EXAMINING THE IMPACT OF OHIO'S PROGRESSIVE SANCTION GRID

FINAL REPORT

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Abstract

The prisoner reentry movement has generated several reforms in community corrections that attempt to more effectively manage supervised offenders, including the use of progressive sanction policies to guide responses to violation behavior. This project investigates the effectiveness of recently introduced progressive sanction guidelines governing post-prison offenders under the supervision of the Ohio Adult Parole Authority, the central feature of which is a violation response grid. This grid is formally embedded within a broader violation policy revision that emphasizes responsiveness to offender risk and needs, reduced reliance on revocation hearings, and community sanction alternatives to early violation behavior. The overall project consists of four components, which include quantitative analyses of policy implementation and offender recidivism based on coded information from case files, a survey-based process evaluation, and an independently conducted validation study. The offender-based analyses are designed around a historical comparison group approach that relies on samples taken from before and after the policy implementation. The process evaluation is based on focus group sessions with officers that were then used to develop a self-administered officer survey tapping several attitudinal dimensions related to policy implementation. Results from the study reveal patterns that are consistent with goals and objectives of the policy. In particular, they show significantly reduced reliance on revocation hearings, revocation sanctions, and local jail detention, more efficient and concentrated use of hearings, better congruence between offender risk and revocation sanctions, and increased progressiveness in response. These findings are substantiated in multivariate models predicting revocation hearing outcomes and are consistent with results from the validation study. The sanction guidelines have no independent effect on key supervision outcomes in fully specified survival models. They do, however, enhance the effectiveness of sanction-based programming, especially for high risk offenders. Further, combining treatment services with restrictive sanctioning also significantly reduces recidivism at the high-risk level in the post-guidelines sample, even though punitive sanctioning by itself shows no generalized benefit. The focus group and statewide officer survey data reveal that although procedural training on the sanction grid was perceived to be sufficiently adequate to apply it appropriately in practice, there is widespread disagreement among respondents that officer skills and opinions were considered in its design. Those officers who did perceive more agency responsiveness reported a better understanding of the primary intent of the policy to better structure the sanctioning process, increase consistency and reduce disparities across regions.

Executive Summary

Recent increases in prison releases have caused explosive growth in the number of offenders under supervision, increased reliance on parole revocations, and exacerbated problems related to caseload management. The prisoner reentry movement has generated several reforms in community corrections that attempt to more effectively manage these offenders, including the use of progressive sanction policies to guide responses to violation behavior.

This project investigates the effectiveness of recently introduced progressive sanction guidelines governing post-prison offenders under the supervision of the Ohio Adult Parole Authority. The central feature of these guidelines is a violation response grid, a structured decision-making tool that uses offender risk, violation severity, and cumulative behavior to determine levels of organization response that range from unit sanctions to in-custody revocation hearings. This grid is formally embedded within a broader violation policy revision that emphasizes responsiveness to offender risk and needs, reduced reliance on revocation hearings, and community sanction alternatives to early violation behavior. The policy became effective in July 2005. Despite differences in operational design, progressive sanctioning systems share several core principles of deterrence and procedural fairness, including consistency and certainty of response and an escalating range of sanction options that are proportional to the severity of non-compliance. However, the effectiveness of these models in statewide jurisdictions among post-prison populations has not yet been demonstrated. The project provides important evidence in this regard through a comprehensive investigation of Ohio's new sanction guidelines on the dimensions of both implementation and offender recidivism outcomes.

The overall project is organized around four major components:

1. **Quantitative analysis of policy implementation**.[†] This component of the project addresses whether the main procedural and policy objectives of the policy have been accomplished, producing a wide range of findings from an incident-level analysis of before and after differences on proportionality and uniformity of response, efficiency in the use of violation hearings, severity of sanction outcomes, and which factors are most important in predicting agency responses.
2. **Quantitative analysis of recidivism and offender outcomes**. This component addresses the question of whether the guidelines have an independent impact on recidivism, and whether progressive sanctions have a moderating effect on the role that other key factors play in shaping supervision outcomes. In particular, the study investigates the relative efficacy of punitive versus rehabilitative responses and how the relationship between those responses and recidivism changes after implementation.

[†] All phases of the project pertaining to the first two components were conducted by the principal investigators at ODRC.

3. **Independently conducted survey-based evaluation of policy implementation**.[‡] This component relies on focus group and statewide survey responses from parole officers and parole unit supervisors to investigate through qualitative methods staff perceptions of training on the new guidelines, attitudes regarding implementation of the policy, perceived barriers to implementation, and (through statistical methods) the relationship between officer attitudes and several perceptual dimensions pertaining to understanding of purpose and effectiveness of the sanction grid.
4. **Independently conducted replication/validation study of quantitative findings**. This phase of the project addresses the major research questions of the first and second components through a series of parallel descriptive and multivariate analyses of both policy and offender outcomes. The replication study relies on a parallel sample of offenders, drawn using an identical sample design and subject to same matching procedures as the sample used in the main study.

Design and Data Sources

- The quantitative analyses of offender records were conducted using a variation of a separate sample pre-test/post-test research design that relied on the use of a historical comparison group. Under this basic design, the effects of an intervention on outcome variables in a posttest sample are compared to observations from a comparable, but separate, sample constructed prior to the change and thus not exposed to the intervention.

- The comparison group consists of a stratified, random sample of first-time post-release control and parole releases that started supervision during October-December 2003. The progressive sanctions (i.e., post-test) sample is representative of supervision starts in August-October 2005. The study compares outcomes between these two groups that stem from supervision experiences shaped by the sanctioning regimes and policy settings in place before and after introduction of the progressive sanctions reform.

- Sample design and selection criteria yielded total sample counts of 1,040 and 1,012 for the comparison and PS groups, respectively. Propensity score matching techniques and covariance modeling are used to correct for any observed sample differences. The follow-up period of observation for both samples is the first year of supervision, or until the date of early termination, whichever occurs first.

- An identical design was used to select an overlapping, parallel sample from the same set of sampling frames to be used for the replication analyses.

[‡] The last two components of the project were independently conducted by researchers at the Division of Criminal Justice at the University of Cincinnati under the direction of Lawrence Travis, Ph.D. The validation study involved both replication of the data collection phase and selected statistical analyses. Its purpose was to provide an auditing framework through which the potential for agency bias in reporting results from the internally conducted quantitative evaluation could be formally examined.

- Information from case file material, field officer supervision notes and electronically available documents was collected using an incident-based method by which detail on up to ten violation-incidents was retrospectively coded during the first year of supervision. The study is based on the full range of non-compliant and criminal behavior that occurred during the study period, as long as that behavior occurred while under active parole supervision.

- Information was also collected on residential and employment history and all programming and treatment interventions, including start and end dates, descriptive information, and reason codes associated with each change in status. These interventions may be imposed as sanctions, or as otherwise indicated through needs assessments or supervision plan documents. The coded information was then merged with standard administrative files containing offender demographics, committing offense and sentence characteristics, release dates, supervision length, field unit location, and risk assessment scores.

- The policy implementation analysis is based on a restructured version of the data file in which offender-incidents are treated as the observation units. Results from the initial bivariate analyses in this component of the project are based on 3,248 incidents, in which the central analytical concern is with pre and post-guidelines differences in agency response. The offender-level recidivism analyses are based on a propensity score matched sample of 1,044 cases, in which the main outcomes of interest are felony reoffending and major violation behavior.

- The independent implementation evaluation was based on a two-stage data collection process involving focus groups, semi-structured interviews, and a self-administered officer survey. Four structured focus group sessions involving 5-12 parole officers each were conducted by the University of Cincinnati researchers in the Cincinnati, Cleveland and Chillicothe Adult Parole Authority regions during mid-2006. Individual interviews with officers were conducted in the Lima region in place of focus group sessions. Supervisors were also individually interviewed in each of these regions, resulting in 14 interviews overall. The focus group data were then used as a basis for development of statewide, mail-based survey of officers and parole unit supervisors. The survey includes self-reported background items and multiple clusters of likert-type items tapping attitudes related to training on sanction grid, perceptions about its purpose, perceived effectiveness, and subjective experiences using the grid. Additional sets of survey items relate to professional orientation, perceptions about supervisory relations, organizational climate, and perceptions about the appropriate role of a parole officer. The survey was administered in early 2007 to 460 officers who used or supervised others using the violation sanction grid. The final response rate among the targeted group (i.e., those who use it) was 83%, suggesting significant generalizability to the universe of parole officers in Ohio.

Main Findings

Procedural and Policy Objectives

- Results from the incident-level analyses of policy outcomes reveal patterns that are consistent with goals and objectives of the policy. In particular, these results show significantly reduced reliance on revocation hearings, revocation sanctions, and local jail detention, more efficient and concentrated use of hearings, and better congruence between offender risk and revocation sanctions.

- The guidelines have also increased the progressiveness and proportionality of responses, as measured through violation hearing rates across cumulative incidents and violation severity. The incident-level multivariate models substantiate these findings, showing that post-grid offenders are significantly less likely to experience a violation hearing and to be revoked or returned to prison, net of control variables. Further, in the revocation models split out by sample cohort, the effects of violation history, prior violations and assessed risk are all significantly stronger under the new system, suggesting that the objective criteria of the sanction grid extend to revocation decisions as well.

Offender Outcomes

- The bivariate results with regard to supervision outcomes show that offenders supervised under the new sanction guidelines have generally higher failure rates. This is consistent with recent one-year recidivism patterns reported in administrative data available on full release populations. These differences are rendered non-significant, however, in the multivariate models that control for standard sources of recidivism. In other words, the introduction of progressive sanctions has played no independent role in increasing recidivism, even under a more limited use of revocation hearings.

- The results also show that offenders who are younger, less violent, chronically unemployed, and medium to high risk (excluding sex offenders) are more likely to commit new crimes. Technical violations are strongly associated with both felony reoffending and major violation behavior, and the sanction grid neither worsens nor attenuates their impact. We find similarly strong effects when the violation rate is measured dynamically in the final models. Residential instability is mildly predictive of new crimes, but not major violation behavior.

The Role of Rehabilitative versus Punitive Responses under Progressive Sanctioning

- In models based on early violators (at risk for chronic non-compliance), prior programming sanctions substantially reduce the risk of felony reoffending, while control-oriented sanctioning has a worsening effect. In other words, front-end agency responses to violations that include community-based referrals and treatment interventions work better than an excessive use of punitive sanctions. Further, the intensive use of restrictive conditions and discretionary jail detention may be especially problematic for improving outcomes among the lowest risk offenders. The

effect of halfway house referrals is significant but less important than the general programming effect, which encompasses a wide range of services and interventions.

- The beneficial impact of sanction-based programming is consistent throughout the results, and the effects are generally enhanced under the sanction guidelines. When the early violator models are split by sample group, halfway house referrals and program sanctions work substantially better under the sanction guidelines. They work especially well for post-guidelines high-risk (non-sex) offenders, consistent with an established body of correctional treatment literature. In contrast, there is no mitigating effect of program referrals for those offenders in the pre-grid cohort. Further, combining treatment services with restrictive sanctioning also significantly reduces recidivism at the high-risk level in the post-grid sample.

- In dynamic models predicting felony behavior on the full-sample split equations, program sanctions and supervision plan activities combine to reduce the risk of reoffending, but only among in the post-grid release cohort. In terms of relative importance, the strongest predictors in these final analyses are chronic unemployment, offender risk and successful involvement in sanction-based programming or services.

Replication Study

- The replication study generally substantiates the findings reported in the main ODRC analyses of policy implementation and offender outcomes. Similar to the ODRC results, the validation results from the incident-level analysis show that the sanction gird is negatively related to both officers' decision to pursue a hearing and returns to prison for a technical violation. There are very few differences in the factors that influence the incident-level outcomes before and after the sanction guidelines were implemented.

- Also consistent with the ODRC results, the replication analyses of offender-level outcomes indicate that that the sanction grid had no appreciable effect on offender behavior. Taken together, the replication study findings raise the level of confidence that can be placed in the main findings from the ODRC components of the project.

Independent Process/Implementation Evaluation

- Analysis of the focus group and statewide officer survey data reveal that although procedural training on the sanction grid was perceived to be sufficiently adequate to apply it appropriately in practice, there is widespread disagreement among respondents that officer skills and opinions were considered in its design. Those officers who did perceive more agency responsiveness reported a better understanding of the primary intent of the policy to better structure the sanctioning process, increase consistency and reduce disparities across regions.

- In turn, favorable attitudes regarding agency respect for officer professionalism, understanding of primary intent and satisfaction with regional administrators all combine to positively impact perceptions about effectiveness of the sanction grid and its ability to produce better control over offenders under supervision.

- Officer characteristics have little or no effect on perceived outcomes of the sanction grid, but officers who are more authoritative in their approach to supervision are less favorable regarding the sanction grid's effectiveness. Interestingly, officers who view the basis of their power to compel offender compliance in coercive terms have more favorable opinions about the grid, while those who view this power on the basis of legitimate authority are less favorable, especially with regard to effectiveness and offender control, suggesting that some officers might actually perceive the grid as undermining their legitimacy.

Conclusions

- The findings from the project suggest that progressive sanction regimes can serve as an important and seemingly cost-effective population management tool when revocation and incarceration resources are used in a parsimonious fashion and limited mostly to high risk offenders or those who pose public safety risks.

- The progressive structure of the grid also allows for critical, community-based treatment interventions to occur before pursuing a hearing, without increasing overall rates of felony reoffending. The results further indicate that revocation outcomes in the current system are influenced only by formal, policy-based criteria. Any policy changes that rescind or otherwise weaken these elements of the guidelines may potentially compromise the uniformity and proportionality that has been achieved.

- The guidelines also provide a structural opportunity to align treatment sanctions with high-risk and potentially chronic violators on the front-end of supervision, allowing those offenders to retain any pro-social experiences gained without facing the presumption of immediate revocation. The results indicate that these interventions are especially effective for high risk and need clients supervised under the guidelines, and they support a heavier use of control sanctions for these groups where necessary, even though overuse of punitive sanctions worsens outcomes in general.

- The enhanced benefits of sanction-based programming and treatment interventions for those offenders supervised under progressive sanctions suggests that for those involved in such services, the certainty of the consequences for failing to comply have now become more pronounced under the sanction grid. It might also be because these policies provide stronger guidance to consider the full range of risk and needs, resulting in better alignment of services once violation behavior has occurred. Finally, it is possible that structured sanctioning promotes closer monitoring of compliance with treatment services and that this occurs earlier in the supervision process.

- The fact that the progressive sanction policy has no independent global effect on improving offender outcomes should be viewed in the context of findings from the survey-based process evaluation, which suggest that full potential for sound implementation was compromised by the perceptions among some officers that their opinions and professional skills were not considered in the design of the sanctioning system. This appears to have had the effect of undermining officer perceptions about its overall effectiveness, and in some cases, increasing perceptions that the sanction grid undermined legitimacy-based sources of authority.

Final Report: Examining the Impact of Ohio's Progressive Sanction Grid
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Introduction

The explosive growth in prison releases nationwide presents enormous challenges for the effective management of offenders under community supervision. Probation and parole populations in the United States continued to expand in 2006 and now exceed 5 million offenders (Glaze and Bonczar, 2007). The number of offenders on parole at yearend 2006 approached 800,000, an increase of 2.3% over the previous year. The Ohio Adult Parole Authority (APA) has likewise experienced substantial increases in its total supervision population, growing over four percent in 2007 to a level of 35,000 amid record levels of prison intake in recent years. Prison releases to supervision exceeded 12,000 in FY 2007, while the community supervision population overall increased over 90% from fiscal yearend 1997 to 2006 (Bureau of Research, Ohio Department of Rehabilitation and Correction [ODRC], 2008; Bennie, Norton, and Martin, 2008). These increases have been accompanied by a significant shift in the composition of this population toward higher proportions of violent and sex offenders (Bennie et al., 2008). Officers continue to confront larger and more specialized caseloads with fewer agency resources.

The growth in prison releases also poses challenges to the successful implementation of system-wide reentry plans, which envision extensive program coordination, specialized treatment interventions, and sophisticated use of risk and needs assessment tools to achieve positive supervision outcomes and thereby reduce recidivism. But these plans also call for more effective supervision practices to ensure compliance with the conditions of supervision and increase offender accountability. Indeed, the Ohio Reentry Plan, as part of a broader set of recommendations on reentry-centered offender supervision, explicitly calls for policy revisions that would provide for the statewide adoption of standardized, progressive sanction guidelines (ODRC, 2002).

These recommendations reflect a broader national movement in community corrections toward a more structured form of sanctioning that reduces reliance on revocation in favor of a continuum of escalating responses determined by both offender characteristics and public safety concerns (Council of State Governments [CSG], 2005; Burke, 1997). Progressive sanctioning policies emphasize community treatment options that are appropriately responsive to offender risk in seeking to stem a growing wave of returns to prison that frequently result from technical rule violations. Nationally, 35% of prisoners admitted to state prisons are parole violators and two-thirds of those revocations are for technical violations and not new criminal convictions (Travis, 2003). These patterns have led prison and jail administrators to reinforce calls for more effective supervision management as they struggle to handle overcrowding and budgetary crises.

In Ohio, while technical returns represented just over 10% of all admission types in fiscal year 2007, the volume of returns continues to increase as supervision populations grow and is now approaching 3,500 annually (Bureau of Research, ODRC, 2008). Two-thirds of supervised releases in Ohio commit at least one violation within the first year of release (Martin, Dassanayaka, and Van Dine, 2004). And although technical return rates in Ohio have begun to decline moderately, they have been largely offset by recent increases in felony re-commission rates, adding to the urgency to implement proposed reentry policies governing supervision practices. Yet there is an emerging consensus

among parole authorities that overly punitive responses to technical violations will not reduce recidivism, nor will they necessarily enhance public safety (Burke, 2004). This view is consistent with an established body of evidence underscoring the utility of addressing risk and criminogenic needs in reducing recidivism over punishment alone.

The recommendations to craft a more reentry-based sanctioning process first put forth in Ohio's reentry plan were eventually implemented in July 2005 through a comprehensive policy reform governing the Adult Parole Authority's response to violations of the conditions of supervision. The Ohio guidelines are part of a broader reform movement in which structured sanctioning policies have been implemented in several other agencies. But since these policies are so new, very little evidence exists by which to gauge their overall effectiveness.

The major purpose of this project is to study the effectiveness of Ohio's progressive sanction policy, both as an efficient management tool and as a reentry-based approach to increasing rule compliance and thereby improving supervision outcomes. More specifically, the major goals are to investigate whether the introduction of the guidelines and policy improved supervision outcomes in the aggregate, increased administrative efficiency and the progressiveness of sanction responses, and resulted in more explicit use of structured risk assessment as a factor in shaping agency response to violations. It further investigates the impact of the sanction guidelines on individual-level supervision outcomes, and explores how the relationships among risk, violations, sanction response, and new criminal offending change before and after implementation. Finally, it seeks to validate the quantitative findings through an independently conducted replication study, and add context to those findings through a process evaluation of the implementation of the policy based on parole officer survey and related focus group data.[1]

Organization of Report[2]

This report is organized as follows: we begin with a brief overview of recent empirical and conceptual work that has helped inform the current use of graduated sanctions, followed by a discussion of the major features of Ohio's guidelines and supporting policy. We then specify two major sets of research questions that we investigate through our quantitative analyses. Next, we overview the design and discuss the analytic strategy behind these analyses, discussing our data sources, collection methods, comparison group and sampling design. Findings from the study are presented in two sections: one addressing implementation and operational effectiveness of the sanction grid based on analyses of core process measures, and the second showing descriptive and multivariate findings related to pre/post policy differences on important dimensions of offender outcomes. Finally, we discuss the policy implications of the findings, and conclude with a discussion of how they contribute to emerging theories of reentry and procedural justice.

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[1] The replication study and process evaluation were conducted independently by the University of Cincinnati and included in the scope of project components funded by NIJ. The process evaluation is based in part on a survey of Ohio parole officers' attitudes and perceptions surrounding the Adult Parole Authority's progressive sanctions policy. The design and results of both components are reported in Appendix 9.

[2] The main body of the report is limited to presentation of the design, methods, and findings from the quantitative analyses of policy effectiveness conducted by ODRC.

Empirical and Theoretical Foundations of Graduated and Progressive Sanction Models

Graduated sanction models refer to both court-based dispositional options, which vary by level of confinement or supervision required, and agency-based schedules of increasingly restrictive responses that vary proportionally with an offender's degree of non-compliance (Weibush, 2002). In either case, these models have been heavily influenced by empirical findings from a growing body of "best practices" research on effective supervision and treatment strategies. By the mid-1990s, early forms of alternative judicial sanctioning, such as electronic monitoring and intensive probation, were shown to be of limited effectiveness, overemphasizing surveillance and punitive approaches without addressing underlying behavior or improving offender outcomes (Petersilia and Turner, 1993). Many of these programs failed to include treatment components (Cullen, Eck and Lowenkamp, 2002; Paparozzi and Gendreau, 2005), even as other work demonstrated that the effectiveness of intensive supervision is enhanced when combined with such treatment (Petersilia and Turner, 1991).

A larger body of meta-analytic research has conclusively demonstrated the effectiveness of correctional interventions that employ established programmatic principles, especially those that are responsive to higher risk offenders (e.g., Andrews et al., 1990; Andrews and Bonta, 1998). Early intermediate sanction programs, however, focused inappropriately on lower-risk offenders, counter to the "risk principle" and related findings demonstrating that intensive services work best when targeted at the higher risk and need levels (Gendreau, 1996; Paparozzi and Gendreau, 2005; Lowenkamp and Latessa, 2005).[3] Recent findings from a large study of residential treatment programs in Ohio has shown widespread effectiveness among higher risk offenders, but iatrogenic effects for their lower risk counterparts (Lowenkamp and Latessa, 2005).

These findings are consistent with a related set of findings documenting the effectiveness of drug courts and court intervention programs (Office of Justice Programs, 1998), which represent the earliest use of incremental sanctioning within the context of a *program*, or intervention, model (Taxman, Soule, and Gelb, 1999). Importantly, these approaches have demonstrated that a more structured use of graduated sanctions provides incentives to participate in drug treatment (Harrell, Cavanagh, and Roman, 1999), and that the overall effectiveness of drug courts is greater among higher-risk offenders (Lowenkamp, Holsinger and Latessa, 2003, cited in Lowenkamp and Latessa, 2005). Graduated sanctions models, as implemented in drug court programs, emphasize the importance of swiftness and certainty in imposing an increasingly severe schedule of penalties for non-compliance with program rules. These penalties sometimes include intensive treatment. Drug court models thus combine elements of monitoring and treatment-oriented responses in creating a more balanced approach to progressive sanctioning (Harrell and Roman, 2001).

This well established body of best practices research has most recently helped inform the development in several jurisdictions of progressive sanctioning guidelines

[3] The risk principle, as used commonly throughout the correctional treatment literature, refers to the notion that treatment services are most effective when their intensity is matched appropriately to an offender's risk of reoffending.

governing the system-wide supervision of parole and probation caseloads. These reforms have usually been implemented as part of broader reentry strategies designed to confront large violator populations and improve overall success rates. They are generally referred to as *administrative* models because they govern behavior within a particular setting and become part of the standard supervision practice (Taxman et al., 1999). Although they share common elements, there is wide variation across jurisdictions in the operational design of these policies, ranging from loosely structured menus of sanction options to complex violation response matrices that incorporate multiple decisional points as well as positive reinforcement rewards (Burke, 2004; Carter, 2001).

The matrix-based systems which are most closely related to Ohio's sanction grid typically incorporate offender risk as a major factor in determining sanction response. Many of these systems have been developed in consultation with the National Institute of Corrections (NIC), which has strongly advocated that empirically-based risk assessment be incorporated explicitly into graduated response systems in order to develop more targeted and structured decision-making tools (Burke, 1997). Various classification tools, such as the LSI or Salient Factor Score, are used to place offenders into low, moderate, or high-risk categories. Risk profiles are usually arrayed against broad categories of violation severity to help guide officers in imposing appropriate responses, which may range from verbal reprimands to parole revocation (CSG, 2005; Carter and Ley, 2001; Burke, 2004). These more recent reforms are thus consistent with basic assumptions of the risk principle, recognizing that both public safety and rehabilitative responses should be aligned with an offender's risk of reoffending.

Graduated sanction reforms share several broader objectives, including an emphasis on swiftly imposed responses, certainty in agency adherence to the sanction policy, and an increasingly severe range of responses, all of which serve as deterrents to non-compliance by increasing its perceived costs (Taxman et al., 1999; Wiebush, 2002). Violation matrices also provide responses that are proportional to the seriousness of misconduct. But their incorporation of risk management principles and reliance on local community resources reflects broader utilitarian objectives as well, as parole agents attempt to tailor responses according to assessed criminogenic needs and limit revocation options to high risk violators who fail in program interventions (Wiebush, 2002). A more elaborate theoretical basis for the effectiveness of these elements in reducing supervision failure has recently been advanced by Taxman et al. (1999), who argue that the deterrence principles and consistency and uniformity of response inherent within progressive sanctioning schemes reduce disparity and increase favorable perceptions of *procedural justice*, thereby enhancing the legitimacy of parole authorities and promoting compliance (see also Rottman, 2007; Sherman, 1993). Offenders are more likely to view the sanctioning system as procedurally fair when rules and the consequences of violations are explained in advance, and when sanctions are imposed consistently but with an appropriate level of officer discretion (CSG, 2005; Harrell et al., 1999).

In spite of this important theoretical refinement, the effectiveness of administrative models of progressive sanctions in statewide jurisdictions has not yet been demonstrated, especially for post-prison settings in which the costs of re-incarcerating technical violators is highest. Relevant research has been limited so far to drug court evaluations, descriptive assessments of changes in revocation patterns and other process-level indicators (see Carter, 2001), or limited studies of probation departments (e.g., The

Civic Institute at Mercyhurst College, 2002).[4] We address this gap in the literature by conducting a comprehensive investigation of Ohio's new sanction guidelines on the dimensions of both implementation and offender recidivism outcomes. Before outlining our research questions, we first present an overview of the major elements of the policy and response grid, situating the policy within the context of recent legislative changes.

The Ohio Progressive Sanction Grid and Violation Policy

The emergence of structured parole sanctioning in Ohio is traceable to major statutory changes implemented as a part of Ohio's 1996 Truth-in-Sentencing law, more commonly known by its legislative label, SB2. Among its many changes, SB2 provided presumptive sentencing guidelines, abolished parole and imposed definite sentences on most felony offenders. The sentencing guidelines component of SB2 presumed diversion for first-time, low-level offenders, but also provided for prison sentences as low as six months for lowest felony levels. Although it ended parole release for most new admissions, it retained supervision after prison for those who used to receive parole, now called Post Release Control (PRC).

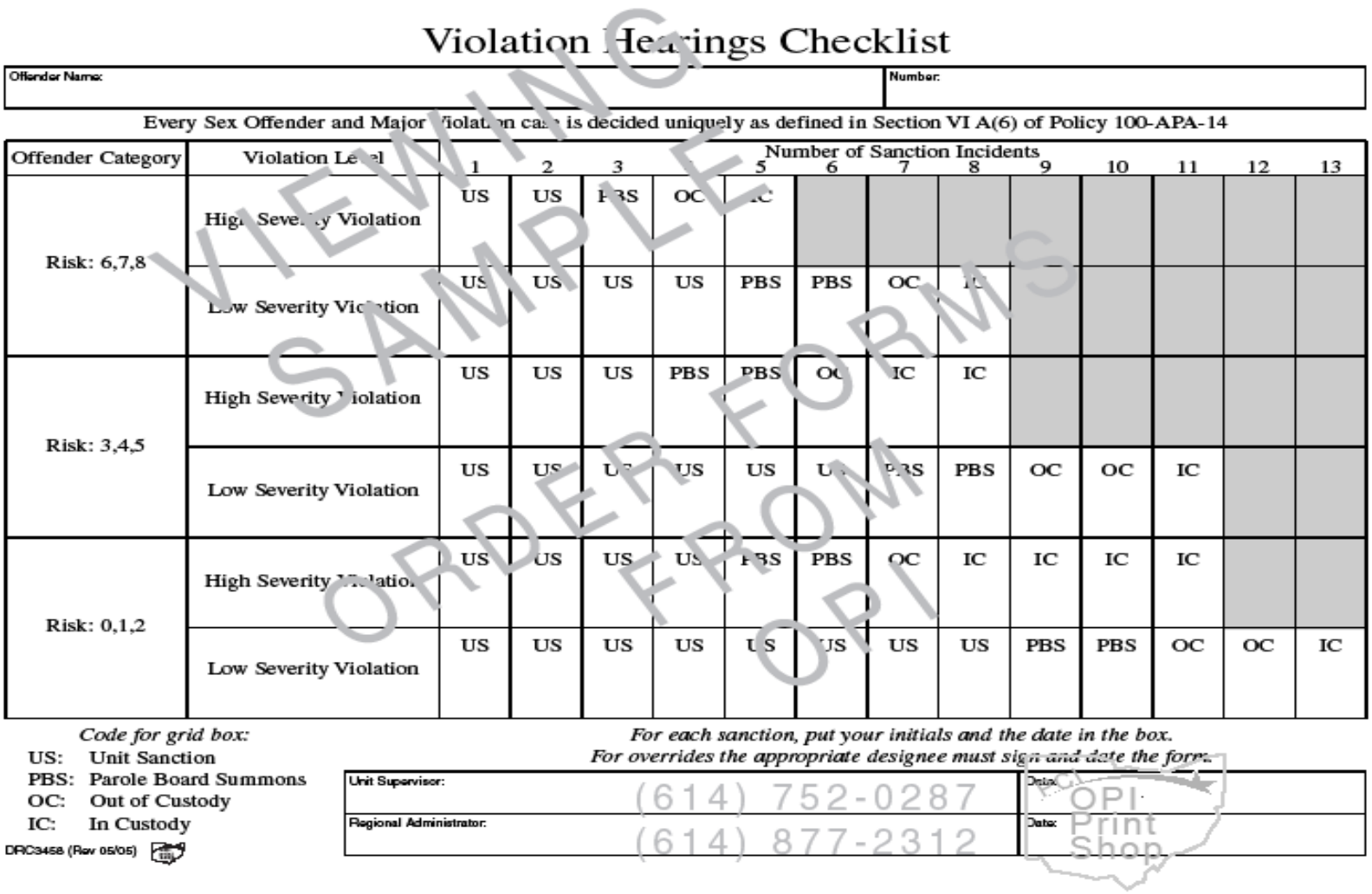
In addition to violent offenders, however, it also made non-violent offenders subject to discretionary PRC placement. Discretionary PRC placements have declined sharply in recent years under tighter criteria, but the law substantially changed the size and composition of the post-prison supervision population to include large numbers of previously unsupervised low-level felons. Caseloads evolved into a mix of older parolees serving longer, indeterminate terms, and younger PRC cases perceived to be resentful and harder to manage. While parolees remain subject to revocation, those violating PRC face a maximum nine-month penalty upon each return, the cumulative total of which cannot exceed half of the original sentence.[5]

Large numbers of discretionary PRC releases in the early post-SB2 period led, in turn, to a sharp increase in technical returns. The combination of high return rates, short penalty intervals, inconsistent handling of violation behavior and under-utilization of community sanctions underscored the need to reform revocation and supervision practices. The establishment in the mid-1990s of a single, due process violation hearing in the field increased consistency, but failed to reduce the level of technical returns. Eventually a series of advisory workgroups was formed starting in 2001 (in consultation with NIC) to develop baseline information on violation and response patterns, expand the range of community sanctions, and ultimately recommend ways to organize a new system of progressive sanction guidelines consistent with Ohio's Reentry Plan.

[4] This study of Erie County (Pennsylvania) probationers evaluated a modified sanction matrix emphasizing "zero-tolerance" responses, finding that technical violation and felony commission rates were lower than under an alternative matrix system without that enhancement. Although the study used random assignment, it employed few controls, used non-standard follow-up periods, and relied on small caseload counts, thus limiting its generalizability.

[5] We use the term "revocation" generically throughout this report, even though that term is technically reserved in Ohio only for parolees who are returned for technical violations, not PRC violators. Revocations and "prison sanctions" are conceptually similar, with both types of offenders experiencing similar lengths of stay once returned.

Figure 1. Ohio APA Sanction Grid.



Violation Hearings Checklist

Offender Name:	Number:

Every Sex Offender and Major Violation case is decided uniquely as defined in Section VI A(6) of Policy 100-APA-14

Offender Category	Violation Level	Number of Sanction Incidents 1	2	3	4	5	6	7	8	9	10	11	12	13
Risk: 6,7,8	High Severity Violation	US	US	PBS	OC	IC								
	Low Severity Violation	US	US	US	US	PBS	PBS	OC	IC					
Risk: 3,4,5	High Severity Violation	US	US	US	PBS	PBS	OC	IC	IC					
	Low Severity Violation	US	US	US	US	US	US	PBS	PBS	OC	OC	IC		
Risk: 0,1,2	High Severity Violation	US	US	US	US	PBS	PBS	OC	IC	IC	IC	IC		
	Low Severity Violation	US	US	US	US	US	US	US	US	PBS	PBS	OC	OC	IC

Code for grid box:
US: Unit Sanction
PBS: Parole Board Summons
OC: Out of Custody
IC: In Custody

DRC3458 (Rev 05/05)

For each sanction, put your initials and the date in the box.
For overrides the appropriate designee must sign and date the form.

Unit Supervisor:	Date:
Regional Administrator:	Date:

The sanction grid that is the subject of this evaluation is presented in Figure 1. The grid is formally embedded within a broader policy that governs responses to violations of the conditions of APA post-prison supervision, serving as a structured decision-making tool that provides guidance in imposing sanctions based on offender risk and violation severity. This new violation policy became effective in July 2005. It replaced a less structured one that allowed for more local discretion, and made the following key changes that have important implications in shaping our research questions below: 1) As before, the policy directs officers to consider both public safety and the overall history of the offender in addressing noncompliance, but now makes explicit reference to the sanction grid and an offender's risk level in determining the most appropriate response; 2) It limits the mandatory issuance of a hold order (when criminal proceedings have not been initiated by local jurisdictions) to a more restrictive set of situations involving firearms, sex offenses, bodily injury, threatening behavior, and out-of-state fugitive status, requires higher-level approval for local detention that is otherwise discretionary, and creates a general presumption that violation hearings will be held in non-custody settings; and 3) The policy replaces a less structured checklist system (used mostly to determine the need for a custody hearing) with a risk-based, progressive matrix format to guide the actual level of response to violation behavior. The procedural aspects of a violation hearing itself are addressed in a separate policy that remained unchanged across our study period. While the sanction grid does not formally govern hearing dispositions (i.e., revocation decisions), it has important implications for dramatically changing the volume and type of offenders who are referred through staffing decisions.

The policy's emphases on the risk principle and community sanction alternatives are reflective of the Department's broader reentry goals relating to supervision practices. These goals include embracing a supervision philosophy emphasizing offender accountability, public safety, and balanced, progressive responses to non-compliance. They are consistent with procedural justice notions of deterrence described above, which maintain that legal compliance is best achieved by promoting fairness, preserving offender dignity, and responding with certainty and swiftness to negative behavior (Sherman, 1993; Taxman et al., 1999). In sum, the policy represents an acceleration of an ongoing shift away from the punitive control of offenders toward an approach emphasizing balance and community-level response.

The structure of the sanction grid is similar to other violation response matrices, especially those that incorporate risk. Violation behavior is categorized within risk level, forming the vertical axis of the grid. Risk scores are from the offender's static assessment used to determine initial level of supervision. High-level violations include absconding, violations of protective orders, victim contact, program terminations, change of residence and certain misdemeanor offenses. Low-level violations mostly include employment, reporting, substance abuse, and curfew violations. Sex offender violations, weapons infractions, threatening behavior, out-of-state fugitive status, and causing bodily injury are handled uniquely as "major" violations and not addressed through the grid. Otherwise, sanctions for new felony behavior with no other technical violations would be imposed at the post-conviction stage.

Responses are determined by cross-classifying these categories by the cumulative number violation-incidents as a way of incorporating sanction history into the decision-making process. Unlike many other systems, however, the matrix does not provide structured menus of specific sanctions in each response cell, nor does it incorporate incentives along with sanctions as part of a single unified system of response strategies.

