

July 2012

Confinement for Technical Violations of Community Supervision: *Is There an Effect on Felony Recidivism?*

Under Washington State's sentencing laws, an adult convicted of a felony in superior court receives a sentence as prescribed by the ranges in the state's sentencing guidelines. Depending on the seriousness of the crime and a person's criminal history, some sentences result in confinement in prison or community supervision, while some require both prison and community supervision sequentially.¹ The Washington State Department of Corrections (DOC) has jurisdiction over offenders when a superior court orders community supervision.

When an offender is placed on community supervision, he or she must adhere to certain conditions such as scheduled reporting to DOC and not consuming controlled substances. If an offender is found to be in violation of these "technical" conditions, the offender can receive a sanction ranging from reprimands to confinement. As of June 2012, about four percent of all offenders confined by DOC were incarcerated because of a violation of conditions. If an offender commits a new serious criminal offense, the offender may be referred to prosecutors for a charging decision.

The primary purpose of this report is to examine whether offenders who receive confinement as a sanction for a technical violation have different recidivism rates compared with similar offenders who violate conditions but are not confined. In other words, does confinement for a technical violation affect recidivism?²

¹ RCW 9.94A, RCW 9.94A.501, and RCW 9.94A.701 & 702.

² DOC contracted with the Institute to examine effective practices for community supervision of offenders. The Institute's Board of Directors approved this project on September 6, 2011. This is the Institute's final report; an interim report was completed in 2011: Drake, E. K. (2011). "What works" in community supervision: Interim report (Document No. 11-12-1201). Olympia: Washington State Institute for Public Policy. For completeness, we re-print our meta-analytic findings in Section III of this report.

Summary

The Washington State Department of Corrections (DOC) has jurisdiction over offenders when a superior court orders community supervision. While on supervision, offenders must adhere to conditions such as reporting regularly to their Community Corrections Officer (CCO). If conditions are violated, DOC may impose sanctions ranging from reprimands to confinement. Between fiscal years 2002 and 2008, approximately 72 percent of all offenders who had a violation received confinement as a sanction.*

We investigate whether the use of confinement—as a sanction for a violation—has an impact on recidivism.

We rely on a "natural experiment" to analyze this question. We discovered that some CCOs use confinement as a sanction more than others, and that DOC attempts to evenly distribute offenders to CCO caseloads by risk for reoffense. These two factors allow us to test whether recidivism is affected by confining offenders who violate the conditions of their community supervision.

We employed numerous tests, all of which demonstrate that recidivism is not lowered for offenders who are confined for a violation of supervision. Limitations and possible extensions of this research are discussed.

* For this study, violations resulting in a conviction for a new crime are counted as recidivism, not as a violation.

There are three sections in this report:

- I. Background information on adult community supervision in Washington;
- II. An evaluation of the use of confinement—for offenders who violate the terms of community supervision—on recidivism; and
- III. A review of the literature regarding "what works" for offenders on supervision.

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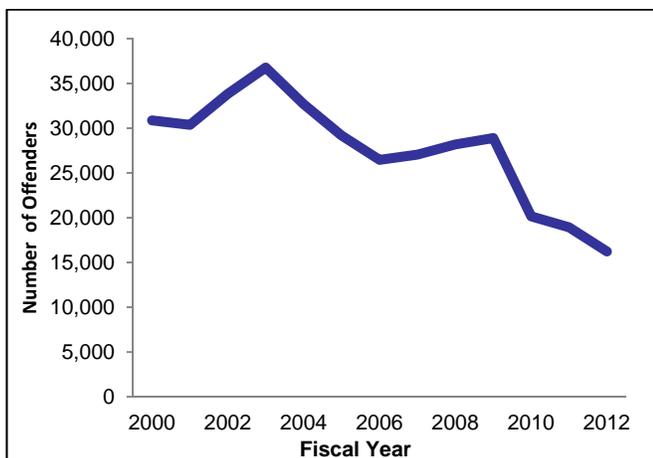
The authors would like to thank Laura Harmon and John Bauer at the Institute for data processing and analysis.

I. Background on Community Supervision

Depending on the crime of conviction, offenders can be sentenced by a superior court to a term of supervision between one and three years.³ Washington's community supervision caseload has declined in recent years due in part to legislative changes that have affected supervision for certain types of offenders. The trend in community supervision caseloads is plotted in **Exhibit 1**. Major legislation impacting the population includes:

- Elimination of supervision in 2003 for certain low-risk property offenders (ESSB 5990, Chapter 379, Laws of 2003);
- Elimination of supervision in 2009 for misdemeanants sentenced in superior court and low risk felons. This legislation also replaced community supervision ranges with set terms by the offender's current offense type (ESSB 5288, Chapter 375, Laws of 2009); and
- Elimination of "tolling" or the period of time on supervision when an offender does not receive credit for time served on supervision (ESSB 5891, Chapter 40, Laws of 2011).

Exhibit 1
Average Number of Adult Offenders on Active Supervision by Fiscal Year



WSIPP, 2012

Risk for Re-Offense

In 1999, the Offender Accountability Act (OAA) set state policy regarding the intensity of community supervision. The OAA directs DOC to classify offenders according to their future risk for re-offense and the harm they have caused society in the past. The legislation requires DOC to deploy more staff and rehabilitative resources to higher-risk offenders.

Risk for future offending is estimated by DOC using an assessment that classifies offenders into groups with similar characteristics. The Institute developed a "static" risk assessment, and DOC began using the tool as part of its Risk Level Classification system in 2008.⁴ Generally, static risk factors, such as criminal history, do not change over time.

DOC's current classification includes four risk groups. The distribution of DOC's current community supervision population for offenders on active supervision includes:⁵

- High violent (37 percent) – offenders who have a high risk for violent recidivism;
- High non-violent (29 percent) – offenders who have a high risk for non-violent recidivism;
- Moderate (18 percent) – offenders who have a moderate risk for recidivism; and
- Lower (16 percent) – offenders who have a lower risk for recidivism.

Community Corrections Officers (CCO) supervise offenders mandated to serve all or part of their sentences in the community. Community safety is the primary goal of supervision.⁶ CCOs are also required to identify and address an offender's criminogenic needs, within available resources. For example, if an

⁴ Barnoski, R. & Drake, E. (2007). *Washington's Offender Accountability Act: Department of Corrections' static risk assessment* (Document No. 07-03-1201). Olympia: Washington State Institute for Public Policy.

⁵ Data are as of April 2012. Retrieved from <http://www.doc.wa.gov/aboutdoc/measuresstatistics/docs/AvailableDataCorrectionsResearchBrochure.pdf> on June 9, 2012. The remaining 1 percent of the active population were unclassified.

⁶ DOC Policy 380.200

³ RCW 9.94A.701

offender is found to have substance abuse problems, a CCO may refer him or her to drug treatment.

CCOs develop Offender Supervision Plans, which are used as a case management tool. The plans contain information about the expectations of behavior for the offender, intervention strategies, and reporting requirements. DOC policy dictates the minimum contact standards required by CCOs.

Exhibit 2 displays DOC’s minimum monthly contacts by risk level classification.

Exhibit 2
Supervision Minimum Contact Standards

Risk Level Classification	Monthly Contact Standards
High Violent	3 face-to-face contacts (2 must be out of office) 1 collateral contact ¹
High Non-Violent	2 face-to-face contacts (1 must be out of office) 1 collateral contact
Moderate	1 face-to-face contact 1 face-to-face contact out of office per quarter 1 collateral contact
Lower (special cases ²)	1 face-to-face contact 1 face-to-face contact out of office per quarter 1 collateral contact
Lower	Report by KIOSK when changes occur such as address, employment, etc. ³

¹ People associated with the offender (e.g., spouses or employers).

² Includes sex offenders required to register, sentencing alternatives, and offenders diagnosed with mental health issues.

³ A KIOSK is a computer terminal.

Note: CCOs have one face-to-face contact per week with homeless offenders.

WSIPP, 2012

Conditions, Violations, and Sanctions

Offenders supervised in the community are required to adhere to conditions of supervision.⁷ The imposed conditions relate to community safety, supervision monitoring, the crime of conviction, or the offender’s risk level. Examples of conditions include: obeying all laws, prohibited contact with specified individuals, abstaining from alcohol or drugs,

and participation in treatment. Conditions can be imposed by the court or by DOC.

