

## Conducting Reliable Research on Parole Outcomes

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### Introduction

Criminal justice populations are dynamic. They are constantly changing in terms of size and composition. In part, this is because criminal justice institutions exist in dependent relationships with other institutions. Thus, court dockets are affected by police activities; prison populations are affected by court decisions and returns from parole; and parole caseloads are shaped by prison release patterns. Moreover, the changing characteristics of a particular population affect a range of dynamics within that population. Within parole—the focus of this fact sheet—recidivism outcomes are affected by changes to the risk profiles of parolees under supervision, and this effect is reciprocal. As caseloads get riskier, recidivism rates will likely increase, but as riskier parolees are removed from caseloads because of revocations and new criminal convictions, caseload risk will decrease. These nuances are generally ignored by the public, the media, and often policymakers—who tend to focus primarily on the relationships between criminal activities and correctional outcomes. But such a perspective underemphasizes the ways that key institutions affect one another, and the ways that institutional characteristics and the local political environment shape correctional population and sanctioning patterns.

**This fact sheet will explore these issues with a focus on the recent history of parole in Colorado, which experienced significant changes to policies, practices, and outcomes in the wake of a tragic, high-profile event—the murder of Tom Clements, the Executive Director of the Department of Corrections, by a high-risk parolee in Mark of 2013 (Lin, 2018).** This fact sheet will also highlight the importance of accounting for institutional and environmental influences on parole outcomes, review some of the ways that re-

searchers can empirically measure them and identify common analytic challenges in these efforts.

### Factors that affect parole populations and outcomes

In general, correctional populations are affected by the movement of people into and out of various statuses. Parole population and sanctioning patterns, for example, are fundamentally impacted by the number and type of people being released onto parole from prison, as well as the number and type of people being removed from parole through successful completions, revocations, and convictions for new crimes. New parolees are constantly being placed onto parole agency caseloads, and existing parolees are constantly exiting these caseloads. Thus, the number of people being released from prison—either through mandatory parole or discretionary parole board decisions—directly affects parole caseload sizes, and the composition of this group (i.e., their risk and need profiles) affects their likelihood of violation, revocation, and successful parole completion. Clearly, the behaviors of parolees themselves (i.e., compliance with parole conditions or engagement in prohibited activities) are a key explainer of these movements, but they are not strictly the products of parolee behaviors. Correctional institutions themselves evolve over time due to a range of internal and external factors and these changes affect parole dynamics. Specifically, populations and sanctioning are impacted by institutional and environmental characteristics such as supervision intensity, crowding and caseload pressures, policy changes, and more broadly, political expectations and high-profile events. A key challenge for researchers is measuring these explanatory factors when they are identified.

Parolees exist in a state of conditional liberty; they live in the community, but under more restrictive conditions than non-parolees. Upon release from prison, parolees are made aware of their conditions of supervision. They are of course prohibited from engaging in criminal activity, as all people are. But they are also subject to other behavioral directives such as curfews, residency restrictions, rules about where they can go and when they can go there, prohibitions against firearm possession, abstaining from alcohol, attending mandatory treatment, and maintaining steady employment. They also experience forms of supervision and monitoring that non-parolees do not. These include regularly reporting to their supervising parole officer, obtaining permission before changing employment or residence, drug testing, and submitting to warrantless searches of their car or residence by a parole officer at any time. Violation of any of these conditions can lead to revocation—return to prison—on either a new criminal conviction or a technical violation of parole, and these violations are produced by the behavior of parolees, the amount of attention that agencies pay to these behaviors, and the willingness of agencies to deliver sanctions for various violations that are detected (see, for example, Grattet, Lin & Petersilia 2001; McCleary 1992). Thus, parole sanctioning outcomes, which shape the composition of the parolee population, are jointly produced by parolee behaviors and systemic responses to those behaviors (Grattet & Lin 2016; Grattet, Lin, & Petersilia 2011; Lin, Grattet & Petersilia 2010, 2012; Wright & Cesar 2013).