Rather, the cells refer to mainly to levels of organizational response, which include local unit-level responses, parole board summons, or violation hearings. A sanction, as formally defined by the policy, refers broadly to any official response imposed pursuant to relevant sections of the Ohio Revised Code. More specifically, unit-level sanctions imposed by local supervising units include responses such as more restrictive conditions, structured supervision activities, substance abuse testing and monitoring, referral to a substance abuse specialist, housing and other community referrals, upgrades in supervision levels, increased reporting, informal and written reprimands, summons to a parole board officer, and halfway house and/or non-residential program placement. Referral to a violation hearing is necessary in order for a revocation of release to be considered.

The sanction grid allows multiple opportunities to impose unit-level sanctions before initiating the process to pursue a violation hearing. This break between local and hearing-level response thus constitutes the main progressive element of the Ohio system, rendering it less structured and incremental than other graduated sanction systems, such as conventional drug courts, that incorporate more nuanced response options. Importantly, however, this helps preserve officer discretion and allows opportunities for more tailored rehabilitative interventions to be imposed at the higher risk levels, consistent with policy language directing officers to consider a wide range of offender background factors in fashioning responses to violation behavior. On the other hand, the system is explicitly proportional in that the number of local sanctions allowed decreases with increases in risk and violation severity. As an intermediate step, the grid directs officers to schedule one or more Parole Board Summons prior to resorting to a violation hearing. These refer to unit-level sanctions that require appearances in front of paroling officers as a vehicle for amplifying the importance of abiding by the conditions of supervision and restating the consequences of non-compliance. Finally, the grid presumes that violation hearings will be scheduled out of custody except when overridden by pubic safety concerns or in cases involving out-of-state fugitives.

Research Questions

Figure 2 summarizes the major factors that helped shape the development of the policy, along with a conceptual model of its hypothesized procedural and offender outcomes. Increasing prison intake and the surge of relatively lower-risk offenders onto supervision in early stages of SB2 created new, simultaneous challenges in the areas of population and supervision case management. The policy reforms include several elements designed to confront those challenges through more selective and efficient use of sanctioning resources.

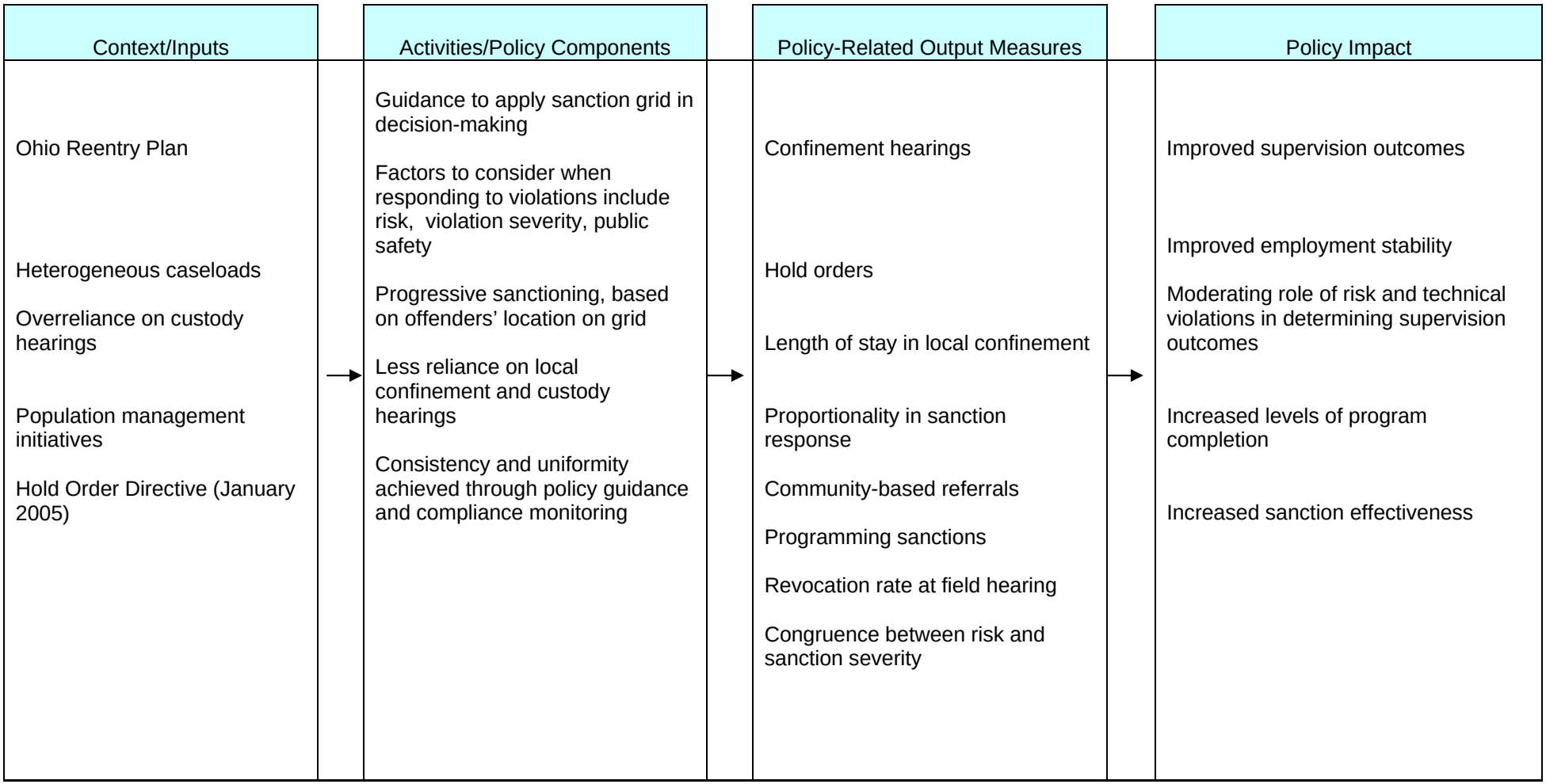
Implementation of the policy and sanction grid was preceded in the short term by an executive directive that restricted the use of local jail detainment and in-custody violation hearings to incidents involving only the most serious forms of violation behavior. This language was then incorporated into the policy itself, along with the full range of factors to be considered in responding to all forms of non-compliance and in preparing to pursue a violation hearing. As outlined in Figure 2, the major objectives of the policy include the following: increased proportionality (i.e., responses appropriate to the level of violation severity) and uniformity across regions at the organizational level of sanctions imposed, progressive sanctioning (i.e., unit sanction versus revocation hearing) and presumptive use of community-based options for early violators, better

responsiveness to risk, and more selective use of hearings and confinement resources. These objectives are representative of those embraced by several jurisdictions receiving technical assistance from NIC in the early 1990s (Burke, 1997). Implementation of the policy is expected to produce changes in several specific areas of agency response, some of which are highlighted in Figure 2. These changes, in turn, have implications for improved offender outcomes under a policy setting more responsive to offender risk and need levels. The study is broadly organized around two major sets of research questions that follow from this conceptual model:

1) Procedural and Policy Objectives: In addressing the overall aspects of implementation, we first ask whether the organizational level of response (unit/local sanction versus violation hearing) is proportional and uniform, consistent with the basic principles of a procedural justice approach to parole supervision. Further, is the overall administrative efficiency of the agency increased through a more selective use of revocation hearings and local jail confinement, thereby preserving this option for higher risk, repeat violators? Have officers increased the use of programming/treatment interventions, where appropriate, as an early alternative to more punitive sanctions? And do offender risk and overall violation history become stronger determinants of organizational and sanctioning response? These questions address the core objectives of the new policy guidelines and constitute the basic outcomes on which the systems of other agencies have so far been evaluated.

2) Offender Outcomes: We extend the scope of the study further by also addressing the sources of supervision outcomes before and after the start of the sanction guidelines. Broadly speaking, we ask whether there is a significant improvement in offender outcomes after implementation, net of other determinants of supervision behavior, and under what circumstances progressive sanctions are most effective. We also address how the role of offender risk changes in determining those outcomes under a system of decision-making more sensitive to risk profiles, and whether the previously reported (see Gray et al., 2001; Travis and Petersilia, 2001) positive effect of technical violations on new criminality is attenuated or exacerbated under an overall less punitive system. Further, we investigate the relative efficacy of punitive versus rehabilitative responses in general, and ask how the relationship between those responses and recidivism changes after implementation. In sum, we cast a broadly defined set of questions that bear directly on establishing the managerial appeal of progressive sanctions, while contributing to a separate literature on the general analysis of violation behavior (e.g., Fendrich, 1991; Gray, Fields, and Maxwell, 2001; Schulenberg, 2007).

Figure 2. Ohio Progressive Sanction Policy Impact Model



Research Design and Data Sources

The study uses a variation of a separate sample pretest-posttest research design (Campbell and Stanley, 1963) that relies on the use of a historical comparison group. The design is shown in schematic form below:

O_1 (X) (Historical Comparison Group)
X O_2 (Post-Intervention/Sanction Guidelines Group)

Under this basic design, the effects of an intervention on outcome variables in a posttest sample are compared to observations from a comparable, but separate, sample constructed prior to the change and thus not exposed to the intervention. This design typically uses an analysis of covariance approach and is common in a large body of sentencing guideline research and evaluations of system-wide policy interventions, but is potentially undermined by threats to internal validity relating to cohort and history effects. Since there is no conventional comparison group, observed treatment effects are potentially due to other sources unrelated to the policy changes investigated here.

We attempt to minimize these potential biases through statistical controls, matching procedures, and by optimizing our sampling design, such that the data are drawn from sampling frames representing release cohorts from the periods immediately before and after implementation of the new policy in July 2005. The comparison group consists of a random sample of first-time Post Release Control and Parole releases that started supervision during October-December 2003. The progressive sanctions (PS) sample is representative of supervision starts in August-October 2005. In both cases, the starting frames excluded re-releases to supervision after a technical return, as well as releases to Transitional Control (i.e., vocational furlough), Monitored Time (i.e., supervision based on record checks only), interstate compact, or a detainer. The follow-up period of observation for both samples is the first year of supervision, or until the date of early termination, whichever occurs first. For the comparison group, this period ends just prior to the January 2005 hold-order directive, thereby minimizing any possible contamination from a related policy change governing revocation practices.[6] We refer throughout the report to these two samples as the pre and post-guidelines groups since agency response to violation behavior was governed by the policy environments that existed before and after introduction of the progressive sanctions reform.

Both samples include all females released during the two periods who met the selection criteria. Males were selected at conventional precision levels through a stratified random sampling scheme using a 20% oversampling rate to offset missing or otherwise unusable case file material. The male population was stratified by type of

[6] It should be noted that in spring of 2006, the APA implemented a separate revision to its offender classification policy that included a formal incentive system to promote positive behavior. We consider this to have occurred late enough in the post-test follow up period that any meaningful contamination should be minimal, especially in light of the slowly escalating nature of the reward system.

release (parole, discretionary PRC, and mandatory PRC), sex offender status, and parole region and drawn proportionally from each stratum. These procedures yielded total sample counts of 1,040 and 1,012 for the comparison and PS groups, respectively. Since key offender background characteristics, including risk level, were not available electronically for the entire 2003 release population, cases were not matched to the PS group at the time of sample selection. Instead, we use propensity score matching techniques and covariance modeling to correct for any observed sample differences. The matching procedure is discussed in more detail in the recidivism outcome analyses below.

The study is based on data coded from a variety of electronically available and paper copy supervision records. The primary source of information used in obtaining the complete supervision history of an offender, including narratives of the violation and sanction histories, are the field officer's supervision (FOS) notes. FOS notes record all offender contacts, service referrals, violations committed, sanctions imposed, program completions and employment changes. New PC tablet technology was made available to all field officers by the end of 2004, such that hand-written notes are now digitally recorded and uploaded to a web-based tracking system. Coding for the PS cohort was done from the electronic version of these notes. Since this version was unavailable for most of 2004, data collection for the comparison group took place in the field at local APA unit offices. In both cases, the violation and sanction data were coded from narrative, log-style entries.

Information from the case file material was collected using an incident-based method by which detail on up to ten violation-incidents was retrospectively coded during the first year of supervision. Incident types are broadly categorized in terms of rule violations and criminal behavior. Data coders were trained to record the full range of non-compliant and criminal behavior that occurred during the study period (excluding traffic citations), even if the behavior did not lead to an APA sanction. Each coded incident consisted of detailed information on up to seven specific violations and/or sanctions, since some incidents involved multiple violations tied to a single APA response or court disposition. Coded information was limited to behavior that occurred while under active APA supervision.

Observations were also collected on residential and employment history and all programming and treatment interventions. These data were coded and assembled in the form of multiple records per offender (for each employment, residential, or programming episode) consisting of start and end dates, descriptive information, and reason codes associated with each change in status. This information also came mostly from field notes, although several other source documents were used throughout the data collection effort, including violation and arrest reports, hold orders, sanction receipts, supervision plans, termination recommendations, and self-reported supervision activities. For the PS group, a paper copy of the sanction grid (if marked) was used to supplement and verify information obtained from the field notes.

All information collected from the case file documents was entered into a series of databases, restructured, and then merged with data extracted from several electronically available administrative data sources. These sources include standard agency data on offender demographics, committing offense and sentence characteristics, release dates, supervision length and field unit location. They also include status codes

relating to re-incarceration events (revocation or felony recommission), thus providing a supplementary source of information on supervision outcomes. Similarly, we added administrative data on field hearings, residential address records and substance abuse referrals in order to provide an alternative source of information in those areas as well.

For the treatment group, offender risk scores were extracted from Reentry Accountability Plan (RAP) databases, which consist of separate static risk and dynamic needs assessments scored during the offender's incarceration. The categorized static score is one of the key axes of the sanction grid, as well as the basis for the APA's supervision classification system. The instrument was originally developed for use with ODRC's parole guidelines system, but was later incorporated into the current reentry assessment process. The overall score represents the sum of six individual items that mostly measure an offender's prior criminal history. Although risk profiles vary in the aggregate over time, the unavailability of automated assessments on all releases prior to 2004 precluded the use of a conventional case matching design at the time the samples were drawn. Subsequent collection and coding of missing risk scores for the comparison group did allow, however, for propensity score matching to be used retrospectively to correct for non-equivalency between the two groups. These procedures are discussed further below.

Analytic Strategy: Policy Implementation

Our assessment of the effectiveness of the new sanction policy centers around two major sets of quantitative analyses that correspond with each set of research questions above. In the first section of the analysis, we use bivariate comparisons, contingency tables, and multivariate models of agency response to address the extent to which the major policy objectives have been implemented effectively. The bivariate analyses allow us to compare differences across samples in specific field-based activities and organizational responses that are central to progressive sanctioning. Some of the findings are presented by levels of offender risk and violation severity, since those factors are considered explicitly in the new decision-making guidelines. We then switch to regression analyses of two key decision points in the sanctioning process, level of organization response (i.e., local vs. violation hearing) and violation hearing disposition, in order to examine the net effects of the sanction guidelines on these outcomes, as well as the moderating effect they may have with regard to how risk and violation behavior determine responses before and after implementation.

Throughout the implementation assessment, we use a restructured version of the dataset that treats offender-incidents as the basic unit of analysis. In this type of file arrangement, each incident, along with appended offender-level data and the coded violation and sanction detail, constitutes a separate record. The results from the bivariate analysis below are based on 3,248 incidents after exclusion of missing data on incident type.[7] Propensity matching, which is used throughout the recidivism analysis below, was

[7] The restructured file consists of 1,196 offenders (out of the combined starting sample of 2,052, reduced to 1,963 after exclusion of missing data) with at least one coded incident. For this portion of the analysis, a small number of cases with valid violation codes, but missing incident types were excluded. Refer to Appendix 1 for a complete summary and description of all samples and related subsets used throughout the analysis.

Table 1. Descriptive Statistics and Definitions of Variables used in Offender-Incident Analysis (combined pre and post guidelines samples; N=3,248)

Variable Name	Definition	Mean
Organizational Outcomes:		
Level of Organizational Response†	1=Incident resulting in revocation (VSP) hearing (or hearing pursued); 0=Unit-level response	0.134
Hearing Location	1=Hearing held with offender in custody; 0=Out-of-custody hearing	0.795
Pre-Hearing Jail Detention	1=Incident involving pre-hearing local jail detention (i.e., jail hold); 0=No jail hold issued	0.260
Sanctions Imposed:		
Hearing Outcome	1=Hearing resulting in revocation/return to prison; 0=Non-revocation disposition	0.753
Revocation/Return†	1=Incident with revocation/return as most serious sanction imposed**; 0=Other sanction	0.126
Programming/Treatment/Restrictions	1=Incident with programming/treatment or restrictions as most serious sanction imposed**; 0= Other sanction	0.438
Halfway House Placement	1=Incident with halfway house placement as most serious sanction imposed**; 0=Other sanction	0.079
Independent Variables:		
Offender Risk	Reentry Accountability Plan Static Risk Assessment Score	
Low		0.234
Medium		0.414
High		0.208
Sex Offender		0.144
Violation Severity	Severity level of most serious violation behavior committed at each incident	
Major		0.164
High		0.468
Low		0.368
Cumulative Violation Rate	Total violations committed through current incident (per month)	1.230
Sex	1=male; 0=female	0.866
Race	1=non-white; 0=white	0.546
Age	Age (in years) at start of supervision	33.382
Felony Category of Commitment Offense	Felony category: F1/life sentence to F5 (coded in reverse order of seriousness)	3.033
Parole-Eligible Sentence	1=Released on discretionary parole; 0=Released on post release control	0.260
Parole Region:	Parole region at start of supervision	
Akron		0.165
Cincinnati		0.195
Columbus		0.182
Lima		0.086
Mansfield		0.099
Chillicothe		0.091
Cleveland (reference)		0.182

**Outcomes include multiple sanctions of lesser severity. Incidents with no APA response are excluded.
†Dependent variables used in incident-level regression models.

not applied at this stage since the primary analytic concern is with agency response, not offender behavior. Using the full sample also increases statistical power when studying more serious back-end sanctioning, which is otherwise limited by the one-year follow-up period.

Measures Used in Policy Implementation Analysis

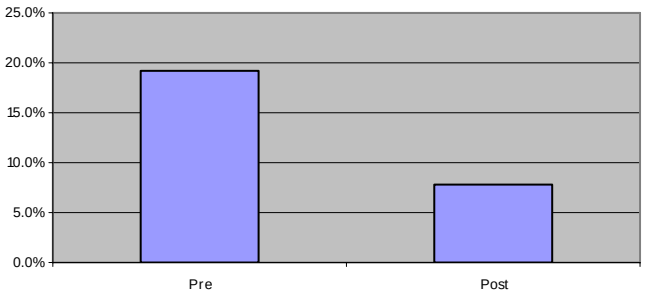
Table 1 presents mean levels and definitions of the measures used throughout our evaluation of the sanction policy's major administrative and procedural objectives. We define administrative effectiveness broadly in terms of organizational outcomes and sanction responses, following from the conceptual model presented in Figure 2. Organizational outcomes are measured in three ways, including whether the behavior is considered at the unit or hearing level, the location of violation hearing, and whether a local jail hold is placed during the course of the APA's response. Sanction responses are defined as hearing and overall incident dispositions, grouped by type (e.g., restrictions on activities or additional conditions imposed) and coded to the most serious based on degree of restrictiveness. In both cases, the items are measured in dichotomous fashion, as shown in Table 1. The mean levels of these measures indicate that, in the aggregate, only a small minority of incidents in the first year of supervision involve revocation hearings or jail detention. They also show that while 75% of the incidents that are referred to hearings result in a revocation (or prison return), overall responses to violations, not surprisingly, are generally less severe.

The unit/hearing decision and revocation measures also serve as dependent variables in our multivariate analyses of agency response. The independent variables used in those models are defined in Table 1. These variables represent a combination of sanction grid elements and other control variables likely to play a role in explaining variation in response patterns. Offender risk refers to the static risk assessment score described above, collapsed in order to conform to the risk categories considered on the grid. Sex offenders are defined as a separate risk category across all analyses regardless of their static risk score. This is because responses to violations among sex offenders are decided by policy on an individual basis, they are generally under more intensive supervision, and the length of their supervision is substantially longer than among non-sex offenders.[8] The ordinal measurement of violation severity is also consistent with the policy language, such that "major" violations (discussed above) refer to behavior subject to presumptive custody hearings and not necessarily guided by progressive sanctioning. Detailed violation behaviors were collapsed according to policy definitions (outlined in Figure 1) and coded to the most serious category in the case of incidents with multiple violations. The cumulative violation rate is a dynamic variable, defined as the total number of violations divided by months at risk as of the date of the current incident, and serves as a standardized measure of violation history.

These models also include several background attributes. Felony category is an ordinal measure of offense severity, with five levels ranging from life sentences to the least serious fifth-degree offenses. The life and first degree felonies have been combined and the values reverse-coded, such that higher values correspond with more serious

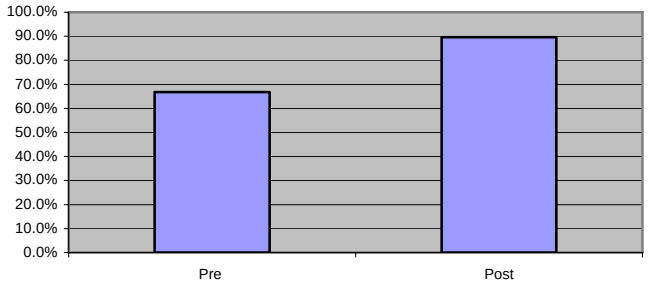
[8] Formal classification of sex offenders is determined by a combination of their Static 99 risk score and static RAP score.

Figure 3. Organizational Response: Revocation Hearing Pursued*



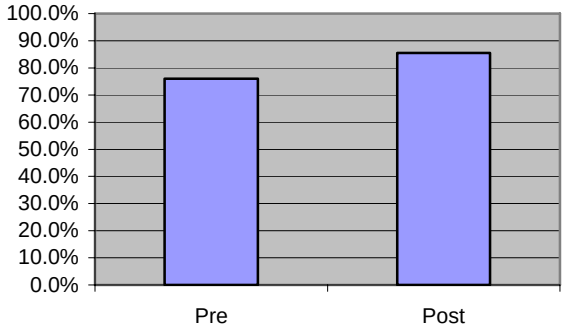
*Difference significant at .001level.

Figure 4. Revocation Outcome at Hearing*



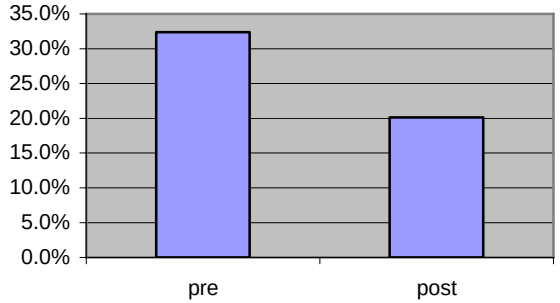
*Difference significant at .001

Figure 5. Location of Hearing: In-Custody*



*Difference significant at .05

Figure 6. Pre-Hearing Jail Holder Issued*



*Difference significant at .001

offenses. Parole eligibility refers to an offender's sentence structure, coded as 1 for discretionary parole releases serving indeterminate terms under the pre-SB2 legal code.[9] Region is a categorical variable denoting the geographically-based administrative unit in which the offender is initially placed at the start of supervision and is included to test for regional differences in policy implementation. Finally, the sex and race (white/non-white) are treated as dummy controls, while age is measured continuously as age at start of supervision.

Results: Implementation Analysis

We begin by examining simple bivariate relationships between group status and those outcomes that are central to evaluating the main procedural and administrative objectives of the violation policy. More selective use of revocation, increased use of graduated responses, and more structured sanctioning based on risk among the PS sample would all be consistent with effective implementation. Significant differences on these measures are determined on the basis of chi square test statistics.

The results in Figures 3 and 4 show pronounced and significant differences in revocation hearing patterns before and after the start of the violation policy. APA officers pursue hearings for PS offenders in the first year of supervision at a rate less than half that for the comparison group (8% vs. 19%), reflecting greater reliance overall on local unit-level sanctions in the post-reform period.[10] On the other hand, the rate of revocations (or return to prison sanctions, in the case of PRC) imposed at violation hearings is substantially higher for the PS group, approaching 90% compared to less than 70% for the pre-guidelines sample. Hearings are also significantly more likely to be held in custody settings now than before (Figure 5), reversing a recent upward trend in the use of non-custody locations.

All of these findings are strongly consistent with major objectives of the sanctions policy. They point to higher return rates among an increasingly smaller core of higher risk offenders who are more likely to be eventually referred to a custody hearing. This trend is strikingly evident in comparisons of administrative data on the composition of the entire returned violator population in FY 2005 and FY 2007, which indicate a 26 point reduction during this period in the overall percentage of returns who are low-risk non-sex offenders (not shown). Further, as shown in Figure 6, use of pre-hearing jail holds is also down significantly, again consistent with policy guidance away from reliance on detention and in-custody hearings unless otherwise dictated by the severity of the violation behavior.[11] In sum, the process-level findings in Figures 3-6 point to a more structured and efficient use of costly, punitive resources under the current system, preserving those penalties as back-end options for higher risk offenders or those who pose the most immediate risk to public safety.

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[9] A small number of SB2 offenders serving combined flat and indeterminate sentences are included in this category.

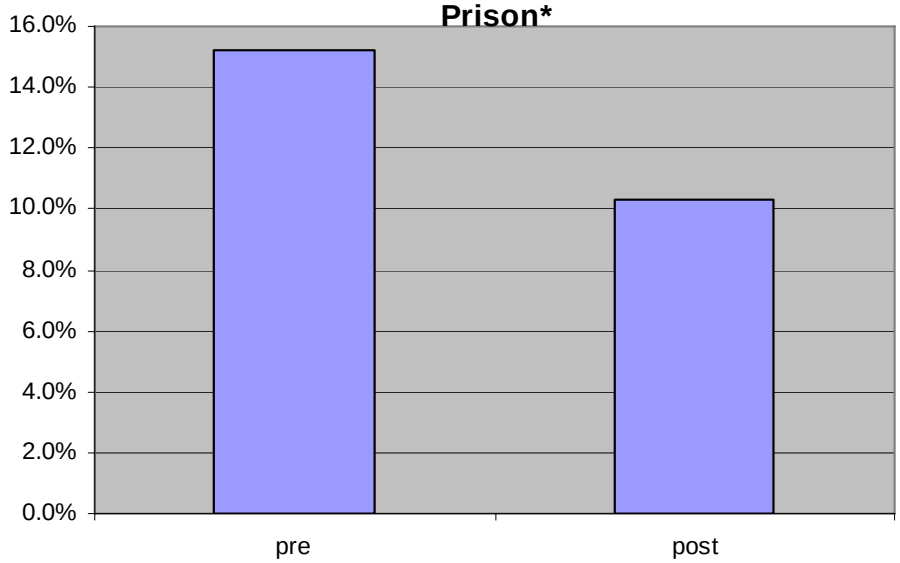
[10] These numbers include hearings pursued by officers even when a hearing is not actually held, such as in the case of subsequent absconding.

[11] In other analyses of the composition of incidents involving jail detention (not shown), holds are less associated with offender risk among the PS group, reflecting the shift toward use of current violation behavior as the main determining factor in placing a hold order, as dictated by the new policy.

While the policy and grid explicitly govern level of organizational response, general guidance on the nature of the sanction to impose is less structured. Officers are, however, directed to consider the offender's risk, case history and location on the grid in deciding how to respond, even at the unit level. Figures 7-14 shift the focus to a broader study of sanction and response patterns beyond those that pertain only to violation hearings and major decision points. In doing so, we assess the effectiveness of the policy in shaping the progressiveness of sanction severity and increasing the congruence between specific sanctions and offender profiles. The results are organized around the most serious sanction imposed for each violation-incident, again treating incidents as the unit of analysis. In this section and elsewhere, we use a sanctioning continuum constructed by collapsing detailed sanction codes into the following categories, listed in decreasing order of restrictiveness: revocation, halfway house placement, increased restrictions/conditions on supervision, programming/treatment, formal reprimands and informal warnings. Criminal behavior handled solely through court proceedings with no APA response is grouped separately and excluded from most of the analysis below.

Figure 7 shows group differences in the level of revocation outcomes among all incidents involving APA sanctions. Not surprisingly, revocation rates are significantly lower in the aggregate among the PS sample, consistent with the sharp reduction in violation hearings described above. Although rates are also relatively low in the comparison group (below 20%), interesting and significant findings emerge after controlling for risk, as shown in Figures 8 and 9. Figure 9 shows a marked linear relationship between risk and rate of revocation among PS offenders, with significantly greater concentration in the high risk and sex offender categories. The differences by risk category in the comparison group are non-significant. While not definitive, these initial findings suggest that risk has now become a guiding factor in determining how agency responses to violations are fashioned, ultimately affecting revocation decisions.

Figure 7. Most Serious Sanction: Revocation/Return to Prison*



*Difference significant at .001 level.

Figure 8. Revocation/Return by Risk Level: Pre Guidelines Sample

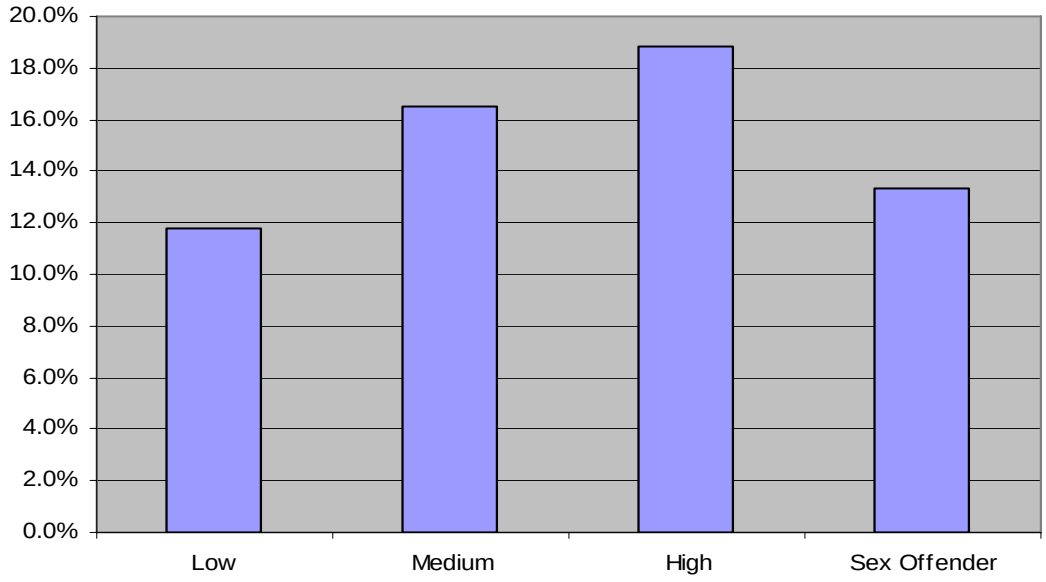
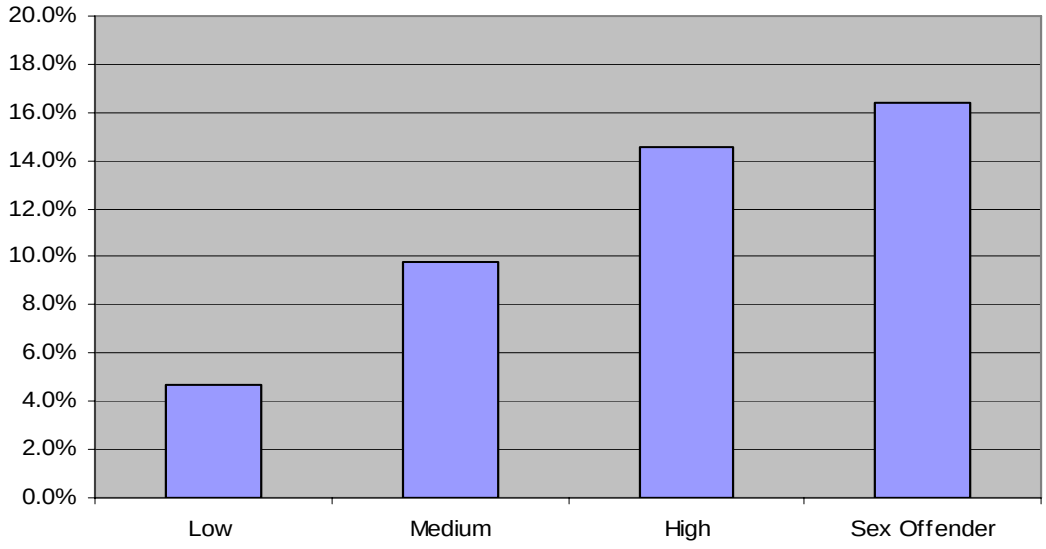
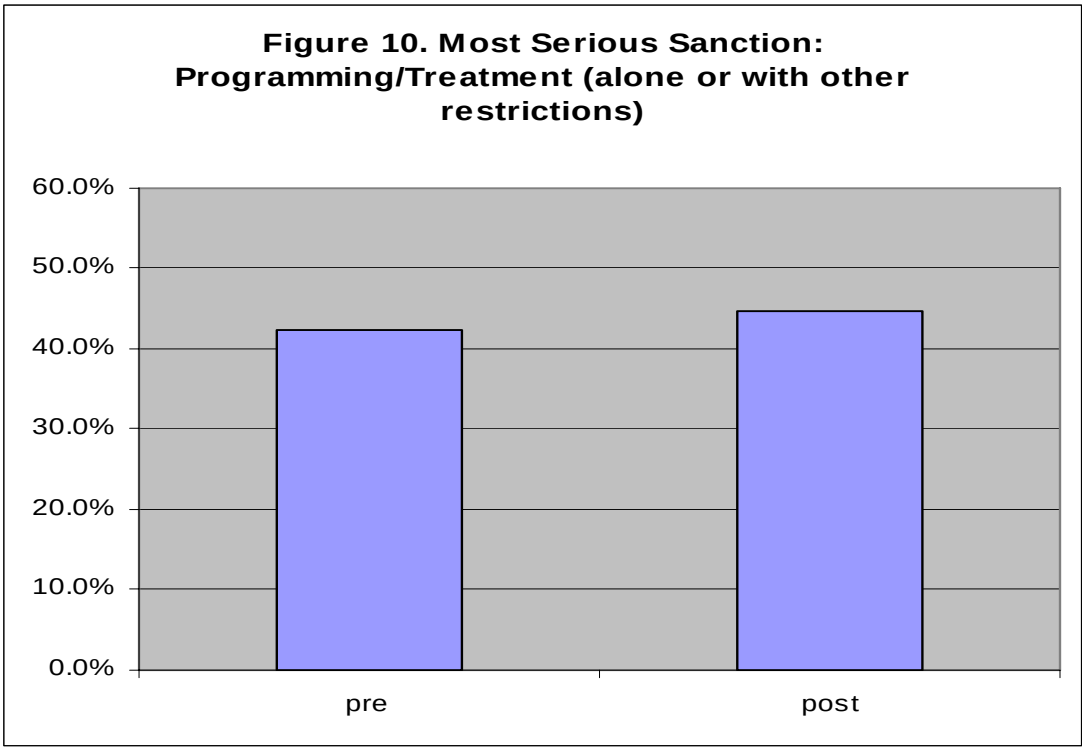


Figure 9. Revocation/Return by Risk Level: Post Guidelines Sample



Differences significant at .001 level.

On the other hand, the results are more mixed in Figures 10-12, which present differences in the rates of middle-range sanctions imposed, again controlling for risk. In Figure 10, we consider the use of programming/treatment as the most serious sanction imposed, either alone or in combination with other restrictions on supervision.[12] There is a higher reliance on programming sanctions in the aggregate among the PS sample, as expected under a more community-oriented approach, though the difference is not statistically significant. As shown in Figure 11, however, significant differences by risk do emerge in the post-grid period, similar to the results above on revocation outcomes, indicating an increased use of unit-level sanctions for lower-risk offenders. In Figure 12, we present data on halfway house sanctioning, which has traditionally been an attractive community-based alternative to incarceration offering both rehabilitative and punitive appeal. The patterns reveal an overall higher reliance on halfway house referrals in the post-grid period, especially among sex offenders, but significant risk-based differences emerge only among the comparison group. Although there are now more halfway house opportunities available for sex offenders, the growing use on this option for the lowest risk offenders is seemingly counter to the risk principle and should be further considered for its effectiveness as a sanction for that group. One likely explanation is that the grid encourages officers to exhaust all possible community-based alternatives prior to seeking a hearing or imposing revocation, without regard to an offender's compatibility with more intensive services.



