DATA AND EVALUATION ISSUES: MEASURING SUCCESS AND RECIDIVISM

Introduction

The Delaware Committee on Criminal Justice Reform and its various reentry reform planning workgroups are committed to rigorous and ongoing evaluation aimed at assessing the impact of the Delaware Recidivism Reduction Project supported through the NCJRP. The Committee’s data and evaluation workgroup, which is led by an external, independent evaluation expert from the University of Delaware, met throughout the summer of 2017 to discuss evaluation methods and how these might best serve Delaware’s reentry reform initiative. Based on those discussions and the input of project leadership, a consensus was reached that the overall evaluation effort should meet the following two goals. First, the evaluation effort should provide ongoing, data-driven feedback to project management regarding the short-term impact of incremental reentry reforms on recidivism. Second, the evaluation effort should ultimately provide Delaware stakeholders and the Arnold Foundation with summative evidence on the impact of comprehensive reentry reform in Delaware on long-term recidivism and other outcomes of interest.

To accomplish goal number one, the evaluation team is proposing to conduct a series of survival analyses on small cohorts of prison releasees over the life of the project. Independent cohorts will be drawn and their time to recidivism studied as various reentry reforms are incrementally implemented. The analyses will generate feedback on the short-term effects of various reentry reforms on recidivism, thereby demonstrating that progress is being made and the reentry reform initiative is headed in the right direction. They also will help lay the foundation for planning and implementing a comprehensive impact evaluation of reentry reform aimed at documenting its effects on long-term recidivism and other relevant outcomes. While the survival analysis component of the evaluation will be initiated in 2018, the comprehensive impact evaluation and recidivism reduction study is likely to be conducted over the course of several years beginning in 2019.

Release cohorts for the survival analyses will be drawn as various reentry reforms are sequentially implemented over time. Thus, each cohort will have had the opportunity to benefit from one or more specific reentry reforms. Using Cox regression techniques, the recidivism survival rates of each cohort will be compared to those of prior cohorts as well as to a baseline cohort drawn from before any NCJRP-supported reentry reforms were initiated. This approach will allow the evaluation team to provide project management with rapid, ongoing feedback about project progress while more complex operational definition and data access and analytical issues to support a more robust, long-term impact study are explored and resolved. Commitment to the project has been received from the Delaware Department of Correction, the Delaware Statistical Analysis Center, the Delaware Criminal
Justice Information System (DELJIS) agency, and the independent evaluators at the University of Delaware.

Before delving into more detail about the survival analysis methodology, please note that we will be referring to these assessment efforts as “Success Rate Analysis.” The reasons for this are linguistic rather than analytic, as Delaware prefers to focus on success and promote the use of success-oriented terminology. In keeping with the reform initiative’s overall goal of enhancing successful reentry, we believe that reporting on “success” rather than “failure” rates is more in line with our values and the spirit of the reform effort.

The Need for an Initial Pilot Test of the Methodology

During the planning stages for the “success rate analysis” study the data and evaluation work group uncovered several issues regarding data availability and the development of operational definitions that will be critical to resolve prior to the implementation of the study. While the key data elements needed to support survival analysis and pre- post-reform comparisons for cohorts matched on risk-level are available, key questions remain about the availability of data to support various sub-group analyses that might shed light on the mediators and moderators of success. Additionally, Delaware’s unified correctional system as well as its case processing practices make it difficult to develop an operational definition of recidivism that meets the needs of all stakeholders or that consistently reflects an agreed upon concept of recidivism by stakeholders. Hence, we are proposing to first conduct a pilot test of our “success rate analysis” methodology to test the validity of our proposed operational definitions, confirm that the data elements we expect to employ meet our availability and quality assumptions, and explore whether other data elements of interest might be available and incorporated into the analysis. Based on our findings, the operational definitions and specific data elements employed in the analysis may be refined to better meet the needs of stakeholders or adapted to meet the contingencies of available data.