## Individual and neighborhood characteristics

A substantial body of research identifies characteristics that predict a higher likelihood of recidivism while on parole. In terms of parolee characteristics, risk prediction instruments used by parole agencies typically rely upon “static” predictors such as demographics and criminal history, and “dynamic” factors like mental health, employment, family structure, and substance use (Grattet, Lin, & Petersilia 2011; Harcourt 2007; Petersilia 2009). The research underlying the use of these recidivism predictors generally finds that recidivism risk is higher among younger parolees, male parolees, those with more extensive criminal histories, those with mental health and substance abuse issues, and those with less stable employment and families (Andrews, Bonta, & Wormith, 2011; Berg & Huebner 2011; Cobbina, Huebner, & Berg 2012; Huebner &

Berg 2011; Huebner & Pleggenkuhle 2015; Makarios, Steiner, & Travis 2010; Skeem et al. 2014; Stahler et al. 2013; Steen, Opsal, Lovegrove, & McKinzey 2012; Tripodi, Kim, & Bender 2010; Wright & Cesar 2013). The environment that parolees return to can also affect recidivism outcomes. Parolees living in disadvantaged, high-crime neighborhoods exhibit higher recidivism rates than those living in better areas (Hipp, Petersilia, & Turner 2010; Kubrin & Stewart 2006; Stahler et al. 2013). Neighborhoods that have a higher concentration of social service providers have also been shown to decrease parolee recidivism (Hipp, Petersilia, & Turner 2010).

Empirically accounting for individual and neighborhood characteristics in conducting research about parole is relatively straightforward. Correctional agencies routinely collect demographic, criminal history, and socioeconomic data for use in risk assessment and other administrative functions. Colorado, like many states, uses the Level of Service Inventory-Revised (LSI-R) to guide decision-making in a variety of correctional contexts, including determining parolee supervision levels and conditions (Colorado Department of Public Safety 2008). To make these determinations, the LSI-R collects information on each parolee’s criminal history, education, employment, financial situation, family characteristics, accommodations, neighborhood, use of leisure time, companions and acquaintances, alcohol and drug problems, emotional interference, mental health, and other criminogenic attitudes. These data can be easily drawn and utilized in research about parole release, supervision, and sanctioning dynamics (see Lin 2018). Furthermore, using parolee address data, correctional agencies and researchers can link each parolee’s record to available data on neighborhood characteristics—using the U.S. Census, for example.

## Intuitional factors

In addition to individual and neighborhood factors (i.e., who parolees are and where they live), characteristics of parole supervision can affect outcomes such as violations and successful completion rates. The treatment that parolees receive, for example, can change these outcomes. Research shows that when effectively administered, treatment can reduce parolee recidivism, and this seems especially true for drug and alcohol treatment programs (Andrews et al. 1990; Lipsey 1999; Cullen 2007; Losel 1995; Peters, Hochstetler,

DeLisi, & Kuo 2015). More subtly, parolees' relationships with their supervising officers can have an effect on outcomes. Chamberlain Gricius, Borjas, and War (2018) assessed these relationships and found that those who had negative relationships with their supervising parole officers had higher recidivism rates than those who had positive relationships with their supervising officers. Parole outcomes are also affected by the degree to which parolees are supervised. Research has shown that more intensive supervision is associated with higher likelihoods of recidivism—especially for technical violations (Grattet & Lin 2016; Grattet, Lin, & Petersilia 2011; Turner, Petersilia, & Deschenes 1992; Wright & Cesar 2013). Put more plainly, the more closely that parolees are watched, the more their prohibited behaviors are detected and punished, even after controlling for their risk profiles. Parole outcomes can also be impacted by institutional pressures such as caseloads and institutional crowding. In California, research has found that parole caseload size affects violation patterns, and that correctional facility crowding decreases revocation rates (Grattet, Lin, & Petersilia 2011; Lin, Grattet, & Petersilia 2010).

