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# Estimating the Cost Savings Associated with a 1% Reduction in Recidivism for Marion County, Indiana

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Submitted by

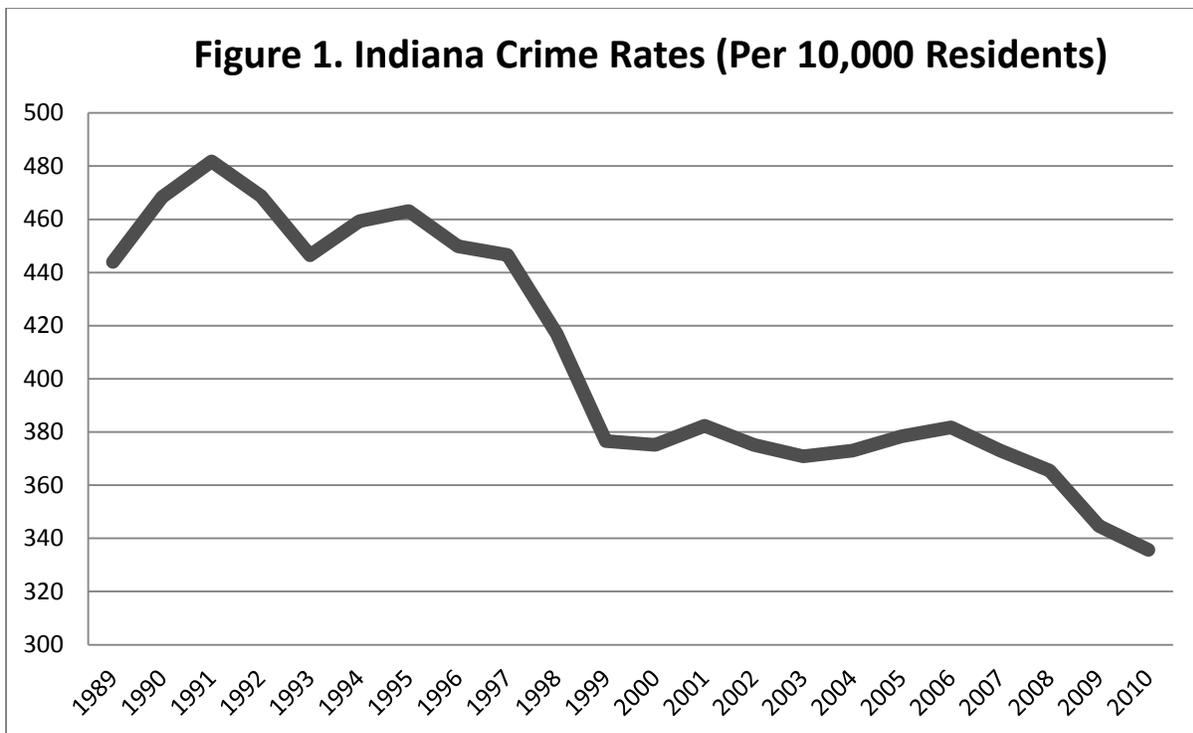
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## Introduction

The size of the prison population in Indiana and the volume of people leaving prison and returning to Marion County (Indianapolis) is a public policy crisis. Consider the following:

- Over the past 20 years, the number of people in prison in this state has reached an all-time high. In 1989, the prison population in this state had risen to a level higher than had been the case at any point in the state's history. On the final day of that year, there were 12,341 adults incarcerated in Indiana prisons. Ten years later (on the final day of the year in 1999), the population in Indiana prisons had risen to 19,309. Another ten years passed and by the end of 2009, the prison population was now 28,389.
- Over the same 20-year period, the crime rates were following an entirely different pattern, as evidenced in Figure 1.



In fact, the crime rates for Indiana in 2010 were lower than they had been at any point since 1969. Research has consistently shown that the reductions in crime rates over this period are not due to the increases in the rates of incarceration.

- According to a report issued by the Justice Policy Institute in 2009, Indiana spent \$645 Million on correctional expenditures in 2007.<sup>1</sup> It is particularly noteworthy that only 17 states spent more on correctional costs that same year.