Prior to implementation of the 1999 OAA, the superior court was responsible for oversight of the sanctioning process when offenders violated conditions of supervision. Under the OAA, DOC has jurisdiction over imposing conditions, responding to violations, and sanctioning offenders.⁸

Offenders must be informed of imposed conditions. If an offender does not follow the conditions, the CCO can determine that an offender is in “violation” of his or her conditions of supervision. Violations can include failure to obey all laws and other behaviors such as using drugs or alcohol, failure to report to DOC, or refusing/neglecting to pay legal financial obligations.

CCOs are required to respond to new criminal behavior as well as all known technical violations.⁹ CCOs have discretion in how they respond to technical violation behavior. A DOC “response guide” assists CCOs in responding to violations. Responses, in order of increasing formality and severity, include:

- Reprimand – a warning;
- Stipulated agreement – an agreement between the CCO and offender where the offender admits to the violation and agrees to comply with the imposed sanction;
- Negotiated sanction – an agreement between the CCO and offender, in addition to approval by a Hearing Officer (DOC staff), where the offender admits to the violation and agrees to comply with the opposed sanction; and
- Full hearing – a Hearing Officer oversees the violation hearing, considers evidence presented, and determines the sanction.

⁸ The 2012 Legislature passed 2E2SSB 6204, Chapter 6, Laws of 2012, which made significant changes to DOC’s violation process. The changes do not apply to our study population; thus, we describe DOC’s policies prior to June 1, 2012. For a description of DOC’s current practice, see the sidebar “Recent Reforms to Supervision in Washington.”

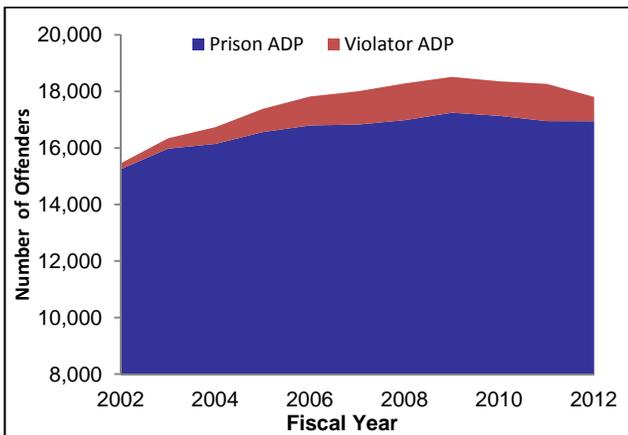
⁹ DOC Policy 460.130

⁷ DOC Policy 390.600

Offenders are entitled to a full hearing for alleged technical violations. If the offender is found guilty of a technical violation by the DOC Hearing Officer, a sanction is imposed. After considering public safety, the seriousness of the violation, the offender’s crime of conviction, and risk for re-offense, the Hearings Officer and CCO collaborate to determine a sanction. Sanctions can include confinement up to 60 days, enhanced supervision requirements, or treatment requirements.

Exhibit 3 displays the average daily population of offenders incarcerated who are under the jurisdiction of DOC, as well as the number of community supervision violators in confinement. An offender who receives confinement as a sanction for a violation can serve the sanction in prison or in county jail.

Exhibit 3
Average Daily Population (ADP) of Offenders Under DOC Jurisdiction in Confinement



Source: Caseload Forecast Council, June 2012
WSIPP, 2012

As of June 30, 2012, the average daily violator population was 610—which is approximately four percent of the total inmate population, as well as four percent of the active supervision population. Offenders confined for a violation spend approximately 30 days in confinement on average.¹⁰

DOC’s estimated expenditures for confining violators are approximately \$13 million per fiscal year.¹¹

Recent Reforms to Supervision in Washington

In this retrospective evaluation, we examine supervision as it existed in Washington from 2002 to 2008. It is important to note that the 2012 Legislature and DOC adopted a new approach that affects supervision.¹ Underlying this legislative change were two principles: swift and certain sanctions and evidence-based treatment.

Some evidence indicates that the swift and certain nature of punishment has a greater deterrent effect than the severity of punishment.² For example, probationers in Hawaii’s HOPE program receive swift and certain sanctions—typically a few days in jail—for violations of supervision. Findings from a 2009 random assignment study indicate HOPE is effective at reducing recidivism.³

With the 2012 legislation, DOC implemented a graduated sanctions response guide, restricting the number of days an offender can be confined for a violation. Lower level violations result in one to three days of confinement, and higher level violations result in up to 30 days of confinement. Prior to the implementation of the 2012 law, offenders could spend up to 60 days in confinement for a violation.

The population of offenders serving time in confinement for a violation has decreased and is expected to continue to decrease. As of June 30, 2012, the average daily population for violators was 610 offenders—an approximate 57 percent decrease within one year.

New research evidence indicates that a behavioral management approach to offender supervision can reduce recidivism by 16 percent (See Section III of this report). Behavioral management is based on a Risk Need Responsivity (RNR) model. The offender’s risk and criminogenic needs are addressed with cognitive behavioral or social learning techniques while integrating individual abilities and motivation.

When the two principles are fully implemented, DOC expects to save \$31 million dollars per biennium from reduced prison and jail bed capacity for violators.⁴ Approximately \$13 million dollars of the savings, or 42 percent, will be reinvested into evidence-based programs including cognitive behavioral treatment and chemical dependency treatment. Thus, the total upfront budget savings toward the state’s general fund is \$18 million.

¹ 2E2SSB 6204, Chapter 6, Laws of 2012.

² Durlauf, S. & Nagin, D. (2011). Imprisonment and crime: Can both be reduced? *Criminology & Public Policy*, 10(1).

³ Hawken, A. & Kleinman, M. (2009). Managing drug involved probationers with swift and certain sanctions: Evaluating Hawaii’s HOPE. *National Institute of Justice*. Award No. 2007-IJ-CX-0033.

⁴ See Fiscal Note for 2E2SSB 6204. Retrieved from: <https://fortress.wa.gov/ofm/fnspublic/legsearch.asp?BillNumber=6204&SessionNumber=62>

¹⁰ Per communication with DOC.

¹¹ Email correspondence with DOC on July 9, 2012.

II. Evaluation of Confinement for Violators

The primary purpose of this evaluation is to estimate—for offenders who violate the terms of their community supervision—the effect of confinement imposed by the Department of Corrections’ (DOC) on recidivism.

Study Population

The population for this study includes all offenders in Washington who were at-risk for recidivism in the community between July 1, 2001 and June 30, 2008. This population is the most recent group after implementation of the 1999 Offender Accountability Act (OAA), while allowing sufficient time for a 36-month recidivism follow-up period.¹²

Since this study tests the impact of Community Corrections Officers’ (CCO) use of confinement after an offender receives a technical violation, we limit the population of offenders to those with at least one violation event during the 36-month follow-up period (N=70,398). Further, in order to implement our preferred research design, we restrict our sample of violators to those offenders who had a single CCO during community supervision with a sufficient number of observations per CCO (N=1,273). **Exhibit A1** of Appendix A (page 11) illustrates the selection process for identifying offenders in the study sample.

Methods

Detailed information about the research methods we use in this evaluation is provided in Appendix B (page 13). We summarize the key aspects of our approach in this section.

Random assignment is the optimal research design to estimate treatment effects of criminal justice programs because it reduces the possibility that extraneous factors may influence results. Since random assignment was not possible for this retrospective evaluation, we use a non-experimental design based on observational data from DOC. This type of

design, however, raises the risk that selection bias and unobserved factors can undermine causal inference.¹³

To address this issue, we rely on a “natural” experiment. Unlike a random assignment study, researchers are unable to assign treatment and control groups in a natural experiment. Rather, the groups are formed by real-world conditions that sometimes occur when a policy is implemented. Natural experiments have been used in the judicial sentencing literature to test whether variations in sentencing patterns have an effect on recidivism.¹⁴ We adopt a similar methodology for this study.

The strength of our research design rests on two conditions. First, we demonstrate that some CCOs consistently use confinement more than others. Under Washington law, CCOs have some discretion in responding to violation behavior, which can create a condition for a natural experiment.

Second, in communication with DOC, we learned that DOC attempts to evenly distribute offenders to CCO caseloads based on Risk Level Classification. This assignment process, in essence, mimics random assignment.¹⁵

The presence of these two conditions allows us to test the effect of the use of confinement for a violation on recidivism. We examine how recidivism might be affected by a CCO’s discretionary use of confinement for offenders who violate the terms of supervision.¹⁶ To implement this research design, we use an “instrumental variables” approach to draw inferences from this natural policy experiment.¹⁷

¹³ Wooldridge, J. M. (2009). *Introductory Econometrics: A Modern Approach*. South-Western College Publishing.