Cohort Selection

At the recommendation of the Technical Assistance providers, success rate analyses will be conducted by identifying cohorts of prisoners reentering the community whose LSI-R assessments place them in a conceptual range from the upper half of Moderate through the lower half of High risk for reoffending. The NCJRP targeted risk range is based on EBP principles of identifying groups who are both most in need of and most likely to benefit from EBP services. DOC’s classification process designates persons in three categories as either Low, Moderate, or High for purposes of housing and program participation. While these designations are currently effective for classification, the evaluation team will have to decide how to align LSI-R point scores with the targeted risk range for cohort selection. For initial cohorts the team will determine cut points for selection based on point score, rather than exclusively on DOC risk classification. Details and the decision as to what cut points to utilize will be determined as part of the pilot. Pilot and Baseline Cohorts will be selected based solely on risk level. Subsequent cohorts will be selected based on risk level and participation in a RNR recommended EBP program and compared to the baseline cohort.
The Delaware Strategic Plan for Prisoner Reentry: Reducing Recidivism by Former Prisoners
DATA AND EVALUATION ISSUES: MEASURING SUCCESS AND RECIDIVISM

For all success rate analyses, cohort selection will begin with queries of monthly releases from Level V prison terms (sentenced to > 1 year). Monthly cohort sizes are expected to be in the range of 90 to 95 clients, with about 10% of those being females. Preliminary analyses indicate that, once complete risk assessment data (based on the LSI-R) are available, most clients in the prison release cohorts will likely be assessed in the NCJRP-targeted risk. About 70 to 90 clients per month are thus expected to enter the tracking process in the success rate analysis. Data from multiple sources will be collected and analyzed to accomplish the identification of subjects, probation and parole data, and recidivism data. Table 1 below identifies which data will be utilized for which components, where the data is housed and whether it is available to the Data and Evaluation team.

Table 1: Success rate Measures

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Source</th>
<th>Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unique Identifier</td>
<td>DELJIS</td>
<td>Currently Available.</td>
</tr>
<tr>
<td>Demographics</td>
<td>DELJIS</td>
<td>Currently Available.</td>
</tr>
<tr>
<td>Risk Data</td>
<td>DACS</td>
<td>Currently Available.</td>
</tr>
<tr>
<td>Needs Data</td>
<td>RNR Tool, DACS</td>
<td>Available in future cohort analyses, not baseline.</td>
</tr>
<tr>
<td>Sentencing Data</td>
<td>DELJIS, JIC</td>
<td>Currently Available.</td>
</tr>
<tr>
<td>Arrest/Incarceration/Conviction Data</td>
<td>DELJIS</td>
<td>Currently Available.</td>
</tr>
<tr>
<td>Criminal History</td>
<td>DELJIS</td>
<td>Currently Available.</td>
</tr>
<tr>
<td>Case Processing, Death, release to other jurisdiction etc.</td>
<td>DELJIS, DACS</td>
<td>Currently Available.</td>
</tr>
<tr>
<td>Program Data</td>
<td>DACS, DOC providers</td>
<td>Available in future cohort analyses, not baseline.</td>
</tr>
</tbody>
</table>

As shown in Table 1, much of the data required for the success rate analyses are currently available to the Evaluation team. The Table notes the Indicator to be used in the analyses, the source of the data and whether it is currently available to be accessed by the NCJRP Evaluation team. Delaware criminal justice related data including criminal history, current offense, sentence, time served, as well as post release arrest, incarceration and conviction data are maintained by the Delaware Criminal Justice Information System (DELJIS) and are stored on secured servers. The data are currently directly available to the Delaware Statistical Analysis Center and indirectly to the UD evaluators. All risk data, as well as DOC and Probation case management data are currently available through the Delaware DOC case management system- Delaware Automated Correction System (DACS). These data are also available to the evaluation team through DOC, but due to being a case management system, extracting the data requires submitting data requests, which may take time to produce by DOC’s contracted database provider. The data are available as case notes in the DACS case management system and can be extracted manually, but this requires considerable effort. The evaluation team is familiar with the
system and has extracted data in the past and is continuing to work to make extraction of analyzable data less time consuming. Work load and data extraction effort will be explored in the pilot study.

