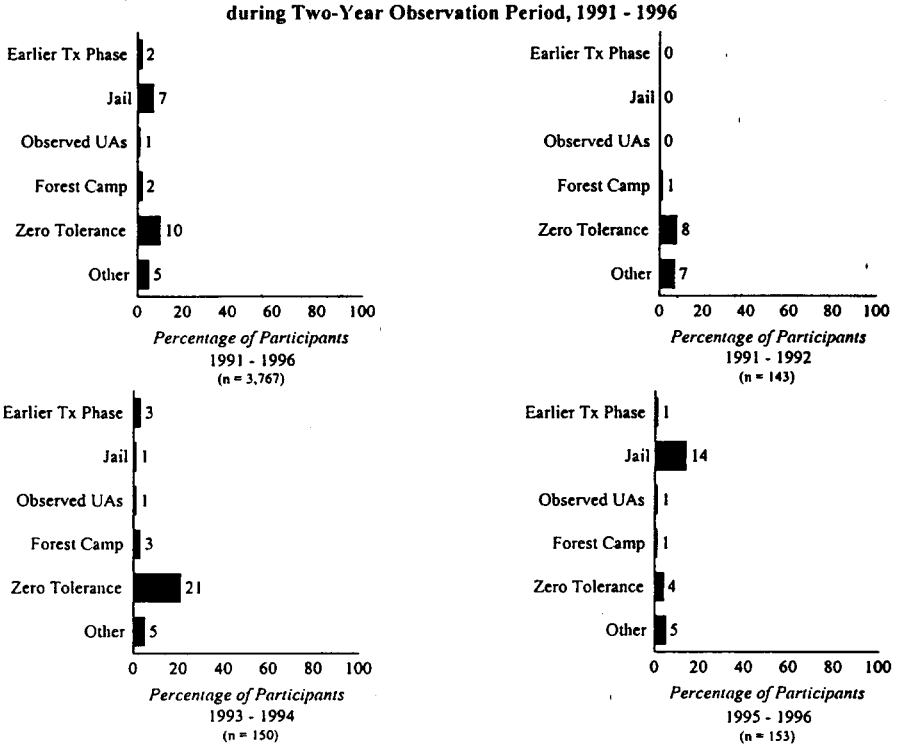
Crime and Justice Research Institute

A variety of sanctions were employed by the Multnomah County Drug Court during the two-year follow-up.[9] Overall, seven percent of participants received a jail sanction, and ten percent were placed on Zero Tolerance. Notably, the use of jail increased sharply in 1995-96 to 14 percent, up from one percent in 1993-94. The increased use of jail in later years is likely tied to the change in program leadership (assignment of a non-judge referee) and subsequent modification of program rules eliminating much of the tolerance that had characterized the program in previous years.

Overall, there was little change in sanctioning patterns in the Multnomah County Drug Court from one to two years, suggesting that most of those participants actively engaged in treatment during the second year were meeting program requirements and did not experience sanctions.

[9] We were unable to document confinement time attributable to drug court over the two-year follow-up period.

Types of Sanctions Imposed on Multnomah County Drug Court Participants during Two-Year Observation Period, 1991 - 1996



[Note: Although the Zero Tolerance program was not created until January 1994 under Judge Robinson, treatment provider records indicate its use in 1991 and 1992.]

Crime and Justice Research Institute

Percent of Expected Treatment Actually Attended

When treatment performance was measured as the percentage achieving a high rate of attendance (75 percent of expected or presumptively scheduled treatment), about half of the Clark County participants overall achieved that rate, with minor variation over time. The overall high-attendance rate was lower among Multnomah County participants at about 39 percent overall, but with a sharp decline from about half of the earlier participants to 31 percent of the 1995-96 participants. (Note that these percentages are based on all participants, including those dropping out early as well as those succeeding in treatment.)

Multivariate analysis of treatment attendance in Clark County showed that persons who were married or living with a significant other, had no prior theft-related arrests, and had no positive tests at assessment were most likely to achieve 75 percent treatment attendance. Persons with prior drug convictions, negative tests for marijuana, but positive tests for other drugs had a much lower probability of high attendance.

- Our analysis also showed that for these higher risk participants the method of entry into the drug court also mattered: persons entering through diversion had a higher probability of 75 percent attendance than persons entering through conviction (entry of a guilty plea).

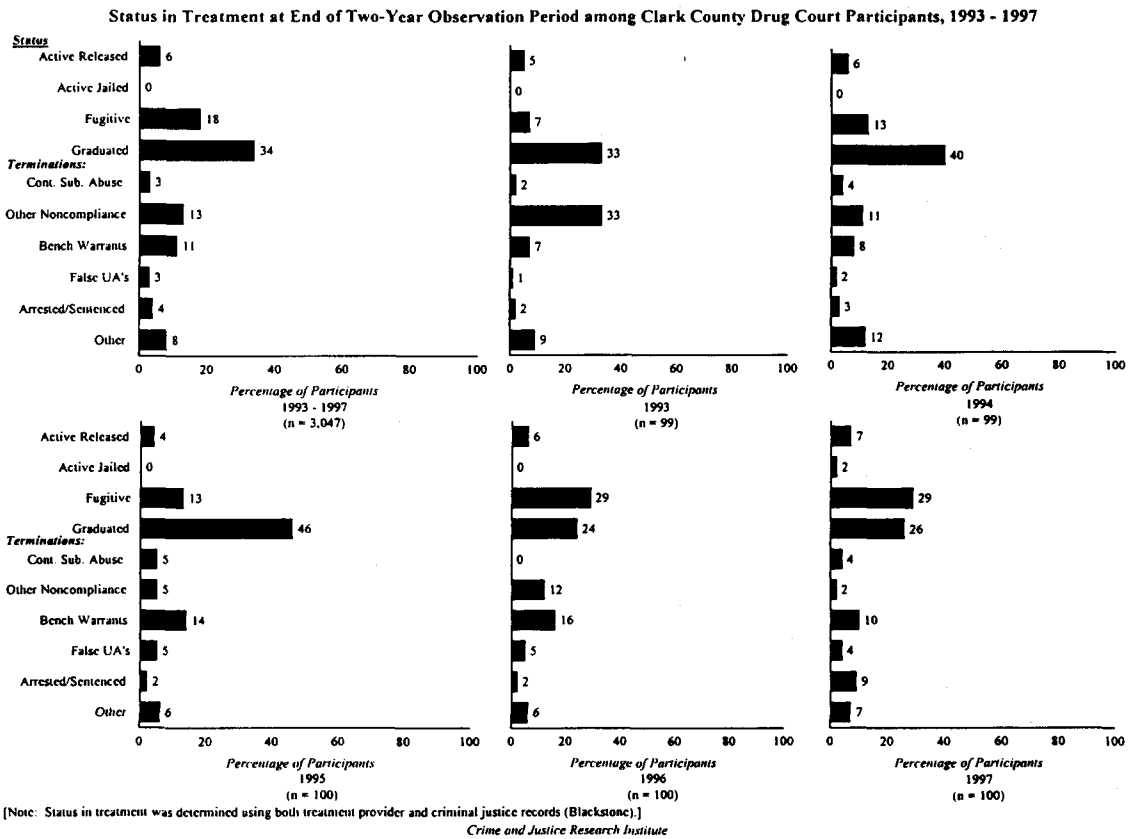
This finding is significant in the context of the shift toward guilty pleas as the primary mode of entry into the drug court in Clark County. It shows that the method of entry appears to

make a specific, as opposed to a general difference, net of the effect of other factors. Persons who tested positively at assessment, who did not test positively for marijuana, who had no prior drug convictions, and who entered through diversion had a lower probability of 75 percent attendance (34 percent) than their counterparts who entered drug court through plea (51 percent high attendance).

In Portland, having prior felony arrests, recent prior FTAs, indications of heroin use, and positive tests at assessment all are associated with a lower probability of high attendance, while being over age 40 and having indications of marijuana use increase the likelihood of 75 percent attendance.

Participants' Status in the Drug Court at the End of Two Years

In Clark County, the overall profile of drug court cases from 1993-97 showed that about one-third had successfully graduated within 24 months or less, 42 percent were in an "unfavorable" status resulting in termination from the drug court at the two-year mark, another six percent were still active and in the community, and 18 percent were in fugitive status.



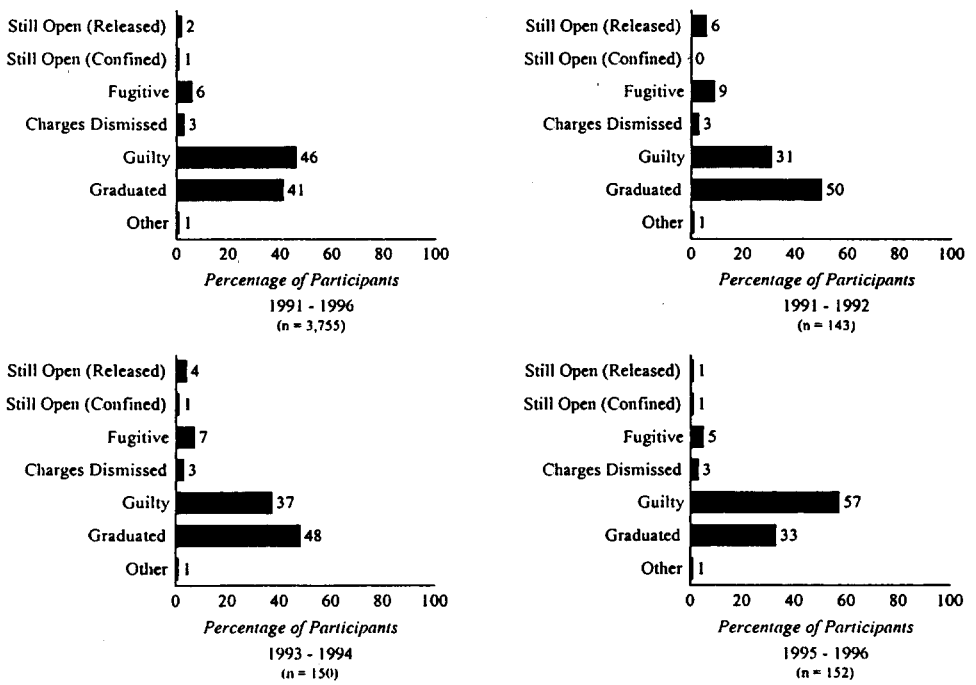
These patterns shifted when cohorts of Clark County Drug Court participants were examined over time.

- As we have seen, graduation rates decreased to about 24 percent and 26 percent of participants entering in 1996 and 1997.
- The other important change appears to be in fugitive status: from 7 percent of 1993 participants in fugitive status at the end of two years, the rate had increased roughly four-fold to 29 percent of participants entering the drug court in 1997.

Simplified into "favorable" (graduated or still active in treatment and not in jail) and "unfavorable" (all other statuses) drug court statuses, from the peak of 50 percent of Clark County participants in a favorable status in the 1995 cohort, the rate dropped markedly to only 30 and 33 percent of the 1996 and 1997 participants at the end of two years.

The majority of participants of Multnomah County Drug Court participants overall (1991-96) had their cases closed and their relationships with drug court completed by the end of the second year. Two percent of cases were still open (with participants on release); this changed little over the three time periods shown. Another one percent of cases overall were still open with the participant in confinement, again with little change over time. A small proportion of participants were in fugitive status at the two-year mark, with an additional small proportion having charges dismissed.

Status of Cases among Multnomah County Drug Court Participants at the End of a Two-Year Observation Period, 1991 - 1996



[Note: Two-year case status was determined using treatment provider and court data. There are 45 participants who are still active in treatment according to InAct data, but are considered graduates in court data. The discrepancy is likely a result of outstanding treatment fees and/or delays in updating treatment files. In order to be consistent, those 45 participants are considered graduates here and elsewhere in the report.]

Crime and Justice Research Institute

What did appear to change over time was the proportion of cases successfully closed due to graduation from the program:

- 50 percent of 1991-92 participants, 48 percent of 1993-94 participants, and 33 percent of 1995-96 participants graduated within the two-year observation period.
- While the successfully closed cases (graduated/dismissed) decreased proportionately, the proportion with convictions as the final case status increased from 31 percent among 1991-92 participants and 37 percent among 1993-94 participants to more than half (57 percent) of the 1995-96 participants.

This shift in graduations and guilty verdicts in 1995-96 is also explained, at least in part, by the change in judicial leadership and program philosophy in January 1996, when program rules became more stringent and less tolerant of participant setbacks.

Predicting Graduation

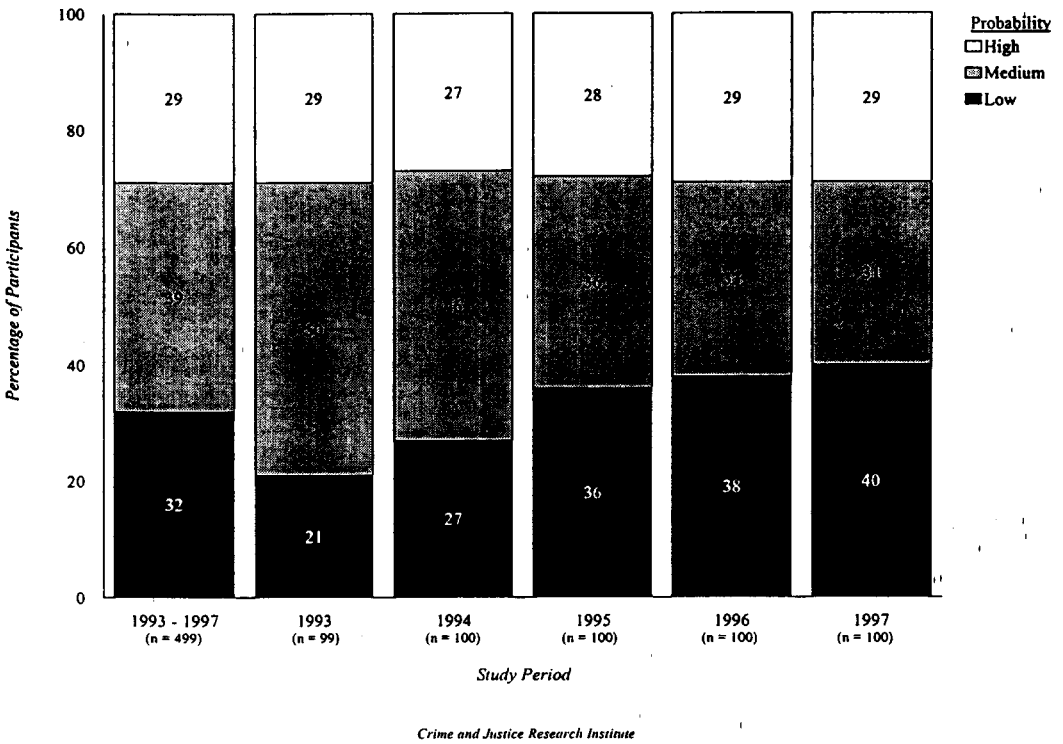
We noted previously that the graduation rates of Multnomah County and Clark County drug court participants experienced similar drops to around one-third and one-fourth of entrants toward the end of the study periods.

Among Clark County participants, graduation was predicted by prior arrests, prior convictions, positive drug tests at assessment, race/ethnicity, gender, and method of entry into the court.

- Among those with no recent prior arrests and no initial positive drug tests, entering the drug court through guilty plea was associated with a lower chance of graduation than through diversion.
- The race/ethnicity and gender of participants was predictive of graduation probability in the following specific way: persons with prior arrests, who were unemployed at assessment, and who were non-white had a lower probability of graduation (11 percent) than of similar white participants (26 percent).
- Among those same white participants, women were less likely to graduate within two years (17 percent) than men (34 percent).
- Results were used to develop a predictive risk classification of graduation, overall and by year. We see again that higher risk participants entering in post-conviction statuses after 1995 were associated with a lower probability of graduating.

These findings point to effects related to method of entry into the drug court as well as race and gender in specific categories of participants that influence the prospects for graduation from drug court. Given our other findings and discussions with drug court participants in focus groups in Clark County, we interpret these findings to mean that race and ethnic status are surrogate measures for the kinds of drug, crime, and other problems experienced by participants in the different communities where they reside. They therefore pose a challenge for the Clark County Drug Court in developing responses that might best address the needs and experiences of participants in a culturally relevant and problem-specific way to eliminate chances that graduation can be influenced by questionable criteria.