¹⁴ Green, D. P. & Wink, D. (2010). Using random judge assignments to estimate the effects of incarceration and probation on recidivism among drug offenders. *Criminology*, 48(2).
Rhodes, W. (2010). Estimating treatment effects and predicting recidivism for community supervision using survival analysis with instrumental variables. *Journal of Quantitative Criminology*, 26(3), 391-413.

¹⁵ This is true with the exception of specialized caseloads or units (e.g., sex offenders or minimum management units).

¹⁶ We estimate the impact of the use of confinement as a sanction for a technical violation of supervision. Offenders with new convictions are counted as recidivists in this study.

¹⁷ Wooldridge, J. M. (2010). *Econometric Analysis of Cross Section and Panel Data, 2nd Edition*. The MIT Press.

¹² Recidivism is defined as any felony offense committed within 36-months of being at-risk in the community that results in a Washington State conviction.

Results: Effects on Recidivism

Our main finding is that felony recidivism is not lowered by using confinement for offenders who violate the technical conditions of their community supervision. This finding represents the result for the average offender included in our sample.¹⁸

We checked the robustness of this finding by testing many alternative models. The results are discussed in full in Appendix B (page 13). From a policy perspective, the findings are substantively similar across all models: confinement, when used as a sanction for violators, does not decrease recidivism for the average offender in our sample.

In fact, in all of the models we estimate, confinement for a violation is *associated* with increased recidivism. We do not, however, draw a *causal* conclusion that confinement for a violation increases recidivism. We believe there are two plausible but contradictory reasons that may explain why our finding indicates an increase in recidivism when confinement is used as a sanction for a violation.

The first plausible explanation is that confinement, or strict CCO behavior, may actually have a deleterious effect on an offender by, for example, preventing reentry into the labor market. In this case, the larger effects found in our preferred models would indicate that a CCO's use of confinement as a sanction *causes* more recidivism.

Another plausible explanation, however, is that a CCO has the ability to observe an offender's risk for recidivism beyond what is actually measured in the Risk Level Classification. In this case, the larger effects found in our preferred models would simply imply that some CCOs are routinely better at assessing higher risk offenders and using confinement accordingly.

These contradictory explanations are both plausible, but only the first explanation would indicate a *causal* effect between confinement and increased recidivism. Therefore, although we see an increase in recidivism for offenders

¹⁸ We also tested the effects of confinement for a violation on violent felony recidivism and found substantively similar results, which are not reported in Appendix B.

who receive confinement as a sanction, we cannot attribute a causal relationship because we do not have the ability to distinguish whether the effect is the result of confinement itself, strict CCO behavior, or the CCO's ability to detect unmeasured risk of recidivism.

Given these contradictory explanations, and because we found no instance in which recidivism is reduced in any of our models, we therefore conclude that, at a minimum, confinement for a violation does not decrease recidivism for the average offender in our sample.

Limitations

It is important to note that the sole purpose of this study was to determine the impact of confinement for a violation on subsequent recidivism. As noted below, we did not estimate the number of potential crimes avoided during the confinement period itself—termed by criminologists as an “incapacitation” effect.¹⁹ A more complete analysis, beyond the scope of this evaluation, would include the incapacitation effect of confinement for a violation.

The strength of our research design rests in part on the assumption that DOC attempts to evenly distribute offenders to CCO caseloads based on Risk Level Classification, thereby mimicking random assignment. While this appears to be the case in Washington, absent a true randomized controlled trial, some uncertainty about this assumption remains.

In addition, the generalizability of our results may be limited. In order to exploit the natural experiment, we had to restrict our sample to offenders assigned to only one CCO throughout the follow-up period.²⁰ Our final sample (N=1,273) represents only 2 percent of all offenders who had at least one violation event during the follow-up period.

¹⁹ For an example of the Institute's work on incapacitation effects, see: Aos, S. & Drake, E. (2010). *WSIPP's benefit-cost tool for states: Examining policy options in sentencing and corrections* (Document No. 10-08-1201). Olympia: Washington State Institute for Public Policy.

²⁰ We further limited the sample to include CCOs that had a minimum of 20 observations in the sample. See Appendix B for details.

We compared the study samples on key characteristics such as criminal history, risk for reoffense, and demographics (See **Exhibit A2**). The final sample had a 6 percent higher risk for felony recidivism than all offenders with a violation. We control for these “observed” differences in our analyses. We also rely on instrumental variables to control for unobserved differences which may be seen by the CCO. Nonetheless, some uncertainty remains about the generalizability of our findings.

Possible Next Steps

Because of time and budget constraints for this project, we focused our analysis on a single “big picture” question: does confinement for a violation affect felony recidivism? There are several additional topics that could be analyzed.

- 1) **Incapacitation.** There are two ways crime can be affected when criminal justice policies involve confinement: recidivism and incapacitation. First, the effectiveness of confinement itself can be tested to determine its impacts on recidivism. Second, crime can be affected through incapacitation—when an offender is confined and unable to commit crime in the community or when the threat of punishment deters others from committing crime. In this study, we only estimate the recidivism effect. To analyze the full impact of the policy, an incapacitation analysis should also be conducted.
- 2) **Subgroup Analysis of Offenders.** For our restricted sample, we examined whether the use of confinement for any type of technical violation affects felony recidivism for the average DOC offender on supervision. With a larger sample than the one we were able to assemble for this study, it may be possible to test whether the use of confinement is more or less effective for different subgroups of offenders (e.g., drug offenders). As it is, our basic finding pertains to the average offender in our study.
- 3) **Sanctions Other Than Confinement.** DOC has the discretion to impose a variety of sanctions when offenders violate the terms of supervision. In this study, we tested the impact of one sanction for a violation—confinement. Other sanctions, such as increased drug testing, could also be examined to determine if there are impacts on recidivism.
- 4) **Effect of Confinement on Different Types of Violations.** We did not examine whether CCOs were more likely to use confinement as a sanction for certain types of violation behavior, such as absconding from supervision or a failed drug test. If there is variation, it would be desirable to test whether there are separate effects on recidivism.
- 5) **Subgroup Analysis of CCO Characteristics.** Lastly, the dataset we assembled for this project does not include information on the characteristics of individual CCOs (e.g., years of experience, age, gender) that may have an impact on an offender’s propensity to recidivate. Additional data would need to be collected in order to test the impact of these characteristics on recidivism.

III. Evidence-based Community Supervision

In the final section of this report, we summarize the current findings from our systematic review of the literature regarding “what works” for adult community supervision.

A considerable amount of knowledge exists about interventions and strategies proven to reduce crime.²¹ To date, we have systematically reviewed three areas within the adult supervision literature to determine “what works”:

- Intensive supervision—surveillance only;
- Intensive supervision—with treatment; and
- Supervision using the “Risk Need Responsivity” model.

The Institute has previously published reports on the first two topics, but the third approach—the Risk Need Responsivity model—is a new area of research. For comparison purposes, we summarize our findings for all three topics in this report.

The sidebar on this page highlights the Institute’s general approach to summarizing the results of research studies.

Intensive Supervision With and Without Treatment

Intensive supervision probation/parole (ISP) emphasizes a higher degree of surveillance than traditional supervision in the community. In our systematic review of the literature, we found 31 credible studies that examine whether intensive supervision reduces recidivism.

ISP can be delivered in lieu of incarceration, as a conditional release from incarceration in the form of parole, or as a probation sentence. Conditions of supervision vary across the studies, but some characteristics include urinalysis testing, increased face-to-face or

What Does “Evidence-Based” Mean?

At the direction of the Washington State Legislature, the Institute conducts systematic reviews of evaluation research to determine what public policies and programs work, and which ones do not work. These evidence-based reviews cover adult and juvenile corrections, child welfare, mental health, substance abuse, prevention, K–12 education, and pre-K education.

The phrase “evidence-based” is sometimes used loosely in policy discussions. When the Institute is asked to conduct an evidence-based review, we follow a number of steps to ensure a rigorous and consistent definition. These criteria include the following:

- 1) We consider *all* available studies we can locate on a topic rather than selecting only a few; that is, we do not “cherry pick” studies to include in our reviews.
- 2) To be included in our reviews, we require that an evaluation’s research design include treatment and comparison groups from intent-to-treat samples. Random assignment studies are preferred, but we include quasi-experimental studies when the study uses appropriate statistical techniques.

We then use a formal statistical procedure, called meta-analysis, to calculate an average “effect size,” which indicates the expected magnitude of the relationship between the treatment and the outcome of interest. That is, we determine whether the weight of the evidence indicates outcomes are, on average, achieved.