The analysis will incorporate offender risk level data, which has previously not been utilized in the SAC’s recidivism analyses due to its relatively recent availability in the prison environment. Risk level designations from the LSI-R are stored exclusively in DACS. Offender risk levels are determined through administration of the Level of Service Inventory- Revised (LSI-R) assessment. Probation & Parole has been utilizing the LSI-R since 2003; Level IV correctional facilities have been using the tool since December 2012; Level V correctional facilities (prisons) have been utilizing the tool since June 2013. Noting the implementation dates for these assessments across the various supervision level environments is important because offender risk level data would not be available prior to those dates. Because the target offender population for the success rate analysis is the group being released from Level V prison facilities, cohorts prior to June 2013 would not be feasible if risk level is to be included.

Initial exclusions based on release conditions (all exclusions and rationale will be recorded):

- Deceased, or infirm released to end-of-life care
- Released to custody of other authorities
  - Short term custody with agreement to return may need further consideration
- Released to community supervision in another jurisdiction, or supervision in DE under authority of another jurisdiction
- Other possibilities to be considered and finalized in the pilot study are certain mental health cases and civil commitments.

Initial client grouping and possible additional exclusions:

- Sex offenders (excluded or separate analysis group)
- Ineligible for reentry processes being considered (possible control groups)
- Other possibilities – e.g., cut-off for minimum length of stay after sentencing, to eliminate cases with most/all of prison term spent in detained status or other situations that might conflict with reentry planning processes. Such cases will be accounted for and decisions will be made during the pilot to determine how they should be dealt with.

Client characteristic identification:

- Age, sex, race/ethnicity, other demographic factors relevant for reentry planning
- Prison term (for most recent release) categorization; e.g., primary offense, length of stay, treatment/programming during stay
- Summary of historical criminal justice involvement
  - History will likely by necessity be limited to Delaware involvement, but indicators of non-Delaware activity will be explored for consideration during the pilot phase.
- Risk assessments (LSI-R classification)
- Post-release supervision levels and conditions
- Type of programming, both existing and those made by NCJRP
Client tracking for success rate will begin at release from a full custodial setting to community supervision at or less restrictive than a work release setting. Thus, for example, inmates held at Level V for accommodations at lower levels will have some lag time between prison release and tracking start dates. Reasons for release to tracking start lags will be identified and recorded. Once cohorts are identified, monthly DELJIS queries will be conducted to determine whether any person in the selected cohorts has experienced a recidivism event as defined below.

**Outcome Measures**

Rearrest and recommitment will be used as categories of post-release failure, with explorations in the pilot phase serving to address complexities and refinement of these categories. For the purposes of the Success Rate Analyses, reconviction will not be included, at least for the early cut points of the analyses. The reason for this is that convictions take time. When conducting short term follow up analysis of 90, 180, and 365 days, many of the convictions for events falling within the time at risk will not occur until outside of the follow-up window. For this reason, the analyses will focus on rearrest and recommitment (including in detention status). For reporting purposes, the inverse of failure will be reported as success rates. Definitions for each category are described as follows.

**Rearrest:**

- A Delaware arrest, or issuance of a warrant for arrest, for a new offense or probation/parole violation, where the triggering offense occurs after release
  - Qualifying new offenses are limited to those in the Delaware Code with statutory punishments that include possible incarceration.
  - Probation violations will be excluded if the only condition violated is payment of monetary assessments, or is determined to represent the use of a graduated sanction (to be explored in pilot study).

**Recommitment:**

- A commitment to secure custody (in a Bureau of Prisons facility or VOP Center) ordered by a State of Delaware court for a qualifying rearrest
  - Explorations in the pilot phase will include breakouts by detained or sentenced status and custody time thresholds
- Returns to custody for events not qualifying as rearrest failures will be excluded as recommitment failures, but adjustments to time at risk for failure may be made to discount excluded custody time. Examples of excluded returns to custody are:
  - Administrative commitments under DOC authority
  - Commitments for civil contempt or non-payment
  - Commitments ordered by authorities other than a State of Delaware court

The inverse of failure rates will be used in reports as success rates, but time to failure techniques will be used for the analyses. For failure rate calculations, only the first failure in each category will be counted for each individual. Failure rates will be calculated at one-month intervals,
starting at one month after tracking begins, with individuals from all cohorts combined once they have a qualifying failure or reach the end of an interval without failure. The numerator in the failure rate at each interval will be the number individuals with a failure (in the respective category) during or prior to the interval. The denominator will be the sum of the numerator and the number of individuals who did not have a failure (in the respective category) through the end of the interval, but did have the opportunity for failure for the number of months represented by the end of the interval. As noted, the inverse of failure rates will be reported as success rates to emphasize the NCJRP’s focus on successful reentry.