[12] In this case, programming and restrictions are treated as comparable in terms of severity. Informal warnings and reprimands may also have been imposed in combination with programming.

The findings from Figures 7-12 are presented in detail in an alternative format in Appendix 2, in which the distribution of all incidents is shown by sanction category (including those with local prosecution only), controlling for both offender risk and violation severity. This table presents additional detail by type, including sanctioning rates among pure programming and restriction categories. The pre and post grid totals at the bottom clearly demonstrate the shift away from using revocation toward increased use of programming and restrictions in combination.[13] This is true in general, but especially so at the medium risk level, suggesting a growing preference for heavy use of mixed sanctioning and increased conditions among offenders who were previously being revoked at much higher levels. In our recidivism analysis below, we explore the relative efficacy of these various sanction responses over time. Finally, the results in Appendix 2 show a clear upward, progressive pattern by risk in the likelihood of a technical return among high severity violators in the post grid sample. By contrast, there are only trivial differences by risk category in the revocation rates among serious violators in the comparison group.

The final set of cross-tabular results is summarized in a series of bar chart comparisons in Figure 13. The results from the top half are presented in greater detail in Appendix 3. The purpose in both sets of charts is to evaluate the central operational objectives of the sanction grid itself: first, to implement a system by which rule violations are treated in a progressively more serious manner; and second, to provide alternative, front-end community treatment options for higher risk offenders. In assessing these policy objectives, violation hearing and program sanction rates are both shown by risk level, controlling for violation severity, incident number and pre/post guidelines status. Bar charts are used in order to facilitate comparisons across the two samples in the rates of program/treatment sanctioning and hearing referrals (as opposed to unit level sanctions), the main decisional point addressed on the sanction grid.[14] For each cross-tabulation we present the rates across the first, third and fifth (or higher) incidents during the first year of supervision. Unfortunately, sample design limitations and restrictions in the length of our follow-up period preclude more detailed analyses of in and out-of-custody hearing options, for which guidance is available at only the highest incident levels on the grid. For the same reasons, all incidents beyond the fifth are combined into a single category for purposes of this analysis.[15] While this limits the generalizability to the initial period of supervision, there is still sufficient variation in our data to assess our basic questions concerning progressiveness of response.

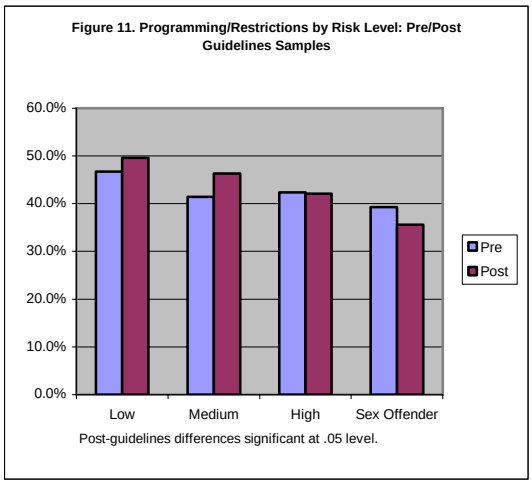
The rates of both outcomes are shown along the vertical axes of the charts in Figure 13. Differences in the rates at each risk level are reported for both the pre and post grid samples, controlling for violation severity and incident number. In the top half of the figure, the charts show pronounced sample differences across all risk categories in both the levels of hearing rates and progressiveness of response, especially for medium

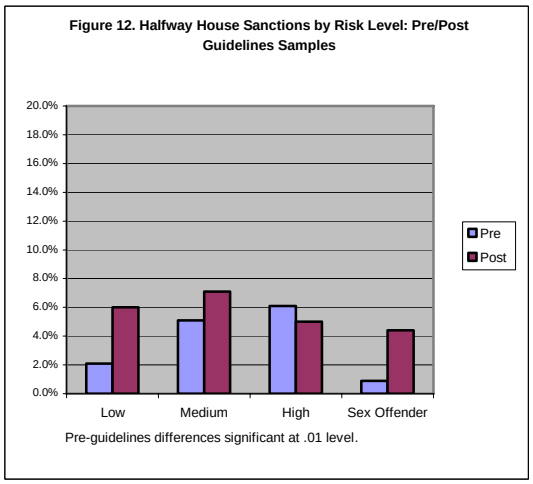
[13] The overall rates for the combination category are lower in this table than reported in Figure 10 because they are based on use of both responses together. Figure 10 shows programming rates alone *or* with restrictions.

[14] In the violation hearing rate analysis, Parole Board Summonses are combined with unit sanctions, since that option is used so infrequently. The rate of program sanctions imposed refers to the rate at which at least one such sanction is imposed, regardless of other sanctions.

[15] See Appendix 3 for cell counts and distributions of violation hearings for each incident up through the sixth or higher. This table also presents response patterns for sex offenders.

and high risk offenders. The PS cohort exhibits considerably lower hearing rates in nearly every area of the grid. Further, as incidents accumulate, there is a remarkable, monotonic progression in the likelihood of a hearing for higher-risk PS offenders who commit high-severity violations. This is in contrast to hearings pursued among pre-grid offenders, for whom there is much less differentiation by offender risk. For example, among high-risk offenders, the likelihood of a revocation hearing at the time of the first





incident is less than five percent for the PS group. These numbers then increase to 20% at the third incident and 30% at the fifth or higher incident. The corresponding rates for the comparison group are 20%, 50%, and 44%. The data show almost no instances of non-compliance with the policy among the low-severity violation categories.

Considering the bottom half of Figure 13, the results within each risk level show comparable rates overall of program sanctions imposed, but noticeable differences across incident number. Among high risk offenders, program referral rates at the time of the first incident are much lower for both low and high severity violations in the PS cohort, reflecting a more graduated use of lower-level responses in the earlier stages of supervision. After the initial incident, however, there is a relatively elevated and sustained use of these interventions under the sanction grid (in many cases along with other restrictive sanctions, as shown in the aggregate counts in Appendix 2) in the high severity category of all risk levels. At the 5th and higher incidents, for example, high-risk/high-severity progressive sanction offenders experience program sanction rates at more than double the rate of their pre-grid counterparts. These findings on organizational and specific sanction responses in Figure 13, along with the more detailed results in Appendix 3, provide strong evidence of effective implementation on these very basic objectives of the violation policy.

Our final set of analyses assessing implementation effectiveness is presented in Tables 2 and 3, in which the relationships discussed so far are summarized in a series of multivariate logistic regression models. The purpose is twofold: first, to examine the overall net impact of the sanction guidelines on key policy outcomes; and second, to test for any differential effects of formal decision criteria on those outcomes before and after introduction of the policy. An increase in the importance of the basic elements of the

sanction grid in shaping decisions across samples would provide additional evidence in support of effective implementation.

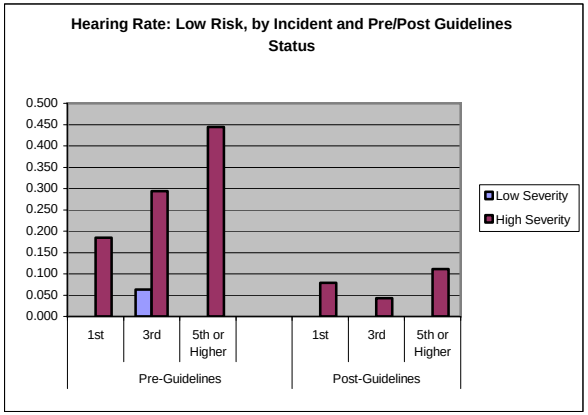
Starting with Table 2, we consider the relative impact of formal policy criteria on the decision to pursue a violation hearing, extending the cross-tabular analysis described in Figure 13. The models exclude sex offenders, incidents involving major violations, and incidents with no APA response because we are interested at this stage only in responses that are guided formally by the sanction grid. In the first model based on the combined pre and post-grid samples, we specify violation hearing responses as a function of the decision criteria and "treatment" effect (i.e., policy intervention), measured through a dummy variable coded as 1 to indicate PS group status. The results indicate a strong and significant negative effect of the policy reform, controlling for offender risk, incident number and current violation severity. The odds of pursuing a revocation hearing are nearly 80% lower for violation incidents involving PS offenders compared to those among the pre-grid comparison sample. This is consistent with the bivariate effect shown in Figure 3 reflecting the policy mandate to seek local, non-confinement alternatives to violation behavior in the early phases of supervision.

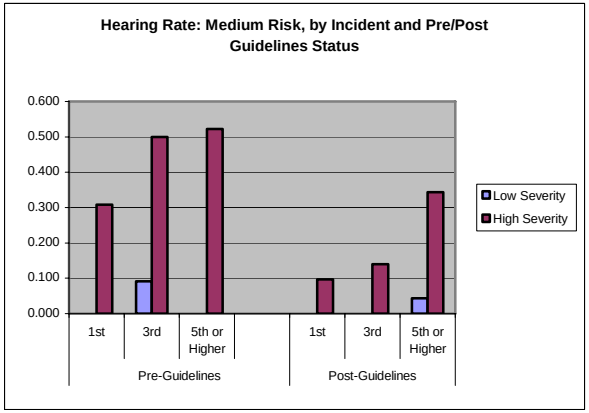
This initial model also reveals strongly significant effects among the other variables, confirming the central role of the formal structural elements of the sanction grid in determining level of organizational response. But how does the impact of these factors vary by treatment and comparison group status? We consider this question in the second and third models of Table 2, in which the equations are run separately for each sample. Contrary to expectations, the magnitude of the effects is only slightly larger among the PS sample, with differences between the coefficients across models failing to achieve statistical significance. This is partly due to general continuity in the importance of these criteria over time in guiding this decision, especially with regard to the overriding concern of public safety, as reflected in the effect size of the violation severity variable in both cases. On the other hand, the one-year follow up period and the exclusion of major violations clearly limits the statistical variation in decision outcomes that would increase as offenders progress through the sanction grid. These study design limitations potentially dilute the interactive effects of the sanction criteria that are modeled in Table 2.

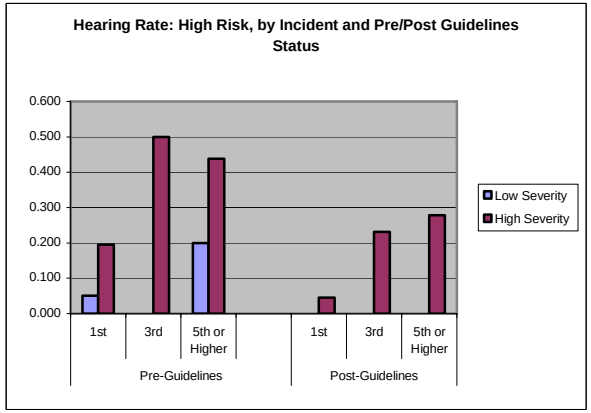
Table 3 extends the incident-level multivariate analysis of implementation effectiveness to revocation/prison sanction outcomes. Following our earlier strategy, we expand the focus beyond the explicit procedural aspects of the grid itself to a more general examination of dispositional outcomes. As in Table 2, the main analytical concerns are in assessing the main effects of the sanction guidelines (net of controls), and to test the extent to which sanctioning criteria vary in their effects before and after reforms. The models in Table 3 are based on all cases, including sex offenders and the most serious violators, in order to maximize variation in the outcome and generalize the results on revocation patterns to the broader population of offenders sanctioned by the APA. They are also specified using a limited set of offender background characteristics that serve, with minor changes, as a set of standard control variables throughout our recidivism analyses below.[16]

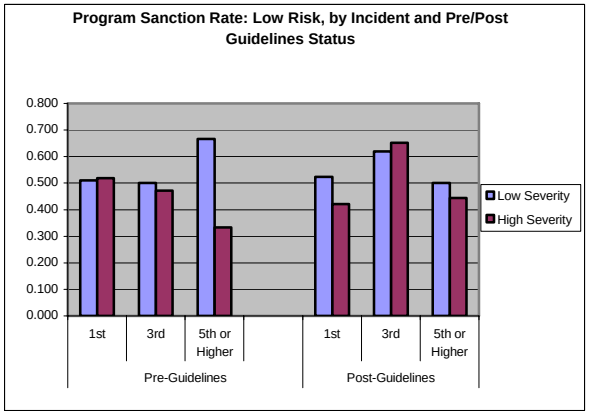
[16] The selection of the controls and their role in the case matching procedures and model development process are discussed in greater detail in sections that follow.

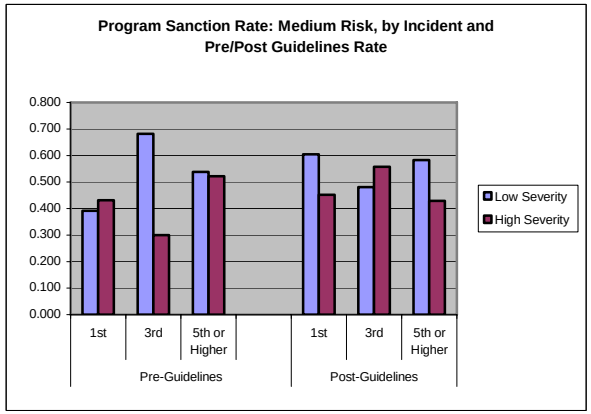
Figure 13. Violation Hearing and Program Sanction Rates, by Incident Number, Offender Risk and Violation Severity











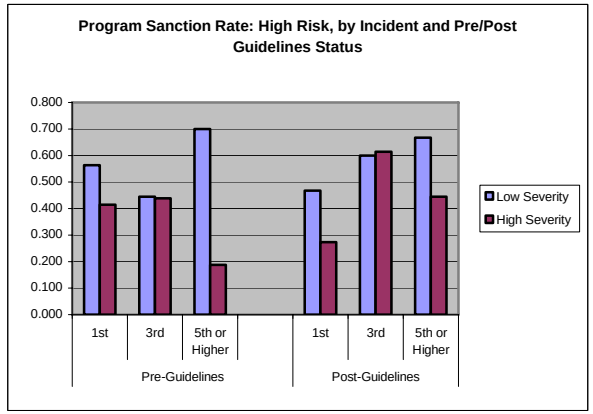


Table 2. Logistic Regression Analysis of Sanction Grid Criteria and Decision to Pursue Revocation Hearing

	Full Sample (N=1,566)		Pre-Guidelines (N=749)		Post-Guidelines (N=817)	
	B	Exp(B)	B	Exp(B)	B	Exp(B)
Violation Severity						
High	2.696	14.815 ***	2.669	14.431 ***	2.735	15.406 ***
Low (reference)						
Incident Number	0.334	1.397 ***	0.295	1.343 ***	0.401	1.493 ***
Offender Risk						
High	0.948	2.580 ***	0.794	2.213 **	1.318	3.736 **
Medium	0.840	2.316 ***	0.663	1.941 *	1.245	3.472 **
Low (reference)						
Sanction Guidelines						
Post-Guidelines Sample	-1.512	0.220 ***				
Pre-Guidelines Sample (reference)						
Nagelkerke R Square	0.338		0.317		0.258	
Model chi-square	318.101 ***		168.994 ***		87.268 ***	
-2LL	912.504		589.396		320.995	

Note: Excludes sex offenders and major violations not considered by grid.
*p < .05; ** p < .01; *** p < .001.

Since revocation actions are embedded as an end-point within the initial decision to pursue a hearing (addressed in Table 2), the two outcomes are highly correlated and are thus jointly dependent on some of the same explanatory factors. Nonetheless, the study of incident-level revocations is still compelling because of the discretionary judgment employed by hearing officers at this stage of the sanctioning process. The results in Table 3 from the first model based on the combined sample indicate that PS offenders are about half as likely to be revoked when sanctioned, net of background controls and basic sanctioning criteria. The effect is strongly significant and, not surprisingly, consistent with the negative guidelines effect on hearing decisions reported in Table 2, reflecting the fact that fewer offenders are at risk for revocation under a policy aimed at a more selective use of revocation hearings. The controls are mostly non-significant, with the exception of parole release and the isolated regional effect. The Mansfield regional effect is likely reflecting the elevated use of technical returns associated with local reentry court activities, while the parole effect indicates the reduced likelihood of return characteristic of longer-term discretionary parole inmates whose release rates temporarily surged in FY 2004.

Results from the full-sample model also confirm the importance of objective decisional criteria in explaining revocation sanctions, including the cumulative violation rate. Interpreting the odds ratio, unit increases in the rate per month increase the odds of reincarceration by 16%. We include this measure to control for possible sample differences in overall violation behavior, but also to assess whether this additional aspect of an offender's overall profile is more predictive of responses under the new policy guidelines. Indeed, as shown in the split sample models of Table 3, both the violation rate and higher risk categories have significant positive effects on revocation after implementation but not before. And although violation severity is significant in both models, committing a major violation under the new policy substantially increases the odds of revocation, since those violations are now subject to a presumptive hearing. These results, taken in the context of the findings from Table 2, point to a new sanctioning system under which reliance on the most severe sanctioning resources is limited and increasingly reserved for the more chronic and serious, higher-risk offenders under supervision. While there is also evidence of graduated sanctioning in the pre-guidelines period, the results from Table 3 suggest that the risk-based criteria used to justify a revocation recommendation at the time of case staffing are sharpened and extended to the dispositional stage, ultimately helping to guide revocation decisions. It should be noted that in separate cross-tabular analyses restricted only to incidents involving hearings (see Appendix 4), we found essentially the same pre/post sample differences in the relationships between revocation outcomes and the categorical measures in Table 3, suggesting that the findings reported here are not simply an artifact of referring more of those offenders to a hearing in the first place.

In sum, the multivariate findings presented in Tables 2 and 3 are largely consistent with the simple pre/post differences on the core process measures reported earlier. Together they provide substantial quantitative evidence of an effectively implemented system that exhibits strong regional uniformity, structured decision-making capacity, and improved resource management, all consistent with administrative objectives. But once implemented, do these systems enhance prisoner reentry? In the sections below, we shift attention to our second set of major research questions, addressing the role of progressive sanctions in influencing offender recidivism outcomes.

Table 3. Logistic Regression Analysis of Incident-Level Revocation Outcomes

	Full Sample (N=1,970)		Pre-Guidelines (N=938)		Post-Guidelines (N=1,032)	
	B	Exp(B)	B	Exp(B)	B	Exp(B)
Sex						
Male	0.269	1.308	0.325	1.384	0.153	1.166
Female (reference)						
Race						
Non-white	-0.261	0.770 ^	-0.356	0.700 ^	-0.104	0.901
White (reference)						
Age at Release	-0.011	-0.011	-0.001	0.999	-0.022	0.978
Felony Level of Committing Offense	0.017	1.018	-0.019	0.981	0.074	1.077
Parole Release						
Parole Release	-0.873	0.418 ***	-1.112	0.329 ***	-0.365	0.694
Post Release Control (reference)						
Parole Region						
Akron	-0.007	0.994	-0.150	0.860	0.133	1.143
Cincinnati	-0.153	0.858	-0.184	0.832	-0.285	0.752
Columbus	0.172	1.188	0.450	1.568	-0.257	0.773
Lima	0.224	1.251	0.558	1.747	-0.100	0.905
Mansfield	0.796	2.218 **	0.764	2.147 *	0.669	1.952
Chillicothe	0.206	1.229	0.536	1.709	-0.099	0.905
Cleveland (reference)						
Violation Severity						
Major	3.932	51.005 ***	3.616	37.193 ***	4.399	81.346 ***
High	2.807	16.556 ***	2.752	15.671 ***	3.018	20.446 ***
Low (reference)						
Violation Rate	0.152	1.164 **	0.117	1.124	0.195	1.215 **
Offender Risk						
Sex Offender	0.719	2.053 **	0.012	1.012	1.412	4.103 ***
High (non-sex offender)	0.883	2.418 ***	0.539	1.715	1.203	3.331 **
Medium (non-sex offender)	0.451	1.570 *	0.312	1.367	0.659	1.933 ^
Low (reference)						
Sanction Guidelines						
Post-Guidelines Sample	-0.725	0.484 ***				
Pre-Guidelines Sample (reference)						
Nagelkerke R Square	0.292		0.308		0.300	
Model chi-square	337.354 ***		185.201 ***		163.692 ***	
-2LL	1184.630		632.687		528.128	

*p < .05; ** p < .01; *** p < .001.; p < .10

Analytic Strategy: Offender-Level Recidivism

Following a discussion of variable definitions and case matching procedures, we begin the outcome analysis with a summary of bivariate-level findings on the full range of non-compliant behavior, from violations of the rules of supervision to new felony behavior. Group differences on several supervision outcome measures are presented and situated within recent data on ODRC recidivism trends. We address our questions relating to supervision outcomes primarily through multivariate event history methods, first by estimating a series of Cox regression models, then by switching to analyses based on discrete-time logistic regression techniques. We use these methods, which are detailed further below, because they are well suited to studying durational outcomes and have become a standard quantitative approach in recidivism research. The main focus throughout is on felony reoffending, modeled using offender-level records with sufficient detail on the timing of failure and various supervision activities to support these statistical techniques. Our basic analytical approach is to first assess the independent role of the sanction guidelines on serious offending in the full matched sample, controlling for violation, background and socio-demographic characteristics as in the incident-level regression models above. Again, the impact of the intervention is measured through dummy effect coding, an approach common in system-wide policy evaluation studies (e.g., Harrell, Mitchell, Merrill, and Marlowe, 2003) and sentencing reform research (e.g., Koons-Witt, 2002: Griffin and Wooldredge, 2006). This will allow us to establish whether group differences persist beyond the bivariate level.

We then extend these baseline analyses to consider whether progressive sanctioning exerts a moderating force on technical violations and offender risk, factors we expect will show strong main effects on supervision failure. Next, we consider the relative efficacy of punitive and rehabilitative responses in reducing risk of re-offending in an analysis of offenders who commit violations early in supervision, with an emphasis on high-risk offenders. Finally, in order to more fully explore the dynamics of agency response and intervention, we consider the role of several time-dependent predictors of recidivism through a set of discrete-time event history models.

Measures Used in Offender Recidivism Analysis

The independent variables used in the case matching procedure, and then later throughout our recidivism analysis, are shown in Table 4. The operational definitions are the same as shown in Table 1 for those variables also included in the incident-level models above.[17] Mean levels on these and other items are presented from the unmatched samples in Table 4 to show the extent to which they are significantly different.[18] In

[17] In the Cox regressions, the violation rate is treated as fixed, defined as the total number per month of non-felony or non-major violations committed up through the incident preceding the failure event or until the end of supervision (for censored observations).

[18] We eliminated from the analysis a small number of cases for which source documents were not available, yielding an unmatched sample size of 1,963, after additional exclusion of cases with outlying violation behavior.

addition to the demographic and offense characteristics, we also checked for control group equivalency on employment status, education and residential instability. The employment variable is coded as 1 if the offender had no documented episodes of part or full-time work (including self-employment), even if only for part of the follow-up period. We are thus concerned only with the overall effects of chronic unemployment, since precise job start and end dates were unavailable in a substantial number of cases. Education and residential instability are also measured as dichotomous dummy variables. Education is coded 1 for offenders with a GED or diploma at the start of supervision (including attainment while incarcerated). The residence measure is constructed by collapsing the distribution of instability (number of non-residential programming moves per month) into high and low categories. The recidivism models use the same four-category risk scheme, but sample differences are shown by both category and total score.

A comparison of the mean values on these items shown in Table 4 reveals that the groups are significantly different on five key variables likely to be related to offender outcomes. Specifically, post-guideline offenders are better educated but have more residential instability, are much less likely to have been paroled, are generally less violent with shorter incarcerations, and pose less of a risk for reoffending. We therefore used a retrospective propensity score matching procedure in order to correct for these differences and reduce sample heterogeneity. Propensity score methods are a well-documented approach to minimizing pre-existing treatment and comparison group differences that have the potential to bias estimates of observed treatment effects. Since the pre/post groups have been shown above to be significantly different on key covariates of reoffending, attributing any observed improvement in offender outcomes to the effects of progressive sanctioning is confounded by such differences, especially with regard to risk.

Following conventional methods, we applied this procedure by first estimating a predictive model of treatment group selection, which yields a predicted probability, or propensity score, to be used in the subsequent matching analysis. The model was estimated in a highly parsimonious fashion, specifying group selection as a function of age, discretionary parole release, felony level of the committing offense, and assessed risk (not shown). These particular variables were selected because they are considered most relevant to explaining recent compositional changes in Ohio prison release populations.[19] A final best-fitting model was selected that omitted the non-significant effects of felony level. To compensate for any specification error in the propensity model, we retain statistical controls throughout the analyses below to further adjust for remaining heterogeneity.

[19] Education was not used in the analysis due to substantial levels of missing data.

Table 4. Descriptive Statistics and Definitions of Variables used in Offender-Level Outcome Analyses (Unmatched Pre and Post Guidelines Samples; N=1,963)

Variable Name	Definition	Pre	Post
Socio-Demographic Covariates:			
Sex	1=male; 0=female	0.821	0.800
Race*	1=non-white; 0=white	0.526	0.481
Age	Age (in years) at start of supervision	35.2	35.1
Employment Status	1=no indication of employment (full or part time during follow-up period); 0=at least some employment	0.302	0.284
Education***	1=GED/high school diploma or higher; 0=other	0.522	0.610
Residential Instability***	1=high rate of change in residence; 0=low rate or no change in residence	0.145	0.211
Parole Region:	Parole region at start of supervision		
Akron		0.142	0.154
Cincinnati		0.199	0.234
Columbus		0.138	0.142
Lima		0.114	0.093
Mansfield		0.092	0.067
Chillicothe		0.079	0.086
Cleveland (reference)		0.234	0.223
Offense Characteristics:			
Felony Category of Commitment Offense*	Felony category: F1/life sentence to F5 (coded in reverse order of seriousness)	3.29	3.15
Parole-Eligible Sentence***	1=Released on discretionary parole; 0=Released on post release control	0.376	0.194
Offender Risk:***	Reentry Accountability Plan Static Risk Score (categorized according to sanction grid levels)		
Low (reference)		0.326	0.362
Medium		0.322	0.348
High		0.178	0.109
Sex Offender		0.174	0.181
Total Risk Score***	Total risk score (0-8)	3.190	2.820

*p ≤ .05; ** p ≤ .01; *** p ≤ .001.

Cases were paired based on the computed propensity score using a conventional matching algorithm that employs "nearest-neighbor" matching without replacement, such that treatment cases are matched to comparison cases in descending order on the basis of highest score (Painter, 2004). Once matched, those cases are then unavailable for subsequent matching. Following King et al. (2007), we used a caliper restriction of .01 propensity units to limit selection of cases to only those pairs with closely matching propensity scores. While this significantly restricts the size of our starting samples, it increases the rigor of our recidivism analyses. Subsequent comparisons between the matched samples on the characteristics of race, felony, parole eligibility, and offender risk revealed only very minor and non-significant differences. We attempt to minimize the effect of remaining significant differences on residential instability through statistical controls. The resulting matched sample of 1,044 (522 in each group) is used throughout most of the outcome analyses below.

Results: Offender-Level Recidivism Analyses

We begin by presenting descriptive data in Table 5 summarizing the full range of non-compliant behavior among both groups in the first year of supervision. The top half of the table shows percentage distributions by detailed violation type, categorized by violation severity. The number columns report the sum of individual counts across all coded incidents in order to show the overall volume of violation behavior. The results show remarkable similarity in the distribution of violation types, revealing that substance abuse and reporting violations are the most frequently occurring forms of non-compliance in both groups. High severity and major violations together make up half of all documented violation behaviors. On the other hand, the overall volume of misconduct is substantially higher among those supervised under the progressive sanctions policy, and PS offenders are less likely to have committed no violations in the first year. Separate analyses of the data indicate that these differences are not due to greater levels of time at risk. While it is reasonable to assume that increased case staffing and automated record-keeping lead to better documentation of violation activity, the similarity in composition by severity level is inconsistent with that explanation. Instead, the results are consistent with differences in means levels of major supervision outcomes reported at the bottom of Table 5. Post-guidelines offenders are less likely to be revoked (similar to the incident-level findings above), but they are more likely to be re-incarcerated on a new felony crime, commit a major violation, have an unsuccessful termination from supervision, and commit a new felony. The differences are moderate but significant in the case of re-incarceration, major violations, and termination, and point to a broader tendency among the PS sample toward less rule conformity, poorer adjustment and increased criminality.

Table 5. Detailed Violation Data and Selected Supervision Outcomes (Pre and Post-Guidelines Matched Samples, N=1044)

	Definition	Pre-Guidelines		Post-Guidelines		
Violation Behavior:	Documented violations (up to 7 violations coded per incident)					
Major Violations (not addressed by Sanction Grid)						
Felony - Violent		44	2.78%	49	2.38%	
Felony - Nonviolent		97	6.14%	147	7.15%	
Misdemeanor - Weapons		15	0.95%	12	0.58%	
Threat Behavior		15	0.95%	17	0.83%	
Total		**171**	**10.82%**	**225**	**10.94%**	
High Severity Violations						
Sanction Violation		45	2.85%	75	3.65%	
Absconding/Fleeing Supervision		178	11.26%	193	9.38%	
Association Violation		32	2.02%	31	1.51%	
Parole Board Special Condition		10	0.63%	11	0.53%	
Programming Violation		131	8.29%	186	9.04%	
Misdemeanor, except traffic		228	14.42%	311	15.12%	
Total		**624**	**39.47%**	**807**	**39.23%**	
Low Severity Violations						
Change of Residence Violation		91	5.76%	144	7.00%	
Change of Employment Violation		8	0.51%	6	0.29%	
Reporting Violation		252	15.94%	324	15.75%	
Substance Abuse Violation		283	17.90%	357	17.36%	
Failure to Follow Instruction		89	5.63%	123	5.98%	
Communication with Prisoner		10	0.63%	5	0.24%	
Curfew Violation		12	0.76%	13	0.63%	
Misdemeanor - Traffic		41	2.59%	53	2.58%	
Total		**786**	**49.72%**	**1025**	**49.83%**	
All Violations (across all incidents)		**1581**		**2057**		
Number of Offenders with One or More Violations		330	63.22%	350	67.05%	
Number of Offenders with No Violations		192	36.78%	172	32.95%	
Key Supervision Outcomes:						
Revocation for Technical Violation	1=Any violation behavior during follow-up resulting in revocation/prison return; 0=No revocation/return		**10.00%**		**7.70%**	
Recommision for New Felony Offense	1=Re-incarceration for felony crime committed during follow-up; 0=No re-incarceration		**11.50%**		**16.90%**	**
Major Violation Behavior †	1=Arrest for felony crime/documented weapons or threatening behavior; 0=No major violation		**22.80%**		**28.40%**	*
Successful Termination of Supervision	1=Favorable termination/still active at study end with no revocation; 0=Unfavorable/revoked/new felony		**63.80%**		**57.50%**	*
New Felony Crime (including Absconding) †	1=Arrest for felony crime or declared violator at large; 0=No felony behavior during follow-up period		**35.20%**		**39.70%**	

*p ≤ .05; ** p ≤ .01; *** p ≤ .001.

^p ≤ .10

† Dependent variables used in recidivism models.

The increase in re-incarceration reported here is consistent with administrative data on recidivism patterns among all releases, which point to a gradual upward trend in recent years in the one-year rate of return for new crimes. These patterns, and related increases in prison intake, are puzzling in light of relatively stable rates of violent crime in Ohio during this period. They are at least partly due to growing imprisonment rates among non-violent crimes like absconding, but also to increased net-widening and resulting growth in offender populations with longer criminal histories and more community failures. The bivariate differences in the violation and behavioral measures, however, point either to a negative policy intervention effect or residual sample heterogeneity unresolved through case matching. We pursue this question below with the use of statistical controls in several multivariate models of reoffending.

We examine two of the supervision outcomes at the bottom of Table 5 in our assessment of the impact of progressive sanctions on recidivism: felony reoffending and major violation behavior. These are both dichotomous outcomes, with the felony measure coded as 1 if the offender is arrested for committing a new felony crime or has absconded and been declared a violator at large. Absconding from supervision is considered a violation of Ohio's felony escape statute, has been increasingly targeted for prosecution, and is the special subject of recently scholarly work (Mayzer, Gray and Maxwell, 2004; Schwaner, 1997; Williams, McShane and Dolny, 2000). The violation measure captures misconduct considered to be of the highest severity by the sanctions policy, including felony crimes (but not routine, in-state absconding), threat behavior, and weapons-related violations. Thus, both variables are incident-based, behavioral measures unbiased by court processes and post-arrest discretionary factors. They overlap in terms of measurement, but also diverge in important conceptual ways. Felony reoffending, in this context, is a broadly cast, statutorily defined measure of criminal behavior with important implications for re-incarceration, whereas the violation measure is a more policy-based indicator of behaviors that pose the greatest threats to public safety. Together, they offer a more complete picture of recidivism patterns.

Tables 6, 7, and 8 present results from a series of Cox proportional hazards regression models of reoffending.[20] Cox regression is a common technique used in survival analysis to study the factors that determine the timing of an event, and so it is well suited to analyses of recidivism and related supervision outcomes. Specifically, these equations model the hazard of the event of interest at time *t* as a function of an unspecified baseline hazard ratio plus a set of covariates. Cox models, in the present context, are appealing since they model the duration of survival on supervision, thus accounting both for differential time at risk and censoring of observations for which the event does not occur within the follow-up period. Some SB2 offenders for whom PRC is not mandatory are terminated early (less than one year) if compliant with the conditions of supervision. Other offenders may have been revoked prior to more serious offending. Both types of cases are treated as censored observations in the models below.

Cox models are referred to as *proportional* hazards models because they assume that covariate hazards ratios are proportional across time. We confirmed this assumption

[20] Due to limitations in the SPSS Cox regression module, the analyses were conducted without correcting for the slight oversampling of female cases. To check for any potential bias, we estimated comparable logistic regression models on both outcomes using a weight variable, which yielded no meaningful differences in the substantive results.

Table 6. Cox Regression Analysis of Felony Reoffending

	New Felony Crime Matched Sample (N=1,044)		New Felony Crime Matched Sample (N=1,044)		New Felony Crime (Matched Sample, N=1,044)			
					Pre-Guidelines		Post-Guidelines	
	B	Exp(B)	B	Exp(B)	B	Exp(B)	B	Exp(B)
Race								
Non-white	-0.046	0.955	-0.021	0.979	0.093	1.098	-0.016	0.985
White (reference)								
Sex								
Male	0.252	1.287	0.225	1.252	0.498	1.645 *	0.161	1.174
Female (reference)								
Age at Release	-0.024	0.976 ***	-0.036	0.965 ***	-0.024	0.976 *	-0.019	0.981 *
Felony Level of Committing Offense	-0.127	0.881 **	-0.114	0.892 **	-0.202	0.818 ***	-0.151	0.860 **
Employment during Supervision								
No Employment	0.966	2.628 ***	0.941	2.562 ***	0.960	2.612 ***	1.023	2.782 ***
At Least Part-time/Year or Non-Labor Force (reference)								
Residential Moves (rate per month)								
High Rate	0.189	1.208 ^	0.211	1.235 ^	0.287	1.333	0.145	1.156
Low or No Moves (reference)								
Overall Violation Rate (per month)	0.657	1.929 ***	0.648	1.911 ***	0.872	2.391 ***	0.714	2.041 ***
Criminal History Risk Score†			0.282	1.326 ***				
Sex Offender	0.433	1.541 *						
High Risk (non Sex Offender)	1.239	3.451 ***			0.779	2.179 ***	0.294	1.342
Medium Risk (non Sex Offender)	0.987	2.683 ***						
Low Risk (reference)								
Sanction Guidelines								
Post-Guidelines Sample	0.047	1.048	0.456	1.577 ^				
Pre-Guidelines Sample (reference)								
Interaction Term								
Risk x Sanction Guidelines			-0.091	0.913 ^				
Model chi-square		340.263 ***		338.507		145.742 ***		168.498 ***
-2LL		4912.589		4900.026		2086.920		2321.744

*p ≤ .05; ** p ≤ .01; *** p ≤ .001.
^p ≤ .10
†Risk entered as total computed score for interaction model.

through visual inspection of covariate log minus log plots, which revealed no evidence of time dependence. In each of the regression tables, we report the unstandardized effect on the hazard rate as well as the hazard ratio [Exp(B)], similar to the odds ratio in logistic regression and interpretable as a measure of effect size.