For detailed information on our research methods see: Lee et al. (2012). See Appendix C of this report for a list of citations included in the meta-analyses reported in this study.

collateral contacts, or required participation in treatment. The average number of monthly face-to-face contacts for studies included in our meta-analysis was 12.

²¹ Lee, S., Aos, S., Drake, E., Pennucci, A., Miller, M., Anderson, L. (2012). *Return on investment: Evidence-based options to improve statewide outcomes* (Document No. 12-04-1201). Olympia: Washington State Institute for Public Policy.

Of the 31 studies included in our analysis, 17 were surveillance-only, where the emphasis is on more contact with the offender. The remaining 14 studies were evaluations of ISP in conjunction with treatment. The typical form of treatment included drug treatment and cognitive behavioral treatment.

As in our earlier reviews of this literature, we continue to find that intensive supervision without treatment has no detectable effects on recidivism rates. When treatment is added to intensive supervision, however, we find a recidivism reduction.²² In **Exhibit 6** (next page), we display these two results: intensive supervision with surveillance only has a 0.16 percent increase in recidivism, while intensive supervision with treatment reduces recidivism, on average, by 10 percent.

We investigated additional policy questions regarding surveillance and treatment using multivariate regression analysis for the 31 studies. Our analysis uncovered an interaction between the level of contacts on supervision and treatment. We found that, when supervision is coupled with treatment, more face-to-face contacts are associated with a greater reduction in recidivism.

Risk Need Responsivity Supervision

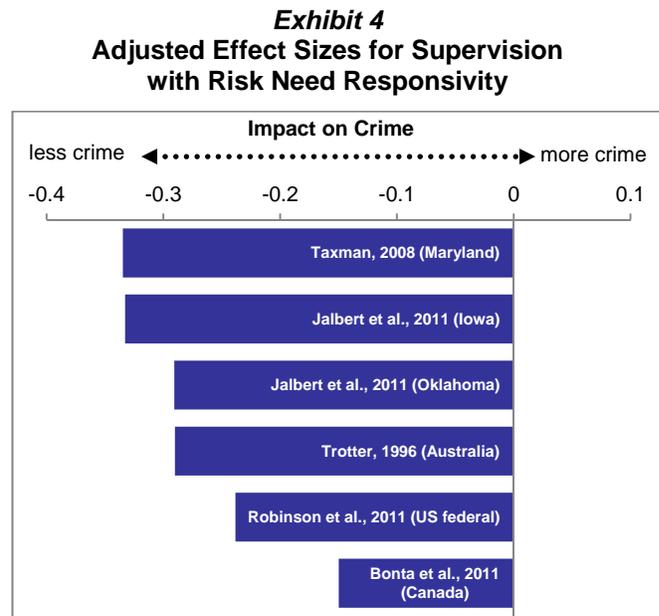
In addition to our reviews of ISP with and without treatment, we analyzed an emerging literature on a model of supervision that utilizes the principles of “Risk Need Responsivity” (RNR). This model was first developed by Canadian researchers in 1990 and is defined as follows:²³

- *Risk principle* – utilize interventions commensurate with an offender’s risk for re-offense.
- *Need principle* – target offender’s criminogenic needs such as anti-social attitudes or substance abuse.

- *Responsivity principle* – utilize interventions geared toward the offender’s abilities and motivation (generally cognitive behavioral or social learning interventions).

In our systematic review of the RNR supervision literature, we included six studies that met our standards of rigor. This broad grouping of studies spanned supervision delivered to moderate to high risk offenders on both probation and parole. Although the supervision models were different for each study population, officers were trained in how to deliver supervision to offenders utilizing principles of the RNR model.

Exhibit 4 displays our findings for the individual studies included in our analysis.



WSIPP, 2012

According to some criminologists, the goals of offender supervision have changed over the past three decades.²⁴ The first generation of supervision in the 1980s focused primarily on surveillance and monitoring of the offender. Gradually, in the 1990s, surveillance and monitoring of the offender was supplemented

²² Aos, S., Miller, M., & Drake, E. (2006). *Evidence-based public policy options to reduce future prison construction, criminal justice costs, and crime rates* (Document No. 06-10-1201). Olympia: Washington State Institute for Public Policy.

²³ Andrews, D., Bonta, J., & Hoge, R. (1990). Classification for effective rehabilitation: Rediscovering psychology. *Criminal Justice and Behavior*, 17, 19–52.

²⁴ Taxman, F. S. (2012). Crime control in the twenty-first century: Science-based supervision. *Journal of Crime and Justice*, DOI: 10.1080/0735648X.2012.686583.

Taxman, F. S. (2006). What should we expect from parole (and probation) under a behavioral management approach? *Perspectives*, 30(2), 38–45.

with programs such as drug treatment or cognitive behavioral treatment. Supervision is now shifting to a behavioral management approach, which incorporates the Risk Need Responsivity model into the officers' supervision and case management approach.

Exhibits 5 and 6 summarize our findings of the supervision literature. The results of our meta-analysis parallel the shift of these supervision strategies over the decades—a shift that indicates an increasingly favorable effect of crime outcomes.

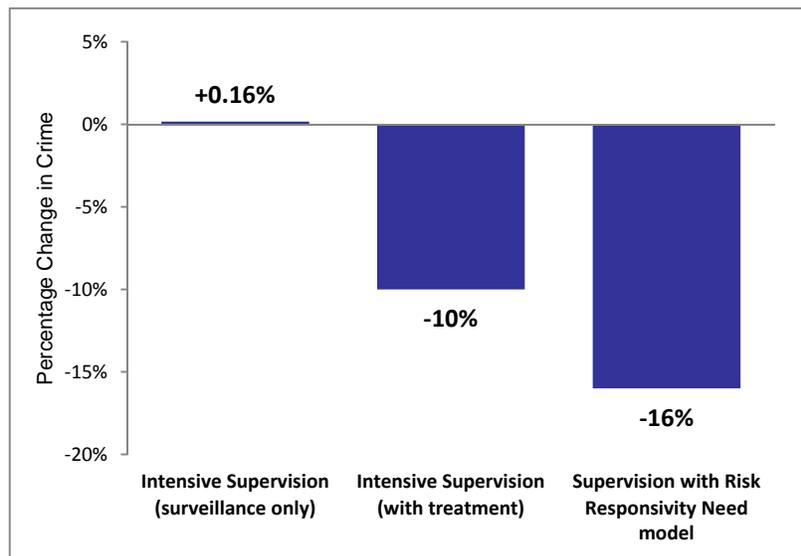
Exhibit 6 displays the main findings from our literature review which shows the percentage change in crime outcomes for each of the three types of supervision. We find that intensive supervision with treatment is better than intensive supervision without treatment. Additionally, the newest finding indicates that supervision, when delivered with the RNR model, has an even larger impact on crime outcomes. In fact, the 16 percent reduction in recidivism is among the largest effects we have found in our review of evidence-based adult corrections programming.²⁵

Exhibit 5
Supervision for Adult Offenders: Effect on Crime

Supervision Strategy	Number of Studies	Adjusted Effect Size	Standard Error	Percentage Change in Crime*
Intensive Supervision Probation/Parole (surveillance only)	14	+0.004	.065	+ 0.16%
Intensive Supervision Probation/Parole (with treatment)	17	-.205	.071	-10%
Supervision with Risk Responsivity Need model	6	-.303	.030	-16%

* We calculate the percentage change in crime as an average reduction over a long-term follow-up of 15 years.

Exhibit 6
Percentage Change in Crime Outcomes for Three Types of Supervision



WSIPP, 2012

²⁵ Lee, S., Aos, S., Drake, E., Pennucci, A., Miller, M., Anderson, L. (2012). *Return on investment: Evidence-based options to improve statewide outcomes* (Document No. 12-04-1201). Olympia: Washington State Institute for Public Policy.

Appendix A: Offender Samples and Study Group Characteristics

Appendix A contains information on the samples used in the analyses described in Section II and Appendix B of this report. The purpose of the evaluation is to estimate, for offenders who violate the terms of their community supervision, the effect of DOC's use of confinement on recidivism.