The Data and Evaluation committee will first conduct a pilot analysis in late 2017 using the methods outlined above. They will report both the results and the lessons learned in terms of data acquisition and definitional issues, as well as recommendations to the Core Group. Once the Core Group approves of the methods and outcome definitions, the evaluation team will utilize those methods to draw the comparison baseline group and all subsequent cohorts.

Recommendations:

1. Continue to meet and dialogue with other committees in the NCJRP and TA providers to improve data access sharing and validity.

2. Conduct a pilot Success Rate Analyses on a cohort drawn in late 2017.

3. Begin dialogue to focus on resource acquisition to conduct ongoing Success Rate Analyses and long term recidivism study.

Looking Ahead: Planning for a Long-Term Recidivism Study.

The data and evaluation work group recognizes that time to failure and survival modeling techniques lack adequate sophistication to capture all the nuance of a robust reentry reform impact study. The Success Rate Analyses proposed above are designed to provide timely feedback to project management and stakeholders (i.e., the Delaware Committee on Criminal Justice Reform and its various workgroups) regarding progress being made on reentry reforms. The team plans to develop the methodology for a more robust third party recidivism analysis in the future as part of a larger and more sophisticated reentry reform impact study. The future evaluation effort described below will document the reformed reentry proves, assess the fidelity of various reentry reforms to evidence-based program plans and models, measure post release engagement and community integration, and focus on multiple outcomes that are not limited to a single definition of recidivism. A study of this type will require the acquisition of external funding as well as significant commitment for all parties involved with Delaware’s NCJRP-supported recidivism reduction initiative. What follows is thus not a proposal for a recidivism study, but rather a brief description of what the team anticipates such a proposal would focus on. It is
The Delaware Strategic Plan for Prisoner Reentry: Reducing Recidivism by Former Prisoners

DATA AND EVALUATION ISSUES: MEASURING SUCCESS AND RECIDIVISM

Based on past evaluation and recidivism studies conducted by team members and on conversations with the Data and Evaluation team and other Delaware Recidivism Reduction Project workgroups.

The Figure below represents a draft outline of the team’s view of what an evidence based continuum of correctional care would look like and the corresponding data elements that would be required to evaluate both the process of the continuum and how it impacts recidivism.

---

### Delaware EBP Continuum of Correctional Care

<table>
<thead>
<tr>
<th>Intake Phase: Risk/Needs</th>
<th>Level 5 Phase: Responsivity</th>
<th>Pre-Release Phase: Planning to Address Needs</th>
<th>Community Reentry Phase: Responsivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intake Assessments</td>
<td>Evidence based programming as determined by RNR. Sentence length factored to address primary and secondary needs</td>
<td>RNR Pre-Release/ADAPT Assessment</td>
<td>EBP Behavioral Services -</td>
</tr>
<tr>
<td>Incorporate: Sentence LSI-R RNR</td>
<td></td>
<td></td>
<td>Employment Services -</td>
</tr>
<tr>
<td>Classification</td>
<td>Pre-Release</td>
<td>Post-Release</td>
<td>Housing Services -</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Educational Services -</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Physical-Mental Health Services</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Probation Services</td>
</tr>
</tbody>
</table>

---

### Corresponding Data Elements for Evaluation/Recidivism Study

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Arrest, Incarceration, employment Data, Individual Function Data Source: DELJIS, NCIC, P&amp;P, Interviews</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

As can be seen in the figure, a comprehensive impact study will require data from multiple sources at multiple time points. Traditional studies follow people from prison exit, or in the case of most randomized trials, follow cohorts exposed to some type of intervention either in prisons or during the post-release process. Either approach is limited by failure to assess the impact of different aspects of the continuum. We thus propose selection of a cohort to be followed from intake through community as demonstrated in the figure. Each box in the above part of the figure represents a phase in the continuum in which assessment, programing, or other service/activity takes place. Each corresponding box in the lower figure represents the data required to capture the assessment, programing or other service/activity occurring at that phase in order to assess the impact of the event. Obtaining, linking and analyzing the requisite data will be both time consuming and resource dependent, but the evaluation
team is confident it can be achieved with time and has the potential to result in one of the most robust recidivism studies ever conducted.