Table 6 presents findings from the matched sample analysis of felony reoffending. Time to failure is measured in days from the start of supervision. Our strategy is to first test for evidence of an overall intervention (treatment) effect of the sanctioning policy after introducing several other possible sources of recidivism as controls, some of which were used in the matching procedure. In doing so, we attempt to minimize remaining sample heterogeneity and thus isolate the guidelines effect. Our use of controls is parsimonious, and the final models, aside from the demographics, exclude variables that failed to achieve significance in the initial estimation of felony behavior. Variables that turned out *not* to be predictive of new crimes include parole release status, early substance abuse violations, pre-release security threat group status, offense type, and documented needs in the areas of employment and substance abuse.[21] While we examine the role of time-dependent covariates in later analyses, residential instability and rule violation behavior are treated here as fixed, time-invariant measures so as to capture their global effects across the entire supervision period.

The results in the first set of columns in Table 6 reveal a weak and non-significant sanction guidelines effect, indicating that the policy intervention has no impact on risk of felony reoffending in the first year of supervision. The unfavorable bivariate effect reported in Table 5 no longer holds in the full covariate model shown in Table 6. On the one hand, the findings lend no support to the theoretical expectation that progressive sanctioning, as applied in the Ohio policy, has a diffuse, generalized effect on reducing felony behavior among the entire supervision population, either through deterrence or increased perceptions of system fairness or legitimacy. On the other hand, they also discount the notion that reduced reliance on more immediate punitive responses increases the risk of failure. There is no evidence that recent increases in Ohio's short-term felony recommission rates have been exacerbated through the APA's more selective use of jail detention and revocation penalties discussed above. In fact, in separate baseline regressions without controls (not shown), the initially significant and positive effect of the guidelines is completely attenuated once felony level, employment and residential instability are introduced, all of which are significant and in the expected direction in Table 6. This suggests that the recidivism increases are partly due instead to aggregate growth in non-violent releases with chronic employment and housing needs.

The next three models in Table 6 address the extent to which the sanction guidelines interact with key covariates in their effect on time to failure. We focus mainly on offender risk and violation history since these are now both central in determining agency response. Both factors significantly shorten survival on supervision in the combined sample (first model of Table 6), although the impact among sex offenders (relative to low risk offenders) is marginal, consistent with other general findings on sex offender recidivism (Langan and Levin, 2002: Sample and Bray, 2003; Spivak and

[21] Data on marital status at the start of supervision are not available. Living arrangement was collected, but is missing in a substantial number of cases. The needs assessment variables were constructed on the basis of pre-release dynamic domain assessment scores and supervision programming areas documented on case planning forms, depending on availability.

Damphousse, 2006). The question here is whether the policy moderates these effects, on the assumption that graduated responses enhance supervision outcomes for higher risk and less compliant offenders through earlier programmatic interventions and community-based responses that are less disruptive than confinement. If a policy that delays violation hearings in favor of local sanctions is beneficial for these offenders, then we would expect to see significantly reduced effects for the violation rate and offender risk variables in the post-guidelines regression model.

We test for this by running the Cox regressions separately by sample in order to compare the size of the effects before and after the policy. But as a preliminary step, we first model the hazard of reoffending in the combined sample as a function of the same covariates, plus a term representing the interaction between the treatment dummy and the offender's ordinal risk score (0-8). The ordinal score provides more statistical variation and allows us to test for the presence of an interaction across the full continuum or risk irrespective of classification category. In the split models, the measure is dichotomized into the high and all other risk (including sex offenders) categories in order to isolate possible differential effects among those offenders most likely to commit new crimes in the first year, as shown in the first model of Table 6. The two approaches together help provide a more comprehensive test of guidelines-based differences by risk.

The results across these three models in Table 6 are mixed. The magnitude of the interaction term based on the ordinal score is modest, but in the expected direction, indicating that the guidelines do indeed moderate the strong positive relationship between risk and reoffending.[22] The effect is only marginally significant, however. On the other hand, the differences by risk revealed in the split-sample models are more pronounced. The effect on the hazard of felony reoffending for the high risk category in the comparison group is twice that of all other offenders, but is rendered statistically non-significant under the sanction guidelines. While there is no direct test of program exposure in these models, the finding suggests that early reliance on rehabilitative responses for these offenders improves supervision outcomes. Of course there are many other plausible explanations for such a finding over time, including better case management, service delivery, or resource availability, all of which may have little or nothing to do with changes in sanctioning response. Further, in alternative models using the original four-category risk variable (not shown), the pre-post test difference at the high-risk level is substantially attenuated by the *increased* importance of medium levels of risk in increasing felony reoffending in the PS sample. It may be that the policy has resulted in a greater degree of incongruence between programmatic intervention and criminogenic need levels, worsening outcomes for middle range offenders and thereby diluting its positive impact on the highest risk cases. We examine more direct evidence on the relationship between program involvement and reoffending in additional analyses below.

In contrast to the moderating effect of the guidelines on risk, the last two models in Table 6 indicate that there are no significant differences across samples in the effects of technical violations on time until felony reoffending. The frequency of violations per month is predictive of poor outcomes in both cases, irrespective of differences in policy

[22] The moderating effect of the sanction guidelines on the hazard ratio for offender risk is interpretable through an adjusted hazard ratio, calculated as Exp(.282-.091)=1.210, nine percent less than the main effect of risk [Exp(.282)=1.326].

Table 7. Cox Regression Analysis of Major Violation Behavior

	Major Violation Behavior Matched Sample (N=1,044)		Major Violation Behavior Matched Sample (N=1,044)		Major Violation Behavior (Matched Sample, N=1,044)			
					Pre-Guidelines		Post-Guidelines	
	B	Exp(B)	B	Exp(B)	B	Exp(B)	B	Exp(B)
Race								
Non-white	-0.119	0.888	-0.107	0.898	0.015	1.016	-0.074	0.928
White (reference)								
Sex								
Male	0.941	2.562 ***	0.868	2.383 ***	1.238	3.448 ***	0.731	2.077 *
Female (reference)								
Age at Release	-0.025	0.976 **	-0.037	0.963 ***	-0.020	0.980 ^	-0.028	0.972 **
Felony Level of Committing Offense	-0.033	0.968	-0.014	0.986	-0.078	0.925	-0.066	0.936
Employment during Supervision								
No Employment	0.866	2.377 ***	0.838	2.312 ***	0.909	2.482 ***	0.824	2.279 ***
At Least Part-time/Year or Non-Labor Force (reference)								
Residential Moves (rate per month)								
High Rate	-0.171	0.843	-0.160	0.852	0.154	1.166	-0.389	0.678 ^
Low or No Moves (reference)								
Overall Violation Rate (per month)	0.534	1.705 ***	0.508	1.662 ***	0.794	2.211 ***	0.512	1.669 ***
Criminal History Risk Score†			0.241	1.273 ***				
Sex Offender	0.185	1.203						
High Risk (non Sex Offender)	1.113	3.044 ***			0.561	1.753 **	0.446	1.562 *
Medium Risk (non Sex Offender)	0.916	2.500 ***						
Low Risk (reference)								
Sanction Guidelines								
Post-Guidelines Sample	0.162	1.176	0.351	1.420				
Pre-Guidelines Sample (reference)								
Interaction Term								
Risk x Sanction Guidelines			-0.040	0.961				
Model chi-square		206.419 ***		205.255 ***		94.833 ***		91.657 ***
-2LL		3405.776		3400.898		1365.014		1697.498

*p ≤ .05; ** p ≤ .01; *** p ≤ .001.
^p ≤ .10
†Risk entered as total computed score for interaction model.

environments relating to the timing and severity of sanctioning response. The comparable strength of this finding across samples is perhaps not surprising, given the wide range of criminogenic needs with which parole violations are correlated (Loza and Loza-Fanous, 2000). In our own data, violation rates are positively correlated with employment, substance abuse and attitudinal needs in the post guidelines sample (where complete dynamic domain data are available), underscoring the importance of early interventions in those cases. It is also important to note, however, that neither does progressive sanctioning appear to worsen outcomes among chronic violators. The implication is similar to that of the non-effects of the overall policy intervention shown in the first model of Table 6, in both cases suggesting that more a judicious and concentrated use confinement does not necessarily pose unacceptable public safety risks.

Table 7 extends the analysis conducted in Table 6 using an overlapping, alternative measure of recidivism. We specify an identical set of Cox models predicting time to the first incident involving a major violation, defined to include felony behavior (but not absconding that is not otherwise eventually prosecuted), weapons-related infractions and threatening behavior. Again, time to failure is measured in days from the start of supervision, and terminations and revocations are both treated as censored observations, as in Table 6. The same basic research questions are addressed using the same modeling strategy. For purposes of comparison, the regression models also include the same set of covariates used to develop the base model of felony reoffending.

The results in the first equation of Table 7 are generally consistent with those of Table 6, indicating that the sanction guidelines have no net impact on major violation behavior in the combined sample. The significant bivariate differences reported earlier are no longer evident in the multivariate regression. This finding reinforces the tentative conclusion above that supervision under the new reforms neither improves nor worsens offender outcomes in the first year. Similar to Table 6, the results also show that higher risk, chronically unemployed, younger offenders and those who commit frequent technical violations are all more likely to experience shorter survival on supervision, with increased risk of involvement in major violation behavior. In contrast, the effects of gender are strongly significant in Table 7, reflecting a greater propensity among men to commit weapons and threat behaviors. Low level crimes (i.e., felony variable), residential instability and sex offender status are all modestly, but significantly related to felony reoffending, but not major violations, suggesting that these factors are more associated with chronic reporting and residential placement problems that eventually result in absconding.

The results in both tables reveal strong main effects of the technical violation rate on recidivism, consistent with past research in this area (Gray et al., 2001; Martin et al., 2004). Like the new crime models, there are no significant interactive effects of violations on major offending (split models of Table 7), even though the effect size is moderately smaller among PS offenders. The findings in Table 7 also show, however, that the guidelines do not significantly alter the effects of offender risk, either by total score or among high-risk cases only, in contrast to the results in Table 6. One possible interpretation is that the models of felony reoffending are especially sensitive to the inclusion of routine absconding outcomes. Absconding may have simply become less associated with risk over time, possibly because increased interventions among higher risk offenders have helped mitigate the criminogenic needs that underlie such behavior.

In sum, the results in Tables 6 and 7 demonstrate that there is no overall intervention effect of the sanction policy, and there is only very limited and mixed evidence that the policy exerts a moderating influence on the key determinants of these recidivism outcomes. At the same time, they show that progressive responses to violation behavior have not increased recidivism in Ohio in the short term, and that those system-wide increases are likely due instead to other compositional changes in release cohorts. But if a policy environment that is more uniform, rehabilitative, and presumably fairer does not yield improved supervision outcomes in general, are there any circumstances under which this new system is more effective? In the last set of analyses, we examine the effectiveness of alternative forms of agency response, and how that varies before and after implementation.

The results considered so far are based on the entire matched release sample, regardless of actual exposure to the sanctioning process due to non-compliance. Even though close to 70% of the sample overall did commit at least one violation during their first year of supervision (Table 5), models that are based on the full sample are less appropriate as a basis for testing the effectiveness of specific sanctions imposed. In Table 8, we address this question by limiting the focus to offenders who commit high-severity technical violations in the early stages of supervision. This alternative strategy allows us to compare similarly situated offenders who show early indications of relatively serious non-compliance, are likely to become more closely monitored by their parole officer, and are at risk for future criminal offending.[23] It also ensures at least some degree of involvement in the APA sanctioning process and is thereby likely to provide greater statistical variation in terms of response. We use the sanction grid definition of high-severity violations, which includes misdemeanors, program violations, violations of previous sanction orders, victim contact, and failure to appear at violation hearings. The dependent variable is felony reoffending, based on the same operational definition used in Table 6 that includes absconding. Absconding is excluded from the high severity category to avoid overlapping definitions. The analysis is based on 229 cases from the unmatched sample in which the offender committed at least one high severity violation within the first three months of supervision.[24] The unmatched sample is used in order to increase the size of cell counts in the split sample models that follow.[25]

Table 8 presents the results from a Cox regression analysis of these early violators, estimating time until first felony offense as a function of the guidelines effect plus a modified set of covariates. We use the same set of controls used in Tables 6 and 7, along with three key measures tapping the effects of sanction response. The first is a weighted index of sanction intensity, defined as the total number of non-programming interventions or sanctions imposed (i.e., local unit reprimands, restrictions on activities/increased reporting /other conditions, or pre-hearing jail detention, weighed by severity) divided by the total number of cumulative violations. Revocations are not

[23] This group has an average violation rate per month (for the entire follow-up period) that is nearly six times the rate for offenders with no serious violations in the first three months.

[24] The high-severity violation incident used as a selection filter and the outcome variable (i.e., felony reoffending) are thus defined as mutually exclusive events for the purposes of this analysis. We omitted a small number of cases wherein a high-severity violation occurred within the first three months, but subsequent to the failure event.

[25] In parallel main effects models run using the matched sample, the results were virtually identical to those obtained in Table 8.

Table 8. Cox Regression Analysis of Felony Reoffending among Early Violators

	Offenders with High Severity Violation within First 3 Months (Unmatched Cases)					
	Full Model (N=229)		Pre-Guidelines (N=97)		Post-Guidelines (N=132)	
	B	Exp(B)	B	Exp(B)	B	Exp(B)
Race						
Non-white	0.251	1.285	0.486	1.626	0.241	1.273
White (reference)						
Sex						
Male	-0.030	0.920	-0.312	0.732	0.402	1.495
Female (reference)						
Age at Release	-0.013	0.987	-0.024	0.976	-0.004	0.996
Felony Level of Committing Offense	-0.136	0.872	-0.150	0.861	-0.139	0.871
Employment during Supervision						
No Employment	0.935	2.548 ***	1.240	3.457 ***	0.769	2.157 **
At Least Part-time/Year or Non-Labor Force (reference)						
Residential Moves (rate per month)						
High Rate	0.296	1.344	0.082	1.086	0.410	1.506
Low or No Moves (reference)						
Overall Violation Rate (per month)	1.762	5.825 ***	2.374	10.737 ***	1.679	5.361 ***
Criminal History Risk Score						
Sex Offender	0.238	1.269	0.153	1.166	0.262	1.300
High Risk (non Sex Offender)	0.304	1.355	0.943	2.568	0.001	1.001
Medium Risk (non Sex Offender)	0.735	2.085 **	0.818	2.265	0.753	2.123 *
Low Risk (reference)						
Non-Programming Sanction Intensity	0.286	1.332 **	0.174	1.190	0.431	1.539 **
Prior Programming/Treatment Sanction						
One or More Prior Programming Sanctions	-1.013	0.363 ***	-0.820	0.440 *	-1.001	0.367 **
None (reference)						
Prior Halfway House Referral Sanction						
One or More Prior Referrals	-0.641	0.527 *	0.040	1.041	-0.983	0.374 **
None (reference)						
Sanction Guidelines						
Post-Guidelines Sample	-0.123	0.884				
Pre-Guidelines Sample (reference)						
Model chi-square		165.540 ***		92.319 ***		87.894 ***
-2LL		1021.390		305.710		620.606

*p ≤ .05; ** p ≤ .01; *** p ≤ .001.
^p ≤ .10

included since those are treated as censored events throughout our analyses. The variable represents a summary measure of the extent to which the aggregate of responses are disproportionately punitive or control-oriented relative to the number of technical violations. The other two variables represent the effects of programming and treatment interventions imposed as sanctions, measured dichotomously and coded as 1 if a programming or halfway house referral sanction was ever imposed. In all three cases, the measures are treated as fixed and simply capture the generalized effects of prior exposure to at least one attempt to impose a rehabilitative response to early violation behavior.[26] The intervention variables do not necessarily reflect instances of successfully completed programming, but in combination with the intensity index, they do allow for a comparative assessment of treatment versus punitive forms of sanctioning response among offenders who are at risk for chronic non-compliance.

We first consider the results in Table 8 using the same analytic strategy as before, examining for evidence of a policy intervention effect independent of controls in a combined sample model (first equation). We are also interested, however, in the relative effects of the response measures as part of a more basic test of the effectiveness of competing supervision strategies. These measures are then assessed in the context of the sanction guidelines through split-model equations, and finally, in risk-based interaction models below (Table 9). The results show that there is no independent effect of the sanction guidelines on risk of reoffending among the early violator subsample, consistent with our previous findings from the full sample models in Tables 6 and 7. Even among offenders with earlier and heavier involvement in the sanctioning process, exposure to the grid system does not by itself extend survival time on supervision. Taken together, the absence of a main policy effect across Tables 6, 7, and 8 is inconsistent with the notion that progressive sanctioning, as implemented in Ohio, has produced a generalized deterrent or legitimizing effect that promotes compliance. It is important to note, however, that the study is not designed to test those arguments directly, nor do we have perceptual data available from the offender population and so our findings remain inconclusive in that regard.

The analysis does allow for a more definitive assessment of which supervision strategies might be most effective under progressive sanctioning. We begin by examining in Table 8 the main effects of three alternative ways of responding to violations on the risk of committing a new crime among the early violators in the combined pre/post grid sample. The results reflect novel and interesting findings regarding the relative efficacy of punitive and treatment-oriented agency responses to violation behavior. They show significant, mitigating effects of exposure to sanction-based treatment interventions on the risk of reoffending. Interpreting the hazard ratios, having received one or more programming/treatment sanctions reduces the hazard rate of felony reoffending by about 65% among early violators, controlling for other standard factors related to parole failure. Halfway house placement referrals, which involve structured programming in a residential setting, reduce the risk by nearly 50%, although

[26] All three response variables measure sanctions imposed prior to experiencing the failure event. For censored observations, the measures are based on sanctions imposed over the course of the entire period during which offenders are at risk for failure. The response(s) is not necessarily directly linked to the high severity violation used as a filter for case selection and in some cases may have imposed prior to that violation.

the effect is less significant. In contrast, there is a significant *positive* relationship between the intensity of restrictive sanctions and reoffending. Disproportionate increases in the use of reprimands, restrictions on activities, and reporting requirements have an independent, worsening effect on recidivism in the first year of supervision.

To our knowledge, the analysis in Table 8 represents the first critical test comparing the efficacy of alternative sanction responses that is based on a statewide supervision sample and modeled using event history techniques. Our measure of programming sanctions is arguably crude, encompassing a wide range of treatments and interventions irrespective of program compliance and completion. In light of the sanction intensity effect, however, this general finding is consistent with research in the reentry treatment literature (e.g., National Research Council, 2007; Taxman, 1998; Zhang, Roberts, and Callanan, 2006; Zhang and Zhang, 2005) and research highlighting the relative importance of treatment compared to control and surveillance strategies (Aos, Miller and Drake, 2006; Paparozzi and Gendreau, 2005; Petersilia, 1998; Solomon, 2006; Taxman, 2002). Since the analysis is limited to early violators, the results also point to the importance of "frontloading" supervision resources, to the extent that the interventions shown to be effective here are tied to those violations that occur in the first few months out of prison (National Research Council, 2007; Petersilia, 2007). It may also be the case, however, that early violations help prompt a more focused and timely effort to deliver services tied to the offender's supervision plan, independent of sanction-based programming.

The treatment effect reflected in the halfway house measure is likely diluted by the fact that it is not necessarily a measure of program compliance and includes referrals that result in unsuccessful termination. Further, the effectiveness of these referrals as a sanction option is compromised by the potential misalignment of needs and intensive services that occurs when halfway houses are treated by officers simply as a convenient intermediate confinement option.[27] The smaller effect size of halfway house interventions shown in Table 8 is consistent with our incident-level descriptive findings discussed above, which suggest that utilization rates have become less correlated with offender risk over time.

The results raise important questions concerning the efficacy of purely punitive responses as a general strategy for managing chronic violators who are at risk for supervision failure. The findings are consistent with reviews of research that document the ineffectiveness of surveillance-oriented approaches (Aos et al., 2006), and suggest that heavy of use of restrictive sanctioning may lead to a downward spiral of non-compliance by way of increased detection, eventually resulting in more serious criminal behavior. The sanction finding should be qualified, however, in two important respects. In models run on the entire sample (as opposed to early violators), sanction intensity modestly, but significantly, *reduces* recidivism, though the effect is not significant in the post-guidelines sample (results shown in Appendix 5).[28] The problematic effects of

[27] See Lowenkamp and Latessa (2005) for comprehensive findings on the effectiveness of residential treatment programs in Ohio, including those having iatrogenic effects.

[28] These differences by sample could be due partly to the restricted use of jail detention under the sanction grid for those violations most strongly correlated with the dependent variable. We tested for this possibility by removing jail holds from the sanction index and entering it as a separate dummy effect on both the full and early violator samples (results shown in Appendices 6 and 7). This alternative strategy yielded the same positive effect of sanction intensity and no independent effect of jail holds among early violators

intensity may be limited to chronic violators, and may reflect the ineffectiveness of heavier reliance on reprimands and restrictions with that group. The broader substantive importance of the finding is also limited by that fact that we do not test for revocation effects on later reoffending, which is not possible under the current design, but should be considered as a central subject of future research.[29]

The pre/post grid status findings from Table 8 (and in the full sample models in Appendix 5) reveal interesting differences in how the effects of sanction type differ by guidelines status. The coefficients for sanction intensity (positive), treatment (negative) and halfway house referrals (negative) are all strongly significant among the post-guidelines group. Prior programming is also important for pre-grid offenders (with reduced magnitude), but the other two response measures are not. Thus, the new sanctions policy appears to have enhanced the effectiveness of community services in general for offenders with more chronic patterns of non-compliance.

But do these effects hold equally among all risk levels? Table 9 extends the recidivism analysis of early violators to determine whether the findings on agency response reported in Table 8 vary by offender risk, and if so, whether those differences are moderated further by the new sanction guidelines. We test for these differences first with an interaction effects models based on the combined sample, then by splitting the models by pre/post guidelines status and estimating separate equations. Each model contains two risk-based interaction terms, one for sanction intensity and the other for programming. Interaction terms for halfway house sanctions are not included because of collinearity and small sample counts. These models include all of the controls shown in Table 8, though we report coefficients and hazard ratios only for the interaction effects and their constituent terms. We use a dichotomized version of risk (as in the split models of Tables 6 and 7), focusing on the interaction effects by high risk status, since those offenders are the ones usually targeted for intensive interventions, spend the longest time under supervision, and are the costliest to supervise.

Considering the full model in the first column of Table 9, the results show that sanction intensity significantly reduces the hazard of reoffending among high-risk early violators, but not prior programming. While the small sample count yields only marginal significance, the sanction effect is substantively compelling, indicating that unit increases in the intensity index reduce the risk of reoffending among high risk violators by about 13% (adjusted hazard ratio). Considered in light of the unfavorable main effect in Table 8, the findings suggest important differences in the efficacy of punitive sanctions by risk, and that lower risk parolees who pose minimal public safety risks are perhaps best managed through an expanded reliance on administrative review.

With regard to programming responses, differences do emerge by risk and become robust once the models are split by sanction grid status. Among PS offenders,

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(Appendix 7). In the full models split by sample, however, jail holds reduce the risk of reoffending, with a slightly stronger effect among the pre-guidelines groups (Appendix 6). It is also possible that the results are an artifact of case censoring in the Cox model, to the extent that punitive sanction intensity is more strongly associated with early revocation. We obtained substantively similar results on the early violator sample, however, in Cox models that omitted those cases. We also ran comparable logistic regression models that yielded similarly strong effects of programming but non-significant effects of sanction intensity and halfway house referrals.

[29] However, in a major analysis of the BJS 1994 release data, re-released technical violators who served the remainder of their sentences had higher rearrest rates than other release groups (Solomon et al. 2005).

the interaction effect reported in the last column of Table 9 is strongly significant, indicating the high-risk violators (relative to all others) benefit substantially from having received at least one prior programming sanction. The interaction term has no significant effect in the comparison group, however. A similar, but weaker effect emerges with regard to punitive sanctions. These responses have undesirable consequences overall in the PS group, but work to reduce the hazard of reoffending at the highest risk levels. In contrast to programming, there are no meaningful differences in the magnitude of the interactions across the split models, with both coefficients approaching significance at the .10 level.[30] Finally, in a three-way interaction term testing the combined effectiveness of sanction intensity and prior programming among all PS offenders (not just early violators), the effects are pronounced and highly significant at the high-risk level after the guidelines, but not before (not presented).[31] Taken together, these results underscore the importance of frontloading intervention resources for serious offenders and combining those resources with increased restrictions, the effects of which are substantially enhanced under a system that formally limits the early use of revocation mostly to situations involving public safety risks.

To facilitate interpretation of the complex of findings in Table 9, we present simple descriptive data in Table 10 that show mean levels of felony reoffending for early violators and all offenders, by risk and criminogenic need level, before and after implementation of the sanction guidelines. In both panels, the data are based on the matched sample, though in this case, the early violator subset is expanded to include high severity incidents in the first six months in order to increase statistical variation on the needs measure. High risk offenders are combined with sex offenders. Since systematic and comparable administrative data on assessed needs are not available for the pre-grid sample, a proxy measure was constructed by dichotomizing the assessment data (asset/low need versus some or high need) where available and supplementing it with a measure tapping programming activities noted on the offender's supervision accountability plan or similar case planning documents. The criminogenic needs examined are restricted to employment and substance abuse since these areas both show significant bivariate correlations with felony reoffending are more likely to be reliably assessed by agency staff. The measure is coded equal to 1 if a need/activity is indicated in both of the employment and substance abuse domains.

[30] We discuss the substantive importance of these effects due to especially small sample counts. In additional models not presented, the interaction effect between high risk offenders and the modified intensity measure described in the preceding footnote is actually stronger in the post-guidelines model (p=.06). The risk by jail interaction is also negative (i.e., reduced risk of reoffending) and approaches the .10 level.

[31] Each unit increase in the sanction intensity scale for high risk offenders with a prior programming sanction results in a 54% decrease in the hazard of reoffending.

Table 9. Cox Regression Analysis of Felony Reoffending among Early Violators: Interaction Models

	Full Model (N=229)		Pre-Guidelines (N=97)		Post-Guidelines (N=132)	
	B	Exp(B)	B	Exp(B)	B	Exp(B)
Criminal History Risk Score						
High Risk (non Sex Offender)	0.933	2.543 ^	0.664	1.942	1.184	3.266 ^
Non-High Risk (reference)						
Non-Programming Sanction Intensity	0.331	1.392 *	0.308	1.361	0.460	1.585 **
Prior Programming/Treatment Sanction						
One or More Prior Programming Sanctions	-0.923	0.397 ***	-1.156	0.315 **	-0.588	0.555 ^
None (reference)						
Interaction Terms:						
High Risk x Sanction Intensity	-0.466	0.628 ^	-0.603	0.547	-0.521	0.594
High Risk x Prior Programming	-0.753	0.471	0.958	2.607	-1.723	0.178 **
Model chi-square		160.759 ***		91.084 ***		88.605 ***
-2LL		1024.685		306.487		541.780

*p ≤ .05; ** p ≤ .01; *** p ≤ .001.
^p ≤ .10
Note: Models control for all covariates shown in Table 8.

Table 10. Mean Levels of Felony Reoffending, by Risk and Employment/Substance Abuse Needs

	Pre-Guidelines	Post-Guidelines
Early Violators:		
Low/Medium Risk		
Minimal Need	48.3%	64.0%
Moderate/High Need	**51.9%**	**47.4%**
High Risk/Sex Offender		
Minimal Need	39.1%	40.0%
Moderate/High Need	**57.1%**	**53.8%**
All Offenders:		
Low/Medium Risk		
Minimal Need	28.4%	33.1%
Moderate/High Need	36.6%	44.6%
High Risk/Sex Offender		
Minimal Need	**36.6%**	**32.5%**
Moderate/High Need	**48.3%**	**46.7%**

Comparing levels before and after, the results reveal moderate, though non-significant, reductions in one-year recidivism rates that are concentrated among (matched) higher risk offenders with high needs. The offender categories that experienced declines are shown in boldface. In the case of early violators, the higher need offenders, regardless of risk, show reductions in new crimes of four to five percentage points. The elevated reoffending levels over time among low-need/lower risk offenders are suggestive of the iatrogenic effects of heavy sanctioning noted above, though the effects are not statistically significant. Among the entire matched sample, the decrease is slightly smaller, but limited to high risk and sex offenders. This is generally consistent with the risk-based interaction findings presented in Table 9, suggesting that supervision strategies under the guidelines have been more responsive to those offenders who present serious case management challenges. In separate descriptive analyses in which we compare changes in overall sanction-based programming rates (not shown), pre/post grid increases in chemical dependency referrals, for example, are greatest in the high risk/high substance abuse need population, while sex offenders have experienced the biggest increases in the use of halfway house sanctions.

In order to further explore pre/post grid differences in program/treatment sanction responsiveness, Table 11 presents results from Cox regressions of rehabilitative sanctioning using the full matched sample. The dependent variable is time until the first program sanction is imposed, regressed on the same set of controls used above, plus the main guidelines effect. The key variable of interest, however, is the same criminogenic needs assessment measure considered in Table 10, treated here as a dummy variable and coded as 1 if the offender exhibits moderate to high employment and substance abuse needs. The purpose of the analysis is thus to examine differences in the timing of

program intervention response (relative to assessed need) before and after implementation of the sanction grid. Using the same modeling strategy as above, equations are first shown for the full model and then split by sample status.

Not surprisingly, results from the initial full model in Table 11 show a strong main effect of high-need status on the hazard of receiving a program-based sanction. Interpreting the hazard ratio, having greater levels of assessed employment and substance abuse needs increases the odds of receiving a program or treatment sanction by about 57%, net of control variables that include the overall violation rate. While progressive sanction offenders overall do not enjoy earlier sanction-based program interventions (first equation), the split models reveal interactive effects of dynamic needs by pre/post grid status, showing a significant effect of high needs only among the post-grid sample. The results suggest better agency responsiveness to these needs among offenders supervised under the sanction grid. Overall, the pattern of results in Tables 10 and 11, along with the earlier incident-level descriptive data from Figure 13, diverge from findings reported by Solomon, Kachnowski and Bhati (2005) and Solomon (2006) that call into question the overall effectiveness of parole, especially for more serious offenders. Instead, they suggest that parole supervision can be improved for those groups under sanctioning systems that provide graduated monitoring and earlier opportunities for intensive treatment services.

In our final set of multivariate results on offender outcomes, we switch back to an analysis of the full sample, continuing with an event history approach but shifting to a more dynamic set of predictors that include time-varying covariates. In Table 12, we present results from a broader analysis of felony reoffending using a discrete-time logistic regression modeling technique that incorporates both durational outcomes as well as discretely measured covariates whose values may vary across the observation period. Our data are conducive to this approach because of detail available in the dataset on the timing of programming and sanction histories and residential movements. While the Cox regressions above treat these effects as fixed, the models in Table 12 allow values on these factors to vary as offenders move in and out of programming, experience bursts of violation activity, change living arrangements, and so. The general purpose, therefore, is to extend the earlier analyses by examining how these variations over time might contribute to predicting supervision failure and whether the sanction guidelines moderate the importance of those factors.

This analysis follows conventional modeling procedures described by Allison (1984) for predicting discrete time hazard rates. We first transformed the offender-level dataset into a "person-period" file, such that each record consists of segmented time intervals representing each month of the follow-up period during which an offender is at risk of failing (i.e., committing a new felony offense). The event history for offenders who do not experience the failure event and remain on supervision until the study end point would be represented through twelve person-month records. Cases that fail are coded as 1 on the reoffending variable for the month in which the outcome event occurs. This method accommodates censored cases that leave supervision early by including segmented records only for those months at risk. The dates for the reoffending event (which are used to define the continuous time variable in the Cox models), as well as for the start and end dates of time dependent covariates, are recoded into dichotomous variables to capture changes in status for each monthly observational record.

Table 11. Cox Regression Analysis of Rehabilitative Sanctioning

	Full Model (N=1,044)		Pre-Guidelines (N=522)		Post-Guidelines (N=522)	
	B	Exp(B)	B	Exp(B)	B	Exp(B)
Race						
Non-white	0.144	1.155	0.264	1.303	0.065	1.067
White (reference)						
Sex						
Male	-0.114	0.892	-0.176	0.838	0.010	1.010
Female (reference)						
Age at Release	-0.017	0.984 ^	-0.019	0.981	-0.016	0.984
Felony Level of Committing Offense	-0.034	0.966	0.038	1.039	-0.094	0.911
Employment during Supervision						
No Employment	-0.268	0.765 ^	0.029	1.029	-0.532	0.588 *
At Least Part-time/Year or Non-Labor Force (reference)						
Residential Moves (rate per month)						
High Rate	0.213	1.237	0.242	1.273	0.143	1.154
Low or No Moves (reference)						
Overall Violation Rate (per month)	1.291	3.635 ***	1.378	3.966 ***	1.216	3.372 ***
Criminal History Risk Score						
Sex Offender	-0.460	0.631	-0.522	0.594	-0.335	0.715
High Risk (non Sex Offender)	0.140	1.151	0.088	1.092	0.268	1.307
Medium Risk (non Sex Offender)	0.170	1.185	0.155	1.168	0.208	1.231
Low Risk (reference)						
Employment/Substance Abuse Needs						
Moderate or High Need	0.450	1.569 **	0.313	1.368	0.588	1.800 **
No or Minimal Need (reference)						
Sanction Guidelines						
Post-Guidelines Sample	0.107	1.113				
Pre-Guidelines Sample (reference)						
Model chi-square		247.970 ***		115.022 ***		130.477 ***
-2LL		2656.273		1057.071		1308.42

*p ≤ .05; ** p ≤ .01; *** p ≤ .001.
^p ≤ .10

Table 12. Discrete Time Event History Analysis of Felony Reoffending

	Full Matched Sample (N=9,225)			
	Pre-Guidelines		Post-Guidelines	
	B	Exp(B)	B	Exp(B)
Race				
Non-white	-0.069	0.933	-0.165	0.848
White (reference)				
Sex				
Male	0.306	1.358	0.124	1.133
Female (reference)				
Age at Release	-0.025	0.975 *	-0.020	0.980 ^
Felony Level of Committing Offense	-0.125	0.883 *	-0.090	0.914
Employment during Supervision				
No Employment	0.972	2.643 ***	1.042	2.834 ***
At Least Part-time/Year or Non-Labor Force (reference)				
Criminal History Risk Score Category				
Sex Offender	0.724	2.063 *	0.325	1.383
High Risk (non Sex Offender)	1.434	4.197 ***	1.172	3.228 ***
Medium Risk (non Sex Offender)	0.867	2.381 ***	1.105	3.020 ***
Low Risk (reference)				
Time Dependent Covariates:				
Cumulative Violation Rate				
High	1.012	2.752 ***	1.008	2.739 ***
Medium	0.458	1.581 ^	0.520	1.681 *
Low (reference)				
Substance Abuse Violation				
Violation Committed	0.305	1.356	0.232	1.262
No Violation (reference)				
Residential Move				
Offender Changed Residence	0.456	1.578	-0.075	0.928
No Change (reference)				
Non-Programming Sanction Intensity				
High	-0.129	0.879	-0.037	0.964
Low (reference)				
Jail Hold (pending possible violation hearing)				
Offender under Hold Order	-0.144	0.866	-0.339	0.713
No order (reference)				
Non-Sanction based Programming/Treatment				
Offender in Programming (excluding halfway house)	-0.864	0.422 **	-0.474	0.622 *
No Programming (reference)				
Residential Programming				
Offender in Programming	-0.039	0.962	0.077	1.080
No Programming (reference)				
Sanction based Programming/Treatment				
Offender in Programming (excluding halfway house)	0.534	1.706	-1.015	0.363 **
No Programming (reference)				
Nagelkerke R Square		0.131		0.145
Model chi-square		177.318 ***		206.676 ***
-2LL		1376.205		1466.620

Note: Models include time dummy covariates.
*p ≤ .05; ** p ≤ .01; *** p ≤ .001.
^p ≤ .10

We then estimate the models by specifying the logit transformation of the hazard of reoffending (at time *t*, given risk at time *t*) as a function of time, plus a set of both fixed and time-dependent covariates. The independent effects of time are measured through a set of dummy variables representing each of the first eleven months of observation (see Allison, 1984). Once the data are arranged in this format, the models are simply estimated using logistic regression techniques, with the unstandardized coefficients interpretable as the effects on the log odds of reoffending for each unit increase in an independent variable. Although Cox regression is extendable to this context, the computation of time segmented variables is cumbersome and the method is not recommended for models containing several time dependent covariates (Yaffee and Austin, 1994).[32]

Table 12 presents results from the discrete time models estimated on each sample. Unlike in Table 8, these models are based on the full matched sample file in order to maximize variation on some of our key covariates of interest. This file consists of 9,225 observations after transposing the records as described above. Initial models run on the combined sample revealed no independent effect of the sanction guidelines, consistent with earlier findings, so we present only the split models in Table 12. The same basic controls are included, plus a set of time dependent variables that tap a mix of violation history and response factors.[33] The cumulative violation measure is the same one used in Tables 6-9, except that the rate is now categorized and allowed to vary by month of observation. The other violation measure captures in the level of substance abuse history, coded as 1 for each month in which at least one substance abuse violation occurred. Punitive sanctioning is measured through the sanction index (dichotomized) and a dummy code representing months in which an offender was placed under a jail hold order (detention pending a hearing or investigation).