Probability of Graduation during a Two Year Observation period among Clark County Drug Court Participants, 1993 - 1997, by Year (CHAID)

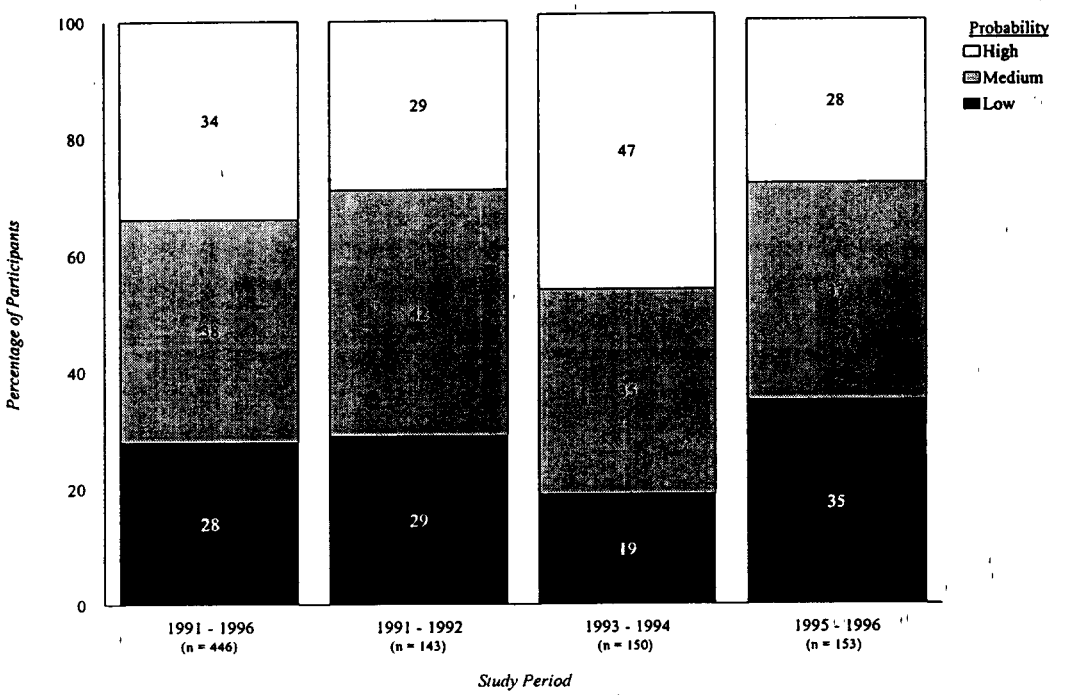


Multivariate analysis on the Multnomah County data identified prior felony arrests, prior misdemeanor convictions, marijuana use (measured at assessment), and participant race as predictors of graduation from drug court.

- It is not surprising that, given our other findings, persons with prior felony arrests and prior misdemeanor convictions should have a lower probability of graduation, or that persons with no prior felony arrests and positive tests for marijuana should have a higher likelihood of successful completion of drug court.
- However, in the specific group including participants with no prior felony arrests and no positive tests for marijuana, the fact that race/ethnicity is a differentiator of graduation prospects is again problematic. White participants in this category show a much higher graduation probability (48 percent) than non-whites (26 percent).
- A predictive classification of graduation probability shows a sharp decline in percentage of high-risk graduation in 1995-96, matching earlier findings.

It is our interpretation of the Multnomah County data that the race effect in this instance is also linked to drug use and other factors associated with the neighborhoods in which participants of different racial and ethnic groups resided. Explanations for this race difference in the probability of graduation will need further examination by the drug court to consider methods for addressing the special issues that may be associated with non-whites in the category identified.

Probability of Graduation during a Two-Year Observation Period among Multnomah County Drug Court Participants, 1991 - 1996



Crime and Justice Research Institute

PART TWO Drug Court Operations: Selected Issues

Courtroom Workload as a Measure of Drug Court Development

The assumption from the drug court model that drug courts make special use of the criminal courtroom has several implications. One general assumption about courtroom use is that the drug court is expected to relieve other criminal courts of some significant portion of the drug-related caseload. By handling the drug court eligible cases, the model would predict, the introduction of the drug court would have a positive effect on the overall processing of cases as well as on related functions of the prosecutor and defense counsel. We examined this assumption in the Phase I report.

- In Clark County, the high-volume drug court enrolled about 20 percent of the kinds of drug cases that could have been eligible for drug court.
- In Multnomah County, the drug court enrolled about 50 percent of the total pool of eligible felony drug cases.
- Proportionate enrollment of the target population aside, in each location this represented about 700 persons per year in the peak years.

In this aspect, then, the two drug courts we studied did capture a substantial portion and number of cases that otherwise would have been handled through adjudication in other courtrooms like any other criminal case.

A second general expectation from the drug court model is that the nature of proceedings in the drug court courtroom would differ considerably from the normal courtroom. Proceedings would be more informal, more flexible, the participants would directly interact with the judge, the judge's role would be central and hands-on, and proceedings would be generally non-adversarial and intended to facilitate the treatment process.

To understand "what a drug court does," we examined the day-to-day business of the two drug courts by studying samples of their daily and weekly dockets over time. The content of the courtroom week, viewed over time, serves as a measure of the development or evolution of the drug courts from their early implementation stages to more advanced stages of operation as mature court programs.

Because the Clark County and Multnomah County Drug Courts had each been in operation for nearly a decade, it was simply not feasible to study all drug court sessions conducted over time. Instead, we sampled court sessions in each jurisdiction over time. The Clark County courtroom workload data were based on one week's worth of sessions selected from each month of each year (sampling all sessions in the same week of each month), from the start of the program in November 1992 through February 1999. In all, we sampled 76 week's worth of sessions or a total of 184 sessions over that period of time. We chose to sample by week rather than by individual session because, as the drug court developed over time, it expanded from one session per week to two sessions per week (in November 1993) and then added a high volume night session in December 1995 for clients who were employed and in good standing. We reasoned that the most appropriate way to study the drug court's workload

was to capture all of its business on a weekly basis, regardless of the number of sessions held in a week or number of cases heard in a specific session. In short, the courtroom study in Clark County focused on the drug court's weekly courtroom workload as represented by one week per month over the duration of its operation.

The approach taken to study the Multnomah County Drug Court workload was similar. We selected all sessions (morning, afternoon, and night) occurring in the third full week of each month from October 1994 through April 1999. Court dockets (from which we selected our sample and drew data) were not retained for the period prior to October 1994. The Multnomah County weekly courtroom workload data were based on a sample of 54 weeks including 236 sessions from this four and one-half year period of time. The period for which courtroom dockets were unavailable is significant because it represents the early stages of development of the Multnomah County Drug Court (which began operation at the end of 1991).

Two core characteristics of drug court workloads appear to be that[10]

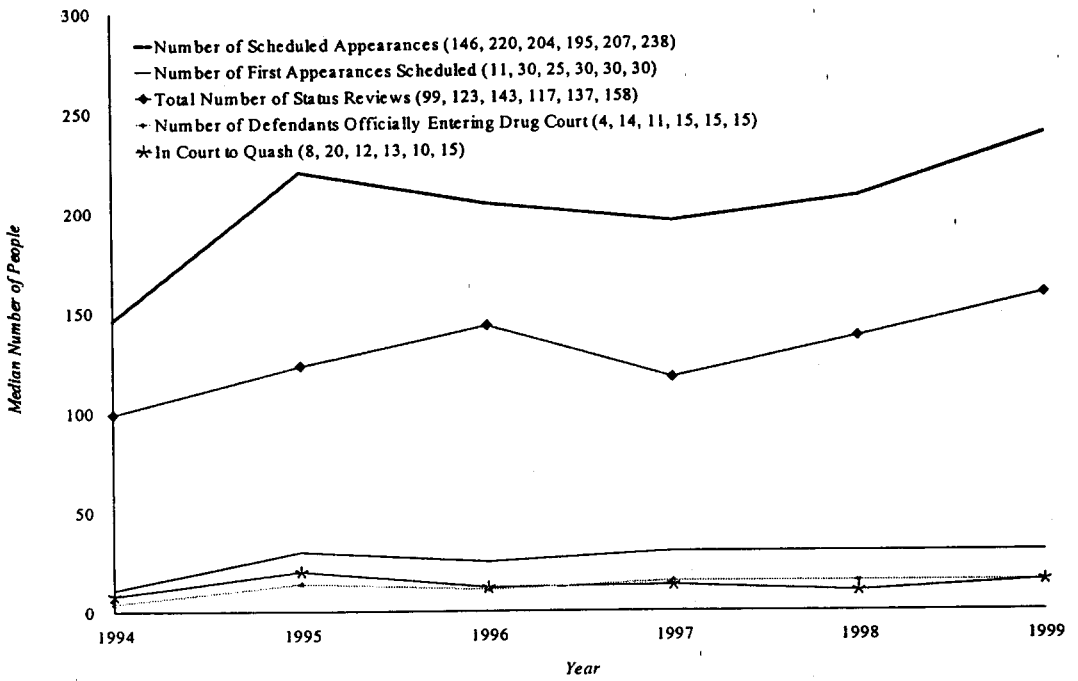
a) as the volume of matters scheduled for drug court grows over time, the large majority of scheduled matters involve status reviews, or appearances scheduled for the review of participants' progress in treatment; and
b) as the volume of scheduled matters increases, the ratio of status review to non-status review matters grows dramatically, from about one to one in 1992 during the start-up phase to almost ten to one at the beginning of 1999.

In other words, over time a small and slowly increasing volume of non-status matters (specifically new enrollments) produces an almost exponential increase in drug court volume.

In Clark County, the proportion of non-status review matters (including new enrollments) scheduled in the drug court over time dropped from 56 percent in the first sessions in 1992 (note that there were only nine sessions representing 1992) to 20 percent of the first full-year of appearances scheduled in 1993 and to five percent of scheduled matters in 1999.

[10] We base this statement not only on the current study but also on our study of the Philadelphia treatment court (Goldkamp et al. 1999, 2001).

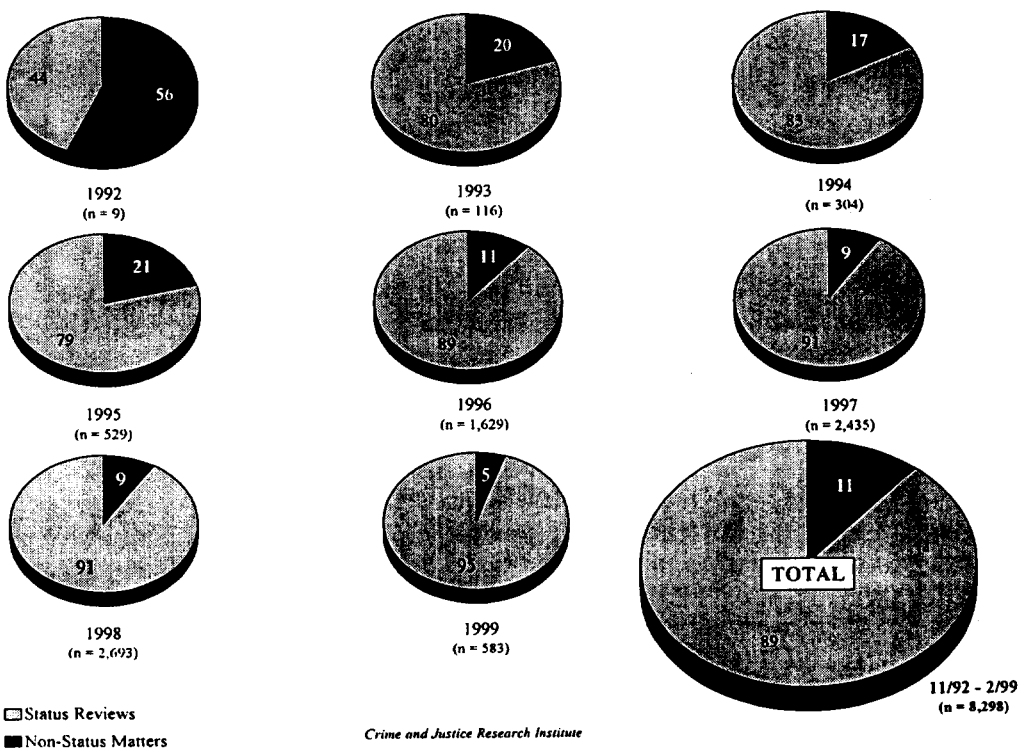
Median Weekly Workload in Multnomah County, by Year



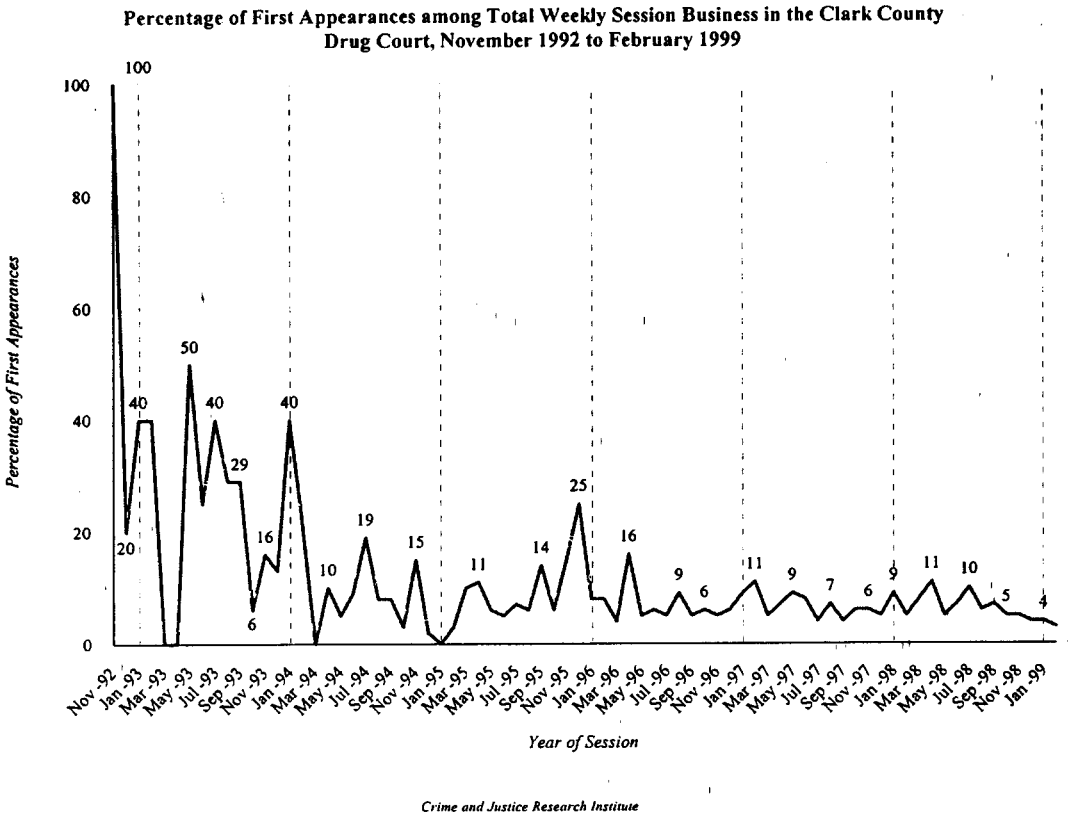
[Note: This analysis represents a truncated portion of the drug court workload history because data were unavailable for the years 1991-1993.]

Crime and Justice Research Institute

Role of Status Reviews in the Clark County Drug Court Workload, November 1992 to February 1999, by Year



Crime and Justice Research Institute



Analysis of the average weekly workload of the Multnomah County Drug Court from October 1994 though April 1999 also showed that the bulk of the court's weekly business includes status reviews of persons already in the drug court and that the increase in total workload is substantially driven by the increase in scheduled status reviews of active participants, from 123 in October 1994 to 169 in April 1999. Like the Clark County Drug Court workload data, the Multnomah County data show a widening gap between the number of status reviews and the number of first appearances (of potential enrollees) over time.

The analyses of the Clark and Multnomah County Drug Court workloads, framed as weekly profiles[11] of the matters set and disposed on the courts' dockets, have identified common themes across the two different jurisdictions. The workloads of the two drug courts grew increasingly to be dominated by the "business" of transacting status reviews, although other matters, such as enrolling candidates making their first appearances before the court and dealing with fugitives, were critical. In fact, the vast majority of the work of the drug courts in both locations had to do with status reviews. This finding is the logical extension of the ubiquitous drug court practice of requiring frequent visits to the courtroom by participants in treatment. The implication of this fact for the use of court and courtroom resources, however, is of great practical relevance to the operation of the criminal courts.