The approach will allow for impact comparisons within a cohort that include but are not limited to the following:

- Intake Risk/Needs match to program (responsivity)
- Prison based program participation impact
- Pre-release Risk/Needs match to program (responsivity)
- Post release based program participation impact.
- Impact of reintegration success measures (employment, housing, continued education etc.)
- Impact of social measures such as family, peers, and measures of agency.

These and other factors can be modeled to predict recidivism, social integration and well-being. Much of the data required for the first three phases exist in some fashion in the DOC and DOC contractor databases. Some data elements are accessible now or can be with additional effort, while others will require the ongoing work of the various NCJRP-supported work groups to make them accessible for analyses. Data for the Community Reentry and Continuing Community Phases will require additional effort and resources to obtain. However, based on prior work by members of the evaluation team, the data often exist in some fashion.

**Government Agency Data beyond DOC**

The Data and Evaluation team will continue to investigate how to access needed data as part of the NCJRP. Examples of data required for a fully robust post release series of analyses include but are not limited to those data held by Delaware agencies involved in the NCJRP-supported reentry reform effort. This includes the Departments of Housing, Labor and Education as well as The Division of Substance Abuse and Mental Health. Data from these agencies have been used in past evaluation reporting at the aggregate level, but are known to exist at the individual level. Most track individuals using the Master Client Index (MCI), which is a unique identifier assigned to any person accessing services at a Delaware State Agency. The MCI is unique to an individual and once established is used as an identifier each time an individual accesses services. When linked to a State Bureau of Identification Number (SBI) used by DOC, the resulting data can be used to assess receipt of services across a range of agencies, as well as criminal history and criminal justice measures of arrest, recommitment, and reconviction. The MCI is also used by the Dept. of Labor to track workforce participation by recording the amount of taxes paid in a yearly quarter. The evaluation team has used these figures in the aggregate as part of the I-ADAPT evaluation. MOUs and informed consent procedures would be required to access this type of data at the individual level, but the team is confident that this can be accomplished, particularly with NCJRP assistance and support.

**Program Participation Data and Tracking**

The evaluation team has discussed the potential merit of incorporating program participation data into both the success rate analysis and the longer-term impact study. At this time, however,
uncertainties exist about the availability and reliability of program participation data overall. While program engagement and/or program completion data is indeed available for some flagship treatment programs, the quality and completeness of the data may not be sufficient to support valid analysis. The DOC has taken steps to require smaller contracted providers to submit rosters of program participants’ names, unique identifier ID #s, and program entry dates. However, this information is not currently translated back into DACS. In other words, utilizing program participation data for flagship programs only from DACS is potentially flawed, and program participation markers for smaller providers offering programs to offenders either inside or outside the correctional facilities are not yet electronic.

The Committee has begun to consider the information that will need to be collected to begin thinking about how to eventually incorporate offender program participation data in recidivism or success rate analyses. The following questions have been identified:

- What type(s) of data systems are currently used to track program participation?
- How are participants identified? What format is the identifier in (SBI Number? Name only? Unique ID assigned by the provider/agency?)
- Is participation or receipt of service also tracked in DACS?
- Is the participant’s LSI-R risk score considered in any way for program admission, assignment to various “tracks” of the program, etc.?

The following categories of program participation are of interest for their potential impact on reentry success:

- I-ADAPT
- Reentry Court
- CJC-funded reentry programs (serving incarcerated or non-incarcerated individuals)
- Programs contractually funded by DOC or those operating at no cost to DOC but with MOA’s/MOU’s (these programs are overseen by the DOC’s Strategic Partnership Oversight Committee, SPOC)
- Flagship behavioral health treatment programs administered by DOC’s contracted behavioral health provider

Two of our key objectives as evaluation planning proceeds are to investigate what type of program participation data are available from various sources and determine how best to incorporate reliable program participation data into the evaluation effort.