The models also include three rehabilitative-oriented covariates. Sanction-based programming is similar to the measure used above in Tables 6-9, while residential programming is similar to the halfway house referral measure, but broader in scope. The residential housing measure taps involvement in any structured residential placement setting, including halfway houses and independent housing agencies (offering more limited services), and is not necessarily sanction-based. The third measure, non-sanction based programming and treatment, refers to all other interventions and referrals related to an offender's supervision plan, parole board special conditions, or assessed needs. This is also a broadly defined measure that would include interventions ranging from intensive treatment to short-term employment assistance. Importantly, these variables measure only compliant/successful involvement in services or attendance at appointments. They are dummy-coded as 1 in each observational record only if the offender ultimately completes the program or is still active at the study end point. We use dummy coding to facilitate comparison of effect sizes. While these measures do not tap the effects of the entire treatment experience, they do serve as an acceptable proxy of ongoing compliance with program goals. Finally, all of the time-dependent covariates are entered as lagged

[32] Initial results from a base model run on the combined sample that included the same covariates as in the main Cox model in Table 6 showed substantively similar effects, confirming the robustness of the method.
[33] The models control for the effects of the time dummies. The coefficients are not presented since none is statistically significant.

effects, such that the outcome event is regressed on supervision experiences that occurred in the preceding month. This is a common procedure used in discrete time methods and is done to avoid the potential for reverse causation between two variables measured in the same segmented time period.

The results indicate effect sizes among the core set of controls that are very similar in both cases to the results reported in the Cox models in Table 6. Our main interest, however, is in assessing the effects of the time-dependent variables and whether those effects interact with the sanction guidelines. The dynamic effects of cumulative technical violations are similarly strong for both groups. High rates of technical violations are very important in predicting new felonies, whether treated as fixed effects (in the Cox models) or allowed to vary with time. High rates measured in the preceding month of observation increase the odds of recidivism by a factor of almost three. These results suggest that parole officers should be especially sensitive to spikes in the concentration of violations since they portend poor outcomes. There is no evidence, however, that the sanction guidelines alter the outcomes of high-rate violators, similar to results reported above. Possible explanations include the possibility that specific sanctions imposed under the grid are not sufficiently aligned with risk and need level, local resources continue to be unevenly available, or that restrictive sanctions are not applied soon enough for high-rate violators who are also of high risk.

On the other hand, substance abuse violations and residential instability have no impact on the risk of committing new crimes in the discrete time analysis. Months in which substance abuse violations occur have no significant (lagged) effect in either group. It is possible that substance abuse plays a more immediate role in supervision failure and that our measurement is insensitive to that relationship, though in some of our initial multivariate models (not shown) we observed only a very weak and non-significant relationship between substance abuse needs and recidivism. Similarly, although high levels of residential mobility help explain supervision failure among early violators (Table 8), the effects throughout the study have been weak and inconsistent. Other research has found that instability is predictive of probation revocation (Mayzer et al., 2004), absconding (Williams et al., 2000) and other lower-level forms of non-compliance (Schulenberg, 2007), suggesting that it may have minimal net impact on more serious types of felony recommission. This would be consistent with the weaker effects reported in our Cox models of major felony behavior that exclude absconding.

Our two measures of punitive response also have no independent, dynamic impact on the odds of reoffending in either group. In contrast to the early violator models in Tables 8-9, the direction of the intensity index is negative but the coefficient is not significant. There is no relationship in the short term between increases in the intensity of sanctions imposed, when allowed to vary over time, and subsequent criminal behavior. Furthermore, temporary jail detention, though necessary and required in many cases for investigative and public safety purposes, appears to have no added benefit from a deterrence standpoint. These results thus appear to support current policy guidance that discourages discretionary use of hold orders. However, it is important to recall the caveats noted above that complicate the interpretation of jail effects (see footnote 28). When jail holds are isolated as a separate variable, they work to strongly *reduce* recidivism in the full matched comparison group sample. In the post-grid sample, they exhibit a smaller effect, but the interactive effect is in the expected direction (i.e.,

indicating decreased reoffending) for high risk offenders (not presented), suggesting again that restrictive and confinement responses may work much better at those levels. Additional research is necessary to better understand the circumstances in which temporary jail confinement can be most effective as a discretionary sanction, and to allow more definitive conclusions about whether effectiveness varies according to offender risk.

The findings regarding the three treatment measures are more compelling and suggestive of the potential for rehabilitative effects under reentry-oriented progressive sanctioning. The measures offer a more nuanced picture of service delivery and allow for more precise assessment of the relative importance of non-punitive interventions. The results indicate that successful compliance with services tied mostly to case planning are effective in reducing risk of felony reoffending in both groups, though the effect is larger and more significant among the comparison group. While compliant involvement in residential programming has no effect, sanction based programming is predictive only among the post-guidelines group. The results are robust, indicating that PS offenders who maintain successful involvement in sanction-related interventions experience a 65% reduction in the odds of reoffending compared to those who are non-compliant or have no sanction-related services at all. In contrast, there is no significant impact in the comparison group.

The non-sanction based effects present in both models of Table 12 highlight the general rehabilitative benefits of treatment services among all supervised post-prison offenders, regardless of sanction policy context. This is an intuitive finding that is broadly consistent with the community based treatment literature and substantiated by it's presence in a conservatively specified model that controls for restrictive sanctions and background factors. In contrast, we find no evidence in the discrete time models supporting the efficacy of residential programming among either cohort. This finding diverges partly from the favorable effects of halfway house referrals observed in the early violator subsample (Table 8). The null effects shown in Table 12 could be due to our overly broad measurement of such programming, which encompasses supportive housing arrangements with less intensive services as well as halfway house placements. The differential effects of overall programming as a *sanction* response are perhaps most compelling, however, since they point to the importance of structured sanction guidelines in enhancing the efficacy of these responses. Comparing the effect sizes of the odds ratios in the post-guidelines sample, the decrease in the risk of recidivism from the sanction-based effect is nearly twice that of non-sanction programming. The finding is also consistent with the strong main effects of both treatment and halfway house sanctions that emerge among early violators in the PS sample (see discussion of Table 8). Together, the findings suggest that the sanction policy enhances the rehabilitative effects of program involvement, first through better alignment between risk and intensive services in response to violations, but perhaps also through closer engagement in the offender's progress and the increased certainty of a revocation hearing as a consequence of program failure.

Summary of Findings

Correctional agencies implementing prisoner reentry initiatives face enormous rehabilitative and public safety challenges as they consider the most effective supervision strategies for confronting large and diverse, crime-prone parole populations with multiple criminogenic needs (Petersilia, 2001). At the same time, new findings based on multi-state release data have called into question the overall utility of supervised release (Solomon et al., 2005), while the fragmentation of sentencing and supervision philosophy and increasing rates of parole failure have created organizational strain and identity crises among state parole authorities (Travis and Peterisilia, 2001). Progressive sanctioning policies represent a relatively new, but largely untested, strategy designed to conserve supervision resources and improve offender outcomes by combining principles of procedural justice with structured decision-making guidelines. The systematic study of these policies is important to understand how they might contribute to a growing body of knowledge regarding best practices in correctional supervision.

This project provides evidence from a wide-ranging assessment into the effectiveness of progressive sanctions as implemented with Ohio's post-prison supervision population. Using a historical comparison group design, the study explored several dimensions of effectiveness related to policy and recidivism outcomes using data from offender samples before and after implementation of the progressive sanction guidelines. Major clusters of findings from the study are summarized below.

- **The main procedural and administrative objectives of the violation policy and progressive sanction grid have been accomplished.[34]**

The major procedural objectives of the policy guidelines have so far been largely accomplished, as evidenced by significantly reduced reliance on revocation hearings, revocation sanctions, and local jail detention, more efficient and concentrated use of hearings, and better congruence between offender risk and revocation sanctions. The guidelines have also increased the progressiveness and proportionality of responses, as measured through violation hearing rates across cumulative incidents and violation severity. The incident-level multivariate models substantiate these findings, showing that post-grid offenders are significantly less likely to experience a violation hearing and to be revoked or returned to prison, net of control variables. Further, in the revocation models split out by sample cohort, the effects of violation history, prior violations and assessed risk are all significantly stronger under the new system, suggesting that the objective criteria of the sanction grid extend to revocation decisions as well.

[34] We conclude that these findings are largely substantiated by the replication study reported in Appendix 9. The ODRC and UC incident-level models both indicate significant and negative effects of the post-guidelines sample on the decision to pursue a revocation hearing and revocation outcomes. Both studies also show strong effects of violation severity and cumulative incidents on organizational response, and strong effects of severity, violation rate, and risk on revocation outcomes. In contrast, however, the UC regressions of hearing decisions revealed non-significant effects of offender risk.

- **The progressive sanction guidelines have no independent impact on recidivism.[35]**

The bivariate results with regard to supervision outcomes show that offenders supervised under the new sanction guidelines have generally higher failure rates. This is consistent with recent one-year recidivism patterns reported in administrative data available on full release populations. These differences are rendered non-significant, however, in the multivariate models that control for standard sources of recidivism. In other words, the introduction of progressive sanctions has played no independent role in increasing recidivism, even under a more limited use of revocation hearings. The results also show that offenders who are younger, less violent, chronically unemployed, and medium to high risk (excluding sex offenders) are more likely to commit new crimes. Technical violations are strongly associated with both felony reoffending and major violation behavior, and the sanction grid neither worsens nor attenuates their impact. We find similarly strong effects when the violation rate is measured dynamically in the final models. Residential instability is mildly predictive of new crimes, but not major violation behavior.

- **Program and treatment-based interventions are more important than punitive sanctions in reducing reoffending, and the sanction guidelines enhance the effectiveness of those interventions, especially for higher-risk offenders. [36]**

In models based on early violators (at risk for chronic non-compliance), prior programming sanctions substantially reduce the risk of felony reoffending, while control-oriented sanctioning has a worsening effect. The effect of halfway house referrals is significant but less important than the general programming effect, which encompasses a wide range of services and interventions. The sanction intensity effect is more ambiguous and less stable, since the direction of the impact varies by modeling approach. In only one instance, however, do punitive sanctions reduce the risk of reoffending (in full sample models, in which prior jail detention noticeably improved outcomes in the pre-grid sample). On the other hand, the beneficial impact of sanction-based programming seems more consistent, and the effects are generally enhanced under the sanction guidelines. When the early violator models are split by sample group, halfway house referrals and program sanctions work substantially better under the sanction guidelines. They work especially well for post-guidelines high-risk (non-sex) offenders, consistent with an established body of correctional treatment literature. In contrast, there

[35] We conclude that findings from the felony reoffending and major violation behavior analyses are also mostly substantiated by the replication study, although the UC sample revealed no significant bivariate differences on any of the key offender outcomes. Importantly, the UC multivariate models show no significant policy effect on either outcome, consistent with the ODRC study. The direction and size of the covariate effects found in both studies are largely similar (with the notable exception of residential instability), though the effects of risk are generally weaker among the UC sample. No interactive effects of risk are present in the UC findings, though the major violation models do show moderating effects of the sanction guidelines on the violation rate, in contrast to the ODRC results.

[36] These questions were not investigated in the UC replication due to funding constraints on the scope and level of detail of information collected from case files.

is no mitigating effect of program referrals for those offenders in the pre-grid cohort. Further, combining treatment services with restrictive sanctioning also significantly reduces recidivism at the high-risk level in the post-grid sample. In dynamic models predicting felony behavior on the full-sample split equations, program sanctions and supervision plan activities combine to reduce the risk of reoffending, but only among in the post-grid release cohort. In terms of relative importance, the strongest predictors in this final analysis are chronic unemployment, offender risk and successful involvement in sanction-based programming or services.

- **Implementation of the sanction grid policy has been facilitated by uniformity of staff training, but undermined by perceived agency disregard of officer opinions and professional autonomy.**

Findings from the survey of Adult Parole Authority officers (reported in detail in Appendix 9) reveal that training on use of the grid was perceived to be adequate, but that professional opinions and skills were not sufficiently considered in its design. Perceptions about the failure to genuinely involve officers throughout the policy formation process are correlated with poor understanding of the intent of the policy, which, in turn, are negatively associated with perceptions about the sanction grid's effectiveness and potential in helping to control offender behavior. While officer satisfaction with supervisors and regional administrators enhances perceptions of effectiveness, those with authoritarian approaches to supervision are less favorable in their assessments. Finally, officers who view the basis of their power to compel offender compliance in coercive terms have more favorable opinions about the grid, while those who view this power on the basis of legitimate authority are less favorable, especially with regard to effectiveness and offender control, suggesting that some officers might actually perceive the grid as undermining their legitimacy.

Policy Implications and Study Limitations

The findings from the study suggest that progressive sanction regimes can serve as an important and seemingly cost-effective population management tool when revocation and incarceration resources are used in a parsimonious fashion and limited mostly to high risk offenders or those who pose public safety risks. Our results demonstrate that the sanction grid and violation policy effectively filter the highest risk, non-compliant offenders into hearings sooner, consistent with the basic principles of risk management and proportionality of response. Importantly, however, the progressive structure of the grid also allows for critical, community-based treatment interventions to occur before pursuing a hearing, without increasing overall rates of felony reoffending. Although the long-term efficacy of revocation was not examined in this study, there has been no overall adverse effect realized so far under the current policy relaxing its use. It is also important to note that in results from our incident-level analyses, revocation outcomes in the current system are influenced only by formal, policy-based criteria. Any policy changes that rescind or otherwise weaken these elements of the guidelines may potentially compromise the uniformity and proportionality that has been achieved.

On the other hand, the results show consistently that the sanction guidelines have no global impact on reducing the risk of committing either new crimes or major violation behavior. This finding undermines the procedural justice notion that deterrence principles increase compliance by increasing legitimacy and fostering perceptions of fairness, despite the objective uniformity, proportionality and progressiveness of the system. Our findings should be regarded as tentative in this regard, however, since we lack attitudinal data with which to fully evaluate those arguments. Further, it is unknown to what extent the purpose of the sanction grid and consequences of non-compliance have been consistently communicated across caseloads. It is also possible that administrative sanction models alone are insufficient to produce this effect unless integrated with broader case management reforms in which parole officers become more proactively engaged with clients in reinforcing accountability and motivating self-directed change, as advocated by Taxman et al. (1999).

It is important to note that this study has been conducted in the early stages of implementation, and so perhaps it is too soon to evaluate its direct effects on improving supervision outcomes in the aggregate. Unfortunately, however, the process evaluation suggests that implementation has been compromised by limited officer "buy-in", poor understanding of the intent of the policy and unfavorable assessments of effectiveness, all of which are negatively affected by perceptions of disregard for professional opinion and by authoritarian styles of officer supervision. These findings from the survey have important implications for how parole agencies communicate the purpose of supervision reforms and involve line staff in their design and implementation. The extent to which such reforms are narrowly perceived as enhancing coercive power or, alternatively, as part of a cultural change in which officers associate evidenced-based practices with improved outcomes can ultimately affect offender perceptions of fairness and legitimacy.

As a self-contained policy, we are thus less inclined to see the findings as dismissive of a procedural justice effect, and instead as demonstrating how the guidelines provide a structural opportunity to align treatment sanctions with high-risk and potentially chronic violators on the front-end of supervision, allowing those offenders to retain any pro-social experiences gained without facing the presumption of immediate revocation. This includes intensive residential treatment for sex offenders, which as shown in our descriptive findings, has increasingly displaced revocation as an early response option, even though sex offenders are not formally addressed by the grid. Indeed, perhaps the most compelling findings of the study concern the relative efficacy of control versus programming responses to violation behavior, and how these responses interact with higher risk levels and the sanction policy. The results indicate that early treatment interventions are especially effective for high risk and need clients, and they support a heavier use of control sanctions for these groups where necessary. Furthermore, as shown in the dynamic models of reoffending, there is a substantial crime-reduction benefit from on-going successful participation in treatment services among all offenders supervised under the sanction guidelines. Why would sanction-based programming and treatment interventions produce enhanced benefits under a graduated sanctions policy? One reasonable interpretation is that for those involved in such services, the certainty of the consequences for failing to comply have now become more pronounced under the sanction grid. It might also be because these policies provide stronger guidance to consider the full range of risk and needs, resulting in better

alignment of services once violation behavior has occurred. Finally, it is possible that structured sanctioning promotes closer monitoring of compliance with treatment services and that this occurs earlier in the supervision process.

On the other hand, the study casts doubt on the general efficacy of purely punitive approaches to supervision, consistent with long-standing findings in the community corrections literature. While there is a consistently strong correlation between violation rates and reoffending, responding to those violations with control-oriented responses appears to be effective only among higher-risk offenders. Further, jail holds, as they are currently used, appear to offer no *generalized* deterrent value. The policy implications are complex, because they raise legitimate questions about the best way to manage low-risk offenders who become chronic nuisance violators for whom neither revocation nor intensive sanctioning appear effective. Indeed, punitive sanction intensity seems to worsen their outcomes, especially under a sanction policy that requires a protracted series of responses before pursuing a revocation hearing. Some of these may include inappropriate treatment services, including halfway houses, which have been shown to produce iatrogenic effects for such offenders (Lowenkamp and Latessa, 2005).

Accordingly, we offer three concrete, interrelated suggestions on ways to improve the sanction grid in Ohio, and progressive sanctioning systems in general. First, mechanisms to downgrade low-risk offenders to monitored-time supervision (i.e., administrative review) should be significantly expanded and should occur as early as possible where simple rule compliance has been demonstrated. Second, and more generally, APA managers should consider more formally integrating the positive incentive system developed in 2006 together with the violation policy, similar to Georgia's response structure (see Burke, 2004), instead of bundling it with the current classification policy. The incentive system should also be simplified and include easily attainable and meaningful goals for certain categories of offenders, such as the step-down reward described above. Revising these systems such that they are melded together as a single, unified policy may help to better promote positive behavior among nuisance violators. Finally, the APA should consider an expanded use of temporary jail confinement, or at least mandated halfway house confinement, as a specific, punitive sanction option on the grid for *high-risk* offenders who fail to comply with early programming opportunities. This approach should still be explored with caution, since any positive impact of jail holds (when used mainly for investigative purposes now) has not been conclusively demonstrated in our findings and requires further study. It is worth noting, however, that judicious and swiftly imposed short jail stays are a central sanctioning option in effective drug court programs and are one of many recommendations made recently by the Reentry Policy Council (CSG, 2005).

Of course the findings from this investigation are potentially undermined by important design limitations, as is typical in most quasi-experimental designs. Before and after research designs are inherently subject to threats to internal validity involving history effects, and those effects are a potential source of contamination in this study. It is possible that the observed differential effects regarding program interventions, for example, are due not to the structured guidance imposed by the sanction policy, but to improvements over time in program integrity, risk and needs assessment, or overall supervision case management. From this standpoint, the differences over time regarding sanction effectiveness should be viewed as suggestive and not definitive. It is sometimes

possible to strengthen designs that use historical comparison groups by measuring pre and post-test observations at multiple time points. While such an approach was not feasible with available data in the current design, we have separately analyzed administrative data (available on the full APA population) on violation hearing trends back through 2002. Those data reveal a virtually flat pattern of revocation rates at the hearing level from FY 2002-2005, followed by a sharp increase starting in FY 2006, entirely consistent with our implementation results reported above. Further, baseline violation data from an earlier ODRC study of releases in late 2000 (Martin et al., 2004) show a pattern of progressiveness in hearing rates that is similar to the pre-grid patterns described here. These additional data points help substantiate our conclusions regarding the procedural outcomes of the policy. However, we are unable to investigate the full impact of the sanction grid as employed in the later stages of supervision, since the study uses a relatively short follow-up period of one year. It is likely that a longer follow-up period would increase statistical variation in our outcome measures and strengthen the implementation findings, but further study is needed to confirm this. Additional research using extended follow-up periods is also required to make more definitive statements about the sanctioning effects examined here.

It is possible that the study results pertaining to offender outcomes are undermined by selection bias. Our descriptive results revealed significant pre/post-test differences on several key background factors, not surprisingly, since the samples were not matched at the point of selection. The retrospective case matching procedures we used are a common corrective measure for this potential problem, but are limited by possible specification error in the propensity score prediction model and level of rigor used in the subsequent matching criteria. While our use of statistical controls helps minimize residual sample differences, the findings from the study should be qualified by the possibility of remaining bias.

Despite these limitations, our findings contribute to an emerging literature on effective supervision strategies, addressing gaps noted by Petersilia (2001) and the National Research Council (2007) regarding the lack of evidence on parole innovations and the effectiveness of current practices. This study provides important evidence demonstrating that structured sanctioning reforms are clearly beneficial as a management tool in the context of large, heterogeneous post-prison release populations. They minimize the haphazard use of costly and possibly ineffective revocation penalties and in doing so, help to establish formal systems of consistent, proportional, and progressive responses. Perhaps most importantly, they provide a structural presumption for earlier reliance on community-based interventions and services that help to foster reintegration among those offenders at highest risk for reoffending.

References

Allison, P.D. (1984). *Event History Analysis: Regression for Longitudinal Event Data.* Beverly Hills, CA: Sage.

Aos, S., M. Miller, and E. Drake. (2006). *Evidence-Based Adult Corrections Programs: What Works and What Does Not.* Olympia: Washington State Institute for Public Policy.

Andrews, D.A., I. Zinger, R.D. Hoge, J. Bonta, P. Gendreau, and F.T. Cullen. (1990). Does correctional treatment work? A clinically relevant and psychologically informed meta-analysis. *Criminology*, 28(3):369-404.

Andrews, D.A., and J. Bonta. (1998). *Psychology of Criminal Conduct*. Cincinnati: Anderson.

Bennie, R.C., L. Norton, and B. Martin. (2008). *Ohio Adult Parole Authority Census, July 1, 2007*. Columbus, OH: Bureau of Research., Ohio Department of Rehabilitation and Correction.

Bureau of Research (2008). *Fiscal Year 2007Institution Report*. Columbus, OH: Bureau of Research, Ohio Department of Rehabilitation and Corrections.

Burke, P.B. (2004). *Parole Violations Revisited: A Handbook on Strengthening Parole Practices for Public Safety and Successful Transition to the Community*. Washington, D.C.: National Institute of Corrections.

Burke, P.B. (1997). *Policy-driven Responses to Probation and Parole Violations*. Silver Spring, Maryland: Center for Effective Public Policy.

Campbell, D.T. & Stanley, J.C. (1963). *Experimental and Quasi-Experimental Designs for Research*. Chicago: Rand McNally.

Carter, M. (ed) (2001). *Responding to Parole and Probation Violations: A Handbook to Guide Local Policy Development*. Silver Spring, Maryland: Center for Effective Public Policy.

Carter, M. and A. Ley. (2001). Making It Work: Developing Tools to Carry Out the Policy. In M. Carter (ed.), *Responding to Parole and Probation Violations: A Handbook to Guide Local Policy Development*. Silver Spring, Maryland: Center for Effective Public Policy.

Council of State Governments. Reentry Policy Council. (2005). *Report of the Re-Entry Policy Council: Charting the Safe and Successful Return of Prisoners to the Community.* New York, NY: Council of State Governments.

Cullen, F.T., J.E. Eck, and C.T. Lowenkamp. (2002). Environmental corrections—A new paradigm for effective probation and parole Supervision. *Federal Probation*, 66(2):28-37.

Fendrich, M. (1991). Institutionalization and parole behavior: Assessing the influence of individual and family characteristics. *Journal of Community Psychology*, 19(2):109-122.

Gendreau, P. (1996). The principles of effective intervention with offenders. Pp. 117-130 in A.T. Harland (ed.), *Choosing Correctional Options that Work*. Thousand Oaks, CA: Sage.

Glaze, L.E., and T. Bonczar. (2007). Probation and Parole in the United States, 2006. Washington, D.C.: Bureau of Justice Statistics Bulletin.

Gray, M.K., M. Fields, and S.R. Maxwell. (2001). Examining probation violations: Who, what and when. *Crime and Delinquency*, 47(4):537-557.

Griffin, T. and J. Wooldredge. (2006). Sex-based disparities in felony dispositions before versus after sentencing reform in Ohio. *Criminology*, 44(4):893-924.

Harrell, A., S. Cavanagh, and J. Roman. (1999). *Final Report: Findings from the Evaluation of the DC Superior Court Drug Intervention Program.* Washington, D.C.: The Urban Institute.

Harrell, A. and J. Roman. (2001). Reducing drug use and crime among offenders: The impact of graduated sanctions. *Journal of Drug Issues*, 31(1):207-231.

Harrell, A., J. Roman, A. Bhati, and B. Parthasarathy. (2003). *The Impact Evaluation of the Maryland Break the Cycle Initiative*. Washington, D.C.: The Urban Institute.

Harrell, A., O. Mitchell, J. Merrill, D. Marlowe. (2003). *Evaluation of Breaking the Cycle*. Washington, D.C.: The Urban Institute.

King, R., M. Massoglia, and R. MacMillan. (2007). The context of marriage and crime: Gender, the propensity to marry, and offending in early adulthood. *Criminology*, 45(1):33-66.

Koons-Witt, B. (2002). The effect of gender on the decision to incarcerate before and after the introduction of sentencing guidelines. *Criminology*, 40(2):297-327.

Kramer, J.H., and J.T. Ulmer. (1996). Sentencing disparity and departures from guidelines. *Justice Quarterly*, 13(1):81-105.

Langan, P. and D. Levin. (2002). *Recidivism in Prisoners Released in 1994*. Washington, D.C.: Bureau of Justice Statistics

Lowenkamp, C.T. and E.J. Latessa. (2005). Increasing the effectiveness of correctional programming through the risk principle: Identifying offenders for residential placement. *Criminology & Public Policy,* 4(2):263-290.

Lowenkamp, C.T. A.M. Holsinger, and E.J. Latessa. (2003). *Are drug courts effective? A meta-analytic review*. Unpublished manuscript. Cincinnati, OH: University of Cincinnati.

Loza, W. and A. Loza-Fanous. (2000). Predictive validity of the Self-Appraisal Questionnaire (SAQ): A tool for assessing violent and non-violent release failures. *Journal of Interpersonal Violence,* 15:1183–1191.

Martin, B., S. Dassanayaka , and S. Van Dine. (2004). *Post-Prison Supervision in Ohio: A Descriptive Study of Violation Patterns and Agency Response*. Presented at the 2004 Annual Meetings of the American Society of Criminology, Nashville, TN.

Mayzer, R., M.K. Gray, and S.R. Maxwell. (2004). Probation absconders: A unique risk group? *Journal of Criminal Justice,* 32:137-150.

National Research Council. (2007). *Parole, Desistance from Crime, and Community Integration*. Washington, D.C.: The National Academies Press.

Office of Justice Programs. (1998). *Looking at a Decade of Drug Courts*. Washington, D.C.: Office of Justice Programs, U.S. Department of Justice.

Ohio Department of Rehabilitation and Correction. (2002). *The Ohio Plan for Productive Offender Reentry and Recidivism Reduction.* Columbus, Oh: Ohio Department of Rehabilitation and Correction.

Painter, J. (2004). *Propensity Matching via SPSS*. Available at: http://www.unc.edu/~painter

Paparozzi, M.A. and P. Gendreau. (2005). An intensive supervision program that worked: service delivery, professional orientation, and oranizational supportiveness. *The Prison Journal*, 85(4):445-466.

Petersilia, J. (1998). *Community Corrections*: *Probation, Parole, and Intermediate Sanctions*, Oxford University Press.

Petersilia, J. (2001). Prisoner reentry: Public safety and reintegration challenges. *The Prison Journal*, 81(3):360-375.

Petersilia, J. (2007). Employ behavioral contracting for earned-discharge parole. *Criminology & Public Policy*, 6(4):807-814.

Petersilia, J. and S. Turner. (1993). Evaluating Intensive Supervision Probation and Parole: Results of a Nationwide Experiment. *Research in Brief*. Washington, DC: U.S. Department of Justice, National Institute of Justice.

Petersilia, J. and S. Turner. (1993). An evaluation of intensive probation in California. *The Journal of Criminal Law and Criminology*, 82(3):610-658.

Rottman, D.B. (2007). Adhere to procedural fairness in the justice system. *Criminology & Public Policy*, 6(4):835-842.

Sample, L.L. and T.M. Bray (2003). Are sex offenders dangerous? *Criminology & Public Policy*, 3(1), 59-82.

Schulenberg, J.L. (2006). Predicting noncompliant behavior: Disparities in the social locations of male and female probationers. *Justice Research and Policy*, 9(1):25-57.

Schwaner, S. (1997). They can run but can they hide? A profile of parole violators at large. *Journal of Crime and Justice*, 20(2):19-32.

Sherman, L.W. (1993). Defiance, deterrence, and irrelevance: A theory of the criminal sanction. *Journal of Research in Crime and Delinquency*, 19:172-189.

Solomon, A. (2006). Does parole supervision work? Research findings and policy opportunities. *Perspectives*, Spring: 26-37.

Solomon A., V. Kachnowski and A. Bhati (2005). *Does Parole Work? Analyzing the Impact of Postprison Supervision on Rearrest Outcomes*. Washington, D.C.: The Urban Institute.

Spivak, A.L. and K.R. Damphousse. (2006). Who returns to prison? A survival analysis of recidivism among adult offenders released in Oklahoma, 1985-2004. *Justice Research and Policy*, 8(2):57-88.

Taxman, F. (1998). *Recidivism Reduction Through a Seamless System of Care: Components of Effective Treatment, Supervision, and Transition Services in the Community*. Washington, D.C.: Office of National Drug Control Policy.

Taxman, F. (2002). Supervision—Exploring the Dimensions of Effectivess. *Federal Probation*, 66(2):14-27.

Taxman, F., D. Soule, and A. Gelb. (1999). Graduated sanctions: Stepping into accountable systems and offenders. *Prison Journal*, 79(2):182-204.

The Civic Institute at Mercyhurst College Center for Justice Research and Policy. (2002). *Modified Adult Probation Sanctions: Evaluation of Probation Supervision Sanctions Systems*. Mercyhurst College: The Civic Institute.

Travis, J. (2003). *Reflections on Parole: Meeting the Challenge Today*. Washington, D.C.: The Urban Institute.

Travis, J. and J. Petersilia. (2001). Reentry reconsidered: A new look at an old question. *Crime and Delinquency*, 47(3):291-313.

Wiebush, R. (2002). *Graduated Sanctions for Juvenile Offenders: A Program Model and Planning Guide*. University of Nevada, Reno: Juvenile Sanctions Center, National Council of Juvenile and Family Court Judges.

Williams, F.P., M.D. McShane, and H.M. Dolny. (2000). Predicting parole absconders. *The Prison Journal*, 80(1):24-38.

Yaffee, R.A. and J.T. Austin (1994). *Discrete Time Event History Models for Higher Education Research*. Presented at the New York University Graduate Sociology Methodology Workshop, March 8, 1995.

Zhang, S.X., R.E.L. Roberts, and V.J. Callanan (2006). Preventing parolees from returning to prison through community-based Reintegration. *Crime and Delinquency*, 52(4):551-571.

Zhang, S.X. and L. Zhang. (2005). An experimental study of the Los Angeles County Repeat Offender Prevention Program: Its implementation and evaluation. *Criminology & Public Policy*, 4(2):205-236.

Appendix 1. Sample Count Summary and Selected Outcomes, by Unit of Analysis and Pre/Post Guidelines Status

		Percent with Hearing or Hearing Pursued	Percent Revoked	Percent Committing New Felony
Offender-Level Analysis				
Unmatched Offender Sample*	1963			
Pre	998	—	8.10%	29.00%
Post	965	—	5.50%	31.30%
Propensity Score Matched Sample	1044			
Pre	522	—	10.00%	35.20%
Post	522	—	7.70%	39.70%
Offenders with At Least 1 Incident	1196	(not analyzed at offender level)		
Early Violator Sample (within 3 months)	229			
Pre	97	—	—	48.50%
Post	132	—	—	53.00%
Incident-Level Analysis				
Offender-Incident Cases among Offenders with At Least 1 Incident	3248	(1196 uniquely identified offenders)		
Pre	1548	—	—	—
Post	1700	—	—	—
Offender-Incidents Resulting in APA Imposed Sanction (excluding court-only sanctions)	1970			
Pre	938	—	15.80%	—
Post	1032	—	10.50%	—
Grid-Relevant Offender-Incidents Resulting in APA Imposed Sanctions (excludes violations not handled by grid)	1566			
Pre	749	20.40%	—	—
Post	817	6.90%	—	—
Offender-Incidents Resulting in Actual Revocation Hearings	290			
Pre	181	—	66.90%	—
Post	109	—	90.80%	—

* Count reflects exclusion of missing data.

Note: Arrows denote base sample subsets.