Exhibit A1
Study Group Selection for the Outcome Evaluation

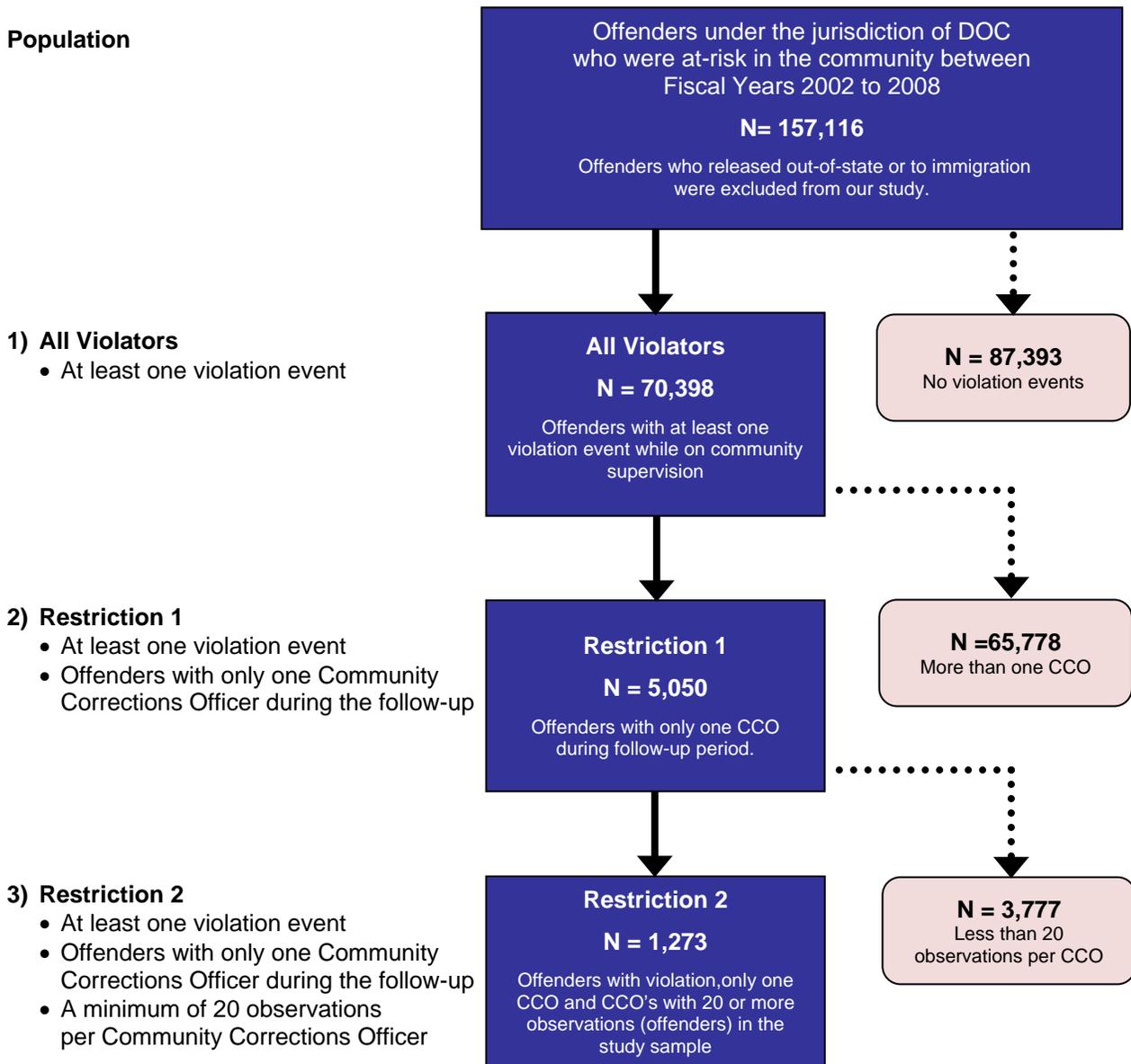


Exhibit A2

Demographics of the Study Groups: Means, Percentages and Statistical Significance Between Groups

	FY 02-08 ² Cohort			All Violators			All Violators ²			Restriction 1			Restriction ² 2			Restriction 1			Restriction 2			
	Mean/ Percent	Mean/ Percent	p value	Mean/ Percent	Mean/ Percent	p value	Mean/ Percent	Mean/ Percent	p value	Mean/ Percent	Mean/ Percent	p value	Mean/ Percent	Mean/ Percent	p value	Mean/ Percent	Mean/ Percent	p value	Mean/ Percent	Mean/ Percent	p value	
Prior adult felony adjudications	1.09	1.76	0.000	1.72	2.27	0.000	2.32	2.12	0.011	1.76	2.12	0.000										
Felony risk score ¹	59	69	0.000	69	73	0.000	73	73	0.827	69	73	0.000										
Non-drug risk score ¹	42	49	0.000	49	52	0.000	52	52	0.403	49	52	0.000										
Violent risk score ¹	27	32	0.000	32	34	0.000	34	35	0.357	32	35	0.000										
Age at-risk	33	33	0.000	33	34	0.000	34	32	0.000	33	32	0.009										
African American	13%	22%	0.000	22%	22%	0.977	22%	22%	0.985	22%	22%	0.998										
Male	77%	82%	0.000	82%	86%	0.000	86%	86%	0.835	82%	86%	0.000										
Violation events	--	--	--	3.20	2.62	0.000	2.55	2.82	0.000	3.16	2.82	0.000										
Confinement for a violation	--	--	--	72%	72%	0.757	70%	75%	0.001	72%	75%	0.005										
Confinement events	--	--	--	2.97	2.38	0.000	1.61	1.99	0.000	2.11	1.99	0.051										
Assigned CCOs	5.01	3.64	0.000	5.32	1.00	0.000	1.00	1.00	na	5.09	1.00	0.000										
Number of observations	86,718	70,398		65,348	5,050		3,777	1,273		69,125	1,273											
Sum of observations	157,116			70,398			5,050			70,398												

¹The three risk scores in the tables above are calculated using DOC's static risk assessment. For more information, see: R. Barnoski & E. Drake (2007). *Washington's Offender Accountability Act: Department of Corrections' static risk instrument* (Document No. 07-03-1201). Olympia: Washington State Institute for Public Policy.

² The sample does not include the offenders in the group to which the comparison is being made. That is, the sum of the two groups equals the total number of observations for the sample.

Appendix B: Technical Description of Research Methods and Results

Exhibit B1 of this Appendix presents the results of 18 alternative models we estimate to determine the effect of confinement for a violation on felony recidivism. We describe the Ordinary Least Squares (OLS) models and then our preferred Instrumental Variables (IV) models. The OLS models do not account for possible omitted-variable bias, while the IV models attempt to take this issue into account.²⁶

Ordinary Least Squares Estimation

The first six models on **Exhibit B1** show the results of OLS regressions with different samples of offenders or regressors. Models (1) through (3) take the following form:

$$(1-3): R = f(CD, X, e)$$

The models estimate felony recidivism, R , as a linear function of whether an offender was confined for a violation, CD , a vector of covariates, X , and an error term, e . All offenders in the sample incurred at least one violation event within 36-months of being at-risk in the community.²⁷ CD represents offenders with a violation who received confinement as a sanction, which is measured dichotomously. We also estimate a parallel set of models (10-18) with the number of confinement events as a continuous measure, CC .

Felony recidivism, R , is defined as any felony offense committed within 36-months of being at-risk in the community that results in a Washington State conviction.^{28,29} Since R is measured dichotomously, the OLS results are linear probability models. For comparability with our instrumental variables approach, we chose to use OLS instead of logistic regression because the instrumental variables approach we employ in models (7), (8), and (9) are estimated with two-stage least squares or limited information maximum likelihood. We also estimated logistic regression for models (1) through (6) and obtained similar results.

The covariates, X , we include in all models are those typically found in the criminal justice research literature. Covariates for this analysis are the number of prior adult felony convictions; the offender's felony risk score, non-drug risk score, and violent risk score, which are actuarial measures from DOC's static risk assessment³⁰; the offender's age when at-risk in the community; and whether the offender was African American or male. We also include separate year variables to account for changing statewide recidivism trends.³¹

Models (1) through (3) are identical except for the samples analyzed. Appendix A illustrates the samples used in this evaluation. Model (1) is estimated with all 70,398 offenders who had a violation during the sample period. Of these offenders, 72 percent received a confinement sanction. The coefficient on the confinement for a violation variable in model (1) indicates that, after controlling for all the covariates in the model, offenders who received confinement as a sanction had a 18.93 percentage point increase in their probability of felony recidivism.

²⁶ Wooldridge, J. M. (2010). *Econometric Analysis of Cross Section and Panel Data, 2nd Edition*. The MIT Press.

²⁷ A violation event is the time at which violations are processed. Thus, multiple violations can be processed simultaneously. We count the number of violation events for 36-months from the time the offender is at-risk in the community.