[11] The analyses were purposefully designed to focus on the content of the court workload, not on the volume. The growth in the volume of the cases dealt with by the drug courts is discussed in the Phase I report.

The steadily increasing share of the drug court workload accounted for by status reviews stands in sharp contrast to the much smaller and only slowly increasing portion of the workload made up of new cases involving candidates appearing for the first time. To varying degrees, both jurisdictions showed increasingly disparate ratios of status reviews to new admissions as the courts operated for longer periods. In other words, while a steady portion of new cases—peaking at around 25-35 cases per week in both sites—were channeled away from the traditional criminal caseload, the courtroom workload generated increased almost exponentially.

An implication for the larger criminal court system is that the drug courts do channel a substantial and relatively stable number of cases away from the normal adjudicatory process, but in so doing, require increasing courtroom resources (courtroom workload) to handle the far greater number of hearings or appearances required to "resolve" each case.

A second implication of this finding is that, in the real and practical world of the criminal courts, drug courts can or naturally may tend to reach a sort of "imbalance ratio," or a point at which the disproportion between status reviews and the processing of new cases into the drug court system become dysfunctional (the court is only handling existing cases and soon depletes its population for lack of sufficient new cases) or too resource intensive (too few cases from the criminal caseload are dispatched at too high a cost in resources).

Judicial Staffing and Its Effect on Participant Outcomes in Multnomah County

From its beginnings, the drug court innovation was about a new, unorthodox, hands-on role of the judge that represented a major departure from traditional judicial proceedings. A major assumption of the drug court approach was that its effectiveness depended on the special role of the judge as facilitator, supervisor of treatment, arbiter, and guarantor of accountability among drug court participants. As drug courts have proliferated, they have raised important resource and management questions for the administration of criminal courts. The question of whether the dedication of a single drug court judge (and courtroom) is really necessary for a successful drug court effort remains an important question that goes to a core assumption of the drug court model.

The unique history of the Multnomah County Drug Court provided a special opportunity to examine this assumption of the drug court model in what amounts to a "natural experiment"—or more accurately perhaps, a "natural quasi-experiment." The special opportunity is presented by the fact that the Multnomah Court did operate under different judicial staffing approaches over the period covered in this evaluation. The history of judicial staffing of the Multnomah County Drug Court includes periods in which single drug court judges, a non-judge referee, and multiple judges in rotation presided in the drug court.

The question posed for the research was whether differences in judicial staffing of the drug court were related to participant outcomes.[12] We chose to address this question by recording the number of different judges (or non-judges) to whom participants were exposed

[12] Note that we examined the impact of the shift in judicial assignment on court operation in time series analysis in the Phase I report.

(presiding over sessions they attended) while they were progressing through the drug court program.

- Most participants (90 percent) who entered the Multnomah County Drug Court between 1991-95 only experienced one or two judges presiding over their drug court appearances.
- Ten percent, however, were exposed to from three to five judges during their participation in the program, with most of these accounted for by participants entering the drug court during 1995.

Participant exposure to judges shifted seriously after 1995.

- Using the three period grouping of participants, only about one-fourth of entering participants during 1996 (26 percent) and 1997 (24 percent) were exposed to as few as one or two judges.
- Roughly half during both periods (53 percent of the 1996 participants and 49 percent of the 1997 participants) experienced from three to five judges (or non-judges), with as many as roughly another one-fourth (22 percent of 1996 and 27 percent of 1997) of participants exposed to six or more judges.

The drug court model, assuming an important effect associated with the single drug court judge, would presumably predict that participants supervised in court by one or two judges (allowing for occasional substitutions for vacation, etc.) would record notably better outcomes than those who saw many judges (or non-judges). Persons supervised by many judges or non-judges would not benefit as much as single judge participants from the symbolic authority of the judge experienced in courtroom interactions, would not feel the personal connection to the judge or feel that the judge was as familiar with their cases, would experience more inconsistency from session to session in treatment of their and their peers noncompliant behavior, etc.

Bivariate findings present contradictory or at least equivocal support for the hypothesis deriving from the drug court model that the single drug court judge is a critical element that contributes to reduced reoffending. The combined 1991-97 data and the 1997 data in particular seem to suggest that either

a) being exposed to only one judge (the smallest judge exposure possible) or, quite the contrary,
b) being exposed to five or more judges (the greatest exposure possible) results in lower probabilities of rearrest than exposure to from two to four judges (exposure to a medium number of judges).

On the one hand, the single-judge assumption of the drug court model appears to be supported in the finding of the next lowest rearrest rate, while it appears to be soundly rejected in the finding that those exposed to the largest number of judges will generate the lowest rates of rearrest.

One possible explanation for this apparently odd finding is that the number of judges to whom a participant is exposed to and the length of time a participant spends in the drug court are related and interact to affect rearrest probability. During 1997 in particular (with 16 judges and

two referees sitting in the drug court within a 12 month period), one would expect that participants in the program for the longest periods (up to 12 months) would encounter the greatest number of judges presiding over drug court sessions they attended.

Exposure to a large number of judges, in fact, would be a sign that participants were successful in continuing and (maybe even) completing treatment; in other words, most successful participants could not help but be exposed to a large number of judges or non-judges during their minimum 12-month involvement. As the most "successful" participants well on the way to graduation, they would also be the least likely to be rearrested.

With measures of risk and the drug court historical era entered as controls, two measures of judge exposure (number of judges seen during drug court involvement and longest period seeing one judge) were entered in multivariate models seeking to predict these outcomes.[13] A judge exposure effect was found in four of the six analyses of drug court outcomes.

Disentangling the mechanism through which the single-judge staffing approach affects participant outcomes was a complex undertaking. In part, our analyses have identified some of the difficult issues of design, interaction, and measurement that confound making simple inferences about the potency of the single-judge assumption of the drug court model. The measurement of judge exposure, as we have termed it, and the interaction of judge exposure with length of time in drug court are two challenging issues. Taking into account the effect of history (the time eras associated with different judicial staffing approaches) is also difficult.

The analyses suggest, in fact, that, whether or not judge exposure plays a role in shaping outcomes, it is clearly tied to other factors related to different periods of time. We believe, for example, that along with the shift toward the non-judge referee and the frequent judicial rotation beginning around 1996—or independent of it—the shift in court policies (toward more ready use of automatic termination of participants at early stages of drug court treatment) greatly influenced outcomes.

Despite all the complexities—and putting off their better resolution to future research—we see themes in the findings suggesting that, depending on the type of outcome measure examined, the way in which the drug court courtroom is staffed produces a noteworthy effect. The significant findings are not necessarily supportive of the primacy of the single-judge approach to drug court (e.g., particularly the finding showing that participants seeing six or more judges had a lower probability of reoffending).

- When the number of judges was normed to the length of time participants were in drug court (judges per 100 days), the significant but inverse effects found for judge exposure disappeared in the modeling of rearrest (any kind) and rearrest for drug offenses, but appeared as a positive predictor of rearrest for non-drug offenses, when it had not reached significance before.
- Both measures of judge exposure supported the notion that the more judges seen by participants, the greater the chances of poor treatment attendance.

[13] Because time in treatment is significantly correlated with the judge effect measures, it is not included in this model.

This finding may be significant if, in fact, increased retention in treatment (the principal rationale for the judge's hands-on supervision) also increases the chances of better outcomes generally, as the drug treatment literature would suggest. The prospects for unfavorable termination from drug court seem also to be influenced by judge exposure. The longer the time seeing a single judge, the lower the chances of unfavorable termination. The more judges seen per 100 days in drug court, the greater the probability of termination, other factors held constant. These findings are very supportive of the drug court model's assumption of the importance of the single drug court judge.

At this stage, and within the limitations of these data and analyses, we find both grounds to support the importance of the single judge approach, depending on the outcome of interest, and grounds to question whether the single judge assumption might really represent other assumptions of the drug court model, such as the need for effective judicial supervision, continuity of monitoring, and consistency in rules and responses to participant behavior during the drug court process.

The Effect of Acupuncture in Treatment in the Clark County Drug Court

In the history of the development of drug courts in the United States, the Miami Drug Court was the launching pad of what, at the time, was considered a highly unorthodox judicial endeavor. The Miami Court set its stamp on the movement for change in the courts by pioneering an approach to substance abusing criminal defendants that included the basic ingredients of what is now referred to as the "drug court model." By far, one of its most unorthodox elements was the use of acupuncture in its drug treatment regimen. As drug courts spread throughout the United States strongly influenced by the original Miami model, many incorporated acupuncture into their treatment regimens. Some jurisdictions were unable to incorporate acupuncture into the drug court treatment process because sufficient acupuncture services were simply not available to them. Other jurisdictions, more influenced by traditional substance abuse treatment perspectives (and reliance on residential treatment), have rejected acupuncture on principle.

Against this background of relatively widespread use of acupuncture in drug courts and supportive findings in a small general research literature, few studies have directly examined the role and effectiveness of acupuncture in drug court treatment of offenders. With the special support and cooperation of the Clark County Drug Court officials, the Phase II evaluation took advantage of the opportunity to attempt to examine the utility of acupuncture in drug court treatment.[14]

During the evaluation study period (1993-97), the Clark County Drug Court required all participants in the first phase of treatment to attend acupuncture at the clinic locations five days per week. After the first treatment phase, acupuncture was voluntary but was encouraged to lessen depression, anxiety, and insomnia, reduce or eliminate withdrawal symptoms (i.e., drug

[14] We must particularly express our gratitude to John Marr, President of Marcon Associates and Director of Choices Unlimited, the principal treatment provider for the Clark County Drug Court. John actively worked with the researchers to organize the study approach and facilitate access to the data. The research examining acupuncture in treatment was also strongly supported by the Honorable Jack Lehman, the drug court judge since 1992.

craving, nausea, body aches, etc.), and to assist with stress reduction and relapse prevention. In later phases of treatment, the judge sometimes ordered a struggling participant to attend acupuncture again, usually in response to a positive urinalysis. At each of those appointments, participants were also required to undergo drug testing. Thus, attendance at sessions provided the opportunity for ongoing monitoring of substance abuse among participants through drug testing.

The research employed a two-part approach to the study of the impact of acupuncture to take best advantage of the opportunity provided by the Clark County Drug Court evaluation. The two study components included

a) a descriptive analysis of the acupuncture participation and its relationship to outcomes among cohorts of drug court participants sampled from 1993 through 1997 (using a quasi-experimental approach employing post-hoc statistical controls); and
b) an acupuncture experiment that sought to accommodate the logistical and ethical issues raised above.

According to treatment records for the combined cohort samples of participants entering the drug court from 1993 to 1997, on average participants attended about 16 (median) acupuncture sessions in their first 12 months of drug court.[15] Around this median, however, a small proportion (27 percent) of participants attended ten or fewer sessions and an almost equal proportion (25 percent) attended 30 or more acupuncture sessions during the first 12 months. Because acupuncture was required in the first phase of treatment (a period averaging around 30 days) and was optional thereafter, one would expect to see the number of acupuncture sessions attended to peak upon completion of Phase I and then begin dropping thereafter. In addition, we would expect that the number of acupuncture sessions attended by drug court participants would mirror their attendance in treatment and be affected by their program status. (For example, persons with few appointments recorded would be participants who were terminated or fugitive from the drug court at any early stage.)

- As one might suppose, persons failing to complete Phase I of treatment showed a low median attendance (10 acupuncture sessions), compared to those advancing to Phase II (24 appointments).
- The average attendance at acupuncture sessions did not increase for persons who only advanced to Phase III in 12 months, and decreases among those reaching Phase IV and graduation (with medians of 14 and 11 acupuncture sessions).

The relationship between number of acupuncture sessions attended and program status (length of time in the program before either termination or completion by graduation) confounded analysis of acupuncture's impact.

The lower median number of acupuncture sessions attended among participants reaching more advanced phases of treatment within 12 months is difficult to interpret. In fact, one would expect persons reaching Phase IV or even graduating to have at least attended the first month of

[15] Note that the median number of sessions is based on all participants, including those who may have dropped out of the program in its early stages as well as those who attended a minimum of 12 months.

acupuncture five days per week, thus producing an average of 20 to 25 appointments, and added subsequent sessions in later phases, producing a cumulative total above what was generated only in Phase I.[16]

Acupuncture and 12-Month Outcomes

When interpreted as reflecting the amount of acupuncture treatment given (in a treatment "dosage" sense), the findings concerning relationships between acupuncture and these outcomes seem, at least at first, to be consistently unfavorable:

- Persons having acupuncture after Phase I ("more") showed a slightly smaller proportion than those having acupuncture only in Phase I ("less") in a favorable treatment status at the 12-month mark (63 versus 69 percent[17]), and a notably lower proportion graduating in two years (39 percent compared to 53 percent).
- They also showed a larger proportion rearrested within 12 months of drug court entry (52 versus 38 percent) and a greater proportion confined (57 percent versus 35 percent) during the 12-month observation period.
- Those with the negative outcomes showed either no notable difference in number of acupuncture sessions attended, or greater average (median) acupuncture attendance.

In short, on the surface, these findings appear to support the interpretation that greater exposure to acupuncture was associated with worse treatment and criminal justice outcomes.

This interpretation may be confusing "cause" for "effect," however. Another interpretation, perhaps more plausible, would understand the acupuncture measures to be the product—not the producer—of participant performance (length of time) in treatment. This alternative reasoning would expect that persons who performed poorly (and were terminated early from the program) would record fewer acupuncture sessions. Early termination, therefore, would explain low acupuncture attendance or exposure, not the other way around. Successful participation in treatment, following this logic, would produce a larger number of sessions attended. This explanation—that treatment progress accounts for the number of acupuncture sessions attended and not the other way around—seems to account for the findings that persons attending few sessions survived in the drug court for only short periods. It does not seem to explain why persons who reached advanced stages of treatment showed lower acupuncture attendance rates as well. This explanation would instead predict that persons proceeding successfully through 12 months of treatment would generate a large number of sessions attended (certainly well beyond those only advancing through Phase I in 12 months).

The explanation for this seemingly anomalous finding may be found in the drug court policy. Read the wrong way, the data would suggest that low acupuncture attendance was associated with ("caused") greater treatment success. Because of the normal practice of discontinuing acupuncture sometime shortly after Phase I, we found that persons completing

[16] One possible explanation for the finding is that some participants may spend as little as two weeks or less in Phase I before advancing to Phase II. Theoretically, a participant who advances quickly through Phase I in two weeks would attend only ten acupuncture sessions.

[17] The difference is not statistically significant at the .05 level.

advanced stages of treatment record fewer acupuncture appearances than, for example, those only completing Phase I (e.g., the longer time active in Phase I, a sign of struggling, the more required acupuncture sessions attended.)

Persons who participate in acupuncture after Phase I, therefore, were the exception to normal practices. In fact, their participation at later stages was generally the result of a court sanction that, by order of the drug court judge, required them to "return" to acupuncture for a specified period of time because of poor performance in the program. In other words, those recording acupuncture sessions after Phase I were participants on the verge of (or at greater risk of) failing the program and being terminated from the drug court. Thus, the order back to acupuncture amounted to a prediction of greater difficulty in achieving successful program outcomes. In fact, those receiving such orders subsequently showed poorer outcomes relating to program completion, rearrest and confinement.

Multivariate analyses of the drug court participant data sought to identify an effect of acupuncture (measured several ways) on two key drug court outcomes—graduation from drug court and rearrest—by controlling for time in treatment and *a priori* risk attributes. Five different measures of acupuncture exposure were tested, including receiving acupuncture after Phase I (no, yes) and various dichotomous splits of number of needling sessions attended (10 or fewer, 11 or more; 15 or fewer, 16 or more; 25 or fewer, 26 or more; 30 or fewer, 31 or more). The effect of each of these acupuncture measures was tested while controlling for risk attributes and time in treatment.

- For rearrest within one year, four of the five measures of acupuncture exposure were significantly associated with rearrest, indicating that increased attendance at acupuncture sessions is related to a greater probability of rearrest.
- Similarly, four of the five measures of acupuncture exposure were negatively (and significantly) associated with graduation at two years (increased acupuncture related to a lower probability of graduation).