### Scope of the Research Question

The purpose of the analysis reported here is to estimate the financial savings that would be realized with a one-percent decrease in the recidivism rate for Marion County. There are multiple dimensions to this particular research question. First, there must be a determination as to what is meant by the term “recidivism.” We begin with a cohort of offenders that have been released from prison and returned to communities within Marion County. Recidivism for this group may involve any new arrests committed after their release from prison. An important consideration is how to identify indicators of new criminal offenses. As we are relying on official measures of offending, we would either be interested in capturing new arrests or new convictions. An alternate approach would be to examine whether the offenders returned to prison within a specified period of time. A return to prison would either be the result of a conviction on a new offense or the result of violating the terms of their conditional release (i.e., the terms of their parole or probation). For the state of Indiana, the Indiana Department of Correction (IDOC) has a tradition of considering recidivism as any return to prison within three years of release from an IDOC facility.

Another dimension to the key research question for this project has to do with the matter of estimating the costs associated with recidivism. There are a variety of ways that the costs associated with crimes have been conceptualized. In addition to the ways that costs accrue due to the different aspects of criminal justice processing (costs associated with police actions, incarcerations in jail, court processing costs, community supervision costs related to probation and community corrections, and prison commitments), there is also research that has calculated social costs relating to the property loss and victim costs.<sup>2</sup> In a report from the Criminal Justice Commission for the State of Oregon, Michael Wilson provided taxpayer and victimization costs for a series of processing points in the criminal justice system, including arrest, conviction, probation, parole, and jail. Wilson notes that the taxpayer costs for each point in the criminal justice system are not easy to estimate. His estimates are presented for a limited number of offenses: homicide, rape, robbery, aggravated assault, and then the broad categories of property crimes, drug offenses, and other offenses.

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<sup>1</sup> Justice Policy Institute (2009) “Pruning Prisons: How Cutting Corrections Can Save Money and Protect Public Safety.” Available online at [http://www.justicepolicy.org/images/upload/09\\_05\\_REP\\_PruningPrisons\\_AC\\_PS.pdf](http://www.justicepolicy.org/images/upload/09_05_REP_PruningPrisons_AC_PS.pdf).

<sup>2</sup> See Lochner, Lance, & Moretti, Enrico. (2004). The Effect of Education on Crime: Evidence from Prison Inmates, Arrests, and Self-Reports. *American Economic Review*, 94(1):155-189. See also Miller, Ted. R., Cohen, Mark A., & Wiersema, Brian. (1996). *Victim Costs and Consequences: A New Look*. Washington DC: National Institute of Justice.

For the purposes of this analysis, we examined the possibility of providing a more detailed analysis that considered the criminal justice costs and social costs described above. To do so would, unfortunately, require the manual capturing of detailed information from the county's data management system JUSTIS. For a recent analysis on recidivism for Marion County's LAP initiative, we were provided with data on arrests from the JUSTIS system. Those data, however, did not specify the reason for the arrest so we are unable to identify the offense or to distinguish arrests for new offenses from those arrests for probation and parole violations. We have access to JUSTIS to look up the information, but the amount of time that would be necessary to gather these data for the full release cohort would have meant this project could not be completed within the 30-day window we agreed to.<sup>3</sup>

We should note as well that there were concerns with the data that was made available to us for this analysis. From Marion County, we received a data set that was supposed to capture all arrests for the observation period of interest. We have come to understand, though, that the data are not complete and the gaps in the data are not systematic or predictable. Coupled with the situation described above where we are limited in our ability to distinguish the new arrests from technical violations, we could not have produced an analysis that we could have offered with confidence as the basis for valid conclusions. We also received data from IDOC on those offenders released to Marion County. We were under the impression that we were provided with a complete cohort of released offenders. Yet, for the cohort we focus on in this analysis (those released from prison in 2007), we received data from IDOC on 4,776 offenders released from prison and returning to Marion County.

The data provided by IDOC is incomplete, though, in ways we can determine and correct for. To be able to estimate the costs associated with returning the offenders to prison, we needed to know how long they were expected to be in prison. From the data we received from IDOC, we needed to look up expected release dates on 706 offenders. In 22% of the cases, we learned that the offender had already been released from prison, and as such, should have appeared in subsequent release cohorts but did not. This gap in the data was unexpected, but we were able to manually fill in gaps and have done so. Relative to the gaps that appear in the JUSTIS data, we believe we are able to produce cost estimates with more confidence based on the data we have on prison returns and releases.