²⁸ This analysis uses the Washington State Institute for Public Policy's criminal history database which was initially developed in the 1990s to conduct criminal justice research for the Legislature. The data are updated quarterly and are a synthesis of conviction information from the Administrative Office of the Courts and the Department of Corrections.

²⁹ We also tested the effects of confinement for a violation on violent felony recidivism and found substantively similar results, which are not reported in the Appendix.

³⁰ Three risk scores were calculated using DOC's static risk assessment. See: R. Barnoski & E. Drake (2007). *Washington's Offender Accountability Act: Department of Corrections' static risk instrument* (Document No. 07-03-1201). Olympia: Washington State Institute for Public Policy.

³¹ Drake, E., Barnoski, R. & Aos, S. (2010). *Washington's Offender Accountability Act: Final report on recidivism outcomes* (Document No. 10-01-1201). Olympia: Washington State Institute for Public Policy.

To implement our preferred instrumental variables strategy, we need to restrict the sample of violators to those offenders who only had a one CCO during community supervision (Restriction 1).³² Following Rhodes (2010), we further restrict the sample to offenders whose officer had a minimum of 20 observations in our study sample (Restriction 2).³³ Models (2) and (3) show these OLS results, respectively. The coefficient on the confinement variable fell slightly to 14.88 percentage points in model (2) and is 18.58 percentage points in model (3).

Ordinary Least Squares Estimation with Officer Measures

Models (4) through (6) show OLS results for the three CCO variables we use in instrumental variables estimation for the Restriction 2 sample. This is the sample we use in our preferred IV models. First, following Rhodes (2010), we include a separate dummy variable for each CCO.³⁴ For the Restriction 2 sample, there were 42 officers; therefore, model (4) includes 41 dummy variables. The confinement coefficient from model (4) indicates an increase of 16.57 percentage points in recidivism.

$$(4): R = f(CD, X, Officers, e)$$

There are known statistical problems when estimating instrumental variables models that use multiple instruments; therefore, for models (5) and (6) we construct a single instrumental variable representing officer behavior.³⁵ Rather than a separate dummy variable for each officer, in Model (5), we compute a single measure summarizing each officer's use of confinement. The rate for each officer is calculated as the total number of offenders with a violation who were sanctioned to confinement, divided by the total number of offenders with a violation. The inclusion of this single variable, in model (5), results in a confinement coefficient of 15.56 additional recidivism percentage points for those offenders sanctioned to confinement.

$$(5): R = f(CD, X, Officer\ confinement\ rate, e)$$

In model (6), we show the results of an additional single instrumental variable we create to account for “stricter” officers. Stricter officers were identified by conducting an OLS regression with confinement for a violation regressed on the observed characteristics and individual dummy-coded officers. We plotted the 41 officer coefficients and binned the coefficients by quartile. Fifty-six percent of the officers fell into the upper quartile—stricter officers—and we coded those officers with a ‘1’ and the remainder with ‘0’. This variable is included in model (6). The result indicates an increase of 16.7 percentage points in felony recidivism.

$$(6): R = f(CD, X, Stricter\ officers, e)$$

Instrumental Variables (IV) Estimation

OLS models run the risk of omitted variable bias.³⁶ We implement an instrumental variables analysis to address this potential problem. This approach relies on the observation that some CCOs routinely use confinement more than others and the assumption that offenders are randomly assigned to CCO caseloads. With the exception of specialized caseloads and units, to our knowledge, DOC attempts to evenly distribute offenders to officer caseloads based on risk.

³² To count the number of CCOs an offender was assigned to throughout the course of supervision, we only counted active supervising officers. That is, we excluded positions such as archived, inactive, banked, or warrants caseloads. We also excluded administrative office positions.

³³ Rhodes, W. (2010). Estimating treatment effects and predicting recidivism for community supervision using survival analysis with instrumental variables. *Journal of Quantitative Criminology*, 26(3), 391-413. Rhodes recommends removing specialty caseloads and testing the sensitivity caseload size. He recommends, as an example, a minimum caseload of 25. We tested our 2SLS models using this approach as well. The coefficients for confinement for a violation were not substantively different (0.3106 from Model 7 compared with 0.2649); thus, we opted for a lower caseload minimum of 20, which resulted in 460 more observations that could be included in our sample.

³⁴ Rhodes, W. (2010). Estimating treatment effects and predicting recidivism for community supervision using survival analysis with instrumental variables. *Journal of Quantitative Criminology*, 26(3), 391-413.

³⁵ Angrist, J. & Pischke, J. (2009). *Mostly Harmless Econometrics: An Empiricist's Companion*, Princeton University Press. Chapter 4. Stock, J., & Watson, M.W. (2011). *Introduction to Econometrics*. Addison Wesley Longman.

³⁶ Wooldridge, J. M. (2009). *Introductory Econometrics: A Modern Approach*. South-Western College Publishing.

In models (7), (8), and (9) we estimate a two-stage process using the three types of IVs. First stage results are shown in **Exhibit B2** and second stage results are reported in **Exhibit B1**.

$$(7): \text{ First stage equation} \quad CD = f(X, \text{Officers}, e)$$

$$\text{ Second stage equation} \quad R = f(CD, X, e)$$

Model (7) uses multiple dummies as instruments, the vector *Officers*, for each of the 41 CCOs. The first stage result for this model is reported in **Exhibit B2**. As a group, *Officers* are jointly significant ($p=.000$) in predicting whether an offender is confined for a violation, *CD*. The second stage results are shown in **Exhibit B1**. When multiple instruments are used in the same equation, the estimates may be misleading and limited information maximum likelihood (LIML) should be used to estimate the effects.³⁷ Conventional standard errors from LIML, however, should be corrected using Bekker-adjusted standard errors, which are reported in the table for models (7) and (16).³⁸ The coefficient for the instrumented confinement variable increased to 31.06 percentage points—nearly twice the magnitude as found in our OLS models.

In model (8), we estimate a single IV model with two-stage least squares (2SLS) where the IV is officer confinement rate, described above. The first stage results in **Exhibit B2** indicate that the officer confinement rate IV is significant ($p=.000$) and the F-statistic is a significant 33.13, which indicates the strength of the instrument, and is easily larger than the rule-of-thumb of 10 for single-instrument IV analysis.³⁹ The second stage coefficient on the confinement variable, reported in Exhibit B1, is 32.04 percentage points more recidivism which is, again, about twice the magnitude of the OLS models.

$$(8): \text{ First stage equation} \quad CD = f(X, \text{Officer confinement rate}, e)$$

$$\text{ Second stage equation} \quad R = f(CD, X, e)$$

Finally, in model (9) we estimate a third IV model with 2SLS where the IV is the dichotomous stricter officer variable, described above. The first stage results, in **Exhibit B2**, indicate that the stricter officer IV is significant ($p=.000$) and the model F-statistic, 21.44, is significant. The second stage coefficient on the confinement variable, reported in **Exhibit B1**, is 35.97 percentage points more recidivism.

$$(9): \text{ First stage equation} \quad CD = f(X, \text{Stricter officer}, e)$$

$$\text{ Second stage equation} \quad R = f(CD, X, e)$$

In Models (10) through (18) we repeat the same process described in this appendix; however, we substitute the continuous measure of confinement, *CC*, for the dichotomous measure of confinement, *CD*. The non-IV models indicate an increase in the probability of felony recidivism between 3 and 3.6 additional percentage points per confinement event. In the three IV models, (16) through (18), the confinement coefficient indicates 8 additional felony recidivism percentage points per confinement event. The IV coefficients are, once again, nearly twice as large as their OLS counterparts. The average number of confinements per offender in the Restriction 2 sample is 1.99.

Conclusion

In this analysis, we focus on a whether confinement for a violation affects felony recidivism. After estimating 18 models, both OLS and IV models with various samples and using multiple dependent variables of confinement, we conclude that confinement for a violation does not reduce recidivism.

In fact, in all of the models we estimate, confinement for a violation is associated with an increase in recidivism. We do not, however, draw a causal conclusion that confinement for a violation increases recidivism. We believe

³⁷ Angrist, J. & Pischke, J. (2009). *Mostly Harmless Econometrics: An Empiricist's Companion*, Princeton University Press. Chapter 4. Stock, J., & Watson, M.W. (2011). *Introduction to Econometrics*. Addison Wesley Longman.

³⁸ Imbens, G., & Wooldridge, J. "Weak Instruments and Many Instruments." Lecture 13, August 1, 2007, Summer Institute 2007: What's New in Econometrics, National Bureau of Economic Research, Cambridge, MA, July 30 - August 1, 2007. Retrieved from: http://www.nber.org/WNE/lect_13_weakmany_iv.pdf.