The results of the descriptive analyses discussed in this section were not equivocal, in the sense that there seemed to be no relationship between acupuncture attendance and outcomes, but they were difficult to interpret with confidence. The relationships between acupuncture attendance and participant outcomes seemed to be opposite of those that would be posited by the drug court model. Instead of producing better outcomes with increased exposure, apparently the more participants attended acupuncture, the worse their outcomes.

We found both that the use of acupuncture was inextricably related to length of participation in drug court treatment and that the obvious reading of the findings confused cause and effect. When understanding number of acupuncture sessions as an "effect" rather than a "cause" and recognizing the impact of the policy that treatment acupuncture is voluntary after Phase I, the findings made more sense.

The Acupuncture Experiment

Clark County Drug Court and treatment officials were supportive of the study of the effect of acupuncture on treatment outcomes and discussed the issues raised by use of an experimental design that would randomly assign candidates to two treatment groups, one with and one without acupuncture. In fact, because the treatment program was well established (after at least seven years of operation), they were concerned because random assignment would be effected by removing an existing element of treatment (acupuncture) from one group rather than adding an extra element to the other.

A modified experimental design was devised to address the need for "equivalent" treatment conditions for all participants and to allow for the occasional specific requests made by participants in the control group for acupuncture services. (In other words, services would not be denied if requested. The researchers and program officials estimated that this would not occur frequently.) In addition, persons who entered treatment with partners were kept in the same study group (they were not split up), once assigned, rather than being separated through randomization.

The more difficult question was how to arrange for equivalent treatment experiences for the acupuncture and non-acupuncture groups and to still be able to draw inferences about the specific effect of acupuncture on participant outcomes. The solution, to replace acupuncture in the control group with a relaxation therapy of equivalent duration, was proposed by the treatment provider. The relaxation sessions, which provided clients with educational information and instruction regarding relaxation techniques, were scheduled in the same way acupuncture was for the acupuncture group. Daily attendance was required in Phase I.

According to the agreed upon procedures, participants who entered the Clark County Drug Court from March 8, 1999 through August 13, 1999 and who made a first appearance at the treatment center were randomly assigned to acupuncture and relaxation conditions of treatment based on the last digit of their identification number. (Candidates with odd last digits were assigned to relaxation, while those with even last digits were assigned to acupuncture). Random assignment continued relatively efficiently for the five-month period in 1999, resulting in 166 participants in the acupuncture group and 170 participants in the relaxation comparison group. During the study period, 21 participants initially assigned to the relaxation group subsequently requested acupuncture.

Participant progress through treatment and re-involvement in criminal justice were observed for a period of six months. The six-month observation period (counted from the date of entry into drug court) was adopted for two reasons. First, acupuncture is employed in the Clark County Drug Court principally to produce effects in the early stages of treatment (to increase amenability to treatment and to increase retention.) Second, resources for a longer follow-up study were limited.

The proportions of participants in each group receiving sanctions, recording positive drug tests, and missing at least one appointment were nearly identical. About one-fourth of participants in both the acupuncture and relaxation groups (25 versus 29 percent) received at

least one sanction; three-quarters of each group recorded at least one positive drug test (75 versus 79 percent); and 82 percent of both groups missed at least one appointment in the first six months. The measures showing the length of time from enrollment into the drug court to first sanction, first positive drug test, first missed appointment and mean days confined during the first six months (7 and 10 days respectively) were also very similar. The slight differences between the two study groups were not significant.

Acupuncture participants seemed to have advanced farther in treatment:

- Fifty-four percent of acupuncture group members reached Phase III in six months, compared to 44 percent of the relaxation group members.
- When the median number of days spent in each treatment phase by members of each study group are contrasted, again the groups are closely similar—with the exception that the acupuncture group recorded a greater average number of days in Phase III (with a median of 20 days) than their relaxation counterparts (with a median of 0 days).
- Moreover, the acupuncture group averaged 10 days longer in treatment (median, 132 days) in the first six months than the relaxation group (122 days).
- The groups averaged nearly identical numbers of treatment contacts in six months (with medians of 57 and 56 respectively).

Although these findings suggest that participants in the acupuncture group progressed somewhat farther through the treatment regimen and recorded more days in treatment than their relaxation group counterparts, they showed closely similar statuses in the drug court treatment program at the end of the first six months. Most (60 percent of the acupuncture group and 62 percent of the relaxation group) were still active in the program and in good status in the community. Twenty-seven percent of acupuncture group members, compared to 21 percent of the relaxation group members, were fugitives; about one percent of each group was in jail but still in the drug court program. By six months, 12 percent of the acupuncture group and 16 percent of the relaxation group had been terminated from the drug court for non-compliance.

The study groups did not differ in the proportions recording failures to appear (as measured by bench warrants) over the six-month follow-up (58 and 55 percent). A slightly smaller percentage of acupuncture participants were confined at least once during the six-month observation period (49 compared to 54 percent of the relaxation group members) and were confined for slightly shorter periods of time (a median of 14 versus 18 days). These differences were not significant.

Participants assigned to the two study groups differed little in the extent to which they became re-involved with the criminal justice system in the first six months of drug court treatment. Nearly identical proportions of each group (45 percent of acupuncture and 46 percent of relaxation) were rearrested for a new offense. Acupuncture participants took slightly longer to be rearrested (with a median of 57 days compared to 49 for relaxation participants). The two groups did not differ significantly in serious person rearrests (6 versus 8 percent, drug rearrests (14 versus 19 percent) or in bench warrants issued within six months of program entry (36 versus 41 percent).

Comparison of six-month treatment and criminal justice outcomes revealed slight differences favoring acupuncture over relaxation. The positive (but mostly not statistically significant) findings included a longer time to first positive drug test, less confinement, advancing farther in treatment by six months (statistically significant), more time in treatment and more treatment contacts, and a longer time to rearrest. These slight differences noted, it is fair to characterize the experimental findings as showing substantially similar results when the outcomes for the two groups were compared.

The "no difference" finding suggests that acupuncture participants did as well and did no worse than other treatment enhancement services (and maybe did slightly better), at least as represented by relaxation therapy. We are not able to say that acupuncture contributed to better results in treatment and criminal behavior among participants as measured in the early stages (within six months of entry). Because of a limitation of the design (we were not able to create a drug court group receiving no equivalent treatment enhancement), we are not able to conclude whether both interventions improved treatment retention and success (and so both should be viewed as helpful) or if neither was beneficial.

Aspects of the experiment in operation may explain these results or at least may have biased the outcomes in favor of the relaxation group. Specifically, there were some problems with maintaining the integrity of treatment in 85 cases (of 366 total in the study). In these cases, participants assigned to one intervention group received at least one session reserved for the other treatment group. The treatment integrity problem was not random, in the sense that 70 involved relaxation assignees partaking in some acupuncture compared to only 15 acupuncture assignees who attended at least one relaxation session (also, 21 relaxation members formally requested acupuncture).

These slip-ups (formal requests, court orders, and accidents) not only made a disproportionate impact on the experimental findings because of their number (in favor of improving relaxation results), but also the treatment lapses were qualitatively much different. Going from relaxation therapy with its classroom or group counseling atmosphere to acupuncture treatments where staff place needles in the ears of participants is a far more dramatic change in treatment than going from acupuncture to non-acupuncture treatment. Having participants rejoin their appropriate treatment paths must have added a second disruptive quality to the overall treatment experience of participants involved.

Our examination of the impact of this slippage in treatment integrity suggests that the slightly positive findings we detected relating to better advancement and retention in treatment among participants undergoing acupuncture might well have been made stronger if the treatment slippage had not occurred. We would argue that the struggling relaxation participants would likely have continued to perform poorly (or even performed worse) if they had been denied acupuncture. However, because of ethical and programmatic concerns, they received acupuncture, which for many of them, likely facilitated successful participation in the treatment regimen.

Participant Fees for Treatment in the Clark County Drug Court: 1993-1997

The costs of operating drug courts–and their cost effectiveness—is an important topic not examined in this research.[18] However, since the inception of drug courts in the United States in 1989, finding the resources to fund them and, in particular, to pay for treatment services has been one of the most challenging questions facing jurisdictions. The methods for funding and, more particularly, for paying for the treatment services provided to drug court participants are as varied as methods for supplying and paying for treatment services in non-drug court and non-criminal justice settings across the United States.

The extent to which drug court participants are required to pay for services is a relatively small, but not inconsequential part, of the funding mosaic influencing drug courts. Payment for services by participants is important for two principal reasons: a) as a matter of drug court treatment philosophy that teaches responsibility and accountability; b) simply as a matter of revenue to pay for treatment.

Both drug courts we studied have required some payment from participants in the treatment process as a matter of revenue and as a matter of philosophy. The Clark County Drug Court stands out from other drug courts in its strict requirements regarding payment of treatment fees—as a matter of both philosophy and revenue to support treatment services. Because of this emphasis and the availability of records relating to fees and their payment,[19] this section focuses on a descriptive analysis of assessment and payment of treatment fees in the Clark County Drug Court as an illustration of this aspect of drug court operation.[20]

In the Clark County Drug Court, defendants who enter the program can have treatment costs paid through county funds[21] ("county-pay") or pay their own treatment expenses ("self-pay"). For participants supported through county funds, the judge sets a weekly fee at the first drug court appearance. The weekly fee must be paid without fail to the court at each subsequent appearance. The drug court policy requires that participants make their payments in court or face possible sanctions for falling behind in payments. (The likelihood of sanction is increased if the participant has also missed treatment and/or produced positive drug tests.)

Participants may be required to pay their own costs for a number of reasons. Their cases may involve offenses not meeting the original eligibility criteria; they may be entering the program for a second time and be excluded from support through county funding; the participant may have been in the program for more than one year and still be noncompliant (thus exhausting the presumption for continued public support of treatment). In addition, on occasion, participants may have sufficient income and employment stability to require that they pay their

[18] The reader should consult the work of Michael Finigan and his associates for the best and most understandable discussions of cost, cost effectiveness, and cost benefits of drug courts (e.g., Finigan, 1998, 1999).

[19] Note that these findings are not standardized by follow-up period. Rather, fee information is provided for the original follow-up period, which is as follows: 1993 and 1994 (three year follow-up), 1995 (two year follow-up), 1996 and 1997 (one year follow-up).

[20] The emphasis on Clark County is partly, therefore, a matter of data convenience. More in-depth investigation of this topic, including in the Multnomah County Drug Court, was beyond the resources of this research.

[21] Each year the drug court treatment provider negotiates a contract with the county to provide treatment to drug court participants with the county.

own costs, or may have private insurance that may cover behavioral health care costs. We discuss "county-pay" participants first, followed by participants categorized as "self-pay."

Participants Supported by Public Funds

About 83 percent of participants entering the Clark County Drug Court from 1993 through 1997 had treatment services paid for by county-funding. The proportion of participants supported through the "county-pay" approach ranged from 71 to 80 percent from 1993 through 1995 before increasing substantially in 1996 and 1997 when upwards of 90 percent were categorized as county-pay. The implication of this finding is that the large majority of persons treated in drug court were supported by public (county) funds and that this proportion grew to nearly all participants over time. The increase in participants supported through county funds corresponds to the period during which the drug court shifted away from diversion increasingly to accept participants who pled guilty to enter the court (and were often in the drug court as a condition of probation).

The fees assigned to county-pay participants were generally small: the median initial fee was five dollars per week, both for the entire study period (1993-1997), as well as for each year separately. The amount a participant was required to pay in court depended on the frequency of court appearances; thus, for example, a person appearing before the judge every week might pay $5 at first, but a person appearing in court on a monthly basis would pay $20. Nineteen percent of participants had their fee amount changed by the judge at some point during their treatment, either an increase (58 percent of fee changes) or decrease (42 percent of fee changes). Nearly half of all fee schedule changes occurred in 1997; 80 percent of these involved an increase in the amount required. Change in fee schedule could occur for a number of reasons. For example, the judge may assign a higher weekly amount as a sanction for positive drug tests, arguing that "if you have enough money to buy drugs, you have enough money to pay your treatment fees." The judge might also reduce the fee amount as a reward for positive progress. Changes in fee schedule could also result from changes in the participant's employment status, for example, because of losing a job or getting a better-paying one.

In general, the amount of fees required of individuals was not inordinately large, certainly compared to the actual costs of treatment. Overall, about $260 (median) was required of drug court participants entering the program from 1993 through 1997.[22] Total fees assessed by the court varied over time, peaking among 1995 participants at about $355. (This may be explained by a longer average time in treatment among 1995 participants. The greater the number of weeks in treatment, the greater the number of weeks during which fees were imposed.)

The greatest difficulty in achieving payment of the fees in the drug court occurred among the 1993 participants (when the drug court was in its early stages of operation) when payment averaged $78 per participant (compared to the $235 owed). A large gap between the average amount owed per participant ($260) and the average amount paid ($155) also was found among the participants entering the drug court in 1996, a point when the drug court population was shifting to post-conviction candidates. The gap narrowed considerably among the 1997

[22] The total assessed amount is determined by multiplying the weekly, assessed dollar amount by the number of weeks that the participant was in the program (also taking changes in fee schedule into consideration).

participants. It would follow that the largest "losses" to the revenue of the drug court would have been generated by the first class of participants (1993) and the last cohort studied (1997).

Although these findings suggest that participants as a group frequently did not pay the full, assessed amount by the court by the time of their completion, in many cases, they did pay a good portion of it. The median total fees owed at time of termination overall was only $5, and 49 percent of participants owed nothing when they left the program. In 1994, 1995, and 1997, the median dollar amount owed by participants was $0. In 1994 and 1997, just over half of participants (52 percent and 53 percent, respectively) had paid the full amount and owed nothing (median, $0). In 1995, 62 percent of participants had made all required payments at the time of termination from the program. In 1993 and 1996, participants were less compliant with the fee schedule, owing on average (medians of) $23 to $25 at the time they left the program.

We were able to document the actual amount of fees assessed, paid and owed for drug court participants sampled from 1993 through 1997.[23] From 1993 through 1997, the Clark County Drug Court assessed total fees of approximately $658,682 for 2,113 participants (weighted data). Of that amount, it collected about $543,281, and was unable to collect about $115,400 in outstanding fees. Thus, the drug court was successful in collecting over 80 percent of the fees it imposed on clients, but failed to collect about 18 percent of the expected, fee-generated revenue.

The data presented above suggest that the Clark County Drug Court did a remarkable job of securing payment of weekly treatment fees owed by participants.[24] The unrecovered amounts—and even the average court appearances not resulting in full payment of fees—were basically explained by the participants who were performing poorly and dropping out of the program. Participants who would ultimately be terminated from the program would leave poor records of compliance with drug court requirements along the way—including non-payment of fees. Once these persons were terminated from the drug court (and left to face the consequences of conviction, confinement and revoked probation), the fees they owed were no longer recoverable. Even those participants did not leave very large amounts of fees still owed to the drug court.

"Self-Paying" Participants

Approximately 17 percent of participants entering the Clark County Drug Court between 1993 and 1997 were classified as self-paying for various reasons (described above). This meant that they were expected to pay for the full cost of treatment (directly to the treatment provider), rather than paying weekly, court-assessed fees to the judge. The self-paying participants became increasingly rare over the years covered by the study to less than ten percent of all participants in 1996 and 1997. Because self-pay participants were responsible for the total amount of treatment

[23] We were able to obtain all three amounts for 345 participants of the 497 sample participants from 1993-1997. For an additional 51 participants, we could determine the actual amount paid but not the amount owed (or total assessed). The remainder of the sample of participants were self-paying and therefore not considered in this analysis.

[24] The 82 percent payment rate is outstanding as judged by payment of court fees of other types in most jurisdictions in the United States.

costs, the median cost of treatment assessed to them—about $1,225 was much higher than total fees assessed to county-pay participants (about $260) who were responsible in weekly installments for only a fraction of the full cost of their treatment. The median assessed cost for self-pay participants varied somewhat from year to year, from a low of $1,001 in 1996 to a high of $1,425 in 1997.[25]

Self-paying participants overall paid a large share of fees assessed to them, about $1,040 (median) of the $1,225 assessed. The record of payment among self-paying participants—like county-pay participants—was poorest among those entering in 1993, the drug court's first full year of operation, and participants entering in 1996. At the time of termination from the program, self-paying participants owed the treatment provider a median amount of $270. Just over one-fourth of self-paying participants (27 percent) paid the full cost of the program; three-fourths owed dollar amounts ranging from a low of $180 in 1993 to a high of $425 in 1994 at completion of or termination from the drug court.