Given the concerns we note here, we elected to go with the following research design.

## Research Design

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<sup>3</sup> We drew a random sample of cases from the release cohort and compiled comprehensive follow-up data on arrests, convictions and jail stays. In a separate report, we will offer a proposal for a more detailed costs analysis based on such a comprehensive examination of the data. Such an analysis would require a longer time to complete.

We are interested in estimating the cost savings associated with a one-percent reduction in recidivism. We define recidivism as the return of an offender to prison within three years after his or her release from prison. Since we were interested in a follow-up period of three full years after release, we elected to base our analysis on a cohort of offenders released from IDOC during 2007. We received data from IDOC that identified a cohort of 4,776 offenders released at some point during 2007 and returning to Marion County. In the data set we received, we were also provided with information on whether each offender returned to IDOC within three years after their release. If they returned to prison, we looked to determine how long they were due to be in prison. Our estimates of the costs of the reincarceration were calculated by multiplying the expected (or actual if the person has already been released again) number of days in prison by the current average per diem rate reported by IDOC: \$53.96. To determine the expected length of the prison stay, we did one of the following, as appropriate:

- If the person has already been released from prison again, we captured the actual release date.
- If the person is still in prison, we looked for what IDOC reports as the earliest possible release date. This provides a conservative estimate of the length of time in prison, as some of these offenders may not be actually released on the earliest possible date.
- In a small number of cases, we did not have access to an earliest possible release date. In those cases, we based our expected release date on the sentence from the court, taking into account any good-time credit calculations that the offender is eligible for. In one case, the offender is serving a life sentence, so we based the expected release date on current estimates of expected life span given the individual's demographic characteristics.

## Results of Analysis

Of the 4,776 offenders released from prison in 2007, 2,463 had been returned to prison within three years of their release date. This represents 51.6% of the original sample. That more than half of the formerly-incarcerated offenders are returned to prison is disappointing in and of itself. It is also noteworthy, though, that IDOC has published three-year recidivism rates for those released from 2002-2005 and found statewide return rates of 39.2% for those released in 2002, 38.6% for those released in 2003, 37.8% for those released in 2004, and 37.4% for those released in 2005. A three-year recidivism rate of 51.6% suggests that the recidivism rates in Marion County are higher than in other parts of the state. Our analysis shows that among all the offenders returning to prison within three years of their release, the average length of time each offender will spend in prison is 626 days and the average cost for the new period of incarceration per offender is \$33,786.

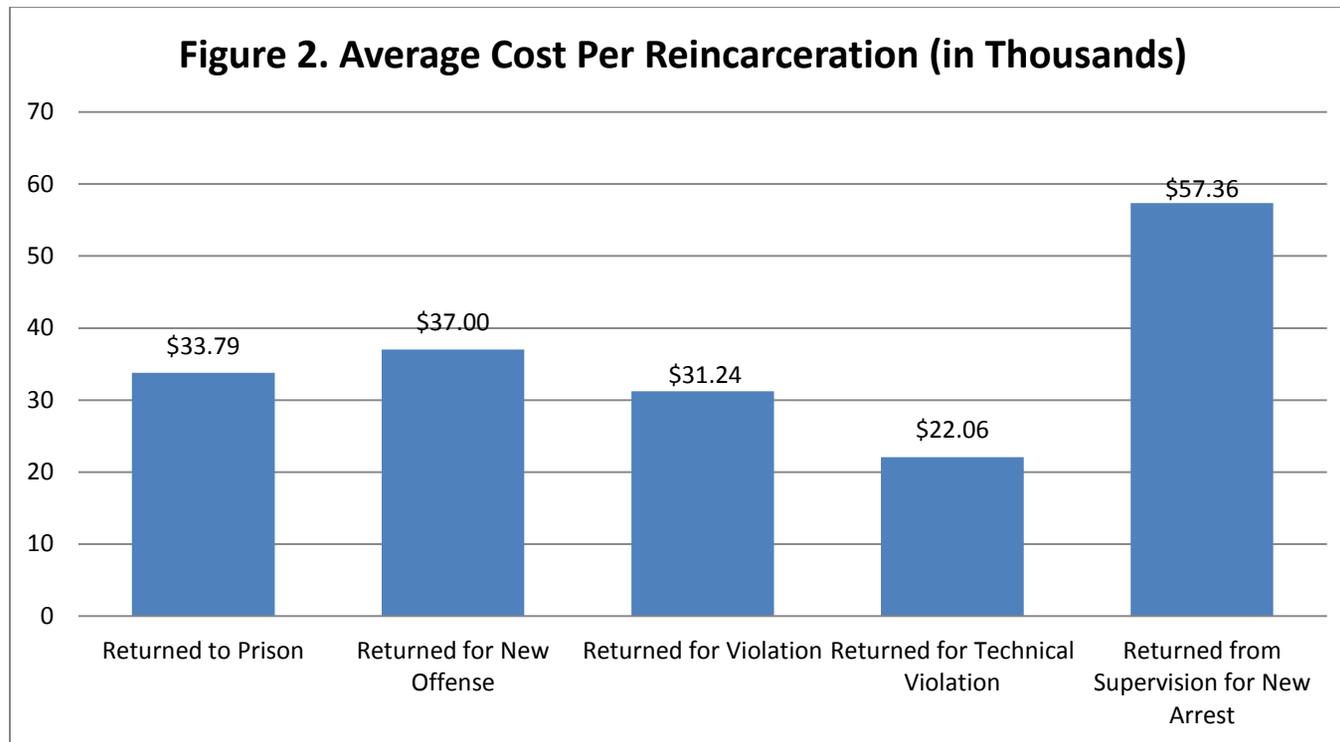
When an offender returns to prison, IDOC identifies whether the person is coming to prison because of a new offense or because of a technical violation. We make use of that designation in distinguishing between several groups of returning offenders:

- Those who have been convicted of a new offense and sentenced to prison on a new cause number. 1,090 offenders (22.8%) fell in this category. The average length of time an offender in this group will spend in prison when they go back is 686 days. The average cost per offender of the new incarceration is \$36,998.
- Those who were returned to prison as a result of a revocation of their community supervision (probation, CTP, or parole). There were 1,373 (28.7%) persons in this category. It is noteworthy that among those returning to prison, more than half were returned for violations. The average length of time an offender in this group will spend in prison when they go back is 579 days. The average cost per offender of the new incarceration is \$31,236.
  - Among those returning to prison for violating the terms of their community supervision, 1,016 (21.3% of the total cohort) were returned for a technical rule violation. This group tended to spend shorter amounts of time in prison when they did go back. The average length of time an offender in this group will spend in prison when they go back is 409 days. The average cost per offender of the new incarceration is \$22,055.
  - Among those returning to prison for violating the terms of their community supervision, 357 (7.5% of the total cohort) were returned on the basis of a new offense (although not necessarily convicted of a new offense). This group tended to spend the longest average amounts of time in prison when they did go back. The average length of time an offender in this group will spend in prison when they go back is 1,063 days. The average cost per offender of the new incarceration is \$57,363.

We are looking to conceptualize the cost savings of a 1% reduction in recidivism for each of the groups identified above. We consider a 1% reduction based on the actual rate of recidivism as described above. So for instance, the data show that among all offenders in the cohort, 51.6% recidivate. For this analysis, we consider the impact of moving the recidivism rate from 51.6% to 50.6%. In Table 1, we calculate the number of cases involved in a 1% reduction in recidivism. With such a reduction, we then present the revised recidivism rate and the new number of cases in that particular group. Then we calculate the total costs for the original number of offenders in that group returning to prison. We also calculate the costs for the reduced number of offenders in that group (after moving the percentage down by 1%). From these two values, we calculate the difference to determine how much we can save by reducing recidivism by one percent. Figure 2 and Figure 3 provide summary results on the costs for the five groups. We then repeat this same analysis where the outcome of interest is the number of bed-days associated with each group going back to prison. Table 2, Figure 3, and Figure 4 provide those results.