Appendix 2. Incident-Level Analysis: Imposed Sanctions, by Risk and Violation Severity, Before and After Policy Implementation

	Sanction Type															
Risk and Violation Severity	Informal/ Reprimand	percent	Programs Only*	percent	Restrictions Only*	percent	Restrictions and Programs*	percent	Halfway House**	percent	Revocation/ Prison Return**	percent	Local Charges Initiated***	percent	Total	percent
Sex Offender (off grid)																
Major Violation (off grid), Pre-Grid	0	0.0%	2	7.4%	4	14.8%	1	3.7%	1	3.7%	5	18.5%	14	51.9%	27	100.0%
Major Violation (off grid), Post-Grid	1	3.3%	0	0.0%	2	6.7%	4	13.3%	0	0.0%	17	56.7%	6	20.0%	30	100.0%
High Severity, Pre-Grid	14	16.1%	12	13.8%	22	25.3%	17	19.5%	0	0.0%	15	17.2%	7	8.0%	87	100.0%
High Severity, Post-Grid	12	12.1%	11	11.1%	30	30.3%	19	19.2%	7	7.1%	11	11.1%	9	9.1%	99	100.0%
Low Severity, Pre-Grid	13	23.2%	16	28.6%	15	26.8%	9	16.1%	1	1.8%	0	0.0%	2	3.6%	56	100.0%
Low Severity, Post-Grid	11	17.2%	10	15.6%	19	29.7%	18	28.1%	3	4.7%	1	1.6%	2	3.1%	64	100.0%
High Risk																
Major Violation (off grid), Pre-Grid	1	1.4%	3	4.3%	8	11.6%	10	14.5%	0	0.0%	13	18.8%	34	49.3%	69	100.0%
Major Violation (off grid), Post-Grid	1	1.9%	3	5.8%	13	25.0%	2	3.8%	1	1.0%	9	17.3%	23	44.2%	52	100.0%
High Severity, Pre-Grid	9	7.1%	15	11.9%	20	15.9%	19	15.1%	16	12.7%	25	19.8%	22	17.5%	126	100.0%
High Severity, Post-Grid	3	3.4%	7	8.0%	18	20.5%	21	23.9%	10	11.4%	15	17.0%	14	15.9%	88	100.0%
Low Severity, Pre-Grid	14	16.5%	30	35.3%	12	14.1%	18	21.2%	6	7.1%	4	4.7%	1	1.2%	85	100.0%
Low Severity, Post-Grid	6	9.5%	18	28.6%	16	25.4%	17	27.0%	3	4.8%	0	0.0%	3	4.8%	63	100.0%
Medium Risk																
Major Violation (off grid), Pre-Grid	3	3.4%	3	3.4%	12	13.8%	4	4.6%	3	3.4%	20	23.0%	42	48.3%	87	100.0%
Major Violation (off grid), Post-Grid	2	1.5%	2	1.5%	23	17.3%	26	19.5%	6	4.5%	15	11.3%	59	44.4%	133	100.0%
High Severity, Pre-Grid	19	8.9%	21	9.8%	41	19.2%	48	22.4%	17	7.9%	43	20.1%	25	11.7%	214	100.0%
High Severity, Post-Grid	21	8.5%	16	6.5%	41	16.6%	73	29.6%	30	12.1%	29	11.7%	37	15.0%	247	100.0%
Low Severity, Pre-Grid	25	14.8%	58	34.3%	42	24.9%	31	18.3%	6	3.6%	3	1.8%	4	2.4%	169	100.0%
Low Severity, Post-Grid	30	16.2%	42	22.7%	38	20.5%	56	30.3%	15	8.1%	2	1.1%	2	1.1%	185	100.0%
Low Risk																
Major Violation (off grid), Pre-Grid	0	0.0%	1	3.0%	6	18.2%	4	12.1%	0	0.0%	7	21.2%	15	45.5%	33	100.0%
Major Violation (off grid), Post-Grid	0	0.0%	3	5.7%	4	7.5%	7	13.2%	5	9.4%	9	17.0%	25	47.2%	53	100.0%
High Severity, Pre-Grid	12	12.2%	13	13.3%	18	18.4%	18	18.4%	2	2.0%	17	17.3%	18	18.4%	98	100.0%
High Severity, Post-Grid	15	11.6%	13	10.1%	28	21.7%	42	32.6%	10	7.8%	4	3.1%	17	13.2%	129	100.0%
Low Severity, Pre-Grid	20	16.9%	28	23.7%	26	22.0%	35	29.7%	4	3.4%	1	0.8%	4	3.4%	118	100.0%
Low Severity, Post-Grid	26	18.4%	37	26.2%	30	21.3%	36	25.5%	9	6.4%	0	0.0%	3	2.1%	141	100.0%
Total																
Pre-Grid	130	11.1%	202	17.3%	226	19.3%	214	18.3%	56	4.8%	153	13.1%	188	16.1%	1169	100.0%
Post-Grid	128	10.0%	162	12.6%	262	20.4%	321	25.0%	99	7.7%	112	8.7%	200	15.6%	1284	100.0%

* May include informal warnings or reprimands, but not HWH or revocation sanctions; ** May include any lesser sanction; *** Refers to incidents with local prosecution but no APA response.

Appendix 3. Incident-Level Analysis: Level of Organizational Response, by Risk and Violation Severity, Before and After Policy Implementation

		Incident 1				Incident 2				Incident 3				Incident 4			
Risk and Violation Severity	**Level of Response**	**Pre Guidelines**		**Post Guidelines**		**Pre Guidelines**		**Post Guidelines**		**Pre Guidelines**		**Post Guidelines**		**Pre Guidelines**		**Post Guidelines**	
Sex Offender (off grid):		Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
High Severity Violation	Unit Sanction	28	80.0%	34	85.0%	12	66.7%	21	87.5%	7	63.6%	6	60.0%	4	80.0%	4	57.1%
	Revocation Hrg (VSP)	7	20.0%	6	15.0%	6	33.3%	3	12.5%	4	36.4%	4	40.0%	1	20.0%	3	42.9%
		35	100.0%	40	100.0%	18	100.0%	24	100.0%	11	100.0%	10	100.0%	5	100.0%	7	100.0%
Low Severity Violation	Unit Sanction	28	100.0%	35	100.0%	15	100.0%	14	93.3%	7	100.0%	6	85.7%	1	100.0%	2	100.0%
	Revocation Hrg (VSP)	0	0.0%	0	0.0%	0	0.0%	1	6.7%	0	0.0%	1	14.3%	0	0.0%	0	0.0%
		28	100.0%	35	100.0%	15	100.0%	15	100.0%	7	100.0%	7	100.0%	1	100.0%	2	100.0%
High Risk:																	
High Severity Violation	Unit Sanction	33	80.5%	21	95.5%	11	45.8%	18	90.0%	8	50.0%	10	76.9%	5	38.5%	7	63.6%
	Revocation Hrg (VSP)	8	**19.5%**	1	**4.5%**	13	**54.2%**	2	**10.0%**	8	**50.0%**	3	**23.1%**	8	**61.5%**	4	**36.4%**
		41	100.0%	22	100.0%	24	100.0%	20	100.0%	16	100.0%	13	100.0%	13	100.0%	11	100.0%
Low Severity Violation	Unit Sanction	37	94.9%	30	100.0%	19	95.0%	16	100.0%	9	100.0%	10	100.0%	5	83.3%	7	100.0%
	Revocation Hrg (VSP)	2	**5.1%**	0	**0.0%**	1	**5.0%**	0	**0.0%**	0	**0.0%**	0	**0.0%**	1	**16.7%**	0	**0.0%**
		39	100.0%	30	100.0%	20	100.0%	16	100.0%	9	100.0%	10	100.0%	6	100.0%	7	100.0%
Medium Risk:																	
High Severity Violation	Unit Sanction	45	69.2%	56	90.3%	38	69.1%	45	91.8%	15	50.0%	37	86.0%	9	45.0%	25	86.2%
	Revocation Hrg (VSP)	20	**30.8%**	6	**9.7%**	17	**30.9%**	4	**8.2%**	15	**50.0%**	6	**14.0%**	11	**55.0%**	4	**13.8%**
		65	100.0%	62	100.0%	55	100.0%	49	100.0%	30	100.0%	43	100.0%	20	100.0%	29	100.0%
Low Severity Violation	Unit Sanction	74	100.0%	76	100.0%	40	95.2%	50	100.0%	20	90.9%	27	100.0%	12	92.3%	14	100.0%
	Revocation Hrg (VSP)	0	**0.0%**	0	**0.0%**	2	**4.8%**	0	**0.0%**	2	**9.1%**	0	**0.0%**	1	**7.7%**	0	**0.0%**
		74	100.0%	76	100.0%	42	100.0%	50	100.0%	22	100.0%	27	100.0%	13	100.0%	14	100.0%
Low Risk:																	
High Severity Violation	Unit Sanction	22	81.5%	35	92.1%	18	85.7%	23	100.0%	12	70.6%	22	95.7%	5	55.6%	12	100.0%
	Revocation Hrg (VSP)	5	**18.5%**	3	**7.9%**	3	**14.3%**	0	**0.0%**	5	**29.4%**	1	**4.3%**	4	**44.4%**	0	**0.0%**
		27	100.0%	38	100.0%	21	100.0%	23	100.0%	17	100.0%	23	100.0%	9	100.0%	12	100.0%
Low Severity Violation	Unit Sanction	51	100.0%	65	100.0%	29	96.7%	41	100.0%	15	93.8%	21	100.0%	9	100.0%	10	100.0%
	Revocation Hrg (VSP)	0	**0.0%**	0	**0.0%**	1	**3.3%**	0	**0.0%**	1	**6.3%**	0	**0.0%**	0	**0.0%**	0	**0.0%**
		51	100.0%	65	100.0%	30	100.0%	41	100.0%	16	100.0%	21	100.0%	9	100.0%	10	100.0%

Appendix 3 (continued). Incident-Level Analysis: Level of Organizational Response, by Risk and Violation Severity, Before and After Policy Implementation

		Incident 5				Incident 6 or Higher				Total			
Risk and Violation Severity	**Level of Response**	**Pre Guidelines**		**Post Guidelines**		**Pre Guidelines**		**Post Guidelines**		**Pre Guidelines**		**Post Guidelines**	
Sex Offender (off grid):		Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
High Severity Violation	Unit Sanction	3	75.0%	5	83.3%	5	71.4%	8	88.9%	59	73.8%	78	81.3%
	Revocation Hrg (VSP)	1	25.0%	1	16.7%	2	28.6%	1	11.1%	21	26.3%	18	18.8%
		4	100.0%	6	100.0%	7	100.0%	9	100.0%	80	100.0%	96	100.0%
Low Severity Violation	Unit Sanction	2	100.0%	1	50.0%	0		4	100.0%	53	100.0%	62	95.4%
	Revocation Hrg (VSP)	0	0.0%	1	50.0%	0		0	0.0%	0	0.0%	3	4.6%
		2	100.0%	2	100.0%	0		4	100.0%	53	100.0%	65	100.0%
High Risk:													
High Severity Violation	Unit Sanction	3	50.0%	8	80.0%	6	60.0%	5	62.5%	66	60.0%	69	82.1%
	Revocation Hrg (VSP)	3	**50.0%**	2	**20.0%**	4	**40.0%**	3	**37.5%**	44	**40.0%**	15	**17.9%**
		6	100.0%	10	100.0%	10	100.0%	8	100.0%	110	100.0%	84	100.0%
Low Severity Violation	Unit Sanction	3	100.0%	2	100.0%	5	71.4%	1	100.0%	78	92.9%	66	100.0%
	Revocation Hrg (VSP)	0	**0.0%**	0	**0.0%**	2	**28.6%**	0	**0.0%**	6	**7.1%**	0	**0.0%**
		3	100.0%	2	100.0%	7	100.0%	1	100.0%	84	100.0%	66	100.0%
Medium Risk:													
High Severity Violation	Unit Sanction	8	57.1%	17	85.0%	3	33.3%	6	40.0%	118	61.1%	186	85.3%
	Revocation Hrg (VSP)	6	**42.9%**	3	**15.0%**	6	**66.7%**	9	**60.0%**	75	**38.9%**	32	**14.7%**
		14	100.0%	20	100.0%	9	100.0%	15	100.0%	193	100.0%	218	100.0%
Low Severity Violation	Unit Sanction	5	100.0%	11	100.0%	8	100.0%	11	91.7%	159	97.0%	189	98.4%
	Revocation Hrg (VSP)	0	**0.0%**	0	**0.0%**	0	**0.0%**	1	**8.3%**	5	**3.0%**	3	**1.6%**
		5	100.0%	11	100.0%	8	100.0%	12	100.0%	164	100.0%	192	100.0%
Low Risk:													
High Severity Violation	Unit Sanction	4	100.0%	8	80.0%	1	20.0%	8	100.0%	62	74.7%	108	94.7%
	Revocation Hrg (VSP)	0	**0.0%**	2	**20.0%**	4	**80.0%**	0	**0.0%**	21	**25.3%**	6	**5.3%**
		4	100.0%	10	100.0%	5	100.0%	8	100.0%	83	100.0%	114	100.0%
Low Severity Violation	Unit Sanction	6	100.0%	4	100.0%	3	100.0%	2	100.0%	113	98.3%	143	100.0%
	Revocation Hrg (VSP)	0	**0.0%**	0	**0.0%**	0	**0.0%**	0	**0.0%**	2	**1.7%**	0	**0.0%**
		6	100.0%	4	100.0%	3	100.0%	2	100.0%	115	100.0%	143	100.0%

Appendix 4. Percent Revoked/Returned among all Incidents Involving Revocation Hearings

	Pre-Guidelines (N=181)	Post-Guidelines (N=109)
	Percent Revoked/Returned	Percent Revoked/Returned
Sex		
Male	0.684	0.908
Female	0.565	0.909
Race	**	
Non-white	0.580	0.914
White	0.753	0.902
Parole Release	***	^
Parole Release	0.448	0.818
Post Release Control	0.772	0.931
Parole Region		
Akron	0.682	1.000
Cincinnati	0.700	0.905
Columbus	0.581	0.867
Lima	0.741	0.857
Mansfield	0.636	0.824
Chillicothe	0.700	1.000
Cleveland	0.750	0.900
Violation Severity		*
Major	0.778	0.980
High	0.645	0.857
Low	0.500	0.750
Offender Risk		
Sex Offender	0.792	0.906
High (non-sex offender)	0.596	1.000
Medium (non-sex offender)	0.667	0.889
Low (non-sex offender)	0.727	0.883

*p ≤ .05; ** p ≤ .01; *** p ≤ .001.

^p ≤ .10.

Appendix 5. Cox Regression Analysis of Felony Reoffending (Full Matched Sample)

	Full Model (N=1,027)		Pre-Guidelines (N=507)		Post-Guidelines (N=520)	
	B	Exp(B)	B	Exp(B)	B	Exp(B)
Race						
Non-white	-0.050	0.952	0.122	1.130	-0.157	0.855
White (reference)						
Sex						
Male	0.246	1.279	0.348	1.417	0.193	1.213
Female (reference)						
Age at Release	-0.026	0.974 ***	-0.028	0.972 **	-0.024	0.976 *
Felony Level of Committing Offense	-0.129	0.879 **	-0.155	0.857 **	-0.096	0.909 ^
Employment during Supervision						
No Employment	0.993	2.700 ***	1.068	2.910 ***	0.996	2.707 ***
At Least Part-time/Year or Non-Labor Force (reference)						
Residential Moves (rate per month)						
High Rate	0.228	1.256 ^	0.300	1.349	0.171	1.187
Low or No Moves (reference)						
Overall Violation Rate (per month)	0.949	2.582 ***	1.080	2.944 ***	0.969	2.636 ***
Criminal History Risk Score						
Sex Offender	0.489	1.631 *	0.645	1.906 *	0.301	1.352
High Risk (non Sex Offender)	1.295	3.652 ***	1.459	4.303 ***	1.198	3.314 ***
Medium Risk (non Sex Offender)	1.056	2.876 ***	0.834	2.302 ***	1.243	3.466 ***
Low Risk (reference)						
Non-Programming Sanction Intensity	-0.133	0.876 *	-0.236	0.790 **	-0.032	0.968
Prior Programming/Treatment Sanction						
One or More Prior Programming Sanctions	-0.444	0.642 **	-0.276	0.759	-0.655	0.519 ***
None (reference)						
Prior Halfway House Referral Sanction						
One or More Prior Referrals	-0.354	0.702	-0.471	0.624	-0.326	0.722
None (reference)						
Sanction Guidelines						
Post-Guidelines Sample	0.046	1.047				
Pre-Guidelines Sample (reference)						
Model chi-square		406.504 ***		186.952 ***		225.757 ***
-2LL		4816.057		1998.288		2266.604

*p ≤ .05; ** p ≤ .01; *** p ≤ .001.
^p ≤ .10

Appendix 6. Cox Regression Analysis of Felony Reoffending (Full Matched Sample): Alternative Sanction Intensity Model

	Full Model (N=1,041)		Pre-Guidelines (N=519)		Post-Guidelines (N=522)	
	B	Exp(B)	B	Exp(B)	B	Exp(B)
Race						
Non-white	-0.052	0.949	0.084	1.088	-0.137	0.872
White (reference)						
Sex						
Male	0.248	1.281	0.386	1.471 ^	0.145	1.156
Female (reference)						
Age at Release	-0.025	0.975 ***	-0.027	0.973 **	-0.022	0.978 *
Felony Level of Committing Offense	-0.130	0.878 **	-0.170	0.844 **	-0.085	0.918
Employment during Supervision						
No Employment	0.969	2.634 ***	1.040	2.830 ***	0.949	2.582 ***
At Least Part-time/Year or Non-Labor Force (reference)						
Residential Moves (rate per month)						
High Rate	0.226	1.253 ^	0.232	1.261	0.198	1.219
Low or No Moves (reference)						
Overall Violation Rate (per month)	1.004	2.729 ***	1.203	3.329 ***	1.011	2.748 ***
Criminal History Risk Score						
Sex Offender	0.478	1.613 *	0.613	1.847 *	0.299	1.349
High Risk (non Sex Offender)	1.302	3.678 ***	1.469	4.343 ***	1.212	3.361 ***
Medium Risk (non Sex Offender)	1.040	2.830 ***	0.784	2.190 ***	1.240	3.457 ***
Low Risk (reference)						
Non-Programming Sanction Intensity (without holds)	-0.138	0.871 *	-0.173	0.841 ^	-0.069	0.933
Prior Jail Hold						
One or More Prior Holds	-0.464	0.629 **	-0.681	0.506 **	-0.467	0.627 *
None (reference)						
Prior Programming/Treatment Sanction						
One or More Prior Programming Sanctions	-0.413	0.662 **	-0.307	0.735	-0.560	0.571 **
None (reference)						
Prior Halfway House Referral Sanction						
One or More Prior Referrals	-0.290	0.748	-0.493	0.611	-0.179	0.836
None (reference)						
Sanction Guidelines						
Post-Guidelines Sample	0.029	1.029				
Pre-Guidelines Sample (reference)						
Model chi-square		424.575 ***		198.351 ***		235.419 ***
-2LL		4846.275		2022.895		2268.550

*p ≤ .05; ** p ≤ .01; *** p ≤ .001.
^p ≤ .10

Appendix 7. Cox Regression Analysis of Felony Reoffending among Early Violators: Alternatvie Sanction Intensity Measures

	Offenders with High Severity Violation within First 3 Months (Unmatched Cases)					
	Full Model (N=239)		Pre-Guidelines (N=106)		Post-Guidelines (N=133)	
	B	Exp(B)	B	Exp(B)	B	Exp(B)
Race						
Non-white	0.190	1.210	0.189	1.208	0.195	1.216
White (reference)						
Sex						
Male	0.037	1.038	-0.433	0.649	0.495	1.641
Female (reference)						
Age at Release	-0.008	0.992	-0.010	0.990	0.004	1.004
Felony Level of Committing Offense	-0.199	0.819 *	-0.285	0.752 *	-0.164	0.849
Employment during Supervision						
No Employment	0.926	2.523 ***	1.124	3.078 ***	0.839	2.314 **
At Least Part-time/Year or Non-Labor Force (reference)						
Residential Moves (rate per month)						
High Rate	0.259	1.295	-0.116	0.890	0.325	1.383
Low or No Moves (reference)						
Overall Violation Rate (per month)	1.665	5.286 ***	2.277	9.745 ***	1.601	4.958 ***
Criminal History Risk Score						
Sex Offender	0.227	1.255	0.186	1.204	0.318	1.374
High Risk (non Sex Offender)	0.375	1.454	1.178	3.248 *	-0.083	0.921
Medium Risk (non Sex Offender)	0.683	1.979 *	0.650	1.916	0.778	2.176 *
Low Risk (reference)						
Non-Programming Sanction Intensity (without holds)	0.251	1.285 *	0.193	1.213	0.507	1.661 **
Prior Jail Hold						
One or More Prior Holds	-0.028	0.972	-0.470	0.625	0.201	1.222
None (reference)						
Prior Programming/Treatment Sanction						
One or More Prior Programming Sanctions	-1.077	0.341 ***	-1.144	0.318 ***	-1.051	0.349 ***
None (reference)						
Prior Halfway House Referral Sanction						
One or More Prior Referrals	-0.563	0.569 *	0.075	1.077	-0.996	0.369 **
None (reference)						
Sanction Guidelines						
Post-Guidelines Sample	-0.239	0.788				
Pre-Guidelines Sample (reference)						
Model chi-square		168.553 ***		103.124 ***		83.924 ***
-2LL		1083.291		341.996		559.107

*p ≤ .05; ** p ≤ .01; *** p ≤ .001.
^p ≤ .10

Appendix 8. Coding Sheets for Source Documents

Title: Examining the Effectiveness of Ohio's Progressive Sanction Grid
Ohio Department of Rehabilitation and Correction
Award #: NIJ 2005-IJ-CX-0038

General/Background Information

G1: __ __ __ Coder's Initials

G2: C __ __ __ __ __ __ Offender's CCIS ID number (six digits)

G3: _____ Last Name of Offender

G4: _____ First Name of Offender

G5: __ __/__ __/__ __ __ __ Supervision Start Date (mm/dd/yyyy)

G6: __ __/__ __/__ __ __ __ Study End Date (one year from Start Date) or Early Termination Date (revocation/return/early termination) if less than one year (mm/dd/yyyy)

G7: A __ __ __ __ Current APA Unit

G8: _____ File Status

1=FOS notes/Violation Report available and information ascertainable
2=FOS notes/other documents not available; insufficient information to code file
3=Paper file unavailable to code (reason unknown)
4=File is substantially incomplete due to transfer
5=FOS notes are only partially available or available on-line only (mid-way through follow-up period)

G9: _____ Offender Status at Study End Point

1=Still on active supervision
2=Final Release
3=Unfavorable PRC Final Release
4=Revoked/Returned to Prison
5=Recommitted on new crime
6=Violator At-Large/Whereabouts Unknown
88=Not ascertainable

Appendix 8 (continued).

C __ __ __ __ __ __ Offender's CCIS ID number (six digits)

G10: __/ __ /__ /__ /__ / __ /__ Domain Areas/Activities Addressed on Supervision Plan (Code as marked)

1=Employment/Education
2=Family/Marital
3=Financial/Community Functioning
4=Mental Health/Personal/Emotional
5=Substance Abuse
6=Vocational/Educational
7=Sex Offender Treatment
8=Attitude
9=Associates
10=Other
11=Supervision plan available, but no areas marked
88=Not ascertainable

G11: _____ Educational Attainment at Start of Supervision [Source: Facesheet; PSI, if GED indicated; Institution Summary Report]

1=Less than high school degree
2=Diploma/GED
3=Diploma/GED, plus vocational training
4=Some College
5=4 year degree or higher
88=Not ascertainable

G12: _____ Overall Employment Status during Study Time Frame

1=Evidence of at least one period of regular, part-time or full-time employment/school enrollment during study period (complete work history section)
2=Not employed/enrolled at all during study period, or intermittent day-labor only (do not complete work history section)
3=Disabled/Retired (do not complete work history section)
88=Not ascertainable (do not complete work history section)

G13: __ __/__ __/__ __ __ __ Date Offender stepped Down to Monitored Time during Study Time Frame (88=change occurred but not ascertainable; 99=not applicable)

Appendix 8 (continued).

C __ __ __ __ __ __ Offender's CCIS ID number (six digits)

IA0 __ __/__ __/__ __ __ __ Date of Initial Assessment (for old form only; 88=missing; 99=not applicable, RAP static only)

IA1 _____
IA2 _____
IA3 _____
IA4 _____
IA5 _____
IA6 _____
IA7 _____
IA8 _____
IA9 _____
IA10 _____
IA11 _____ Total Score
IA12 _____ Classification Category
IA13 _____ Override Code on Initial Assessment

RA0 __ __/__ __/__ __ __ __ Date of first Re-assessment (for old form only; 88=missing; 99=not applicable, early termination)

RA1 _____
RA2 _____
RA3 _____
RA4 _____
RA5 _____
RA6 _____
RA7 _____
RA8 _____
RA9 _____ Total Score
RA10 _____ Classification Category
RA11 _____ Override Code on Re-assessment

Appendix 8 (continued).

Value definitions for Violation, Employment, Programming, and Housing Modules (code using module forms)

Violation Section

V1: **Incident/Arrest Date** [Use first applicable date for incidents with multiple violations. For incidents resulting in PVAL status, code date behavior was first detected. Source: FOS notes; Arrest Report; Order of Arrest; Violation Report; CCIS Printout]

88=Not ascertainable or unknown.
99=Not applicable (no incidents during first year of supervision; enter in first incident column and leave rest of form blank)

V2: **Incident/Action Type** [Record all violation-related incidents, including incidents resulting in local prosecution or PVAL status. Do not count citations issued for traffic offenses. Source: FOS notes; Arrest Report; Order of Arrest; Violation Report; CCIS Printout]

1=Violation of rules of supervision without arrest (with or without APA sanction imposed)
2=Violation of rules of supervision resulting in APA arrest
3=Misdemeanor or felony crime resulting in law enforcement arrest
4=Misdemeanor or felony crime resulting in APA arrest
5=Misdemeanor of felony crime (including absconding/PVAL) leading to APA warrant, or APA warrant and subsequent arrest
6=Law enforcement arrest due to outstanding non-APA warrant
7=APA arrest for investigation purposes
8=Other (specify)
88=Not ascertainable

V3: **Violation Behavior(s)** [Refer to code numbers. Source: FOS notes; Arrest Report; Order of Arrest; Violation Report; Hearing Report Data Form]

V4: **Employment Status at Time of Violation** [Source: FOS Notes; Violation Report]

1=Evidence of at least regular, part-time employment/school enrollment
2=Not employed/enrolled, or intermittent day-labor only
88=Not ascertainable

V5: **Does incident involve multiple substance abuse violations?** [Source: FOS Notes; Violation Report]

1=Yes
2=No (single substance abuse violation only)
88=Not ascertainable
99=Not applicable (no substance abuse involved)

Appendix 8 (continued).

V6: Declared PVAL Date [Code date that PVAL status is formally declared. Source: FOS Notes; CCIS Printout]

88=PVAL declared, but date not ascertainable (or unknown)
99=Not applicable (violation did not involve absconding supervision/no PVAL declared)

V7: Holder Placement Date [Source: FOS Notes; Blue Holder Card; Violation Report; CCIS Printout]

88=Hold order placed, but date not ascertainable (or unknown)
99=Not applicable (violation did not result in placement of hold order)

V8: Release From Confinement Date [Source: FOS Notes; Blue Holder Card; Violation Report; CCIS Printout]

88=Hold order placed, but release date not ascertainable (or unknown)
99=Not applicable (violation did not result in placement of hold order)

V9: APA Response [Source: FOS Notes; Violation Report; Hearing Report Form; Local Sanction Receipt; Court Docket/Judgment]

1=Local unit sanction (including informal/verbal warning)
2=Parole Board summons
3=VSP hearing
4=Declared PVAL or PVAL arrest warrant issued
5=APA Warrant issued for arrest
6=No APA response (violation noted by officer, no action taken or warning given)
7=No APA response (local prosecution only)
8=APA sanction in conjunction with court-imposed sentence (no VSP hearing)
9=VSP hearing pursued (violation report prepared) prior to re-commission for new offense or subsequent absconding
10=APA response on subsequent incident
88=Not ascertainable

V10: Court Outcome [Source: FOS Notes; Violation Report; Court Docket/Judgment]

1=Local charges initiated but dropped
2=Found guilty and community sanction/jail sentence imposed
3=Found guilty and recommitted on new felony conviction
4=Found not guilty
5=Prosecuted on subsequent arrest
6=Prior suspended sentence reinstated for probation violations
88=Not ascertainable/unknown
99=Not applicable (no local court action)

V11: Sanction(s) Imposed [Refer to code numbers. Source: FOS Notes; Violation Report; Sanction Receipt]

88=Not ascertainable/unknown
99=Not applicable (unresolved PVAL violation; criminal charges dropped, etc)

V12: APA Sanction Date

88=Not ascertainable/unknown
99= Not applicable (court disposition only)

V13: Court Conviction Date

88=Not ascertainable/unknown
99= Not applicable (APA sanction only)

V14: Grid Referenced

V15: Date of Grid Override

[Leave V16 through V21 blank if not applicable. Source: Violation Report; Violation Hearing Form]

V16: VSP Hearing Date

88=Not ascertainable/unknown

V17: Location

1=In-custody
2=Out-of-custody
3=Other
88=Not ascertainable

V18: Finding

1=Guilty to all charges
2=Some charges dismissed
3=All charges dismissed
88=Not ascertainable

V19: Days Served Local Jail [Count days held in jail pending hearing]

0=No time served in local jail
8888=Not ascertainable

V20: Length of Prison Sanction [Refers to prison sanction time imposed for PRC (not parole) offenders]

8888=Not ascertainable
9999=Not applicable (offender is a parolee; non-prison sanction)

V21: Prison Time Exhausted? [Code as "Yes" if available prison sanction time is exhausted with current sanction]

1=Yes
2=No
88=Not ascertainable
99=Not applicable (offender is a parolee; non-prison sanction)

Employment Section [Source: FOS Notes; Periodic Supervision Report Forms; Pay Stubs]

J1: Start Date

88=Not ascertainable

J2: Status

1=Part-time or full-time (employment with regular schedule/non-intermittent work only)
2=Intermittent or temporary (includes day-to-day labor with no regular schedule)
3=Actively self-employed
4=Student (if both student and employed, code nature of employment status)
88=Not ascertainable

J3: End Date

88=Not ascertainable
99=Not applicable (still employed/enrolled at study end point)

J4: Reason for Termination

1=Unfavorable
2=Voluntary termination
3=Laid off/position terminated
4=Change of employment
5=Disability
6=Treatment
7=Arrest/revocation/re-commission
88=Not ascertainable
99=Not applicable (still employed/enrolled at study end point)

Appendix 8 (continued).

Programming/Intervention Section [Source: FOS Notes; Supervision Plan; CDS Referral Sheets; Case Management reports]

P1: Referral Date/FOS Entry Date

88=Not ascertainable

P2: Start Date/Appointment Date

88=Not ascertainable
99=Not applicable (program not started)

P3: Name/Type of Program/Referral (enter name of program/treatment, if available, if category not identifiable)

1=Substance abuse
2=Interpersonal/Emotional
3=Family
4=Education/Training
5=Employment
6=Mental Health
7=Sex Offender Treatment
8=Housing/Community Functioning
88=Not ascertainable
99=Not applicable (program not started)

P4: Reason

1=Per supervision plan
2=Imposed as sanction
3=Parole Board condition
4=Self admission/referral
5=Other intervention (e.g., employment or housing referral; VA services)
88=Not ascertainable
99=Not applicable (program not started)

P5: End Date

88=Not ascertainable
99=Not applicable (not started; still active at study end date; one-time appointment)

Appendix 8 (continued).

P6: Final Disposition/End Status

1=Completion
2=Unsuccessful termination (for any reason)
3=Suspended
4=No treatment recommended
5=Still active/On-going referral/One-time appointment (e.g., employment/housing)
6=No show at program start/appointment date

Housing/Residence Section [Source: FOS Notes; Supervision Report Form]

H1: Begin Date/FOS Entry Date [should be on or about supervision start date]

88=Not ascertainable
99=Not applicable (whereabouts unknown from start of supervision)

H2: Street Address

H3: City, State, and Zip Code

H4: Living Arrangement [do not code confinement/jail address]

1=alone
2=domestic partner (i.e., significant other or boy/girlfriend)
3=dependent children only
4=parent (includes step parent)/parent + other family members
5=sibling only
6=other relative
7=friend/roommate
8=homeless
9=Halfway House/other residential
10=at-large or whereabouts unknown upon release
88=not ascertainable

H5: Out Date

88=Not ascertainable
99=Not applicable (still present at above address at study end point)

H6: Reason

1=Voluntary move (e.g., for employment, or reason not specified)
2=Domestic conflict
3=Eviction
4=Residential program completion/termination
5=Revocation/Return to prison/Re-commission
6=Housing availability
88=Other non-ascertainable
99=Not applicable/study end

Examining the Impact of Ohio's Progressive Sanction Grid: Validation Study and Process Evaluation

Final Report

prepared for

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Appendix 9--*Examining the Effectiveness of Ohio's Progressive Sanction Grid*—UC Report

This section of the report was provided by a research team from the Division of Criminal Justice at the University of Cincinnati (UC). The UC researchers were contracted by the Ohio Department of Rehabilitation and Correction (ODRC) to validate a portion of the quantitative analyses performed by the ODRC researchers and to conduct a process evaluation of the implementation of the progressive sanction grid. Beginning with the process evaluation, the results of the UC researchers' efforts are presented here.

PROCESS EVALUATION

The Ohio Adult Parole Authority Progressive Sanction Grid was implemented in July of 2005 as part of a larger policy addressing the sanctioning of offenders who violate the conditions of parole or post-release control supervision. The policy revision was issued in response to perceived disparities in the treatment of offenders who violated conditions of supervision. Specifically, the policy was designed to:

> foster consistent procedures designed to promote public confidence, safety, and fair, objective decision making when the Adult Parole Authority imposes sanctions for violation behavior committed by offenders during their period of supervision (ODRC policy 100-APA-14, 2005).

The policy was also consistent with the Department's larger reentry initiative which was published in 2002 and contained recommendations to develop a violation policy that was supportive of the Department's reentry goals (e.g., reduce recidivism) and that structured and provided statewide consistency in the use of progressive sanctioning (ODRC, 2002).

By evaluating the effectiveness of the progressive sanction grid in terms of specific procedural and policy objectives as well as offender outcomes, the larger project within which this study is contained adds to the limited body of empirical literature on sanctioning reform. The process evaluation was designed to examine an equally under researched area; how the reform was perceived by the key actors in the sanctioning process: adult parole authority officers.

PROCESSES UNDERLYING PERCEPTIONS OF ORGANIZATIONAL CHANGE

Very few studies have examined criminal justice actors' perceptions of agency policies or changes in agency policies. Still, there is a rich body of organizational literature and corresponding theory which could be potentially relevant to the subject. Even though the study methods described below were largely inductive, several organizational perspectives were still applicable to the process evaluation. Suffice it to say that the following theoretical perspectives were implicit in shaping the conceptual framework of the study; therefore, most of the measures which were considered for the analyses could potentially be framed in one or more of these perspectives.

Expectancy theory (see, e.g., Mastrofski, Snipes, and Ritti, 1994; Mitchell, 1974) could be relevant to understanding officers' perceptions of the sanction grid. This is because officers' beliefs or expectations regarding the effectiveness of the sanction grid could be influenced by their individual experiences, training, and views about the intent and outcomes of the sanction grid. Variables such as training, perceptions of the intent of the sanction grid, length of service, orientation towards parole supervision, and so forth could shape officers' perceptions regarding the effectiveness of the sanction grid.

Aspects of need theory (Maslow, 1943) could also be related to understanding officers' views regarding the sanction grid. For example, belonging needs such as satisfaction with coworkers or supervisors could influence officers' attitudes towards their job as well as any policies the administration requires them to apply. Similarly, esteem-related needs may also influence officers' perceptions of the sanction grid because officers may vary in their opinions concerning whether their skills and experience were recognized in the design of the sanction grid. Accordingly, concepts tapping involvement in organizational decision-making, years of service, salary, or rank could be linked to officers' perceptions of the sanction grid.

Perspectives on equity in the workplace (see, e.g., Stojkovic, Kalinich, and Klofas, 2003) may also be relevant to the subject. If particular groups of officers perceive that the sanction grid disproportionately affects their ability to perform their job, they may be less likely to view the sanction grid in a positive manner. Drawing from this perspective, individual officer characteristics such as age, race, gender, rank, office location (e.g., rural), caseload size, or specialization (e.g., sex offenders) could be associated with particular views about the sanction grid.

Finally, perspectives on achievement and power (see, e.g., Hepburn, 1985; McClelland, 1965; French and Raven, 1959) could be useful in understanding officers' views regarding the intent and efficacy of the sanction grid. For example, how officers view their basis of power (e.g., coercive) could be pertinent to perceptions of the sanction grid because the sanction grid was designed to standardize the treatment of offenders. Similarly, officers who perceive a gap between their (or their superiors') ideal and actual amount of control over their caseload could view the sanction grid more negatively due to its design to regulate offender treatment. From this perspective, officers' basis of power, rank, and perceptions of personal control could all be applicable to explaining their perceptions regarding the sanction grid.

Officers Attitudes and Organizational Change

The implementation of the sanction grid was carried out under ODRC's larger department-wide reentry initiative. Therefore, regardless of its intent, the sanction grid could carry with it the impression that it was a "rehabilitative" measure, as reentry and rehabilitation are often conceptually linked. Officers' attitudes towards supervision could influence their perceptions of the sanction grid because some officers emphasize law enforcement objectives versus treatment and assistance objective (Clear and Latessa, 1993; Harris, Clear, and Baird, 1989). If officers are more favorable to the law enforcement goals of supervision, they may

perceive any policy implemented under the guise of "reentry" or "rehabilitation" as a challenge to the skills and duties they perceive as most important to their job.