Although the number of self-paying participants overall was small—and grew to be very small toward the end of the study period, treatment costs assessed, paid and owed were sizeable. Overall, self-paying participants were charged $490,448 for treatment, of which $365,379 was recovered and $125,068 was outstanding. Approximately 26 percent of the total amount charged for self-pay clients was not recovered before participants completed or were terminated from the program. Because the treatment provider received no supplemental money from the county for self-paying participants, any fees that self-paying clients did not pay contributed to a financial loss for the provider, as services were rendered without compensation. The difficulties associated with insuring payment compliance among participants and the financial risk for the treatment provider may help to explain the move away from admitting self-paying clients in the later years of the study period.

[25]The small n's associated with self-paying participants, particularly in 1996 and 1997, may account for the variation in median treatment fees assessed.

PART THREE Drug Courts in Context

Competition for the Drug Court Population: The Impact of the District Attorney's Expedited Plea Program (X-PLEA)

Despite the strong growth of the drug court, Oregon's Fourth Judicial District Court in Multnomah County continued to experience dramatic growth in the drug-related criminal caseload throughout the early and mid-1990s. In 1991, the year the drug court first accepted participants, there were 3,837 drug arrests in Multnomah County. By 1997, drug arrests peaked at just over 6,000, an increase of nearly two-thirds (64 percent). With broad responsibility for prosecuting this growing volume of cases, Multnomah County District Attorney Michael Schrunk was forced to develop additional strategies for their efficient disposition. The Expedited Plea program (X-PLEA) was established in July 1997. Unfortunately, to a large extent, the X-PLEA program targeted the same felony drug cases already addressed by the drug court.

The evaluation examined the impact of the District Attorney's Expedited Plea program because its was an example of a potentially significant change in the environment within which the Multnomah County Drug Court operated—a factor external to the court—that could have influenced the operation and impact of the court itself by drawing away large numbers of cases targeted by drug court. The introduction of the District Attorney's Expedited Plea program—which offered one year's probation in exchange for a guilty plea—was planned to expedite the adjudication of increasing numbers of drug cases entering the court system. This was to be done by encouraging very early guilty pleas (within several days of arrest).

By targeting the same types of felony drug cases as the drug court, the parallel operation of the X-PLEA program also raised questions about the relative impact of the now two drug case alternatives on normal adjudication, about whether they were unnecessarily duplicative, and about the extent to which defendants selecting each option returned to the criminal justice system.

Although the drug court and X-PLEA alternatives pursued different aims (treatment versus efficient disposition of cases), they shared in common the objective of slowing or eliminating the return of defendants to the system. Reduced reoffending was an implicit rather than explicit goal of the X-PLEA program, in that any gains from efficient disposition of drug cases would be dismissed to the extent that the cases disposed generated a high rate of return to the court system only to be processed again.

Procedurally, the felony drug defendant was made aware of the X-PLEA program at the defender orientation, which occurred shortly after arrest (no later than the day after). This was exactly the same stage at which defendants typically learned about the possibility of entering the drug court. Prior to this program, defendants had two basic choices explained to them by defender staff at orientation before making their first court appearance: a) they could have their cases adjudicated in the normal fashion in the felony court; or b) they could decide to enter the drug court treatment program for a minimum of one year, with the possibility of having the charges dismissed. Defendants entering the drug court had a 14-day period within which they could decide to "opt out" for any reason (e.g., they thought they had a good chance to win the

case or they just were not motivated to continue in treatment). Once the X-PLEA program was introduced, felony arrestees were given a third choice, to enter an immediate plea of guilty (within a few days of arrest) and receive automatic probation.

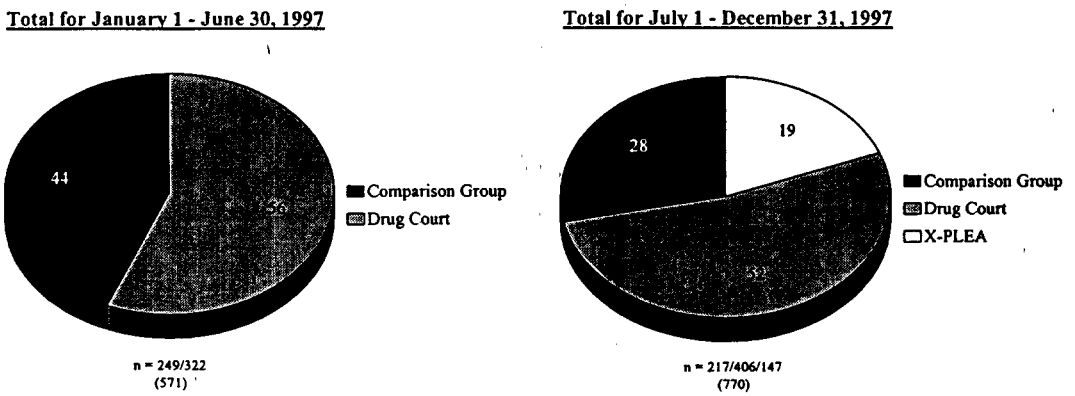
For the drug court, the introduction of the X-PLEA program represented a potentially serious threat to its operation. The principal fear was that, instead of presenting arrested drug offenders with a hard and informed choice between going to trial (and taking their chances in court) and entering treatment (and possibly avoiding a conviction), the X-PLEA option gave an "easy out," one that was so attractive to drug-involved defendants that it would undermine the viability of the drug court program. A drug conviction and probation, it was feared, would give drug abusers a "hassle-free" option that looked a great deal easier to live with than meeting the demands of the drug court process. Moreover, a related fear was that it would encourage defendants initially interested in treatment to drop out of the drug court within the two-week window after they realized that drug court treatment was going to be an intensive, difficult process.

As a first step toward understanding the impact of the X-PLEA option, we sought to reconstruct the flow of eligible felony drug cases into the court process for the six-month period prior to introduction of X-PLEA during the first half of 1997 when defendants either chose drug court or normal adjudication. We then contrasted this with the allocation of drug cases among three options (drug court, X-PLEA and normal adjudication) during the second six months of 1997, when the X-PLEA option was introduced.

- During the first half of 1997 when the X-PLEA option was not available, about 56 percent of all relevant felony drug cases (the target population) were enrolled into drug court, leaving about 44 percent to be adjudicated in the normal fashion.
- During the second half of the year, the portion of the drug caseload entering drug court was reduced slightly to 52 percent of all felony drug cases, as 19 percent chose X-PLEA and 28 percent were processed in the normal way.

During its first six months at least, the X-PLEA option appeared to have only a slight effect on the drug court "share" of the drug caseload (reducing it four percent); instead, it mainly affected the part of the drug caseload composed of defendants who would not have chosen drug court. In short, X-PLEA did not appear to steal away cases destined for the drug court, but rather reduced the proportion of drug cases that would face trial (or plea bargain) in other criminal courtrooms. In short, the X-PLEA program appeared to make an important contribution to the efficient (and timely) disposition of drug cases.

Flow of Drug Court-Eligible Cases Scheduled to Appear at Public Defender Orientation in 1997, before and after the Start of the Expedited Plea Program (X-PLEA)



[Note: These figures are estimates based on data from the Metropolitan Public Defender and District Attorney's Office.]

The finding that the X-PLEA program attracted candidates from the same general pool of drug cases as the drug court but managed, for the most part, to attract defendants who would not have chosen drug court raises the question of how the two populations of (X-PLEA and drug court) defendants differed. We examined two opposing hypotheses that could explain the different choices made by the generally similar felony drug defendants in the second half of 1997.

One hypothesis was that the two groups of drug defendants differed little in significant (measurable) ways. Instead, the X-PLEA and drug court options met different needs of felony drug defendants (i.e., timely disposition of charges without confinement versus treatment and possible dismissal of charges). Thus, the X-PLEA program added an option to the adjudication-alternatives routing of cases, away from normal processing, that responded to the almost "hydraulic" demand for alternatives. The X-PLEA option increased "supply" (capacity) by opening another, needed exit door from normal processing for defendants who wanted to avoid sentences to confinement. Under this hypothesis, the defendants and their cases may have been similar, but their own objectives differed. Some wanted to "get it over with" as quickly as possible and did not mind trading a conviction for probation to avoid confinement. Others were attracted by the prospect of treatment and wished to avoid the conviction itself.

A competing hypothesis was that, beyond their surface similarity, the two groups of felony drug defendants differed in significant (and measurable) ways that predicted the choices they would make. Knowledge of these differences would be of practical significance in planning for treatment and dispositional initiatives for drug cases.

We compared the drug court and X-PLEA participants across a range of demographic, current case, and prior criminal history measures, and found that the two groups differed significantly in a number of ways, but most obviously in their prior criminal histories.

- X-PLEA participants were more likely than drug court participants to have spent time in pretrial detention on their current case (69 compared to 23 percent), though time detained rarely exceeded three days (only seven percent of X-PLEA participants were detained for longer than three days).

- X-PLEA participants more often than drug court participants had recent prior arrests (61 compared to 42 percent), theft/RSP prior arrests (31 versus 11 percent), and prior felony arrests (68 percent versus 43 percent). They were also more likely than drug court participants to have prior convictions for drug offenses (46 versus 26 percent), and recent prior failures to appear (45 versus 18 percent).

Conceivably, the notably more extensive criminal histories associated with the felony drug defendants choosing X-PLEA suggested a greater experience with the justice system than defendants choosing drug court. This more extensive experience may have been associated with different attitudes toward the criminal process and confinement—with the X-PLEA defendants showing less of a concern for another conviction than drug court participants who wished to avoid the conviction and have charges dismissed.

As their higher risk attributes would have predicted, X-PLEA participants differed greatly also in their rates of rearrest and return to the criminal justice system within a one-year period from their initial arrests.

- More than half (57 percent) of 1997 X-PLEA defendants were rearrested within a year (for any type of offense), compared to 36 percent of their drug court counterparts.
- The difference was slight when rearrest for drug offenses were considered: 27 percent of X-PLEA and 20 percent of drug court participants.[26]
- The difference between the two groups was greater when rearrests for non-drug offenses were considered: nearly half (46 percent) of X-PLEA compared to under one-third (30 percent) of drug court participants were rearrested within a year for these offenses.
- Of those rearrested within one year, drug court participants appeared to be rearrested sooner (in a median of 35 days or about one month from first court date) than X-PLEA defendants (in a median of 77 days or more than two months).
- The X-PLEA defendants also experienced more days in confinement during the follow-up year (a median of 18 days) than drug court participants (with a median of three days in jail), mostly as a consequence of their higher rate of rearrest.

The findings from logit modeling of rearrest suggested that X-PLEA participants did worse during follow-up because the X-PLEA option disproportionately attracted higher risk felony drug defendants.

[26] This difference was not significant at the $p<.05$ level.

- The non-significance of indicator of defendant group (drug court versus X-PLEA) and the significance of risk attributes in the three analyses of rearrest suggest that the risk attributes of the defendants accounted for the difference in reoffending.

In short, having been screened selectively from the pool of felony drug cases entering Circuit Court in Multnomah County, the higher risk X-PLEA defendants then, on the whole, proceeded to perform as their risk attributes would have predicted: notably worse.

The high rate of rearrest among X-PLEA participants (and consequent rate of violation of probation) resulted in their return to the court system more frequently than drug court participants, meaning that they would more frequently be processed again through the courts within a year and would spend roughly six times the number of days in confinement. However, the X-PLEA program did not affect the drug court in the negative way that its supporters had feared. In fact, one might argue that from the perspective of public safety (rearrest and return to the system), the X-PLEA path offered a favorable contrast for the drug court record.

The Importance of Community Context for "Downtown" Drug Courts

The evaluation research in Clark and Multnomah counties explored the potential influence of contextual or external factors on the operation of the drug courts in the two sites, for example, in the time series analyses of the effects of laws, policies, administrative changes, judicial staffing and competing programs in the court system (e.g., X-PLEA). In Phase II of the research, we expanded this theme by considering drug courts and their participants in their community contexts in the cities of Las Vegas and Portland.

The preliminary investigation of the community contexts of the Clark County and Multnomah County drug courts identified two themes: a) the effect of drug courts on neighborhoods (the "downtown" drug court as a community justice innovation); and b) the effect of community context on drug court impact (affecting the participant's chances of success).

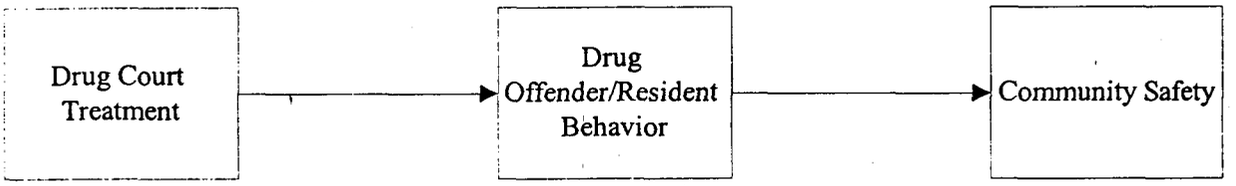
Drug Court as a Community Justice Innovation

The first theme is that, de facto, the "downtown" drug courts serve a relatively small number of principal neighborhoods in their respective urban areas. (They do not deal with drug offenders from all neighborhoods in equal portions.) This simple and perhaps obvious fact—that the drug courts are mostly working with residents of certain areas (and that their crimes take place in fairly specific commercial and residential sections)—makes the community contexts of the drug courts a potentially important element in their ultimate impact. From their locations downtown, implicitly, these drug courts serve like other forms of community justice, as significant links between the justice system and specific neighborhoods or commercial districts.

Recognition of this first community context theme, that drug courts serve mainly a small number of sections of the city and therefore have an implicit link with these principal neighborhoods, makes it possible to consider strategies to enhance the effectiveness of drug court services that build on these links. Such strategies may take into consideration the specific

community settings involved, build on community resources already in place, and recognize difficulties experienced by residents in treatment when resources do not exist in those settings.

The Effect of Drug Courts on Neighborhoods



Drug court affects community safety through treating behavior of drug-involved residents.

Crime and Justice Research Institute

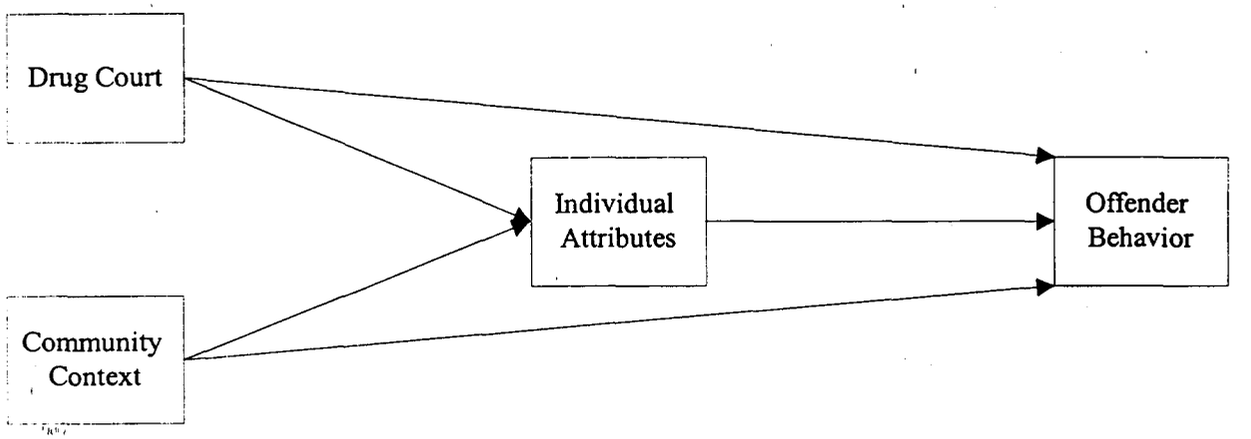
Community Context as a Factor in Participant Performance in Drug Court

The second theme is that, depending on the nature of the different communities in which drug court participants reside, community contexts may influence the prospects for success in positive and negative ways. What is happening away from the drug courts, at home, in the neighborhood or in the workplace plays a part in shaping the obstacles (or providing the resources) facing the drug court participant in treatment.[27] Participants' probability of success (or, more negatively, "risk" of failure) is affected not only by their individual attributes, responsibility and volition, but also by the environment in which they live and work. Neighborhood contexts differ considerably among drug court participants within Las Vegas and Portland.