³⁹ Angrist, J. & Pischke, J. (2009). *Mostly Harmless Econometrics: An Empiricist's Companion*, Princeton University Press. Chapter 4.

there are two plausible, but contradictory, explanations for why all the OLS coefficients indicate an increase in recidivism and why the IV models indicate an even greater increase in recidivism.

The first plausible explanation is that confinement or strict CCO behavior may have a deleterious effect on an offender by, for example, preventing reentry into the labor market. If this explanation is true, then the larger confinement coefficients in our IV models indicate that CCOs who use confinement more than their counterparts causes more recidivism.

It is also plausible, however, that a CCO has the ability to observe an offender's risk for recidivism beyond what is measured by the risk score covariates. If this explanation is true, then the larger confinement coefficients for the IV models imply that some CCOs are routinely better at assessing high risk offenders and using confinement accordingly.

These contradictory explanations are both plausible, but only the first explanation indicates a real causal effect of confinement on recidivism. Therefore, although we see an increase in recidivism for offenders who receive confinement for a sanction, we cannot attribute a causal relationship because we cannot distinguish whether the effect is from confinement itself or the CCOs ability to detect risk of recidivism relative to measured risk.

Given these contradictory explanations, and because we found no instance in which recidivism is reduced in any of our models, we conclude that, at a minimum, confinement for a violation does not decrease recidivism for the average offender in our sample.

Exhibit B1
Regression Models Used to Estimate the Effects of Confinement for a Violation (Dichotomous Measure)

	OLS Estimation						OLS Estimation with Officer Measures						Instrumental Variables Estimation					
Estimator:	OLS		OLS		OLS		OLS		OLS		OLS		LIML		2SLS		2SLS	
Sample:	All Violators		Restriction 1		Restriction 2		Restriction 2		Restriction 2		Restriction 2		Restriction 2		Restriction 2		Restriction 2	
Number observations:	70,398		5,050		1,273		1,273		1,273		1,273		1,273		1,273		1,273	
	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE
Model:	(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)		(9)	
Confinement for a violation	0.2006	(0.004)	0.1488	(0.015)	0.1858	(0.032)	0.1657	(0.035)	0.1556	(0.035)	0.1670	(0.033)	0.3106	(0.085)	0.3204	(0.075)	0.3597	(0.103)
Prior adult felony adjudications	0.0110	(0.001)	0.0229	(0.005)	0.0311	(0.009)	0.0272	(0.01)	0.0301	(0.009)	0.0314	(0.009)	0.0304	(0.009)	0.0303	(0.009)	0.0301	(0.01)
Felony risk score [#]	0.0039	(0.000)	0.0008	(0.001)	-0.0002	(0.001)	-0.0006	(0.001)	-0.0002	(0.001)	-0.0001	(0.001)	-0.0006	(0.001)	-0.0006	(0.001)	-0.0007	(0.001)
Non-drug risk score [#]	0.0004	(0.000)	0.0028	(0.001)	0.0035	(0.002)	0.0026	(0.002)	0.0034	(0.002)	0.0033	(0.002)	0.0033	(0.002)	0.0033	(0.002)	0.0032	(0.002)
Violent risk score [#]	-0.0004	(0.000)	0.0000	(0.001)	-0.0003	(0.002)	0.0009	(0.002)	-0.0006	(0.002)	-0.0005	(0.002)	-0.0003	(0.002)	-0.0003	(0.002)	-0.0003	(0.002)
Age at-risk	-0.0046	(0.000)	-0.0057	(0.001)	-0.0061	(0.001)	-0.0053	(0.002)	-0.0061	(0.001)	-0.0062	(0.001)	-0.0057	(0.002)	-0.0057	(0.002)	-0.0056	(0.002)
African American	0.0267	(0.004)	0.0709	(0.017)	0.1771	(0.033)	0.1007	(0.038)	0.1616	(0.034)	0.1684	(0.033)	0.1599	(0.035)	0.1586	(0.035)	0.1532	(0.036)
Male	0.0524	(0.005)	0.0694	(0.020)	0.0408	(0.041)	0.0380	(0.041)	0.0376	(0.040)	0.0377	(0.041)	0.0312	(0.041)	0.0305	(0.041)	0.0274	(0.042)
FY 2002	0.0680	(0.008)	0.0723	(0.029)	0.0634	(0.060)	0.1039	(0.064)	0.0614	(0.060)	0.0643	(0.060)	0.0813	(0.062)	0.0827	(0.062)	0.0884	(0.063)
FY 2003	0.0740	(0.008)	0.0915	(0.028)	0.0212	(0.058)	0.0329	(0.060)	0.0177	(0.058)	0.0236	(0.058)	0.0376	(0.059)	0.0389	(0.059)	0.0441	(0.060)
FY 2004	0.0694	(0.008)	0.0552	(0.028)	0.0811	(0.055)	0.0805	(0.057)	0.0858	(0.055)	0.0877	(0.055)	0.0997	(0.057)	0.1012	(0.057)	0.1070	(0.058)
FY 2005	0.0595	(0.008)	0.0570	(0.026)	0.0437	(0.054)	0.0616	(0.057)	0.0446	(0.054)	0.0520	(0.055)	0.0540	(0.055)	0.0548	(0.055)	0.0580	(0.056)
FY 2006	0.0369	(0.008)	0.0735	(0.026)	0.0749	(0.053)	0.0650	(0.054)	0.0698	(0.053)	0.0767	(0.053)	0.0836	(0.053)	0.0843	(0.053)	0.0870	(0.054)
FY 2007	-0.0037	(0.008)	0.0003	(0.026)	-0.0224	(0.053)	-0.0081	(0.054)	-0.0260	(0.053)	-0.0218	(0.053)	-0.0095	(0.054)	-0.0085	(0.054)	-0.0044	(0.055)
Alternative Instruments																		
Officers	N		N		N		Y		N		N		Y		N		N	
Officer confinement rate	N		N		N		N		Y		N		N		Y		N	
Stricter officers	N		N		N		N		N		Y		N		N		Y	
Adjusted R-squared	0.1106		0.1028		0.1434		0.1659		0.1455		0.1449		na		na		na	

[#] The three risk scores in the equations above are calculated using DOC's static risk assessment. For more information, see: R. Barnoski & E. Drake (2007). *Washington's Offender Accountability Act: Department of Corrections' static risk instrument* (Document No. 07-03-1201). Olympia: Washington State Institute for Public Policy.

Exhibit B1 (continued)
Regression Models Used to Estimate the Effects of Confinement for a Violation (Continuous Measure)