Power can be defined as the ability of party A to determine the behavior of a party B (Hepburn, 1985; Stojkovic et al., 2003). By virtue of their legally ordered relationship, parole officers are charged with ensuring offenders comply with conditions of supervision. As such, power is relevant to the performance of a parole officer's job. Variation in officers' views on how offender compliance is attained may center on their individual bases of power. As noted above, the sanction grid was designed to be consistent with notions of procedural justice, which suggest that compliance is achieved by promoting fairness, preserving offender dignity, and responding with certainty and swiftness to violation behavior (Taxman, Soule, and Gelb, 1999). It follows that the degree of concordance between the purposes and design of the sanction grid and officers' individual bases of power could influence their perceptions regarding the sanction grid's intent and outcomes.

METHODS

The process evaluation was designed to determine Adult Parole Authority (APA) officers' perceptions regarding ODRC's transition to the sanctioning grid. The process evaluation was carried out in two phases. First, focus groups with line-level APA officers and semi-structured interviews with parole services supervisors were conducted in four of the seven APA supervision regions. The focus groups and interviews were conducted to guide the development of a mail survey which was distributed to APA officers as the second phase of the study. The focus groups and interviews were carried out between August and December of 2006 and the survey was administered between March and May of 2007.

FOCUS GROUPS AND INTERVIEWS

The regions in which focus groups and interviews were conducted were purposively selected based on size and geographic location, and included Cincinnati, Chillicothe, Lima, and Cleveland. In each of the four regions, all APA officers were invited via electronic mail to participate in focus groups that would be carried out during a week in which the UC researchers would be at their regional office collecting data from offender files for the validation study. The invitations resulted in five focus groups (at least one in each region) ranging in size from 5-12 officers. It should be noted, however, that one of the focus groups had to be cancelled due to an unspecified critical incident that occurred the day the focus group was scheduled. In place of the focus group, individual interviews were subsequently conducted with those officers who had volunteered to participate. Supervisors who volunteered to participate in the focus groups were interviewed individually in order to protect the confidentiality of the participating line officers. Altogether, four focus groups and 14 interviews were conducted.

The focus groups were conducted by at least two researchers, where one of the researchers acted solely as a note taker. All participants were asked the same 12 questions (see Appendix 1), and additional questions were asked when the researchers determined them to be relevant to the study. For the interviews with supervisors, the questions were modified slightly to address potential supervisory concerns. As noted above, the findings from the focus groups and interviews were primarily used to guide the development of the officer survey; however, the findings were also useful in providing some contextual information to supplement the survey findings.

OFFICER SURVEY

The target population for the officer survey included all the APA officers who had used the sanction grid during the course of performing their job duties. These officers include line level parole officers who supervise parole and post-release control (PRC) cases, senior parole

officers who manage parole and PRC cases, but also perform some administrative responsibilities for their supervision unit, and parole services supervisors, who are responsible for overseeing an APA supervision unit.

Similar to most large parole agencies, the job responsibilities (e.g., report writing versus field supervision) of APA officers often change during the course of their employment. In order to adjust for the possibility that an officer had experience with the sanction grid, but at the time of the survey no longer carried an active parole/PRC caseload, the sampling frame included all the parole services supervisors, senior parole officers, and line level parole officers employed by the APA (N = 621). Each officer was sent a survey through the mail, and follow-up mailings were sent in general accordance with the procedures outlined by Dillman (1978). Several minor adjustments to Dillman's (1978) method, however, should be noted. First, the initial mailing was followed with an electronic mail reminder, as opposed to a postcard. Another electronic mail reminder was also sent between the second and fourth follow-up mailings. Additionally, the fourth and final follow-up mailing was sent to only those officers who were identified by ODRC to be either a parole services supervisor or a parole/PRC caseload carrying officer at the time the sampling frame was generated. As such, this group of officers received four follow-up reminders, as opposed to the three reminders sent to the entire sampling frame. These procedures resulted in 469 returned surveys, a response rate of nearly 76 percent.

The information obtained from the surveys, along with the official data obtained from ODRC, facilitated the determination of the number of officers who had used the sanction grid and should therefore be included in the target population (N = 460). The remaining APA employees were excluded from the study because they did not have experience with the sanction grid and instead performed duties such as transports, presentence investigations, or supervision of community control (probation) cases. Of the 460 officers who were determined to be the

target population, 380 returned surveys, a response rate of nearly 83 percent. The final sample was further reduced to 373 officers because seven surveys were determined to be unusable due to substantial missing data. Univariate hypothesis tests revealed that the sample statistics for the variables age, race, gender, rank (e.g., parole services supervisor), and years employed by ODRC were not significantly different from the corresponding population parameters which were generated from official data provided by ODRC.

Measures

Unless a specific answer was required (e.g., gender), the survey asked officers to respond to questions by choosing from likert type response categories (e.g., agree, disagree). All of the measures included in the final models are described in Table 1; although a larger pool of potential predictors were initially considered for the analyses. The measures in Table 1 were ultimately selected after considering their theoretical relevance as demonstrated in the empirical literature, thorough checks for (multi)collinearity, the stability of coefficient estimates (influenced by the number of predictors relative to sample size), and the strength of the zero-order relationships.

-- table 1 about here --

The outcome measures were created by factor analyzing responses to multiple survey questions regarding the sanction grid. Exploratory factor analysis resulted in seven factors with eigenvalues $\geq$ 1.00, six of which were initially used as outcome measures. The factors that were ultimately used in the analyses were created separately to permit examination of potential covariation between the concepts of interest (i.e., some of these measures were included as predictor variables in subsequent analyses). Each scale, however, was primarily based on the results of the exploratory analysis. The individual items which made up each factor and their component loadings are described in Appendix 2.

Two factors tapped officers' perceptions regarding the implementation of the sanction grid. *Professional respect* measured the degree to which officers perceived their views and skills were considered in the design of the sanction grid. *Adequacy of training* assessed officers' opinions regarding the level of training they received on how to use the sanction grid. A second pair of factors examined officers' understanding regarding the intent of the sanction grid. *Primary intent* assessed officers' understanding of the purposes of the sanction grid (e.g., application of consistent procedures), whereas *secondary intent* examined officers' perceptions regarding other potential purposes, whether intended or not (e.g., reduce the prison population), of the sanction grid. The final two outcome measures tap officers' views regarding the outcomes resulting from the transition to the sanction grid. *Effectiveness* examined the officers' opinions of whether the sanction grid achieved its intended purposes. *Offender control* is a more specific measure which assessed officers' perceptions about whether offender behavior has been easier to manage since the implementation of the sanction grid. Only the responses from officers who had been with the ODRC before and after the implementation of the sanction grid (N = 338) were used to create this scale.

Based on the criteria described above, the predictor variables that were ultimately included in all of the models were whether an officer was *female*, *nonwhite*, had *education beyond a bachelor's degree*, was a *parole services supervisor*, *supervised sex offenders*, their number of *years of service* with ODRC, and each officers' *caseload size*. For the measure of caseload size, the values for parole services supervisors were created by standardizing the total cases assigned to their unit by the number of officers in their unit. Factors tapping officers' level of *satisfaction with* their *supervisor*, *coworkers*, and *regional administrator* were also created to ascertain the influence of the officer's perceptions of the organizational climate on their evaluation of the sanction grid. The same procedures as those described above were used to

create the scales related to dimensions of organizational satisfaction. Descriptions of the individual items that make up each of the satisfaction scales are also contained in Appendix 2. Finally, the seventh factor discussed above, *case management adjustment*, measures the degree of change in routine case management that officers' perceived had occurred as a result of the sanction grid. Case management adjustment was only created for those officers who had been with the department before and after the implementation of the sanction grid. As such, this variable was only included in the analyses of offender control.

Attitudinal measures were also created to examine whether officers' approaches to supervision influenced their perceptions of the sanction grid's intent or effectiveness. *Authority* and *Assistance* were factors designed to tap officers' attitudes toward role performance. The individual items used to create these scales, which are listed in Appendix 2, were modified versions of questions originally used by Glaser (1969) and subsequently by Clear and his colleagues (e.g., Clear and Latessa, 1993; Harris et al., 1989). Measures of officers' power bases were also examined. Following prior studies of the subject (e.g., French and Raven, 1959; Hepburn, 1985), measures were created to tap *legitimate*, *coercive*, *reward*, *expert*, and *referent* power. Two survey questions were used to tap each base of power. The survey questions are displayed in Appendix 3. Prior to the analyses, the responses to each of the questions were converted to *z*-scores and summed to create each base of power scale. The analyses which included officers' bases of power were restricted to 372 or 337 (offender control) officers because one officer did not respond to the questions used to create these scales.

Statistical Analyses

All steps in the analysis involved multi-level modeling techniques due to the need to recognize the hierarchical structure of the data (officers nested within supervision units and supervision units nested within APA regions). Tri-level data sets were created with officers at

level-1, supervision units at level-2, and APA regions at level-3. The tri-level data files adjusted for correlated error among officers "nested" within the same supervision units as well as for correlated error among supervision units within the same APA region. The technique also facilitated hypothesis tests to determine whether significant variation in each outcome existed between supervision units or APA regions (e.g., did officers' perceptions regarding the adequacy of training differ across supervision units or across the seven APA regions?).

The linear outcome measures were all examined with hierarchical linear regression using HLM 6.04 (Raudenbush, Bryk, Cheong, Congdon, and du Toit, 2004). The analyses proceeded in two stages. First, an unconditional model (with no predictors) revealed the variance estimates in each outcome at level-1 (among officers within supervision units), level-2 (between supervision units within APA regions), and level-3 (across regions). Next, fixed-effect models were estimated for each of the six outcome measures. Although the limited number of officers within units (and units within regions) restricted our ability to examine the random effects of the predictor variables, the level-1 model intercepts were still allowed to vary randomly across supervision units and the level-2 model intercepts were permitted to vary randomly across APA regions. All of the officer-level measures were centered on the means for each unit in order to reduce the odds of finding spurious level-1 effects due to unmeasured supervision unit-level effects that might also be related to compositional differences in officer populations across supervision units or even across APA regions.

FINDINGS

The analyses of the survey data are presented in two parts. First, the outcome variables were modeled sequentially with the initial set of predictors that were discussed above. Next, we considered the role of officers' attitudes in officers' perceptions regarding the intent and outcomes of the sanction grid. Officer attitudes were considered separately in order to overcome

potential collinearity between the attitudinal measures and because ODRC had a particular interest in the outcomes of these analyses.

The focus groups and interviews revealed a general dissatisfaction with the sanction grid. Despite some variation in responses, officers seemed generally concerned with three major issues: 1) how the sanction grid was implemented, 2) the intent of the sanction grid, and 3) the outcomes which have resulted from the use of the sanction grid. Accordingly, the questions on the officer survey were designed to tap issues related to these three domains, as well as assess potential differences between officers' perceptions of these issues.

Table 2 contains the findings from the analyses of officers' perceptions of issues related to implementation, professional respect, and adequacy of training. Before delving into the multivariate findings, it should be noted that the responses to the individual items comprising the professional respect scale indicated widespread disagreement with the notion that officers' skills and views were considered in the design of the sanction grid. On the other hand, officers generally felt that they were trained adequately on the sanction grid and understood its use.

-- table 2 about here --

The multivariate analyses of professional respect revealed that officer's satisfaction with their regional administrator was positively related to perceptions of professional respect; however, none of the other predictors were related to professional respect. Satisfaction with the regional administrator, being the only significant predictor, accounted for 8 percent of the variation in professional respect. More generally, however, these findings are consistent with the notion that the attitudes held by APA officers regarding professional respect were widespread. That is, regardless of their individual characteristics, the nature of their job, or perceptions of their supervision unit, officers did not feel their skills and views were considered in the design of the sanction grid. This conclusion is further confirmed by the analysis of variance between units

and APA regions. Perceptions of professional respect did not vary across supervision units, and only a modest, albeit significant, 3 percent of the variation in professional respect was between regions.

Turning to the analysis of perceptions concerning the adequacy of training, Table 2 reveals that none of the predictor variables included in the model was related to the adequacy of training. Moreover, officers' perceptions regarding training did not vary between supervision units or between the APA regions. These findings suggest uniformity in officers' evaluation of the training on the sanction grid provided by ODRC. When taken with the responses to the questions regarding training, the findings here indicate that ODRC did an equally acceptable job in instructing its officers on how to use the sanction grid.

The results from the analyses of primary and secondary intent are contained in Table 3. Recall that primary intent refers to the principal procedural objectives of the sanction grid such as standardizing the sanctioning process. Minority officers and supervisors were more likely to understand the primary intent of the sanction grid. Officers' years of service and their caseload size were negatively related to whether they comprehended the primary intent of the sanction grid. Officers' perceptions of professional respect were also positively related to their understanding of the primary intent of the sanction grid. Officers' gender, education level, whether they supervised sex offenders, their satisfaction with the dimensions of their work environment, and their perceptions regarding the adequacy of training on the sanction grid did not have an effect on their perceptions of the sanction grid's primary intent. Officers' perceptions of the primary intent of the sanction grid did, however, vary significantly across supervision units and APA regions, which suggests that there may be unmeasured organizational influences that effect the level of understanding regarding the primary intent of the sanction grid.

-- table 3 about here --

Secondary intent refers to the more understated or latent goals of the policy such as reducing the number of hearings, controlling officer discretion, and so forth. In contrast to the analysis of primary intent, the findings from the model of secondary intent (Table 3) revealed that minority officers and officers who supervise sex offenders were less likely to perceive a secondary intent to the sanction grid. Similar to the analysis of primary intent, supervisors also perceived there was a secondary intent to the implementation of the sanction grid. Finally, officers who perceived that they were less respected were more likely to view a secondary intent to the sanction grid.

The significant predictors accounted for 21 percent of the variation in primary intent, while the relevant predictors only accounted for 8 percent of the variation in secondary intent. Unlike the analysis of primary intent, perceptions regarding a secondary intent of the sanction grid did not vary across supervision units or the APA regions. These findings support the idea that perceptions regarding a potential secondary intent of the sanction grid were boundary spanning.

Table 4 contains the results of the analyses of officer perceptions regarding the outcomes of the sanction grid. Effectiveness refers to the intended outcomes of the sanction grid such as making sanctioning more fair. Offender control is more specific to officers' perceived ability to manage offender behavior. In general, the responses to the items that made up these scales indicated a fairly widespread disagreement regarding the effectiveness of the sanction grid and its ability to improve offender control. As table 4 makes clear, officers' reported satisfaction with supervisors was negatively related to their perceptions of the sanction grid's effectiveness. Satisfaction with the regional administrator, perceptions of professional respect, and primary intent were all positively associated with more supportive views of the sanction grid's

effectiveness. These significant predictors accounted for 46 percent of the variation in officers' perceptions of the effectiveness of the sanction grid.

-- table 4 about here --

Similar findings emerged from the analysis of officers' perceptions of offender control. It is important to remember, however, that these analyses were restricted to those offenders who were with ODRC both before and after the implementation of the progressive sanction grid. Consistent with the analysis of effectiveness, officers' satisfaction with their supervisor was negatively related to their perceptions of offender control. Also consistent with the analysis of effectiveness, satisfaction with the regional administrator, perceptions of professional respect, and primary intent were all positively associated with perceptions of offender control. Unique to this outcome, however, was a negative relationship between secondary intent and offender control. The measure of case management adjustment was also negatively associated with offender control. The latter finding suggests that officers who perceived a change in the way they managed their caseload as a result of the sanction grid also perceived a change in their ability to effectively regulate offender behavior. All told, the relevant predictor variables accounted for 29 percent of the variation in offender control.

The organizational dimension to both sets of results that can be inferred from the effects of satisfaction with supervisor and satisfaction with regional administrator was further supported by the analysis of variance in each outcome which revealed that 5 percent of the variation in perception of effectiveness was between supervision units and 4 percent was between regions. Similarly, 11 percent of the variation in offender control was between supervision units. These findings demonstrate that officers in different supervision units and APA regions feel differently regarding the outcomes of the sanction grid, which suggests that perceptions and assessments of the sanction grid may be linked to broader perceptions of the supervision unit or job satisfaction.

Considering Officers' Attitudes and Perceptions of the Progressive Sanction Grid

The attitudinal measures were initially examined without any other predictors in order to determine if they were related to the sanction grid outcomes under consideration. Those attitudinal measures which were determined to be relevant were retained and included in a fully specified model containing the predictors from the earlier analyses. Table 5 contains the results of the models of perceived intent of the sanction grid that included the measures tapping attitudes toward role performance. In the initial models, officers who viewed their role in terms of authority were less likely to agree with the primary intent of the sanction grid. Assistance oriented attitudes did not have an effect on primary intent and neither assistance nor authority had effects on secondary intent. In the full model of primary intent, the effect of authority became insignificant and all the relevant predictors from the earlier analyses maintained their relationships with primary intent.

-- table 5 about here --

The results of the analyses of primary and secondary intent which included the measures of officers' bases of power are displayed in Table 6. Coercive power was positively related to primary intent, while all of the other types of power bases were insignificant. Moreover, none of the bases of power were associated with secondary intent. In the complete model of primary intent, the effect of coercive power became irrelevant while the other relevant predictors from the earlier analyses remained associated with primary intent.

-- table 6 about here --

Table 7 displays the results of the analyses of the outcomes of the sanction grid which included the measures of attitudes oriented towards authority and assistance. The initial models revealed a negative relationship between authority and perceptions of effectiveness. Assistance was unrelated to effectiveness, and neither dimension of role performance was related to

offender control. Table 7 also shows that the negative relationship between authority and effectiveness held once the other predictors were included in the model. Interestingly, all the other relevant predictors except satisfaction with supervisor remained related to perceived effectiveness after authority was added to the model. The addition of authority increased the overall strength of the model from .46 to .47.

-- table 7 about here --

The results of the analyses sanction grid outcomes which included officers' bases of power are included in Table 8. Coercive power, expert power, and legitimate power were each related to both effectiveness and offender control. Referent power was also predictive of offender control. In the full model of effectiveness, the effect of legitimate power diminished, but the effects of coercive and expert power remained significant. Both bases of power were positively associated with officers' perceptions regarding the sanction grid's effectiveness. The other relevant predictors from the earlier analysis of effectiveness remained significant, and the overall predictive power of the model increased by 3 percent with the addition of coercive and expert power.

-- table 8 about here --

The fully specified model of offender control revealed stable relationships for referent, coercive, and legitimate power. Referent and coercive power were positively associated with offender control, while legitimate power was negatively associated with offender control. The significant predictors from the earlier analysis remained related to offender control, and the overall strength of the model increased by 6 percent with the addition of the relevant bases of power.

SUMMARY

The findings from the process evaluation revealed that officers' opinions regarding the implementation of the sanction grid were relatively consistent regardless of their individual characteristics or the location of their workplace. Generally, officers did not feel their opinions and skills were considered in the design of the sanction grid, but they did feel adequately trained on the use of the sanction grid. These findings substantiate what was gleaned from the focus groups and interviews, where most officers reported an understanding of the grid, but were suspicious as to whether officers were involved in its design. For example, most officers reported that they were not aware that any POs were involved in the design of the sanction grid. A few officers noted that there were officers included in the workgroup formed to address the sanction policy, but that the sanction grid was developed prior to when the workgroup convened. When the workgroup did meet, the group was merely informed about the sanction grid and advised that it was going to be implemented. Paraphrasing one officer, "…although the officers in the workgroup were asked their opinions about the grid, it was generally perceived that those opinions were not going to be considered." Finally, a couple officers advised that they received some electronic mails via the Department's Division of Parole and Community Service list serve; however, the electronic mails were worded in a such a way that they were very difficult to understand. Generally, officers did not feel that they had a fair opportunity to respond to the proposed policy reform.

The survey data revealed that those officers who did perceive that their opinions and skills were considered in the design of the sanction grid, or were otherwise recognized and appreciated, reported a better understanding regarding the intent of the policy. Training, however, had no effect on officers' perceptions regarding the intent of the grid. With the exception of race, background and job related characteristics of the officers had little effect on their perceptions

regarding the intent of the sanction grid. Altogether, these findings suggest that officers who believe they are not accorded professional respect by the administration of the ODRC are suspicious of the motives behind the development of the sanction grid, but that the training adequately prepared officers to apply the grid in practice, regardless of their perceptions of intent.

Regarding the outcomes of the sanction grid, those officers who understood the primary intent of the sanction grid to be to ensure consistent treatment of offenders were more favorable in their evaluations regarding the sanction grid's effectiveness and their ability to control offender behavior after its implementation. Officers who felt that that their opinions were considered in the design of the grid were also more favorable in their evaluation of the outcomes of the sanction grid. Finally, officers' satisfaction with their supervisor and regional administrator were related to their assessments of the effectiveness of the sanction grid as well as their opinion about their ability to control offenders after the grid was implemented. Officer characteristics had little or no effect on perceived outcomes of the sanction grid, but officers who were more authoritative in their approach to supervision were less favorable regarding the sanction grid's effectiveness. Officers' bases of power also affected their opinions regarding the outcomes of the sanction grid. Interestingly, those officers who viewed their base of power as coercive were more favorable regarding the sanction grid, while officers who viewed their base of power as legitimate were less favorable. This latter finding runs counter to expectations since the sanction grid is grounded in notions of procedural justice which are generally consistent with perspectives on legitimate authority as a means of compliance (see, e.g., Tyler, 1990). Given comments made in the focus groups, it is possible that at least some officers perceive that the sanction grid restricts parole officers' ability to exercise legitimate power.

VALIDATION STUDY

The validation study was designed to confirm or disconfirm the findings generated by the ODRC's evaluation of the progressive sanction grid. The study involved collection of a separate sample of cases from offender files for the purposes of comparison to the parallel ODRC sample and replication of the main analyses performed by the ODRC.

METHODS

In light of the purposes of the validation study, the methods and analytic techniques employed by the UC researchers were virtually identical to those described above by the ODRC. The sample of offenders was selected using the same procedures as those used by the ODRC, resulting in a pre-sanction grid sample of 1,040 offenders and a post-sanction grid sample of 1,012 offenders. Approximately 50 percent of each sample overlapped with the parallel ODRC's samples. The offender data for the validation study were collected by two researchers from UC. Inter-rater reliability analyses conducted using a random sample of 10 cases selected from one of the APA regions revealed an internal consistency between the two researchers of .93. Although budgetary restrictions prohibited the UC researchers from collecting the range of information obtained by the ODRC, the data collected by the UC researchers did permit replication of many of the outcome measures and the main analyses performed by the ODRC. Aside from the measures of *major* and *high severity violation* used in both the incident-level and offender-level analyses and the measure *residential instability* used in the offender-level analysis, the measures included in the final analyses were identical to those used by the ODRC. Regarding the former, the difference between the ODRC and the UC measures lies in how misdemeanors with weapons were treated. Specifically, the ODRC considered new misdemeanor with a weapon offenses a major violation, whereas the UC researchers included all new misdemeanors (including those

with weapons) in the high severity violation category.[37] Due to data availability, different information was used to create the measure of residential instability. The measure used in the UC researchers' analysis was created by standardizing the total number of residential moves minus residential placements by the number of months at risk. The upper quartile of the distribution was subsequently treated as a high rate of change in residence. For reasons described below, we do not expect that the differences in how these measures were created had a significant impact on the results of the validation study.

FINDINGS

The validation study had two components. First, we compared the sample collected by the UC researchers to the sample collected by the ODRC. Next, we replicated the primary multivariate analyses performed by the ODRC. Each phase was performed for both the incident- and offender-level analyses. The incident-level results are presented first.

-- table 9 about here --

The differences between the ODRC and UC samples are detailed in Table 9. Although a few differences did emerge, the samples are generally comparable. The primary difference is the substantial dissimilarity in the cumulative violation rate. The UC sample had a much higher rate of violations per months at risk than the ODRC sample. Despite the differences in coding procedures discussed above, the UC sample had a higher proportion of major violations and a lower proportion of high severity violations. As such, it is unlikely the differences in procedures contributed to any inconsistencies between studies in the multivariate analyses discussed below. Differences in outcomes were small but included a higher rate of pre-hearing jail detentions, a lower rate of violation hearings resulting in a return to prison, and a lower revocation/return rate overall. More of the incidents in the UC sample were committed by sex offenders, while fewer

[37] The data coding form used by the UC researchers did not permit a distinction between types of misdemeanors.

were committed by high risk offenders. Finally, the UC sample had incidents that were committed by slightly younger offenders and a higher proportion of incidents in the UC sample occurred in the Lima region.

Table 10 presents the results of models of the decision to pursue a hearing. With respect to the effects of the sanction grid, we observed similar findings to those found by the ODRC. Similar results were also observed for the effects of violation severity and incident number. Noteworthy differences emerged for the effects of offender risk. Specifically, ODRC found consistent effects for both high and medium risk regardless of whether the incident occurred in the pre- or post-guidelines time period. We did not find any effects for offender risk in any of our samples (pooled, pre-, or post). The differences in the findings may lie in the amount of missing data. The samples described in Table 9 were generally comparable (ODRC = 3,248 incidents/1,196 offenders, UC = 3,328 incidents/1,223 offenders), however, once the cuts described above were made to the respective samples the remaining UC sample was considerably larger. Since the UC sample had a larger proportion of the total incidents that were committed by sex offenders and a larger proportion of the total incidents that were major violations (both were removed from the analyses in table 10), the ODRC sample should have been larger. However, table 4 reveals that the UC sample is larger than the ODRC sample, N = 1,722 compared to N = 1,566. Although impossible to examine with these data, the distinctions between the samples may have contributed to the dissimilarities in the effects of offender risk. Then again, sampling error may also have contributed to some of these effects. Regardless of the differences between the studies, however, ODRC's main findings regarding the sanction grid were substantiated by our analyses.

-- table 10 about here --

Table 11 contains the results from the analysis of revocation/returns resulting from technical violations. Similar to the findings from the previous analysis (Table 10), our findings are generally similar to those reported by the ODRC. In particular, the main findings regarding the effects of the sanction grid, violation type, and offender risk are all generally consistent with those reported by the ODRC. Notable differences between the two set of findings include those regarding the significant effects of felony level in the pooled sample, the effect of medium risk in the pre-guideline sample, and the effects for felony level and parole release in the post-guidelines samples. Also inconsistent with the ODRC findings were the null effects of violation rate in both the pooled analysis and post-guideline period. Similar to the previous analysis, we also observed a larger number of total incidents without missing data on sanction type (ODRC: N = 1,970, UC: N = 2,298), which may, in part, account for the few differences between the findings from the two studies. All told, however, our incident-level results generally mirror those found by the ODRC, and if anything, further support their overall conclusions regarding the effects of the sanction grid.

-- table 11 about here --

Turning to the offender-level analyses, Table 12 reveals that the UC sample characteristics were generally consistent with the characteristics of the ODRC sample. Employment and residential instability were the only measures for which the distributions differed in both the pre- and post-guidelines sample. Regarding residential instability, it is important to note that the distinctions were probably due to the different sources of information used to create the respective measures. As a result of the differences in the procedures, it may be more important to note the similarity between the UC sample and the ODRC sample in the differences between the pre- and post-guidelines samples (both samples = .06). This similarity allows us to place more confidence in the results of the multivariate analyses described below; as

it was unlikely the difference in the procedures used to create the measure of residential instability altered the overall findings of the analyses. Finally, it is also worth noting that the bivariate analyses of the study outcomes derived from the UC sample were actually more favorable (compared to the ODRC's) regarding the sanction grid. Although no reductions in offender recidivism were observed, neither were any increases.

-- table 12 about here --

Table 13 contains the models predicting new felony crime. With minimal exceptions, our findings were virtually identical to those generated from the ODRC's analysis. Similar to the ODRC, we did not find an effect for the sanction grid in the pooled analysis. By contrast, we did not observe the same, albeit modest, effects for the sanction grid in the interaction model. We also observed a consistent difference in the findings for residential instability; however, the incongruence in this finding is probably due to the difference in how the two measures were created. Finally, our analysis generated an effect for offender risk in the post guidelines sample; a finding which could be taken as support for the effect of the sanction grid.

-- table 13 about here --

The models predicting major violation behavior are contained in table 14. The overall effects of the sanction grid found by the ODRC were confirmed by our analysis. Major differences between the two studies included the consistent effect of residential instability and the inconsistent effect of overall violation rate in our study. The first difference could be explained by the differences in coding procedures noted above, and the different effects of the overall violation rate is, when considered with the similarities in the earlier analysis (table 6), too inconsistent (only two models) to draw any conclusions.

-- table 14 about here --

All told, the general pattern of our results from both the incident- and offender-level analyses generally confirms the ODRC's findings. Although a few differences in the statistical significance of some predictors did emerge, the substantive findings with respect to the sanction grid were nearly identical between the two studies.

DISCUSSION AND CONCLUSIONS

The validation study generally substantiated the findings from the ODRC's evaluation. Specifically, we found very few differences between the characteristics of our incident- or offender-level samples and the characteristics of the related samples generated by ODRC. Our multivariate analyses also supported the main findings from the ODRC's analyses. Similar to the ODRC, our incident-level analysis revealed that the sanction grid was negatively related to both officers' decision to pursue a hearing and returns to prison for a technical violation. We also observed very few differences in the factors that influenced the incident-level outcomes before and after the sanction grid was implemented. Also consistent with the ODRC analyses, our offender-level results indicated that the sanction grid had no appreciable effect on offender behavior (i.e., new felonies, major violation behavior). Taken together, these findings raise the level of confidence that can be placed in the main findings of the ODRC's study.

The findings from the process evaluation suggest that very few officer characteristics had an effect on officers' assessments of the sanction grid. By contrast, our findings did indicate an organizational effect on officers' perceptions of the sanction grid. We found that officers generally did not feel that their opinions and skills were considered in the design of the grid. Officers who did feel they were more respected as professionals, however, had a better understanding of the intent of the sanction grid and also were more favorable in their evaluations regarding its effectiveness. Similarly, officers who perceived the intent of the sanction grid as standardizing the response to offender behavior were more positive in their assessments

regarding the outcomes of the reform. Officers who perceived the intent of the sanction grid was to restrict professional judgment, however, were less supportive in their evaluations of the sanction grid's effectiveness.

The findings from the process evaluation also provided support for an organizational dimension to officers' perceptions of the sanction grid that was linked to the chain of command. Officers who were more satisfied with their immediate supervisor were less favorable in their evaluations regarding the effectiveness of the policy. Officers who were more satisfied with their regional administrator, however, were more positive in their appraisal of the sanction grid. The information obtained from the interviews and focus groups aid in making sense of these findings. It could be that officers have aligned with their supervisors in some units, as many supervisors also viewed the grid as a misguided and unnecessary reform.

We were advised that prior to the implementation of the sanction grid, that the standard operating procedure was for officers to staff most sanctioning decisions with a supervisor or senior parole officer. In many of the officers' and supervisors' opinions the staffing served as a check and balance system that helped to ensure a fair and progressive response to offenders' behavior. In the period following the implementation of the sanction grid, supervisors no longer guided the structuring of sanctioning decisions. Decisions were made in accordance with the sanction grid. The result of this change in the sanctioning process could be that, much like many of the line officers, some supervisors felt less respected as professionals. In these supervisor's supervision units, officers and their supervisor may have come together in their opposition to the policy reform. In other supervision units, however, supervisors may have tried to support the department's initiative, which could have created friction between them and the officers under their supervision. For example, one supervisor indicated that the policy was helpful because he/she no longer had to persuade some of his/her officers that arrests or hearings were

unnecessary for certain violations. The result of these two processes may be the inverse effect we observed in the analysis of the survey data. While there was general consistency in the responses about the sanction grid that were gained from the focus groups of officers, less uniformity was found across the interviews with supervisors. Some supervisors were favorable towards the sanction grid, while others were frustrated in much the same way as the line officers.

Regarding the regional administrators, the focus groups and interviews revealed that officers generally perceived that the regional administrator was the only person who could override the sanction grid. It could be that the positive relationship observed in the analyses of the survey data was a function of the officers' perceptions of the regional administrators' willingness to override the policy. In regions where it was perceived that the regional administrator was willing to override the sanction grid, officers may have been more favorable regarding the reform. In these regions, the regional's willingness to override may have been perceived by the officers as support for their professional judgment. In regions where regional administrators were not perceived as willing to override the sanction grid, however, officers may have felt less supported. Recall that satisfaction with the regional administrator was also linked to perceptions of professional respect. On the other hand, it is likely that officers who understood and agreed with the primary purpose of the sanction grid had less desire for overrides and thus were more likely to assess their regional administrator positively. Although the survey data do not allow us to sort-out the causal ordering of these processes, the data seem to indicate that officers' feelings that their judgment was not supported may have contributed to a more negative assessment of the sanction grid.

Finally, it should be noted that there was variation in perceptions regarding the effectiveness of the sanction grid across supervision units and across the APA regions. While some of these differences can probably be attributed to the observations regarding the chain of

command that were discussed above, the qualitative information collected from the interviews and focus groups suggest other possible explanations. Officers in some regions voiced concerns regarding their ability to use the sanction grid effectively in the face of scarce resources. For example, officers who worked in more rural areas remarked how it was difficult to progressively sanction offenders when the sanctions outlined in the policy are unavailable or impractical as illustrated by the following comments. "It is hard to require day reporting or increase office reporting when the offender can't drive and there is no public transportation available." "Community service is no longer useful because of the worker's compensation requirement." Substantiating these types of statements, the officer survey revealed that close to 50 percent of the officers felt that their unit did not have the resources to use the sanction grid the way it was supposed to be used. Interestingly, many officers agreed that the policy could be made to work (46 percent). Nearly 60 percent officers who responded felt the grid could work if they had more sanctions to use. Thus, from many of the officers' perspectives the problem may not be with the policy *per se*, but more so with the way the reform was implemented and the availability of resources to carry out the policy effectively.

In sum, the findings from the process evaluation point to the organizational dimensions of policy change. Even though the ODRC circulated drafts of the sanction grid and violation policy on the Department of Parole and Community Services newsgroup discussion board and convened a workgroup which included APA officers prior to the implementation of the sanction grid, most officers seemed dissatisfied with how the sanction grid was developed and implemented. Officers' perceptions regarding *how* the sanction grid was developed and implemented, in turn, fueled their perceptions regarding its' purpose and effectiveness. These findings are consistent with what has been observed in process evaluations of sentencing reform (e.g., Griffin and Wooldredge, 2001).

Ironically, the policy was designed to make the sanctioning process more just, yet according to the majority of officers the process by which the policy was implemented was unfair. More broadly, these findings can be considered within perspectives on process based leadership (e.g., Tyler and De Cremer, 2005), which hold that when employees perceive that the organization or leadership acts in procedurally fair ways it is viewed as more legitimate and competent, which in turn makes employees more accepting of organizational change. From this evaluation of the Ohio Adult Parole Authority's transition to progressive sanctioning guidelines we observed that parole officers did not feel that they were involved in the development of the guidelines and they did not perceive that the sanction guidelines recognized their professional abilities. For most officers, these feelings contributed to the perception that the policy was illegitimate and hence ineffective. Given the encouraging findings for those officers who did feel involved in the development process and recognized by the sanction grid, other agencies seeking to implement broad sweeping organizational policy reforms may benefit from increasing the involvement of line level employees in order that they identify with the policy and are thus more accepting of the change.

While our process evaluation found that parole officers, in general, felt excluded from the development process and were dissatisfied with the sanction grid, in total, the ODRC adoption of graduated sanctions guidelines for parole violations appears to have been successful in terms of altering sanctioning practices. The graduated sanctions do not appear to have resulted in any significant changes in rates of violation by offenders, but the progressive nature of violation sanctions dictated by the sanction grid does appear to have been implemented.