This theme is illustrated in a simple conceptual model shown below. According to this model drug court impact is delivered both as a direct effect on offender behavior and indirectly as mediated through individual attributes (e.g., *a priori* risk). However, the offender-resident's behavior (drug- or crime-related) is also affected by neighborhood influences (e.g., a nearby drug market) directly and indirectly as mediated by individual attributes.

[27] This point is not at all original. Consider the rationale behind the development of community corrections, community policing, community probation, community prosecution, community courts, etc.

Community Context as a Determinant of Drug Court Participant Performance



Crime and Justice Research Institute

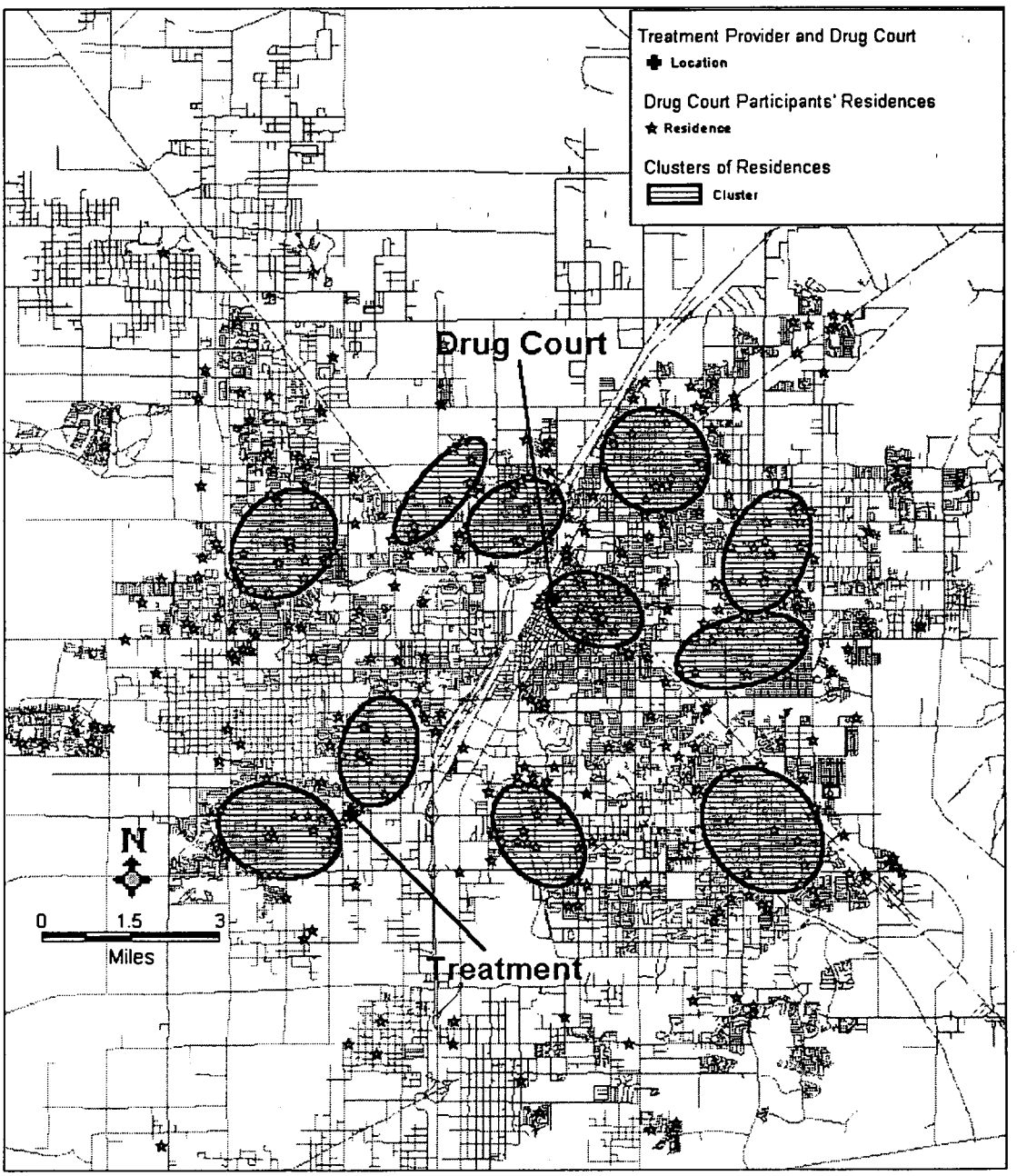
Identifying the "Drug Court Neighborhoods"

Las Vegas is generally divided into three unequal sectors by the intersection of the two major highways that offer the principal means of vehicle access within the city. The courthouse is located in the "old" downtown in the northern section of the city, while the treatment provider's main location (changed since this study) is situated several miles to the southwest, slightly east of the famous Las Vegas "strip" where the large casinos are located.

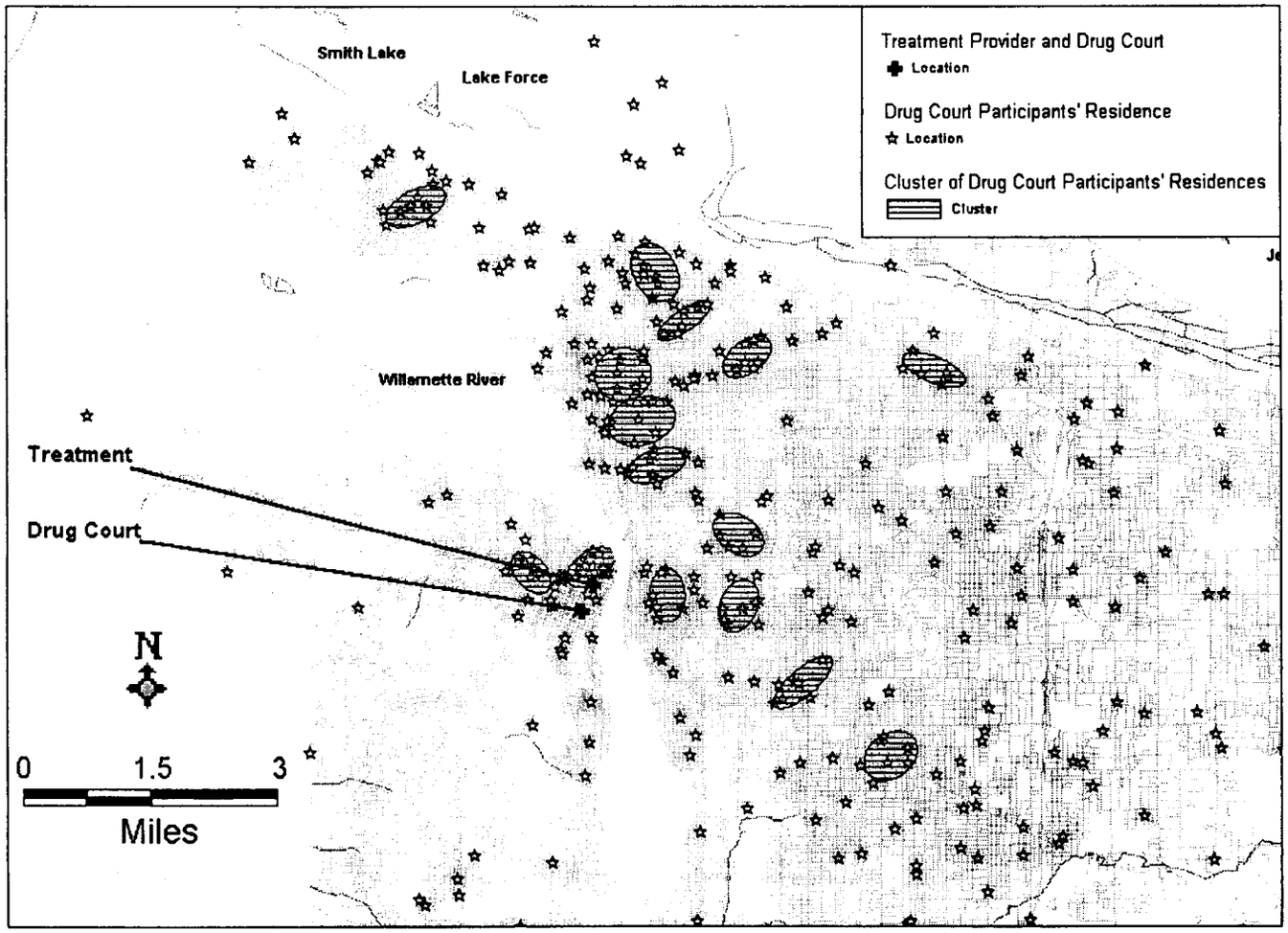
The principal residential areas or clusters of drug court participants were not distributed evenly throughout all sections of the city. Many of the drug court participants lived in the old downtown area of the city, near Fremont Street, a well-known street of gambling establishments, hotels, restaurants and drinking establishments and residential hotels. The old downtown area of Las Vegas is home to the original casinos and hotels of the city, and is easily accessed by all the major highways and transportation routes, which all meet in the same area, proximate to the old downtown. The drug court is only a few blocks away from Fremont Street, therefore within easy walking distance of the residential hotels and the casinos and bars. As the distance from the old downtown increases, the density of offender residence decreases, especially to the west.

Multnomah County and Portland itself are split by the Willamette River, with the main business district and the downtown located on the western side of the river. The Multnomah County Drug Court is located in an historic courthouse in the downtown. The treatment provider is also located downtown, about ten blocks away from the courthouse. Several large residential areas are located to the east and northeast of the river. In addition, a relatively new and large commercial center (the Lloyd District) is also located on the east side of the Willamette River, directly across from the central business district. A comprehensive bus system fans out from the downtown throughout the city, making the downtown fairly accessible to all residents of Portland. Residences of drug court participants are clustered in the northeast area of the city, the eastern section and the western section near the downtown.

Clusters of Residences of Drug Court Participants Relative to Drug Court and Treatment Locations in Las Vegas (1993-1997)



Clusters of Residences of Drug Court Participants Relative to Drug Court and Treatment Locations in Multnomah County (1991-1997)



In both jurisdictions, drug court neighborhoods differed considerably in their proximity to the downtown drug court and to the treatment center. Thus, for some, depending on available transportation, traveling to the court or the treatment provider for treatment might be fairly convenient. However, for many others in both cities, especially Las Vegas, the distance from neighborhood of residence to court or treatment could be substantial.

The relative location of drug offender residences and arrests (centers of drug crime) illustrate the first theme concerning community context and the two downtown drug courts. The felony drug defendants enrolled in the drug court reside disproportionately in a number of principal neighborhood locations within the two cities. These principal residential locations differ in important ways, including in convenient access to the drug courts and treatment centers, in the racial/ethnic make-up (offenders lived in areas that are fairly homogeneous), and in their proximity to centers of drug crime (as measured roughly by the locations of the participants felony drug possession arrests, not shown in this summary).

As different as the principal neighborhoods may be, they are the areas mostly served by the drugs courts; they are implicitly the "drug court neighborhoods." The question raised by this geographic analysis (see the full report for greater detail) of the implicit linkage of downtown drug courts to particular city neighborhoods is how the implicit linkage could be made explicit, how the drug courts could connect to local resources to strengthen their effectiveness and assist participants in progressing forward through treatment while recognizing the challenges that they may face at home.

Geographic Location of Drug Court Neighborhoods and Outcomes

In addition to differing in a variety of potentially crime-relevant attributes, drug court neighborhoods differed in their location within the two cities (and counties) studied. As a way of testing the premise that contextual factors play a part in determining the likelihood of success in drug court, we chose to examine the potential significance of three "distance" measures. The measures reflected the relative proximity of the residences of drug participants to the drug court (downtown), the treatment provider, and the original arrest location in predicting drug court outcomes. These measures had the advantage that they could be calculated similarly for each drug court site.

Two of the measures, distance to the drug court and distance to the provider, were intended as measures of accessibility. In other words, given the different neighborhoods of residence and their locations within the cities, the analysis sought to determine whether the downtown drug courts and their treatment providers were equally or sufficiently accessible to all participants, or whether, because of neighborhood of residence, some suffered disadvantages that translated into lower probabilities of success. Accessibility can be affected by a number of factors, such as access to and location of public transportation (and the routes traveled), the location of highways, access to autos, the ability to pay for transportation, etc.

The third measure, distance from a drug court participant's address to the location of the original arrest (that led to drug court), was intended to reflect the participant's proximity to the location of crime activity. We are assuming, for the purposes of illustration, that the locations of

arrests (in these predominantly felony drug possession cases) are surrogate measures of criminogenic locations, such as drug markets.

Thus, the distance from residence to arrest site can serve a) as a rough measure of the crime exposure of the neighborhoods, or b) as an indication of the travel paths drug offenders took to purchase their drugs. One might suppose then that, when the location of drug crime is very close to residences, the chances (opportunity) for repeating the drug offenses (and drug use) increase, particularly in relation to the more distant locations of the drug court and the treatment center. Participants who find the court and provider fairly accessible but access to criminogenic areas more difficult (they are farther away and harder to get to), in contrast, might have better chances of success.

To examine the premise that where drug court participants lived—relative to their initial arrest locations (a.k.a., crime activity locations) and to the drug court and treatment location—was related to participant performance in the two drug courts, we developed distance measures for bivariate and multivariate analysis. We found that in Clark County and in Multnomah County, net of controls for risk, some versions of distance measures contributed to the prediction of rearrest, termination from drug court and poor treatment attendance. In Clark County, at least one of the distance measures was found to be a significant predictor of each of the drug court outcomes considered. In Multnomah County, some form of two of the measures, distance from residence to initial arrest location and distance from residence to drug court, added significantly to the prediction of subsequent rearrest and termination from the drug court.

At this stage of the research, our purpose is to offer an, albeit exploratory, test of the notion that aspects of community contexts may exert some influence on the chances of success in the respective drug courts. Future analyses and research will explore the nature of these relationships between neighborhood attributes and drug court outcomes in more depth. We are aware that in each of our sites, interpretation of the findings is complex and requires further investigation and explication. In their current form, the findings from these preliminary and exploratory analyses provide evidence supporting the notion both that a) implicitly, drug courts serve principal neighborhoods and therefore could benefit from consideration of these contexts and linkages; and b) these contexts influence the prospects for success of participants in the drug court.

Drug Courts as Catalysts for Change: Rural and Juvenile Drug Court Innovation in Clark County

In Multnomah County and Clark County, the drug courts not only brought about change in their specific targeted areas—the felony drug caseload—but were also catalysts for other judicially-focused change efforts. In Multnomah County, the development of the drug court was part of a larger change effort that included the creation of the nation's first community prosecution program (the Multnomah County District Attorney's Neighborhood DA). In turn, the establishment of the drug court contributed to further change in the Multnomah County judicial system—as the emphasis on substance abuse and on community safety and livability merged—in the development of community courts in two Portland neighborhoods and paved the way for the design of a soon-to-be implemented mental health court. In Clark County, the adult

drug court stimulated the development of a first-appearance drug court in Municipal Court (with a focus on misdemeanor cases), a juvenile drug court in family court, and a rural drug court initiative. Although the drug courts in both jurisdictions represented important forces for change in the judicial system, in this section we briefly illustrate this "impact" of the drug court innovation by describing two related or "spin-off" innovations in Clark County, the rural drug court and the juvenile drug court initiative.

The Rural Drug Court Initiative in Clark County

The drug court team from the pioneering Clark County (Las Vegas) Drug Court planned and implemented an effort to translate the basically urban drug court concept to geographically far flung rural jurisdictions within Clark County in 1997. The Moapa and Mesquite rural drug courts operated for about one year, when they were discontinued due to lack of resources to support treatment. The Laughlin drug court, located in a larger population center, operated for about two years, discontinuing its services in 2000.

The evaluation included a descriptive (non-comparative) analysis of the Laughlin drug court in the early stages of operation. Relative to its population base, the Laughlin drug court was successful in enrolling a large number of felony defendants and convicted offenders who had serious substance abuse problems, mostly with methamphetamines and marijuana, and fairly extensive arrest histories. In its brief history, the Laughlin participants missed a large number of treatment appointments—apparently starting shortly after entering the program and a substantial number recorded positive drug tests. About one-third were sanctioned at some time for non-compliance, with sanctions coming a good while after the non-compliant episodes. At year's end, about one-fourth of the initial participants were fugitives from the drug court and about 15 percent had been terminated for non-compliance with the program requirements. In the first six months, one fourth of participants were rearrested for new criminal offenses, mostly drug offenses and few involving serious (felony-level) crimes against the person or against property. These preliminary and early stage results suggest that the Laughlin court had indeed enrolled challenging substance-abusing offenders who had a need for close supervision and effective treatment.