Table 1. Results of Analysis Estimating Costs Savings for a 1% Reduction in Recidivism

Group	1% Reduction Involves	New Percentage	New Total	New Cost	Total Cost	Cost Savings
Returned to Prison	46	50.6	2417	\$81,660,849.89	\$83,215,007.56	\$1,554,157.67
Returned for New Offense	49	21.8	1041	\$38,515,222.81	\$40,328,139.16	\$1,812,916.35
Returned for Violation	50	27.7	1323	\$41,325,074.21	\$42,886,868.40	\$1,561,794.19
Returned for Technical Violation	46	20.3	970	\$21,393,589.71	\$22,408,131.08	\$1,014,541.37
Returned from Supervision for New Arrest	47	6.5	310	\$17,782,657.06	\$20,478,737.32	\$2,696,080.26



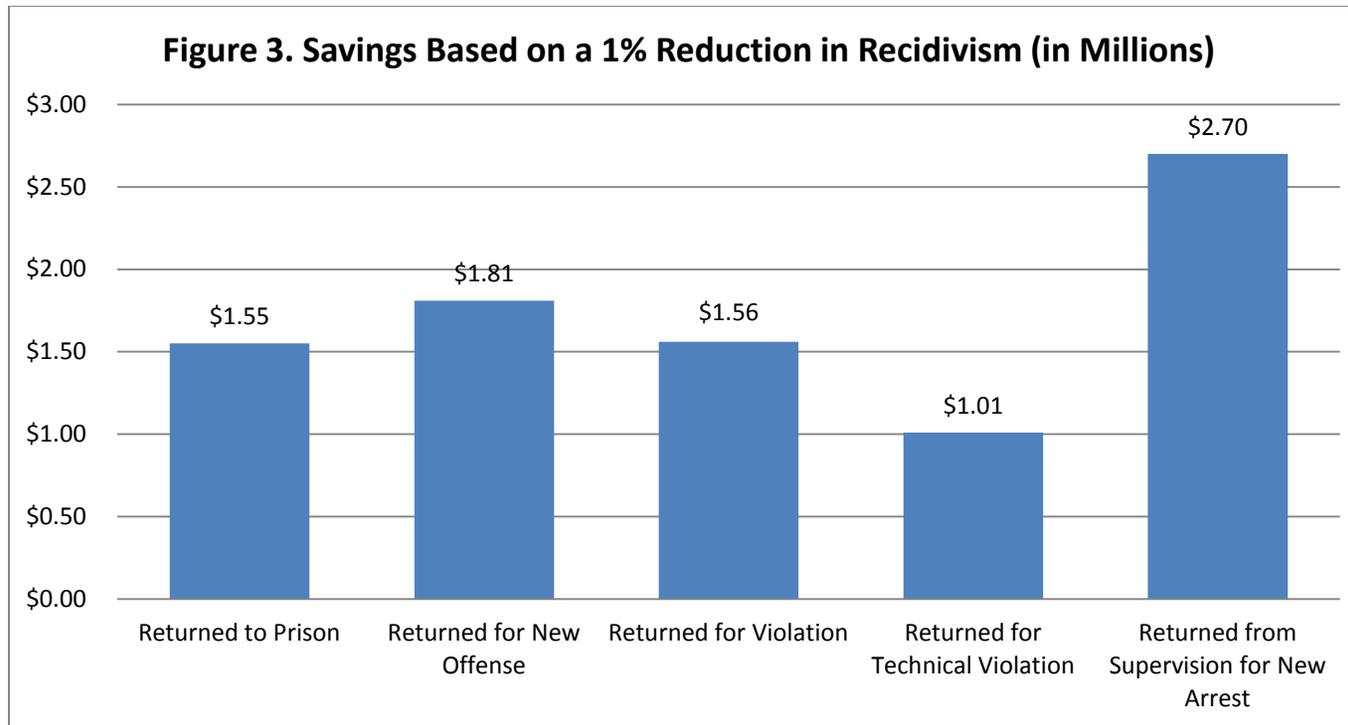
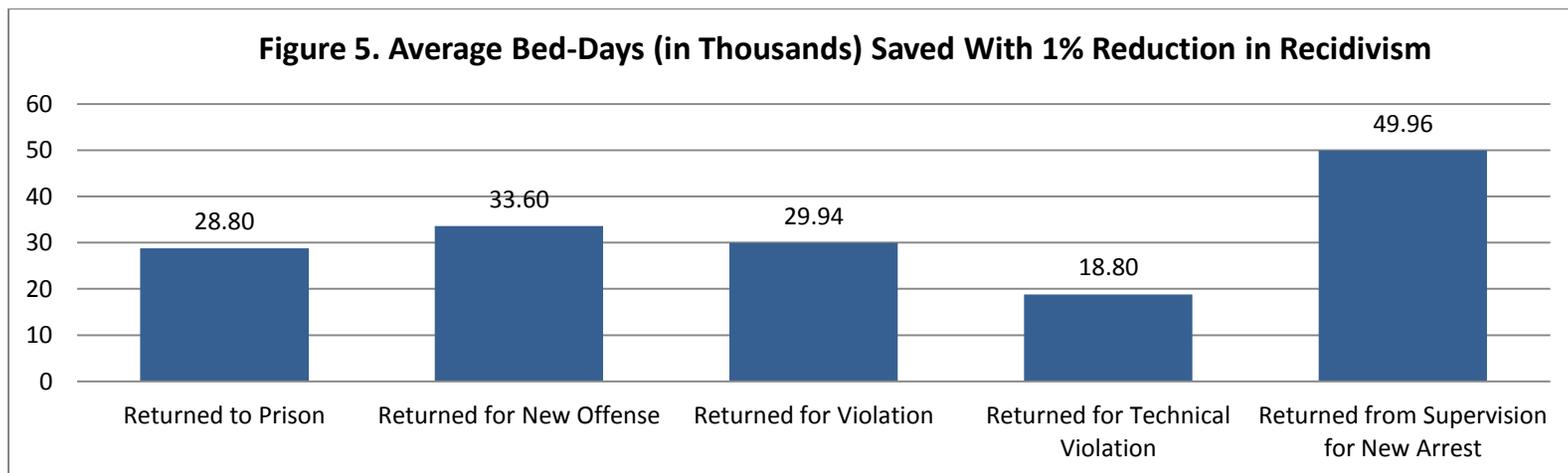
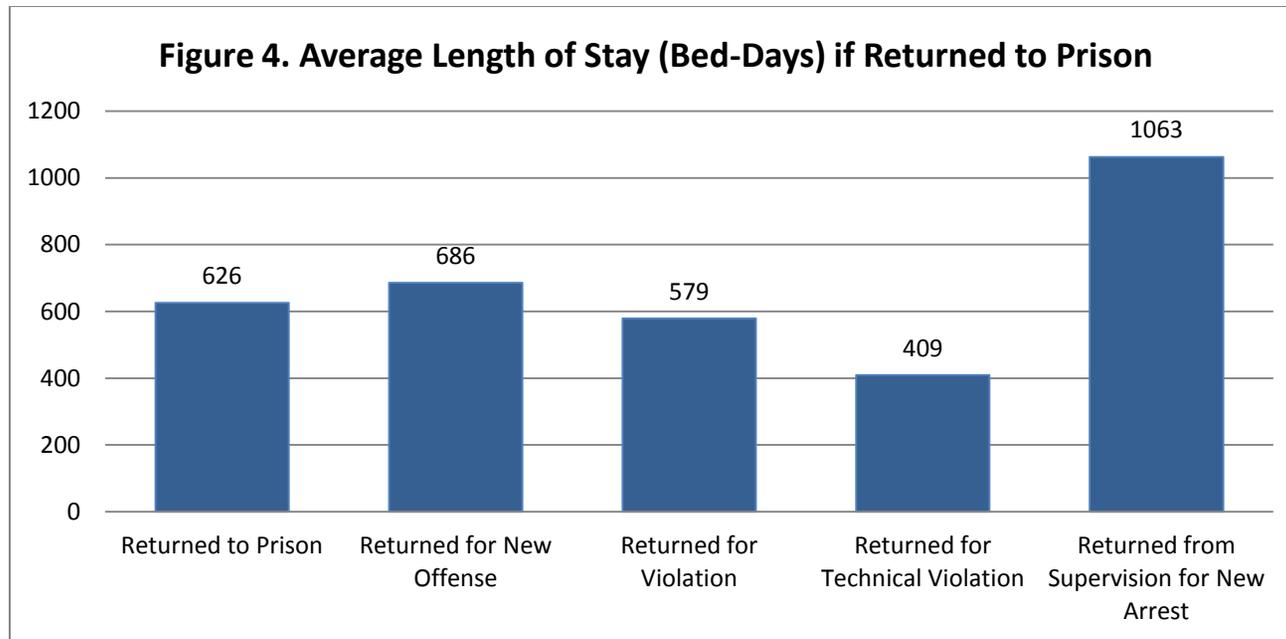


Table 2. Results of Analysis Estimating Day-Beds Saved with a 1% Reduction in Recidivism