Empirically accounting for institutional factors in parole research is significantly more challenging than accounting for individual and neighborhood factors. While individual data, including addresses, are captured as a matter of routine case management within parole agencies, institutional data are more disparate. Treatment data may be incomplete. Often correctional data systems indicate the programs that parolees have been referred to but do not record parolees' levels of engagement, including how often they attended treatment or how much they engaged when they did attend. Sometimes these treatment data are partially contained in violation records (e.g., when a parolee has been violated for treatment noncompliance) but fail to capture the necessary nuance in treatment engagement that may effectively predict parole success or failure. It is nearly impossible to find administrative data on the rapport between parolees and their supervising officers. Measuring rapport is itself a difficult task, and agencies are not incentivized to collect these data in any systematic way, so capturing any sort of information on rapport likely requires an intensive, qualitative approach (see, however, Chamberlain et al. 2018). Supervision data are generally available through correctional databases, but they are complex—mainly because parolees change supervision levels during their parole terms. Supervision levels can be raised or

lowered multiple times during a given parole period for a number of reasons, and thus researchers have to account for these changes, typically by using time-dependent techniques such as survival and time-series analyses (Grattet, Lin, & Petersilia 2011). Parole officer caseload size and correctional crowding present similar challenges. While these data often exist in correctional data systems, their effects change over time and researchers must therefore have access to such data for relevant time periods, and with appropriate levels of temporal detail. For example, if a researcher is measuring parolee outcomes monthly, supervision, caseload, and crowding data should also be available in monthly increments for effective inclusion in analyses.

## Factors related to policies, practices, and the political environment

The environment in which parole outcomes take place is also an important object of inquiry, but it is the most methodologically difficult to analyze. At the most basic level, parole supervision operates differently in different places. For example, Steen and Opsal (2007) analyzed parole revocation in Kentucky, Michigan, New York, and Utah, finding that revocation dynamics varied widely from state to state. Grattet, Lin, and Petersilia (2011) analyzed parole violation patterns in California, finding significant variation in violation risk across the state's four parole regions. These findings suggest that key political and socioeconomic aspects of the local environment should be accounted for in explaining parole outcomes. At a minimum, researchers should attempt to account for geographic variation in these outcomes by including geographic units (e.g., states, counties, regions) as control variables.

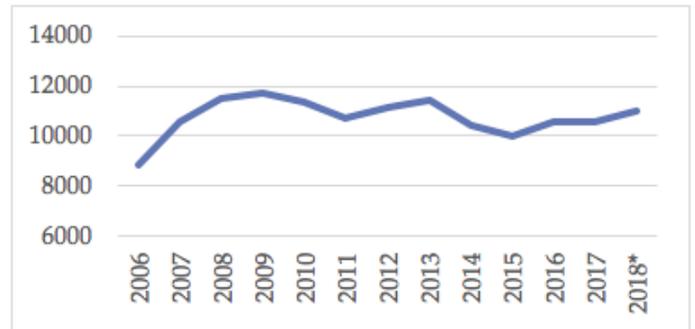
In addition to geographic variations in parole dynamics, changes to public policies can affect parole populations and sanctioning over time. Recent correctional policy changes in Colorado, for example, are likely to have effects on prison and parole populations. Harrison (2018) notes that a 2017 policy change that reduces the amount of time that certain parolees can spend reincarcerated for technical violations (HB 17-1326) will likely grow parole caseloads over the next couple of years in Colorado. But she also notes that a 2013 policy change which shortened parole periods for those sentenced on drug charges (SB 13-250) will begin to show its effects in late 2018, reducing parole caseloads. These two countervailing policy effects are key elements to understanding changes in the

Colorado parole population and its risk profiles in the near future. In general, policies that can affect parole populations and sanctioning outcomes are those that change prison release patterns, those that change parole sanctioning, those that change supervision for certain types of parolees, those that affect the length of parole periods, and those that affect the terms of successful parole completion. Empirically, a policy can be accounted for by including a temporal independent variable indicating the point in time when that policy takes effect. Researchers should also consider the types of parolees that are likely to be affected by certain policies and include relevant interaction terms in statistical analyses. Moreover, if multiple policies affect parole practice simultaneously—as documented in Harrison’s (2018) work in Colorado, for example—accurately accounting for them in research can become extremely challenging.