The Clark County Juvenile Drug Court[28]

By 1995, it had become clear to Clark County officials that the number of cases being filed in the Juvenile Division of the Family Court of the Eighth Judicial District was increasing notably, and that an increasing percentage of those youth were drug-involved. Also clear was the absence of a mechanism to guarantee substance abuse treatment for adjudicated delinquents seeking such services. The Clark County Juvenile Drug Court officially began operation in March 1995 as a spin-off of the pioneering adult Drug Court, making it one of the first such specialized courts for juveniles in the nation. The main rationale for developing the juvenile drug court was to devote special attention to a core group of juvenile offenders for whom substance abuse is a key part of their involvement in delinquency. The focus on juveniles and

[28] We are particularly grateful to Chuck Short, Court Administrator for the Eighth Judicial District of Nevada, Kendis Stake, Drug Court Manager for Clark County, and Judge Robert Gaston for their support and assistance in our descriptive research relating to the Clark County Juvenile Drug Court.

their families led Clark County officials to develop a dependency court as well, to deal with matters of custody and support. The examination of the juvenile drug court included observations of the court, review of approximately one month's worth of videotaped court sessions, and a preliminary descriptive study of the court's caseload during 1999, a year in which a new president judge was revamping the juvenile drug court.

The descriptive analysis of the juvenile drug court addressed the following kinds of issues:

- How the tenets of the adult drug court model applied to the special philosophy and purpose of the juvenile court, which was based on *parens patriae* and making decisions "in the best interests" of the child;
- How the treatment approach from the adult model was adapted to address the special problems of youths involved with drugs (including families and schools in particular);
- How the judge, the courtroom and the drug court team were adapted to carry out the aims of the Juvenile Drug Court (assuming the prior issues are resolved) most effectively;

In the observations and preliminary analysis, the following issues appeared central and contrasted with those faced by adult drug courts:

- The different nature of substance abuse among youths (including alcohol, inhalants, other drug use);
- The importance of family (the role of parents and siblings) and the home;
- The role of peers (positive and negative);
- The importance of the school and of linkage with the school system;
- The importance of linkage with other social services dealing with children and families (human services, welfare, health).

At the time of the study (before the year of revision of its procedures), the Clark County Juvenile Drug Court operated in three sessions each month; each session supervised by an individual master. The cases were assigned to each master alphabetically, with caseloads averaging about 30 juveniles each. Juveniles were identified at the (pre-) disposition stage, after having been adjudicated delinquent (i.e., this is not a pre-adjudication diversion-type option) and were on probation while in the Drug Court.

Participation was voluntary on the part of the candidate juveniles, once juveniles had been assessed (to be in need of substance abuse treatment by the provider, and not to be a danger by probation), were found to have three referrals for drug-related matters (including the current referral, not including drug sales), and parents agreed to participation. Juveniles (with parental consent) were provisionally admitted for three-four weeks until formally admitted at a Drug Court session.

Juveniles could not repeat the Drug Court experience (they were permitted one chance). Juveniles entering the court may or may not have been facing the likelihood of secure confinement as a disposition, but the Drug Court operated in a setting that had limited local capacity for secure detention.

The four-phase treatment program was for a 12-month period, with some earlier graduation in successful cases. This included two-to-three group sessions per week, supplemented by individual sessions. Acupuncture was mandatory during the first phase (detoxification). Urinalysis was required three times per week during Phases I and II, two times per week thereafter. The juvenile attended a monthly Drug Court session, accompanied by a parent.

The full report described issues relating to

- adapting the drug court treatment approach to the problems of juveniles;
- dealing with different substance abuse patterns and treatment needs;
- difficulty in addressing the role of parents in changing the behaviors of youth;
- absence of a central role for the school system;
- addressing the role of peers;
- the use of the drug court courtroom;
- multiple judges (hearing masters);
- targeting and caseload;
- responses to progress in treatment: sanctions and incentives; and
- treatment program length;

The purpose of our analysis and observation was descriptive and intended to capture an evolving juvenile drug court during two periods of time. Both periods involved change. We conducted interviews, observed the court in session, and studied carefully hours of videotape of earlier drug court sessions (because all sessions are taped). To capture at least the kinds of juveniles entering the drug court in Clark County during a year of re-examination and planned change (under Judge Gaston's tenure), we studied all 145 juveniles entering the court in 1999. Our descriptive analyses suggest that the court enrolls seriously drug involved juveniles who have surprisingly extensive prior juvenile histories of arrest and adjudication—all in all a very challenging target population of juveniles in need of a great deal of supervision and assistance. Although we were not able to track down treatment outcomes with sufficient completeness, we were able to follow the rearrests of the juveniles during the 12 months following their enrollment in the drug court. During that time, more than two-thirds of the youths were arrested for new offenses. It is clear that the juvenile drug court succeeded in targeting a "core" of juvenile offenders with serious difficulties in many areas.

Findings from our brief examination of two "spin-off" innovations illustrates that Clark County officials successfully applied the drug court model to two different and challenging court settings. The participants targeted by the rural and juvenile programs were different from those served by the original Las Vegas drug court, with different attributes, backgrounds, experiences, and challenges. Each innovation, no doubt, was forced to adjust to the different needs and problems of its clients, and these descriptive analyses suggest drug court officials were able to provide viable substance abuse treatment to rural and juvenile defendants who, under prior circumstances, would not have been able to receive such services. In many ways, this achievement alone represents success.

Conclusion: Moving Beyond "Whether" Drug Courts Work to "How" They Work, When They Work

Another unusual feature of the comprehensive evaluation presented in our Phase I and Phase II reports was its longitudinal nature. We examined the development, operation and impact of two major drug courts over time: in Clark County from 1993 through 1997 and in Multnomah County from late 1991 through 1997. This longitudinal approach—or more properly the retrospective longitudinal evaluation design—provided an opportunity to understand this important justice innovation over time and in the larger context of changing circumstances. The luxury provided by the opportunity to examine these drug courts over time cannot be overstated.

Ordinarily, evaluation would focus on a sample of cases from one point in time with some follow-up period. (See, for example, Finigan's (1998) study of the Multnomah County Drug Court.) The one-time or cross-section evaluation approach and its findings about drug court operation and impact, therefore, are inexorably tied to the historical moment when the research was conducted. The inferences these findings generate may reflect the drug court's impact at a high or low point—a "good" year or a "bad" year—at random.

Thus, this research has examined the possible impact of changes in the target population, changes in judicial staffing, aspects of treatment provided, changes in law and policies, and changes in the legal status of enrollees over time.

Getting Inside the Drug Court "Black Box"

In short, the findings from this evaluation of a) positive impact and b) variation in impact over time make it impossible to avoid the question "If drug courts work, how do they work?" (Or, "Why does a drug court work sometimes, in some settings, under some circumstances?") To understand the circumstances of the relative impact of the drug court model, then, research is ineluctably forced to look "inside" the drug court to consider how this can be—assuming there is a drug court effect independent of outside factors. Here the business of understanding the impact of drug courts becomes noticeably more complicated as this question goes to the heart of what a drug court "is" and tries to distinguish between what a drug court does and what a drug court produces.

The impact of the drug court—the "drug court effect"—is believed to be derived from a collection of instrumental elements, the salience of which is likely to vary over time in a particular jurisdiction and to vary from location to location as the drug court model is adapted to different settings. An important challenge for research is to determine the relative contributions of the various parts of the drug court model in accounting for its overall (presumed) impact and to discuss the implications of findings that some and not all are important. A high priority, for example, is testing the assumption that the role of the dedicated drug court judge is a fundamental and core element of the drug court model in producing positive treatment outcomes. Other core assumptions of the model needing critical examination relate to the use of sanctions,

the relative value of sanctions and incentives deployed in the courtroom, and whether drug court participants are really motivated toward favorable progress by fear of going to jail.

These questions implicit in assessing the contribution of the ingredients of the drug court model are not inconsequential. For example, if the belief that the judge is the central and most important positive influence on drug court outcomes is not supported through empirical testing, there are major implications for drug courts and the allocation of judicial resources. Setting aside the potentially significant effects of outside factors and participant attributes, these kinds of questions seek to sort through the contributions of the internal elements of the drug court model assumed by their designers to be instrumental to producing a positive result.

Modeling the Effects of Drug Court Functions on Outcomes

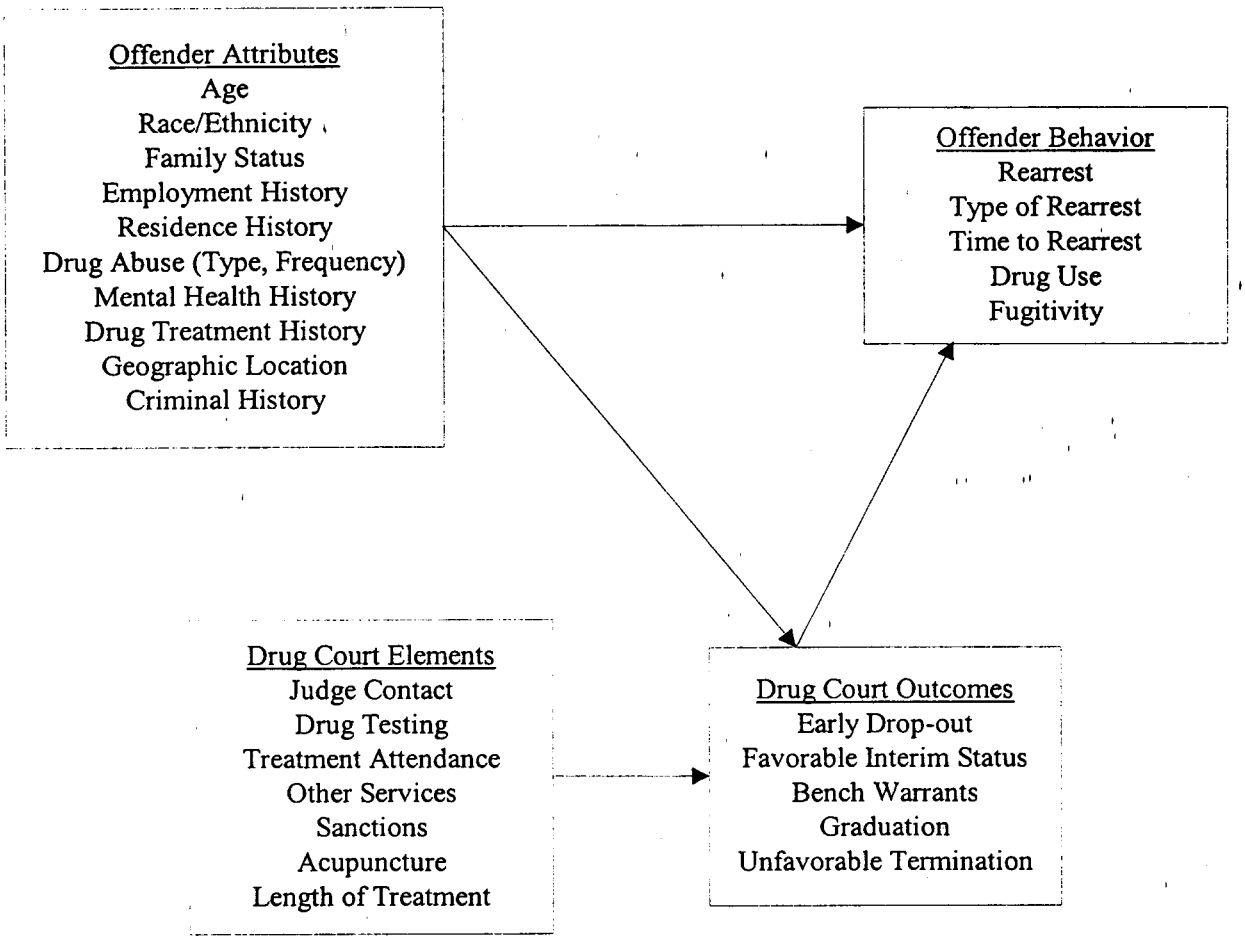
The task of sorting out the effects of the various ingredients of the drug court model is complicated by the need to distinguish between the instrumental functions (such as those just listed) and their results or outcomes. The appearances before the judge, the appointments for treatment, drug tests and other activities form part of the delivery of the treatment effect. The results they produce—drug court success or failure—are overall drug court outcomes. In concluding this research, we developed and tested a causal model of drug court impact, moving analysis of the impact of drug court "inside" the drug court model, by a) breaking the drug court operation into two parts—its operating elements delivering treatment and its outcomes; and b) specifying more clearly the variables measuring these different aspects of the drug court model.

By saying on a general level that a drug court should reduce an offender's criminal behavior, the causal model specifies that numerous contacts with the judge, a regular program of drug testing, attendance in appropriate treatment services, positive incentives and acupuncture all serve as instrumental functions that translate into favorable drug court outcomes.[29] Favorable drug court outcomes among participants include not dropping out at an early stage, producing favorable interim progress reports, attending court as required and graduating with all tasks satisfactorily completed. In fact, longer and more treatment is hypothesized to produce positive drug court outcomes. According to the causal drug court model, favorable drug court achievements, then, bring about favorable subsequent behavior in the form of fewer rearrests, lower fugitive rates from the justice process, reduced substance abuse, and other measures of productive, law-abiding citizenship. Participants who have not progressed fully through drug court treatment and have had less exposure to treatment (insufficient "dosage") should reoffend more frequently.

Versions of this model were employed to test these presumed relationships between key instrumental drug court variables—court appearances, sanctions, treatment attendance, and jail—using data from the two study sites. In both of the drug court study sites, the expected positive relationship between longer times in treatment during the first year and drug court graduation (measured at two years) is found.

[29] A more advanced analysis would also posit the type of services ("level of care") that should figure importantly in treatment effectiveness.

Measuring Offender Attributes, Drug Court Treatment Elements and Drug Court Outcomes in a Model Explaining Offender Behavior (Model 5)

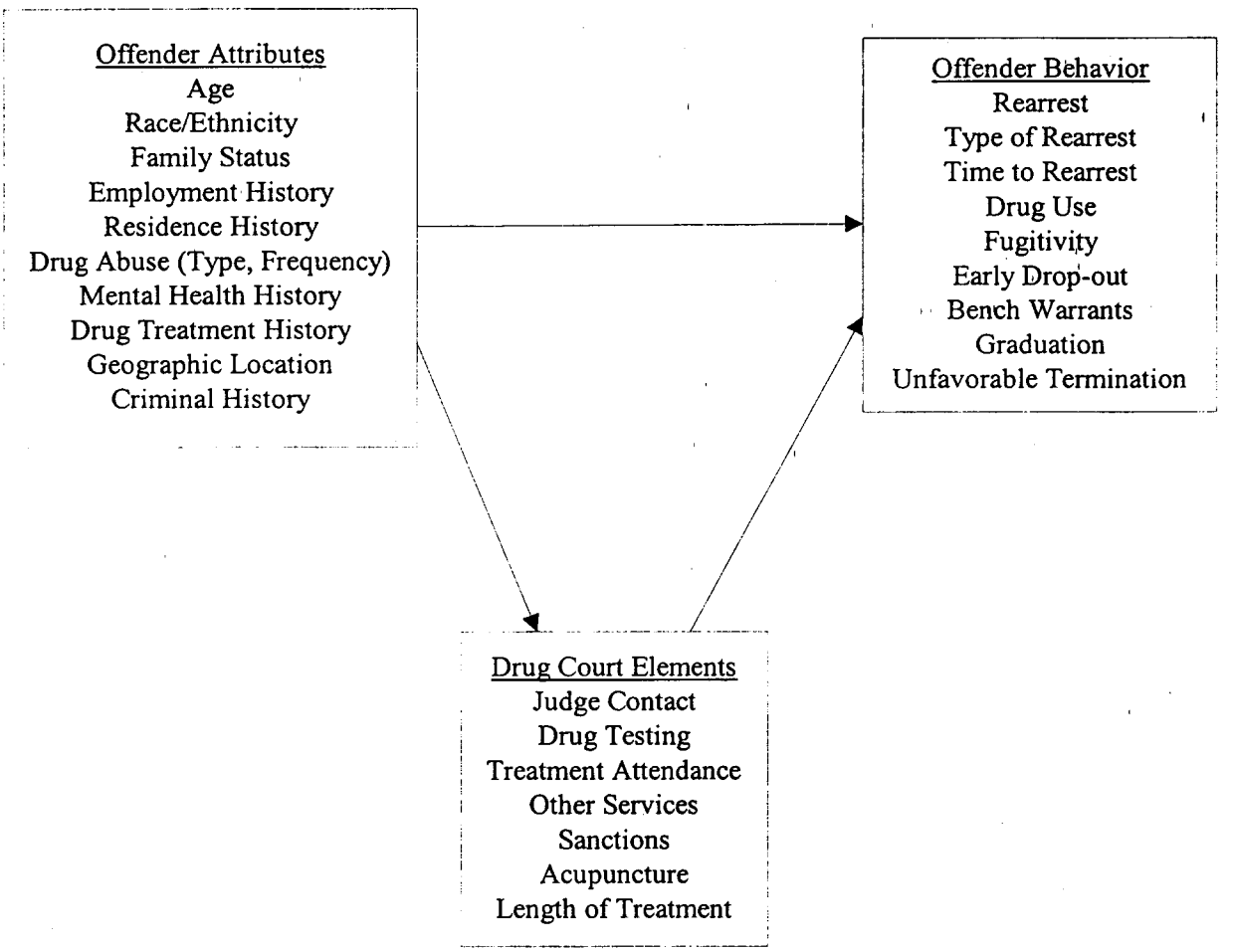


Crime and Justice Research Institute

For example, a revised causal model maintained the distinction between instrumental variables reflecting the delivery of treatment to drug court participants and drug court outcomes, but simplifies the causal model by interpreting drug court outcomes as measures of offender behavior like reoffending. From this perspective, drug court graduation and unfavorable termination are possible products of the drug court experience in the same way reoffending and substance abuse may be. In this model, drug court treatment outcomes do not themselves "cause" reoffending or its absence, they are concomitants. This version of the drug court model suggests that offender attributes (antecedent variables) affect drug court treatment delivery (as higher and lower risk participants tax services differently) directly and the offender behavior criteria (drug court outcomes, reoffending and substance abuse) directly as well as indirectly

through drug court treatment delivery. This revised model also posits that drug court treatment delivery has a direct effect on offender behavior.