	OLS Estimation						OLS Estimation with Officer Measures						Instrumental Variables Estimation					
Estimator:	OLS		OLS		OLS		OLS		OLS		OLS		LIML		2SLS		2SLS	
Sample:	All Violators		Restriction 1		Restriction 2		Restriction 2		Restriction 2		Restriction 2		Restriction 2		Restriction 2		Restriction 2	
Number observations:	70,398		5,050		1,273		1,273		1,273		1,273		1,273		1,273		1,273	
	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE
Model:	(10)		(11)		(12)		(13)		(14)		(15)		(16)		(17)		(18)	
Confinement for a violation	0.0336	(0.001)	0.0297	(0.003)	0.0351	(0.006)	0.0304	(0.007)	0.0294	(0.007)	0.0313	(0.007)	0.0805	(0.021)	0.0886	(0.021)	0.0805	(0.023)
Prior adult felony adjudications	0.0121	(0.001)	0.0241	(0.005)	0.0317	(0.009)	0.0270	(0.010)	0.0302	(0.009)	0.0319	(0.009)	0.0309	(0.010)	0.0308	(0.010)	0.0309	(0.010)
Felony risk score [#]	0.0039	(0.000)	0.0009	(0.001)	0.0003	(0.001)	-0.0002	(0.001)	0.0003	(0.001)	0.0004	(0.001)	0.0004	(0.001)	0.0004	(0.001)	0.0004	(0.001)
Non-drug risk score [#]	0.0005	(0.000)	0.0029	(0.001)	0.0033	(0.002)	0.0024	(0.002)	0.0032	(0.002)	0.0032	(0.002)	0.0028	(0.002)	0.0027	(0.002)	0.0028	(0.002)
Violent risk score [#]	-0.0006	(0.000)	-0.0002	(0.001)	-0.0007	(0.002)	0.0006	(0.002)	-0.0011	(0.002)	-0.0009	(0.002)	-0.0013	(0.002)	-0.0014	(0.002)	-0.0013	(0.002)
Age at-risk	-0.0046	(0.000)	-0.0058	(0.001)	-0.0065	(0.001)	-0.0058	(0.002)	-0.0064	(0.001)	-0.0066	(0.001)	-0.0064	(0.002)	-0.0064	(0.002)	-0.0064	(0.002)
African American	0.018	(0.004)	0.0685	(0.017)	0.1724	(0.033)	0.0954	(0.038)	0.1517	(0.034)	0.1628	(0.034)	0.1332	(0.038)	0.1262	(0.038)	0.1332	(0.039)
Male	0.0601	(0.005)	0.0722	(0.020)	0.0381	(0.041)	0.0362	(0.041)	0.0336	(0.041)	0.0347	(0.041)	0.0160	(0.043)	0.0120	(0.043)	0.0160	(0.043)
FY 2002	0.0797	(0.008)	0.0788	(0.030)	0.0817	(0.061)	0.1116	(0.065)	0.0775	(0.061)	0.0809	(0.061)	0.1399	(0.067)	0.1504	(0.068)	0.1400	(0.068)
FY 2003	0.0832	(0.008)	0.0969	(0.028)	0.0298	(0.058)	0.0285	(0.060)	0.0250	(0.058)	0.0317	(0.058)	0.0725	(0.062)	0.0802	(0.063)	0.0725	(0.063)
FY 2004	0.0758	(0.008)	0.0633	(0.028)	0.0848	(0.056)	0.0791	(0.057)	0.0916	(0.055)	0.0920	(0.056)	0.1253	(0.059)	0.1326	(0.060)	0.1253	(0.060)
FY 2005	0.0622	(0.008)	0.0631	(0.026)	0.0532	(0.055)	0.0607	(0.057)	0.0537	(0.054)	0.0618	(0.055)	0.0853	(0.057)	0.0910	(0.058)	0.0853	(0.058)
FY 2006	0.0396	(0.008)	0.0795	(0.026)	0.0782	(0.053)	0.0612	(0.054)	0.0716	(0.053)	0.0800	(0.053)	0.0991	(0.055)	0.1029	(0.055)	0.0991	(0.055)
FY 2007	0.0011	(0.008)	0.0010	(0.026)	-0.0303	(0.053)	-0.0207	(0.054)	-0.0326	(0.053)	-0.0285	(0.053)	-0.0154	(0.055)	-0.0127	(0.055)	-0.0154	(0.055)
Alternative Instruments																		
Officers	N		N		N		Y		N		N		Y		N		N	
Officer confinement rate	N		N		N		N		Y		N		N		Y		N	
Stricter officers	N		N		N		N		N		Y		N		N		Y	
Adjusted R-squared	0.1070		0.0984		0.1408		0.164		0.1453		0.1431		na		na		na	

[#] The three risk scores in the equations above are calculated using DOC's static risk assessment. For more information, see: R. Barnoski & E. Drake (2007). *Washington's Offender Accountability Act: Department of Corrections' static risk instrument* (Document No. 07-03-1201). Olympia: Washington State Institute for Public Policy.

Exhibit B2

Confinement for a Violation: First Stage Results of Instrumental Variables Models for the Restriction 2 Sample

Number observations:	1,273		1,273		1,273		1,273		1,273		1,273	
	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE
Model (from Exhibit B1):	Confinement (Dichotomous Measure)						Confinement (Continuous Measure)					
	(7)		(8)		(9)		(16)		(17)		(18)	
Prior adult felony adjudications	-0.0019	(0.008)	-0.0013	(0.008)	0.0069	(0.008)	-0.0068	(0.040)	-0.0102	(0.040)	0.0197	(0.040)
Felony risk score [#]	0.0031	(0.001)	0.0027	(0.001)	0.0031	(0.001)	0.0017	(0.006)	-0.0011	(0.006)	0.0005	(0.006)
Non-drug risk score [#]	0.0009	(0.002)	0.0006	(0.002)	0.0007	(0.002)	0.0129	(0.008)	0.0082	(0.008)	0.0077	(0.008)
Violent risk score [#]	-0.0027	(0.002)	-0.0020	(0.002)	-0.0009	(0.002)	-0.0051	(0.009)	0.0045	(0.008)	0.0078	(0.008)
Age at-risk	-0.0025	(0.001)	-0.0024	(0.001)	-0.0033	(0.001)	0.0029	(0.006)	-0.0001	(0.006)	-0.0037	(0.006)
African American	0.0343	(0.032)	0.0180	(0.027)	0.0790	(0.028)	0.3646	(0.162)	0.4308	(0.144)	0.6014	(0.142)
Male	0.0413	(0.034)	0.0430	(0.033)	0.0530	(0.034)	0.2874	(0.173)	0.3633	(0.171)	0.3789	(0.173)
FY 2002	-0.1531	(0.053)	-0.1292	(0.048)	-0.1250	(0.051)	-1.0892	(0.272)	-1.2305	(0.254)	-1.1996	(0.257)
FY 2003	-0.1439	(0.050)	-0.1286	(0.046)	-0.1064	(0.049)	-0.6398	(0.254)	-0.9304	(0.243)	-0.8285	(0.246)
FY 2004	-0.1013	(0.047)	-0.0936	(0.045)	-0.1004	(0.047)	-0.5081	(0.241)	-0.6926	(0.234)	-0.6759	(0.236)
FY 2005	-0.0694	(0.047)	-0.0614	(0.044)	-0.0310	(0.046)	-0.3481	(0.239)	-0.6314	(0.229)	-0.4779	(0.233)
FY 2006	-0.0927	(0.044)	-0.0881	(0.042)	-0.0533	(0.045)	-0.3807	(0.227)	-0.5283	(0.222)	-0.3889	(0.224)
FY 2007	-0.1126	(0.045)	-0.1063	(0.043)	-0.0904	(0.045)	-0.1987	(0.228)	-0.3363	(0.225)	-0.2674	(0.227)
Alternative Instruments	Included	p value	Included	p value	Included	p value	Included	p value	Included	p value	Included	p value
Officers (joint significance)	Y	(0.000)	N		N		Y	(0.000)	N		N	
Officer confinement rate	N		Y	(0.000)	N		N		Y	(0.000)	N	
Stricter officers	N		N		Y	(0.000)	N		N		Y	(0.000)
F statistic	8.48	(0.000)	33.13	(0.000)	21.44	(0.000)	6.89	(0.000)	21.21	(0.000)	19.04	(0.000)

[#]The three risk scores in the equations above are calculated using DOC's static risk assessment. For more information, see: R. Barnoski & E. Drake (2007). *Washington's Offender Accountability Act: Department of Corrections' static risk instrument* (Document No. 07-03-1201). Olympia: Washington State Institute for Public Policy.

Appendix C: Studies Used in the Meta-Analysis

Supervision With Risk Need Responsivity Model

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Intensive Supervision: Treatment

- Bagdon, W. & Ryan, J. E. (1993). Intensive supervision of offenders on prerelease furlough: An evaluation of the Vermont experience. *FORUM on Corrections Research*, 5(2). Retrieved June 23, 2011 from http://www.csc-scc.gc.ca/text/pblct/forum/e052/052_e.pdf
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- Deschenes, E. P., Turner, S., & Petersilia, J. (1995, May). *Intensive community supervision in Minnesota: A dual experiment in prison diversion and enhanced supervised release*. Santa Monica, CA: RAND.
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- Stichman, A., Fulton, B., Latessa, E., & Travis, L. (1998, December). *Evaluating the prototypical ISP: Hartford Intensive Supervision Unit Connecticut Office of Adult Probation Administrative Office of the Courts* (Final Report). Cincinnati, OH: University of Cincinnati, Division of Criminal Justice.
- Turner, S., & Petersilia, J. (1992). Focusing on high-risk parolees: An experiment to reduce commitments to the Texas Department of Corrections. *Journal of Research on Crime & Delinquency*, 29(1), 34-61.

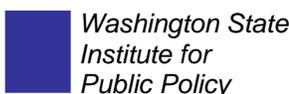
Intensive Supervision: Surveillance

- Bagdon, W. & Ryan, J. E. (1993). Intensive supervision of offenders on prerelease furlough: An evaluation of the Vermont experience. *FORUM on Corrections Research*, 5(2). Retrieved June 23, 2011 from http://www.csc-scc.gc.ca/text/pblct/forum/e052/052j_e.pdf
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For further information, contact:

Elizabeth K. Drake at (360) 586-2767, ekdrake@wsipp.wa.gov.

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