Researchers must be aware of policy shifts that occur during study periods, and when possible, account for them in their analyses. But some changes to parole practice are less predictable and can result from unforeseen events that dramatically change local politics and culture. Significant changes to parole practices occurred in Colorado following the murder of Tom Clements, the Executive Director of the Department of Corrections. In March 2013, a high-risk parolee named Evan Ebel absconded from supervision and killed a Domino’s Pizza delivery driver, disguised himself in the driver’s uniform, and rang Clements’ doorbell. When Clements answered the door Ebel shot and killed him, allegedly on the orders of a white supremacist gang. About a week later, Ebel was himself killed in a high-speed chase and shootout with law enforcement officers in Texas. In the months that followed, these events were covered extensively—and critically—in the local media, which focused on a number of agency failures that contributed to the killings, such as the length of time it took parole to respond to Ebel cutting off his electronic monitor (6 days), and a clerical error that led to Ebel’s early release from prison (see Lin 2018). The Colorado Department of Corrections responded to the killing and its aftermath in formal and informal ways. Formally, it hired more parole officers, created a Fugitive Apprehension Unit, and imposed a two-hour deadline for responding to electronic monitor tampers. Informally, the agency cracked down on parole violations and the parole board became more conservative in its release and revocation decisions. These changes were acknowledged by correctional officials in the

Denver Post newspaper (Mitchell 2014). The impact on parole populations and sanctioning was significant. **Figure 1** shows the total number of parolees at year-end in Colorado between 2006 and 2018. Note the sharp decline in the parole population between 2013 and 2015, in the wake of the killing.

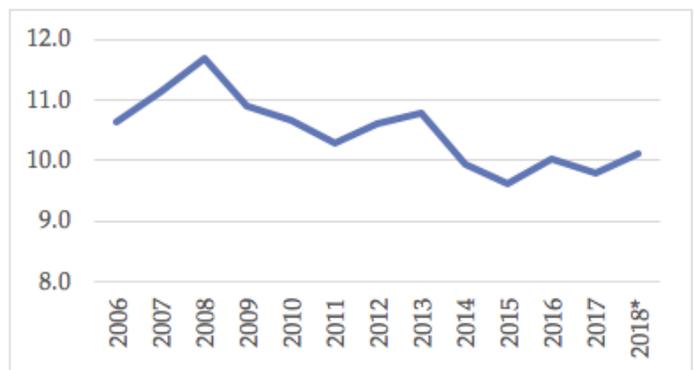
**Figure 1: Total number of parolees in Colorado at year-end, 2006-2018**



Source: Colorado Division of Criminal Justice  
 \*All annual values represent the state parolee population on December 31 except for 2018, which represents the parolee population on September 30, 2018.

This dynamic is also evident in examining parolees as a percentage of Colorado’s overall correctional population (which also includes prisoners, probationers, and those under community corrections supervision). Note the decline in this percentage between 2013 and 2015 in **Figure 2**.

**Figure 2: Parolees as a percentage of Colorado’s overall correctional population, 2006-2018**

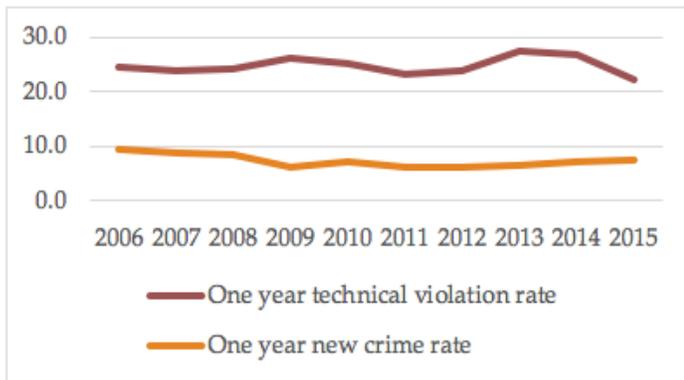


Source: Colorado Division of Criminal Justice  
 \*All annual values represent the proportion of state parolees on December 31 except for 2018, which represents the parolee proportion on September 30, 2018.

Why did the parole population decline in the wake of Clements’ murder? As mentioned above, the state

cracked down on parolee misconduct under harsh public criticism. **Figure 3** shows one-year technical violation and new crime rates for annual cohorts of parolees. Technical violation rates for parolees released in 2013 and 2014 are substantially higher than for prior years. Parolee new crime rates also rose slightly after the killing, which may reflect an increase in arrests made by parole officers, as well as an increase in police arrests made in partnership with, or informed by, parole officers (Lin 2018).