Group	1% Reduction Involves	New Percentage	New Total	New Bed-Days	Total Bed-Days	Bed-Days Saved
Returned to Prison	46	50.6	2417	1,513,359	1,542,161	28,802
Returned for New Offense	49	21.8	1041	713,774	747,371	33,597
Returned for Violation	50	27.7	1323	765,846	794,790	28,944
Returned for Technical Violation	46	20.3	970	396,471	415,273	18,802
Returned from Supervision for New Arrest	47	6.5	310	329,553	379,517	49,964



## Discussion

The results of this analysis point to a number of policy-relevant conclusions. First, the recidivism rate for Marion County is high relative to statewide estimates. The costs associated with the high recidivism rate are also substantial. The cost of returning so many offenders to prison is more than \$83 Million. To reduce the recidivism rate by one percent would involve keeping a “mere” 46 offenders from returning to prison. What could we do to ensure that 46 offenders are retained in the community? This might involve providing treatment-focused supervision that has been shown to effectively reduce recidivism in other jurisdictions. Let’s speculate that we could hire two treatment-focused parole/probation officers to manage these 46 offenders. If they are effective at keeping the offenders from returning to prison, we stand to save \$1.55 Million. Hiring two such officers could be done for much less than \$1.55 Million. In addition, for every additional 46 offenders retained in the community we stand to save an additional \$1.55 Million.

Our estimate of the cost savings is based on the number of days that offenders would otherwise be in prison and assumes that if we keep one person from going to prison that we actually would realize a true savings in the costs of incarcerating that person. Yet, we know that until we have a significant reduction in the number of people going to prison, perhaps so that we can in fact close one of our prisons, we are not really saving the amount of money that is identified by the state as the per diem costs associated with one offender. Another way to consider the impact of a reduction in the percentage of offenders returning to prison is to examine the number of bed-days that are saved when the offenders are not going back to prison. So, for example, we can also say that since the typical offender returned to prison will spend 626 days incarcerated, by reducing the recidivism rate by 1% for Marion County, we are saving the state **28,802** prison bed-days.

The results of this analysis also point to the differential impact that we might realize if we focus more on retaining people in the community once they have violated the terms of their supervision. Again, this is where we might look to other parts of the U.S. for examples of effective strategies that have resulted in fewer people returning to prison. When we are able to reduce the number of returning prisoners so much that we can actually realize savings in terms of needing fewer facilities or fewer staff, then we can begin to consider ways to reinvest the savings to expand the capacity of the community to support the offenders in their efforts to stay out of prison. We might also think about this from an investment perspective. Community-based efforts that actually lead to the reduction in the number of people returning to prison might be expected, over time, to realize cost savings of the magnitude determined here.

The literature provides many directions for policy changes that support the goals of reducing the number of people in prison without increases in the risks to public safety. Some of these potential changes include:<sup>4</sup>

- Parole should be transformed to emphasize the provision of services and support in addition to performing their supervision function. The overall goal should be to see fewer offenders returning to prison for violating the terms of their parole—either technical rule violations or by committing new crimes.
- When states have “shifted supervision modalities from intense supervision to support”, the results have been that fewer people go back to prison on technical violations. The use of risk assessments to determine the appropriate intensity of supervision is recommended.
- There must be greater access to effective evidence-based treatment in the community.
- Deliberate effort is needed to reduce the barriers to civic participation for those released from prison: this means increasing access to jobs, education, welfare benefits, and affordable housing, among other things.
- Significantly reduce the use of parole supervision for nonviolent offenders
- Introduce graduated sanctions for those violating the terms of their community supervision
- Reinvest savings from reducing reincarcerations for the improvement of criminogenic social conditions

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<sup>4</sup> See: Greene, Judith, and Schiraldi, Vincent. (2002). *Cutting Correctly: New Prison Policies for Times of Fiscal Crisis*. Washington DC: Center for Juvenile and Criminal Justice, Justice Policy Institute. See also: Justice Policy Institute. (2010). *How to safely reduce prison populations and support people returning to their communities*. Available online at: [http://www.justicepolicy.org/images/upload/10-06\\_FAC\\_ForImmediateRelease\\_PS-AC.pdf](http://www.justicepolicy.org/images/upload/10-06_FAC_ForImmediateRelease_PS-AC.pdf).



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