Measuring Offender Attributes, Drug Court Treatment Elements and Drug Court Outcomes with Overall Outcomes in a Model Explaining Offender Behavior (Model 6)



Crime and Justice Research Institute

Implications of Las Vegas and Portland Findings for the Model of Drug Court Impact

The analyses testing the conceptualization of "how drug courts work" presented in the full report have important implications for assessing the contributions of the ingredients of the drug court treatment repertoire. First, the importance of considering the independent effects of prior participant attributes on later offender behavior as suggested in several of the hypothesized models is strongly supported by analyses of Clark County and Multnomah County data across

rearrest measures. In fact, one of the most consistent findings across sites was that, even when taking into account the effects of instrumental drug court variables, risk attributes always contributed significantly to the likelihood of reoffending among drug court participants.

Second, by implication, in none of the analyses did we find the opposite, that drug court treatment functions alone accounted for variation in reoffending. The findings relating to examination of the contribution of drug court treatment functions, net of participant risk attributes, are mixed and site dependent.

- In Clark County, four of five instrumental drug court treatment measures contributed to the prospects of later reoffending.
- The picture was quite different in Multnomah County. Once offender risk attributes were controlled, only the use of jail sanctions made a significant contribution to prediction of later rearrests—and even then, this was found for only two measures of rearrest, any and drug rearrests. No drug court function was related to the likelihood of being rearrested within one year for non-drug offenses—at least when measured as a main effect.
- In Multnomah County, then, it appears that the positive drug court results found at the bivariate level were partly spurious, explained by offender risk attributes unaffected by the drug court experience.

The analyses presented in the Phase II report represent a first attempt to assess the impact of various drug court treatment elements. On their face, the findings suggest an emphasis on treatment and deterrence in the Clark County Drug Court and primarily a deterrence emphasis (via jail sanctions) in the Multnomah County Drug Court. Analysis in both sites suggest additionally that drug court functions wield influence conjointly—as interactions—above and beyond their independent contributions to offender outcomes. Thus, while treatment variables alone were not significant predictors of rearrest in Multnomah County, net of the effects of defendant risk, treatment participation did interact with jail sanctions to make a significant contribution.

In modeling drug court outcomes taking into account the factors specified in the causal models of drug court impact, we presented analyses combining data from individual years to represent all years in each site (1993-97 in Clark County and 1991-97 in Multnomah County). However, there is a danger in drawing inferences that may "on average" make sense, but mask effects in particular years. In fact, the longitudinal retrospective design of this study has highlighted the special histories of the drug courts in each site and demonstrated that the year-to-year experience of the courts varied notably; different factors and events influenced the operation of the drug courts in each location as they functioned from year to year in a dynamic process. In Multnomah County, for example, the drug court was supervised in succession by two strong drug court judges, who were succeeded by a non-judge and a rapid rotation of numerous judges for short stints through the drug court. These changes illustrate the dynamic process of the drug court innovation and the importance of a time-sensitive analysis as well as an aggregate analysis of all years.

The masking effect of the all-year, aggregate analyses should be kept in mind in considering such findings as that court appearances before the drug court judge did not affect the

probability of later rearrest. Given the special history of judicial supervision of and assignment to Multnomah County's drug court, one may interpret this finding with great caution and serious reservations to mean that the drug court practice of person-to-person appearance before the drug court judge is not important. In fact, one might argue that the apparent effect of jail sanctions and its interaction with treatment in the Multnomah County Drug Court represents an aspect of the judge's pervasive role. These findings, nonetheless, deserve serious consideration as a first attempt to examine the impact of drug courts using a clear conceptual model of drug court impact. The questions raised by the findings should be pursued in greater depth in subsequent research.

In the revised causal model of drug court impact, we posited that drug court outcomes—such as early termination and graduation—should be viewed as dependent measures of later offender behavior that parallel but do not precede or "cause" offending behavior, that the instrumental drug court functions should produce a variety of later measures of offender behavior, including satisfactory progress through the drug court, reduced drug use and reduced criminal activity. The findings in both sites raise questions about this assumption. Just as offender attributes consistently predicted later rearrests of drug court participants, they consistently did not predict graduation in both sites.

In one sense, this is good news for the respective drug courts, because drug court graduation appears to be determined by success in the drug court, not by individual attributes. In another sense, though, the different prediction of graduation suggests that drug court outcomes and reoffending are not parallel outcomes and should not be combined under the general rubric of offender behavior as the outcome of interest. Another inference might be that the skills, achievements and behavior changes required to graduate from the drug court are not co-extensive with those required to prevent criminality. This apparent disjuncture between prediction of participant success in the drug court and success on the street should be viewed as fundamentally disturbing by drug court advocates if true.

Conclusions: The Challenges of Measuring Drug Court Impact

The proliferation of drug courts over the last decade in the United States and abroad has been remarkable in its substance and magnitude. The simple approach pioneered in Miami in 1989 spawned a movement consisting presently of about 600 operating courts in the United States, one marked by growing diversity and creativity as the original model has been expanded, adapted and has contributed to related innovation in the larger court and justice systems. As this rapid growth in the application of the drug court model has taken place, not unusually, research examining its basic tenets and impact has lagged behind. Now, when the number of studies of drug courts is growing exponentially, little work has provided a theoretical framework for organizing the critical questions about drug court impact.

The issues associated with addressing these research questions were illustrated using data from the retrospective studies of drug courts in Multnomah County, Oregon (1991-1997) and Clark County, Nevada (1993-1997) and applying a draft causal model that conceptualized drug court impact in increasingly testable ways. The analyses demonstrated how such a framework can facilitate consideration of principal elements of the drug court model across sites. In asking

whether drug courts produced better results based on a crime-reduction criterion (measured as rearrests in a follow-up of one year), we found that overall positive effects masked variation in cohorts from different periods of time. These data show support for the hypothesis that drug court participants fare better than their counterparts in terms of rates of rearrest in the first year. However, they are qualified by the finding of variation over time. The theoretical model of drug court impact was constructed to attempt to explain the sources of this variation, whether they were external, such as changes in law and policy, or offender attributes, or traced to the internal workings of the drug court.

We have found plausible support for the hypothesis that drug court impact is influenced over time by outside factors (Goldkamp et al., 2000). The causal analyses supported the hypothesis that offender attributes (considered an antecedent factor in causal models) accounted for some of the positive impact found in the study of the Portland and Las Vegas drug courts—a greater share in Multnomah County and a lesser share in Clark County.

After controlling for such attributes, the differences in rearrest rates were still significant in Multnomah County mainly only when the 1993-1994 defendants groups were compared. Our review of the milestones in the development of that court suggests that 1993-94 was a period of relative stability and effective functioning. These findings conform to earlier analyses (Goldkamp et al., 2000) showing difficulties with a treatment provider during the court's 1991-92 initial start-up period and adverse effects of two important changes: moving away from the single drug court judge model after 1995 to a "referee" (quasi-judicial officer), and frequent rotation of judges into the drug court for short periods—a change that advocates would argue was a serious dilution of the drug court model.

In Clark County, the favorable findings survived controls when 1993, 1994, 1995 cohorts of drug court participants and comparison group defendants were contrasted. They did not survive in analysis of the 1997 cohorts. The finding that comparison group defendants did better than drug court participants when 1996 cohorts were compared remained significant after controls for defendant attributes, including method of entry into the drug court (guilty plea). These findings too are explained by important changes in the Las Vegas approach over time, principally by the policy of the new district attorney to favor admitting only persons pleading guilty to the drug court. This represented a major shift away from the diversion philosophy originally shaping the court and removed the incentives of dismissal and expungement that attracted unconvicted felony drug candidates until 1996. At the same time, the conviction requirement changed the nature of the enrolled population to higher risk participants with more extensive criminal histories.

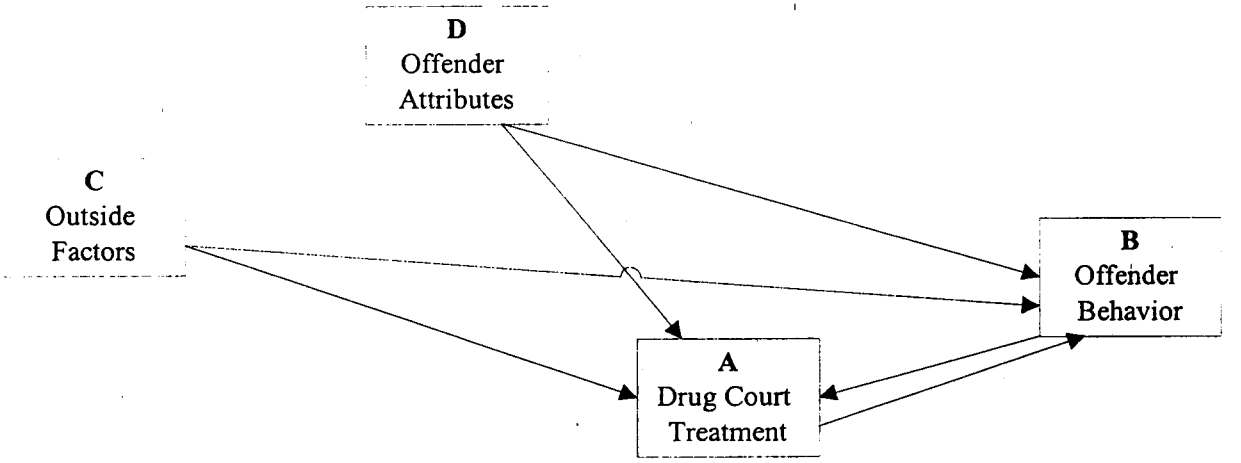
Although a consistent and strong drug court effect producing lower rearrest rates in every time period across the two sites was not found, attempts to explain the effects by controlling for factors external or prior to the influence of the drug court treatment process itself could not eliminate the effect systematically. We conclude from this analysis that

- under certain circumstances drug courts can indeed deliver the advertised crime-reduction effect,
- "outside" factors account for some of the variation in their impact over time, and

- variation in the remainder of the drug court effect must, then, be explained by factors internal to the drug court.

This forces examination of what it is about drug court treatment that could explain variation in participant outcomes over time, i.e., getting inside the "black box" of what a drug court is and what it delivers. The invention of the original drug court model mixed rehabilitative (treatment) and deterrent aims. In testing models of how a drug court works, we employed measures of treatment exposure, sanctions and appearances before the drug court judge. Net of the prior effects of participant risk attributes, analyses of Clark County data found that treatment, sanctioning and attendance at drug court sessions all were significant predictors of subsequent offender behavior (reoffending and graduation)—in the expected directions. In Multnomah County, only jail sanctioning survived controls to have a significant effect on the likelihood of reoffending; the other instrumental drug court treatment variables were not significant. Analysis of possible first-order interaction effects found that, beyond the main effects of the drug court treatment variables, court appearances and treatment attendance and treatment and jail sanctions sometimes played important roles in predicting later reoffending behavior. These exploratory findings suggest the need for careful consideration of how instrumental drug court functions are measured and more focused examination of their interaction to produce the drug court effect.

Offender Behavior also Influences Drug Court Treatment and Indirectly Influences Drug Court Outcomes



Crime and Justice Research Institute

These findings from two different drug courts with two different populations show support for the hypothesis that drug courts can contribute to a crime reduction effect. That effect may be conditioned on the influence of outside factors and participant attributes and may change over time. Nevertheless, these findings also suggest that variation in drug court outcomes also and importantly may be explained by changes in the operation of the drug court and its ability to deliver the treatment and deterrent effects postulated by the collection of components inside the drug court "black box." Understanding of the conditions under which drug courts operate effectively, then, depends on the make-up of the enrolled population, the influence of outside

factors (laws, administrative policies, resources) and the effective functioning of selective drug court functions. Of these, appearances before the judge, treatment participation and sanctions do appear to wield important effects on offender behavior.

Moreover, we found some support for the notion that rearrest is not only affected by drug court treatment but also affects treatment measures itself. Analyses in both jurisdictions showed that interactions among rearrest and instrumental drug court variables (e.g. court appearances, sanctions, treatment attended, etc.) were significant in modeling graduation measured at two years after entry in the program. This effect deserves more careful study. Thus, successive model-building may provide a useful analytic framework for assessing later offender behavior, as it incorporates outside factors, offender attributes, and instrumental components of drug court treatment. Offender attributes and external factors influence drug court treatment measures directly and later offender behavior directly and indirectly through drug court treatment. Later offender behavior (reduced offending) is influenced by the drug court experience but also, itself, has an influence on treatment (which affects offending).

REFERENCES

Finigan, M. (1998). *An Outcome Program Evaluation of the Multnomah County S.T.O.P. Drug Diversion Program*. Washington, DC: State Justice Institute.

Finigan, M. (1999). Assessing Cost Offsets in a Drug Court Setting. *National Drug Court Institute Review, 2*(2), 59-92.

General Accounting Office. (1995). *Drug Courts: Information on a New Approach to Address Drug-Related Crime* (Briefing Report to the Committee on the Judiciary, U.S. Senate, and the Committee on the Judiciary, House of Representatives). Washington, DC: United States General Accounting Office.

General Accounting Office. (1997). *Drug Courts: An Overview of Growth, Characteristics, and Results*. Washington, DC: Office of Justice Programs, U.S. Department of Justice.

Goldkamp, J. S. (1999). When is a Drug Court Not a Drug Court? In C. Terry (Ed.), *The Early Drug Courts: Case Studies in Judicial Innovation*. Beverly Hills: Sage Publications.

Goldkamp, J. S. (2000). The Drug Court Response: Issues and Implications for Justice Change. *Albany Law Review, 63*, 923-961.

Goldkamp, J. S., White, M. D., & Robinson, J. B. (2000). *Retrospective Evaluation of Two Pioneering Drug Courts: Phase I Findings from Clark County, Nevada, and Multnomah County, Oregon*. Philadelphia: Crime and Justice Research Institute.

Goldkamp, J. S., White, M. D., & Robinson, J. B. (2001a). Context and Change: The Evolution of Pioneering Drug Courts in Portland and Las Vegas (1991-1998). *Law & Policy, 23*(2), 143-170.

Goldkamp, J. S., White, M. D., & Robinson, J. B. (2001b). *"An Honest Chance": Perspectives of Drug Court Participants: Findings from Focus Groups in Brooklyn, Miami, Seattle, Las Vegas, and San Bernardino*. Philadelphia: Crime and Justice Research Institute.