**Figure 3: One-year technical violation and new crime rates for parolees, 2006-2015**



Source: Colorado Division of Criminal Justice (<https://www.colorado.gov/pacific/dcj-ors/ors-recidivism>)

The Colorado parole population also declined because the parole board became more conservative with its prison release decisions. **Table 1** shows board recommendations for discretionary release from prison onto parole between 2013 and 2017 (the only years for which these data are available). The table also shows the percentage of eligible inmates recommended for release by the Parole Board Release Guideline Instrument (PBRGI)—a standardized, actuarial risk assessment instrument designed to identify inmate readiness for release.

While the parole board’s release recommendation percentage drops sharply after 2013, the PBRGI’s recommendations remain relatively stable. And as the third column shows, the parole board was more inclined to depart from PBRGI recommendations after 2013.

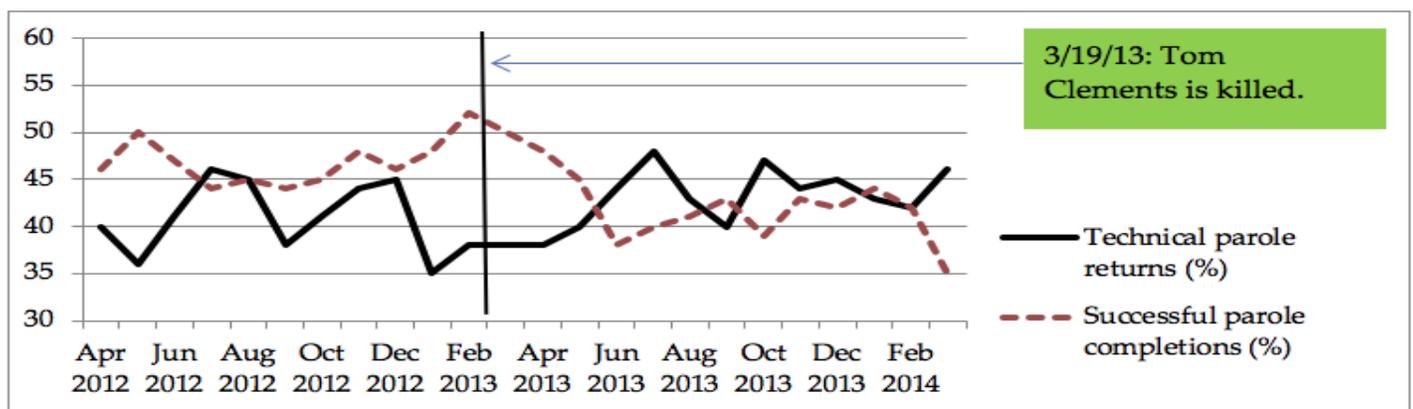
**Table 1: Parole board release decisions and agreement with PBRGI recommendations 2013-17**

Fiscal Year	Board designates for release (%)	PBRGI designates for release (%)	Agreement in release decisions (%)
2013	39.0	53.5	72.90
2014	32.1	49.5	64.85
2015	32.4	51.5	62.91
2016	35.6	53.6	66.42
2017	30.0	46.2	64.94

Source: Ford, K. (2018). Analysis of Colorado state board of parole decisions: FY 2017 report. Denver, CO: Colorado Division of Criminal Justice.

The suddenness of these changes to parole practices in Colorado is even more evident when one focuses on the months immediately preceding and following the murder to Tom Clements. **Figure 4** shows the percentage of all monthly parole outcomes that were returns to prison on technical violations and successful completions of parole between April 2012 and March 2014.

Immediately after the killing, returns to prison on technical violations increased sharply and successful parole completions dropped sharply. This effect persisted for months afterwards.



Source: Lin, J. (2018). Original data provided by the Colorado Department of Corrections.

In Colorado, a tragic, high-profile event rapidly and dramatically shifted state parole practices. This phenomenon was documented empirically through the evaluation of an evidence-based counseling program called Motivational Interviewing (MI) that was being piloted among Colorado parole officers (Lin 2018). The murder of Tom Clements and its aftermath interrupted the study period for the MI evaluation and resultant changes to parole practices interfered with accurately assessing the impacts of MI. Initial analyses, which did not account for the killing, showed that MI increased recidivism among parolees. This finding was incredibly puzzling, but when a temporal control for “the number of days that a parolee was supervised after the killing” was introduced into the analyses, the effects reversed, showing that MI did indeed have the intended effect—reducing recidivism. This effect could not have been identified without understanding the changes to the state’s political environment in the wake of the murder, which significantly

increased the likelihood of parolee recidivism outcomes. The temporal control accounted for these changes and allowed for the effective identification of MI’s utility. The analyses were also able to measure the effects of these parole practice changes on parolee recidivism overall. Analyses of the temporal control variable showed that a parolee supervised for a year in the community after the killing had roughly double the recidivism risk as that same parolee supervised for a year before the killing. In other words, changes to parole practice following Tom Clements’ murder increased recidivism risk independently of any changes to parolee characteristics.