Appendix 1: Questions asked in Focus Groups and Interviews of APA Officers

1. What are the purposes of the Graduated Sanction Grid?

2. Who developed the Graduated Sanction Grid?

3. How did you find out about the Graduated Sanction Grid policy?

4. How were officers trained on the Graduated Sanction Grid policy (supervisors only)?

5. Do you think you (and your officers) have enough information to follow the policy?

6. Do you think the offenders know about the policy?

7. Has the policy changed the way you manage your caseload (officers)?

8. Is there anything good about the policy?

9. Has the Grid affected service delivery (in your unit)?

10. What is negative about the policy?

11. Did the policy affect your (unit's) ability to place holds on non-compliant parolees?

12. How do you think the officers you supervise are adapting to the grid (supervisors only)?

13. Are there rewards or penalties for following (officers who follow) the Grid?

14. Has the policy changed the way you (your unit) sanction non-compliance?

15. Anything else you think we need to know?

Appendix 2: Individual Items and Component Loadings for Factors

Scales	Component Loading
Professional Respect (α = .47, KMO = .676, eigenvalue = 1.95)	
The Grid is based on research on effective discipline	**.633**
Parole officers' opinions were considered in the design of the Grid	**.806**
The Grid recognizes officers' professional ability	**.796**
Using the Grid has lowered officers' spirits	**.510**
Adequacy of Training (α = .81, KMO = .802, eigenvalue = 3.28)	
I received training on how to use the Grid	**.687**
I did not receive enough information to use the Grid the way it is supposed to be used[1]	**.787**
I have received on-going training on how to use the Grid	**.608**
More training on how to use the Grid would be helpful[1]	**.626**
I understand how to use the Grid	**.676**
The Grid is confusing[1]	**.710**
The Grid should be made easier to use[1]	**.680**
Primary Intent (α = .69, KMO = .642, eigenvalue = 1.86)	
The Grid is intended to simplify the discipline process	**.821**
The Grid is intended to make sanctioning more fair	**.827**
The Grid is intended to reduce differences in offender treatment across the APA regions	**.707**
Secondary Intent (α = .56, KMO = .601, eigenvalue = 1.65)	
The Grid is intended to reduce the number of hearings	**.769**
The Grid is intended to reduce the prison population	**.804**
The Grid is intended to reduce officer discretion	**.639**
Effectiveness (α = .84, KMO = .874, eigenvalue = 3.60)	
Using the Grid makes sense to me	**.705**
The Grid is useful in controlling officers' prejudices	**.709**
The Grid has helped me make sanctioning decisions	**.724**
The Grid effectively addresses offender risk	**.704**
The Grid treats offenders fairly	**.697**
Using the Grid has been helpful when I have gone to hearing[2]	**.783**
The Grid allows for offenders to change	**.690**
Case Management Adjustment (α = .55, KMO = .703, eigenvalue = 1.98)	
I staff more sanctioning decisions now that I use the Grid[2]	**.640**
I go through more steps to sanction non-compliance now that I use the Grid[2]	**.707**
I give more written sanctions now that I use the Grid[2]	**.723**
I make more treatment referrals now that I use the Grid[2]	**.531**
Since I started using the Grid I have not changed how I manage my caseload[1, 2]	**.512**
Offender Control (α = .71, KMO = .735, eigenvalue = 2.48)	
Since I started using the Grid I can respond to violations faster[2]	**.557**
Since I started using the Grid it is harder for me to control offender behavior[1, 2]	**.712**
Since I started using the Grid my offenders respect me more[2]	**.709**
Since I started using the Grid my offenders get away with less[2]	**.695**
Since I started using the Grid I have had more offenders reoffend[1, 2]	**.569**
Since I started using the Grid I have more unnecessary paperwork[1, 2]	**.597**

Notes:

[1] Reverse coded.

[2] Parole services supervisors were asked to answer question in reference to their unit.

[3] Parole services supervisors were asked to answer question about their regional administrator.

[4] Parole services supervisors were asker to answer question about central office.

Appendix 2: Individual Items and Component Loadings for Factors (continued)

Scales	Component Loading
Satisfaction with Supervisor (α = .95, KMO = .958, eigenvalue = 8.96)	
My immediate supervisor does a good job using the staff and resources available to him/her for the effective supervision of the offenders[3]	**.844**
My immediate supervisor is helpful in getting me what I need to do my job effectively[3]	**.857**
My immediate supervisor encourages me if I do my job well[3]	**.828**
My immediate supervisor often blames others when things go wrong[1, 3]	**.686**
My immediate supervisor helps me resolve problems when they arise[3]	**.841**
My immediate supervisor listens to my suggestions on how to resolve problems[3]	**.851**
My immediate supervisor listens to my suggestions on how to respond to violation behavior[3]	**.796**
My immediate supervisor treats me fairly[3]	**.909**
My immediate supervisor trusts me to do my job[3]	**.839**
My immediate supervisor has not earned my respect[1, 3]	**.692**
My immediate supervisor makes fair decisions[3]	**.878**
I would transfer to another unit if given the opportunity to do so[1]	**.543**
My last performance rating was fair and accurate	**.554**
The treatment I get from my superiors is about the same as the treatment my co-workers[1]	**.652**
My immediate supervisor asks me to work with fellow officers on job related problems that need to be taken care of[3]	**.655**
Satisfaction with Coworkers (α = .81, KMO = .860, eigenvalue = 3.34)	
I get along with most of my co-workers	**.652**
Most of my co-workers do their fair share of the work	**.795**
Most of my co-workers are satisfied with their job	**.522**
My co-workers volunteer to help handle problems when they come up	**.725**
I do not trust my co-workers[1]	**.652**
My co-workers treat the offenders fairly	**.719**
I am proud to work with the staff in this unit	**.733**
Satisfaction with Regional Administrator (α = .79, KMO = .795, eigenvalue = 3.21)	
The regional administrator is open to suggestions made by the staff regarding how to solve region problems	**.814**
The regional administrator makes fair decisions	**.850**
I am told promptly when there is a change in policy, rules, or regulations that affect me	**.572**
It is often unclear who has the authority to make a decision[1]	**.544**
It is not as important to know your job as it is to get in good with the people in charge here[1]	**.505**
Hard work will typically lead to advancement or other rewards from the administration	**.659**
The regional administrator and my unit supervisor are generally on the same page regarding how policies should be applied[4]	**.717**
Authority (α = .78, KMO = .774, eigenvalue = 2.40)	
How often should a parole officer make unannounced home visits	**.810**
How often should a parole officer test their parolees for alcohol/drugs	**.791**
How often should a parole officer perform record checks	**.768**
How often should a parole officer make checks on who their parolees have been hanging out with	**.724**
Assistance (α = .64, KMO = .679, eigenvalue = 2.16)	
A parole officer should refer a parolee to an employment service if he/she reports having trouble finding a job	**.486**
A parole officer should send a parolee to treatment the first time he/she tests positive for drugs	**.435**
A parole officer should help a parolee make a budget if he/she is having trouble making child support payments	**.779**
A parole officer should work with parolees on structuring their time	**.801**
A parole officer should assist parolees who report having family problems	**.695**

Notes:

[1] Reverse coded.

[2] Parole services supervisors were asked to answer question in reference to their unit.

[3] Parole services supervisors were asked to answer question about their regional administrator.

[4] Parole services supervisors were asker to answer question about central office.

Appendix 3: Individual Items Comprising Officers' Bases of Power

Scale
Reward Power
Offenders typically do what I ask them to because I can give them special help or benefits
A parole officer should reward parolees who complete supervision goals
Referent Power
Offenders typically do what I ask them to because they want my respect
Offenders typically do what I ask them to because they want my approval
Coercive Power
Offenders typically do what I ask them to because they fear sanctions
Offenders typically do what I ask them to because I can apply pressure or sanction them for not cooperating
Expert Power
Offenders typically do what I ask them to because of my skills and experience
Offenders typically do what I ask them to because they think I know what is best for them
Legitimate Power
Offenders typically do what I ask them to because they believe I have the authority to tell them what to do
Offenders typically do what I ask them to because I am fair

REFERENCES

Clear, T., & Latessa, E. (1993). Probation officer roles in intensive supervision: Surveillance versus treatment. *Justice Quarterly, 10*(3), 441-462.

French, J., & Raven, B. (1959). The bases of social power. In D. Cartwright (Ed.), *Studies in Social Power*. Ann Arbor, MI: University of Michigan.

Glaser, D. (1969). The Effectiveness of a Prison and Parole System. New York, NY: The Bobbs-Merrill Company, INC.

Griffin, T., & Wooldredge, J. (2001). Judges reaction to sentencing reform in Ohio. *Crime and Delinquency,* 47(4): 491-512.

Harris, P., Clear, T., & Baird, S. C. (1989). Have community supervision officers changed their attitudes toward their attitudes toward their work? *Justice Quarterly, 6*(2), 233-246.

Hepburn, J. (1985). The exercise of power in coercive organizations: A study of prison guards. *Criminology, 23*(1), 145-164.

Maslow, A. (1943). A theory of motivation. . *Psychological Review, 50*(4), 370-396.

Mastrofski, S., Snipes, J., & Ritti, R. R. (1994). Expectancy theory and police productivity in DUI enforcement. *Law and Society Review, 28*(1).

McClelland, D. (1965). Toward a new theory of motive acquisition. *American Psychologist, 20*(4), 321-333.

Mitchell, T. (1974). Expectancy models of job satisfaction, occupational preference and effort: A theoretical, methodological, and empirical appraisal. *Psychological Bulletin, 81*(12), 1053-1077.

Ohio Department of Rehabilitation and Correction. (2002). *The Ohio Plan for Productive Offender Reentry and Recidivism Reduction.* Columbus, OH: Ohio Department of Rehabilitation and Correction.

Ohio Department of Rehabilitation and Correction. (2005). *Sanctions for Violations of Conditions of Supervision (Policy Number: 100-APA-14)*. Columbus, OH: Ohio Department of Rehabilitation and Correction.

Petersilia, J. (2003). *When Prisoners Come Home: Parole and Prisoner Reentry*. New York, NY: Oxford University Press.

Raudenbush, S., Bryk, A., Cheong, Y. F., Congdon, R., & du Toit, M. (2004). *HLM 6: Hierarchical Linear and Nonlinear Modeling.* Lincolnwood, IL: Scientific Software International, Inc.

Stojkovic, S., Kalinich, D., & Klofas, J. (2003). *Criminal Justice Organizations: Administration*

and Management. Belmont, CA: Thompson Wadsworth.

Taxman, F., Soule, D., & Gelb, A. (1999). Graduated sanctions: Stepping into accountable systems and offenders. *The Prison Journal, 79*(2), 182-204.

Tyler, T. (1990). *Why People Obey the Law*. New Haven, CT: Yale University Press.

Tyler, T. and De Cremer, D. (2005). Process-based leadership: fair procedures and reactions to organizational change. *The Leadership Quarterly, 16*(4): 529-545.

Table 1: Sample Means (Standard Deviations)

	$\bar{X}$	*s*
Level-1: Officers (N_1 = 373)		
Female[1]	**.38**	**(.49)**
Nonwhite[1]	**.19**	**(.39)**
Education > bachelor's degree[1]	**.26**	**(.44)**
Years of service	**10.24**	**(7.02)**
Parole services supervisor[1]	**.13**	**(.33)**
Caseload size	**76.22**	**(25.38)**
Supervises sex offenders[1]	**.24**	**(.43)**
Satisfaction with supervisor[2]	**.00**	**(1.00)**
Satisfaction with coworkers[2]	**.00**	**(1.00)**
Satisfaction with regional administrator[2]	**.00**	**(1.00)**
Professional respect[2]	**.00**	**(1.00)**
Adequacy of training[2]	**.00**	**(1.00)**
Primary intent[2]	**.00**	**(1.00)**
Secondary intent[2]	**.00**	**(1.00)**
Effectiveness[2]	**.00**	**(1.00)**
Authority[2]	**.00**	**(1.00)**
Assistance[2]	**.00**	**(1.00)**
Level-1: Officers (N_1 = 372)		
Reward power[3]	**.00**	**(1.51)**
Referent power[3]	**.00**	**(1.77)**
Coercive power[3]	**.00**	**(1.69)**
Expert power[3]	**.00**	**(1.70)**
Legitimate power[3]	**.00**	**(1.57)**
Level-1: Officers (N_1 = 338)		
Case management adjustment[2]	**.00**	**(1.00)**
Offender control[2]	**.00**	**(1.00)**
Level-1: Units (N_2 = 63)		
Level-1: Regions (N_3 = 7)		

Notes:

[1] dummy coded.

[2] factor (individual items listed in Appendix 2).

[3] sum of the *z*-scores of the responses to 2 items listed in Appendix 3.

Table 2: Officer-Level Effects on Perceived Implementation of Progressive Sanction Grid (level-1 effects "fixed" across supervision units)

	Professional Respect		Adequacy of Training	
	β	*SE*	β	*SE*
Intercept	**.01**	**(.08)**	**-.0001**	**(.05)**
Female	**.09**	**(.11)**	**-.09**	**(.12)**
Nonwhite	**.29**	**(.15)**	**.01**	**(.16)**
Education > bachelor's degree	**.18**	**(.13)**	**.03**	**(.13)**
Years of service	**.002**	**(.01)**	**-.01**	**(.01)**
Parole services supervisor	**.32**	**(.22)**	**.37**	**(.23)**
Caseload size	**.000003**	**(.003)**	**.004**	**(.003)**
Supervises sex offenders	**.10**	**(.20)**	**.10**	**(.21)**
Satisfaction with supervisor	**.05**	**(.08)**	**-.01**	**(.08)**
Satisfaction with coworkers	**-.01**	**(.07)**	**.08**	**(.07)**
Satisfaction with regional administrator	**.16***	**(.07)**	**.01**	**(.08)**
Adequacy of training	**.001**	**(.06)**	**--**	**--**
Professional respect	**--**		**.001**	**(.06)**
N_1	**373**		**373**	
Proportion variation within units	**.97**		**1.00**	
Proportion variation within units explained	**.08**		**.03**	
Proportion variation between units	**.00**		**.00**	
Proportion variation between regions	**.03***		**.00**	

* $p \leq .05$.

Table 3: Officer-Level Effects on Perceived Intent of Progressive Sanction Grid (level-1 effects "fixed" across supervision units)

	Primary Intent		Secondary Intent	
	β	*SE*	β	*SE*
Intercept	**.01**	**(.10)**	**.002**	**(.06)**
Female	**.12**	**(.10)**	**-.07**	**(.11)**
Nonwhite	**.28***	**(.13)**	**-.34***	**(.15)**
Education > bachelor's degree	**.07**	**(.11)**	**-.10**	**(.13)**
Years of service	**-.02***	**(.01)**	**-.003**	**(.01)**
Parole services supervisor	**.42***	**(.20)**	**.54***	**(.22)**
Caseload size	**-.01****	**(.002)**	**.002**	**(.003)**
Supervises sex offenders	**.002**	**(.18)**	**-.47***	**(.20)**
Satisfaction with supervisor	**.04**	**(.07)**	**.09**	**(.08)**
Satisfaction with coworkers	**-.04**	**(.06)**	**.06**	**(.07)**
Satisfaction with regional administrator	**.12**	**(.07)**	**-.09**	**(.08)**
Adequacy of training	**.07**	**(.05)**	**.03**	**(.05)**
Professional respect	**.26****	**(.05)**	**-.16****	**(.06)**
N_1	**373**		**373**	
Proportion variation within units	**.90**		**.95**	
Proportion variation within units explained	**.21**		**.08**	
Proportion variation between units	**.06***		**.05**	
Proportion variation between regions	**.04****		**.00**	

** $p \leq .01$; * $p \leq .05$.

Table 4: Officer-Level Effects on Perceived Outcomes of Progressive Sanction Grid (level-1 effects "fixed" across supervision units)

	Effectiveness		Offender Control	
	β	*SE*	β	*SE*
Intercept	**.03**	**(.10)**	**.02**	**(.08)**
Female	**-.14**	**(.09)**	**.02**	**(.10)**
Nonwhite	**.07**	**(.11)**	**.03**	**(.14)**
Education > bachelor's degree	**-.04**	**(.10)**	**-.13**	**(.12)**
Years of service	**-.01**	**(.01)**	**.003**	**(.01)**
Parole services supervisor	**.01**	**(.17)**	**-.36**	**(.19)**
Caseload size	**-.002**	**(.002)**	**-.002**	**(.002)**
Supervises sex offenders	**-.21**	**(.15)**	**.05**	**(.18)**
Satisfaction with supervisor	**-.11***	**(.06)**	**-.16***	**(.07)**
Satisfaction with coworkers	**-.05**	**(.05)**	**-.07**	**(.06)**
Satisfaction with regional administrator	**.22****	**(.05)**	**.21****	**(.06)**
Adequacy of training	**-.02**	**(.04)**	**-.03**	**(.05)**
Professional respect	**.26****	**(.05)**	**.30****	**(.06)**
Primary intent	**.45****	**(.05)**	**.21****	**(.06)**
Secondary intent	**-.03**	**(.04)**	**-.13***	**(.06)**
Case management adjustment	**--**	**--**	**-.11***	**(.05)**
N_1	**373**		**338**	
Proportion variation within units	**.91**		**.88**	
Proportion variation within units explained	**.46**		**.29**	
Proportion variation between units	**.05***		**.11****	
Proportion variation between regions	**.04****		**.01**	

** $p \leq .01$; * $p \leq .05$.

Table 5: Officer-Level Effects on Perceived Intent of Progressive Sanction Grid (level-1 effects "fixed" across supervision units)

	Primary Intent		Primary Intent		Secondary Intent	
	β	*SE*	β	*SE*	β	*SE*
Intercept	.01	(.10)	.01	(.10)	.001	(.06)
Authority	-.11**	(.05)	-.09	(.05)	-.03	(.06)
Assistance	.05	(.06)	--	--	-.03	(.06)
Female			.13	(.10)		
Nonwhite			.26*	(.13)		
Education > bachelor's degree			.08	(.11)		
Years of service			-.02*	(.01)		
Parole services supervisor			.41*	(.20)		
Caseload size			-.01**	(.002)		
Supervises sex offenders			.03	(.18)		
Satisfaction with supervisor			.05	(.07)		
Satisfaction with coworkers			-.04	(.06)		
Satisfaction with regional administrator			.12	(.06)		
Adequacy of training			.05	(.05)		
Professional respect			.26**	(.05)		
N_1	373		373		373	
Proportion variation within units	.90		.90		.95	
Proportion variation within units explained	.02		.22		.00	
Proportion variation between units	.06*		.06*		.05	
Proportion variation between regions	.04**		.04**		.00	

** $p \leq .01$; * $p \leq .05$.

Table 6: Officer-Level Effects on Perceived Intent of Progressive Sanction Grid (level-1 effects "fixed" across supervision units)

	Primary Intent		Primary Intent		Secondary Intent	
			β	*SE*	β	*SE*
Intercept	**.01**	**(.10)**	**.01**	**(.10)**	**.001**	**(.06)**
Reward power	**.03**	**(.04)**	--	--	**.01**	**(.04)**
Referent power	**.01**	**(.04)**	--	--	**-.02**	**(.04)**
Coercive power	**.10****	**(.04)**	**.04**	**(.03)**	**-.03**	**(.04)**
Expert power	**.04**	**(.04)**	--	--	**.01**	**(.04)**
Legitimate power	**-.06**	**(.04)**	--	--	**.04**	**(.04)**
Female			**.11**	**(.10)**		
Nonwhite			**.29***	**(.13)**		
Education > bachelor's degree			**.08**	**(.11)**		
Years of service			**-.02***	**(.01)**		
Parole services supervisor			**.44***	**(.20)**		
Caseload size			**-.01****	**(.002)**		
Supervises sex offenders			**-.01**	**(.18)**		
Satisfaction with supervisor			**.04**	**(.07)**		
Satisfaction with coworkers			**-.05**	**(.06)**		
Satisfaction with regional administrator			**.12**	**(.07)**		
Adequacy of training			**.06**	**(.05)**		
Professional respect			**.25****	**(.05)**		
N_1	**372**		**372**		**372**	
Proportion variation within units	**.90**		**.90**		**.95**	
Proportion variation within units explained	**.04**		**.21**		**.00**	
Proportion variation between units	**.06***		**.06***		**.05**	
Proportion variation between regions	**.04****		**.04****		**.00**	

** $p \leq .01$; * $p \leq .05$.

Table 7: Officer-Level Effects on Perceived Outcomes of Progressive Sanction Grid (level-1 effects "fixed" across supervision units)

	Effectiveness		Effectiveness		Offender Control	
	β	*SE*	β	*SE*	β	*SE*
Intercept	.03	(.10)	.03	(.10)	.03	(.10)
Authority	-.14*	(.05)	-.08*	(.04)	-.09	(.06)
Assistance	.01	(.06)	--	--	-.03	(.06)
Female			-.13	(.09)		
Nonwhite			.06	(.11)		
Education > bachelor's degree			-.03	(.09)		
Years of service			-.01	(.01)		
Parole services supervisor			.002	(.17)		
Caseload size			-.002	(.002)		
Supervises sex offenders			-.19	(.15)		
Satisfaction with supervisor			-.11	(.06)		
Satisfaction with coworkers			-.05	(.05)		
Satisfaction with regional administrator			.22**	(.05)		
Adequacy of training			-.03	(.04)		
Professional respect			.26**	(.04)		
Primary intent			.44**	(.05)		
Secondary intent			-.03	(.04)		
Case management adjustment			--	--		
N_1	373		373		338	
Proportion variation within units	.91		.91		.88	
Proportion variation within units explained	.02		.47		.01	
Proportion variation between units	.05*		.05*		.11**	
Proportion variation between regions	.04**		.04**		.01	

** $p \leq .01$; * $p \leq .05$.

Table 8: Officer-Level Effects on Perceived Outcomes of Progressive Sanction Grid (level-1 effects "fixed" across supervision units)

	Effectiveness		Effectiveness		Offender Control		Offender Control	
	β	*SE*	β	*SE*	β	*SE*	β	*SE*
Intercept	.02	(.10)	.03	(.10)	.01	(.07)	.01	(.07)
Reward power	-.0002	(.04)	--	--	-.02	(.04)	--	--
Referent power	.03	(.03)	--	--	.07*	(.04)	.06*	(.03)
Coercive power	.16**	(.03)	.07**	(.03)	.16**	(.03)	.10**	(.03)
Expert power	.09*	(.04)	.06*	(.03)	.08*	(.04)	.04	(.04)
Legitimate power	-.10*	(.04)	-.04	(.03)	-.13*	(.04)	-.09*	(.04)
Female			-.15	(.08)			.001	(.10)
Nonwhite			.06	(.11)			.08	(.14)
Education > bachelor's degree			-.03	(.09)			-.12	(.11)
Years of service			-.01	(.01)			-.002	(.01)
Parole services supervisor			.02	(.16)			-.34	(.19)
Caseload size			-.002	(.002)			-.002	(.002)
Supervises sex offenders			-.20	(.15)			.05	(.17)
Satisfaction with supervisor			-.12*	(.06)			-.15*	(.07)
Satisfaction with coworkers			-.07	(.05)			-.08	(.06)
Satisfaction with regional administrator			.21**	(.05)			.19**	(.06)
Adequacy of training			-.02	(.04)			-.03	(.05)
Professional respect			.23**	(.04)			.25**	(.05)
Primary intent			.43**	(.05)			.18**	(.05)
Secondary intent			-.03	(.04)			-.13*	(.05)
Case management adjustment			--	--			-.10*	(.05)
N_1	372		372		337		337	
Proportion variation within units	.91		.91		.88		.88	
Proportion variation within units explained	.11		.49		.14		.35	
Proportion variation between units	.05*		.05*		.11**		.11**	
Proportion variation between regions	.04**		.04**		.01		.01	

** $p \leq .01$; * $p \leq .05$.

Table 9: Incident-Level Sample Means

	ODRC Sample	UC Sample
Organizational Outcome		
Level of organizational response[1]	**.13**	**.13**
Hearing location[2]	**.80**	**.83**
Pre-hearing jail detention	**.26**	**.30***
Sanctions Imposed		
Hearing outcome[2]	**.75**	**.67***
Revocation/return[3]	**.13**	**.10***
Halfway house placement[3]	**.08**	**.09**
Independent Variables		
Offender risk		
Low	**.23**	**.23**
Medium	**.41**	**.42**
High	**.21**	**.19***
Sex Offender	**.14**	**.17***
Violation Severity		
Major	**.16**	**.18***
High	**.47**	**.44***
Low	**.37**	**.39**
Cumulative violation rate	**1.23**	**1.88***
Sex	**.87**	**.87**
Race	**.55**	**.54**
Age	**33.38**	**32.82***
Felony category of commitment offense	**3.03**	**2.99**
Parole-eligible sentence	**.26**	**.26**
Parole region		
Akron	**.17**	**.16**
Cincinnati	**.20**	**.20**
Columbus	**.18**	**.17**
Lima	**.09**	**.11***
Mansfield	**.10**	**.09**
Chillicothe	**.09**	**.08**
Cleveland	**.18**	**.19**
***N* =**	**3,248**	**3,328**

Notes:

[1] Based on $N = 1{,}722$

[2] Based on $N = 354$

[3] Based on $N = 2{,}298$

* Difference between ODRC and UC samples $p \leq .01$

Table 10: Logistic Regression Models Predicting the Decision to Pursue a Revocation Hearing (Maximum Likelihood Coefficients Reported with Standard Errors in Parentheses)

	Pooled		Pre-Guidelines		Post-Guidelines	
	ODRC Sample	UC Sample	ODRC Sample	UC Sample	ODRC Sample	UC Sample
Constant		**-4.29**		**-4.02**		**-5.89**
Violation severity high	**2.70*** **	**2.52*** **	**2.67*** **	**2.46*** **	**2.74*** **	**2.65*** **
		(.25)		**(.29)**		**(.48)**
Incident number	**.33*** **	**.28*** **	**.30*** **	**.20** **	**.40*** **	**.45*** **
		(.05)		**(.05)**	**(.05)**	**(.08)**
Offender risk						
High	**.95*** **	**.25**	**.79** **	**.12**	**1.32** **	**.58**
		(.24)		**(.29)**		**(.41)**
Medium	**.84*** **	**.28**	**.66***	**.38**	**1.25** **	**.02**
		(.21)		**(.26)**		**(.36)**
Post-guidelines sample	**-1.51*** **	**-.99*** **				
		(.17)				
***N* =**	**1,566**	**1,722**		**853**		**869**
Proportion variation explained	**.34**	**.29**	**.32**	**.26**	**.26**	**.29**

*** p ≤ .001; ** p ≤ .01; * p ≤ .05

Table 11: Logistic Regression Models Predicting Incident-Level Revocation/Return (Maximum Likelihood Coefficients Reported with Standard Errors in Parentheses)

	Pooled		Pre-Guidelines		Post-Guidelines	
	ODRC Sample	UC Sample	ODRC Sample	UC Sample	ODRC Sample	UC Sample
Constant		**-5.00**		**-5.20**		**-5.51**
Male	**.27**	**.11**	**.33**	**.05**	**.15**	**.14**
		(.24)		**(.35)**		**(.35)**
Non-white	**-.26[a]**	**-.27[a]**	**-.36[a]**	**-.30**	**-.10**	**-.25**
		(.16)		**(.22)**		**(.24)**
Age at release	**-.01**	**-.01**	**-.001**	**-.001**	**-.02**	**-.01**
		(.01)		**(.01)**		**(.01)**
Felony level of committing offense	**-.02**	**.15***	**-.02**	**.07**	**.07**	**.25****
		(.06)		**(.09)**		**(.10)**
Parole release	**-.87*****	**-.75*****	**-1.11*****	**-.61***	**-.37**	**-.96****
		(.20)		**(.26)**		**(.35)**
Parole region						
Akron	**-.01**	**.42**	**.15**	**.35**	**.13**	**.57**
				(.39)		**(.37)**
Cincinnati	**-.15**	**-.66***	**-.18**	**-1.01***	**-.29**	**-.24**
		(.28)		**(.42)**		**(.40)**
Columbus	**.17**	**.24**	**.45**	**.33**	**-.26**	**.23**
		(.26)		**(.35)**		**(.41)**
Lima	**.22**	**.54[a]**	**.56**	**.20**	**-.10**	**1.12****
		(.28)		**(.38)**		**(.42)**
Mansfield	**.80****	**.63***	**.76***	**.68[a]**	**.67**	**.60**
		(.28)		**(.39)**		**(.43)**
Chillicothe	**.21**	**.26**	**.54**	**.68**	**-.10**	**.10**
		(.32)		**(.46)**		**(.46)**
Violation severity						
Major	**3.93*****	**3.46*****	**3.62*****	**3.27*****	**4.40*****	**3.59*****
		(.28)		**(.42)**		**(.39)**
High	**2.81*****	**2.32*****	**2.75*****	**2.56*****	**3.02*****	**2.09*****
		(.27)		**(.38)**		**(.38)**
Violation Rate	**.15****	**-.02**	**.12**	**.04**	**.20****	**-.09**
		(.05)		**(.07)**		**(.09)**
Offender risk						
Sex offender	**.72****	**1.50*****	**.01**	**1.36*****	**1.41*****	**1.78****
		(.27)		**(.42)**		**(.37)**
High	**.88*****	**1.11*****	**.54**	**1.19****	**1.20****	**1.26****
		(.29)		**(.42)**		**(.43)**
Medium	**.45***	**.94*****	**.31**	**1.12****	**.66[a]**	**.94****
		(.25)		**(.38)**		**(.34)**
Post-guidelines sample	**-.73*****	**-.35***				
		(.16)				
***N* =**	**1,970**	**2,298**		**1,083**		**1,215**
Proportion variation explained	**.29**	**.26**	**.31**	**.25**	**.30**	**.30**

*** p ≤ .001; ** p ≤ .01; * p ≤ .05; [a] p ≤ .10

Table 12: Offender-Level Sample Means

	ODRC Sample			UC Sample		
	Pre	Post		Pre	Post	
Male	**.82**	**.80**		**.82**	**.80**	
Nonwhite	**.53**	**.48**	†	**.53**	**.50**	
Age	**35.20**	**35.10**		**34.40****	**35.20**	
Unemployed	**.30**	**.28**		**.35****	**.21****	†
Residential instability[1]	**.15**	**.21**	†	**.10****	**.16****	†
Parole region						
Akron	**.14**	**.15**		**.14**	**.16**	
Cincinnati	**.20**	**.23**		**.20**	**.23**	
Columbus	**.14**	**.14**		**.14**	**.14**	
Lima	**.11**	**.09**		**.11**	**.09**	
Mansfield	**.09**	**.07**		**.09**	**.07**	†
Chillicothe	**.08**	**.09**		**.08**	**.09**	
Cleveland	**.23**	**.22**		**.23**	**.22**	
Felony category of commitment offense	**3.29**	**3.15**	†	**3.27**	**3.15**	†
Parole-eligible sentence	**.38**	**.19**	†	**.38**	**.20**	†
Offender risk	**3.19**	**2.82**	†	**3.20**	**2.76**	†
Low	**.33**	**.36**		**.32**	**.36**	
Medium	**.32**	**.35**		**.33**	**.37**	
High	**.18**	**.11**		**.18**	**.09***	
Sex offender	**.17**	**.18**		**.17**	**.18**	
Key Supervision Outcomes						
Revocation for technical violation[2]	**.10**	**.08**		**.11**	**.13****	
Recommision for new felony offense[2]	**.12**	**.17**	†	**.18****	**.20**	
Major violation behavior[2]	**.23**	**.28**	†	**.26**	**.28**	
New felony crime[2]	**.35**	**.40**		**.37**	**.37**	
***N* =**	**1,963**			**1,946**		

Notes:

Differences between ODRC and UC samples denoted by ** $p \leq .01$; * $p \leq .05$.
Differences between pre- and post-sanction grid samples denoted by † $p \leq .05$.
[1] Different sources of information used to create measure.
[2] Based on matched sample $N = 1{,}106$.

Appendix 9: Examining the Impact of Ohio's Progressive Sanction Grid--the UC Report

Table 13: Cox Regression Models Predicting New Felony Crime (Coefficients Reported with Standard Errors in Parentheses)

	Pooled		Pooled		Pre-Guidelines		Post Guidelines	
	ODRC Sample	UC Sample	ODRC Sample	UC Sample	ODRC Sample	UC Sample	ODRC Sample	UC Sample
Nonwhite	**-.05**	**-.003**	**-.02**	**-.03**	**.09**	**-.02**	**-.02**	**-.001**
		(.10)		**(.10)**		**(.15)**		**(.15)**
Male	**.25**	**.30[a]**	**.23**	**.28[a]**	**.50***	**.61****	**.16**	**.07**
		(.16)		**(.16)**		**(.22)**		**(.22)**
Age	**-.02*****	**-.02****	**-.04*****	**-.03*****	**-.02***	**-.02[a]**	**-.02***	**-.02***
		(.01)		**(.01)**		**(.01)**		**(.01)**
Felony level	**-.13****	**-.08[a]**	**-.11****	**-.06**	**-.20*****	**-.17****	**-.15****	**-.06**
		(.04)		**(.04)**		**(.06)**		**(.06)**
Unemployed	**.97*****	**.82*****	**.94*****	**.79*****	**.96*****	**.61*****	**1.02*****	**1.10*****
		(.11)		**(.11)**		**(.15)**		**(.15)**
Residential instability	**.19[a]**	**1.34*****	**.21[a]**	**1.32*****	**.29**	**1.57*****	**.15**	**1.18*****
		(.11)		**(.11)**		**(.16)**		**(.16)**
Overall violation rate	**.66*****	**.73*****	**.65*****	**.74*****	**.87*****	**.58****	**.71*****	**1.09*****
		(.15)		**(.15)**		**(.21)**		**(.21)**
Criminal history risk score			**.28*****	**.21*****				
				(.04)				
Sex offender	**.43***	**.43***						
		(.19)						
High risk	**1.27*****	**1.02*****			**.78*****	**.50****	**.29**	**.57****
		(.18)				**(.18)**		**(.20)**
Medium risk	**.99*****	**.67*****						
		(.14)						
Post-guidelines sample	**.05**	**-.03**	**.46[a]**	**.14**				
		(.10)		**(.23)**				
Risk x sanction guidelines			**-.09[a]**	**-.05**				
				(.05)				
***N* =**	**1,044**	**1,106**	**1,044**	**1,106**	**522**	**553**	**522**	**553**
χ^2	**340.26**	**419.22**	**338.51**	**431.19**	**145.74**	**199.46**	**168.50**	**211.92**

*** $p \leq .001$; ** $p \leq .01$; * $p \leq .05$; [a] $p \leq .10$

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Table 14: Cox Regression Models Predicting Major Violation Behavior (Coefficients Reported with Standard Errors in Parentheses)

	Pooled		Pooled		Pre-Guidelines		Post Guidelines	
	ODRC Sample	UC Sample	ODRC Sample	UC Sample	ODRC Sample	UC Sample	ODRC Sample	UC Sample
Nonwhite	**-.12**	**.02**	**-.11**	**-.002**	**.02**	**.07**	**-.07**	**-.04**
		(.12)		**(.12)**		**(.18)**		**(.17)**
Male	**.94*****	**.77*****	**.87*****	**.74*****	**1.24*****	**1.05*****	**.73***	**.46**
		(.21)		**(.21)**		**(.30)**		**(.29)**
Age	**-.03****	**-.03*****	**-.04*****	**-.04*****	**-.02[a]**	**-.02[a]**	**-.03****	**-.04****
		(.01)		**(.01)**		**(.01)**		**(.01)**
Felony level	**-.03**	**-.03**	**-.01**	**-.01**	**-.08**	**-.09**	**-.07**	**-.02**
		(.05)		**(.05)**		**(.07)**		**(.07)**
Unemployed	**.87*****	**.88*****	**.84*****	**.84*****	**.91*****	**.77*****	**.82*****	**1.08*****
		(.12)		**(.12)**		**(.18)**		**(.17)**
Residential instability	**-.17**	**1.28*****	**-.16**	**1.24*****	**.15**	**1.37*****	**-.39[a]**	**1.25*****
		(.13)		**(.13)**		**(.19)**		**(.18)**
Overall violation rate	**.53*****	**.43[a]**	**.51*****	**.37**	**.79*****	**.04**	**.51*****	**.89****
		(.26)		**(.26)**		**(.40)**		**(.32)**
Criminal history risk score			**.24*****	**.21*****				
				(.04)				
Sex offender	**.19**	**.28**						
		(.22)						
High risk	**1.11*****	**.85*****			**.56****	**.53****	**.45***	**.45***
		(.21)				**(.21)**		**(.23)**
Medium risk	**.92*****	**.53*****						
		(.17)						
Post-guidelines sample	**.16**	**.18**	**.35**	**.41**				
		(.12)		**(.26)**				
Risk x sanction guidelines			**-.04**	**-.06**				
				(.06)				
***N* =**	**1,044**	**1,106**	**1,044**	**1,106**	**522**	**553**	**522**	**553**
χ^2	**206.42**	**289.05**	**205.26**	**301.80**	**94.83**	**118.86**	**91.66**	**165.46**

*** $p \leq .001$; ** $p \leq .01$; * $p \leq .05$; [a] $p \leq .10$