**Program Fidelity Data**

The correctional continuum model exhibited in the figure above depicts the involvement of multiple agencies, institutional and community-based programs, and DOC and probation initiatives. EBP principles stress program fidelity as a key component of recidivism reduction. A sound recidivism study will thus need to include measures of program fidelity across a multitude of programs. Delaware’s NCJRP-supported reentry reform and recidivism reduction efforts are focused on improving program fidelity across the correctional spectrum. Hence, it will be incumbent upon the Data and Evaluation
team to ensure that program implementation fidelity data are captured and analyzed as part of the overall study.

**Face to Face Client Data**

While not expanded upon here, the team recognizes that data from clients in the form of face to face interviews as well as individual surveys can add to both the validity and robustness of any recidivism study. The UD evaluation team has a long track record of conducting recidivism studies that incorporate client data collected both in prison and in the community. Face-to-face interviews not only allow for the assessment of self-reported crime and substance use, but can capture the impact of family relations, peers, employment and other narrative events known to impact the desistance process.

**The Evaluation Team**

The Data and Evaluation team possesses the expertise to conduct the study outlined above. The professional staff at SAC possess decades of experience working with Delaware criminal justice data and have conducted multiple recidivism analyses as well as a host of other analytic reports that have informed Delaware Criminal Justice Agencies and the field at large. The Delaware Department of Correction’s Planning & Research Unit has made enormous strides since being established in 2013. By instituting the Risk Needs & Responsivity assessment package as part of DACS and improving the use of LSI-R assessments, the Unit is paving the way towards evidence based assessment and programming as well as developing the capacity to capture data requisite for a long term recidivism study. Joanna Champney, Chief of the DOC’s Planning & Research Unit, has 14 years of professional criminal justice experience. She currently coordinates data collection and outcome analysis for the Delaware DOC, where she oversees demographic data reporting, human service provider data collection/analysis, coordination of all external research requests, implementation of system improvement initiatives, and strategic planning. Her graduate work at the University of Pennsylvania’s Department of Criminology focused on “what works in corrections,” evidence-based practices, and program evaluation. She has coordinated Federal, State, and private foundation grants focusing on criminal justice system improvement and service provision.

The external evaluation team at the University of Delaware has experience conducting complex recidivism studies using experimental and quasi-experimental designs in correctional settings. PI Dr. Daniel O’Connell was PI of the NIJ funded Decide Your Time study; a RCT of the impact of swift and certain sanction in Delaware’s Probation Dept. He was Co-PI of the NIJ funded Roads Diverge study; a 15 year follow up study of the original KEY-CREST cohort, which involved lifetime trajectory modeling as well as 300 qualitative life history interviews. He is currently the PI of the Robert Wood Johnson Foundation’s Culture of Health Study which is conducting a RCT of the impact of using health facilitators to link Delaware probationers to health care. Co-PI Dr. Christy Visher was Co-PI of the landmark Serious and Violent Offender Reentry Initiative which followed cohorts of persons from incarceration to the community. She was also PI of the NIDA funded CJ-DATS2 project which tested implementation science mechanisms through multi-state RCTs in correctional systems. The Delaware DOC and SAC were collaborating partners on each of these studies. The NCJRP evaluation team thus represents a team of
dedicated professionals with decades of experience in conducting RCTs and recidivism-based outcome studies in correctional and community settings.

This very brief description of what a long-term recidivism study proposal will entail is designed to provide a glimpse into what the NCJRP Data and Evaluation Team considers to be key elements needed for such a study. It is not intended to be exhaustive and is certainly preliminary, but through continued efforts of the NCJRP, the team is confident that such a study can be conducted and will be necessary to capture the full impact of the NCJRP.

Recommendations

1) Continue to work on Success Rate Analyses and use effort and knowledge gained to start building the framework for a long-term recidivism study.

2) Continue to work with other NCJRP Committees and TA providers to make data accessible across agencies and programs to establish linkable datasets required for long term recidivism analyses.

3) Begin the process of seeking internal and external resources required to conduct a long-term recidivism study.