## Conclusion

For research on parole populations and sanctioning to be effective, researchers must take steps to understand and empirically account for parole dynamics at multiple levels. Most fundamentally, the characteristics of parolees—including the areas they live in—predict parole outcomes. But institutional characteristics such as supervision intensity, caseload pressures, and facility crowding can also have effects on these outcomes. Policy changes also impact outcomes—especially policies that directly affect sanctioning and supervision practices. And finally, the political environment in which parole practice takes place affects outcomes. These effects can also exist in dialogue with one another. Policies that affect sanctioning, for

example, can change the risk profiles of parolees under supervision, which will affect the chances of recidivism and successful parole completion. And as demonstrated by the case of Colorado, high-profile events can lead directly to changes in policy and practice that shift parole outcomes.

Reliable research about parole must consider the empirical realities of parole supervision in a holistic manner. This means that researchers should go beyond using parolee-level data in predicting sanctioning and outcomes. When available, information about parolees’ neighborhoods and supervision levels should be integrated into analyses. Institutional characteristics such as caseload pressures and facility crowding should also be considered, as should any knowledge of relevant policy changes and changes to practice that emerge from local events. Empirically accounting for all of these variables can be very challenging, and in some cases, impossible. But researchers must be aware of these dynamics, and at least acknowledge their potential impacts in developing and executing studies of parole outcomes.

## References

- Andrews, D.A., Bonta, J., & Wormith, J.S. (2011). The Risk-Need-Responsivity model: Does adding the good lives model contribute to effective crime prevention? *Criminal Justice and Behavior* 38(7): 735-755.
- Andrews, D.A., Zinger, I., Hoge, R.D., Bonta, J., Gendreau, P., & Cullen, F.T. (1990). Does correctional treatment work? A clinically relevant and psychologically informed meta-analysis. *Criminology* 28(3): 369-404.
- Berg, M.T., & Huebner, B.M. (2011) Reentry and the ties that bind: An examination of social ties, employment, and recidivism. *Justice Quarterly* 28(2): 382-410.
- Chamberlain, A., Gricius, M., Wallace, D., Borjas, D., & Ware, V. (2018). Parolee-parole officer rapport: Does it impact recidivism? *International Journal of Offender Therapy and Comparative Criminology* 62(11): 3581-3602.

- Cobbina, J.E., Huebner, B.M., & Berg, M.T. (2012). Men, women, and postrelease offending: An examination of the nature of the link between relational ties and recidivism. *Crime and Delinquency* 58(3): 331-361.
- Colorado Department of Public Safety (2008). What is the LSI? Accessed online (December 20, 2018): [https://cdpsdocs.state.co.us/ccjj/Meetings/2008/2008-05-09\\_LSI.pdf](https://cdpsdocs.state.co.us/ccjj/Meetings/2008/2008-05-09_LSI.pdf)
- Cullen, F.T. (2007). Make rehabilitation corrections' guiding paradigm. *Criminology and Public Policy* 6(4): 717-727.
- Ford, K. (2018). Analysis of Colorado state board of parole decisions: FY 2017 report. Denver, CO: Colorado Division of Criminal Justice.
- Grattet, R., & Lin, J. (2016). Supervision intensity and parole outcomes: A competing risks approach to criminal and technical parole violations. *Justice Quarterly* 33(4): 565-583.
- Grattet, R., Lin, J., & Petersilia, J. (2011). Supervision regimes, risk, and official reactions to parolee deviance. *Criminology* 49(2): 371-399.
- Harcourt, B. (2007). *Against prediction: Profiling, policing, and punishing in an actuarial age*. Chicago: University of Chicago Press.
- Harrison, L. (2018). *Adult and juvenile correctional populations forecasts*. Denver: Colorado Division of Criminal Justice.
- Hipp, J.R., Petersilia, J., & Turner, S. (2010). Parolee recidivism in California: The effect of neighborhood context and social service agency characteristics. *Criminology* 48(4): 947-979.
- Huebner, B.M., & Berg, M.T. (2011). Examining the sources of variation in risk for recidivism. *Justice Quarterly* 28(1): 146-173.
- Huebner, B.M., & Pleggenkuhle, B. (2015) Residential location, household composition, and recidivism: An analysis by gender. *Justice Quarterly* 32(5): 818-844.
- Kubrin, C.E., & Stewart, E.A. (2006). Predicting who reoffends: The neglected role of neighborhood context in recidivism studies. *Criminology* 44(1): 165-197.
- Lipsey, M.W. (1999). Can intervention rehabilitate serious delinquents? *Annals of the American Academy of Political and Social Science* 564(1): 142-166.
- Lin, J. (2018). Program evaluation in the context of supervision regime change: Motivational Interviewing in Colorado. *Justice Quarterly* 35(5): 895-918.
- Lin, J., Grattet, R., & Petersilia, J. (2010). 'Back-end sentencing' and reimprisonment: Individual, organizational, and community predictors of parole sanctioning decisions. *Criminology* 48(3): 759-795.
- Lin, J., Grattet, R., & Petersilia, J. (2012). Justice by other means: Venue sorting in parole revocation. *Law and Policy* 34(4): 349-372.
- Losel, F. (1995). The efficacy of correctional treatment: A review and synthesis of meta-evaluations. In J. McGuire (Ed.), *What works: Reducing reoffending guidelines* (pp. 79-111). West Sussex, England: John Wiley & Sons.
- Makarios, M., Steiner, B., & Travis, L.F. (2010). Examining the predictors of recidivism among men and women released from prison in Ohio. *Criminal Justice and Behavior* 37(12): 1377-1391.
- McCleary, R. (1992). *Dangerous men: The sociology of parole*. Albany, NY: Harrow and Heston.
- Mitchell, K. (2014, March 16). One year later: The slayings of Tom Clements and Nathan Leon. *Denver Post*, p. 1A.
- Peters, D. Hochstetler, A., Delisi, M., Kuo, H. (2014). Parolee recidivism and successful treatment completion: Comparing hazard models across propensity methods. *Journal of Quantitative Criminology* 31(1): 148-181.
- Petersilia, J. (2009). *When prisoners come home: Parole and prisoner reentry*. New York: Oxford University Press.

Skeem, J. L., Winter, E., Kennealy, P. J., Louden, J.E., & Tatar, J.R. II. (2014). Offenders with mental illness have criminogenic needs, too: Toward recidivism reduction. *Law and Human Behavior* 38(3): 212-224.

Stahler, J., Mennis, J., Belenko, S., Welsh, W., Hiller, M., & Zajac, G. (2013). Predicting recidivism for released state prison offenders. *Criminal Justice and Behavior* 40(6): 690-711.

Steen, S., & Opsal, T. (2007). Punishment on the installment plan: Individual-level predictors of parole revocation in four states. *The Prison Journal* 87(3): 344-366.

Steen, S., Opsal, T., Lovegrove, P., & McKinzey, S. (2013). Putting parolees back in prison: Discretion and the parole revocation process. *Criminal Justice Review* 38(1), 70-93.

Tripodi, S.J., Kim, J.S., & Bender, K. (2010). Is employment associated with reduced recidivism?: the complex relationship between employment and crime. *International Journal of Offender Therapy and Comparative Criminology* 54(5): 706-720.

Turner, S., Petersilia, J., & Deschenes, E.P. (1992). Evaluating Intensive Supervision Probation/Parole (ISP) for drug offenders. *Crime and Delinquency* 38(4): 539-556.

Wright, K., & Cesar, G. T. (2013). Toward a more complete model of offender reintegration: Linking the individual-, community-, and system-level components of recidivism. *Victims and Offenders* 8(4), 373-398.

Additional uncited reference:

Skeem, J. L., Winter, E., Kennealy, P. J., Louden, J.E., & Tatar, J.R. II. (2014). Offenders with mental illness have criminogenic needs, too: Toward recidivism reduction. *Law and Human Behavior* 38(3): 212-224.







